

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ARTHREX, INC.,
Petitioner,

v.

P TECH, LLC,
Patent Owner.

IPR2022-00786
Patent 9,579,129 B2

Before SHERIDAN K. SNEDDEN, MICHELLE N. WORMMEESTER,
and CYNTHIA M. HARDMAN, *Administrative Patent Judges*.

WORMMEESTER, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Arthrex, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 24–27, 32, and 33 of U.S. Patent No. 9,579,129 B2 (Ex. 1001, “the ’129 patent”). P Tech, LLC (“Patent Owner”) did not file a preliminary response. We have jurisdiction under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” For the reasons that follow, we institute an *inter partes* review as to all challenged claims of the ’129 patent based on all grounds presented.

II. BACKGROUND

A. Related Proceedings

The parties identify one related federal district court case involving the ’129 patent, *P Tech, LLC v. Arthrex, Inc.*, Case No. 1-21-cv-00968 (D. Del.). Pet. viii; Paper 4, 2 (Mandatory Notices of the Patent Owner). The parties also identify two *inter partes* review proceedings involving other patents asserted in the district court case. Pet. viii; Paper 4, 2.

B. The ’129 Patent

The ’129 patent describes repairing joints of the body, such as joints of the spine. Ex. 1001, 1:15–21. For example, the ’129 patent describes ligament repair. *See id.* at 21:50–23:10. Ligaments are soft tissue in or around a joint that hold the joint together while also controlling movements of the joint. *Id.* at 21:58–61. The ’129 patent explains that when an intervertebral disc becomes herniated, the spine ligaments may become

relaxed. *Id.* at 22:17–21. Loose ligaments allow for excessive joint motion, ultimately causing skeletal disorders. *Id.* at 21:61–22:4. To address this problem, the '129 patent provides a method for tensioning a ligament to prevent joint instability and to reduce pain. *Id.* at 22:7–11.

To illustrate, Figure 9 of the '129 patent is reproduced below.

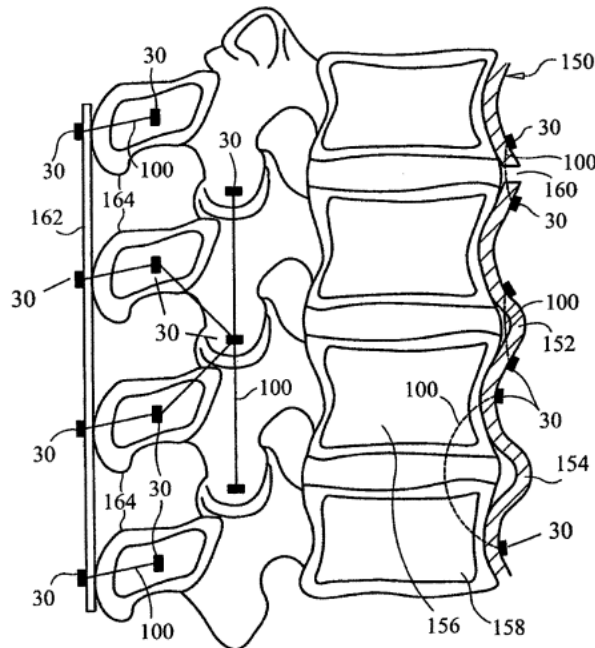


FIG. 9

Figure 9 shows examples of ligament repair at various regions 152, 154, 160 of weakened ligament 150. Ex. 1001, 8:32, 22:27–28, 22:35–37, 22:42–43, 22:49–51. In one example, one fastener 30 is positioned against ligament 150 above stretched region 154, and another fastener 30 is positioned against ligament 150 below stretched region 154. *Id.* at 22:42–45. Suture 100 is run through fasteners 30, ligament 150, as well as adjacent vertebrae 156, 158 in a looped fashion. *Id.* at 22:45–47, Fig. 9. Suture 100 is further tensioned to tighten stretched region 154. *Id.* at 22:47–48.

C. Illustrative Claim

Petitioner challenges claims 24–27, 32, and 33 of the ’129 patent.
Claim 24 is independent and illustrative of the claims under challenge:

24. A method for stabilizing a weakened portion of a ligament of a patient’s body, the method comprising:

- a) performing a surgical procedure on the patient’s body through a surgical incision proximate the weakened portion of the ligament, the ligament including an upper end at a first side of the weakened portion and a lower end at an opposite second side of the weakened portion;
- b) securing a first fastener to the upper end and a first bone portion proximate the upper end;
- c) securing a second fastener to the lower end and a second bone portion proximate the lower end; and
- d) securing a suture directly to the first and second fasteners and tightening the suture.

D. Asserted Grounds of Unpatentability

Petitioner challenges claims 24–27, 32, and 33 of the ’129 patent on the following four grounds. Pet. 2, 21–57.

Claims Challenged	35 U.S.C. § ¹	References/Basis
24, 26, 27, 32	103	Van Kampen ²
25, 33	103	Van Kampen, Boyce ³

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the application from which the ’129 patent issued claims the benefit of priority to an application that was filed before this date, the pre-AIA version of § 103 applies.

² Van Kampen, U.S. Patent No. 4,834,752, issued May 30, 1989 (Ex. 1005).

³ Boyce et al., U.S. Publ’n No. 2004/0024457 A1, published Feb. 5, 2004 (Ex. 1006).

Claims Challenged	35 U.S.C. § ¹	References/Basis
24–27, 32	103	Van Kampen, Lambrecht ⁴
33	103	Van Kampen, Lambrecht, Boyce

In support of its arguments, Petitioner relies on a Declaration of Dr. Steve E. Jordan, M.D. (Ex. 1002).

III. DISCUSSION

A. Level of Ordinary Skill in the Art

We consider the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Petitioner contends:

A person of ordinary skill in the art would have (1) at least a B.S. or equivalent degree; and (2) at least two years’ experience (i) designing, developing, or testing implantable medical devices, such as suture anchors, or (ii) performing surgeries with implantable medical devices, such as suture anchors.

Pet. 19 (citing Ex. 1002 ¶ 38).

Factors pertinent to determining the appropriate level of skill in the art include:

(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field. . . . The patent’s purpose can also be informative.

Best Medical Int’l, Inc. v. Elekta Inc., 46 F.4th 1346, 1353 (Fed. Cir. 2022) (citations omitted). In support of its proposal, Petitioner presents no argument or evidence relating to these factors, but instead simply cites

⁴ Lambrecht, U.S. Patent No. 6,425,919 B1, issued July 30, 2002 (Ex. 1007).

Dr. Jordan's testimony. *See* Pet. 19. Dr. Jordan states that he determined the appropriate level of skill in the art based on his "education, experience, [and] knowledge of problems encountered in the field," but also provides no analysis of the relevant factors. Ex. 1002 ¶ 38.

On this record, we do not find Petitioner's proposed level of ordinary skill in the art to be supported by the factors listed above. Petitioner's proposal allows for at least two years of experience "designing, developing, or testing implantable medical devices," *or* "performing surgeries with implantable medical devices." Critically, Petitioner's proposal does not require that a person of ordinary skill in the art have experience performing surgeries with implantable medical devices. The record, however, indicates a decidedly surgical focus in the cited prior art and challenged patent.

For example, Van Kampen relates to "methods and devices for augmenting or reinforcing biological tissue used in the repair or reconstruction of ligaments or tendons," and Boyce relates to "an implant useful for treating bone injuries, defects, etc., such as spinal disorders for which spinal fusion is indicated and the repair or replacement of ligaments, tendons and/or cartilage." Ex. 1005, 1:10–12; Ex. 1006 ¶ 2. Lambrecht relates to "the surgical treatment of intervertebral (IV) discs in the lumbar, cervical, or thoracic spine." Ex. 1007, 1:12–16. The inventor of the '129 patent is a surgeon. Ex. 1008 ¶¶ 6, 9, 10 (district court complaint discussing inventor). The challenged patent relates to "devices and methods for repairing, reconstructing, augmenting, and stabilizing joints of the body." Ex. 1001, 1:15–21.

In view of pertinent factors including the educational level of the inventor, the types of problems encountered in the art and prior art solutions

to those problems, the educational level of active workers in the field, and the '129 patent's purpose, we find the portion of Petitioner's proposal that encompasses a person having a B.S. degree (or equivalent) and at least two years of experience designing, developing, or testing implantable medical devices—without any surgical experience—to be unsupported.

Accordingly, for purposes of this Decision, we find that a person of ordinary skill in the art would have had a medical degree and at least two years of experience performing surgeries with implantable medical devices, such as suture anchors. In subsequent briefing, the parties are encouraged to address the impact, if any, of the level of ordinary skill in the art on the obviousness analyses at issue in this proceeding. Any final determination pertaining to the level of ordinary skill in the art will be made on the full trial record.

B. Claim Construction

In an *inter partes* review proceeding, we construe a claim of a patent “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” *See* 37 C.F.R. § 42.100(b) (2019). That standard involves construing claims in accordance with the ordinary and customary meaning of such claims as would have been understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

Petitioner provides a proposed construction for each of the claim terms “weakened portion of a ligament” and “suture.” Pet. 16–18. For purposes of this Decision, we conclude that no claim term requires express

interpretation at this time to resolve any controversy in this proceeding. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

C. Obviousness over Van Kampen

Petitioner asserts that claims 24, 26, 27, and 32 of the '129 patent would have been obvious over Van Kampen. Pet. 21–37. For the reasons explained below, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing on this ground.

We start with an overview of the asserted prior art, Van Kampen.

1. Van Kampen

Van Kampen describes a tissue augmentation device for augmenting biological tissue used in ligament repair or reconstruction. Ex. 1005, 1:10–12, 2:23–32. To illustrate, Figure 1 of Van Kampen is reproduced below.

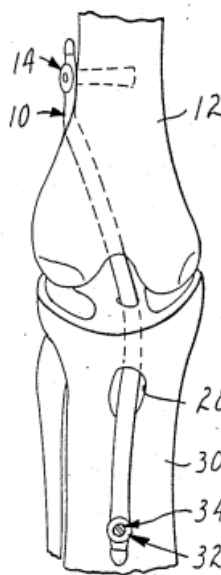


FIG. 1

Figure 1 shows a knee joint with braided tissue augmentation device 10 in place. *Id.* at 3:1–2, 3:18–19. Device 10 is attached at one end to femur 12 by inserting legs of fastener 14 through braids at the end of device 10 and a hole that has been drilled in femur 12. *Id.* at 3:20–22, 3:34–41. Device 10 extends from fastener 14 through tibial tunnel 28, and is attached at the other end to tibia 30 by inserting a cylindrical portion of bushing 32 through braids at the end of device 10 and a hole in tibia 30. *Id.* at 3:47–52, 3:62–65. Screw 34 is inserted into bushing 32 and bored into tibia 30 to secure device 10 to tibia 30. *Id.* at 3:66–68.

Device 10 has biological tissue sutured along its length. Ex. 1005, 3:19–20, 4:51–60. In the case of ligament repair, the tissue may be the damaged ligament itself. *Id.* at 5:4–8. Van Kampen explains that, in the early post-operative healing period, tissue loses strength because its normal blood supply is disrupted by the surgery. *Id.* at 1:25–30. The tissue eventually regains its strength, but, until then, the tissue must be protected from carrying normal loads. *Id.* at 1:30–34. Thus, device 10 has sufficient mechanical properties to support the working loads normally supported by the ligament. *Id.* at 2:23–37, 5:22–25, 5:43–49, 6:16–25. Device 10 will gradually lose some of its load-bearing capability after implantation, thereby gradually transferring increased loads to the tissue. *Id.* at 1:37–40, 6:16–25.

2. Analysis

Turning now to the claims, we discuss independent claim 24 in detail. Claim 24 is directed to “[a] method for stabilizing a weakened portion of a ligament of a patient’s body,” comprising various steps: (a) “performing a surgical procedure,” (b) “securing a first fastener,” (c) “securing a second

fastener,” as well as (d) “securing a suture” and “tightening the suture.” We address the preamble and recited steps in turn.

a. Preamble

As noted above, the preamble of claim 24 recites “[a] method for stabilizing a weakened portion of a ligament of a patient’s body.” Petitioner contends that, “[t]o the extent the preamble is deemed limiting, Van Kampen discloses a tissue augmentation device (and method of using the same) used to repair and stabilize a damaged portion of a ligament.” Pet. 21. As support, Petitioner directs us to where Van Kampen describes using its tissue augmentation device “in the repair or reconstruction of ligaments,” where “[t]he device is adapted for fixation at each end thereof to the anatomical structures connected by the ligament.” *Id.* at 21–22 (citing Ex. 1005, code (57)); *see also* Ex. 1005, 1:15–24 (referring to the reconstruction of a “damaged” ligament). Petitioner asserts that “[a person of ordinary skill in the art] would have used the terms ‘weakened’ and ‘damaged’ similarly as both terms are used to describe[] ligaments that require repair, reconstruction, and/or augmentation.” Pet. 22. On this record, these contentions are consistent with the ’129 patent’s discussion of repairing weakened ligament 150, which appears to have three weakened regions, namely, loosened region 152, stretched region 154, and torn region 160. *See* Ex. 1001, 22:27–57, Fig. 9.

Although we do not determine whether the preamble is limiting at this stage of the proceeding, we are persuaded based on Petitioner’s argument and evidence that Petitioner has shown sufficiently for purposes of this Decision that Van Kampen teaches the subject matter of the preamble.

b. Step a): “performing a surgical procedure”

Claim 24 recites “a) performing a surgical procedure on the patient’s body through a surgical incision proximate the weakened portion of the ligament, the ligament including an upper end at a first side of the weakened portion and a lower end at an opposite second side of the weakened portion.” For this limitation, Petitioner asserts that “Van Kampen describes augmentation of damaged ligaments and, in particular, a torn or damaged ACL,” which Dr. Jordan testifies in his declaration “extends from an upper end of the joint (at the femur) to an opposite, lower end of the joint (at the tibia).” Pet. 23 (citing Ex. 1002 ¶ 65; Ex. 1005, 4:64–5:8); Ex. 1002 ¶ 65; *see also* Pet. 24 (“[T]he ligament would have upper and lower ends (e.g., the portions attached to the bone) on the first and second sides of the weakened portion (e.g., the portion stretched and/or torn).”). We note that the ligament described in the cited portion of Van Kampen is the anterior cruciate ligament, or ACL. Ex. 1005, 4:66–5:2; Ex. 1011, 97 (cited by Pet. 23).

Petitioner further asserts that “Van Kampen explains that the augmentation device is attached in parallel with the ligament in order to support applied loads of the repaired or reconstructed ligament.” Pet. 23 (citing Ex. 1005, 4:51–60). We note that Van Kampen teaches in particular that its augmentation device “is designed to be used in parallel with biological tissue for the repair or reconstruction of a ligament,” where “the augmentation device and the tissue are used adjacent to one another along their lengths,” and “[i]n the case of ligament . . . repair, the biological tissue used in conjunction with the device . . . is the damaged ligament.” Ex. 1005, 4:51–53, 4:56–60, 5:4–8. According to Petitioner, an ordinarily skilled artisan “would have understood that to implant the augmentation device

described in Van Kampen, a surgeon would use a surgical incision proximate the weakened ACL,” which is the ligament to be used in parallel with the augmentation device. Pet. 23. Petitioner relies on the declaration testimony of Dr. Jordan. *Id.* (citing Ex. 1002 ¶ 64).

Based on Petitioner’s argument and evidence, we are persuaded that Petitioner has shown sufficiently for purposes of this Decision that Van Kampen teaches the recited performing step of claim 24.

c. Step b): “securing a first fastener”

Claim 24 further recites “b) securing a first fastener to the upper end and a first bone portion proximate the upper end.” For this limitation, Petitioner provides an annotated version of Figure 1 of Van Kampen, which is reproduced below. Pet. 25.

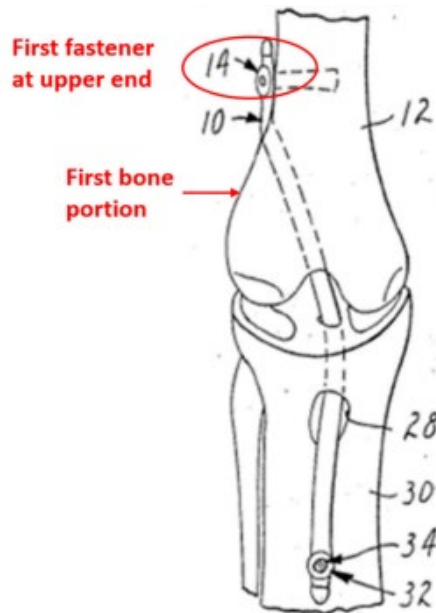


FIG. 1

Figure 1 of Van Kampen, as annotated by Petitioner, shows tissue augmentation device 10 implanted in a knee. *See* Ex. 1005, 3:17–19. As

discussed above, the damaged ligament (ACL) in Van Kampen, which corresponds to the recited ligament including an upper end, is used in parallel with device 10. *See id.* at 4:51–53, 4:56–60, 5:4–8. Petitioner identifies Van Kampen’s fastener 14 as a “first fastener,” and femur 12 as a “first bone portion.” Pet. 25. Petitioner contends that “[a]nnotated Figure 1 shows a first fastener of the disclosed augmentation device and a first bone (femur 12) portion proximate to the upper end of the ligament (although the ligament itself is not shown).” *Id.* Petitioner further points us to where Van Kampen teaches that “[f]astener 14 is implanted by drilling a hole in the femur 12,” and that legs of fastener 14 are inserted through the hole in the femur as well as “through the braids of one end of augmentation device 10 and a small hole created in the biological tissue.” *Id.* at 26 (emphasis omitted) (quoting Ex. 1005, 3:35–40). Again, the biological tissue here refers to the damaged ligament (ACL). *See* Ex. 1005, 4:51–53, 4:56–60, 5:4–8.

Based on Petitioner’s argument and evidence, we are persuaded that Petitioner has shown sufficiently for purposes of this Decision that Van Kampen teaches claim 24’s recited step of securing a first fastener.

d. Step c): “securing a second fastener”

Claim 24 further recites “securing a second fastener to the lower end and a second bone portion proximate the lower end.” For this limitation, Petitioner provides another annotated version of Figure 1 of Van Kampen, reproduced below. Pet. 27.

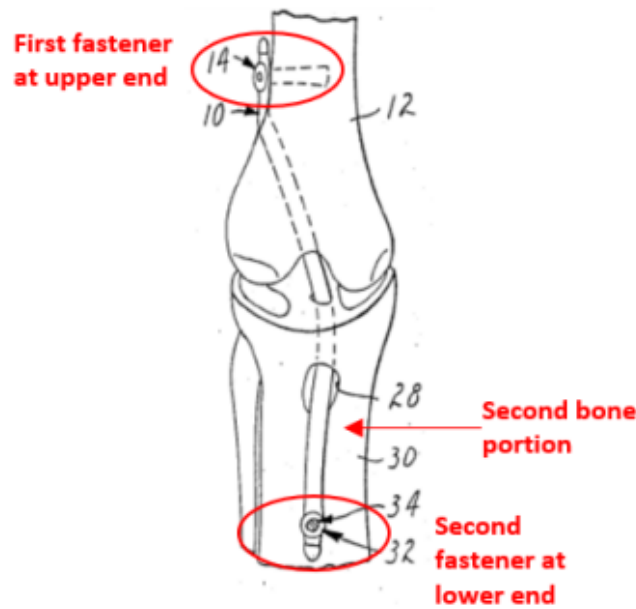


FIG. 1

Figure 1 of Van Kampen, as annotated by Petitioner, shows tissue augmentation device 10 implanted in a knee. *See* Ex. 1005, 3:17–19. As discussed above, the damaged ligament (ACL) in Van Kampen, which corresponds to the recited ligament including a lower end, is used in parallel with device 10. *See id.* at 4:51–53, 4:56–60, 5:4–8. Petitioner identifies Van Kampen’s bushing 32 and screw 34 together as a “second fastener,” and tibia 30 as a “second bone portion.” Pet. 27. As support, Petitioner directs us to where Van Kampen teaches that “bushing 32 is implanted by inserting [a] cylindrical portion [of the bushing] through the braids of one end of augmentation device 10 and a small hole created in the biological tissue . . . and then into a hole in the tibia,” and that “[s]crew 34 is then inserted into bushing 32 . . . and is bored into the tibia to securely affix augmentation device 10 to the tibia 30,” where the biological tissue refers to the damaged ligament (ACL). *Id.* at 28 (emphasis omitted) (quoting Ex. 1005, 3:62–67); *see also* Ex. 1005, 4:51–53, 4:56–60, 5:4–8.

Based on Petitioner's argument and evidence, we are persuaded that Petitioner has shown sufficiently for purposes of this Decision that Van Kampen teaches claim 24's recited step of securing a second fastener.

e. Step d): "securing a suture" and "tightening the suture"

Claim 24 further recites "securing a suture directly to the first and second fasteners and tightening the suture." With respect to the step of "securing a suture directly to the first and second fasteners," Petitioner points us to where Van Kampen describes its augmentation device 10 as comprising "a strap-like element which provides permanent augmentation of the tissue and a biodegradable element in series with the strap-like element," where the two elements together "provide a temporary total prosthesis for the ligament . . . and shield the . . . repaired tissue from excessive loads during the initial healing period." Ex. 1005, 5:22–29 (cited by Pet. 29). Petitioner identifies the strap-like element of Van Kampen's augmentation device 10 as a "suture." Pet. 29. Petitioner contends that "Van Kampen discloses that augmentation device 10 (the strap-like element) is directly attached to fastener 14 and bushing 32/screw 34 (the first and second fasteners)." *Id.* at 30–31 (citing Ex. 1005, 3:35–47, 3:49–68). As discussed above, Van Kampen teaches that the legs of fastener 14 are inserted through the braids of one end of augmentation device 10, and that the cylindrical portion of bushing 32 is inserted through the braids of the other end of augmentation device 10. Ex. 1005, 3:37–40, 3:62–65 (cited by Pet. 31). Petitioner also contends that the materials that Van Kampen lists as suitable for making the strap-like element are "suture material[s]." Pet. 29 (citing Ex. 1005, 5:54–65). Petitioner adds that an ordinarily skilled artisan would

have “understood that the strap-like element functioned as a suture to keep two surfaces in apposition of each other.” *Id.* at 30. Petitioner relies on the declaration testimony of Dr. Jordan. *Id.* at 29–30 (citing Ex. 1002 ¶¶ 75–76).

With respect to the step of “tightening the suture,” Petitioner contends that an ordinarily skilled artisan “would have understood that for the disclosed strap-like element to act properly as a ‘total prosthesis’ it would be tightened between the fasteners,” and that “[t]his is because healthy ligaments are in tension and for the strap-like element to supplement the natural anatomical function, it would need to be tightened to the damaged ligament’s natural anatomic tension.” Pet. 32. Petitioner further asserts that “[i]f not tightened to the damaged ligament’s natural anatomic tension, it would not be supporting the load in a way that allows for the damaged ligament to heal.” *Id.* Petitioner relies on the declaration testimony of Dr. Jordan. *Id.* (citing Ex. 1002 ¶ 78); *see also id.* at 31–33 (citing Ex. 1002 ¶¶ 78, 80). On this record, Petitioner’s contention in this regard is consistent with Van Kampen’s teaching that “the strap-like element must have sufficient tensile strength to carry the working loads normally carried by the ligament . . . being repaired or reconstructed and low flexural rigidity so as to be flexible enough to prevent interference with the normal movement of the muscular or skeletal structures connected by the device.” Ex. 1005, 5:43–49 (cited by Pet. 31).

Based on Petitioner’s argument and evidence, we are persuaded that Petitioner has shown sufficiently for purposes of this Decision that Van Kampen teaches claim 24’s recited steps of securing a suture and tightening the suture.

3. *Summary*

In view of the foregoing, we determine that Petitioner has demonstrated a reasonable likelihood of showing that Van Kampen teaches or suggests all limitations of claim 24 and that claim 24 thus would have been obvious over Van Kampen. Claims 26, 27, and 32 depend from claim 24. Having reviewed Petitioner's arguments asserting that claims 26, 27, and 32 would have been obvious over Van Kampen (*see* Pet. 33–37), we also determine that Petitioner has demonstrated a reasonable likelihood of prevailing on its assertions as to these dependent claims.

D. Obviousness over Van Kampen and Boyce

Petitioner asserts that claims 25 and 33 of the '129 patent would have been obvious over Van Kampen and Boyce. Pet. 38–45. For the reasons explained below, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing on this ground.

We provided an overview of Van Kampen above. *See supra* Part III.C.1. Before addressing Petitioner's analysis, we additionally provide an overview of Boyce.

1. Boyce

Boyce describes implants useful for “the repair or replacement of ligaments, tendons and/or cartilage.” Ex. 1006 ¶ 2. The implants are made from flexible elongated elements, such as bone, tendons, ligaments, or synthetic polymeric fibers. *Id.* ¶ 25. The elongated elements are aligned along their longitudinal axis to provide, for example, woven, knitted,

braided, or twisted structures. *Id.* ¶¶ 10, 20. To illustrate, Figures 1A and 1B are reproduced below.

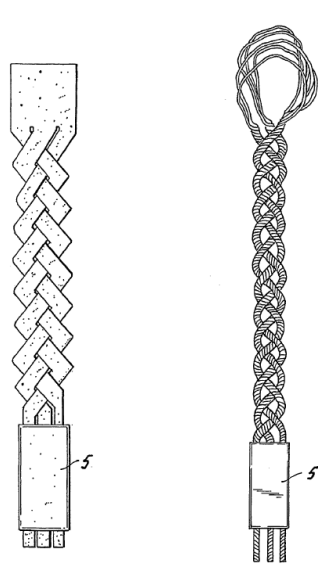


Fig. 1a **Fig. 1b**

Figure 1A shows an elongated section of bone that has been cut to provide three elongated elements arranged in a braid, and Figure 1B shows elongated elements formed into yarns that are arranged in a braid. *Id.* ¶ 24. The elongated elements have “connective tissue-healing activity,” which means they have “the ability . . . to participate in the repair, regeneration, healing, etc., of connective tissue, e.g., bone, ligament, tendon or cartilage.” *Id.* ¶ 15. The implants comprising the elongated elements can be used in various surgical procedures, including the repair of the vertebral column as well as the repair of ligaments or tendons in the spine, hand, elbow, knee, foot, and ankle. *Id.* ¶ 63.

2. Analysis

We turn now to the claims. Each of claims 25 and 33 depends directly from independent claim 24. As discussed above, we are persuaded

that Petitioner has shown sufficiently for purposes of this Decision that Van Kampen teaches or suggests all the limitations of claim 24. *See supra* Part III.C. We address claims 25 and 33 in turn.

a. Dependent Claim 25

Claim 25 recites “the first bone portion is associated with a first vertebra and the second bone portion is associated with a second vertebra, the ligament of the weakened portion of the ligament being comprised of a spinal ligament.” For this limitation, Petitioner acknowledges that “Van Kampen does not expressly disclose stabilizing a ligament in the spine,” but at the same time notes that Van Kampen “does not limit the use of [its] device to any particular region of the body.” Pet. 38, 43–44 (citing Ex. 1005, 1:15–21, 5:9–13); *see also* Ex. 1005, 5:9–13 (“The selection of the appropriate biological tissue to reconstruct or repair a particular tendon or ligament is well within the level of ordinary skill in the field of orthopedic surgery and does not form part of the present invention.”). Petitioner thus relies additionally on Boyce, asserting that “Boyce teaches using an orthopedic implant for the treatment of spinal disorders.” Pet. 44 (citing Ex. 1006 ¶¶ 2, 63). Petitioner contends that an ordinarily skilled artisan “would have found it obvious to combine the teachings of Van Kampen’s device capable of use on a variety of ligaments in the body with Boyce’s description of performing similar procedures on the spine.” *Id.* at 39–40. Petitioner contends that the ordinarily skilled artisan specifically “would have performed Van Kampen’s procedure such that the augmentation device would have been connected to adjacent vertebral bones and the ligaments at

issue (which could have been, for example, the interspinous ligament or anterior longitudinal ligament).” *Id.* at 45 (citing Ex. 1002 ¶ 104).

As support, Petitioner asserts that Van Kampen and Boyce “both disclose similar implantation devices used for treating damaged ligaments and tendons.” Pet. 40. Petitioner also asserts that, “like Van Kampen, Boyce teaches the use of implants for the knee, but unlike Van Kampen, Boyce further teaches the use of the similar implants in the spine.” *Id.* at 38–39 (citing Ex. 1005, 2:23–40; Ex. 1007 ¶¶ 2, 63). Petitioner points to Van Kampen’s characterization of its discussion regarding ligament reconstruction in the knee as “[a]n example,” and further asserts that “it would have been natural for a [person of ordinary skill in the art] to look to Boyce to determine other suitable applications for the device disclosed in Van Kampen.” *Id.* at 38, 40 (citing Ex. 1005, 1:15–21). Petitioner adds that the ordinarily skilled artisan “would have understood that ligament repair and reconstruction regions in the knee . . . and spine were equivalents at the time of the alleged invention of the ’129 Patent.” *Id.* at 40. Petitioner relies on the declaration testimony of Dr. Jordan. *Id.* at 38–45 (citing Ex. 1002 ¶¶ 90–94, 97–105).

Based on Petitioner’s argument and evidence, we are persuaded that Petitioner has shown sufficiently for purposes of this Decision that the proposed combination of Van Kampen and Boyce teaches or suggests the recited limitation of claim 25. On this record, we also are persuaded that Petitioner’s proffered reasoning for using Van Kampen’s device in the treatment of a spinal ligament as taught by Boyce is sufficient to support institution. *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[T]here

must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”).

b. Dependent Claim 33

Claim 33 recites “the surgical procedure of step (a) is performed on the patient’s elbow and the first and second bone portions are comprised of bone portions proximate the patient’s elbow.” For this limitation, Petitioner acknowledges that “Van Kampen does not expressly disclose stabilizing a ligament . . . in the elbow,” but at the same time notes that Van Kampen “does not limit the use of [its] device to any particular region of the body.” Pet. 38, 43–44 (citing Ex. 1005, 1:15–21, 5:9–13); *see also* Ex. 1005, 5:9–13 (“The selection of the appropriate biological tissue to reconstruct or repair a particular tendon or ligament is well within the level of ordinary skill in the field of orthopedic surgery and does not form part of the present invention.”). Petitioner thus relies additionally on Boyce, asserting that “Boyce teaches using an orthopedic implant . . . for the repair and replacement of ligaments in the elbow and knee.” Pet. 44 (citing Ex. 1006 ¶¶ 2, 63). Petitioner contends that an ordinarily skilled artisan “would have found it obvious to combine the teachings of Van Kampen’s device capable of use on a variety of ligaments in the body with Boyce’s description of performing similar procedures on the . . . elbow.” *Id.* at 39–40. Petitioner contends that the ordinarily skilled artisan specifically “would have performed Van Kampen’s procedure such that the augmentation device would have been connected to adjacent bones (humerus and radius) and ligaments (e.g., ulnar collateral ligament) in the elbow joint at issue.” *Id.* at 45 (citing Ex. 1002 ¶ 105).

As support, Petitioner asserts that Van Kampen and Boyce “both disclose similar implantation devices used for treating damaged ligaments and tendons.” Pet. 40. Petitioner also asserts that, “like Van Kampen, Boyce teaches the use of implants for the knee, but unlike Van Kampen, Boyce further teaches the use of the similar implants in the . . . elbow.” *Id.* at 38–39 (citing Ex. 1005, 2:23–40; Ex. 1006 ¶¶ 2, 63). Petitioner points to Van Kampen’s characterization of its discussion regarding ligament reconstruction in the knee as “[a]n example,” and further asserts that “it would have been natural for a [person of ordinary skill in the art] to look to Boyce to determine other suitable applications for the device disclosed in Van Kampen.” *Id.* at 38, 40 (citing Ex. 1005, 1:15–21). Petitioner adds that the ordinarily skilled artisan “would have understood that ligament repair and reconstruction regions in the knee, elbow . . . were equivalents at the time of the alleged invention of the ’129 Patent.” *Id.* at 40. Petitioner relies on the declaration testimony of Dr. Jordan. *Id.* at 38–45 (citing Ex. 1002 ¶¶ 90–94, 97–105).

Based on Petitioner’s argument and evidence, we are persuaded that Petitioner has shown sufficiently for purposes of this Decision that the proposed combination of Van Kampen and Boyce teaches or suggests the recited limitation of claim 33. On this record, we also are persuaded that Petitioner’s proffered reasoning for using Van Kampen’s device in the treatment of an elbow ligament as taught by Boyce is sufficient to support institution.

3. *Summary*

In view of the foregoing, we determine that Petitioner has demonstrated a reasonable likelihood of showing that claims 25 and 33 would have been obvious over Van Kampen and Boyce.

E. Remaining Grounds

Petitioner asserts that claims 24–27 and 32 of the ’129 patent would have been obvious over Van Kampen and Lambrecht. Pet. 45–55.

Petitioner also asserts that claim 33 would have been obvious over Van Kampen, Lambrecht, and Boyce. *Id.* at 56–57.

As discussed above, Petitioner has already demonstrated a reasonable likelihood that it will prevail on its asserted ground of obviousness over Van Kampen as well as its asserted ground of obviousness over Van Kampen and Boyce. *See supra* Parts III.C, III.D. Accordingly, we institute trial on all challenged claims and all asserted grounds of unpatentability, including the grounds based additionally on Lambrecht. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018) (holding that a decision to institute under 35 U.S.C. § 314 may not institute on fewer than all claims challenged in the petition); Patent Trial and Appeal Board, Consolidated Trial Practice Guide, 5 (Nov. 2019), available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf> (“In instituting a trial, the Board will either (1) institute as to all claims challenged in the petition and on all grounds in the petition, or (2) institute on no claims and deny institution. The Board will not institute on fewer than all claims or all challenges in a petition.”).

IV. CONCLUSION

For the foregoing reasons, Petitioner has demonstrated on the record before us a reasonable likelihood that it will prevail in showing that claims 24–27, 32, and 33 of the ’129 patent are unpatentable. We have not, however, made a final determination with respect to the patentability of these claims.

V. ORDER

For the reasons given, it is

ORDERED that *inter partes* review is instituted as to all the challenged claims of the ’129 patent, namely, claims 24–27, 32, and 33, based on all the grounds presented in the Petition:

- A. Obviousness under 35 U.S.C. § 103 of claims 24, 26, 27, and 32 over Van Kampen;
- B. Obviousness under 35 U.S.C. § 103 of claims 25 and 33 over Van Kampen and Boyce;
- C. Obviousness under 35 U.S.C. § 103 of claims 24–27 and 32 over Van Kampen and Lambrecht; and
- D. Obviousness under 35 U.S.C. § 103 of claim 33 over Van Kampen, Lambrecht, and Boyce; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; the trial will commence on the entry date of this Decision.

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PETITIONER:

Megan S. Woodworth
Justin J. Oliver
Robert E. Bugg
Robert C. Tapparo
VENABLE LLP
MSWoodworth@Venable.com
JJOliver@Venable.com
REBugg@Venable.com
RCTapparo@Venable.com

PATENT OWNER:

Robert M. Evans, Jr.
Michael J. Hartley
Kathleen Markowski Petrillo
LEWIS RICE LLC
revans@lewisrice.com
mhartley@lewisrice.com
kpetrillo@lewisrice.com