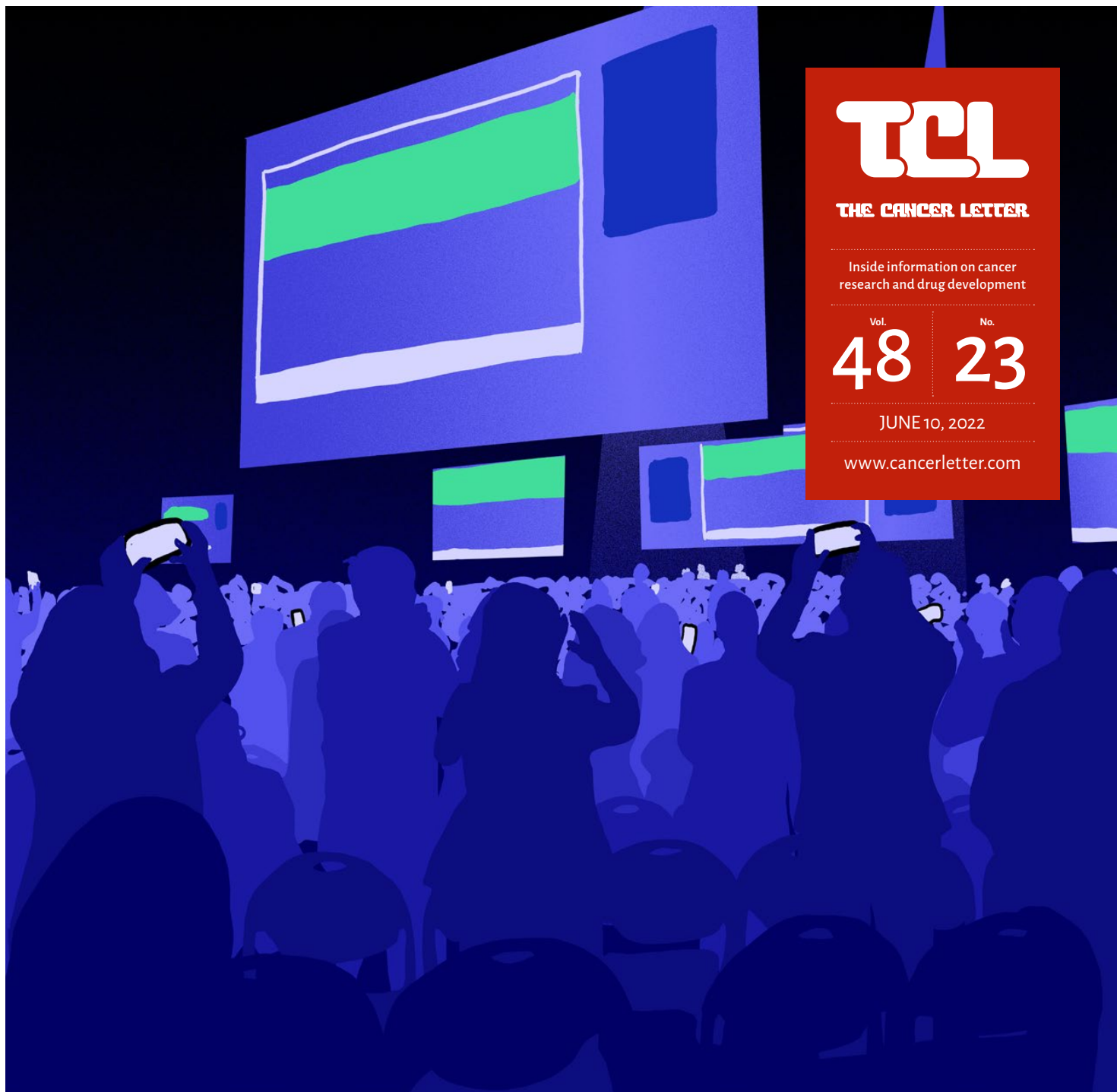




TCL

THE CANCER LETTER

Inside information on cancer
research and drug development

Vol. **48** No. **23**

JUNE 10, 2022

www.cancerletter.com

ASCO'S "ROCK CONCERT" MOMENTS CAME 17 YEARS APART—IN 2005 AND 2022

DESTINY-04 results extend HER2-targeted therapy to a
larger population in breast cancer

→ PAGE 5

IN EARLY RESULTS
"UNPRECEDENTED IN RECTAL
CANCER," 14/14 PATIENTS SHOW
CLINICAL COMPLETE RESPONSE
TO DOSTARLIMAB

→ PAGE 7

MOFFITT'S ROBERT GILLIES,
"FATHER OF RADIOMICS,"
DIES AT 69

→ PAGE 19

LOWY CALLS FOR EXPANDING
NCI'S CLINICAL IMPACT,
INCLUDING: (1) THE NUMBER
OF DRUG CANDIDATES, (2) THE
CLINICAL TRIALS SYSTEM, AND
(3) ACCESS TO CANCER CARE

→ PAGE 9

LUCIUS SINKS, A GIANT
IN PEDIATRIC CANCER,
DIES AT 91

→ PAGE 24



RENOWNED CLINICAL CANCER EXPERTISE BUILT ON LEADING-EDGE RESEARCH.

Northwestern Medicine is in relentless pursuit of better cancer outcomes.

Robert H. Lurie Comprehensive Cancer Center of Northwestern University is proud to be a national leader in cancer research, one of only 51 Comprehensive Cancer Centers as designated by the National Cancer Institute. Our nationally recognized program is made up of world-class physicians and scientists committed to providing innovative, personalized treatment and comprehensive care to patients with all types of cancer.

Discover why Lurie Cancer Center at Northwestern Memorial Hospital is No. 6 in the nation and the top-ranked cancer program in Illinois* by visiting cancer.northwestern.edu.



*U.S. News & World Report 2021-22

© 2021 Northwestern Medicine

Editor & Publisher

Paul Goldberg

Associate Editor

Matthew Bin Han Ong

Reporter

Alexandria Carolan

Reporter

Alice Tracey

Director of Operations,

Illustrator

Katie Goldberg

Marketing &

Account Manager

Mona Mirmortazavi

Designer

Jacqueline Ong

IT Manager

David Koh

Editorial, Subscriptions and Customer Service

PO Box 9905 -

Washington, DC 20016

T 202-362-1809

F 202-379-1787

W www.cancerletter.com

Individual subscriptions \$555 per year worldwide. Group subscriptions required for institutional distribution. To subscribe, [click here](#).

ISSN 0096-3917. Published 46 times a year by The Cancer Letter Inc. Other than "fair use" as specified by U.S. copyright law, none of the content of this publication may be reproduced, stored in a retrieval system, or transmitted in any form (electronic, photocopying, or facsimile) without prior written permission of the publisher. Violators risk criminal penalties and damages. Founded Dec. 21, 1973, by Jerry D. Boyd.

© Copyright 2022.

The Cancer Letter Inc.

All rights reserved.

®The Cancer Letter is a registered trademark.

In this issue

COVER STORY (GUEST EDITORIAL)

- 5** ASCO's "rock concert" moments came 17 years apart—in 2005 and 2022

CLINICAL

- 7** In early results "unprecedented in rectal cancer," 14/14 patients show clinical complete response to dostarlimab

- 9** Lowy calls for expanding NCI's clinical impact, including: (1) the number of drug candidates, (2) the clinical trials system, and (3) access to cancer care

OBITUARY

- 19** Moffitt's Robert Gillies, "father of radiomics," dies at 69
- 22** Lucius Sinks, a giant in pediatric cancer, dies at 91
- 24** Lucius Sinks was the type of physician all of us would like to have

LETTER TO THE EDITOR

- 26** Tom Jordan: I wish to be known for Taxol, carboplatin, and camaraderie



GUEST EDITOR CANCER SURVIVORS MONTH

Deborah Doroshow, MD, PhD

*Assistant professor of medicine,
Tisch Cancer Institute,
Icahn School of Medicine at Mount Sinai*

IN THE ARCHIVES

- 27** How Beth Carner went from six weeks left to live with stage 4 colon cancer to complete remission

IN BRIEF

- 30** Fadlo Khuri honored for decade as editor-in-chief of *Cancer*
- 30** AACR releases Cancer Disparities Progress Report 2022
- 32** Darrel Cohen named CMO of cell therapy at Athenex

REACH PEOPLE WHO MATTER IN ONCOLOGY

Advertise your meetings and recruitments in The Cancer Letter and The Clinical Cancer Letter

Find more information

HERE

or visit:
<https://cancerletter.com/media-kit/>

THE CLINICAL CANCER LETTER

CLINICAL ROUNDUP

- 33** UNC study: Using telehealth to report symptoms improves well-being in advanced cancer
- 34** Parker Institute study: Biomarkers may predict better immunotherapy outcomes in mPDAC
- 34** N-803 immunotherapy may improve responses in BCG-unresponsive bladder cancer, advanced metastatic pancreatic cancer
- 35** Vectibix superior to bevacizumab in Japanese patients with wild-type RAS mCRC
- 35** Cedars-Sinai study shows racial and ethnic disparities in access to immunotherapy for advanced liver cancer
- 36** ACS study: Pandemic reduced breast, cervical, colorectal cancer screenings by millions in 2020
- 36** ACS study: Public perception of e-cigarettes vs. cigarettes harms changed sharply during EVALI epidemic and COVID-19 pandemic

DRUGS & TARGETS

- 37** FDA grants Orphan Drug Designation to iadademstat in SCLC
- 37** Parker Institute for Cancer Immunotherapy, Resilience partner to develop cell and gene therapies
- 37** Dana-Farber, Gustave Roussy, L'Institut Servier sign oncology cooperation agreement
- 38** FDA campaign aims to prevent e-cigarette use among AI/AN youth



GUEST EDITORIAL

ASCO's "rock concert" moments came 17 years apart—in 2005 and 2022

DESTINY-o4 results extend HER2-targeted therapy to a larger population in breast cancer



By George W. Sledge Jr., MD

*Professor of Medicine,
Stanford University School of Medicine*

The plenary session at the ASCO 2022 annual meeting saw that rarest of things at a scientific conference: a standing ovation.

The ovation, a spontaneous outburst of joy in a packed auditorium, was for Dr. Shanu Modi's presentation of the DESTINY-o4 trial.

For many of us in the audience, Dr. Modi's talk brought back memories of the 2005 ASCO meeting, with its "special education session" (a title invented for the meeting) devoted to adjuvant trastuzumab, where three presentations cemented the use of HER2-targeted therapy in the imaginations of medical oncologists.

I had the honor to serve as chair of ASCO's Education Committee that year,

and in turn to act as discussant for the HER2 presentations by Drs. Edward H. Romond, Martine J. Piccart-Gebhart, and Edith A. Perez. To this day, the session remains one of the highlights of my professional life and is fondly remembered as the ASCO "rock concert" (*The Cancer Letter*, May 27, 2005).

Editor's note: Another standing ovation at an ASCO plenary session occurred in 1994, as Bernard Fisher, then embroiled in battles with Rep. John Dingell (D-MI) and NCI, presented the results of NSABP trials (*The Cancer Letter*, May 27, 1994).

Similar to 2022, the presentations were accompanied by a prolonged outburst of applause from the audience, which in memory went on and on, an outpour-

ing of joy by an audience that knew that something fundamental had changed.

So, what was 2005 about, and why did 2022 remind us of that *annus mirabilis*?

Trastuzumab, the first HER2-targeted therapy, had already demonstrated benefit for HER2-positive patients in the metastatic setting in Dr. Dennis Slamon's pivotal 1998 trial (*The Cancer Letter*, Sept. 11, 1998).

Three cooperative groups (the NSABP, the NCCTG and the BIG) had rapidly developed adjuvant trials and raced to the finish line with their results; several other group trials were close on their heels but did not have data ready for the annual meeting.

Indeed, the NSABP and the NCCTG studies, both conducted under the aegis

of the NCI, made it to the finish line via a combined interim analysis approved by NCI and FDA.

The results were spectacular, and (in that pre-Zoom era) led to several late-night calls between the NCI, cooperative group leaders, and the ASCO leadership.

One problem that arose was that ASCO, in those distant days, had no mechanism for late-breaking abstracts. (This mechanism now exists). As such, the trials, with their vital, life-saving data, could not be included in the scientific program as then constituted.

No one had expected the trials to report out so early, nor with such stunning results. But the ASCO leadership wisely decided to create a “special education session”—and so the “rock concert” was born.

What made that session special was the immediate realization that identifying and then targeting a common cell surface receptor in early-stage breast cancer could profoundly affect the outcomes of patients otherwise destined to recur and die. It was a magical moment: biology had spoken, and we, collectively, had listened.

It was one of many such triumphs for targeted therapy that would follow—not just for breast cancer, but for many solid tumors.

So why did 2022 resemble 2005?

It was, in large part, because DESTINY-04 represented an important extension of HER2-targeted therapy to a much larger population of breast cancer patients.

Remember that what we have always defined as HER2-positive breast cancer assumed that one required a large number of HER2 cell surface receptors for HER2-targeted therapy to work. That always seemed to be the lesson of trials with first-generation monoclonal antibodies.

But technology has evolved for HER2-targeted therapy. Recent years have seen the development of multiple antibody-drug conjugates, or ADCs, in which the monoclonal antibody serves as a delivery truck for a linked toxin released intracellularly.

Trastuzumab emtansine was the first of these for breast cancer, followed in more recent years by trastuzumab deruxtecan; these two FDA-approved therapies are pursued by other ADCs in development for breast cancer, as well as for many other malignancies.

And a funny thing happened during the development of trastuzumab deruxtecan: early trials suggested that the drug might have activity against cancers expressing lower levels of HER2 on their cell surface. These trials led, in turn, to DESTINY-04, and Dr. Modi’s stunning ASCO plenary talk.

In this trial, patients with metastatic breast cancer who were defined as being either 1+ or 2+ by immunohistochemistry for HER2 were randomly assigned to receive either treatment of physician’s choice or to receive trastuzumab deruxtecan.

The latter was the clear winner of the duel, with significant improvements in both progression-free and overall survival, the latter by 6.6 months. This data was particularly impressive, and welcome, in a population of patients who had received one to two prior chemotherapy regimens and had exhausted standard hormonal therapy options.

DESTINY-04 has numerous implications and raises many important questions. HER2-low tumors are now on the table, not just for trastuzumab deruxtecan, but for the many follow-on ADCs.

HER2-low tumors exist far outside the confines of metastatic breast cancer; how far will ADCs reach therapeutically in these populations? Will trastuzumab deruxtecan improve outcomes in the adjuvant breast cancer setting, where

many high-risk patients still relapse, and where the drug’s real toxicity (e.g., interstitial lung disease) may alter the risk/benefit ratio?

Specifically, given emerging data in the metastatic setting, might trastuzumab deruxtecan reduce the incidence of brain metastases in a non-classic HER2-low population? And to what extent will trastuzumab deruxtecan provide benefit in triple-negative breast cancer patients expressing low levels of HER2? While DESTINY-04 provided some data in this regard, the number of triple-negative patients enrolled on the trial was small.

These many questions notwithstanding, the presentation of this data was a triumph, and I suspect I was not alone in the audience in feeling chills running up and down my spine during the talk.

I think this feeling, and the standing ovation, were in part a feeling of gratitude for a big win for our patients, and something we could bring back to the clinic immediately.

I suspect also, that after three years of being forced apart from each other by the COVID-19 pandemic, we in the audience were just happy to share in a triumph for modern medical science, and for our renewed fellowship in the battle against a common enemy. Societies socialize, and we had missed that these last perilous years.

After the talk, I met with one of my first-year oncology fellows, who was experiencing her initial ASCO meeting. I told her to remember this moment, because this sense of exhilaration doesn’t happen all that often. 2005 and 2022 were pretty far apart, after all.

But maybe, just maybe, I am wrong, and the progress of cancer science will be accompanied by more frequent rock concerts. We can hope.

CLINICAL

In early results “unprecedented in rectal cancer,” 14/14 patients show clinical complete response to dostarlimab

By Alice Tracey



All fourteen rectal cancer patients in a small phase II study of dostarlimab, an anti-PD-1 monoclonal antibody, saw their cancer completely disappear—with no progression or recurrence at follow-up six to 25 months later. None of the patients required further chemotherapy, radiation, or surgery.

“I believe this is the first time this has happened in the history of cancer,” study author Luis Alberto Diaz, head of the Division of Solid Tumor Oncology at Memorial Sloan Kettering Cancer Center, said in a [statement](#).

The study was [presented](#) by Andrea Cercek, section head of colorectal cancer at MSK and co-director of the Center for Young Onset Colorectal and Gastrointestinal Cancer, at the 2022 ASCO annual meeting June 5.

On the same day, the results were [published](#) in *The New England Journal of Medicine*.

“We’re obviously beyond thrilled,” Cercek said at ASCO. “We’ve treated a total of fourteen patients to date. All fourteen, 100% of them, have had a clinical

complete response to dostarlimab alone. We have not had to radiate any one, and no one has gone to surgery.”

In the prospective phase II study, dostarlimab was administered every three weeks for six months in patients with mismatch repair-deficient stage II or III rectal adenocarcinoma.

Treatment with the drug was intended to be followed by chemotherapy and surgery—but at the time of publication, all of the first fourteen patients had a clinical complete response and didn’t require additional treatment. No grade 3 or 4 adverse events were reported.

“Are these results clinically meaningful? I think everyone in this room will agree that the answer is yes,” discussed Kimmie Ng, associate professor

of medicine at Harvard Medical School and co-director of the Colon and Rectal Cancer Center at Dana-Farber Cancer Institute, said at ASCO. “The 100% clinical complete response rate is unprecedented in rectal cancer, and the potential to decrease morbidity by eliminating pelvic radiation and surgery for our patients is huge.”

The single-arm phase II study [aims](#) to eventually enroll 30 patients with stage II-III dMMR rectal cancer.

“I’d like to highlight that the majority of these patients had big bulky tumors, and 94% were node-positive,” Cercek said. “The standard of care for these patients would have very likely required all three modalities of chemotherapy, radiation, and surgery.”

About 5-10% of rectal cancers are mismatch repair deficient, meaning they are less responsive to chemotherapy. Mismatch repair deficiency can be inherited—called Lynch syndrome—or acquired with age, said gastrointestinal oncologist Richard Goldberg, former director of West Virginia University Cancer Institute.

“These patients don’t have to lose their rectum and possibly have a colostomy for life—so, to have 14 out of 14 patients have a complete response with six months of treatment, some of them having a response even earlier, is startling and really a wonderful finding for patients with rectal cancer,” Goldberg said to *The Cancer Letter*. “The trouble is, it’s only a minority of the patients with rectal cancer.”

Further studies and longer follow-up are needed to evaluate the effectiveness of the drug in this indication, Goldberg said. Median follow-up is currently 6.8 months.

“There are some cautions about this, in that all we have is preliminary data, and the median follow-up is only about sev-

en months,” Goldberg said. “We don’t have any idea what progression-free survival and overall survival will ultimately be. But, having said that, it’s amazing to consider the possibility that you wouldn’t have to have chemo, radiation, and surgery to cure cancer.”

Gastrointestinal medical oncologist Hanna K. Sanoff, of UNC Lineberger Comprehensive Cancer Center, authored an [editorial](#) in *NEJM* discussing these concerns.

“Very little is known about the duration of time needed to find out whether a clinical complete response to dostarlimab equates to cure. Whether the results of this small study conducted at Memorial Sloan Kettering Cancer Center will be generalizable to a broader population of patients with rectal cancer is also not known,” Sanoff wrote. “Despite these uncertainties, Cercek and colleagues and their patients who agreed to forgo standard treatment for a promising but unknown future with immunotherapy have provided what may be an early glimpse of a revolutionary treatment shift.”

Ng said the MSK results are scientifically plausible, based on prior studies.

“Abundant data support that checkpoint blockade may be more effective in the earlier stage setting than the metastatic setting,” Ng said. “There is no pathologic complete response data available from Dr. Cercek’s study, but the possibility that the clinical complete responses may indeed represent pathologic complete responses is supported by multiple published case reports.”

If supported by more data, these results could be practice-changing, Cercek and Ng said.

“We believe this data provides the framework for immuno-ablative therapies. It highlights the clinical impact of biomarker-driven therapy—in other

words, of moving precision medicine into early-stage disease,” Cercek said in the presentation. “The tumor-agnostic indication alone of mismatch repair deficiency has the potential to eliminate definitive therapy with chemotherapy, radiation, and surgery in up to 3-4% of all cancers. This has the potential to be translated rapidly into areas where access to modern chemotherapy, and more importantly, radiation and surgery, may not be available.”

Dostarlimab, sold as Jemperli, is sponsored by GlaxoSmithKline. In September 2021, the drug received an accelerated approval from FDA for dMMR advanced solid tumors (*The Cancer Letter*, [Sept. 3](#), 2021).

Goldberg and MSK’s Diaz were both involved in a 2017 [study](#) evaluating Merck’s PD-1 inhibitor Keytruda (pembrolizumab) in patients with dMMR cancer. This trial led to the FDA [approval](#) of Keytruda in the first ever “site-agnostic” indication (*The Cancer Letter*, [Oct. 13](#), 2017).

“We saw these extraordinary responses in people with advanced disease, some of whom were one step away from hospice. At least two of the patients that I treated are now six years out and appear to be cured. This gives us hope that these 14 patients will have the same long term cancer-free result,” Goldberg said. “It was a startling observation, and that led to the FDA approval of pembrolizumab, not in a specific cancer, but in any cancer that has this mismatch repair defect. That was a novel approval mechanism.”

One of these patients, Beth Carner, is profiled in this week’s installment of the Cancer History Project on [page 27](#).

Both the 2017 pembrolizumab study and the just-reported dostarlimab study received financial support from Swim Across America.

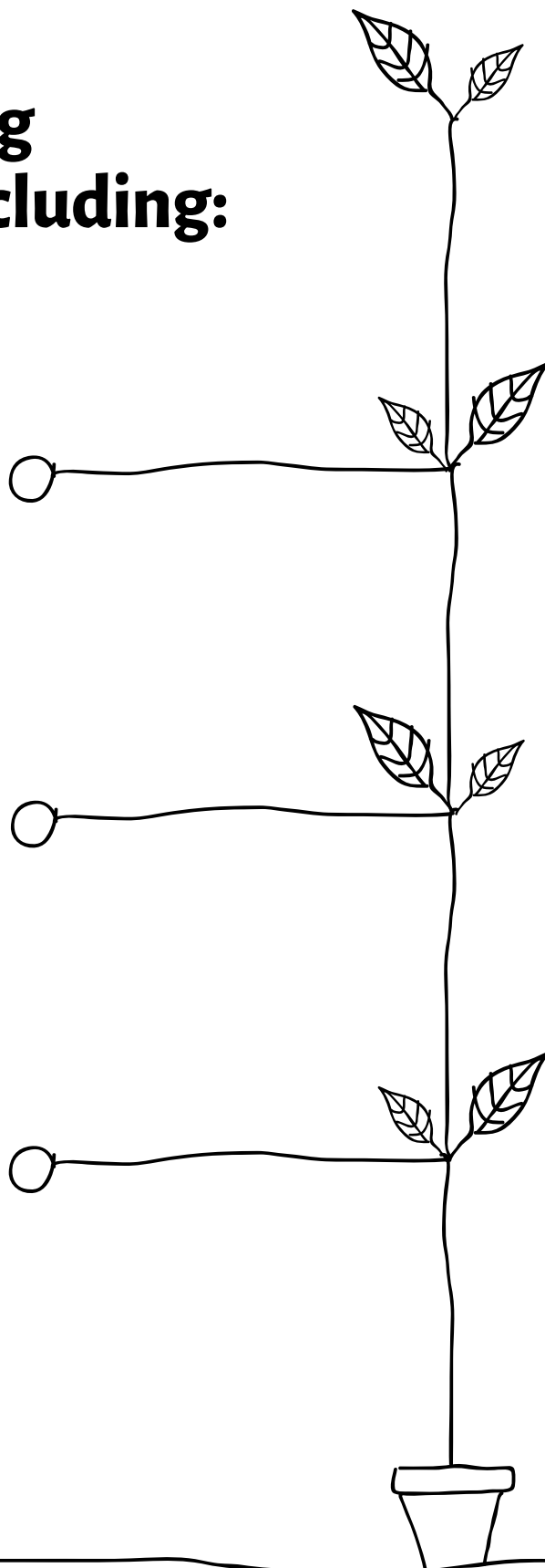
Lowy calls for expanding NCI's clinical impact, including:

① the number of drug candidates,

② the clinical trials system, and

③ access to cancer care

By Alice Tracey



NCI must make a bigger investment in new cancer therapies and expand the clinical trials system that tests them, the institute's Acting Director Douglas Lowy said in his remarks at the American Society of Clinical Oncology annual meeting June 4.

"We need to invest in the pipeline of new drugs for cancer prevention, interception, and treatment," Lowy said at the ASCO meeting. "Second, we need to greatly expand clinical trials to speed the evaluation of candidate interventions in diverse populations—racial, ethnic, and geographic—and, I should also add, seriously consider including patients with comorbidities who currently are excluded from many trials."

As part of this proposed expansion, NCI would need to "ensure equitable healthcare delivery of current and new standards of care" and "increase the diversity of cancer research and the cancer care workforce to resemble more completely the communities that we serve," Lowy said.

Lowy described these goals in the context of President Joe Biden's reignited Cancer Moonshot.

Biden has announced goals of halving cancer mortality over the next 25 years, increasing cancer screening and addressing inequities in access to cancer screening, diagnostics, and treatment (*The Cancer Letter*, Feb. 4, 2022). Funding for the current moonshot expires at the end of FY23.

Two proposed funding announcements will be discussed at an upcoming joint meeting of the Board of Scientific Advi-

sors and the National Cancer Advisory Board, Lowy said.

"One is the Cancer Moonshot Scholars diversity program, whose goal is to try to achieve much more equity and diversity among cancer researchers," Lowy said. "The second is a feasibility trial for clinical evaluation of asymptomatic, multi-cancer detection screening—so-called liquid biopsies—which hold great promise, but really need rigorous evaluation to demonstrate that this new approach actually can save lives and reduce mortality."

Lowy is envisioning this expansion at a time when Biden's FY23 budget proposal seeks to cut NCI funding. However, support for increasing funding for NIH and NCI is strong and bipartisan, Lowy said.

"Congress, with its bipartisan support, has actually increased the funding for NCI each of the last five years. So, I think that with your help and support, this will happen again in 2023," he said.

Biden's proposal for FY23 would cut NCI funding by \$199 million, a 2.9% decrease from FY22, while adding \$4 billion to the Advanced Research Projects Agency for Health (*The Cancer Letter*, April 1, 2022). NIH base funds would increase by \$275 million, the smallest increase in the past seven years.

At a recent hearing of the Subcommittee on Labor, Health and Human Services, Education, and Related Agencies, Rep. Rosa DeLauro (D-CT) and Rep. Tom Cole (R-OK) expressed concerns about the FY23 proposal's apparent prioritization of ARPA-H over basic research (*The Cancer Letter*, May 13, 2022).

"On my 12th day as acting director, I participated in a hearing of the House Appropriations Subcommittee," Lowy said. "I just want to assure you that there is really strong bipartisan support

for cancer research and the NCI among the members of this group."

Lowy also discussed his transition into acting director of NCI—a role he has held twice before. Former NCI Director Ned Sharpless stepped down in April (*The Cancer Letter*, April 8, 2022).

"Ned was really a terrific leader for the NCI, and I was sorry that he was going to be leaving, because he had done such a great job—but I am very pleased to have been asked to be acting director again," Lowy said.

Lowy's full remarks from the 2022 ASCO annual meeting follow.

It is an honor for me to have been invited to give you this short presentation about some of the activities at the NCI.

Before I do that, I first want to congratulate all of the awardees who are going to be receiving awards after I finish my presentation, and especially to congratulate Jedd Wolchok. Aside from the fact that he is an outstanding scientist highly deserving of the Karnofsky Award, it turns out that he and I both trained with Jan Vilček at NYU. I did it when I was a medical student there, and it was my first research experience.

I am bringing this up today to reemphasize something that Dr. [Everett] Vokes talked about, which is the importance of mentorship. I would not be here today if it were not for Dr. Vilček—he had more confidence in my potential than I had, and that really made all the difference in my professional career.

I also want to congratulate all of you for having gotten through the past two years and for the incredible devotion and commitment

“

I am saddened to hear of the upcoming departure of Dr. Ned Sharpless from the National Cancer Institute. His advocacy for and leadership in cancer research will be dearly missed...

...I am encouraged that he will be temporarily replaced by my good friend Deputy NCI Director Doug Lowy.

”



Tom Cole, Congressman, 4th District of Oklahoma
Ranking Republican of the Labor, Health and Human Services
Appropriations Subcommittee

Statement issued April 7, 2022

NIH NATIONAL CANCER INSTITUTE

2

that you have had to patients with cancer during this terrible period. Your resilience has really been extraordinary.

I now would like to introduce the transition of Ned Sharpless to myself with a press release that was issued by [Rep.] Tom Cole [(R-OK)] two months ago, shortly after Dr. Sharpless announced that he was resigning. Ned was really a terrific leader for the NCI, and I was sorry that he was going to be leaving, because he had done such a great job—but I am very pleased to have been asked to be acting director again. These comments from Congressman Cole really exemplified two aspects.

For those of you who don't know Congressman Cole, during my first tenure as acting director, he was chair of the House Appropriations Subcommittee, which provides re-

sources for the NIH in general and NCI specifically. He has been a great friend of cancer research for many years. I also want to highlight that in 2016, I was with Congressman Cole in Oklahoma City, because he is a member of the Chickasaw Nation.

The Stevenson Cancer Center, with support from NCI, organized a meeting on cancer precision medicine for American Indians and Alaskan Natives—because, as you will see in three slides, in case you don't know it, this group of Americans has really not benefited very much from all of the advances that you and others have made in cancer research.

So, on my 12th day as acting director, I participated in a hearing of the House Appropriations Subcommittee. I just want to assure you that there is really strong bipartisan support for cancer research and the NCI among the members of this group.

These are quotes, first from the chair, Rosa DeLauro [(D-CT)], who is a Democrat, and second from [Rep.] Chuck Fleischmann [(R-TN)], who is a Republican. They really are both complimentary about all of the advances that you have been involved with.

Some people are aware that in the budget for 2023, the president's budget, is actually the same as was the request for 2022, as shown in this slide—in the orange, for 2022 and 2023. But I want to show you by depicting what has happened over the last five years that Congress, with its bipartisan support, has actually increased the funding for NCI each of the last five years. So, I think that with your help and support, this will happen again in 2023.

This slide shows you both good news and bad news about the age-adjusted cancer mortality trends by race

FY 2023 Budget Request for the National Institutes of Health House Committee on Appropriations Hearing, May 11, 2022



"This [2022 omnibus] includes an increase of \$353 million to fund a greater number of research proposals at the NCI and support for the Cancer Moonshot initiative **that will save lives by speeding cancer research progress and improving prevention detection and treatment efforts.**"

–Chair Rosa DeLauro (D-CT)



"Cancer research... is something I think our investments with you all [NCI] are proving to be great... **the research is just truly incredible, as are the results.** So, keep up the good fight."

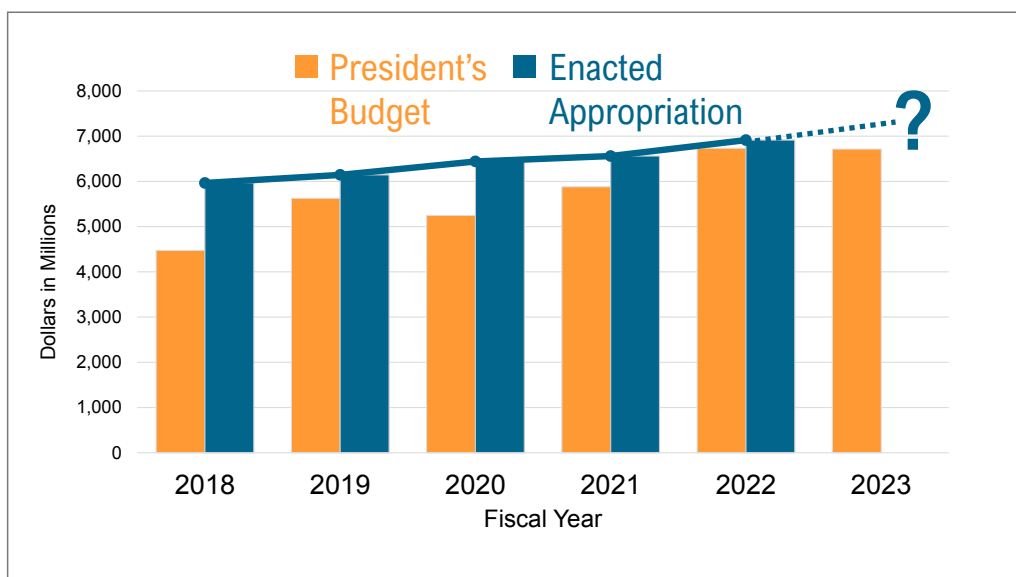
–Representative Chuck Fleischmann (R-TN)

NIH NATIONAL CANCER INSTITUTE

Source: YouTube / House Appropriations Committee (May 11, 2022)

4

President's NCI Budget and Enacted Appropriations



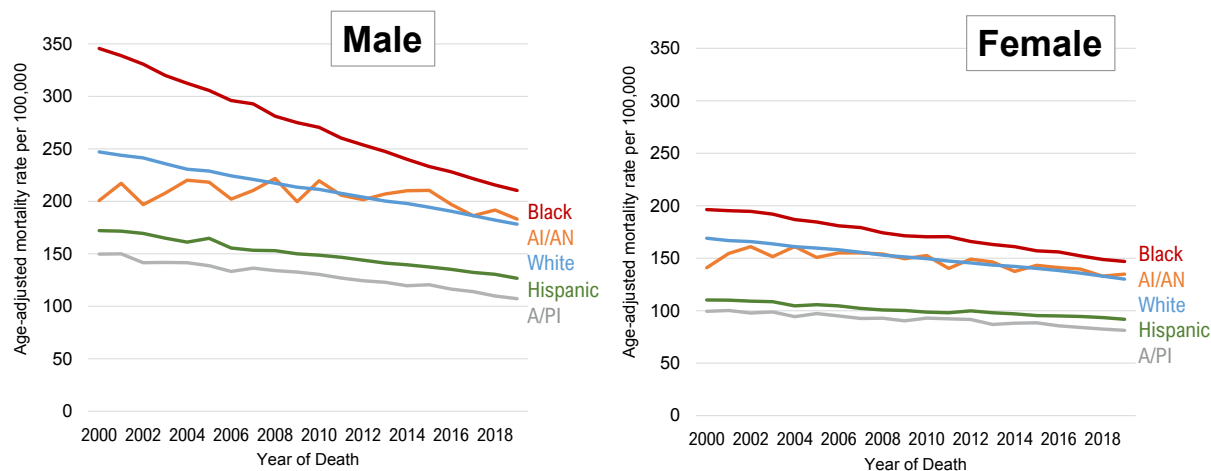
- Strong bipartisan support for cancer research across Congress
- Congress has declined to cut funding to cancer research – even in challenging budget cycles

NIH NATIONAL CANCER INSTITUTE

Source: NCI Budget Fact Book

3

Age-adjusted cancer mortality trends by race and ethnicity (2000-19)



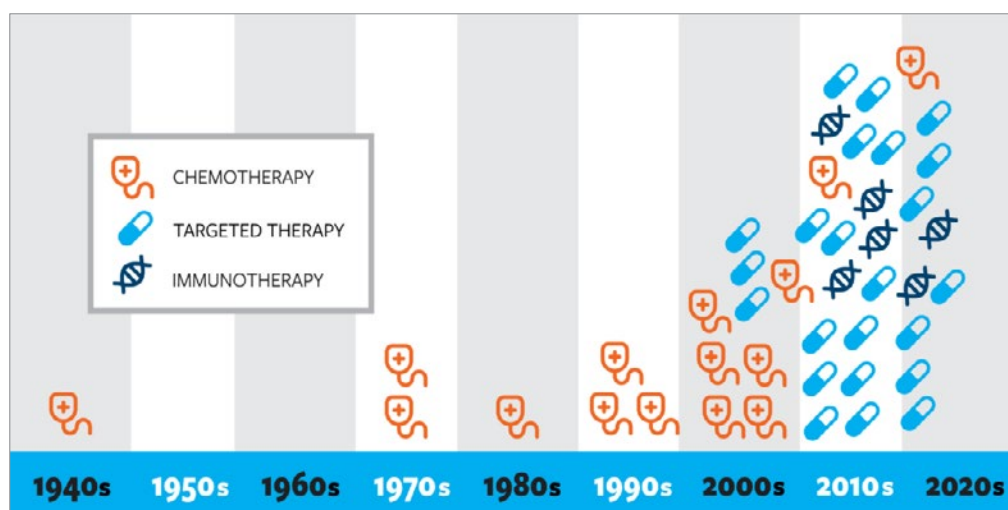
Source: NCI Surveillance, Epidemiology, and End Results Program (SEER), seer.cancer.gov



For more, see Lawrence, et al: **Trends in Cancer Mortality Among Black Individuals in the U.S. From 1999 to 2019 – JAMA Oncology**, May 19, 2022

5

Increasing rate of FDA approvals: lung cancer treatment



Source: Lung Cancer Research Foundation



See also Howlader, et al: **The Effect of Advances in Lung-Cancer Treatment on Population Mortality – New England Journal of Medicine**, Aug 13, 2020

6

Advances in treating *KRAS* mutants in people with cancer

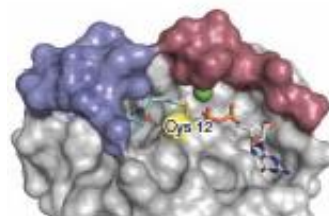
Numbers of new cancer cases per year in the U.S. that contain the most frequent *KRAS* mutant alleles

	All <i>KRAS</i>	G12C	G12D
Lung	45,600	23,000	9,200
Pancreas	32,200	1,000	19,500
Colorectal	60,000	5,700	25,000
Total new cases per year	137,800	29,700	53,700

NCI-Frederick: Patient-derived Models Repository
<https://pdmr.cancer.gov>

Specifically targeting mutant *KRAS*:

- **G12C inhibitor** FDA-approved May 28, 2021
- **G12D inhibitor** clinical trials soon



Ostram, et al, Nature 2013

NIH NATIONAL CANCER INSTITUTE

7

66

Congress, with its bipartisan support, has actually increased the funding for NCI each of the last five years. So, I think that with your help and support, this will happen again in 2023.

99

– Douglas Lowy

and ethnicity over the last 20 years. The good news is all of the trends are downward, both for men and women, but the squiggly lines represent mortality rates for American Indians and Alaskan Natives. They clearly have not benefited to the same degree as others.

The top line shows the decreasing mortality rates in men on the left and Black women on the right. Note that the rate of decline has been substantially faster, especially for Black males, compared to the rest of the population. This is very good news—but note, in addition, that the disparity still exists, as I will show you in two more slides. This good news hides some other areas where success has not occurred yet.

One of the areas of great effect, as Dr. Vokes mentioned, was the area of lung cancer. This slide from the Lung Cancer Research Foundation

tells you about the increasing rate of FDA approvals for lung cancer. Almost all of these approvals have been for non-small cell lung cancer; that is where substantial improvements have occurred. A lot of the improvement that you see on the previous slide was for decreased incidence of lung cancer, thanks to decreased tobacco consumption.

But, as my colleagues and I published a couple of years ago in the reference shown on the bottom, advances in lung cancer treatment also are playing a progressively important role in improving the mortality outcomes for patients with lung cancer, as already mentioned by Dr. Vokes.

Another area which I think is really very exciting is what is happening with mutant *KRAS*-associated cancers. As shown on the right, the first *KRAS* G12C inhibitor was approved

Uterine Cancer Death Rates Rising, Highest Among Black Women in the United States

- **Black women are 2x as likely to die of uterine cancer** compared to other racial and ethnic groups
- Most of the mortality increase is attributable to non-endometrioid uterine cancer, **which disproportionately affects Black and Hispanic women.**
- Non-endometrioid cancer mortality **increased 3.5% per year for Black women and 6.7% for Hispanic women** between 2010 and 2017.



- **There is an urgent need for new research in the affected populations.**

NIH NATIONAL CANCER INSTITUTE

Clarke MA, Devesa SS, Hammer A, Wentzensen N. Racial and Ethnic Differences in Hysterectomy-Corrected Uterine Corpus Cancer Mortality by Stage and Histologic Subtype. *JAMA Oncology*. May 5, 2022.

8

just this past year. This is after the discovery of the mutations 40 years ago this year. For the first 30 years, there simply was no progress in developing inhibitors, but thanks to Kevan Shokat and his colleagues using a tethering approach for G12C inhibition, this now is a reality.

In addition, there is preclinical data for a number of KRAS G12D inhibitors, and these show promise—you and many of your colleagues are going to be testing these approaches in clinical trials in the near future. The table on the left shows you that while G12C is common in lung cancer, it is uncommon in pancreatic cancer. By contrast, G12D is very common in pancreatic cancer. I am optimistic that we will be able to make progress in this area, first as single agent treatment, but then ultimately as combination treatment.

Part of the bad news was recorded last month by Megan Clarke and her colleagues from NCI about uterine cancer death rates going up. They are highest by far among Black women in the United States, who are two times as likely to die of uterine cancer. Most of the mortality increase is attributable to non-endometrioid uterine cancer, which disproportionately affects Black and Hispanic women. The increased rate over the past seven years was 3.5% per year for Black women and 6.7% for Hispanic women. There is clearly an urgent need for new research in the affected populations.

The last topic I want to cover is the Cancer Moonshot. We have all been excited by the aspirational goals, which I will describe for you in the next slide, of the reinvigorated Cancer Moonshot by President

Biden and the administration. But it's important to remember that the first Cancer Moonshot is still alive and well and will have funding through FY23.

This just summarizes some of the accomplishments over the first few years of the current Cancer Moonshot. I called your attention to more than 2,000 publications, 49 clinical trials, and more than 30 patent filings. So, what are the goals of the Cancer Moonshot in the next phase?

What President Biden articulated at the beginning of February in a White House ceremony—both he and the First Lady spoke, and in addition, the vice president spoke—and all three of them talked about cancer, how it affects everyone and how we need to do better. So, the first goal is to cut the cancer death

Cancer MoonshotSM: Accelerate discovery, increase collaboration, and expand data sharing

In the Cancer Moonshot's first 4 years (2017 - 2021)



>2,000
Publications



49
Clinical Trials



>30
Patent Filings

Goals of Cancer Moonshot Next Phase

- 1 **Cut the cancer death rate in half within 25 years.**
- 2 **Transform the meaning of cancer.**
- 3 **Address cancer-associated inequities.**

Accomplishing the New Goals



Invest in the pipeline of new drugs for cancer prevention, interception, and treatment



Ensure equitable health care delivery of current and new standards of care



Expand clinical trials to speed evaluation of candidate interventions in diverse populations (racial, ethnic, geographic)



Increase diversity of cancer research and care workforce to resemble the communities we serve

FY 23 Projects to Jumpstart Next Phase of Cancer Moonshot



Proposed Funding Opportunity Announcements (FOAs)

- Cancer Moonshot Scholars Diversity Program
- Feasibility Trial for Clinical Evaluation of Asymptomatic Multi-Cancer Detection Screening

Will be discussed at

Joint Meeting of the NCI
Board of Scientific Advisors
& National Cancer Advisory
Board

June 13-15, 2022

videocast.nih.gov

“

We have all been excited by the aspirational goals, which I will describe for you in the next slide, of the reinvigorated Cancer Moonshot by President Biden and the administration. But it's important to remember that the first Cancer Moonshot is still alive and well.

”

— Douglas Lowy

rate in half within 25 years. The second is to transform the meaning of cancer. And the third is to address cancer-associated inequities.

So, on the next slide, I am summarizing how the NCI is currently thinking about how we can take these three aspirational goals and try to make them feasible.

First, we need to invest in the pipeline of new drugs for cancer prevention, interception, and treatment.

Second, we need to greatly expand clinical trials to speed the evaluation of candidate interventions in diverse populations—racial, ethnic, and geographic—and, I should also add, seriously consider including patients with comorbidities who currently are excluded from many trials. You and many others are going to really be key to this aspect.

Also, ensure equitable healthcare delivery of current and new standards of care. The importance of implementation research—and to increase the diversity of cancer research and the cancer care workforce to resemble more completely the communities that we serve.

So, in my last slide, I want to tell you that we are hoping to jumpstart the next phase of the Cancer Moonshot for funding in FY23. There are two proposed funding announcements that we are going to be discussing at the joint board meeting of the Board of Scientific Advisors and the National Cancer Advisory Board less than two weeks from today.

One is the Cancer Moonshot Scholars diversity program, whose goal is to try to achieve much more equity and diversity among cancer

researchers. The second is a feasibility trial for clinical evaluation of asymptomatic, multi-cancer detection screening—so-called liquid biopsies—which hold great promise, but really need rigorous evaluation to demonstrate that this new approach actually can save lives and reduce mortality.

In closing, I want to simply remind you about what happened with KRAS. I was fortunate enough that my laboratory participated in the first identification of a mutant KRAS in cancer, 40 years ago this year. I never imagined that it was going to lead to actual cancer treatment. For the first 30 years I was right, but through persistence, ingenuity, technological development, and understanding, it has been possible to go in that direction.

I think this is just one of many great opportunities that we have. So, in closing, cancer affects too many people, too many people die from this terrible disease, but thanks to your efforts, this is going to change. We are going to change the face of cancer over the next few years.

Thank you very much.

OBITUARY

Moffitt's Robert Gillies, “father of radiomics,” dies at 69

By Kim Polacek

Moffitt Cancer Center and the global research community have lost a great leader, scientist, and collaborator. Dr. Robert J. Gillies died June 7 after an extended illness. His recruitment in 2008 and the contributions to science he made over the ensuing 14 years elevated Moffitt's scientific stature. He was 69.

Photos courtesy of Moffitt Cancer Center





“It is indeed rare for a single investigator to have major impacts on such a broad swath of disciplines. Bob did just that, where he was the Father of Radiomics, a leader in cancer metabolism and evolution, and an innovator in drug development and radiopharmaceuticals. He was indeed a jack-of-all-cancer-trades, and we are unlikely to find his like again. We were blessed by his presence and are inspired by his legacy,” said Moffitt Center Director Dr. John Cleveland.

Gillies was an exceptional and fearless investigator whose pioneering work spanned molecular, cellular, and animal studies, clinical trials, and image analytics.

One key area was his work establishing that the pathophysiological microenvironment of early cancers is extremely hostile, where it exerts powerful evolutionary selection for the outgrowth of malignant clones and contributes to genomic plasticity and the heterogeneity of solid tumors.

Given these findings and many others from his group, Gillies and his Moffitt colleague Dr. Bob Gatenby believed

cancers could really only be understood through the lens of Darwinian evolution, and together with Dr. Sandy Anderson, they have led the field of cancer evolution to the prominence that it holds today.

“Bob was a brilliant and innovative scientist who generously shared his talent and creativity with everyone who had the pleasure of working with him. He was a wonderful friend and colleague who will be deeply missed,” said Gatenby.

Notably, these studies also led Gillies to conduct transformative research that focused on functional and molecular imaging of cancer, with an emphasis on the use of imaging to inform evolutionary models of carcinogenesis and response to therapy.

His work developed the field of radiomics, where one can extract minable data from quantitative features of medical images. His radiomics research, specifically in lung cancer, has helped vastly improve screening and diagnosis, as well as guide clinical decision-making and outcomes monitoring. Often referred to as the “father of radiom-

ics,” his vision was for radiomics to be part of the standard clinical workflow in oncology.

Gillies’ work has and will continue to have a lasting impact on cancer research and clinical practice. During his nearly 50-year career, he published more than 400 peer-reviewed articles, many of which were firsts in his field.

Gillies’ contributions include:

- First to grow and maintain cancer cells at high density in a nuclear magnetic resonance-compatible bioreactor
- First to show that the extracellular, and not the intracellular, pH of solid tumors was acidic in vivo
- First pH image of a tumor
- First to show that neutralizing pH could reduce metastases and improve immune therapy
- First to propose a physiologically relevant evolutionary model of carcinogenesis
- First to define radiomics as a discipline
- First to define intratumoral habitats as drivers of cancer evolution

Gillies served in many leadership roles, including program leader and Center of Excellence director. His most recent leadership roles were Martin Silbiger Chair of the Department of Cancer Physiology and vice chair for research in the Department of Diagnostic Imaging and Interventional Radiology. He mentored nearly 80 students, postdoctoral fellows, and faculty at Moffitt alone.

“Bob was a remarkable mentor and a hero to countless early-stage investigators throughout our institution and across the world. With Bob, everyone

has an equal voice regardless of their title or experience. Among his numerous abilities, Bob had a truly unique gift of identifying raw talent and then providing them wisdom and guidance for success. As a close colleague of ours wrote about Bob, 'He understood where he ended, and you began. That is the quintessential definition of gifted mentorship.' And indeed, I owe so much of my success and accomplishments directly to Bob's mentorship. I will forever miss my mentor, my colleague, my hero and my friend," said Dr. Matthew Schabath.

Gillies' commitment to cancer research and his colleagues did not go unnoticed. He received numerous awards over the years, including Moffitt's Research Mentor of the Year in 2016, Moffitt's Researcher of the Year in 2012, the Academy of Molecular Imaging's Distinguished Basic Scientist Award in 2019, and a Gold Medal from the World Molecular Imaging Society in 2018. Additionally, he served as a steering committee member of the American Association for Cancer Research's Cancer Evolution Working Group, which aims to elevate and educate the broader cancer research community about how evolutionary principles can advance cancer diagnostics, therapeutics, and prevention strategies.

Gillies is survived by his sister Beth Bream, wife of almost 45 years Christine Gillies, daughter Julia Ford, son-in-law Bryce Ford, and grandchildren Kennedy Ford, 9, and Jackson Ford, 7; daughter Jessica Mueller, son-in-law Nick Mueller, and grandsons Beckett Mueller, 7, and Nolan Mueller, 3.

The author is:

Kim Polacek

Senior public relations account coordinator, Moffitt Cancer Center

“

It is indeed rare for a single investigator to have major impacts on such a broad swath of disciplines. Bob did just that, where he was the Father of Radiomics, a leader in cancer metabolism and evolution, and an innovator in drug development and radiopharmaceuticals.

”

— John Cleveland

INSTITUTIONAL PLANS

Allow everyone in your organization to read The Cancer Letter and The Clinical Cancer Letter.

Find
subscription plans

HERE

or visit:
<http://cancerletter.com/subscribe/>

OBITUARY

Lucius Sinks, a giant in pediatric cancer, dies at 91

“We were able to come together at Roswell Park and help the kids.”

By Tim Wendel

Photos courtesy of Tim Wendel

With the aid of a cane, Dr. Lucius Sinks moved briskly through the dining room at the Boar's Head Inn in Charlottesville, VA. At the time, he was well into his '80s. But he remained a formidable presence, with thick white hair, dark eyes, and a wry smile.

When I was writing "Cancer Crossings: A Brother, His Doctors, and the Quest for a Cure to Childhood Leukemia," Lucius Sinks was a doctor I needed to talk with. After all, he had been chief cancer research pediatrician during my brother Eric's time at the Roswell Park Cancer Center in Buffalo, NY. Lucius was one of the medical "giants" from that era in cancer research, which included Donald Pinkel, Jerome Yates, Jim Holland and his wife, Jimmie, and a few others. By working together, they took childhood cancer, specifically acute lymphoblastic leukemia, from a 10% survival rate to a 90% "cure" rate.

Transcripts of Wendel's interviews with Lucius Sinks appear [here](#).

The term "moonshot" is used these days when it comes to cancer research. How a concentrated effort of expertise, education and money could move us closer to a cure. What's forgotten is that such progress happened a half-century ago and Lucius Sinks was a major contributor to that groundbreaking effort.

On that day at the Boar's Head Inn, Lucius had a white canvas bag with him.

"I brought you some homework," he said, placing the bag with a thud between the place settings.

I reached inside and pulled out a regular-size book with a blue cover. It was entitled *Conflicts in Childhood Cancer: Volume 4*. Lucius was one of co-authors.

"You can hang on to that one," Sinks said. "The other tome I'll need back at some point."

And a tome it was. So cumbersome that I struggled with both hands to lift the heavy book out of the bag. *Cancer Medicine: Second Edition* was the title of this one and it also had two authors, James F. Holland and Emil Frei III. With a reddish hardcover, it topped out at whooping 2,465 pages.

Lucius chuckled at the look on my face.

"I don't expect you to read it all," he said as we sat down, with the two books sitting in the middle of the table between us. "But you're beginning to ask the right kinds of questions. This material will help."

The readings did help. But, more importantly, so did the dozen lunch meetings Lucius and I had as I was writing *Cancer Crossings*. He opened up this golden age of research for me, patiently explaining the science and sometimes difficult decisions that were key to our understanding of cancer and advancement in treatment.

Dr. Lucius Sinks died Friday at St. Mary's Hospice in Watkinsville, GA, outside Atlanta. He was 91.

As a boy, Lucius grew up on the North Shore of Boston. In the winters, skating and playing hockey soon became one of his first passions. When the marshland near his home in Marblehead froze, he became adept at dodging between the cattails and tall grasses and somehow keeping control of the puck. Even back then, he was solidly built and had no doubt that he would have excelled in the game if the family had stayed in the Boston area.

When Lucius was 13 years old, his father, Allen, suffered a brain aneurysm. Lucius was away at summer camp on Cheboygan Lake in Maine when it occurred, and

his father died within a few days. Today, a CAT scan could have located the slight rupture in the brain and a simple procedure would have probably saved him. That was far from the case in 1944, though. After his father's death, the family moved to Columbus, OH, to be closer to family and began again. After high school, Sinks went on to Yale, graduating in 1953, and on to a fellowship at Cambridge in England before coming to Roswell Park in September of 1966.

"A lot of academic people were against what we were trying to do," Lucius once told me. "They really didn't understand some of the methods we deployed against the cancer and, as a result, there was considerable resistance. Some pediatricians even refused to refer their kids to us. Many of them didn't believe it what we were doing. Not one iota."

With so few doctors and hospitals nationwide willing to take on cancer at the time, Roswell Park often turned to doctors from overseas. Lucius Sinks was in charge of this program.

"At times I felt like I was running my own version of the United Nations," he recalled. "At one point, I even had two guys from Ireland, one Protestant and the other Catholic, and the fur would fly between those two. But I got a great deal of satisfaction out of working closely with my colleagues at Roswell Park because we shared a philosophy that we could make a difference, that some real results could be seen if we stayed after it."

Despite the wide range in backgrounds and approaches, Lucius said, "We were able to come together at Roswell Park and help the kids. As long as we kept focused on the kids, progress was made."

The author is:

Tim Wendel

Lecturer, Johns Hopkins University,
Member, Cancer History Project
editorial board

OBITUARY

Lucius Sinks was the type of physician all of us would like to have

By Jerome Yates, MD

Last week pediatric oncology lost another pioneer in the field, Lucius Sinks. He was 91.



Lucius Sinks with a patient

I first met him when I was a fellow at Roswell Park in 1968 and had the privilege of working with him on protocol studies looking at some of the relatively new antibiotics at the time, like carbenicillin and clotrimazole.

He provided leadership and a calming influence to his pediatric providers, but, more importantly, to the parents and children coping with cancer. At that time, he was also running the fellowship training program for the institute and was an active participant in the "Acute Leukemia Group B."

This was a time of great enthusiasm and excitement, because we were seeing dramatic improvements in outcomes for the pediatric patients while the progress in adult cancer management was less impressive.

Clinical research required good ideas and discipline in protocol cancer management to assure consistency in information collected for subsequent analysis. All involved, nurses, fellows, and attending physicians required a leader like Lucius to optimize the return on investment, because of the pressures to individualize treatments that could produce uninterpretable results.

Though sensitive to the discomfort caused by the required treatments to both the children and the parents, he always made himself available for their questions. He tried to help them understand that his goal was to provide long-term benefit for their children.

He recognized the need for managing the adolescent patients differently than those who were younger than 10, so he proposed a dedicated adolescent unit to meet those needs. This would have been one of the first adolescent units in the country.

In subsequent career opportunities, he provided leadership in pediatric oncology programs at Georgetown and Tufts Universities, the Cancer Centers Branch at the National Cancer Institute, and as the director of the Middlesex Hospital Cancer Center in Middletown, CT.

Lucius was the type of physician that all of us would like to have should we be facing the tragedy of a cancer diagnosis for one of our own children: intelligent, compassionate, approachable, and providing the best source of optimal medical management.

The author is:

Jerome Yates, MD

*Emeritus professor of oncology,
Roswell Park Comprehensive Cancer*

“

Lucius was the type of physician that all of us would like to have should we be facing the tragedy of a cancer diagnosis for one of our own children: intelligent, compassionate, approachable, and providing the best source of optimal medical management.

”

NEVER MISS AN ISSUE!

Get e-mail alerts now.



CLICK HERE

or sign-up at:
<https://cancerletter.com/news-alerts/>

LETTER TO THE EDITOR



“

Back then, the oncologists, the oncology nurses, and some of us BMS folks were in the battle against cancer together.

”

Tom Jordan: I wish to be known for Taxol, carboplatin, and camaraderie



Tom Jordan

Retired vice president of Worldwide Oncology Business, Bristol-Myers Squibb

My first ASCO memories were back almost four decades ago (*The Cancer Letter*, [June 3, 2022](#)).

I read with interest the contributions of others back in those days, and some of them mentioned me and Bristol-Myers Squibb and events we hosted. Some comments sounded a bit critical, but those were different times.

Back then, the oncologists, the oncology nurses, and some of us BMS folks were in the battle against cancer together.

Some remembered the telephone booths at the BMS exhibit at the ASCO annual meeting. Others remembered

the big parties we hosted, and came by the thousands to escape the stress of work to see The 5th Dimension, Lesley Gore, and the Four Tops.

Others commented about the President's Reception, which brought together the world leaders in cancer treatment. And, I noted a remark about me and my buddy, Bob Comis, doing our version of Frank Sinatra's "My Way." (I'm still singing it, but sadly without Bob. I am attaching a [clip](#) of it, in my 40-year-old green sports coat. It's too big now. Haha.)



I can only hope that I and BMS will be remembered not for those events, but by the camaraderie we attempted to create. And, the establishment of the ASCO and the ONS Awards programs. As well as the thousands of clinical trials we conducted to bring more effective treatment to cancer patients, such as Taxol and carboplatin.

I'm attaching a recent photo. I'm 75 now, but still doing things MY way, here in the Philippines.

IN THE ARCHIVES



How Beth Carner went from six weeks left to live with stage 4 colon cancer to complete remission

*Survivor interview by Deborah Doroshow;
Story by Alexandria Carolan*

This is the second installment of the Cancer History Project's series in honor of Cancer Survivors Month.

The interviews are conducted by Deborah Doroshow, assistant professor of medicine, hematology, and medical oncology at the Tisch Cancer Institute, Icahn School of Medicine at Mount Sinai, who is also a historian of medicine and a guest editor of the Cancer History Project in June.

Last week's oral history with Judy Orem, a CML patient who was part of the initial clinical trial for Gleevec, is available [here](#).

At 25, Elizabeth Carner was diagnosed with stage 4 colon cancer.

"I mean, the first thing that went through my head was just looking at mom and dad, and it's just like, OK, well, where did all the other stages go? Because we literally went from my



colonoscopy as being OK to everything's not OK," Carner, now 33, said to Deborah Doroshow, an oncologist at the Tisch Cancer Institute, Icahn School of Medicine at Mount Sinai.

At the time, Carner, who studied theater and stage management as an undergraduate, had a coveted job at an equity theater, Cincinnati Playhouse in the Park. She hadn't thought much of her recent weight loss before the diagnosis—going from 175 to around 150—chalking it up to the hustle of theater life.

Then, one day, Carner fainted at work.

"I was bleeding out," she said. "When I was in the bathroom, just trying to figure out how to manage this, I looked in the mirror and I realized that my face was ghost-white. I'm pale to begin with—with the genetics of the red hair and blue eyes and everything under the

sun, burn like a lobster, whatnot. But for me to see this and just be like, 'Oh, shit, I need to talk to somebody about this.'"

Carner knew members of her family were carriers of Lynch syndrome, a genetic mutation that increases the risk of colon, endometrial, and other cancers. Her grandmother had survived ovarian cancer in the 1950s. Her father had been a survivor of stage I colon cancer. Great uncles and second cousins had all experienced stage 1 or 2 cancer—all when they were over the age of 45.

Her family could even trace its history with cancer back to around 1800, to a relative they nicknamed 'Cancer Catherine'—"We believe that she is the one that had married into the family and brought it along."

Over centuries, cancer became a part of the family lore.

"It was one of those things where you get told about family history, but you think it's never going to happen to you. It didn't quite click," Carner said. "I knew that there was colon cancer history in my family, which we had openly talked about. But the thing was, it didn't even register for me, because all of those instances—the age was 45. I think at the time, the screening age was 50 and since then they've knocked it down to 45, but it wasn't even on my register."

Carner had been screened for colon cancer pretty much yearly. She had a colonoscopy just before she moved away from her family in Rockford, IL, and had another since then in Cincinnati. Doctors had previously found polyps, but they were benign.

The bleeding subsided after Carner went to the emergency room, but continued at home. She knew another colonoscopy was necessary.

"This go around, the doctor went in and found it. Apparently my cancer was not on the inside of my colon, it was on the outside," she said. "How they explained it to me, is that the inside was the flower—the polyp was the flower, but on the other side was all the root."

Thus began a months-long odyssey of six hour drives to Mayo Clinic, where Carner's grandmother had previously been a patient.

"To be perfectly honest, I think those were hard because you're doing the six hour drive up. And when you have six month appointments, or three months appointments, weather turns crappy and everything," Carner said.

The combination of cancer and the aggressive treatment she opted for meant that it was difficult for Carner to keep food down. Her weight dropped from 150 to 119—on her 5'11 frame.



Elizabeth Carner, center, during a production of "Beauty and the Beast," after she received treatment for stage 4 colon cancer.

"I had to tell my friends, literally everything is tasting like cardboard. I would choke it down if I could, but it's not staying," she said. "I never, never, never want to have to compare myself to a Holocaust victim, but I remember looking in the mirror one time and being like, 'Oh, shit, I've seen these photographs before.'"

"Seeing your pelvic bones when you come out of a shower is—no shakes. I can't listen to weight watching radio ads anymore. I can't do it. They say lose so many pounds in so many months, I'm like, that's not healthy. Don't."

The treatments physically exhausted Carner. Her mother insisted that she take naps so that she could have energy when friends came to visit.

"But the thing was, a lot of the times it didn't quite work because I'm one of those people where I get excited to see them," she said. "A lot of on-the-matress savasana, more or less. Which also

is another reason why—morbid personality that I am—I completely understand why they call it 'corpse pose' now."

Mentally, it was difficult for Carner to see college friends embark on their careers, relationships, and personal lives.

"The thing that probably hurt more than the surgical procedure to remove the darn cancers, was going up on social media," she said. "And mind you, [I had] a recent gut wound, in which they always say hurts worse than any other type of wound. And it may be just the psychology. But I probably had more regret and hard time coping with the fact that every time it felt like I turned around—I was seeing this from one of my friends. 'Oh, look at the ring. Oh, look at this. Oh, look at how my life's taking off.'"

"And here I am, having to put my whole life and dreams on pause because of the fact that I got something that I didn't ask for," Carner said.

Carner found that her family's to-the-point nature, and her snarky attitude at doctor's visits, kept people upbeat.

"The medical team really appreciated me being the morbid, smart-alecky, sassy, redhead that came in," she said. She'd say things like—"Hey, I was really happy to see you earlier. I wish I didn't have to, but I'm really happy to see you. I'm glad that you're taking care of me."

At the same time, few people could understand how Carner was feeling.

"It's hard to say that anybody really, I felt, truly got it. Because one, I didn't want them to get it. Because if they would've gotten it, they would've gone through the same hell that I went through," she said. "I think it was very telling when I told my parents: 'OK. I remember my bullies from elementary school, and from high school, and all that stuff.' I was like, 'I would not wish this on them.'"

If anything, Cancer Catherine was a comfort.

"The family history thing is monumental, especially when you go to a gravesite and you think about... 'Oh, crap. Man, they might have actually experienced the same thing I have,'" she said. "I mean, it's mixed emotions, but more or less it's not anger. It's not sadness. It's more or less like, 'Dude, man, I feel like you.'"

TJ, a friend of Carner's mother, was bed-ridden with lung cancer. She understood.

"I went to go visit her, and she was talking about the treatment and the pain she was in, and then talking about morphine and all that stuff. And I was just like, 'I'm sorry, I know you're in a lot of pain, and I really don't know how to,'" she said. "She's like, 'I know you do.' This is what I mean, talking about, I want my friends to get it, but I don't, because that was the hardest thing of just both of us knowing that each of us felt that pain."

In January 2015, doctors told Carner and her family that she had six weeks to live. She recalls her father giving her a choice: "Do you want to try and go back up to Mayo or do you not feel like you want to?"

Though faced with snow and ice and rapidly deteriorating health—she had been in a wheelchair by that point—Carner decided to go. That's when Carner first heard about the clinical trial that would eventually cure her cancer.

"The doctor we were seeing had a colleague, and he was just like, 'Hey, my colleague is over at Ohio State, and they're part of a study that's for this new immunotherapy drug. And they're trying to try it out on a couple of the cancers. It's mostly been used for lung cancer,'" Carner said.

The drug has since become known as Keytruda (pembrolizumab), and doctors thought Carner might be a good candidate because of her specific genetic mutation—MSI (microsatellite unstable)-H.

When she arrived at the desk of Richard Goldberg, a GI oncologist, who at the time was the physician-in-chief at The Ohio State University Comprehensive Cancer Center, Carner had tumors in her neck, breasts, and abdomen. She had previously had masses on her knee and her brain.

When Goldberg previously spoke with *The Cancer Letter* about Carner's case, he described her response to Keytruda as "The Lazarus effect" (*The Cancer Letter*, Oct. 13, 2017).

"She had exhausted conventional therapy, she came in in a wheelchair, she just had her femur pinned...she was so depressed, she could barely hold a conversation," he said. "Here is the 26-year-old who is dying of advanced cancer."

Carner started the trial in February, and within a few months had gone from a

wheelchair to crutches—only requiring the wheelchair when she tired easily. By April or May, doctors had found that the drug was working.

"It was rather drastic," she said. "I mean, for Dr. Goldberg to see me, when I first walked in, I didn't even walk into his office. It was like, I rolled into his office with my family, because I had my crutches and I was in a wheelchair. I was tired. I couldn't really hold my head up as much as I was trying. Posture is not a forte when you're sick."

How could she tell the drug was taking effect?

"I don't want to necessarily say my mood was improving, but it was more or less the numbers, the blood counts and all the blood draws," she said.

About a year out from starting the trial, doctors didn't find any evidence of cancer. Carner remains in complete remission—eight years from when she was first diagnosed.

Carner and Doroshov's full conversation is available as a podcast and transcript on the Cancer History Project.



.....
This column features the latest posts to the Cancer History Project by our growing list of contributors.

The Cancer History Project is a free, web-based, collaborative resource intended to mark the 50th anniversary of the National Cancer Act and designed to continue in per-

petuity. The objective is to assemble a robust collection of historical documents and make them freely available.

Access to the Cancer History Project is open to the public at CancerHistoryProject.com. You can also follow us on Twitter at [@CancerHistProj](https://twitter.com/CancerHistProj), or follow our podcast.

Is your institution a contributor to the Cancer History Project? Eligible institutions include cancer centers, advocacy groups, professional societies, pharmaceutical companies, and key organizations in oncology.

To apply to become a contributor, please contact admin@cancerhistoryproject.com.

IN BRIEF



Fadlo Khuri honored for decade as editor-in-chief of *Cancer*

Fadlo Khuri, president of the American University of Beirut, was honored for

his service as editor-in-chief of *Cancer*, a journal of the American Cancer Society, in a reception June 3 at the 2022 ASCO annual meeting.



Khuri was named editor-in-chief of *Cancer* in 2011 and stepped down in May 2021 (*The Cancer Letter*, Aug. 12, 2011). He took the role after serving as the section editor for Chest and Lung Disease for six years.

During Khuri's tenure as editor-in-chief, *Cancer* exceeded 3,000 submissions for the first time in 2014, then surpassed that record with more than 4,000 submissions in 2020, ACS officials said.

Khuri introduced new features such as "Cancer Case Conundrums," "Insight From the Experts," and "Pathways to Protocols," as well as the CancerScope feature "First Person," recognizing major contributors to oncology. He also personally oversaw a special issue titled "Lung Cancer in China" and introduced new sections like Cancer Prevention, Safety & Quality, and Survivorship.

Khuri is succeeded by Suresh S. Ramalingam, executive director of Winship Cancer Institute of Emory University and associate vice president for cancer of Woodruff Health Sciences Center.

Said Khuri:

I honestly never expected for a moment that we would have an event to mark the end of my 10 years as Editor in Chief for *Cancer* given all that is happening in the world.

I greatly enjoyed working with Carissa Gilman, Esmeralda Buchanan, Shawn Morton from Wiley, a spectacular team, and a handpicked group of world class section editors and a nimble and responsive editorial advisory board. The *Cancer* and Wiley crews are a joy to work with and I am delighted to have realised our collective vision for the journal.

I have no doubts that the Suresh Ramalingam and Carissa Gilman will take *Cancer* to far greater heights, because they and the team are dedicated, determined, and strategic leaders who are always considerate and treat others well.

It was my honor and privilege to work complete my two terms as Editor in Chief and the ceremony, testimonials, and honors from the ACS, Wiley, and my teammates were profoundly moving to me.

AACR releases Cancer Disparities Progress Report 2022

The American Association for Cancer Research released its Cancer Disparities Progress Report 2022, the second AACR report on this topic.

Key cancer disparities statistics include:

- Both incidence and mortality rates for multiple myeloma in the Black population are at least twice as high as rates in the non-Hispanic white population.

- The Hispanic population has a mortality rate of liver cancer that is nearly double that of the NHW population.
- The incidence rate for kidney cancer in the American Indian/Alaska Native population is 80% higher compared to the NHW population. This group also has the highest liver cancer incidence rate of any major racial or ethnic group in the U.S.
- Transgender men are more than twice as likely as cisgender men to be diagnosed with cancer.
- Residents of low-income areas share a disproportionate burden of cancer deaths. In persistently poor counties, mortality rates were 12.3% higher for all cancer types, and more than 40% higher for stomach cancer, when compared to counties that are not persistently poor.
- Compared to those living in urban areas, individuals living in rural areas have 17% higher death rates from all cancers combined, with 34% higher death rates from lung cancer and 23% higher death rates from colorectal cancer.

Racial and ethnic minorities are severely underrepresented in clinical trials, and scientific understanding of how cancer develops in these groups is lacking, the report said.

To address these gaps, the report emphasized the following steps:

- Diversify patient accrual on clinical trials so that participants represent all potential patient groups who might benefit from the therapeutic being tested.
- Create large and inclusive genomic databases to increase knowledge of the cancer-related

changes that influence cancer incidence, progression, and response to treatment in patients from different ancestral groups.

- Disaggregate cancer data to account for the heterogeneity of people within racial, ethnic, sexual, and gender minority groups.

Awareness of cancer disparities is increasing, and progress against inequities is advancing, the report said.

- The disparity in overall cancer mortality rates between Black and White people has narrowed from 26% in 2000 to 13% in 2019.
- The expansion of Medicaid under the Affordable Care Act has nearly eliminated the disparity between Black and White patients initiating chemotherapy within a month of cancer diagnosis, and the disparity between Hispanic and White women receiving timely mammograms.
- Cancer screening programs that adopt culturally tailored approaches and reduce structural barriers have demonstrated success in improving screening rates among marginalized groups.
- AACR Project GENIE, an international cancer registry, contains real-world data from more than 121,000 patients, 13.4% of whom are from racial and ethnic minority groups. The All of Us Research Program of NIH, which aims to build a diverse health database, has enrolled 100,000 people, 50% of whom are from underrepresented groups.
- NIH and NCI have recently created several initiatives to support underrepresented minority scientists in the research workforce, a necessary step toward achieving health equity.

FOLLOW US ON TWITTER



@TheCancerLetter

FOLLOW US ON FACEBOOK



facebook.com/
TheCancerLetter

**FOLLOW US
ON
LINKED-IN**



[linkedin.com/
company/
The-Cancer-Letter](https://linkedin.com/company/The-Cancer-Letter)

The report urged policymakers to:

- Increase federal funding for medical research and public health initiatives that are tasked with reducing cancer health disparities; specifically, provide \$49 billion for NIH's base budget in fiscal year 2023; increase funding for the National Institute on Minority Health and Health Disparities; and fund NCI at \$7.766 billion in FY 2023 (*The Cancer Letter*, [May 27, 2022](#)).
- Improve collection of disaggregated data for racial, ethnic, sexual, and gender minority groups.
- Increase diversity in clinical trial participation.
- Enhance cancer prevention and screening efforts to reduce the burden of cancer among all medically underserved populations.
- Expand access to equitable and affordable quality health care.
- Build a more diverse STEM training pipeline and cancer research and health care workforce.
- Enact comprehensive legislation to eliminate racial and ethnic health inequities—specifically, the Health Equity and Accountability Act introduced on behalf of the Congressional Tri-Caucus, which includes the Congressional Black Caucus, Congressional Asian Pacific American Caucus, and the Congressional Hispanic Caucus.

Darrel Cohen named CMO of cell therapy at Athenex

Darrel P. Cohen was named chief medical officer of cell therapy at Athenex Inc. In this role, Cohen will lead the company's clinical development, clinical operations, and regulatory affairs functions, replacing Kurt Gunter.



Cohen is a hematologist/oncologist with experience in oncology clinical research and drug development in both solid tumors and hematological malignancies. Cohen has held leadership positions at Pharmacia, Sanofi-Aventis, and Pfizer—including vice president of late-phase clinical development at Pfizer Oncology, where he was involved in multiple successful regulatory submissions of molecularly targeted cancer drugs such as Sutent (sunitinib), Xalkori (crizotinib), and Ibrance (palbociclib).

More recently, Cohen was head of clinical development at EUSA Pharma, then chief medical officer at Biosight Pharmaceuticals.

THE CLINICAL CANCER LETTER

CLINICAL ROUNDUP



UNC study: Using telehealth to report symptoms improves well-being in advanced cancer

People with advanced cancer who communicated their symptoms weekly using an electronic survey had about a one-third better physical function and over a 15% better control of their symptoms compared to those who were evaluated less frequently via in-person clinical visits, according to findings from a multi-state study conducted at 52 community cancer clinics.

The PRO-TECT (Patient Reported Outcomes To Enhance Cancer Treatment) trial was led by researchers at the University of North Carolina Lineberger Comprehensive Cancer Center.

The findings were published in the *Journal of the American Medical Association* and

presented at the 2022 American Society of Clinical Oncology annual meeting.

The trial enrolled 1,191 participants. Approximately half (593) were randomly assigned to complete a weekly internet-based or automated telephone system survey that included questions about common symptoms, performance status, and falls. The other half were assigned to a usual delivery of care group, which often meant waiting until their next regularly scheduled clinic visit to report any symptoms.

The most common symptoms reported on the electronic survey were fatigue, nausea, insomnia, appetite loss, diarrhea, pain, difficulty breathing, and constipation. Alerts were sent to nurses if a patient's reported symptoms were severe or worsening.

"We had very high engagement with patients and their care teams in this study, with patients completing more than 90% of their symptom surveys, and nurses frequently reaching out to patients when severe or worsening symptoms were electronically reported," lead author Ethan Basch said in a statement. "This likely reflects how accustomed many patients and providers have become to telehealth and electronic communications."

Approximately one-third of participants, in mostly rural areas, chose to report their symptoms using an optional automated telephone system rather than the internet. This may reflect limited broadband access in rural locales, said Basch, the Richard Goldberg Distinguished Professor and chief of medical oncology at UNC School of

Medicine, director of UNC Lineberger's Cancer Outcomes Research Program, and physician-in-chief of the North Carolina Cancer Hospital.

Patients in the PRO group had significantly greater odds of experiencing clinically meaningful benefits compared with the control group, including a 35% better ability to function physically, a 16.1% better control of their symptoms, and a 41% better overall health-related quality of life. These were all clinically meaningful improvements over the current standard of care.

While the improvements were robust after three months of telehealth reporting, the improvements dissipated after one year. Some of this falloff could be attributed to patients having resolved any needs they had but also possibly due to the decreased number of study participants after a year due to the limited life expectancies of people with advanced cancers, Basch said. Another factor may have been the COVID-19 pandemic.

"PRO-TECT is a way to bring patients together with their care team and aids in identifying those who are at greatest risk," Basch said. "And because we had equal success at all 52 practices in 25 states, it shows that there's a wide acceptance for this kind of intervention."

The researchers' next goal is to determine the best models for widespread implementation and how to make the intervention more efficient for practices.

Parker Institute study: Biomarkers may predict better immunotherapy outcomes in mPDAC

Researchers from the Parker Institute for Cancer Immunotherapy network identified certain patients with pancreatic cancer who may be more likely to benefit from combination treatment regimens consisting of immunotherapy and chemotherapy.

The data were shared at the 2022 ASCO annual meeting in Chicago; results from the phase II clinical trial, known as the PRINCE study, were published in *Nature Medicine*.

The PRINCE trial is sponsored by PICI and based on research by investigators at the University of Pennsylvania. The trial uncovered predictive biomarkers associated with longer overall survival for a subset of advanced metastatic pancreatic ductal adenocarcinoma (mPDAC) patients.

The PRINCE trial evaluated the combination of standard-of-care chemotherapy (gemcitabine + nab-paclitaxel) and nivolumab, a PD-1 inhibitor, and/or sotigalimab, an experimental antibody that is an agonist of the CD40 protein.

As part of exploratory analyses, PICI researchers discovered biosignatures associated with survival for the nivolumab-chemotherapy and sotigalimab-chemotherapy treatment arms, which reflect each immunotherapy's distinct mechanisms of action. Few biomarkers predicted survival in patients receiving the sotigalimab-nivolumab-chemotherapy regimen.

"While the data from the trial suggest that these treatment regimens may not be appropriate for all PDAC patients, we uncovered various predictive biomarkers from the circulation and tumor that may correlate with longer survival and warrant further study," lead study author Lacey Padron, vice president of informatics at PICI, said in a statement. "We are encouraged by the data and believe chemoimmunotherapy combinations may improve outcomes for some patients with metastatic PDAC."

In addition to the University of Pennsylvania, participating research sites from the PICI network included the Dana-Farber Cancer Institute, Memorial Sloan Kettering Cancer Center, Stanford Medicine, University of California, Los Angeles, University of California, San Francisco, and The University of Texas MD Anderson Cancer Center.

N-803 immunotherapy may improve responses in BCG-unresponsive bladder cancer, advanced metastatic pancreatic cancer

Positive data from a pivotal phase II/III trial for BCG-unresponsive non-muscle invasive bladder cancer carcinoma in situ (QUILT 3032) and phase II trial in advanced pancreatic cancer (QUILT 88) were announced at the 2022 ASCO annual meeting.

The trials were sponsored by ImmunityBio Inc.

The data demonstrated a potential option for BCG-unresponsive non-muscle invasive bladder cancer patients who were treated with Bacillus Calmette-

Guérin plus Anktiva (N-803), an IL-15R α Fc superagonist N-803. The data also showed the doubling of historic overall survival rates in patients with advanced pancreatic cancer who were treated with the Nant Cancer Vaccine, N-803, and off-the-shelf PDL1-targeted high-affinity NK cell (PDL1 t-haNK) infusion.

QUILT 3.032 is an open-label, three cohort, multicenter phase II/III study of intravesical BCG plus N-803 in patients with BCG-unresponsive high-grade NMIBC (NCT03022825). The trial was opened in 2017.

The primary endpoint for Cohort A of this study is incidence of complete response of CIS at any time.

FDA previously granted N-803 Breakthrough Therapy and Fast Track designations when used in combination with Bacillus Calmette-Guérin in BCG-unresponsive NMIBC CIS. ImmunityBio recently submitted a BLA to tFDA for N-803 plus BCG for the treatment of BCG-unresponsive non-muscle invasive bladder cancer CIS with or without Ta or T1 disease.

The results showed an excellent safety and tolerability profile of N-803 + BCG for CIS.

- 1% treatment-related SAEs
- 0% immune-related AEs
- 0% grade 4 and 5 AE
- 71% complete remission rate at any time
- 26.6 months median durable complete remission
- 96% avoidance of bladder cancer progression at 24 months in responders
- 91% avoidance of cystectomy at 24 months in responders

- 100% bladder cancer-specific overall survival at 24 months
- Favorable and familiar dosing schedule with activity localized to the bladder

QUILT 88 is a phase II, randomized, three-cohort, open-label study evaluating the comparative efficacy and overall safety of standard-of-care chemotherapy versus low-dose chemotherapy in combination with PD-L1 t-haNK, N-803, and aldoxorubicin in subjects with locally advanced or metastatic pancreatic cancer (NCT04390399).

Each treatment setting, as well as each first- and second-line or later maintenance treatment, will be evaluated independently as Cohorts A, B, and C, respectively, with Cohorts A and B having independent experimental and control arms.

The study is expected to enroll 328 subjects across all three cohorts (63 of 80 participants are currently enrolled in Cohort C, third-line or greater). The primary objective of Cohorts A and B is progression-free survival, and the objective of Cohort C is overall survival. Secondary objectives include initial safety and additional efficacy measures, including overall response rate, complete response rate, durability of response, disease control rate, and overall survival.

- Nant Cancer Vaccine more than doubled median OS vs. the historical OS of 3 months after >2L
- Median overall survival in 3rd-line subjects (n=34) was 6.2 months (95% CI: 4.9-9.8)
- Overall survival for ITT population (N=78) of 3rd-, 4th-, and 5th-line is 5.8 months (95% CI: 4.0-6.9)
- Treatment-related SAEs were uncommon (6%); no TR deaths were reported

- All treatments were performed as outpatient; treatment ongoing for 25 patients.

Vectibix superior to bevacizumab in Japanese patients with wild-type RAS mCRC

Data from the phase III PARADIGM clinical trial of Vectibix (panitumumab) in Japanese patients with previously untreated unresectable wild-type RAS metastatic colorectal cancer were featured during the plenary session of the 2022 ASCO annual meeting.

PARADIGM is a randomized trial conducted in Japan comparing the efficacy and safety of Vectibix plus mFOLFOX6 compared to bevacizumab plus mFOLFOX6 in chemotherapy-naïve patients with unresectable advanced mCRC (n=823).

Sponsored by Takeda and Amgen, this is the first prospective trial to evaluate treatment options for patients with wild-type RAS mCRC and left-side primary tumor (descending colon, sigmoid colon, and rectum).

The results of the trial showed that the mFOLFOX6 + Vectibix combination provides a statistically significant improvement in overall survival over the mFOLFOX6 + bevacizumab combination in patients with a left-sided primary tumor or regardless of tumor locations.

The median OS for left-sided tumors was 37.9 vs. 34.3 months (HR=0.82; 95.798% CI: 0.68-0.99; p=0.031). Overall median OS was 36.2 vs. 31.3 months (HR=0.84; 95% CI: 0.72-0.98; p=0.030).

The safety profile of Vectibix in this study was similar to clinical study results previously published.

Cedars-Sinai study shows racial and ethnic disparities in access to immunotherapy for advanced liver cancer

Racial and ethnic minorities diagnosed with advanced liver cancer have a lower chance of receiving immunotherapy, the most effective treatment for patients with the disease, according to a study led by Cedars-Sinai Cancer investigators.

The study, published in *Hepatology*, found Black and Hispanic patients were significantly less likely to receive immunotherapy compared with white patients, even though the researchers found immunotherapy to be more effective than the traditional treatment of chemotherapy for advanced-stage liver cancer in a wider patient population.

“Although it is very encouraging to see the effectiveness of this promising treatment outside of clinical trials in a broader population, it is very unfortunate to see that Black and Hispanic patients have a lower chance of receiving such an effective treatment for their cancer,” Ju Dong Yang, medical director of the Liver Cancer Program at Cedars-Sinai Cancer and senior author of the study, said in a statement.

To investigate the potential disparities and the effectiveness of immunotherapy for advanced liver cancer, Yang and colleagues used the U.S. National Cancer Database to review medical records and outcome data from 3,990 patients with stage III or stage IV liver cancer.

They found 3,248 of the patients were treated with chemotherapy and 742 were treated with immunotherapy.

During the study period, however, the annual proportion of patients receiving immunotherapy steadily increased.

Key findings include:

- The two treatment groups had similar age and sex distributions, with the median age being 65 and a male predominance.
- When compared with patients treated with chemotherapy, patients with immunotherapy had higher proportions of white (66.6% vs. 61.9%) and Asian (10.3% vs. 7.9%) patients.
- Hispanic (9.1% vs. 12.4%) and Black (14% vs. 17.8%) patients treated with immunotherapy had lower proportions when compared to patients treated with chemotherapy.
- A higher proportion of patients who received immunotherapy belonged in the highest income bracket, lived in neighborhoods with high average education levels, and were treated at academic medical centers.
- Receiving immunotherapy over chemotherapy was associated with improved survival.

ACS study: Pandemic reduced breast, cervical, colorectal cancer screenings by millions in 2020

Researchers at the American Cancer Society found that the number of women in the U.S. who reported having a recent (in the past year) breast cancer or cervical cancer screening dropped by 2.13 million (6%) and 4.47 million (11%) respectively in 2020 compared to 2018.

The results were published in the *Journal of the American Medical Association Open Network*.

The study is the first of its kind to evaluate the impact of the COVID-19 pandemic on cancer screenings nationally using population-based data.

“COVID-19 pandemic had an immediate impact in March and April of 2020, as screenings initially dropped by close to 80%,” Ahmedin Jemal, senior vice president of surveillance and health equity science at ACS and senior author of the study, said in a statement. “Many people caught up on screenings later in 2020, but overall, the COVID-19 pandemic kept screenings down over the course of the entire year. As we move forward, it’s crucial to get people back into their doctor’s offices to get screened.”

The study also found that between 2018 and 2020, colonoscopies for colorectal cancer detection dropped by 16% for both men and women but was offset by an increase in stool testing of 7%.

Other findings include:

- Hispanic and lower-income people experienced sharper drops in past-year breast and cervical cancer screening.
- Asian/Pacific Islander women had a 27% drop in past-year breast cancer screening, the largest drop for any race.
- Hispanic women had a 17% drop in past-year cervical cancer screening.
- The drop in screening in the past year nearly doubled for non-high school graduates compared to college graduates. Non-high school graduates dropped by 11% for breast cancer screening and 17.7% for cervical cancer screening, compared to 6.1% and 9.5% respectively for college graduates.

ACS study: Public perception of e-cigarettes vs. cigarettes harms changed sharply during EVALI epidemic and COVID-19 pandemic

Researchers at the American Cancer Society found that perceptions of electronic or e-cigarettes as being “more harmful” than cigarettes by adults in the United States more than doubled between 2019-2020 and perceptions of e-cigarettes as “less harmful” declined between 2018-2020.

The study, published in the *American Journal of Preventive Medicine*, also found that increase in cigarette smoking prevalence (2019-2020) was restricted to those who perceived e-cigarettes as “more harmful” than cigarettes, while increases in prevalence of e-cigarette use was restricted to those who perceived e-cigarettes as “less harmful” than cigarettes.

Prevalence of dual use of both products increased only among those who perceived these products as equally or “as harmful.” The results coincide with the EVALI or e-cigarette or vaping use-associated lung injury epidemic and the COVID-19 pandemic.

While all tobacco products, including e-cigarettes, pose a risk to the health of the user, major health events, such as the EVALI epidemic in late-2019 and the COVID-19 pandemic in 2020, paved the way to new smoking/e-cigarette health risks. During this time, the quality and type of information individuals were exposed to may have shaped how they compare the potential harms of tobacco products, which in turn may have altered tobacco use behaviors.

How individuals perceive harm of e-cigarettes vs. cigarettes can predict their individual decision to use tobacco products, but according to the study authors, this is the first study to provide evidence this relationship translates to population-based prevalence changes.

“While this study showed sharp changes in public perceptions of e-cigarette vs. cigarette harms during EVALI and COVID-19, the more relevant finding for public health is that increases in cigarette smoking and e-cigarette use prevalence occurred primarily in individuals who perceived their preferred product as relatively less harmful,” lead author Priti Bandi, principal scientist in risk factors and screening surveillance research at ACS, said in a statement. “This suggests that public perceptions of e-cigarettes vs. cigarettes harms influences population tobacco use patterns.”

The researchers analyzed data from the NCI-sponsored Health Information National Trends Survey, collected from more than ten-thousand U.S. adults from 2018-2020. The results showed perceptions of e-cigarettes as “more harmful” than cigarettes doubled each year, increasing most between 2019-2020 (2018: 6.8%, 2019: 12.8%, 2020: 28.3%), while uncertainty (responses of “don’t know”) in relative harm declined (2018: 38.2%, 2019: 34.2%, 2020: 24.7%).

“Less harmful” relative perceptions declined (2018: 17.6%, 2019: 15.3%, 2020: 11.4%), while “as harmful” perceptions remained steady (2018: 37.4%, 2019: 37.7%, 2020: 35.6%). Exclusive cigarette smoking increased between 2019-2020 among those who perceived e-cigarettes as relatively “more harmful” (2018: 18.5%; 2019: 8.4%; 2020: 16.3%), exclusive e-cigarette use increased linearly among those who perceived them as relatively “less harmful” (7.9%; 15.3%, 26.7%), and dual use increased linearly in those who perceived them “as harmful” (0.1%, 1.4%; 2.9%).

DRUGS & TARGETS



FDA grants Orphan Drug Designation to iadademstat in SCLC

FDA granted Orphan Drug Designation to stage LSD1 inhibitor iadademstat for the treatment of patients with small cell lung cancer.

Iadademstat is an oral, highly potent, selective inhibitor of the epigenetic enzyme LSD1, a chromatin remodeler that interacts with a variety of transcription factors involved in SCLC, other solid tumors, and hematological cancers such as acute myeloid leukemia.

Iadademstat is sponsored by Oryzon Genomics.

Parker Institute for Cancer Immunotherapy, Resilience partner to develop cell and gene therapies

The Parker Institute for Cancer Immunotherapy and National Resilience Inc.

announced a five-year strategic alliance to develop next-generation cancer therapies.

PICI and Resilience aim to bring novel cell and gene therapies to market through the creation and incubation of companies with a commitment of up to \$50 million in funding. These startups will leverage technologies from across the PICI Network and biomanufacturing capacity from Resilience.

Resilience will also collaborate with PICI Network investigators on challenges related to biomanufacturing and novel treatment modalities.

Dana-Farber, Gustave Roussy, L'Institut Servier sign oncology cooperation agreement

Dana-Farber Cancer Institute, Gustave Roussy, and L'Institut Servier signed a cooperation agreement to foster collaboration among oncology researchers.

The two-year agreement includes the organization of annual conferences, alternating between Boston and Paris, and the establishment of a fellowship program for four post-doctoral students from Gustave Roussy, who will be hosted in research labs of Dana-Farber.

The conferences, entitled “Dana-Farber/ Gustave Roussy Days in Oncology,” will be open to health professionals specializing in oncology (researchers, clinicians, and students) and will be broadcast online on international Continuing Medical Education sites.

The first conference—Trans-Atlantic Exchanges in Immuno-Oncology—was held in Boston on May 13 and focused on the latest advances in immuno-on-

cology, bringing together more than 1,700 oncology health professionals. The second conference is planned for June 2023 in Paris.

L'Institut Servier conceived of the collaboration and through its scientific committee will provide both organizational and financial support for annual conferences and the fellowship program.

FDA campaign aims to prevent e-cigarette use among AI/AN youth

FDA announced the launch of the “Next Legends” Youth E-cigarette Prevention Campaign, which aims to protect youth from the dangers of tobacco use. The campaign will educate American Indian/Alaska Native youth, ages 12-17, about

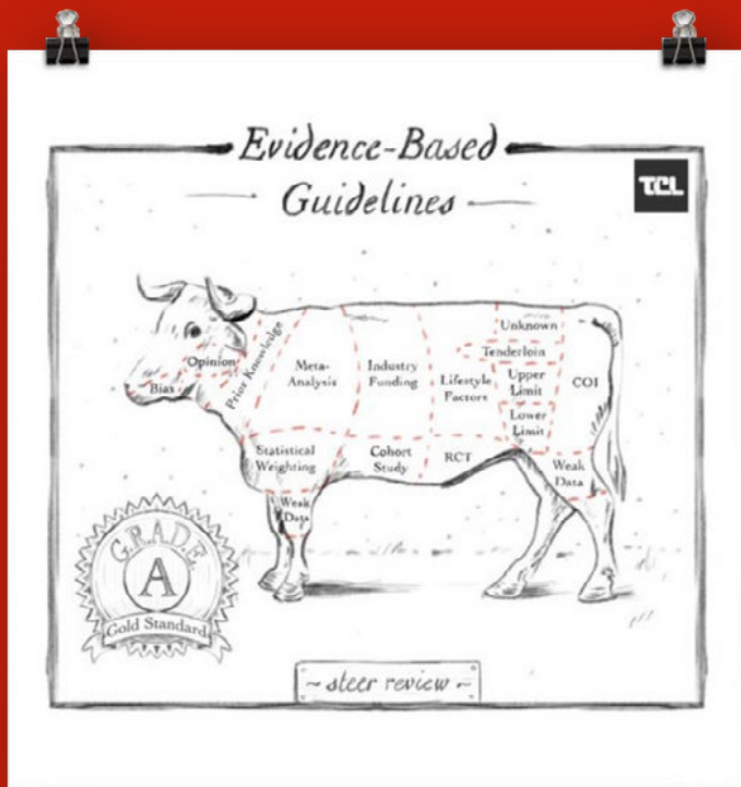
the harms of vaping through unique branding and tailored messaging.

Data from the Youth Risk Behavior Surveillance System indicate that:

- AI/AN youth are more likely to use e-cigarettes and almost twice as likely to be frequent users of e-cigarettes than high school students overall.
- 47.3% of AI/AN high school students reported past 30-day use of “electronic vapor products” including e-cigarettes compared to 32.7% of high school students overall.
- 19.9% of AI/AN high school students reported using electronic vapor products frequently (on 20 or more days in the last 30 days) compared to 10.7% of high school students overall.

The “Next Legends” campaign will reach AI/AN teens online. Digital video advertisements will be placed on social media sites such as Instagram, Snapchat, and TikTok, and streaming and gaming platforms such as YouTube and Twitch. In addition to the campaign’s digital video and social media presence, out-of-home billboards, radio, and TV (in Alaska) will also be used.

FDA’s strategies for developing this initiative included research and analysis to identify messaging needs and cultural considerations for commercial tobacco use prevention efforts; focus groups with AI/AN youth from across regions of the U.S.; and testing of video ads through an online survey with a large sample of Native youth. FDA’s media contractor, Rescue Agency, partnered with G+C Advertising, a native-owned advertising agency with more than 20 years’ experience working with AI/AN tribes and communities.



SHOP THE
CANCER LETTER
STORE

LET'S GO!