REMARKS

This paper is submitted in response to the Office action mailed on May 25, 2022.

I. Status of Claims

This paper amends claim 23 and cancels claim 24. New claims 25-31 have been added. Accordingly, after entry of this Amendment and Response, claims 1-23 and 25-31 will be pending.

No new matter is added with the amendments and new claims. Rather, all amendments and elements of the new claims are fully supported by the original application.

II. Claim Rejections Under 35 U.S.C. § 102

Claims 1-24 are rejected under 35 U.S.C. § 102(a1)(a2) as being anticipated by Whitmore, III et al., U.S. Patent No. 5,931,786 ("Whitmore"). The Applicant respectfully traverses the rejection for at least the following reasons.

a. The rejection of claim 1 is without merit because Whitmore does not include all elements of the claim including inserting an access needle into the perineal access site of the patient and inserting a biopsy needle through the access needle.

Independent claim 1 recites "inserting an access needle into the perineal access site of the patient[…] and inserting the biopsy needle through the access needle[.]" The Office alleges this element of the claim is taught by Whitmore. But, Whitmore does not teach or fairly suggest the aforementioned elements of the claim, among others, for at least the following reasons.

At the outset, Applicant would like to point out the general technology field of Whitmore and how it is different from the field of prostate biopsies. To begin, Applicant notes that Whitmore concerns an ultrasound probe support and stepping device for use in brachytherapy, whereas the present claim concerns a transperineal biopsy procedure on a prostate. *See, e.g., Whitmore, Title, col. 1, ll. 57; preamble of claim 1.* Brachytherapy is a method of treating prostate cancer via "percutaneous transperineal *implantation of radioactive seeds* of either Iodine-125 or Palladium-103[.]" *See, id., col. 1, ll. 24-25 (emphasis added).* In brachytherapy procedures, a prostate biopsy has already been performed. Brachytherapy is part of a treatment

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plan based on the results of the prostate biopsy. Hence, Whitmore does not discuss biopsies; instead, Whitmore discusses implanting radioactive seeds.

In alleging Whitmore describes the aforementioned claim elements, the Examiner generally points to the Abstract, Figures 1-3, and column 4, lines 18-35 of Whitmore. These portions of Whitmore, however, do not describe "inserting an access needle into the perineal access site of the patient[…] and inserting the biopsy needle through the access needle" as required by claim 1. Nowhere in Whitmore is there description of an access needle or inserting an access needle into the perineal access site of the patient. Further, there is no description of inserting a biopsy needle through the access needle. The only description of needles in Whitmore are in reference to "radioactive seed-containing needles" passing through apertures in a template grid. *See, e.g., Whitmore, col. 8, ll. 53-54.* This is not the same as "inserting an access needle into the perineal access site of the patient[…] and inserting the biopsy needle through the access needle[.]" Since Whitmore fails to disclose all elements of claim 1, the rejection is without merit and should be withdrawn. As such, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1.

Claims 2-12 depend from claim 1 and include all the limitations in which are not taught by Whitmore. As such, claims 2-12 are allowable for at least the reason these claims include the limitations of claim 1. This statement is made without addressing the individual limitations of the dependent claims and such an argument is reserved by Applicant. For all of these reasons, among others, Applicant respectfully requests reconsideration and withdrawal of the rejections of claims 1-12.

b. The rejection of claim 13 is without merit because Whitmore does not include all elements of the claim including inserting an access needle into the perineal access site of the patient and inserting a biopsy needle through the access needle.

Independent claim 13 recites "inserting the access needle into the perineal access site of the patient; and inserting the biopsy needle through the access needle and into the prostate of the patient." The Office alleges this element of the claim is taught by Whitmore with the same rationale as claim 1. But, as described with reference to independent claim 1, Whitmore does not

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teach or fairly suggest the aforementioned elements of the claim, among others, for at least the following reasons.

At the outset, Applicant would like to point out the general technology field of Whitmore and how it is different from the field of prostate biopsies. To begin, Applicant notes that Whitmore concerns an ultrasound probe support and stepping device for use in brachytherapy, whereas the present claim concerns a transperineal biopsy procedure on a prostate. *See, e.g., Whitmore, Title, col. 1, ll. 57; preamble of claim 13.* Brachytherapy is a method of treating prostate cancer via "percutaneous transperineal *implantation of radioactive seeds* of either Iodine-125 or Palladium-103[.]" *See, id., col. 1, ll. 24-25 (emphasis added).* In brachytherapy procedures, a prostate biopsy has already been performed. Brachytherapy is part of a treatment plan based on the results of the prostate biopsy. Hence, Whitmore does not discuss biopsies; instead, Whitmore discusses implanting radioactive seeds.

In alleging Whitmore describes the aforementioned claim elements, the Examiner generally points to the Abstract, Figures 1-3, and column 4, lines 18-35 of Whitmore. These portions of Whitmore, however, do not describe "inserting the access needle into the perineal access site of the patient; and inserting the biopsy needle through the access needle and into the prostate of the patient" as required by claim 13. Nowhere in Whitmore is there description of an access needle or inserting an access needle into the perineal access site of the patient. Further, there is no description of inserting a biopsy needle through the access needle. The only description of needles in Whitmore are in reference to "radioactive seed-containing needles" passing through apertures in a template grid. *See, e.g., Whitmore, col. 8, ll. 53-54.* This is not the same as "inserting an access needle into the perineal access site of the patient[…] and inserting the biopsy needle through the access needle[.]" Since Whitmore fails to disclose all elements of claim 13, the rejection is without merit and should be withdrawn. As such, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 13.

Claim 24 is canceled; therefore the rejection of the claim is moot. Claims 14-23 depend from claim 13 and include all the limitations in which are not taught by Whitmore. As such, claims 14-23 are allowable for at least the reason these claims include the limitations of claim 13. This statement is made without addressing the individual limitations of the dependent claims

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and such an argument is reserved by Applicant. For all of these reasons, among others, Applicant respectfully requests reconsideration and withdrawal of the rejections of claims 13-23.

III. New Claims

New claims 25-31 are added with this paper. No new matter is added with the new claims. The new claims are allowable in view of the cited prior art for at least the reason that independent claim 25 includes the following limitation, which is not taught or fairly suggested by Whitmore: inserting the access needle into the perineal access site of the patient; and inserting the biopsy needle through the access needle and into a first location of the prostate of the patient. Claims 26-31 depend from and, thus, incorporate the limitations of claim 25. As such, all claims are allowable over the cited prior art. Applicant respectfully request acceptance and allowance of the new claims.

IV. Conclusion

The Applicant thanks the Examiner for his thorough review of the application. The Applicant respectfully submits the present application, as amended, is in condition for allowance and respectfully requests the issuance of a Notice of Allowability as soon as practicable.

The Applicant believes no fees or petitions are due with this filing. However, should any such fees or petitions be required, please consider this a request therefor and authorization to charge Deposit Account No. 50-1662 accordingly.

If the Examiner should require any additional information or amendment, please contact the undersigned attorney.

Respectfully submitted,

Dated: August 25, 2022

By: /Joshua Pranckun/
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/698,641	**08/25/2022 02:34:49 PM ET**	**083003-722509**

Title of Invention

TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	9971	FILED BY	Donna Carrera
PATENT CENTER #	60907425	FILING DATE	03/18/2022
CUSTOMER #	24030	FIRST NAMED INVENTOR	Matthew J. ALLAWAY
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Josh Pranckun

Documents

TOTAL DOCUMENTS: 3

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
083003-722509_ResponsetoNon-FinalOfficeAction_8-25-22.pdf		10	-	241 KB
083003-722509_ResponsetoNon-FinalOfficeAction_8-25-22-A....pdf	(1-1)	1	Amendment/Request for Reconsideration-After Non-Final Rejection	137 KB
083003-722509_ResponsetoNon-FinalOfficeAction_8-25-22-CLM.pdf	(2-6)	5	Claims	149 KB
083003-	(7-10)	4	Applicant Arguments/Remarks	223 KB

CORBIN_CLINICAL-002128

722509_ResponsetoNon-FinalOfficeAction_8-25-22-REM.pdf	Made in an Amendment

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
083003-722509_ResponsetoNon-FinalOfficeAction_8-25-22.pdf	4F44A910CD562E2729141A32DAAEB58BE573725C672219365A98E883F65E25AAF2EB4EEC17D4E313A61C719F3D6908ED660D4373EF3080923E42835C7ED53A72
083003-722509_ResponsetoNon-FinalOfficeAction_8-25-22-A....pdf	5D1DDEB3D5E5B3DFE95612953840C55510DD96EABAB6279AB51D3CF820120FD79B4A8732737D6A07D14223DABBA990EDF1888F5DCB22AAA8E8DB3C24C4C0832B
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083003-722509_ResponsetoNon-FinalOfficeAction_8-25-22-REM.pdf	C56509E5052D80842BF46088BBEA573BB2E113BD70D6A3D36ED10C2C6A619242C4A7BD58BE46F4270534A18166408D06BC107666A50A591217A66A59635F1528

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office **CORBIN_CLINICAL-002129**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/698,641	Filing Date 03/18/2022	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $240 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

AMENDMENT	08/25/2022	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 30	Minus	** 24	= 6		x $50 =	300
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $240 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	300

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/Ruby Johnson/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/698,641	03/18/2022	Matthew J. ALLAWAY	083003-722509

CONFIRMATION NO. 9971

24030
POLSINELLI PC
PO Box 140310
KANSAS CITY, MO 64114-0310

PUBLICATION NOTICE

OC000000134866067

Title:TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE

Publication No.US-2022-0202444-A1
Publication Date:06/30/2022

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

CORBIN_CLINICAL-002132

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/698,641	03/18/2022	Matthew J. ALLAWAY	083003-722509	9971

24030 7590 05/25/2022

POLSINELLI PC
PO Box 140310
KANSAS CITY, MO 64114-0310

EXAMINER
CATTUNGAL, SANJAY

ART UNIT	PAPER NUMBER
3793	

NOTIFICATION DATE	DELIVERY MODE
05/25/2022	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspt@polsinelli.com

Office Action Summary	**Application No.** 17/698,641	**Applicant(s)** ALLAWAY, Matthew J.	
	Examiner SANJAY CATTUNGAL	**Art Unit** 3793	**AIA (FITF) Status** Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 04/28/22.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-24 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-24 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 03/18/22 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention.
>
> (a)(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

3. Claim(s) 1-24 is/are rejected under 35 U.S.C. 102a1/a2 as being anticipated by U. S. Patent No. 5,931,786 to Whitmore, III et al.

4. Regarding Claims 1 and 13, Whitmore teaches a method of performing a transperineal biopsy procedure on a prostate of a patient using a transrectal ultrasound probe configured to provide imaging, the patient comprising a perineal access site leading to the prostate, the transrectal ultrasound probe including a shaft and a handle proximal to the shaft, the method comprising: inserting an access needle into the perineal access site of the patient, the access needle including a hub at a proximal end of the access needle and a tubular shaft extending distally from the hub, the tubular

shaft including a lumen sized to receive a biopsy needle therethrough; coupling the access needle to one of a plurality of needle receiving ports of a displacement member of a transperineal biopsy guide such that a position of the access needle relative to the displacement member is retained (abstract and figs. 1-3; col. 4 lines 18-35); teaches a transperineal biopsy probe figs. 1-3; a guide for holding the transrectal ultrasonic probe element 18; plurality of holes for needle access element 70), the transperineal biopsy guide comprising: a mount releasably coupled to the transrectal ultrasound probe; (Fig. 1-3 element 12 mount for the probe is releasable) a guide member coupled to the mount (col. 4 lines 18-35); and the displacement member configured to slide relative to the guide member and including a vertically extending member including the plurality of needle receiving ports (figs. 1-3 element 70 is a vertically extending plurality of needle receiving ports) ; and inserting the biopsy needle through the access needle and into a first location of the prostate of the patient (Figs. 1-3 a guide to biopsy the prostrate).

5. Regarding Claims 2 and 14, Whitmore teaches contacting a distal end of a pair of guide rails of the guide member with the perineal access site of the patient (col. 4 lines 36-40 a pair of rails guide member).

6. Regarding Claims 3 and 15, Whitmore teaches injecting a substance into the patient via the biopsy needle (col. 7 lines 58-65 teaches brachy therapy, which is injecting .

7. Regarding Claims 4 and 16, Whitmore teaches taking a first biopsy of the first location of the prostate of the patient via the biopsy needle (figs. 1-3 teaches taking biopsy at a first location).

8. Regarding Claims 5, 6, 17, and 18, Whitmore teaches taking a second biopsy of a second location of the prostate of the patient via the biopsy needle, the second location being different than the first location (figs. 1-3 teaches taking biopsy at multiple locations).

9. Regarding Claims 7 and 19, Whitmore teaches coupling the transperineal biopsy guide to the shaft of the transrectal ultrasound probe via a releasable fastener (col. 4 lines 35-45).

10. Regarding Claims 8 and 20, Whitmore teaches that the releasable fastener does not wrap around the handle of the transrectal ultrasound probe (col. 4 lines 35-45 does not teach that the fastener is wrapped around the handle).

11. Regarding Claims 9 and 21, Whitmore teaches imaging the prostate of the patient with the transrectal ultrasound probe (abstract and figs. 1-3 teaches a transrectal ultrasonic probe for imaging).

12. Regarding Claims 10 and 22, Whitmore teaches coupling the access needle to one of the plurality of needle receiving ports of the displacement member of the transperineal biopsy guide comprises inserting a portion of the hub into one of the plurality of needle receiving ports (figs. 1-3 element 70 is a vertically extending plurality of needle receiving ports).

Regarding Claims 11, 12, 23, and 24, Whitmore teaches that the access needle has a needle size of 15 gauge or 16 gauge (col. 8 line 10 teaches a needle size 15-18 gauge).

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANJAY CATTUNGAL whose telephone number is (571)272-1306. The examiner can normally be reached M-F 9-5 EST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Raymond can be reached on (571) 270-1790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SANJAY CATTUNGAL/
Primary Examiner, Art Unit 3793

Notice of References Cited	Application/Control No. 17/698,641	Applicant(s)/Patent Under Reexamination ALLAWAY, Matthew J.	
	Examiner SANJAY CATTUNGAL	Art Unit 3793	Page 1 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20150366544-A1	12-2015	YAP; Chew Loong	A61B17/3403	600/464
*	B	US-20150119715-A1	04-2015	Baumann; Michael	A61B8/5215	600/407
*	C	US-20140039314-A1	02-2014	Stoianovici; Dan	A61B8/4254	600/439
*	D	US-20130142875-A1	06-2013	SHEMI; Amotz	A61B10/0241	424/484
*	E	US-20120245455-A1	09-2012	Bauman; Michael	A61B17/3403	600/424
*	F	US-20110319759-A1	12-2011	Liu; Hanli	A61B8/12	600/439
*	G	US-20110071380-A1	03-2011	GOLDENBERG; Andrew A.	A61N5/1007	600/411
*	H	US-20090030339-A1	01-2009	Cheng; Wai Sam C.	A61B8/4405	600/562
*	I	US-20080004481-A1	01-2008	Bax; Jeffrey	A61N5/1007	600/7
*	J	US-20070043291-A1	02-2007	Fidel; Howard F.	A61B8/4281	600/439
*	K	US-20050159676-A1	07-2005	Taylor, James D.	A61B10/0275	600/564
*	L	US-20040162458-A1	08-2004	Green, Thomas C.	A61N5/1007	600/7
*	M	US-20030153850-A1	08-2003	Davis, Brian J.	A61B6/5235	601/2

FOREIGN PATENT DOCUMENTS

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	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 17/698,641	Applicant(s)/Patent Under Reexamination ALLAWAY, Matthew J.	
	Examiner SANJAY CATTUNGAL	Art Unit 3793	Page 2 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-5494039-A	02-1996	Onik; Gary	A61B17/3403	600/562
*	B	US-5931786-A	08-1999	Whitmore, III; Willet F.	A61N5/1007	600/459
	C					
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	G					
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	I					
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FOREIGN PATENT DOCUMENTS

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	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/698,641	ALLAWAY, Matthew J.
	Examiner	Art Unit
	SANJAY CATTUNGAL	3793

CPC - Searched*		
Symbol	Date	Examiner
A61B17/3403; A61B8/0841; A61B8/12; A61B10/0241; A61B10/04; A61B90/39; A61B18/02; A61B18/12; A61B2010/045; A61B2017/00274; A61B2017/00477; A61B2017/3405; A61B2017/3411; A61B2017/3413; A61B2018/00547; A61B2090/3925; A61B2090/3933; A61B2090/3954; A61B2090/3966	05/20/2022	SC

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Text and Inventor Search	05/20/2022	SC

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/SANJAY CATTUNGAL/ Primary Examiner, Art Unit 3793	

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	17/698,641	ALLAWAY, Matthew J.
	Examiner	Art Unit
	SANJAY CATTUNGAL	3793

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/20/2022								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
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	6	✓								
	7	✓								
	8	✓								
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	20	✓								
	21	✓								
	22	✓								
	23	✓								
	24	✓								

Bibliographic Data

Application No: 17/698,641

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /SANJAY CATTUNGAL/ (Examiner's Signature) | (Initials)

Title: TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/18/2022	600	3793	083003-722509
RULE			

APPLICANTS

Corbin Clinical Resources, LLC, Cumberland, MD,

INVENTORS

Matthew J. ALLAWAY, Cumberland, MD, UNITED STATES

CONTINUING DATA

This application is a CON of 17494962 10/06/2021

17494962 is a CIP of 17314845 05/07/2021 PAT 11246677

17494962 is a CIP of 16991150 08/12/2020

17314845 is a CON of 16115180 08/28/2018 PAT 11096762

16991150 is a CON of 14874104 10/02/2015 PAT 10743909

16115180 is a CON of 14677286 04/02/2015 PAT 10064681

14874104 is a CIP of 14677286 04/02/2015 PAT 10064681

14677286 has PRO of 61974826 04/03/2014

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

03/23/2022

**** SMALL ENTITY ****

STATE OR COUNTRY

UNITED STATES

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CORBIN_CLINICAL-002143

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2017/09/28 01:01 AM
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L5	4	L2 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2017/09/28 01:40 AM
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L7	1623	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2017/09/28 01:52 AM
L8	416	L7 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2017/09/28 01:56 AM
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L105	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01

							08:27 PM
L106	14	L104 L105	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L107	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L108	1	L107 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L109	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L110	13	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L111	14	L109 L110	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L112	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L113	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L114	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L115	446	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L116	78	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L117	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L118	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L119	38106	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:27 PM
L120	15	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L121	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/06/01 08:27 PM
L122	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L123	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM

L124	3	L122 L123	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L125	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:27 PM
L126	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:27 PM
L127	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/06/01 08:27 PM
L128	4	L125 L126 L127	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:27 PM
L129	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L130	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L131	3	L129 L130	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L132	7	L128 or L131	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:27 PM
L133	0	L132 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:27 PM
L134	1	L132 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:27 PM
L135	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:27 PM
L136	4	L135 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:27 PM
L137	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L138	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM

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		20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L139	17	L137 L138	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L140	10	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L141	4	L138 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L142	7	L138 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L143	2125	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:27 PM
L144	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L145	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L146	17	L144 L145	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L147	10	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L148	4	L145 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L149	7	L145 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L150	2125	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L151	590	L150 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L152	25	L150 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L153	2125	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L154	28	L153 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L155	93	L153 and ((holder) with	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01

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		needle)					08:30 PM
L156	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L157	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L158	1766	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L159	307	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L160	13	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L161	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L162	14	L160 L161	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L163	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L164	1	L163 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L165	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L166	13	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L167	14	L165 L166	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L168	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L169	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L170	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L171	446	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L172	78	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L173	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L174	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L175	38106	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:30 PM

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		A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.					
L176	15	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L177	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/06/01 08:30 PM
L178	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L179	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L180	3	L178 L179	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L181	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:30 PM
L182	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:30 PM
L183	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/06/01 08:30 PM
L184	4	L181 L182 L183	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:30 PM
L185	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L186	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L187	3	L185 L186	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L188	7	L184 or L187	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:30 PM
L189	0	L188 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:30 PM
L190	1	L188 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:30 PM
L191	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:30 PM

		$).did.					
L192	4	L191 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:30 PM
L193	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L194	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L195	17	L193 L194	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L196	10	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L197	4	L194 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L198	7	L194 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L199	2125	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L200	590	L199 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L201	25	L199 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L202	2125	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L203	28	L202 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L204	93	L202 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L205	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L206	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L207	1766	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L208	307	needle with	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01

		(trans$1rectal or rectal) with probe					08:30 PM
L209	13	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L210	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L211	14	L209 L210	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L212	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L213	1	L212 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L214	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L215	13	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L216	14	L214 L215	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L217	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L218	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:30 PM
L219	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L220	446	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L221	78	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L222	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L223	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L224	38106	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:31 PM
L225	15	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L226	3	(US-10743909-$ or US-10743910-$ or US-	(USPAT)	OR	OFF	OFF	2021/06/01 08:31 PM

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		10743911-$).did.					
L227	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L228	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L229	3	L185 L186	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L230	10	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2021/06/01 08:31 PM
L231	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L232	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L233	17	L231 L232	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L234	4	L232 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L235	2125	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L236	590	L235 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L237	2125	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L238	1766	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L239	13	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L240	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L241	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L242	13	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L243	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L244	0	"20140136607" and	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01

		average					08:31 PM
L245	446	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L246	38106	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:31 PM
L247	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L248	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L249	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:31 PM
L250	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:31 PM
L251	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/06/01 08:31 PM
L252	4	L249 L250 L251	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:31 PM
L253	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L254	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L255	3	L253 L254	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L256	7	L252 or L255	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:31 PM
L257	0	L256 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/06/01 08:31 PM
L258	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L259	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM

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		5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L260	17	L258 L259	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L261	4	L259 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:31 PM
L262	72	(needle with (trans$1rectal or rectal)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/01 08:38 PM
L265	1	"15465148"	(USPAT)	OR	OFF	OFF	2021/07/16 11:08 AM
L266	55	(needle with (trans$1rectal or rectal) with gauge)	(US-PGPUB; USPAT)	OR	ON	ON	2021/07/16 06:50 PM
L267	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L268	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L269	17	L267 L268	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L270	12	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L271	4	L268 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L272	7	L268 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L273	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L274	601	L273 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L275	25	L273 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L276	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L277	30	L276 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L278	93	L276 and ((holder) with	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08

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		needle)					11:23 PM
L279	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L280	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L281	1795	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L282	314	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L283	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L284	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L285	15	L283 L284	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L286	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L287	1	L286 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L288	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L289	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L290	15	L288 L289	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L291	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L292	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L293	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L294	472	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L295	81	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L296	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L297	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L298	39538	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM

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		A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.					
L299	17	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L300	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L301	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L302	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L303	3	L301 L302	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L304	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L305	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L306	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/10/08 11:23 PM
L307	4	L304 L305 L306	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L308	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L309	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L310	3	L308 L309	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L311	7	L307 or L310	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L312	0	L311 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L313	1	L311 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L314	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM

		$).did. or (US-5494039-$).did.					
L315	4	L314 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L316	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L317	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L318	17	L316 L317	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L319	12	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L320	4	L317 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L321	7	L317 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L322	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L323	601	L322 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L324	25	L322 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L325	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L326	30	L325 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L327	93	L325 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L328	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L329	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L330	1795	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM

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L331	314	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L332	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L333	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L334	15	L332 L333	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L335	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L336	1	L335 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L337	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L338	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L339	15	L337 L338	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L340	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L341	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L342	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L343	472	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L344	81	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L345	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L346	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L347	39538	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L348	17	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L349	3	(US-10743909-$ or US-	(USPAT)	OR	OFF	OFF	2021/10/08

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		10743910-$ or US-10743911-$).did.					11:23 PM
L350	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L351	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L352	3	L308 L309	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L353	12	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2021/10/08 11:23 PM
L354	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L355	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L356	17	L354 L355	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L357	4	L355 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L358	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L359	601	L358 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L360	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L361	1795	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L362	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L363	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L364	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L365	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L366	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM

L367	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L368	472	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L369	39538	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L370	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L371	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L372	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L373	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L374	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/10/08 11:23 PM
L375	4	L372 L373 L374	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L376	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L377	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L378	3	L376 L377	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L379	7	L375 or L378	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L380	0	L379 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:23 PM
L381	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L382	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM

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		5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L383	17	L381 L382	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L384	4	L382 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L385	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L386	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L387	17	L385 L386	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L388	12	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L389	4	L386 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L390	7	L386 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L391	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L392	601	L391 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L393	25	L391 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L394	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L395	30	L394 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L396	93	L394 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L397	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L398	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM

L399	1795	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L400	314	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L401	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L402	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L403	15	L401 L402	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L404	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L405	1	L404 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L406	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L407	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L408	15	L406 L407	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:23 PM
L409	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L410	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L411	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L412	472	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L413	81	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L414	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L415	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L416	39538	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L417	17	(bar) with	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08

		((trans$1rectal or rectal) WITH PROBE)					11:24 PM
L418	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L419	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L420	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L421	3	L419 L420	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L422	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L423	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L424	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/10/08 11:24 PM
L425	4	L422 L423 L424	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L426	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L427	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L428	3	L426 L427	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L429	7	L425 or L428	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L430	0	L429 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L431	1	L429 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L432	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L433	4	L432 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L434	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L435	15	(US-0031721-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08

		0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					11:24 PM
L436	17	L434 L435	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L437	12	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L438	4	L435 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L439	7	L435 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L440	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L441	601	L440 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L442	25	L440 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L443	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L444	30	L443 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L445	93	L443 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L446	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L447	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L448	1795	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L449	314	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L450	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L451	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L452	15	L450 L451	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08

							11:24 PM
L453	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L454	1	L453 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L455	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L456	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L457	15	L455 L456	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L458	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L459	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L460	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L461	472	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L462	81	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L463	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L464	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L465	39538	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L466	17	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L467	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L468	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L469	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L470	3	L426 L427	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM

L471	12	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2021/10/08 11:24 PM
L472	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L473	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L474	17	L472 L473	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L475	4	L473 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L476	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L477	601	L476 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L478	2166	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L479	1795	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L480	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L481	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L482	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L483	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L484	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L485	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L486	472	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L487	39538	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM

		A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.					
L488	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L489	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L490	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L491	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L492	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/10/08 11:24 PM
L493	4	L490 L491 L492	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L494	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L495	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L496	3	L494 L495	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L497	7	L493 or L496	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L498	0	L497 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/10/08 11:24 PM
L499	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L500	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L501	17	L499 L500	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L502	4	L500 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM

L503	74	(needle with (trans$1rectal or rectal)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:24 PM
L504	1	"15465148"	(USPAT)	OR	OFF	OFF	2021/10/08 11:25 PM
L505	58	(needle with (trans$1rectal or rectal) with gauge)	(US-PGPUB; USPAT)	OR	ON	ON	2021/10/08 11:25 PM
L508	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L509	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L510	17	L508 L509	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L511	13	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L512	4	L509 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L513	7	L509 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L514	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L515	604	L514 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L516	26	L514 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L517	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L518	31	L517 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L519	93	L517 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L520	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L521	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM

L522	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L523	317	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L524	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L525	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L526	15	L524 L525	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L527	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L528	1	L527 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L529	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L530	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L531	15	L529 L530	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L532	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L533	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L534	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L535	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L536	85	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L537	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L538	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L539	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L540	18	(bar) with	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05

		((trans$1rectal or rectal) WITH PROBE)					10:16 AM
L541	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L542	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L543	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L544	3	L542 L543	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L545	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L546	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L547	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/12/05 10:16 AM
L548	4	L545 L546 L547	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L549	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L550	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L551	3	L549 L550	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L552	7	L548 or L551	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L553	0	L552 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L554	1	L552 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L555	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L556	4	L555 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L557	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L558	15	(US-0031721-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05

		0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					10:16 AM
L559	17	L557 L558	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L560	13	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L561	4	L558 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L562	7	L558 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L563	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L564	604	L563 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L565	26	L563 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L566	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L567	31	L566 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L568	93	L566 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L569	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L570	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L571	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L572	317	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L573	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L574	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L575	15	L573 L574	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05

							10:16 AM
L576	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L577	1	L576 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L578	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L579	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L580	15	L578 L579	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L581	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L582	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L583	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L584	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L585	85	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L586	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L587	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L588	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L589	18	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L590	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/12/05 10:16 AM
L591	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L592	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L593	3	L549 L550	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM

L594	13	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2021/12/05 10:16 AM
L595	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L596	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L597	17	L595 L596	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:16 AM
L598	4	L596 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L599	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L600	604	L599 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L601	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L602	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L603	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L604	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L605	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L606	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L607	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L608	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L609	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L610	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM

		A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.					
L611	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L612	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L613	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L614	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L615	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/12/05 10:17 AM
L616	4	L613 L614 L615	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L617	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L618	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L619	3	L617 L618	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L620	7	L616 or L619	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L621	0	L620 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L622	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L623	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L624	17	L622 L623	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L625	4	L623 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM

L626	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L627	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L628	17	L626 L627	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L629	13	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L630	4	L627 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L631	7	L627 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L632	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L633	604	L632 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L634	26	L632 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L635	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L636	31	L635 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L637	93	L635 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L638	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L639	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L640	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L641	317	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L642	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM

L643	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L644	15	L642 L643	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L645	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L646	1	L645 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L647	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L648	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L649	15	L647 L648	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L650	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L651	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L652	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L653	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L654	85	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L655	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L656	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L657	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L658	18	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L659	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L660	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L661	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05

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							10:17 AM
L662	3	L660 L661	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L663	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L664	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L665	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/12/05 10:17 AM
L666	4	L663 L664 L665	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L667	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L668	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L669	3	L667 L668	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L670	7	L666 or L669	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L671	0	L670 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L672	1	L670 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L673	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L674	4	L673 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:17 AM
L675	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L676	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM

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		20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L677	17	L675 L676	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L678	13	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L679	4	L676 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L680	7	L676 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L681	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L682	604	L681 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L683	26	L681 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L684	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L685	31	L684 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L686	93	L684 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L687	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L688	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L689	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:17 AM
L690	317	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L691	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L692	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L693	15	L691 L692	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L694	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L695	1	L694 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L696	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L697	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05

							10:18 AM
L698	15	L696 L697	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L699	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L700	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L701	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L702	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L703	85	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L704	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L705	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L706	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:18 AM
L707	18	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L708	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/12/05 10:18 AM
L709	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L710	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L711	3	L667 L668	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L712	13	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2021/12/05 10:18 AM
L713	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L714	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM

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		0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L715	17	L713 L714	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L716	4	L714 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L717	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L718	604	L717 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L719	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L720	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L721	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L722	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L723	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L724	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L725	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L726	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L727	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L728	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:18 AM

L729	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L730	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L731	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:18 AM
L732	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:18 AM
L733	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/12/05 10:18 AM
L734	4	L731 L732 L733	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:18 AM
L735	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L736	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L737	3	L735 L736	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L738	7	L734 or L737	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:18 AM
L739	0	L738 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:18 AM
L740	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L741	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L742	17	L740 L741	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L743	4	L741 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L744	75	(needle with (trans$1rectal or rectal)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L745	1	"15465148"	(USPAT)	OR	OFF	OFF	2021/12/05 10:18 AM
L746	59	(needle with (trans$1rectal or rectal) with gauge)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM

L747	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L748	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L749	17	L747 L748	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L750	13	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L751	4	L748 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L752	7	L748 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L753	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L754	604	L753 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L755	26	L753 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L756	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L757	31	L756 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:18 AM
L758	93	L756 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L759	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L760	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L761	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L762	317	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L763	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM

L764	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L765	15	L763 L764	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L766	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L767	1	L766 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L768	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L769	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L770	15	L768 L769	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L771	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L772	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L773	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L774	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L775	85	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L776	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L777	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L778	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:19 AM
L779	18	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L780	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/12/05 10:19 AM
L781	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L782	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05

							10:19 AM
L783	3	L781 L782	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L784	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:19 AM
L785	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:19 AM
L786	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/12/05 10:19 AM
L787	4	L784 L785 L786	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:19 AM
L788	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L789	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L790	3	L788 L789	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L791	7	L787 or L790	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:19 AM
L792	0	L791 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:19 AM
L793	1	L791 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:19 AM
L794	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:19 AM
L795	4	L794 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:19 AM
L796	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L797	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM

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		20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L798	17	L796 L797	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L799	13	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L800	4	L797 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L801	7	L797 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L802	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L803	604	L802 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L804	26	L802 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L805	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L806	31	L805 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L807	93	L805 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L808	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L809	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L810	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L811	317	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L812	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L813	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L814	15	L812 L813	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L815	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L816	1	L815 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L817	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L818	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05

							10:19 AM
L819	15	L817 L818	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L820	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L821	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L822	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:19 AM
L823	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L824	85	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L825	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L826	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L827	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:20 AM
L828	18	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L829	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/12/05 10:20 AM
L830	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L831	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L832	3	L788 L789	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L833	13	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2021/12/05 10:20 AM
L834	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L835	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM

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		0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L836	17	L834 L835	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L837	4	L835 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L838	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L839	604	L838 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L840	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L841	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L842	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L843	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L844	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L845	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L846	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L847	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L848	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L849	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:20 AM

L850	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L851	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L852	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:20 AM
L853	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:20 AM
L854	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/12/05 10:20 AM
L855	4	L852 L853 L854	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:20 AM
L856	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L857	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L858	3	L856 L857	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L859	7	L855 or L858	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:20 AM
L860	0	L859 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:20 AM
L861	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L862	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L863	17	L861 L862	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L864	4	L862 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L865	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L866	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM

		20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L867	17	L865 L866	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L868	13	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L869	4	L866 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L870	7	L866 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L871	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L872	604	L871 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L873	26	L871 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L874	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L875	31	L874 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L876	93	L874 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:20 AM
L877	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L878	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L879	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L880	317	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L881	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L882	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L883	15	L881 L882	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L884	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L885	1	L884 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM

L886	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L887	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L888	15	L886 L887	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L889	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L890	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L891	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L892	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L893	85	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L894	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L895	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L896	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:21 AM
L897	18	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L898	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/12/05 10:21 AM
L899	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L900	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L901	3	L899 L900	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L902	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:21 AM
L903	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:21 AM
L904	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/12/05

							10:21 AM
L905	4	L902 L903 L904	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:21 AM
L906	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L907	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L908	3	L906 L907	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L909	7	L905 or L908	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:21 AM
L910	0	L909 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:21 AM
L911	1	L909 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:21 AM
L912	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:21 AM
L913	4	L912 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:21 AM
L914	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L915	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L916	17	L914 L915	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM

L917	13	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L918	4	L915 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L919	7	L915 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L920	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L921	604	L920 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L922	26	L920 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L923	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L924	31	L923 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L925	93	L923 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L926	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L927	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L928	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L929	317	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L930	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L931	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L932	15	L930 L931	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L933	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:21 AM
L934	1	L933 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L935	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L936	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L937	15	L935 L936	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L938	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L939	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM

L940	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L941	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L942	85	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L943	15	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L944	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L945	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:22 AM
L946	18	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L947	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2021/12/05 10:22 AM
L948	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L949	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L950	3	L906 L907	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L951	13	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2021/12/05 10:22 AM
L952	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L953	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM

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		5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L954	17	L952 L953	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L955	4	L953 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L956	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L957	604	L956 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L958	2181	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L959	1810	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L960	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L961	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L962	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L963	14	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L964	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L965	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L966	487	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L967	40149	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:22 AM
L968	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L969	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L970	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:22 AM
L971	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:22 AM

L972	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2021/12/05 10:22 AM
L973	4	L970 L971 L972	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:22 AM
L974	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L975	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L976	3	L974 L975	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L977	7	L973 or L976	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:22 AM
L978	0	L977 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2021/12/05 10:22 AM
L979	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L980	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L981	17	L979 L980	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L982	4	L980 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L983	75	(needle with (trans$1rectal or rectal)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:22 AM
L984	1	"15465148"	(USPAT)	OR	OFF	OFF	2021/12/05 10:23 AM
L985	59	(needle with (trans$1rectal or rectal) with gauge)	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/05 10:23 AM
L990	1	"16115180"	(USPAT)	OR	OFF	OFF	2022/01/29 01:23 AM
L991	771	SANJAY NEAR2 CATTUNGAL	(US-PGPUB; USPAT)	OR	ON	ON	2022/01/29 11:35 AM
L992	1	L991 AND (ULTRA$1SO$3 WITH flash$1light).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/01/29 11:35 AM
L993	2	"17314845"	(US-PGPUB; USPAT)	OR	ON	ON	2022/01/29

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							08:05 PM
L994	0	("11246677").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/01/29 08:06 PM
L995	1	("10064681").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/01/29 08:09 PM
L996	1	("11096762").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/01/29 08:09 PM
L997	1	("10743909").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/01/29 08:12 PM
L998	14	((US-5494039-A).did. AND USPT.dbnm.) OR ((US-20150366544-A1 OR US-20150119715-A1 OR US-20140039314-A1 OR US-20110319759-A1 OR US-20110071380-A1 OR US-20090030339-A1 OR US-20080004481-A1 OR US-20120245455-A1 OR US-20050159676-A1 OR US-20070043291-A1 OR US-20040162458-A1 OR US-20030153850-A1 OR US-20130142875-A1).did. AND PGPB.dbnm.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/20 07:55 PM
L999	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1000	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1001	17	L1 L2	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1002	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1003	4	L2 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

L1004	7	L2 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1005	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1006	627	L7 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1007	28	L7 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1008	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1009	33	L10 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1010	95	L10 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1011	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1012	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1013	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1014	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1015	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1016	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1017	16	L17 L18	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1018	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1019	1	L20 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1020	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1021	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1022	16	L22 L23	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1023	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1024	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1025	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1026	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

L1027	93	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1028	18	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1029	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1030	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1031	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1032	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1033	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1034	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1035	3	L35 L36	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1036	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1037	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1038	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/05/20 07:56 PM
L1039	4	L38 L39 L40	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1040	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1041	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1042	3	L42 L43	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1043	7	L41 or L44	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1044	0	L45 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1045	1	L45 and (attach$3 with	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20

		(body or patient or subject))					07:56 PM
L1046	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1047	4	L48 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1048	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1049	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1050	17	L50 L51	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1051	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1052	4	L51 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1053	7	L51 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1054	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1055	627	L56 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1056	28	L56 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1057	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1058	33	L59 and ((mount) with	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

		needle)					07:56 PM
L1059	95	L59 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1060	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1061	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1062	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1063	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1064	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1065	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1066	16	L66 L67	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1067	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1068	1	L69 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1069	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1070	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1071	16	L71 L72	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1072	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1073	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1074	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1075	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1076	93	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1077	18	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1078	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1079	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM

		A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.					
L1080	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1081	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1082	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1083	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1084	3	L42 L43	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1085	15	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1086	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1087	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1088	17	L88 L89	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1089	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1090	4	L89 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1091	7	L89 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1092	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1093	627	L94 and (lower with	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

		upper)					07:56 PM
L1094	28	L94 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1095	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1096	33	L97 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1097	95	L97 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1098	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1099	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1100	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1101	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1102	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1103	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1104	16	L104 L105	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1105	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1106	1	L107 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1107	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1108	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1109	16	L109 L110	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1110	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1111	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1112	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1113	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1114	93	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1115	18	base$1line with rank$3 with application with	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

		user					
L1116	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1117	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1118	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1119	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1120	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1121	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1122	3	L122 L123	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1123	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1124	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1125	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/05/20 07:56 PM
L1126	4	L125 L126 L127	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1127	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1128	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1129	3	L129 L130	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1130	7	L128 or L131	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1131	0	L132 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1132	1	L132 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1133	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM

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		US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.					
L1134	4	L135 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1135	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1136	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1137	17	L137 L138	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1138	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1139	4	L138 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1140	7	L138 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1141	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1142	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1143	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

		20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L1144	17	L144 L145	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1145	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1146	4	L145 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1147	7	L145 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1148	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1149	627	L150 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1150	28	L150 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1151	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1152	33	L153 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1153	95	L153 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1154	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1155	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1156	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1157	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1158	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1159	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1160	16	L160 L161	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1161	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1162	1	L163 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1163	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1164	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

L1165	16	L165 L166	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1166	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1167	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1168	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1169	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1170	93	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1171	18	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1172	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1173	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1174	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1175	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1176	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1177	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1178	3	L178 L179	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1179	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1180	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1181	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/05/20 07:56 PM
L1182	4	L181 L182 L183	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1183	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

							07:56 PM
L1184	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1185	3	L185 L186	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1186	7	L184 or L187	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1187	0	L188 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1188	1	L188 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1189	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1190	4	L191 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1191	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1192	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1193	17	L193 L194	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1194	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1195	4	L194 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1196	7	L194 and (trans$1rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

		or rectal)					07:56 PM
L1197	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1198	627	L199 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1199	28	L199 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1200	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1201	33	L202 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1202	95	L202 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1203	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1204	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1205	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1206	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1207	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1208	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1209	16	L209 L210	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1210	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1211	1	L212 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1212	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1213	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1214	16	L214 L215	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1215	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1216	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1217	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1218	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1219	93	base$1line with score	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

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		with application with user					07:56 PM
L1220	18	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1221	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1222	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1223	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1224	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1225	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1226	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1227	3	L185 L186	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1228	15	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1229	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1230	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1231	17	L231 L232	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

							07:56 PM
L1232	4	L232 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1233	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1234	627	L235 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1235	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1236	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1237	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1238	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1239	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1240	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1241	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1242	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1243	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1244	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1245	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1246	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1247	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1248	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1249	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/05/20 07:56 PM
L1250	4	L249 L250 L251	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM

L1251	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1252	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1253	3	L253 L254	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1254	7	L252 or L255	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1255	0	L256 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1256	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1257	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1258	17	L258 L259	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1259	4	L259 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1260	81	(needle with (trans$1rectal or rectal)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1261	2	"15465148"	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1262	62	(needle with (trans$1rectal or rectal) with gauge)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1263	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1264	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

		5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.					
L1265	17	L267 L268	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1266	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1267	4	L268 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1268	7	L268 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1269	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1270	627	L273 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1271	28	L273 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1272	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1273	33	L276 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1274	95	L276 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1275	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1276	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1277	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1278	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1279	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1280	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1281	16	L283 L284	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1282	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1283	1	L286 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1284	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1285	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1286	16	L288 L289	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

							07:56 PM
L1287	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1288	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1289	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1290	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1291	93	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1292	18	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1293	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1294	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1295	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1296	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1297	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1298	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1299	3	L301 L302	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1300	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1301	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1302	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/05/20 07:56 PM
L1303	4	L304 L305 L306	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1304	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

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L1305	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1306	3	L308 L309	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1307	7	L307 or L310	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1308	0	L311 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1309	1	L311 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1310	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1311	4	L314 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1312	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1313	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1314	17	L316 L317	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1315	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1316	4	L317 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1317	7	L317 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

L1318	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1319	627	L322 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1320	28	L322 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1321	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1322	33	L325 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1323	95	L325 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1324	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1325	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1326	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1327	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1328	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1329	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1330	16	L332 L333	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1331	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1332	1	L335 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1333	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1334	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1335	16	L337 L338	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1336	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1337	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1338	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1339	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1340	93	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

L1341	18	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1342	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1343	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1344	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1345	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1346	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1347	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1348	3	L308 L309	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1349	15	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1350	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1351	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1352	17	L354 L355	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1353	4	L355 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

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							07:56 PM
L1354	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1355	627	L358 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1356	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1357	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1358	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1359	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1360	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1361	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1362	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1363	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1364	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1365	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1366	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1367	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1368	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1369	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1370	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/05/20 07:56 PM
L1371	4	L372 L373 L374	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1372	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

L1373	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1374	3	L376 L377	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1375	7	L375 or L378	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1376	0	L379 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1377	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1378	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1379	17	L381 L382	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1380	4	L382 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1381	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1382	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1383	17	L385 L386	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1384	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1385	4	L386 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

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L1386	7	L386 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1387	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1388	627	L391 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1389	28	L391 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1390	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1391	33	L394 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1392	95	L394 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1393	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1394	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1395	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1396	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1397	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1398	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1399	16	L401 L402	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1400	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1401	1	L404 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1402	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1403	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1404	16	L406 L407	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1405	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1406	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1407	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1408	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

L1409	93	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1410	18	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1411	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1412	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1413	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1414	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1415	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1416	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1417	3	L419 L420	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1418	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1419	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1420	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/05/20 07:56 PM
L1421	4	L422 L423 L424	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1422	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1423	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1424	3	L426 L427	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1425	7	L425 or L428	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1426	0	L429 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1427	1	L429 and (attach$3 with	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20

		(body or patient or subject))					07:56 PM
L1428	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1429	4	L432 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1430	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1431	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1432	17	L434 L435	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1433	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1434	4	L435 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1435	7	L435 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1436	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1437	627	L440 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1438	28	L440 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1439	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1440	33	L443 and ((mount) with	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

		needle)					07:56 PM
L1441	95	L443 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1442	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1443	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1444	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1445	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1446	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1447	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1448	16	L450 L451	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1449	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1450	1	L453 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1451	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1452	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1453	16	L455 L456	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1454	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1455	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1456	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1457	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1458	93	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1459	18	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1460	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1461	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM

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		A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.					
L1462	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1463	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1464	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1465	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1466	3	L426 L427	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1467	15	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1468	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1469	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1470	17	L472 L473	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1471	4	L473 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1472	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1473	627	L476 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1474	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1475	1869	(bar) and	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

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		((trans$1rectal or rectal) WITH PROBE)					07:56 PM
L1476	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1477	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1478	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1479	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1480	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1481	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1482	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1483	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1484	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1485	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1486	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1487	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1488	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/05/20 07:56 PM
L1489	4	L490 L491 L492	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1490	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1491	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1492	3	L494 L495	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1493	7	L493 or L496	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1494	0	L497 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM

L1495	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1496	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1497	17	L499 L500	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1498	4	L500 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1499	81	(needle with (trans$1rectal or rectal)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1500	2	"15465148"	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1501	62	(needle with (trans$1rectal or rectal) with gauge)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1502	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1503	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1504	17	L508 L509	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1505	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1506	4	L509 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

L1507	7	L509 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1508	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1509	627	L514 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1510	28	L514 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1511	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1512	33	L517 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1513	95	L517 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1514	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1515	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1516	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1517	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1518	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1519	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1520	16	L524 L525	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1521	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1522	1	L527 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1523	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1524	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1525	16	L529 L530	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1526	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1527	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1528	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1529	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

L1530	93	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1531	18	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1532	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1533	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1534	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1535	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1536	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1537	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1538	3	L542 L543	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1539	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1540	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1541	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/05/20 07:56 PM
L1542	4	L545 L546 L547	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1543	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1544	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1545	3	L549 L550	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1546	7	L548 or L551	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1547	0	L552 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1548	1	L552 and (attach$3 with	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20

		(body or patient or subject))					07:56 PM
L1549	13	(US-20150366544-$ or US-20150119715-$ or US-20140039314-$ or US-20110319759-$ or US-20110071380-$ or US-20090030339-$ or US-20080004481-$ or US-20120245455-$ or US-20050159676-$ or US-20070043291-$ or US-20040162458-$ or US-20030153850-$).did. or (US-5494039-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1550	4	L555 and (attach$3 with (body or patient or subject))	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1551	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1552	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1553	17	L557 L558	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1554	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1555	4	L558 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1556	7	L558 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1557	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1558	627	L563 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1559	28	L563 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1560	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1561	33	L566 and ((mount) with	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

		needle)					07:56 PM
L1562	95	L566 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1563	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1564	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1565	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1566	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1567	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1568	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1569	16	L573 L574	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1570	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1571	1	L576 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1572	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1573	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1574	16	L578 L579	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1575	1	"20140136607"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1576	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1577	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1578	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1579	93	base$1line with score with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1580	18	base$1line with rank$3 with application with user	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1581	2	(("8971995") or ("9408586")).PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1582	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM

		A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.					
L1583	20	(bar) with ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1584	3	(US-10743909-$ or US-10743910-$ or US-10743911-$).did.	(USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1585	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1586	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1587	3	L549 L550	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1588	15	((("ALLAWAY") near3 ("Matthew"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1589	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1590	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1591	17	L595 L596	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1592	4	L596 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1593	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1594	627	L599 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1595	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1596	1869	(bar) and	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20

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		((trans$1rectal or rectal) WITH PROBE)					07:56 PM
L1597	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1598	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1599	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1600	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1601	0	"20140136607" and baseline	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1602	0	"20140136607" and average	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1603	548	base$1line with score with application	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1604	41836	(A61B90/39 or A61B8/0841 or A61B8/12 or A61B10/0241 or A61B10/04 or A61B17/3403 or A61B18/02 or A61B18/12 or A61B2017/00274 or A61B2018/00547 or A61B2017/00477 or A61B2010/045 or A61B2017/3413).cpc.	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1605	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1606	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1607	2	"20040167542"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1608	1	"20090292224"	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1609	1	("5494039").PN.	(USPAT; USOCR)	OR	OFF	OFF	2022/05/20 07:56 PM
L1610	4	L613 L614 L615	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1611	2	"20090093715"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1612	1	"20060241477"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1613	3	L617 L618	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1614	7	L616 or L619	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM
L1615	0	L620 and (attach$3 with skin)	(US-PGPUB; USPAT)	OR	OFF	OFF	2022/05/20 07:56 PM

L1616	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1617	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1618	17	L622 L623	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1619	4	L623 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1620	2	"20160022309"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1621	15	(US-0031721-$ | US-0176759-$ | US-0220444-$ | US-0221453-$ | US-0245455-$ | US-0310680-$ | US-20030176759-$ | US-20040031721-$ | US-20040220444-$ | US-20080221453-$ | US-20120245455-$ | US-20130310680-$ | US-5494039-$ | US-5931786-$ | US-52704752-$ | US-8403842-$).DID.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1622	17	L626 L627	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1623	15	"14677286"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1624	4	L627 and rectal	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1625	7	L627 and (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1626	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1627	627	L632 and (lower with upper)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1628	28	L632 and ((lower with upper) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

L1629	2202	needle with (trans$1rectal or rectal)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1630	33	L635 and ((mount) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1631	95	L635 and ((holder) with needle)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1632	2	"20140059703"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1633	1	((stable or stablization) near2 bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1634	1869	(bar) and ((trans$1rectal or rectal) WITH PROBE)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1635	327	needle with (trans$1rectal or rectal) with probe	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1636	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1637	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1638	16	L642 L643	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1639	1	("9326189").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1640	1	L645 and (user near2 behavior)	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1641	1	("5494039").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM
L1642	15	"20030153850"	(US-PGPUB; USPAT)	OR	ON	ON	2022/05/20 07:56 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/698,641	03/18/2022	Matthew J. ALLAWAY	083003-722509	9971

24030 7590 04/27/2022

POLSINELLI PC
PO Box 140310
KANSAS CITY, MO 64114-0310

EXAMINER
CENTRAL, DOCKET

ART UNIT	PAPER NUMBER
3793	

NOTIFICATION DATE	DELIVERY MODE
04/27/2022	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspt@polsinelli.com

Decision Granting Request for Prioritized Examination (Track I)	**Application No.** 17/698,641	**Applicant(s)** ALLAWAY, Matthew J.	
	Examiner CHERYL P GIBSON BAYLOR	**Art Unit** OPET	**AIA (FITF) Status** Yes

1. THE REQUEST FILED 18 March 2022 IS **GRANTED** .

The above-identified application has met the requirements for prioritized examination
- A. ☑ for an original nonprovisional application (Track I).
- B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination**. The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:
   - A. filing a **petition for extension of time** to extend the time period for filing a reply;
   - B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims** , or a multiple dependent claim;
   - C. filing a **request for continued examination** ;
   - D. filing a notice of appeal;
   - E. filing a request for suspension of action;
   - F. mailing of a notice of allowance;
   - G. mailing of a final Office action;
   - H. completion of examination as defined in 37 CFR 41.102; or
   - I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to CHERYL GIBSON BAYLOR at (571)272-3213. In his/her absence, calls may be directed to Petition Help Desk at (571) 272-3282.

/CHERYL GIBSON BAYLOR/ Paralegal Specialist, OPET	

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 17/698,641

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	80		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	350		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	400		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	24 minus 20 =	* 4	x 50 =	200	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 minus 3 =	*	x 240 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	1030		TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

CORBIN_CLINICAL-002242

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
17/698,641	03/18/2022		1030	083003-722509	24	2

CONFIRMATION NO. 9971

24030
POLSINELLI PC
PO Box 140310
KANSAS CITY, MO 64114-0310

FILING RECEIPT

OC000000132868877

Date Mailed: 03/24/2022

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Matthew J. ALLAWAY, Cumberland, MD;

Applicant(s)

Corbin Clinical Resources, LLC, Cumberland, MD;

Assignment For Published Patent Application

Corbin Clinical Resources, LLC, Cumberland, MD

Power of Attorney: The patent practitioners associated with Customer Number 24030

Domestic Priority data as claimed by applicant

This application is a CON of 17/494,962 10/06/2021
which is a CIP of 17/314,845 05/07/2021 PAT 11246677
which is a CON of 16/115,180 08/28/2018 PAT 11096762
which is a CON of 14/677,286 04/02/2015 PAT 10064681
which claims benefit of 61/974,826 04/03/2014
and said 17/494,962 10/06/2021
is a CIP of 16/991,150 08/12/2020
which is a CON of 14/874,104 10/02/2015 PAT 10743909
which is a CIP of 14/677,286 04/02/2015 PAT 10064681
which claims benefit of 61/974,826 04/03/2014

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.

CORBIN_CLINICAL-002243

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 03/23/2022

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/698,641**

Projected Publication Date: 06/30/2022

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****
Title

TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign

Advance Medical Designs, Inc. - EX1002
Advance Medical Designs v. Corbin Clinical Resources, PGR2023-00041
Page 317 of 429

patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

Doc Code: TRACK1.REQ
Document Description: TrackOne Request

PTO/AIA/424 (04-14)

CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION UNDER 37 CFR 1.102(e) (Page 1 of 1)

First Named Inventor:	Matthew J. ALLAWAY	Nonprovisional Application Number (if known):	
Title of Invention:	TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently $0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.

2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.

3. The applicable box is checked below:

I. ☑ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.

---OR---

(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.

ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, **or** the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

i. A request for continued examination has been filed with, or prior to, this form.
ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /Joshua J. Pranckun/	Date 03/18/2022
Name (Print/Typed) Joshua J. Pranckun	Practitioner Registration Number 70712

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.**

☐ *Total of _____ forms are submitted.

CORBIN_CLINICAL-002247

PTO/AIA/15 (10-17)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	083003-722509
First Named Inventor	Matthew J. Allaway
Title	TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF US
Priority Mail Express® Label No.	

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☐ **Fee Transmittal Form** (PTO/SB/17 or equivalent)
2. ☑ **Applicant asserts small entity status.** See 37 CFR 1.27
3. ☐ **Applicant certifies micro entity status.** See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.
4. ☑ **Specification** [*Total Pages* 59] Both the claims and abstract must start on a new page. *(See MPEP § 608.01(a) for information on the preferred arrangement)*
5. ☑ **Drawing(s)** (35 U.S.C. 113) [*Total Sheets* 31]
6. **Inventor's Oath or Declaration** [*Total Pages* 1] *(including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))*
   a. ☐ Newly executed (original or copy)
   b. ☑ A copy from a prior application (37 CFR 1.63(d))
7. ☑ **Application Data Sheet** ** See note below.* See 37 CFR 1.76 (PTO/AIA/14 or equivalent)
8. **CD-ROM or CD-R** in duplicate, large table, or Computer Program (*Appendix*)
   ☐ Landscape Table on CD
9. **Nucleotide and/or Amino Acid Sequence Submission** (*if applicable, items a. – c. are required*)
   a. ☐ Computer Readable Form (CRF)
   b. ☐ Specification Sequence Listing on:
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ Paper
   c. ☐ Statements verifying identity of above copies

ADDRESS TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**

ACCOMPANYING APPLICATION PAPERS

10. ☑ **Assignment Papers** (cover sheet & document(s)) Name of Assignee Corbin Clinical Resources, LLC
11. ☐ **37 CFR 3.73(c) Statement** (*when there is an assignee*) ☑ **Power of Attorney**
12. ☐ **English Translation Document** (*if applicable*)
13. ☐ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    ☐ Copies of citations attached
14. ☐ **Preliminary Amendment**
15. ☐ **Return Receipt Postcard** (*MPEP § 503*) (*Should be specifically itemized*)
16. ☐ **Certified Copy of Priority Document(s)** (*if foreign priority is claimed*)
17. ☐ **Nonpublication Request** Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
18. ☑ **Other:** Track One Request for Prioritized Examination

***Note**: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).
(2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS

☑ The address associated with Customer Number: 24030 **OR** ☐ Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email	

Signature	/Joshua J. Pranckun/	Date	03/18/2022
Name (Print/Type)	Joshua J. Pranckun	Registration No. (Attorney/Agent)	70712

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

CORBIN_CLINICAL-002248

PTO/AIA/01 (06-12)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	METHOD, SYSTEM, AND DEVICE FOR PLANNING AND PERFORMING, GUIDED AND FREE-HANDED TRANSPERINEAL PROSTATE BIOPSIES

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [■] The attached application, or
- [ ] United States application or PCT international application number _____

filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Matthew J. Allaway Date (Optional): 8/28/18

Signature: /Matthew Allaway/

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal	
Application Number:	
Filing Date:	
Title of Invention:	TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE
First Named Inventor/Applicant Name:	Matthew J. ALLAWAY
Filer:	Joshua Pranckun/Donna Carrera
Attorney Docket Number:	083003-722509
Filed as Small Entity	

Filing Fees for Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	80	80
UTILITY SEARCH FEE	2111	1	350	350
UTILITY EXAMINATION FEE	2311	1	400	400
REQUEST FOR PRIORITIZED EXAMINATION	2817	1	2100	2100
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	2202	4	50	200
Miscellaneous-Filing:				

CORBIN_CLINICAL-002250

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
PROCESSING FEE, EXCEPT PROV. APPLS.	2830	1	70	70
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**3200**

Electronic Acknowledgement Receipt	
EFS ID:	45260824
Application Number:	17698641
International Application Number:	
Confirmation Number:	9971
Title of Invention:	TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE
First Named Inventor/Applicant Name:	Matthew J. ALLAWAY
Customer Number:	24030
Filer:	Joshua Pranckun/Donna Carrera
Filer Authorized By:	Joshua Pranckun
Attorney Docket Number:	083003-722509
Receipt Date:	18-MAR-2022
Filing Date:	
Time Stamp:	16:36:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$3200
RAM confirmation Number	E20223HG37264435
Deposit Account	501662
Authorized User	Donna Carrera
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	**CORBIN_CLINICAL-002252**

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	WebADS.pdf	208310 94e7a45870c088545b24e1c8e7e40c9dfed43b2f	no	8
Warnings:					
Information:					
2		722509_CON_Specification_asfiled_3-18-22.pdf	391024 563c135dad11a49c893ff71cc6f8a404b269feb8	yes	59
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Specification		1	54	
	Claims		55	58	
	Abstract		59	59	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	722509_Figures.pdf	6405546 5b9cb181e509264d0165c34fb4e65e33f65dd89d	no	31
Warnings:					
Information:					
4	Track One Request	722509_Track1_Request.pdf	71277 e98a087b147fb0847c3e9d4848be70fe49576ff3	no	1
Warnings:					
Information:					
5	Transmittal of New Application	722509_Transmittal_Letter.pdf	114920 6bf20c329f976c3a1cb3b91b00f16df8b5dd1f3f	no	1

CORBIN_CLINICAL-002253

Warnings:					
Information:					
6	Oath or Declaration filed	722509_Declaration_signed.pdf	571614 557587ad9e1b39e39dcf2cdd882fc2f764486545	no	1
Warnings:					
Information:					
7	Fee Worksheet (SB06)	fee-info.pdf	53248 49ba3f1a7bc50e1bb86f96230abedf47b6d777b8	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	7815939		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
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If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	083003-722509
	Application Number	
Title of Invention	TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
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Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

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Postal Code	21502	Country i	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	24030		
Email Address	uspt@polsinelli.com	Add Email	Remove Email

Application Information:

Title of the Invention	TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE		
Attorney Docket Number	083003-722509	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	31	Suggested Figure for Publication (if any)	8

CORBIN_CLINICAL-002255

WEB ADS 1.0

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	083003-722509
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Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	083003-722509
	Application Number	
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Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	17494962	2021-10-06

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17494962	Continuation in part of	17314845	2021-05-07	11246677	2022-02-15

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17314845	Continuation of	16115180	2018-08-28	11096762	2021-08-24

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16115180	Continuation of	14677286	2015-04-02	10064681	2018-09-04

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
14677286	Claims benefit of provisional	61974826	2014-04-03

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
17494962	Continuation in part of	16991150	2020-08-12

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16991150	Continuation of	14874104	2015-10-02	10743909	2020-08-18

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	083003-722509
	Application Number	
Title of Invention	TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE	

Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14874104	Continuation in part of	14677286	2015-04-02	10064681	2018-09-04

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
14677286	Claims benefit of provisional	61974826	2014-04-03

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Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

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Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	083003-722509
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Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	083003-722509
	Application Number	
Title of Invention	TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

◉ Assignee	○ Legal Representative under 35 U.S.C. 117	○ Joint Inventor
○ Person to whom the inventor is obligated to assign.	○ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	Corbin Clinical Resources, LLC

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Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	083003-722509
	Application Number	
Title of Invention	TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE	

Assignee Information including Non-Applicant Assignee Information:

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Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☒

Organization Name	Corbin Clinical Resources, LLC

Mailing Address Information For Assignee including Non-Applicant Assignee:

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City	Cumberland	**State/Province**	MD
Country i	US	Postal Code	21502
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	083003-722509
	Application Number	
Title of Invention	TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE	

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e. g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Joshua J. Pranckun/			Date (YYYY-MM-DD)	
First Name	Joshua	Last Name	Pranckun	Registration Number	70712

Additional Signature may be generated within this form by selecting the Add button.

TRANSPERINEAL PROSTATE BIOPSY DEVICE, SYSTEMS, AND METHODS OF USE

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present application is a continuation of U.S. Application No. 17/494,962 filed October 6, 2021, which application is a continuation-in-part of U.S. Application No. 17/314,845 filed May 7, 2021, now U.S. Patent No. 11,246,677, which application is a continuation of U.S. Application No. 16/115,180 filed August 28, 2018, now U.S. Patent No. 11,096,762, which application is a continuation of U.S. Application No. 14/677,286 filed April 2, 2015, now U.S. Patent No. 10,064,681, which claims priority under 35 U.S.C. § 119 to U.S. Provisional Patent Application No. 61/974,826 filed April 3, 2014.

[0002] Application No. 17/494,962 is also a continuation-in-part of U.S. Application No. 16/991,150 filed August 12, 2020, which application is a continuation of U.S. Application No. 14/874,104 filed October 2, 2015, now Patent No. 10,743,909, which application is a continuation-in-part of U.S. Patent Application No. 14/677,286 filed April 2, 2015, now U.S. Patent No. 10,064,681, which claims priority under 35 U.S.C. § 119 to U.S. Provisional Patent Application No. 61/974,826 filed April 3, 2014.

[0003] All the above-referenced applications are hereby incorporated by reference in their entireties.

TECHNICAL FIELD

[0004] Aspects of the present disclosure relates to biopsy procedures and systems. In particular, the disclosure relates to methods, systems, and apparatus useful for planning and performing guided and free-handed transperineal prostate biopsies.

BACKGROUND

[0005] A biopsy is a medical procedure that involves sampling and removing tissues or cells from a living body for further examination and analysis. A prostate biopsy may be performed by a care provider for diagnosis and treatment of a patient's prostate. For example, the vast majority of patients with an abnormal prostate specific antigen (PSA) or suspicious results from a digital rectal examination (DRE) undergo biopsy. Typical biopsy procedures include transrectal ultrasound-guided (TRUS) biopsies and transperineal ultrasound-guided (TPUS) biopsies.

[0006] TRUS involves obtaining tissue or cell specimens by passing a biopsy needle or other biopsy instruments through the rectal wall and into the prostate at various locations using a sagittal imaging plane. The biopsy needle or other biopsy instruments may be guided by ultrasound in a sagittal plane. There are disadvantages associated with TRUS. In particular, the patient may be required to take antibiotics prior to the procedure to reduce the risk of infections. Also, TRUS requires the patient to perform bowel preparation, which is a procedure usually undertaken before the biopsy, for cleansing the intestines of fecal matter and secretions. Further, the passage of the biopsy needle through the rectal wall may introduce bacteria from the rectum into the prostate, such as coliform bacteria that may lead to an infection or other complications. Additionally, many clinically significant prostate cancers are found in locations of the prostate that are often too difficult to access when using the transrectal approach.

[0007] TPUS includes obtaining tissue or cells specimens by passing one or more biopsy needles through the perineum and into the prostate. TRUS has been favored over TPUS. Unlike TRUS, TPUS does not require a patient to take antibiotics prior to the procedure or to undergo the bowel preparation for lowering the risk of bacterial issues. Further, TPUS uses a more effective route to access the prostate and is capable of accessing target locations that may be difficult to access utilizing the transrectal approach in comparison with TRUS. In addition, the needle does not pass through the rectal wall which eliminates the risk associated with TRUS of coliform bacteria entering the prostate or the bloodstream.

[0008] Systems configured for TPUS include a biopsy grid that may be fixed to, for example, a floor, platform, or table on which the patient receiving the biopsy lies. The biopsy grid may provide multiple apertures through which a biopsy needle or other biopsy instruments may be

inserted. An ultrasound probe is fixed directly to the apparatus and is used to axially guide the biopsy needle or other instruments, for example other biopsy instruments. Thus, TPUS systems require imaging in an axial plane of the ultrasound or a transverse transducer for positioning the biopsy needle.

[0009] It is with these observations in mind, among others, that various aspects of the present disclosure were conceived and developed.

SUMMARY

[0010] Aspects of the present disclosure involve a biopsy guide configured to couple with a transrectal probe and for use in guiding an access needle in a transperineal prostate biopsy procedure. The access needle may be configured to perforate and be positioned within subcutaneous tissue of a perineum at an access site of a target area of a patient. The biopsy guide may include a guide member and a displacement member supported by the guide member. The guide member may be configured to operably couple with the transrectal probe and including a distal end, a proximal end opposite the distal end, and a length extending along a longitudinal axis between the distal and proximal ends. The displacement member may be configured to support the access needle and displace the access needle along at least a portion of the length of the guide member between the distal and proximal ends. The access needle may be configured to extend into the subcutaneous tissue when the access needle is displaced to the distal end.

[0011] In certain embodiments, the biopsy guide may further include the access needle.

[0012] In certain embodiments, the biopsy guide may further include the transrectal probe.

[0013] In certain embodiments, the displacement member may be configured to displace along the at least a portion of the length of the guide member between the distal and proximal ends. In certain embodiments, the guide member may include a guide rail extending at least a portion of the length between the distal and proximal ends, and the displacement member may include a coupling mechanism to releasably couple with the guide member. In certain embodiments, the displacement member may be configured to displace relative to the guide member via interaction of the coupling mechanism and the guide rail.

[0014] In certain embodiments, the displacement member may be configured to slidingly displace relative to the guide member via interaction of the coupling mechanism and the guide rail.

[0015] In certain embodiments, the guide rail may include a first guide rail and a second guide rail opposed to the first guide rail, the displacement member releasably coupled between the first and the second guide rails.

[0016] In certain embodiments, the coupling mechanism may include: first upper and lower members which may be configured to sandwich the first guide rail; and second upper and lower members which may be configured to sandwich the second guide rail.

[0017] In certain embodiments, the coupling mechanism may include upper and lower members which may be configured to sandwich the guide rail.

[0018] In certain embodiments, the displacement member may include a plurality of needle receiving ports for positioning the access needle in a plurality of orientations relative to the transrectal probe. In certain embodiments, each of the plurality of needle receiving ports may be configured to align the access needle parallel with a longitudinal axis of the transrectal probe. In certain embodiments, the plurality of needle receiving ports may include five needle receiving ports.

[0019] In certain embodiments, the biopsy guide may include a lower mount releasably coupled to the guide member and including a probe coupling mechanism for releasably coupling with the transrectal probe.

[0020] In certain embodiments, the probe coupling mechanism extends at least partially around the transrectal probe, wherein the guide rail extends distally beyond the probe coupling mechanism.

[0021] In certain embodiments, the probe coupling mechanism extends at least partially around the transrectal probe, wherein the displacement member may be configured to distally displace beyond the probe coupling mechanism.

[0022] In certain embodiments, the guide member may include a slot extending a first length between the distal and proximal ends, the displacement member including a rail member may be

configured to be received within the slot such that the displacement member is displaceable along the at least a portion of the length of the guide member between the distal and proximal ends. In certain embodiments, a longitudinal axis of the slot is generally parallel with a longitudinal axis of the transrectal probe when the guide member is secured to the transrectal probe. In certain embodiments, interaction between the slot and the rail member constrains lateral movement of the displacement member relative to the guide member. In certain embodiments, interaction between the slot and the rail member constrains the vertical tilting of the displacement member relative to the guide member. In certain embodiments, the displacement member may include a plurality of needle receiving ports oriented vertically or in a single plane relative to each other. In certain embodiments, the guide member may include a pair of guide rails, the displacement member may be configured to displace between the pair of guide rails.

[0023] In certain embodiments, the access needle may extend beyond the distal end of the guide member when the access needle is displaced to the distal end. In certain embodiments, the access needle may be configured to be locked into position at the distal end.

[0024] Aspects of the present disclosure may also involve a biopsy guide which may be configured to couple with a transrectal probe and for use in guiding an access needle in a transperineal prostate biopsy procedure. The access needle may be configured to perforate and be positioned within subcutaneous tissue of a perineum at an access site of a target area of a patient. The biopsy guide may include a guide member and a displacement member. The guide member may be configured to operably couple with the transrectal probe and may include a distal end, a proximal end opposite the distal end, and a length between the distal and proximal ends. The displacement member may be supported by the guide member and may be configured to support and displace the access needle along at least a portion of the length of the guide member between the distal and proximal ends while maintaining a fixed trajectory of the access needle.

[0025] In certain embodiments, may include the transrectal probe.

[0026] In certain embodiments, may include the access needle.

[0027] In certain embodiments, the displacement member may slidingly couple with the guide member via a coupling mechanism such that the displacement member is displaceable relative to the guide member. In certain embodiments, the guide member may include a first rail member, and the coupling mechanism may include upper and lower members that sandwich the first rail member. In certain embodiments, the guide member may further include a second rail member opposite the first rail member, the upper and lower members sandwiching the second rail member. In certain embodiments, the fixed trajectory is generally parallel to a longitudinal axis of the transrectal probe. In certain embodiments, the guide member may include a pair of guide rails extending the length, and the displacement member may be positioned between the pair of guide rails and slidingly couple with the pair of guide rails via a coupling mechanism. In certain embodiments, the coupling mechanism may include upper and lower members that sandwich each of the pair of guide rails.

[0028] In certain embodiments, the guide member may include a sheath in which the probe resides when the guide member is operably coupled with the transrectal probe.

[0029] In certain embodiments, the biopsy guide further includes a mechanical arrangement between the guide member and the displacement member that at least facilitates the displacement of the access needle along the at least a portion of the length of the guide member, wherein the mechanical arrangement may include at least one of a sliding arrangement, a lead screw, or a parallel bar linkage.

[0030] In certain embodiments, the guide member operably couples with the transrectal probe via at least one of a sheath arrangement, a ratchet arrangement, a biased collar arrangement, a flexible strap arrangement, a clamping arrangement, or a clamshell collar arrangement.

[0031] Aspects of the present disclosure also involve a biopsy guide which may be configured to couple with a transrectal probe and for use in guiding an access needle in a transperineal prostate biopsy procedure. The access needle may be configured to perforate and be positioned within subcutaneous tissue of a perineum at an access site of a target area of a patient. The transrectal probe may include a distal end, a proximal end opposite the distal end, and a longitudinal axis between the distal and proximal ends. The biopsy guide may include a

displacement member which may be configured to be operably coupled with the transrectal probe and to support and displace the access needle along at least a portion of the transrectal probe. The displacement of the access needle may be along a trajectory that is parallel to the longitudinal axis of the transrectal probe.

[0032] In certain embodiments, the biopsy guide may further include a guide member operably coupled to the displacement member and by which the displacement member is operably coupled with the transrectal probe.

[0033] In certain embodiments, at least a portion of the displacement member displaces relative to the guide member when the access needle is displaced along the trajectory that is parallel to the longitudinal axis of the transrectal probe.

[0034] In certain embodiments, the biopsy guide may further include a mechanical arrangement between the guide member and the displacement member that at least facilitates the displacement of the access needle along the trajectory that is parallel to the longitudinal axis of the transrectal probe, wherein the mechanical arrangement may include at least one of a sliding arrangement, a lead screw, or a parallel bar linkage.

[0035] In certain embodiments, the guide member may operably couple with the transrectal probe via at least one of a sheath arrangement, a ratchet arrangement, a biased collar arrangement, a flexible strap arrangement, a clamping arrangement, or a clamshell collar arrangement.

[0036] In certain embodiments, the biopsy guide may further include a mechanical interface by which the displacement member is operably coupled with the transrectal probe and by which the displacement member displaces the access needle along the trajectory that is parallel to the longitudinal axis of the transrectal probe. In certain embodiments, the mechanical interface may include at least one of a sliding arrangement directly between the transrectal probe and the displacement member or a rolling arrangement directly between the transrectal probe and the displacement member.

[0037] In certain embodiments, the biopsy guide may further include the transrectal probe and wherein the transrectal probe may include a first portion of the sliding arrangement and the

displacement member may include a second portion of the sliding arrangement directly engaged in sliding contact with the first portion. In certain embodiments, at least one of the first portion or second portion comprises a slot, a rail, or a bar.

[0038] In certain embodiments, the biopsy guide may further include the transrectal probe and wherein the sliding arrangement may include at least a portion of the displacement member being in direct sliding contact with an exterior surface of the transrectal probe.

[0039] In certain embodiments, the biopsy guide may further include the transrectal probe and wherein the rolling arrangement may include a roller bearing arrangement supported on the displacement member being in direct rolling contact with an exterior surface of the transrectal probe.

[0040] Related art systems and prostate biopsy TPUS methods do not allow free-hand movement of the ultrasound probe, and heavily rely on the axial ultrasound plane to confirm positioning of the biopsy needle or other instruments. Moreover, such systems and methods include extracting prostate tissue specimens by delivering separate punctures into the transperineal tissue. Also, a care provider executing TPUS procedure using related art systems may experience substantial difficulty in freely handling and positioning a biopsy needle at a desired target location of the prostate relying on the sagittal plane in using the TRUS methods.

[0041] An apparatus in accordance with an embodiment may include an upper mount and a lower mount. The lower mount may be configured to connect with the upper mount to secure a transrectal probe therebetween. The upper mount may be configured to support an access needle, the access needle configured for perforation of subcutaneous tissue of a perineum at an access site of a target area of a patient. The upper mount may be configured to guide the access needle whereby movement of the access needle is fixed relative to movement of the transrectal probe.

[0042] A system in accordance with an embodiment may include a biopsy guide and a transrectal transducer fixed to the biopsy guide. The biopsy guide may be configured to guide an access needle to perforate an access site in subcutaneous tissue of a perineum, whereby movement of the access needle is fixed relative to a movement of the transrectal transducer.

[0043] A method of performing a prostate biopsy in accordance with an embodiment may include imaging a prostate in an axial plane and a sagittal plane with a transducer providing a real-time image, locating a target area of the prostate, and positioning an access needle and an access site in subcutaneous tissue of a perineum wherein the access site is at a midpoint between a lateral edge of the prostate and a urethra along a first axis and a midpoint between an anterior capsule and a posterior capsule along a second axis. The method may include guiding a biopsy instrument along a sagittal plane to the target using the real-time image, and obtaining one or more specimens of the prostate through the access needle with a biopsy instrument.

[0044] Accordingly, there is a demand for transperineal biopsy methods, systems, and apparatus that enables a biopsy that is less burdensome for the patient and for the practitioner performing the biopsy, increased guidance of needle or other biopsy instruments, and with a higher rate of efficacy and lower rate of health risk than related art TPUS and TRUS systems and methods. Apparatus, systems, and methods disclosed herein satisfy these demands.

[0045] Other implementations are also described and recited herein. Further, while multiple implementations are disclosed, still other implementations of the presently disclosed technology will become apparent to those skilled in the art from the following detailed description, which shows and describes illustrative implementations of the presently disclosed technology. As will be realized, the presently disclosed technology is capable of modifications in various aspects, all without departing from the spirit and scope of the presently disclosed technology. Accordingly, the drawings and detailed description are to be regarded as illustrative in nature and not limiting.

BRIEF DESCRIPTION OF THE DRAWINGS

[0046] FIG. 1 shows a side view of a guide secured to a probe in accordance with an embodiment;

[0047] FIG. 2A shows an internal view of a guide fastener in accordance with an embodiment;

[0048] FIG. 2B shows a sheath-based guide fastener in accordance with an embodiment;

[0049] FIG. 2C shows a zip-tie-based guide fastener in accordance with an embodiment;

[0050] FIG. 3 shows a top view of a guide secured to a probe in accordance with an embodiment;

[0051] FIG. 4 shows a cross-sectional view of the back of a guide secured to a probe in accordance with an embodiment.

[0052] FIG. 5 shows a magnified view of a guide secured to a probe in accordance with an embodiment;

[0053] FIG. 6 is a magnified top view of a guide fastener in accordance with an embodiment;

[0054] FIG. 7 is a magnified view of a guide in accordance with an embodiment;

[0055] FIG. 8 is a side view of a biopsy instrument that has penetrated the prostate in accordance with an embodiment;

[0056] FIG. 9 is a front view of a designated area of the prostate where a biopsy instrument will penetrate in accordance with an embodiment;

[0057] FIG. 10 is a side view of a biopsy instrument penetrating the prostate in accordance with an embodiment;

[0058] FIG. 11 is a front view of a designated area of the prostate where a biopsy instrument will penetrate with areas in which the cell or tissue specimen has already been extracted in accordance with an embodiment;

[0059] FIG. 12 is a top view of a biopsy instrument that has penetrated the prostate in accordance with an embodiment;

[0060] FIG. 13 is a side view of a prostate and the path of the biopsy instrument;

[0061] FIG. 14 is a front view of a guide positioned at a designated area of the prostate in accordance with an embodiment;

[0062] FIG. 15 is a side view of a guide positioned at a designated area of the prostate in accordance with an embodiment;

[0063] FIG. 16 is a front view of a guide positioned at another designated area of the prostate in accordance with an embodiment;

[0064] FIG. 17 is a side view of a guide positioned at another designated area of the prostate;

[0065] FIG. 18 is a front view of a guide positioned at a higher designated area of the prostate, according to one embodiment;

[0066] FIG. 19 is a right side view of a guide positioned at a higher designated area of the prostate in comparison with that shown in FIGS. 14-17 in accordance with an embodiment;

[0067] FIG. 20 is a side view of a guide and a biopsy instrument firmly penetrating a fat plane and perineum skin of a patient in accordance with an embodiment;

[0068] FIG. 21 is a view of an access needle positioned at the access site in accordance with an embodiment;

[0069] FIG. 22 is a magnified view of the right side of a prostate and a biopsy instrument in accordance with an embodiment;

[0070] FIG. 23 is an image of the front side of a prostate and a biopsy instrument being retrieved from the prostate, and other targeted areas in accordance with an embodiment;

[0071] FIG. 24 shows a method for performing a prostate biopsy in accordance with an embodiment;

[0072] FIG. 25 is an ultrasound image showing a transducer, access needle path extending from an access point at a perineal site to a prostate, and a prostate;

[0073] FIGs. 26A-26C show side views of a guide configured with a pivoting mount in accordance with an embodiment;

[0074] FIG. 27 is an isometric front view of another embodiment of a biopsy guide;

[0075] FIG. 28 is a front view of the biopsy guide of FIG. 27;

[0076] FIG. 29 is a side view of the biopsy guide of FIG. 27;

[0077] FIG. 30 is an isometric front exploded view of the biopsy guide of FIG. 27;

[0078] FIG. 31A is a front isometric view of the upper mount of the biopsy guide;

[0079] FIG. 31B is a front view of the upper mount of the biopsy guide;

[0080] FIG. 31C is a back view of the upper mount of the biopsy guide;

[0081] FIG. 31D is a side view of the upper mount of the biopsy guide;

[0082] FIG. 31E is a bottom view of the upper mount of the biopsy guide;

[0083] FIG. 31F is a top view of the upper mount of the biopsy guide;

[0084] FIG. 32A is a front isometric view of the displacement member of the biopsy guide;

[0085] FIG. 32B is a front view of the displacement member;

[0086] FIG. 32C is a back view of the displacement member;

[0087] FIG. 33A is an isometric front view of the lower mount of the biopsy guide;

[0088] FIG. 33B is a front view of the lower mount;

[0089] FIG. 34 is front isometric view of an access needle;

[0090] FIG. 35A is a front isometric view of the lower mount;

[0091] FIG. 35B is a front isometric view of the lower mount coupled with the upper mount;

[0092] FIG. 35C is a front isometric view of the lower mount coupled with the upper mount and the sliding platform engaging with the rails of the upper mount;

[0093] FIG. 35D is a front isometric view of the assembly of FIG. 35C with an access needle supported by the sliding platform;

[0094] FIG. 36 is a front view of another embodiment of the displacement member;

[0095] FIG. 37A is an isometric front view of another embodiment of the biopsy guide;

[0096] FIG. 37B is an isometric front exploded view of the upper mount of the biopsy guide of FIG. 37A;

[0097] FIG. 37C is an isometric back exploded view of the upper mount of the biopsy guide of FIG. 37A;

[0098] FIG. 37D is a front view of the upper mount of the biopsy guide;

[0099] FIG. 37E is a front isometric view of the displacement member of the biopsy guide;

[00100] FIG. 37F is a front view of the displacement member;

[00101] FIG. 37G is a side view of another embodiment of the displacement member with the access needle partially positioned within the top needle receiving port of the vertically extending member;

[00102] FIG. 37H is a front isometric view of another embodiment of the a biopsy guide;

[00103] FIG. 37I is a side view of the biopsy guide of FIG. 37H showing the platform member in various positions relative to the probe;

[00104] FIG. 37J is a front isometric view of another embodiment of an upper mount;

[00105] FIG. 37K is a front view of another embodiment of a biopsy guide;

[00106] FIG. 37L is a side view of the biopsy guide of FIG. 37K;

[00107] FIG. 37M is a front isometric view of another embodiment of a biopsy guide;

[00108] FIG. 37N is a front view of the biopsy guide of FIG. 37M;

[00109] FIG. 37O is a front isometric view of a cinch strap;

[00110] FIG. 37P is a front isometric view of a V-block insert;

[00111] FIG. 37Q is a front view of the biopsy guide of FIG. 37M with a V-block insert of FIG. 37P;

[00112] FIG. 37R is a front isometric view of another embodiment of a biopsy guide;

[00113] FIG. 37S is a front view of the biopsy guide of FIG. 37R;

[00114] FIG. 37T is a front isometric view of another embodiment of a biopsy guide;

[00115] FIG. 37U is a front view of the biopsy guide of FIG. 37T;

[00116] FIG. 37V is a front view of another embodiment of a lower mount;

[00117] FIG. 37W is an isometric front view of another embodiment of a lower mount;

[00118] FIG. 37X is a front view of another embodiment of a lower mount;

[00119] FIG. 38A is a transverse plane or slice view of a prostate depicting the urethra and an access site for penetration of the access needle;

[00120] FIG. 38B is a sagittal plane or slice view of the prostate depicting the urethra and an access site for penetration of the access needle;

[00121] FIG. 38C is the same transverse plane or slice view as FIG. 38A, but including a marking device positioned within the urethra for biopsy navigation; and

[00122] FIG. 38D is the same sagittal plane or slice view as FIG. 38B, but including a marking device positioned within the urethra for biopsy navigation.

DETAILED DESCRIPTION

[00123] The apparatus, systems, and methods provided herein enable real-time visualization, free-handed, guided, and multi-sample transperineal methods for performing a biopsy. The methods, systems, and apparatus provided herein also enable a complete biopsy of the prostate with only one perforation, or with minimal perforations of a patient's skin by way of an initial access site, such that the access needle is freely moveable. The biopsy guide may be placed on or fitted to an assortment of ultrasound probes of different sizes and shapes due to an adjustable mounting system. The guide may be configured to fit to the probe using any suitably configured fastening system. For example, the guide may be configured as a sleeve that is formed to slide over an end of a probe and into an operable position. Alternatively, the guide may be configured to fit to a probe using screws, flanges, zip ties, or other temporary, permanent, or semi-permanent fastening systems.

[00124] In one embodiment, the guide allows biopsies of one or more tissue or cell samples to be obtained through an initial access needle, while providing direct, real-time ultrasound visualization by, for instance, fixing a position of the access needle relative to an ultrasound probe to provide. For example, the guide is fixed to an ultrasound probe that is not fixed and may be freely moveable in operation. Stabilization bars that are built into the guide facilitate the positioning and holding of the perineal skin and subcutaneous tissue to allow positioning of the access needle. The position of the access needle is facilitated by locking the access needle into the subcutaneous tissue of the perineum using a sliding platform that allows a user, such as a medical practitioner or patient caregiver, to place the access needle along a sagittal transducer plane at optimal positions for obtaining prostate biopsies. In some embodiments, upon placement of the access needle into a locked position, for example, in the pelvic floor, a user may then pass a biopsy needle through the access needle to a desired location of the prostate. In yet further embodiments, the passing of the biopsy needle through the access needle and to the prostate may be facilitated by direct sagittal plane visualization based on the alignment of the access needle.

[00125] Methods and systems provided herein do not require a patient to take antibiotics at any point prior to the biopsy procedure, nor do they require a patient to undergo bowel

preparation in advance of the procedure. Methods, systems, and apparatus can reduce or eliminate multiple skin perforations by using a single access location or access site, while allowing multiple extractions of tissue or cell specimens from the prostate. Methods, systems, and apparatus in accordance with embodiments allow for real-time visualization during a free-handed, guided, transperineal approach, while also facilitating a complete assessment of the prostate with, for example, only one perforation of the patient's skin wherein the access needle is freely moveable in each plane.

[00126] Methods, systems, and apparatus of embodiments may include and facilitate treatment that uses a cryoablation probe for focal therapy of prostate cancer, a radiofrequency instrument, a thermotherapy instrument, any instrument for treatment of the cancerous area, or a combination of any of these instruments.

[00127] Methods, systems, and apparatus of embodiments enable planning and performing the free-hand transperineal prostate biopsies under the guidance of a device and of a real-time transducer in the sagittal imaging plane.

[00128] The biopsy is performed using a system that includes a biopsy guide, a transducer, an access needle, and a biopsy instrument. The access needle may allow the anesthesia to be injected into the patient, and the tissue or cell specimens of the prostate to be extracted. If anesthesia is used, a syringe may be included in the system. The transducer may be an ultrasound probe or any other type of device that is capable of causing a visualization of the prostate in a display device. In embodiments, the biopsy guide may be disposable. In embodiments, the biopsy guide may be formed of materials intended for a single use. In other embodiments, the biopsy guide is reusable. In some embodiments, the biopsy guide may be formed of materials intended for multiple uses.

[00129] The guide may include a sliding platform, stabilization bars, one or more upper and lower mounts, and a fastener. The upper and lower mounts may be curvilinear in shape. The upper and lower mounts may be positioned proximally or distally along an ultrasound probe, such as a transrectal ultrasound probe. The configuration and positioning of the upper and lower mounts are adjustable based on the shape of the ultrasound probe and the patient's body habitus.

[00130] The guide may be made of any material such as a plastic or metallic material. The guide may be disposable and made of a biodegradable plastic material. In other embodiments, the guide may be reusable and made of stainless steel. The dimensions, for example, the length, width, height, depth, and breadth of the sliding platform, stabilization bars, upper and lower mounts, and the fastener may vary and may be adjustable. The variable and adjustable dimensions, for example, of the stabilization bars, provide a user with flexibility in achieving and maintaining the guide in an appropriate ultrasound plane while performing biopsy procedures, while the user's patients may vary in size and levels of perineal subcutaneous tissue and fat. In a patient with an excessive amount of perineal subcutaneous tissue and fat, a larger stabilization bar will assist in locking the guide in the proper ultrasound plane.

[00131] The adjustable stabilization bars and mounts may be curvilinear in shape, allowing the guide to be placed proximally or distally along any cylindrical instrument, such as the transrectal ultrasound probe, which is determined by the surgeon based on the shape of the probe and the patient's body habitus. This allows the guide to be mounted to any assortment of ultrasound probes. Similarly, the platform may, for example, have various thicknesses.

[00132] The stabilization bars may be fixed to a top portion of the upper curvilinear mounts of the guide, and may extend beyond the front edge of the upper mounts. The stabilization bars may extend beyond the front edge of the upper curvilinear mount by approximately 8 mm. The guide may be approximately 60 mm wide, or the guide may be approximately 50 mm long, for example. The stabilization bars may have grooves for accommodating a sliding platform that is shorter in length than the stabilization bars. The grooves being configured to allow the platform to slide forward and backward along the stabilization bars.

[00133] An inner portion of the stabilization bars may have built-in grooves. The grooves accommodate a sliding platform which is shorter in length than the stabilization bars. This allows the sliding platform to slide from the back to the front of the stabilization bars. The stabilization bars may include a resistance as to prevent the sliding bar to freely move back and forth on the stabilization bar. This resistance may be introduced by the sliding platform or both the stabilization bar and the sliding platform. The resistance may be provided by a strip of rubber or

any other material capable of providing friction or other. The strip may be curvilinear. The resistance may be generated by a mechanical system, such as a spring mechanism.

[00134] The sliding platform may have a hole through the platform. In some embodiments, the hole is drilled in the center of the platform. The hole can accommodate various types of needles, including access needles having various diameters, for example, spinal needles having a gauge in the range of 14-18. The hole can also accommodate needles having various lengths. The lengths of the needle may depend, in part, on the body habitus. The needle may be a reusable needle, such as a reusable spinal needle. The needle may be a disposable needle, such as a disposable spinal needle.

[00135] A flange of the guide secures the placement of the access needle to the guide. The flange may be configured to snap into the guide to secure the needle. The flange may be secured to the guide by other securing mechanisms. The flange can be of various shapes and configurations. For example, the flange may be u-shaped. As another example, the flange may have a thin or slim configuration. The guide assists in providing the appropriate angle of penetration and direction of the access needle, or other instruments that may be used in combination with the guide.

[00136] The hole in the guide is placed so that once the guide is mounted to the ultrasound probe, the drilled hole will be parallel to the sagittal transducer. The drilled hole may also accommodate the tip of a biopsy gun, or any other biopsy instrument. The sliding platform may be interchangeable and may be removed to allow placement of another sliding platform with a different sized to permit different sizes of needles and other instruments. The hole may be configured to accommodate a cryoablation instrument, a radiofrequency instrument, thermotherapy instrument, or any other instrument for diagnosis and treatment of a bodily tissue, including a cancerous area of a prostate.

[00137] The platform may have or define a predrilled hole in the center of the platform that can accommodate various sizes of needles and instruments. For example, the hole may be configured to accommodate a needle having a range of 14-18 gauges, such as a reusable 14 gauge spinal needle. Central hole placement on the platform enables alignment of the hole with a sagittal transducer when the guide is mounted to an ultrasound probe. The platform may have

multiple holes to accommodate various applications and body habitus. Further, the platform may be of various thicknesses.

[00138] Once the one or more upper curvilinear mounts are placed at the desired location on the transrectal ultrasound probe, the access hole for a needle, such as a 14 gauge reusable spinal needle, will remain a fixed distance from the ultrasound probe. In embodiments, having one or more lower curvilinear mounts, the mounts may be positioned to cradle an upper aspect of the ultrasound probe.

[00139] At least two lower mounts are provided and may be individually positioned to accommodate various types of probes, which may have variable diameters along their shafts. In embodiments, a probe, such as a transrectal ultrasound probe, may have one or more diameters along the probe's shaft. In yet further embodiments, one end of the guide may be fixed at a location of the probe having a different diameter than the location where the other end of the guide is fixed. The separate lower mounts allow for the fixation of the guide, even with varying probe diameters.

[00140] The lower mount of the guide may include a lower right mount and a lower left mount connected by an adjustable mid-joint or fastener. The adjustable mid-joint or fastener allows the guide to be secured to the probe even if the diameter of the shaft of the probe is longer than the width of the lower mount. The mid-joint or fastener may be flexible to allow the right lower mount to form an acute angle with the left lower mount. This also allows for fixation of the guide to a probe shaft that is not circular in shape.

[00141] The lateral edges on both ends of the lower mounts may contain a notched post. Corresponding locations of the upper mounts contain holes, such as square shaped holes, to accommodate the notched post of a corresponding lower mount. An upper aspect of each hole includes a flange for locking the notched post in a fixed position. This configuration allows the lower mounts and the upper mounts to be secured to each other and to the probe.

[00142] Methods may include locating a suspicious area, positioning an access needle, and obtaining one or more tissue or cell specimens from an accurate point in the prostate. The method allows for multiple tissue or cell specimens to be obtained from a bodily organ, such as the prostate, and permits access to the prostate from different angles through a single initial

access needle. The method may include calculating the volume of the prostate by positioning the access needle at a mid-point in the x axis from the lateral edge of the prostate to the urethra.

[00143] Methods may be performed using no anesthesia. Alternatively, an anesthetic may be used. For example, the anesthetic may be lidocaine, or any type of local anesthetic. The lidocaine may include 1 or 2% of a lidocaine solution.

[00144] The suspicious area or bodily organ may be located by using a transducer. The transducer may be any type of probe for accessing and viewing a targeted site or object, such as an ultrasound probe, or any type of transducer capable of providing visualization of the prostate and/or instruments and devices for diagnosis and treatment of the tissue. The biopsy may be performed using a biopsy gun, a suction device, or any type of instrument that is small enough to be introduced through the access needle and capable of extracting the tissue or cell specimen. The biopsy may be performed while the patient is in a dorsal lobothy position, prone position, or any position that allows for access to the perineal area.

[00145] Methods may include applying an antiseptic solution to the perineal area. The antiseptic solution may include betadine, or any other substance that reduces the possibility of infection, sepsis, or putrefaction. Methods may include applying bacitracin to the skin at the puncture site or any other type of topical preparation for preventing the possibility of infection.

[00146] Methods may include attaching a needle to a luer lock syringe, which may contain an anesthetic, or any other type of device capable of retaining its contents and dispensing its contents through the needle. A biopsy gun or any other instrument that may be attached to the needle and used for inserting or extracting any substance thru the lumen of the access needle.

[00147] Methods may include releasing the syringe from the needle after the anesthetic is injected. Methods may include dividing the prostate in three different regions and designating lateral, mid, apical prostate, and may include labeling the tissue or cell specimen containers, which will identify the tissue or cell specimens.

[00148] Methods may include securing the guide to the probe. This will permit the practitioner to take the biopsy gun as many times as necessary using his/her other hand, and, consequently, extract multiple tissue or cell specimens. It is contemplated that this can be done without

assistance of any other person, and that the biopsy gun may also be attached to the guide in order to permit the surgeon to, for example, label the container with the tissue or cell specimen while performing the biopsy. Methods may also include monitoring all the actions in the prostate by way of a display device that provides images captured by the probe.

[00149] Methods may include moving the needle in x, y, and z planes. By being able to move the needle in x, y, and z planes, the surgeon is capable of extracting tissue or cell specimens from several different areas of the prostate without having to retrieve the needle and preventing other perforation of the patient`s skin. In embodiments, movement of the needle within the patient's body is facilitated by using a display device.

[00150] Methods may include removing the access needle from the perineal area. This may be done while the biopsy gun is secured to the access needle or after the biopsy gun has been detached from the access needle.

[00151] Methods may include realigning the needle in the desired prostate region. If the surgeon wishes to start at the right lateral prostate region and notices that the needle tip is not directed at the lateral region, the surgeon rolls the ultrasound probe slightly and to note that the needle tip is directed to the desired region, then the surgeon may realign the needle to obtain tissue or cell specimen. The surgeon may realign the needle using one hand while having the needle attached to the biopsy gun, which may be attached to the probe through the guide.

[00152] Methods may include identifying the areas in which biopsy have already been performed. After each extraction of tissue or cell specimen during the biopsy, a hyperechoic streak remains visible on ultrasound display. This allows the surgeon to identify the area of the prostate and that an extraction has been made, as to allow the surgeon to prevent overlap of extractions.

[00153] In another embodiment, the method includes identifying the path of the urethra. This allows the surgeon from preventing passing the biopsy needle thru or into this path.

[00154] FIG. 1 is a side view of a guide 100 secured to a probe including a stabilization bar 101, fasteners 102, probe 103, lower mounts 104, and an upper mount 105. The stabilization bar

101 is an extension of the upper mount 105, as further discussed in FIG. 4. In embodiments, the distance between the fasteners 102 and the upper mount 105 may be adjustable to accommodate various applications and body habitus.

[00155] FIG. 2A is an internal view of a guide's fastener, including an aperture 201, teeth 202, and a flange 203. The flange 203 may be an extension of the aperture 201, which is part of the upper mount 105. Aperture 201 will allow the teeth 202 to be inserted into the upper mount 105, and the flange 203 will lock the teeth 202, which is connected to lower mount 104, to the upper mount 105. The aperture 201 with flange 203 and teeth 202 allows for adjusting the height of the guide 100.

[00156] In one embodiment, the fastener (e.g., via the aperture 201, flange 203, and/or the teeth 202) can be configured to fasten the guide 100 to the probe 103 with, e.g., varying levels of tension to provide for adjustments of the relative positions of the guide 100 and the probe 103 even after the guide 100 has been mounted to the probe 103. For example, the fastener 102 can provide a first level of tension sufficient to hold the position of an access needle (e.g., introduced through a hole or other needle mount of the guide 100) rotationally fixed to the probe 103 while still allowing for a forward or reverse sliding of the probe 103 with respect to the guide 100. By way of example, the forward or reverse sliding adjustment can be performed to adjust the penetration depth of the probe 103 with respect to the patient depending on a size of the patient. Once the final adjustment is made, the fastener can be actuated to final position or tension that will then lock further adjustments of the positioning of the guide 101 relative to the probe 103.

[00157] It is noted that the guide's fastener as described above is one example embodiment among other possible example fasteners that are applicable to various embodiments of the guide 100. Accordingly, it is contemplated that various embodiments of the guide 100 may use any now known or later developed fastening system that can secure the guide 100 to the probe 103.

[00158] By way illustration and not limitation, examples of two fasteners are discussed with respect to FIGs. 2B and 2C. FIG. 2B shows a sheath-based fastener whereby the fasteners 102 are attached to a sheath 211 that is configured to slide over an end of a probe 103 and into an operable position. Although the sheath 211 is shown as a closed sheath, in another embodiment, the sheath 211 can be configured as a sleeve that is open-ended to slide over the probe 103. By

way of example, the sheath 211 can be made of a flexible material (e.g., rubber) to provide for stretching and tension on probe 103.

[00159] In another embodiment, as shown in FIG. 2C, the guide 100 can be configured with a zip-tie style fastener in place of a lower mount mechanism to secure the guide 100 to the probe 100. In other embodiments (now shown), the guide 100 may be configured to fit to the probe 100 using screws, flanges, or other temporary, permanent, or semi-permanent fastening systems. In addition, although the fasteners 102 of the guide 100 may be configured as generic and adjustable fasteners that can support probes of a variety sizes and shapes, it is also contemplated that the fasteners can be fit to specific models of probes for customized applications.

[00160] FIG. 3 is a top view of a guide secured to a probe. This figure includes a sliding platform 301, a drilled hole 302, stabilization bars 101, fasteners 102, an upper mount 105, and a probe 103. As previously described, in one embodiment, the drilled hole 102 can accommodate or support various sizes and/or configurations of needles (e.g., straight needles, curved needles, etc.) and instruments for performing a biopsy so that the needle can be aligned relative to the probe 103, thereby, also providing an alignment between the needle and an image produced by the ultrasound probe 103. In one embodiment, the drilled hole 102 can support an access needle through which a biopsy needle or other instrument can be introduced at a known alignment with respect to the probe 103. In addition, although the hole 102 to support, e.g., an access needle or other instrument is showed in a central midline position, the location of the hole can be configured at any position of the guide 100.

[00161] FIG. 4 is a cross-section view of the back of a guide secured to a probe including a sliding platform 301, drilled hole 302, stabilization bars 101, lower mount 104, upper mount 105, fasteners 102, and probe 103.

[00162] FIG. 5 is a magnified view of FIG. 1. FIG. 5 demonstrates minimum dimensions of preferred embodiments, which includes stabilization bars 101 and upper mount 105 from 30mm to 50mm long; the upper mount 105 with a height ranging from 10mm to 15mm; the stabilization bars 101 with a height that is about 1/3 of the height of the upper mount 105; fasteners 102 with a height of about 25mm and 10mm wide; a lower mount 104 10mm wide. Additionally, the offset

501 from the distal point of the stabilization bar 105 to the fasteners 102 may be 5mm. It is contemplated that any of these dimensions may vary, including the stabilization bar 101, which may be longer than the upper mount 105.

[00163] FIG. 6 is a magnified internal view of the guide fastener shown in FIG. 2. FIG. 6 demonstrates minimum dimensions of preferred embodiments. The fasteners 102 may have an aperture 201 to accommodate teeth 202, wherein the fastener 102 is 5mm to 10mm wide. Additionally, the sliding platform 301, which may be from 12mm to 25mm wide, is slightly shorter than the distance between the two stabilization bars 101 as to accommodate the sliding platform while also securing it to the guide 100.

[00164] FIG. 7 is a magnified view of the guide depicted FIG. 3, without the probe 103. FIG. 7 also demonstrates minimum dimensions of preferred embodiments, wherein the height of the upper mount 105 ranges from 5mm to 10mm; and the teeth 202 is from 5mm to 8mm wide.

[00165] FIG. 8 is a side view of a biopsy instrument that is about to penetrate the prostate, including a prostate 801, a probe 103, a biopsy instrument 802, a perineum skin 803, an anus 804, and a perforation point 805. The probe 103 is inserted into the anus 804 to provide real-time images of the biopsy, including images of the biopsy instrument 802 and the prostate 801. It is contemplated that the biopsy instrument 802 includes a needle and any other instrument capable of performing a biopsy.

[00166] FIG. 9 is a front view of a targeted area 902 of the prostate 801. FIG. 10 is a side view of a biopsy instrument penetrating the prostate 801, including a targeted area 902 of the prostate 801. The targeted area 902 is reached by biopsy instrument 802 after perforating perineum skin 803.

[00167] FIG. 11 is a front view of a targeted area of the prostate where a biopsy instrument will penetrate with areas in which the cell or tissue specimen has already been extracted. FIG. 11 depicts both an extracted area 1101 and a targeted area 902. The possibility of viewing the area in which the cell or tissue specimen has already been extracted permits the practitioner to avoid placing the access needle in an area that cell or tissue specimen has already been extracted. This allows the biopsy to be more efficient and more accurate.

[00168] FIG. 12 is a top view of FIG. 8, depicting a prostate 801, perineum skin 803, a probe 103, and a biopsy instrument 802. FIG. 13 is a right side view of a prostate and the path of the biopsy instrument including the path of the biopsy instrument 1301 and the perforation point 805. FIG. 13 illustrates that only one initial perforation to the skin of the patient is necessary in order to extract one or more cell or tissue specimens.

[00169] FIG. 14 is a front view of a guide determining a lower targeted or suspicious area 1401 of the prostate in which to penetrate the biopsy instrument, a prostate, and a probe. FIG. 16 is a front view of a guide determining a mid-target or suspicious area 1601 of the prostate in which to penetrate the biopsy instrument, a prostate, and a probe. FIG. 18 is a front view of a guide determining a higher targeted or suspicious area 1801 of the prostate in which to penetrate the biopsy instrument, a prostate, a probe. FIGS. 14, 16, and 18 demonstrates the variety of angles and positions in which a guide may be positioned in order to reach several regions of the prostate, such as the lateral region, mid region, and apical region. In order to the able to reach these areas, FIGS. 14,16, and 18 demonstrate how the upper mount 105, the stabilization bars 101, or a combination of thereof can adjust in order to reach a lower targeted or suspicious area 1401, a mid-targeted or suspicious area 1601, or a higher targeted or suspicious area 1801 of the prostate.

[00170] FIGS. 15, 17, and 19 demonstrate a side view of FIGS. 14, 16, and 18 and the paths of the biopsy instrument 1301 taken by a biopsy instrument to reach lower targeted or suspicious area 1401, a mid-targeted or suspicious area 1601, or a higher targeted or suspicious area 1801 of the prostate.

[00171] FIG. 20 is a right side view of a guide, and a biopsy instrument firmly penetrating a fat plane of perineum skin, including offset 501 of a stabilization bar 101. This allows for stabilization in a patient with an excessive amount of perineal subcutaneous tissue, fat, or a combination thereof. A larger stabilization bar 101 will assist in locking the guide in the proper ultrasound plane. Accordingly, the offset 501 may longer than 5mm for these purposes.

[00172] FIG. 21 is a front view of a prostate, a probe, a targeted or suspicious area, wherein the biopsy instrument may reach any area of the prostate. FIG. 21 demonstrates that the biopsy instrument can reach the entire prostate while using only one perforation point 805. After

obtaining one cell or tissue specimen, the biopsy instrument 802 may be partially retrieved from the perineum area at a point in which the distal point of the biopsy instrument 802 is redirected to another targeted or suspicious area. Then, the biopsy instrument (usually the needle of the biopsy instrument) is inserted to the second targeted or suspicious area for obtaining a cell or tissue specimen of another area of the prostate.

[00173] FIG. 22 is a magnified view of the right side of a prostate and a biopsy instrument. FIG. 22 depicts the location of the biopsy instrument inside the prostate and the other paths in which the biopsy instrument may take utilize for additional samples or retrieval. In embodiments, the biopsy needle or other instruments do not reach the initial part of the penis, which is in a different plane from the prostate.

[00174] FIG. 23 is an image of the front side of a prostate and a biopsy instrument being retrieved from the prostate, and other targeted areas. FIG. 23 shows a procedure being applied to the apical region of the prostate.

[00175] The urethra should be avoided in any part of the procedure, but it is mostly important when extracting cell or tissue specimens from the apical region of the prostate, when the chances of perforation is greater. After several extractions, the practitioner is able to see the blood streak from where the cell or tissue specimen was taken so as to avoid overlapping.

[00176] After this procedure, the patient may be put with restriction for no more than 1 day. If the patient is put on restriction for 1 day, after the one-day-restriction, no restriction is made.

[00177] In an embodiment, the biopsy system performs the processes 2400 of FIG. 24. At 2401, a patient is prepared for the biopsy procedure by having the patient get into a lithotomic position, prone position, or any position that allows for access to the perineal area. The biopsy procedure may be a prostate biopsy. In some embodiments, the patient's scrotum is elevated using, for example, two strips of plastic tape. The perineum is prepared with an antiseptic solution to the perineal area, for example, the antiseptic solution may include betadine.

[00178] At 2402, a target area or object, such as the prostate, is imaged. Imaging may be performed with a transducer, such as an ultrasound probe. Imaging of a target area may be in a

sagittal and/or axial plane and may be performed in real-time with direct visualization. Utilizing the real-time image, a user can identify areas of interest, e.g. suspicious areas or the target area or object at 2403.

[00179] The user may determine an access site for positioning an access needle. At 2404, an access needle is positioned at an access site in subcutaneous tissue of the perineum. The access site may be at a midpoint between a lateral edge of the prostate and the urethra along an x axis, and a midpoint between an anterior capsule and a posterior capsule along a y axis. The access needle is guided and positioned at the access site by using the guide.

[00180] At 2405, a biopsy instrument is guided to the target or suspicious areas or object. The biopsy instrument may include a biopsy needle. The guiding of the biopsy instrument can be facilitated by using the real-time visualization provided by the transducer. Real-time visualization also facilitates obtaining tissue or cell specimens from an accurate point in the prostate, for example. The method allows for one or more tissue or cell specimens to be obtained from a bodily organ, such as the prostate at 2406, and permits access to the prostate from different angles through a single initial access needle.

[00181] At 2407, the biopsy instrument may be retrieved and removed from the patient. The method may include calculating the volume of the prostate by positioning the access needle at a mid-point in x axis from the lateral edge of the prostate to the urethra.

[00182] FIG. 25 shows an ultrasound 2501 showing a transrectal probe 2503 and an access needle guide line 2505. The needle guide line enables the practitioner to observe a needle path whereby the access needle has contacted the prostate 2507, thereby enabling the practitioner to avoid overlapping sampling, and to avoid perforating the prostate.

[00183] FIGs. 26A-26C show side views of an alternative embodiment of a guide 2600 secured to a probe including a stabilization bar 101, fasteners 102, probe 103, lower mount 104, and an upper mount 105. The stabilization bar 101 is an extension of the upper mount 105, as further discussed in FIG. 4. In embodiments, the distance between the fasteners 102 and the upper mount 105 may be adjustable to accommodate various applications and body habitus.

[00184] The guide 2600 includes a sliding platform 301. The guide is fitted to the probe 103 by a sleeve 2607. The sleeve 2607 is formed by the lower mount 104 and the upper mount 105. The sleeve 2607 may be configured to slide over an end of the probe 103 into an operable position as shown in FIGS. 26A-26C. The sleeve 2607 is a partial sleeve that has an opening at both ends of the sleeve 2607 to enable slidable mounting to and removal from the probe 103.

[00185] The sliding platform 301 of the guide 2600 may be pivotably mounted to enable movement in a direction perpendicular to a longitudinal axis of the probe 103, as shown in FIGs. 26A-26C. In particular FIGS. 26A-26C show that the sliding platform 103 is fixed to the guide at a pivot point 2608. The sliding platform 103 is configured to pivot at pivot point 2608 to enable, for example, normal or vertical adjustment of an access needle (not shown) in directions perpendicular to a longitudinal axis of the probe 103 while ensuring that a longitudinal axis of the access needle (not shown) remains parallel to the longitudinal axis of the probe 103.

[00186] For example, FIG. 26A shows a sliding platform 301 in a first position at which a lateral planar surface of the platform 301 extends in a direction parallel to the longitudinal axis of the probe 103. FIG. 26B shows the sliding platform 301 pivoted to a second position wherein a front end the platform 301 is disposed a distance from the probe 103 that is greater than a distance between an opposite rear portion of the platform 301 and the probe 103. FIG. 26C shows the sliding platform 301 pivoted to a third position wherein the rear end of the platform 301 is disposed a distance from the probe 103 that is greater than a distance between the opposite front end of the platform 301 and the probe 103.

[00187] In another embodiment, the method may be performed without the patient taking antibiotics or undergoing bowel preparation before having the procedure. During the procedure, the practitioner may administer an anesthetic to the patient, for example, lidocaine, or any type of local, anesthetic. The lidocaine may be included in a solution having 1% of lidocaine.

[00188] In an embodiment, the suspicious area is located by using a transducer. The transducer may be any type of transrectal robe for prostate cancer, such as an ultrasound probe, or any type of transducer capable of imaging the prostate and the extraction device. The biopsy may be performed using a biopsy gun, a suction-mechanism, or any type of instrument that is small enough to be introduced through the access needle and capable of extracting the tissue or

cell specimen. The biopsy may be performed while the patient is in a lithotomy position, prone position, or any position that allows for access to the perineal area.

[00189] In another embodiment, methods may include applying an antiseptic solution to the perineal area such as betadine, or any other substance that reduces the possibility of infection, sepsis, or putrefaction.

[00190] In another embodiment, the ultrasound probe may be a B&K 8848 transrectal ultrasound probe, or any other ultrasound capable of causing visualization of the prostate and the extraction device. The frequency range may be 5 -12 MHZ, and the focal range may be 3-60 mm. The ultrasound probe may be able to cause the visualization of the prostate and extraction devices at least in the axial plane, sagittal plane, or a combination thereof.

[00191] In another embodiment, methods may include attaching a needle to a luer lock syringe, which may contain an anesthetic, or any other type of device capable of retaining its contents and to dispense its contents through the needle. A biopsy gun or any other instrument may be attached to the needle for inserting or extracting any substance through the lumen of the access needle.

[00192] In another embodiment, the method includes releasing the syringe from the needle after the anesthetic is injected. The method may include dividing the prostate in three different regions and designating lateral, mid, apical prostate, and may include labeling the tissue or cell specimen containers, which will identify the tissue or cell specimens.

[00193] In another embodiment, a biopsy gun may be an 18 gauge biopsy gun, or any other size that is capable of being coaxially inserted thru the lumen of the access needle.

[00194] In another embodiment, methods may include securing the guide to the probe. This will permit the practitioner to take the biopsy gun as many times as necessary using his or her other hand, and, consequently, extract multiple tissue or cell specimens. It is contemplated that this can be done without assistance of any other person, and that the biopsy gun may also be attached to the guide in order to permit the surgeon to e.g. label the container with the tissue or cell specimen while performing the biopsy. The method may also include monitoring all the actions in the prostate thru a display device, which will transmit images captured by the probe.

[00195] In another embodiment, methods may include moving the needle in x, y, and z planes. By being able to move the need in x, y, and z planes, the surgeon is capable of extracting tissue or cell specimens from several different areas of the prostate without having to retrieve the needle and preventing other perforation of the patient's skin.

[00196] Methods may further include removing the access needle from the perennial area. Removal of the access needle may be performed while the biopsy gun is secured to the access needle or after the biopsy gun has been detached from the access needle.

[00197] Methods may include realigning the needle in the desired prostate region. If the surgeon wishes to start at the right lateral prostate region and notices that the needle tip is not directed at the lateral region, the surgeon rolls the ultrasound probe slightly and to note that the needle tip is directed to the desired region, then the surgeon may realign the needle to obtain tissue or cell specimen. The surgeon may realign the needle using one hand while having the needle attached to the biopsy gun, which may be attached to the probe through the guide.

[00198] Methods may include identifying the area in which a biopsy has already been performed. After each extraction of tissue or cell specimen during the biopsy, a hyperechoic streak remains visible on ultrasound display. This allows the surgeon to identify the area of the prostate and that an extraction has been made, as to allow the surgeon to prevent overlap of extractions.

[00199] In another embodiment, methods may include identifying the path of the urethra. This allows the surgeon from preventing passing the biopsy needle thru or into this path. In another embodiment, the method includes pressuring the perineum. In yet another embodiment, the method includes applying bacitracin to the skin at the puncture site or any other type of topical preparation for preventing the possibility of infection. In another embodiment, positioning the access needle is performed without the need of a biopsy grip, wherein the guide provides the precise point for the biopsy.

[00200] An apparatus and system in accordance with embodiments discussed above is used to carry out these methods. In an alternative embodiment of apparatus and systems, a guide may not include a lower mount, and may include an access needle. The guide includes a stabilization bar, sliding platform, a hole located in approximately the center of the platform, an upper mount,

teeth, aperture, arms, and a connector. The access needle includes a hub and is secured to the guide. The teeth may be part of, or may be attached to, a lower mount. The teeth may be inserted into the aperture in order to secure the guide to a probe, for example. It is contemplated that the combination of the aperture and the teeth may form a fastener mechanism. In embodiments, connector is part of, or may be attached to, an access needle, and may be secured to the upper mount in order to provide stabilization of the access needle and to allow the practitioner to move the access needle by merely moving, for example, a probe that may be secured to the guide.

[00201] A connector and a hub permit the use of various other instruments such as, for example, a non-biopsy instrument, to be secured. A biopsy instrument may be inserted into the access needle in order to reach a targeted area. The upper mount may include arms. In embodiments, the arms may be shorter, longer, or may not exists, in which case the aperture is disposed directly in the upper mount. When the aperture is directly in the upper mount, upper mount may be longer, thicker, or a combination thereof.

[00202] In some embodiments, the guide may include lower mounts that have teeth. Arms may extend from the upper mount to allow the height of the guide to be adjusted and to be placed farther from or closer to the probe. The arms permit the access needle to be maintained at a certain distance from a probe. In embodiments, the material of the guide may be a plastic or any other material, including other plastic materials, or any other material that is cost effective. In embodiments, the guide may be reusable and may be formed with a stainless steel. The lower mount may be curvilinear and flexible to allow the lower mount to bend if necessary to secure the guide to the probe.

[00203] Reference is made to FIGS. 27-35D, which depict various views of another embodiment of a transperineal biopsy guide 2700. As with the previously described embodiments, the biopsy guide 2700 may couple with a transrectal probe and may be used in guiding an access needle in a transperineal prostate biopsy procedure. While reference will be made to the embodiment in FIGS. 27-35D, aspects of the previously described embodiments may be incorporated into the present embodiment without limitation. And, aspects of the present embodiment may be similarly incorporated into the previously described embodiments without limitation.

[00204] To begin, reference is made to FIGS. 27-30, which depict, respectively, a front isometric view, a front view, a side view, and a front isometric exploded view of the transperineal biopsy guide 2700. As seen in the figures, the biopsy guide 2700 includes an upper mount 2702 and a lower mount 2704. The lower mount 2704 includes a probe coupling or fastening mechanism 2706 to couple the lower mount 2704 with a transrectal probe (not shown in FIGS. 27-28, but shown in FIGS. 1, 2B, and 3-6, for example). The lower mount 2704 additionally includes an upper mount coupling mechanism 2714 to couple the lower mount 2704 with the upper mount 2702. While FIGS. 27-30 depict a single coupling mechanism 2706, it is foreseen that the biopsy guide 2700 may include more than one coupling mechanism 2706, as shown and described in previous embodiments.

[00205] The upper mount 2702 may couple with the lower mount 2704 and may include a guide member 2708 and a displacement member, translating member, or sliding platform 2710. The displacement member 2710 may couple with an access needle 2712 and be supported by the guide member 2708. More particularly, the displacement member 2710 may slidingly couple with the guide member 2708 such that the displacement member 2710 and the access needle 2712 are guided along a trajectory that is fixed relative to the guide member 2708 and the transrectal probe. The trajectory of the access needle 2712 may be generally parallel with a longitudinal axis of the transrectal probe when the biopsy guide 2700 is coupled with the probe.

[00206] Reference is made to FIGS. 31A-31F, which depict various views of the guide member 2708 of the upper mount 2702 of the biopsy guide 2700. FIG. 31A is a front isometric view of the guide member 2708; FIG. 31B is a front view of the guide member 2708; FIG. 31C Is a back view of the guide member 2708; FIG. 31D is a side view of the guide member 2708; FIG. 31E is a bottom view of the guide member 2708; and, FIG. 31F is a top view of the guide member 2708.

[00207] As seen in the figures, the guide member 2708 includes a distal end 2716, a proximal end 2718 opposite the distal end 2716, and a longitudinal axis 2720 extending through the distal and proximal ends 2716, 2718. As described herein locational orientations of distal and proximal are relative to the patient or, more particularly, the perineum of the patient. As such, distal generally refers to towards the patient and proximal refers to away from the patient.

[00208] Referring back to the figures, the guide member 2708 further includes a base platform 2722 extending substantially perpendicularly between a pair of vertical extension members 2724. Atop each of the vertical extension members 2724 is a guide rail or stabilization bar 2726 that is adapted to slidingly engage with and allow the displacement member 2710 to translate along a trajectory that is parallel with the longitudinal axis 2720 of the guide member 2708.

[00209] As best seen in FIGS. 31A and 31C, each of the guide rails 2726 includes a generally rectangular member 2728 that is perpendicularly oriented to the vertical extension members 2724. The rectangular member 2728 extends from the proximal end 2718 to the distal end 2716 of the guide member 2708. The vertical extension members 2724 couples with a bottom surface 2730 of the rectangular member 2728. An outer lateral edge of the rectangular member is coupled with a side member 2732 that extends from the proximal end 2718 to the distal end 2716 of the guide member 2708. A distal member or flange 2734 extends inwardly from the rectangular member 2728 a distance that is equal to the width of the rectangular member 2728. More particularly, the distal member 2734 includes a rounded inner edge 2736 that is coplanar, at its apex, with an inner edge 2738 of the rectangular member 2728. The distal member 2734 may include a planar distal face or surface 2740 with an opening 2742 formed therein. The opening 2742 may facilitate an access point for injection molding. As with previously described embodiments, the guide rails 2726 and, more particularly, the distal face 2740 of the guide rails 2726 may facilitate the positioning and holding of the perineal skin and subcutaneous tissue to allow positioning of the access needle 2712.

[00210] As seen in FIGS. 31A, 31C, and 31F, a top surface 2744 of the rectangular member 2728 includes a stop feature 2746 to secure or lock the displacement member 2710 in a distal or deployed condition or position. The stop feature 2746 is a ramp that distally slopes upward until the apex of the ramp at which point the ramp distally slopes downward. In the distal position, the displacement member 2710 is at a distal-most position and abuts or is adjacent a proximal face 2748 of the distal member 2734. The distal member 2734, thus, prevents further distal movement of the displacement member 2710 and the stop feature 2746 restrains proximal movement a certain amount. In certain embodiments, as seen in the figures, the proximal end 2718 of the rectangular member 2728 is open such that the displacement member 2710 can be slidingly engaged with the rectangular member 2728.

[00211] As seen in FIGS. 31A and 31D-31F, the base platform 2722 extends about one half of the overall longitudinal distance of the guide rails 2726. In this way, the guide rails 2726 extend beyond both the base platform 2722 and the vertical extension members 2724 such that the guide rails 2726 may contact the perineal skin and subcutaneous tissue of the patient but not a distal edge 2750 of the base platform 2722 or a distal edge 2752 of the vertical extension members 2724. And since a distal portion of the lower mount 2704 lies generally flush with the distal edge 2750 of the base platform 2722, the lower mount 2704 also may be spaced apart from the skin of the patient during the biopsy procedure. In this way, in certain embodiments, the guide rails 2726 may contact the skin of the patient while the other portions of the guide 2700 remain spaced apart from the patient's skin.

[00212] As seen in FIG. 31D, the distal edge 2752 of the vertical extension member 2724 is arcuate and a proximal edge 2754 of the vertical extension member 2724 includes a semi-circular path about halfway between the base platform 2722 and the guide rails 2726. As seen in FIGS. 31E-31F, the base platform 2722 includes a pair of channels 2756 extending parallel to each other and extending longitudinally. These channels 2756 may coaxially align with snap features 2758 in the upper mount coupling mechanism 2714 of the lower mount 2704 to facilitate the upper mount 2702 being coupled with the lower mount 2704. Once the channels 2756 and the snap features 2758 are aligned, the upper and lower mounts 2702, 2704 may be snapped together such that the snap feature 2758 extends through the channels 2756 to securely couple the mounts together. While the figures show channels 2756 and snap features 2758, other mechanisms are possible to couple the upper and lower mounts 2702, 2704. For example, the base platform 2722 and the upper mount coupling mechanism 2714 may each include through holes that coaxially align. And, screws or nuts/bolts may be used to secure the mounts 2702, 2704 together.

[00213] As seen in FIGS. 31B-31C and 31E, the bottom surface 2762 of the base platform 2722 includes a rectangular rail or protrusion 2764 extending longitudinally. The top surface of the base platform 2722 includes a longitudinally extending groove, which may be used to align the guide member 2708 with the sagittal plane of the ultrasound probe. As seen in FIG. 31E, the channels 2756 extend through the rail 2764. As will be described subsequently, the rail 2764 may engage with a platform 2766 of the upper mount coupling mechanism 2714 of the lower mount 2704 so as to align the upper and lower mounts 2702, 2704 upon coupling together.

[00214] Reference is made to FIGS. 32A-32C, which depict, respectively, a front isometric view, a front view, and a back view of the displacement member 2710. As described previously, the translating or displacement member 2710 may be coupled with the guide rails 2726 of the guide member 2708 so as to be displaceable or slidable between the proximal end 2718 of the guide member 2708 to the distal end 2716. Thus, when the access needle 2712 is coupled with the displacement member 2710, the access needle 2712 is also displaceable between the proximal end 2718 of the guide member 2708 to the distal end 2716.

[00215] As seen in the figures, the displacement member 2710 includes a central vertically extending member 2760 having five needle receiving ports 2768 formed therein. Each needle receiving port 2768 includes an opening 2770 extending from a distal end 2772 to a proximal end 2774 of the displacement member 2710. Each of the openings 2770 of the needle receiving ports 2768 are generally vertically aligned with each other and each includes a trajectory axis 2776 defining a trajectory of the access needle 2712 when positioned within the opening 2770. The trajectory axis 2776 is generally parallel to the longitudinal axis 2720 of the guide member 2708 when the displacement member 2710 is coupled with the guide member 2708. The trajectory axis is also generally parallel with a longitudinal axis of the probe when the biopsy guide 2700 is coupled with the probe. Thus, the trajectory axis 2776 of the access needle 2712 may be generally fixed or constant, in a generally parallel orientation to the previously described axes, as the displacement member 2710 displaces distal-proximal relative to the guide member 2708.

[00216] A particular needle receiving port 2768 may be chosen based on a desired distance from the probe. Thus, if a physician desires that the access needle 2712 should be positioned nearer the probe, a particular needle receiving port 2768 may be chosen that is at the bottom of the displacement member 2710. In certain embodiments, the openings 2770 of the needle receiving ports 2768 may be vertically spaced apart about 5 mm. In certain embodiments, the openings 2770 of the needle receiving ports 2768 may be vertically spaced apart about 3 mm. In certain embodiments, the openings 2770 of the needle receiving ports 2768 may be vertically spaced apart about 4 mm. In certain embodiments, the openings 2770 of the needle receiving ports 2768 may be vertically spaced apart at any interval between about 2 mm to about 6 mm, among other distances.

[00217] While the vertically extending member 2760 includes five needle receiving ports 2768, it is foreseen that more or less ports may be included in the displacement member 2710 without limitation.

[00218] The displacement member 2710 further includes a coupling mechanism 2778 to displaceably couple the displacement member 2710 and the guide rails 2726. The coupling mechanism 2778 includes a pair of lower tab members 2780 extending laterally out and away from the vertically extending member 2760. When coupled with the guide rails 2726, the lower tab members 2780 may abut or be positioned adjacent the bottom surface 2730 of the rectangular member 2728. The tab members 2780 include a planar top surface 2782 that may provide sliding contact with the bottom surface 2730 of the rectangular member 2728. The planar contact between the surfaces may contribute to stability of the displacement member 2710 relative to the guide rails 2726 by reducing vertical tilt of the displacement member 2710.

[00219] The coupling mechanism 2778 further include an upper member 2784 positioned above the lower tab members 2780. A bottom surface 2786 of the upper members 2784 may abut or be positioned adjacent the top surface 2744 of the rectangular member 2728 when the displacement member 2710 is coupled with the guide rails 2726. The bottom surface 2786 of the upper members 2784 is planar and, thus, the planar contact between the surfaces may contribute to stability of the displacement member 2710 relative to the guide rails 2726 by reducing vertical tilt of the displacement member 2710. The upper members 2784 and the lower tab members 2780 operate to sandwich the rectangular members 2728 of the guide rails 2726 when the displacement member 2710 is coupled with the guide member 2708.

[00220] The coupling mechanism 2778 further includes a lateral brace mechanism 2788 at lateral ends of the upper members 2784. The lateral brace mechanism 2788 includes an upside-down U-shaped member 2790 having three inner surfaces 2792 that define a longitudinal extending channel 2794 therein. The channel 2794 may receive the side members 2732 therein when the displacement member 2710 couples with the guide rails 2726. In this way, the lateral brace mechanism 2788 may contribute to stability of the displacement member 2710 relative to the guide rails 2726 by reducing lateral tilt of the displacement member 2710. It is foreseen that the displacement member 2710 may not include the lateral brace mechanism 2792 and may

instead only include the upper member 2784 and the lower tab members 2780. Alternatively, it is foreseen that the displacement member 2710 may not include the upper member 2784 and the lower tab members 2780, but may only include the lateral brace mechanism 2792. Additionally and alternatively, other mechanisms are possible to facilitate the displacement member 2710 displacing between the proximal and distal ends 2718, 2716 of the guide member 2708. For example, the guide member 2708 could include longitudinally extending rods (not shown) and the displacement member 2710 may include a sleeve that engages and is guided by the rods. In such an embodiment, the rods may be adapted to slide within the openings 2770 of the needle receiving ports 2768 with or without modification to the displacement member 2708.

[00221] Still referring to FIGS. 32A-32C, flanges 2796 extend laterally from the upside-down U-shaped members 2790, which may act as grasping points for the physician. The flanges 2796 extend inwardly and are coplanar with a back wall member 2798 that spans between the upside-down U-shaped members 2790, the vertically extending member 2760, and the upper members 2784. The back wall member 2798 may function to provide rigidity between the various components of the displacement member 2710. As seen in FIG. 32C, a proximal side 2800 of the needle receiving ports 2768 includes keyed features to lockingly engage the access needle 2712 such that it does not rotate once it is coupled with the port 2768.

[00222] Reference is made to FIGS. 33A and 33B, which depict, respectively, a front isometric view and a front view of the lower mount 2704 of the biopsy guide 2700. As previously described, the upper mount coupling mechanism 2714 includes the snap features 2758 to couple with the channel 2756 in the base platform 2722. Each of the snap features 2758 may be vertical flanges 2802 with a lip 2804 at its vertical termination. As the inner surfaces defining the channels 2756 contact the vertical flanges 2802, the inner surfaces compress the lips 2804 together relative to each other until the flanges 2802 "snap" or expand outwardly relative to each other such that the lips 2804 are on a top surface of the base platform 2722. The vertical flanges 2802 extend from the platform 2766 of the upper mount coupling mechanism 2714. The platform 2766 is coupled with the probe coupling mechanism 2706, which, as seen in the figures, may be a snap-grip or snap-clip type of hose or tube clamp. The mechanism 2706 may include a first and a second arm member 2804, 2806 extending from opposite sides 2808 of the platform 2766. The arm members 2804, 2806 are flexible and designed to wrap around a portion of the

probe fitted within the opening formed by the first and second arms 2804, 2806. The first arm member 2804 includes a first clamping structure 2810 including an upper row of teeth 2812 and a lower smooth sliding surface 2814. The second arm member 2806 includes a second clamping structure 2816 including an upper smooth sliding surface 2818 and a lower row of teeth 2820. The first and second clamping structures 2810, 2816 work together to provide a clamping or gripping function to securely support the transrectal probe to the lower mount 2704 and, thus, the upper mount 2702.

[00223] In operation, a transrectal probe is positioned within the opening between the first and second clamping structures 2810, 2816. The physician may determine a desired position on the probe based on the patient's anatomy, the particular transrectal probe, or the particular procedure to be performed, among other possible criteria. Once a position for the lower mount 2704 is chosen, the physician may cause the first and second arm members 2804, 2806 to be contracted relative to each other by pushing on the outer ends 2822 of the clamping structures 2810, 2816, respectively. As the clamping structures 2810, 2816 converge relative to each other, the lower row of teeth 2820 on the second clamping structure 2806 is received within an opening 2824 formed between the upper row of teeth 2812 and the lower smooth surface 2814. The upper row of teeth 2812 are caused to engage with the lower row of teeth 2820. Additionally, the upper smooth surface 2818 is caused to slide on an inner smooth surface 2826 of the first arm member. And, the lower smooth sliding surface 2814 is caused to slide on a lowest smooth surface 2828 on the second clamping structure 2816. The teeth of the upper and lower row 2812, 2820 are arranged in a saw tooth like manner such that when they are increasingly engaged with each other the teeth grip each other and resist moving in the opposite direction. Once engaged, the teeth may be disengaged by pulling on a tab 2830 on a bottom portion of the first clamping structure 2810. Pulling on the tab 2830 allows the teeth 2812, 2820 to disengage with each other and the flexible nature of the first and second arms 2804, 2806 are caused to spring back into the shape shown in FIG. 33B. As seen in FIGS. 33B-33B, an inner surface 2834 of the first and second arms 2804, 2806 includes a gasket 2832 that may be flexible and deformable to provide for a gripping surface between the probe and the lower mount 2704.

[00224] Reference is made to FIG. 34, which depicts a front isometric view of an access needle 2712. As seen in the figure, the needle 2712 includes a distal end 2836 and a proximal

end 2838 opposite the distal end 2836. At the distal end 2836 is the bevel 2840 extending distally from a shaft 2842. Within the shaft 2842 is a lumen 2844 for communication of fluids or, in the case of the access needle 2712, a shaft of a smaller gage biopsy needle. The proximal end 2838 of the needle 2712 includes a hub 2846 with ridges 2848 extending longitudinally around a circumference of the hub 2846. The ridges 2848 may engage with corresponding and negatively shaped features on the proximal side 2800 of the needle receiving ports 2768.

[00225] The following discussion will focus on use of the biopsy guide 2700 and will refer to FIGS. 35A-35D, which depict, respectively: a front isometric view of the lower mount 2704; a front isometric view of the lower mount 2704 coupled with the upper mount 2702; a front isometric view of the lower mount 2704 coupled with the upper mount 2702 and the displacement member 2710 positioned at a proximal end of the guide member 2708; and, a front isometric view of the lower mount 2704 coupled with the upper mount 2702 and the displacement member 2710 positioned at a proximal end of the guide member 2708 with the access needle 2712 positioned within one of the needle receiving ports 2768.

[00226] As seen in FIG. 35A, the lower mount 2704 is positioned with the first and second clamping structures 2810, 2816 of the first and second arm members 2804, 2806 uncoupled such that a transrectal probe may positioned between the arm members 2804, 2806. While it is not depicted in the figures, the first and second clamping structures 2810, 2816 may be engaged with each other or coupled as described previously to grasp the probe between the arm members 2804, 2806 and against the gasket 2832.

[00227] As seen in FIG. 35B, the upper mount 2702 may be coupled with the lower mount 2704. More particularly, the vertical flanges 2802 on the platform 2766 of the upper mount coupling mechanism 2714 may be engaged with or snapped together with the channels 2756 on the base platform 2722 of the guide member 2708.

[00228] As seen in FIG. 35C, the displacement member 2710 may be engaged with the guide member 2708. More particularly, the distal end 2772 of the displacement member 2710 is longitudinally aligned with the proximal end 2718 of the guide member 2708 such that the proximal ends of the guide rails 2726 are positioned to extend into the corresponding features of the displacement member 2710. That is, the rectangular member 2728 is aligned with the

opening between the upper members 2784 and the lower tab members 2780, and the vertically extending side members 2732 are aligned with the channels 2794 between the inner surfaces 2792 of the upside-down U-shaped member 2790 of the displacement member 2710. Once aligned, the displacement member 2710 is displaced, moved, or translated into engagement with the guide member 2708, as seen in FIG. 35C, which depicts the displacement member 2710 in a proximal-most position.

[00229] As seen in FIG. 35D, the access needle 2712 is coupled with the displacement member 2710. More particularly, the bevel 2840 and shaft 2842 of the access needle 2712 are extended through the proximal side 2800 of a particular opening 2770 of a needle receiving port 2768 until the hub 2846 of the access needle 2712 engages with the proximal side 2800 of the port 2768. The ridges 2848 of the access needle 2712 may engaged with corresponding features within the opening 2770 of the port 2768 such that the access needle 2712 remains coupled with the displacement member 2710. The access needle 2712 may be restrained from rotating by the ridges 2848. In certain embodiments, the access needle 2712 may be secured to the displacement member 2710 by, for example, a threaded features on the hub 2846 and openings 2770 of the ports 2768 such that the needle 2712 and the displacement member 2710 may be threadably engaged and disengaged with each other.

[00230] In the orientation shown in FIG. 35D, the displacement member 2710 and the access needle 2712 are in a proximal-most position or condition. As seen in the figure, in this particular embodiment, the bevel 2840 of the access needle 2712 lies about flush with the planar distal face 2740 of the distal member 2734. In other embodiments or with a different sized needle 2712, the bevel 2840 of the access needle 2712 may extend beyond the distal face 2740 of the distal member 2734 when the displacement member 2710 is in the proximal-most position, or the bevel 2840 of the access needle 2712 may be positioned proximal of the distal face 2740 of the distal member 2734 when the displacement member 2710 is in the proximal-most position.

[00231] In certain embodiments where the bevel 2840 of the access needle 2712 does not extend past the distal face 2740 of the distal member 2734, the physician may use the distal member 2734 to manipulate the perineal skin and subcutaneous tissue of the patient while having

the displacement member 2710 coupled to the guide member 2708, but while not having the bevel 2840 of the access needle 2712 contact the patient's skin.

[00232] While FIG. 35D depicts the access needle 2712 coupling with the displacement member 2710 when the displacement member 2710 is in the proximal-most position, the access needle 2712 may be engaged with the displacement member 2710 when the displacement member is at the distal-most position or at any position between the distal-most position and the proximal-most position. When the access needle 2712 is in the proximal-most position, as shown in FIG. 35D, the physician may manipulate the probe and the distal member 2734 of the upper mount 2702 to manipulate the perineal skin and subcutaneous tissue of the patient. When the trajectory of the access needle 2712 is appropriately positioned relative to the patient's perineal skin and subcutaneous tissue, the physician may distally displace the access needle 2712 by pushing on one or more of the back wall member 2798 or flanges 2796 of the displacement member 2710, or the hub 2846 of the access needle 2712. In certain embodiments, the displacement member 2710 may be biased or spring-loaded such that the physician may actuate a mechanism that distally advances the displacement member 2710 and the access needle 2712 without a need for manual advancement by the physician. As the access needle 2712 and the displacement member distally advance or displace, the displacement member 2712 will lock or be secured into the distal-most position via the ramps of the stop feature 2746 positioned on the top surface 2744 of the rectangular member 2728. In the distal-most position, as seen in FIG. 27, the displacement member 2710 is prevented from further distal displacement via the distal member 2734. In particular, a front edge or surface 2850 of the distal end 2772 of the displacement member 2710 abuts or is adjacent a proximal surface 2748 of the distal member 2734 when the displacement member 2710 is in the distal-most position. In certain embodiments, as seen in FIG. 27, the back surface 2748 may abut or be adjacent the front edge or surface 2850 of the upper members 2784, the lower tab members 2780 (not seen in FIG. 27) and/or part of the upside-down U-shaped member 2790.

[00233] As further seen in FIG. 27, the distal members 2734 extend inward towards the needle receiving ports 2768 but may define an opening or gap between the rounded inner edges 2736 for the access needle 2712 to extend therethrough.

[00234] Once the access needle 2712 is in position in the patient's skin and subcutaneous tissue, the biopsy procedure may continue, as described previously, with the physician extending a biopsy needle through the lumen 2844 of the access needle 2712 and into the patient's prostate. Once procedure is complete, the physician may remove the access needle 2712 from the patient's body by proximally displacing the displacement member 2710 and the access needle 2712 by pulling or pushing on the displacement member 2710 or access needle. Alternatively, the access needle 2712 may be disengaged with the displacement member 2710 while the displacement member 2710 is in the distal-most position.

[00235] The discussion will now focus on additional and alternative embodiments of the biopsy guide. As seen in FIG. 36, the displacement member 2710 may include the upper members 2784 and the lower tab members 2780 for engaging with and sliding or displacing relative to the rectangular members 2728 of the guide rails 2726. The displacement member 2710 of FIG. 36, however, does not include an upside-down U-shaped member for engaging with the side members 2732 of the guide rails 2726 and, further, does not include the back wall member 2798 and the flanges 2796. Features of both embodiments of the displacement member 2710 may be combined as needed and without limitation.

[00236] The lower mount 2704, as described herein, may take many forms without departing from the scope of the present disclosure. Other mechanisms to couple the upper mount 2702 to the probe are possible and contemplated herein. For example, the upper mount 2702 may couple with or be integrally formed with a thin sheath or sleeve of latex, polyurethane, or other materials, such as a male condom. The sheath may be fitted over the probe in a tight fitting manner such that the upper mount 2702 is secured in position relative to the probe.

[00237] Additional or alternative embodiments of the lower mount 2704 may include rubber or rubber-type cinch straps that are coupled with or integral with the upper mount 2702.

[00238] The upper mount 2702, as described herein, may take many forms without departing from the scope of the present disclosure. Other mechanisms to guide the access needle 2712 are possible and contemplated herein. For example, the displacement member 2710 supporting the access needle 2712 may be coupled to a platform on a coupler side of a four-bar linkage (e.g., parallelogram linkage) where the fixed portion of the linkage may be coupled with the base

platform 2722 of the guide member 2710. The platform may be displaceable distal-proximal by urging the platform distally or proximally, while displacing in an arcuate path. In the case of a parallelogram linkage, the trajectory of the access needle 2712 may remain parallel to the longitudinal axes of the probe and guide member 2710 while vertically displacing. In this way, such a linkage may be used for distal-proximal displacement as well as vertical displacement or adjustment, as needed for a particular biopsy procedure. This type of displacement member 2710 may be used with the guide member 2708 as described herein with or without modification.

[00239] As another example, the displacement member 2710 supporting the access needle 2712 may be coupled to a carriage or lead screw nut that is displaced relative to the guide member 2708 (and probe) via rotation of a lead screw. The lead screw may be positioned parallel to the longitudinal axis of the guide member 2708 and the probe such that displacement of the lead screw nut and, thus, the displacement member 2710 and access needle 2712 displace or translate distal-proximal while maintaining a trajectory of the access needle 2712 that may be fixed. A bottom side of the lead screw nut may include a feature or protrusion that extends into a channel formed in the base platform 2722 of the guide member 2708 such that the lead screw nut does not rotate, but, rather, displaces or translates linearly distal-proximal in response to rotation of the lead screw. The lead screw may be rotatable by hand via, for example, a handle at the proximal end of the lead screw.

[00240] Reference is now made to FIGS. 37A-37F, which depict various views of another embodiment of the biopsy guide 3700. As seen in FIG. 37A, which is a front isometric view of the biopsy guide 3700, the guide 3700 is similar to previously described embodiments of the guide in that it includes an upper mount 3702 and a lower mount 3704. The lower mount 3704 is adapted to secure the guide 3700 to a transrectal probe and includes the same features as the previously described embodiment. The upper mount 3702 may releasably couple with the lower mount 3704. As seen in FIGS. 37B and 37C, which are, respectively, front and back isometric exploded views of the upper mount 3702, the biopsy guide 3700 further includes a guide member 3710 and a displacement, sliding, or translating member 3706 that is adapted to couple with an access needle 3708.

[00241] As seen in FIGS. 37B-37C and 37E-37F, the displacement member 3706 includes a vertically extending member 3712 having five needle receiving ports 3714 formed within the member 3712. The ports 3714 may receive the access needle 3708 within any of the ports 3714, as previously described, to vary the height of the access needle 3708 relative to the probe (not shown). The access needle 3708 may couple with the needle receiving ports 3714 such that they may be displaced together relative to the guide member 3710.

[00242] As seen in the figures, a bottom end 3716 of the vertically extending member 3712 is coupled to a distal end 3718 of a rail member 3720 that may slidingly engage with the guide member 3710. The rail member 3720 includes a flange member 3722 and a web member 3724 arranged in a T-beam shape. That is, the flange member 3722 is wider than the web member 3724, which projects upward and substantially perpendicularly from a central portion of the flange member 3722. From the distal end 3718, the rail member 3720 extends proximally to a proximal end 3726. At the proximal end 3726 is an end plate member 3728, which prevents distal displacement of the displacement member 3706 past a certain point.

[00243] As seen in FIGS. 37C and 37D, the guide member 3710 includes a rail receiving slot or channel 3730 having a proximal opening 3732, a distal opening 3734 (seen in FIG. 37B), and a top opening 3736. The rail receiving slot 3730 is generally a negative shape of the rail member 3720 and may receive the rail member 3720 therein and permit the rail member 3720 and, thus, the displacement member 3706 and access needle 3708 to displace relative to the guide member 3710. When the rail member 3720 is positioned within the rail receiving slot 3730, inner surfaces 3738 of the slot 3730 may contact the flange and web members 3722, 3724 and restrain the displacement member 3706 from lateral displacement and vertical tilting while allowing distal-proximal displacement or translation of the displacement member 3706. Thus, the displacement member 3706 may be displaced or translated distally and proximally while maintaining alignment of a trajectory of the access needle 3708 substantially parallel with a longitudinal axis of the probe when the biopsy guide 3700 is coupled with the probe.

[00244] As seen in FIG. 37A, the displacement member 3706 is in a distal-most position with the distal end 3718 of the rail member 3720 and a distal end 3740 of the vertically extending member 3712 being about coplanar with a distal face 3742 of a distal member 3744 of the guide

rail members 3746, which may be similar to as previously described in relation to previous embodiments. In the distal-most position, the rail member 3720 extends past the distal opening 3734 of the rail receiving slot 3730, and the end plate member 3728 of the rail member 3720 abuts or is adjacent the proximal opening 3732 of the rail receiving slot 3730. To proximally displace the displacement member 3706 from the distal-most position, the physician may pull or push on the end plate member 3728, the vertically extending member 3712, or the access needle 3708.

[00245] It is noted that the guide rail members 3746 and, more particularly, the distal members 3744 may be used by the physician to manipulate the perineal skin and subcutaneous tissue of the patient, as described previously. And while the embodiment of the biopsy guide 3700 in FIGS. 37A-37F describe a rail and slot type of arrangement between the displacement member 3706 and the guide member 3710, other mechanisms are possible to displace the displacement member 3706 relative to the guide member 3710. Additionally or alternatively, features and elements from other embodiments of the biopsy guide may be incorporated into the present embodiment without limitation. Similarly, features and elements from the present embodiment of the biopsy guide may be incorporated into any of the other embodiments of the biopsy guide without limitation.

[00246] As seen in FIG. 37G, which is a side view of another embodiment of the displacement member 3706 with the access needle 3708 partially positioned within the top needle receiving port 3714 of the vertically extending member 3712, the rail member 3720 may be replaced by a lead screw 3748 and the bottom end 3716 of the vertically extending member 3712 may include a lead screw nut 3750 that rotationally engages with the lead screw 3748 to cause the displacement member 3706 and the access needle 3708 to displace or linearly translate relative to the probe and the guide member 3710 (not shown). The lead screw 3748 may be rotationally coupled with bearings 3752 at opposite ends which allow the lead screw 3748 to rotate thereon. The lead screw nut 3750 may be prevented from rotating by a guide rail 3754 that extends between the bearings 3752 and also extends through a passageway in the lead screw nut 3750. In this way, as the lead screw 3748 rotates, the lead screw nut 3750, as well as the vertically extending member 3712 and the access needle 3708, are caused to displace or translate distal-proximal because the lead screw nut 3750 is prevented from rotating by the guide rail 3754. The

lead screw 3748 may include a handle 3756 for rotating the lead screw 3748. The displacement member 3706 shown in FIG. 37G may be coupled with the guide member 3710 shown in the previous figures such that the lead screw 3748 is generally parallel with the longitudinal axis of the guide member 3710 and the probe. The displacement member 3706 may, for example, couple with the base platform of the guide member 3710 at the bearings 3752, or at other parts of the member 3706.

[00247] As seen in FIGS. 37H-37I, which are, respectively, an isometric front view and a side view of another embodiment of the biopsy guide 3900, it includes a probe coupling mechanism 3902 in the form of collars that may be adjustably secured to the probe 3904. Four arm members 3906 are pivotally coupled at bottom ends 3908 to the probe coupling mechanism 3902 and pivotally coupled at top ends 3910 to a platform member 3912. The arm members 3906 may be of equal length such that the platform member 3912 is capable of displacing distal-proximal while maintaining a parallel orientation relative to the probe 3904. More particularly, as seen in FIG. 37I, the platform member 3912 may include a longitudinal axis that is generally parallel to a longitudinal axis of the probe 3904 in all distal-proximal orientations of the platform member 3912 relative to the probe 3904. The platform member 3912 may include a longitudinally extending channel 3914 for receiving and guiding a displacement member 3916 having a needle receiving port 3918. The displacement member 3916 may include a flanged lower body portion 3920 that matches a shape of the channel 3914 such that the displacement member 3916 may slide within the channel 3914 or displace relative to the platform member 3912 while maintaining an orientation of a needle positioned within the needle receiving port 3918 that is generally parallel to the longitudinal axis of the probe 3904.

[00248] As seen in FIG. 37I, the biopsy guide 3900 may function as a four bar parallel or parallelogram linkage during displacement of the platform member 3912. In particular, FIG. 37I shows three positions of the platform member 3912 as it displaces. A first position 3922 shows the platform member 3912 at a highest position relative to the probe 3904 where the arm members 3906 are vertically extended to their maximum. A second position 3924 shows the platform member 3912 as it distally displaces while rotating clockwise and lowering the platform member 3912 relative to the probe. A third position 3926 shows the platform member 3912 as it further distally displaces while rotating clockwise and lowering the platform member 3912

relative to the probe. As seen in all positions 3922, 3924, 3926, a longitudinal axis of the platform member 3912 may remain generally parallel with a longitudinal axis of the probe 3904.

[00249] Reference is now made to FIG. 37J, which is a front isometric view of another embodiment of an upper mount 4000. As seen in the figure, the upper mount 4000 includes a guide member 4002 that is similar to previously described embodiments in that it includes a pair of guide rails 4004 that extend longitudinally and are spaced apart from each other. This embodiment of the upper mount 4000, however, does not include a displacement member. Rather, the guide mount 4002 of the upper mount 4000 of FIG. 37J includes a vertically oriented member 4008 including needle receiving ports 4006 that are also vertically aligned. The member 4008 may not be displaceable relative to the guide member 4002 in this particular embodiment.

[00250] That is, the needle receiving ports 4006 may align a trajectory of an access needle in any of the ports 4006 such that a trajectory of the access needle may be generally parallel to a longitudinal axis of the probe. The needle receiving ports 4006 may be integrally formed with the guide member 4002. Or, the vertical member 4008 including the needle receiving ports 4006 may be releasably coupled to the guide member. In a releasable arrangement, the vertical member 4008 may be coupled with the guide member via any coupling mechanism described herein or known in the art. As seen in the figure, the needle receiving ports 4006 are cylindrical and extend generally from a proximal end 4010 to a distal end 4012 of the guide member 4002. The distal tip 4014 of the needle receiving ports 4006 may be about coplanar with a distal face 4016 of the distal members 4018 of the guide rails 4004.

[00251] Reference is made to FIGS. 37K-37L, which are, respectively, front and side views of another embodiment of a biopsy guide 4100. As seen in the figures, the biopsy guide 4100 includes displacement member 4102 including a vertically oriented body 4104 having five vertically aligned needle receiving ports 4106 for receiving, supporting, and orienting an access needle. At a bottom end 4108 of the vertical body 4104 is a probe coupling mechanism 4110 including a collar 4112 having a guide rail or protrusion 4114 extending from an inner surface 4116 of the collar 4112. The guide rail 4114 extends longitudinally in the collar 4112 and may be received by a correspondingly shaped channel or slot 4120 in a transrectal probe 4118. In this way, the displacement member 4102 may slide, displace, or translate relative to the probe 4118

while being restrained from certain movements by the interaction between the guide rail 4114 and the channel 4120. As such, the access needle supported by the needle receiving port 4106 may displace or translate distal-proximal relative to the probe 4118 while maintaining a trajectory that is generally parallel with a longitudinal axis of the probe 4118.

[00252] The inner surface 4116 may include roller bearings or similar structures to permit the collar 4112 to roll, translate, or displace relative to the probe 4118. While the channel 4120 is described as being formed in the probe 4118, the channel 4120 may be formed in a separate member that is coupled to the probe 4118. In this case, a specialized probe having a channel may not be needed; rather, any off-the-shelf ultrasound probe may be used with the separate member having the channel 4120 to utilize the biopsy guide 4100 of the present embodiment.

[00253] Reference is made to FIGS. 37M-37U, which depict various views of alternative embodiments of the lower mount. To begin, reference is made to FIGS. 37M-37Q. FIG. 37M is a front isometric view of a biopsy guide 4200. FIG. 37N is a front view of the biopsy guide 4200. FIG. 37O is a front isometric view of a cinch strap 4202. FIG. 37P is a front isometric view of a V-block insert 4204. FIG. 37Q is a front view of the biopsy guide 4200 of FIG. 37M with an insert 4204 of FIG. 37P.

[00254] As seen in FIG. 37M, the biopsy guide 4200 includes an upper mount 4206 and a lower mount 4208. The upper mount 4206 may include a base platform 4210 and a pair of guide rails 4212 extending longitudinally from the base platform 4210. The guide rails 4212 may guide a displacement member (not shown), which may support an access needle (not shown), as described in previous embodiments. The lower mount 4208 may include a cinch strap 4202, as shown in FIG. 37), which may include a flange 4214 at one end 4216 and a series of transversely extending ridges 4218. The cinch strap 4202 may be fitted or positioned within a slot 4220 in the base platform 4210 such that the flange 4214 abuts the surfaces of the slot 4220 and is prevented from extending through the slot 4220. The cinch strap 4202 may be fitted around the transrectal probe 4222 and positioned within a locking opening 4224 opposite the slot 4220 in the base platform 4210. The cinch strap 4202, which may be rubber or otherwise made of a flexible material, may be pulled tightly at the free end 4226 such that the ridges 4218 are progressively

locked by the locking opening 4224. Once appropriately tightened, the upper mount 4206 is now secured to the probe 4222.

[00255] As seen in FIGS. 37P-37Q, the lower mount 4208 of the biopsy guide 4200 may include a V-block insert 4204 positioned between the probe 4222 and the cinch strap 4202. The V-block insert 4204 may include a pair of slots 4228 on opposite sides of the insert 4204 that may be sized to receive the cinch strap 4202 therethrough to secure the V-block insert 4204 into position relative to the cinch strap 4202. The V-block insert 4204 ensures at least three points of contact between the probe and the biopsy guide 4200: one point of contact between the probe 4222 and an underside of the base platform 4210; and, two points of contact between the probe 4222 and the V-block insert 4204.

[00256] Reference is made to FIGS. 37R-37S, which depict, respectively, a front isometric view and a front view of another embodiment of a biopsy guide 4300. Similar to the previously described embodiments, the biopsy guide 4300 includes an upper mount 4302 and a lower mount 4304. The upper mount 4302 may include a base platform 4306 and a pair of guide rails 4308 extending longitudinally and spaced apart from each other. The guide rails 4308 may guide a displacement member (not shown), which may support an access needle (not shown), as described in previous embodiments. The lower mount 4304 may include a curvilinear shaped inner surface 4310 opposite the base platform 4306 and pair of opposing arms 4312 extending downward. The arms 4312 may converge on a bottom side 4314 of the lower mount 4304. A V-block insert 4316 may be positioned an opening 4318 of the lower mount 4304. The opening 4318 may be sized and shaped to receive the transrectal probe 4322 therein. The V-block insert 4316 may be vertically adjustable within the opening 4318 via a thumb-screw 4320. When actuated or rotated, the thumb-screw 4320 may push the V-block insert 4316 vertically to exert a force on the probe 4322, which, in turn, exerts a force on the inner surface 4310 of the base platform 4306 of the lower mount 4304.

[00257] Reference is made to FIGS. 37T-37U, which depict, respectively, a front isometric view and a front view of another embodiment of a biopsy guide 4400. As seen in the figures, the device 4400 includes an upper mount 4402 and a lower mount 4404. The upper mount 4402 may include a base platform 4406 and a pair of guide rails 4408 extending longitudinally and spaced

apart from each other. The guide rails 4408 may guide a displacement member (not shown), which may support an access needle (not shown), as described in previous embodiments. The lower mount 4404 couples the upper mount 4402 to the probe 4410 and may include a strap 4412 that is affixed at one side 4414 via a pair of fasteners (e.g., screws, bolts) 4416. The strap 4412 may wrap around the probe 4410 and be secured in place via a worm gear mount 4418. The worm gear mount 4418 may include a thumb-knob 4420 that is rotatable and extending to a threaded feature (e.g., ACME threads) 4422 that threadably engage with slots 4424 on the second end 4426 of the strap 4412. As the thumb-knob 4420 is tightened, the thread feature 4422 advances on the slots 4424 and pulls the strap 4412 tighter on the probe 4410 (similar to a hose clamp). This embodiment may include a V-block insert (not shown). As seen in the figures, an underside 4426 of the base platform 4406 may be curvilinear to match the shape of the probe 4410. These features among features from other embodiments may be combined as needed to modify any of the features of any of the biopsy guides described herein.

[00258] Reference is made to FIGS. 37V-37X, which depict additional and alternative embodiments of a lower mount 4502 of a biopsy guide 4500. As seen in FIG. 37V, which is a front view of a lower mount 4502, the upper mount 4504 may be similar to previously describe embodiments in that it includes a base platform 4506 and a pair of guide rails 4508. The lower mount may include a pair of semi-circular arm members, clamps, or collars 4510 that are pivotally coupled together at a joint 4512 (e.g., pin). The pair of semi-circular arm members 4510 may open and close about the joint 4512 in a clam-shell type manner. Opposite the joint 4512, the arm members 4510 are adjustably secured together via a thumb-screw 4514 that extends between a pair of flanges 4516. Thus, turning the thumb-screw 4514 in a first direction may cause the pair of arm members 4510 to constrict against a probe (not shown) positioned within the opening 4518 between the arm members 4510. And, turning the thumb-screw 4514 in a second direction may cause the pair of arm members 4510 to loosen against the probe positioned within the opening 4518.

[00259] FIG. 37W depicts a front isometric view of the lower mount 4504 including a flexible spring band or biasing collar 4520 extending circumferentially and terminating in a pair of flanges or tabs 4522 that may be compressed together, relative to each other, to selectively enlarge the opening 4518. The probe (not shown) may be positioned within the opening 4518

and the spring band 4520 may compress against the probe and cause a constant force to be exerted on the probe, allowing it to be used on probes of multiple diameters. The flat spring band 4520 may be replaced by a wire spring band (i.e., dumbbell clamp) without departing from the scope of the disclosure.

[00260] FIG. 37X depicts a front view of a lower mount 4504 having a pair of semi-circular arm members, clamps, or collars 4510 that are pivotally coupled together at a joint 4512 (e.g., pin). The pair of semi-circular arm members 4510 may open and close about the joint 4512 in a clam-shell type manner. Opposite the joint 4512, the arm members 4510 are adjustably secured together via a snap-clip, ratchet, or clamp assembly 4524 including a lever arm handle 4526 a wire arm or loop 4528. The lever arm handle 4526 is attached to one free end 4534 of the arm members 4510 and the wire arm 4528 is attached to the lever arm handle 4526. The other free end 4530 of the other arm member 4510 includes a lip 4532 such that the wire arm 4528 may be fitted around the lip 4532 with the lever arm handle 4526 in an opened position. Once the wire arm 4528 is positioned within the lip 4532, the lever arm handle 4526 may be pivoted towards the arm member 4510, which pulls the free ends 4534, 4530 together to secure the arm members 4510 against the probe (not shown). To remove the probe from the lower mount 4504, the lever arm handle 4526 may be pivoted outward away from the arm member 4510 of the free end 4534 and the arm members 4510 will expand relative to each other and release the probe.

[00261] As with many of the embodiments of the biopsy guide described herein, there may be a particular type of mechanical arrangement between the guide member and the displacement member that at least facilitates the displacement of the access needle along at least a portion of the length of the guide member. As discussed in relation to each of the embodiments, the mechanical arrangement may include at least one of a sliding arrangement, a lead screw, or a parallel bar linkage. And, as described with reference to the various embodiments of the biopsy guide, the guide member may operably couple with the transrectal probe via at least one of a sheath arrangement, a ratchet arrangement, a biased collar arrangement, a flexible strap arrangement, a clamping arrangement, or a clamshell collar arrangement.

[00262] Reference is now made to FIGS. 38A-38D, which depict, respectively, a transverse plane or slice image of a prostate 3800 and a urethra 3804, a sagittal plane or slice image of a

prostate 3800 and a urethra 3804, a transverse plane or slice image of a prostate 3800 and a urethra 3804 with a marking device 3824 positioned within the urethra 3804, and a sagittal plane or slice image of a prostate 3800 and a urethra 3804 with a marking device 3824 positioned within the urethra 3804. As mentioned previously, during a prostate biopsy procedure it may important for the physician to identify the path of the urethra so that he or she can avoid puncturing the urethra with the access needle and the biopsy needle. The biopsy guides described herein may be used with various systems to locate the urethra via the transrectal probe in sagittal and axial planes.

[00263] As described previously, the probe or transducer provides imaging in axial and sagittal planes so as to provide real-time images of the prostate. As seen in FIG. 38A, which is a transverse plane showing the prostate 3800 and the probe 3802, the urethra 3804 is shown, as well as a path 3806 of the urethra 3804, as would be seen in a sagittal plane. As seen in FIG. 38B, which is a sagittal plane showing the prostate 3800 and the probe 3802, the urethra 3804 is shown extending over the prostate 3800 and connecting with the bladder 3808.

[00264] When the prostate is viewed, as seen in FIGS. 38A and 38B, the physician may then position the access needle 2712 in an access site 3810 in the subcutaneous tissue 3812 of the perineum 3814, where the access site 3810 is at a midpoint between a lateral edge of the prostate 3816 and the urethral path 3806 along a first axis and a midpoint between an anterior capsule 3818 and a posterior capsule 3820 along a second axis. The physician may guide the probe 3802 and the biopsy guide (not shown) along a sagittal plane to the target using the real-time image from the probe 3802, and the physician may obtain one or more specimens 3822 of the prostate 3800 through the access needle 2712 being guided by the biopsy guide.

[00265] Identifying the urethra may be accomplished via a number of methods. First, as seen in FIGS. 38C-38D, a marking device 3824 such as, for example, a balloon catheter can be inserted into the urethra 3804 and used by the physician to locate the urethra 3804. As seen in FIG. 38C-38D, the marking device 3824 may include a catheter 3826 and a balloon 3828. The balloon 3828 may be expanded in the bladder 3808 and the catheter 3826 may extend through the urethra 3804 and out of the patient's body. The balloon 3828 and/or catheter 3826 may be visible in certain planes during the biopsy procedure and may aid in identifying the urethra 3804.

[00266] Additionally or alternatively, the marking device 3824 may include markers 3830 such as physical or chemical markers that are visible in an ultrasound environment (e.g., pellets of polylactic and polyglycolic acids containing carbon dioxide, polyglycolic acid pads) along the length of the catheter 3826 so that the physician can view the path of the urethra 3804 as viewed in transverse or sagittal planes. Thus, the physician may be able to position a trajectory of the access needle 2712 to be adjacent and not intersecting with the path of the urethra as indicated by the markers 3830 on the catheter 3826. The markers 3830 may be positioned on the catheter at certain intervals so as to provide a way to estimate the size or volume of the prostate 3800. Additionally or alternatively, the catheter 3826 may include a contrast medium (e.g., dye) for visualization purposes and may otherwise function similarly to markers 3830 positioned on the catheter 3826.

[00267] The biopsy guides and devices described herein may additionally include markers or sensors positioned on the biopsy guide or access needle such that movement of the guide or needle, or any device/material placed through the access needle, may be visualized via the markers/sensors by ultrasound equipment (e.g., probe) or other equipment using different imaging modalities (e.g., MRI, CT). In this way, for example, a marker positioned at a distal end of the access needle may provide visual guidance as to the location of the tip of the access needle relative to the boundaries of the prostate.

[00268] Although various representative implementations have been described above with a certain degree of particularity, those skilled in the art could make numerous alterations to the disclosed embodiments without departing from the spirit or scope of the inventive subject matter set forth in the specification. All directional references (e.g., distal, proximal, front, back, side, top, bottom, fore, aft, right, left, etc.) are only used for identification purposes to aid the reader's understanding of the implementations, and do not create limitations, particularly as to the position, orientation, or use of the embodiments described herein unless specifically set forth in the claims. Joinder references (e.g., attached, coupled, connected, and the like) are to be construed broadly and may include intermediate members between a connection of elements and relative movement between elements. As such, joinder references do not necessarily infer that two elements are directly connected and in fixed relation to each other.

[00269] It is believed that the present disclosure and many of its attendant advantages will be understood by the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the components without departing from the disclosed subject matter or without sacrificing all of its material advantages. The form described is merely explanatory, and it is the intention of the following claims to encompass and include such changes.

[00270] While the present disclosure has been described with reference to various embodiments, it will be understood that these embodiments are illustrative and that the scope of the disclosure is not limited to them. Many variations, modifications, additions, and improvements are possible. More generally, embodiments in accordance with the present disclosure have been described in the context of particular implementations. Functionality may be separated or combined in blocks differently in various embodiments of the disclosure or described with different terminology. These and other variations, modifications, additions, and improvements may fall within the scope of the disclosure as defined in the claims that follow.