## Inside Philanthropy

## The State of

 American PhilanthropyGiving for
Cancer Research

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## ABOUT INSIDE PHILANTHROPY

Inside Philanthropy is a digital media site that covers the world of charitable giving. We report daily on foundations, major donors, and trends in philanthropy. Through our GrantFinder resource, we also profile and track thousands of funders working across key issue areas and geographic regions. Inside Philanthropy is supported by reader subscriptions and advertising. We do not receive funding from any other source. Learn more at insidephilanthropy.com

## ABOUT THE STATE OF

## AMERICAN PHIT ANTHROPY

The State of American Philanthropy is a series of background papers on important topics and trends in U.S. philanthropy. The papers draw on past research and reporting by IP writers, as well as new interviews, grantmaking data, and other sources. Learn more at insidephilanthropy.com/state-of-american-philanthropy.
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## EXECUTIVE SUMMARY

This brief explores the giving of major donors, private foundations, grantmaking public charities, corporations and community foundations to U.S.-based nonprofit cancer research organizations.

Philanthropy can constitute a significant percentage of cancer research organizations' revenues, although reliance on donations varies considerably from one organization to another. The field's largest source of funding comprises affluent donors whose one-time gifts or commitments can eclipse the annual grantmaking budget of a major private foundation.

Buoyed by a surging stock market, a vast ecosystem of funders disbursed hundreds of millions of dollars to accelerate the pace of research in the fields of cancer prevention, detection, and treatment over the past 30 years. This support frequently takes the form of high-risk investments that fall outside of the purview of federal agencies and pharmaceutical companies.

This brief explores the following long-term factors and trends affecting cancer research funders and fundraisers:

## Who's Giving

- Affluent individual donors play a leading role in the nonprofit cancer research ecosystem. Within this demographic is a subset of relatively less-affluent donors who otherwise generally give within their regions and who represent the charitable backbone for most cancer research organizations.
- Private "legacy" foundations that receive a great deal of attention in many other giving areas provide less financial support for cancer research than major individual donors but a few are committed to supporting cutting-edge research, as well as pushing for more equitable health outcomes across the field.
- Corporate philanthropy for cancer research takes the form of grants, which flow from corporate foundations, or collaborative partnerships.
- Community foundations support cancer research organizations through discretionary grantmaking and donor-advised funds (DAFs), which constitute the majority of their funding.


## Who's Getting

- A vast amount of philanthropy for cancer research flows to National Cancer Institute-designated cancer centers, almost all of which are affiliated with a university.
- A substantial portion of philanthropic dollars flow to cancer research centers located in major metropolitan areas that have sophisticated and well-resourced fundraising operations.


## The Big Issues and Funding Trends

- Funders' top priorities include providing sufficient support to advance fast-evolving fields like immunotherapy and precision medicine, and ramping up support for research into specific cancer types that have disproportionately high incidence and mortality rates.
- The sector's dominant funding strategies are instituting a venture philanthropy mindset to accelerate the return on high-risk, high-reward treatments; targeting interventions to bring promising but underfunded treatments to market; driving cross-interdisciplinary collaboration; and streamlining the grant application and research processes.


## Equity in the Sector

- While the field has made significant strides in reducing the cancer death rate over the past 30 years, progress has not been evenly distributed, as some demographics are more susceptible to getting certain cancers or have higher death rates compared to other groups.
- In an effort to boost equitable health outcomes, funders are exploring how genomic research can yield treatment breakthroughs for disproportionately affected demographics, addressing pervasive representation gaps in clinical trials, and adopting a holistic approach to research that acknowledges the contributions of underlying economic and social issues to health disparities.

Looking ahead, philanthropy's role in the cancer research space will become all the more critical as federal support fails to keep up with inflation and experts fear rising cancer rates due to the growing obesity epidemic. Funders and research professionals IP spoke with identified a set of emerging opportunities for grantmakers like implementing strategies to educate donors on the value of basic research, closing racial representation gaps in clinical trials, bringing cancer screenings back to pre-pandemic levels, and upping support for prevention research.

## Introduction

In 1971, Congress passed and President Nixon signed the National Cancer Act. The legislation expanded the authority of the director of the National Cancer Institute (NCI), which was established in 1937 and is now part of the National Institutes of Health (NIH), created a new National Cancer Advisory Board, and launched the NCI's nationwide Clinical Trials Network. With this, the United States government had formally declared "war on cancer."

A half-century later, the American Cancer Society (ACS) - the nation's largest cancer advocacy organization, a fundraising powerhouse, and a prominent research funder - reported that the cancer death rate for men and women combined fell $32 \%$ from its peak in 1991 to 2019. The ACS attributed the drop to a reduction in smoking, chemotherapy after surgery for breast and colon cancer, and improved prevention and screening. The society also found that the risk of dying from prostate cancer decreased by about $50 \%$ from the mid-1990s to the mid-2010s, and cancer death rates in children plummeted by $71 \%$ since 1970 .

What the report didn't explicitly mention is that philanthropy played an integral role producing these astonishing successes. Coinciding with the surging stock market, a vast ecosystem of private foundations, individual donors and corporations collectively disbursed hundreds of millions of dollars to accelerate the pace of research in the fields of cancer prevention, detection and treatment over the past 30 years.

But money alone doesn't account for philanthropy's outsized influence. Unlike federal
agencies that must answer to taxpayers, or pharmaceutical companies that answer to shareholders, private funders typically have more latitude when it comes to supporting high-risk investments that can generate significant impact. As such, some funders approach giving through the lens of "venture philanthropy," a broad term that can involve investing in promising for-profit oncology start-ups or simply bankrolling cuttingedge treatments.

In 2022, hedge fund manager Stanley Druckenmiller and his wife Fiona announced a $\$ 100$ million commitment to launch the Fiona and Stanley Druckenmiller Presidential Innovation Fund at New York City's Memorial Sloan Kettering Cancer Center (MSK), the largest and oldest private cancer center in the world, to fund early stage cancer research. Druckenmiller told IP he and his wife made the gift because "a lot of their [MSK's] discoveries in cancer are out-of-the-box things that the NIH won't fund."

In one sentence, Druckenmiller articulated funders' embrace of the "venture philanthropy" mindset. The billionaire also represents the kinds of affluent mega-donors that have come to dominate the cancer research field in the past 20 years. A Wall Street or Silicon Valley donor's onetime $\$ 50$ million gift or pledge to an established cancer center or esteemed university can eclipse the annual grantmaking of a prominent research foundation.

Three key factors point to philanthropy's growing role in the cancer research field moving forward. The first is support from the federal government that is not growing in a significant way, and certainly not much relative to the great potential for new, impactful developments. NCI's budget for
the fiscal year 2021 was $\$ 6.4$ billion, a $0.9 \%$ increase in funding over 2020 that was well below the 4.7\% rate of inflation. Moreover, the NCI only funded $11 \%$ of viable applications, down from $28 \%$ in 1997. As Loren Savage, Huntsman Cancer Foundation executive director of major giving, told IP, "Your chances of receiving support from government entities is pretty minuscule."

While philanthropy has stepped up to fill the gap, "more funding is needed in every area of cancer research," said Michael Neal, the ACS's chief of organizational advancement. Diseases like lung and colorectal cancer remain chronically underfunded despite being the two deadliest cancers in the United States, respectively. "Even in tumors such as breast cancer, which receive more funding than most cancers, more research is needed to help decrease the more than 43,000 anticipated deaths this year," Neal told IP.

Nor has the torrent of private dollars translated into equitable health outcomes. Black people have the highest death rate and shortest survival rate of any racial or ethnic group in the U.S. for most cancers, while Native Americans have higher incidence rates compared to non-Hispanic whites. Structural deficiencies across the field, such as the widespread lack of representation of BIPOC patients in clinical trials, are deeply rooted and compound existing social inequties. As a result, professionals in the field are asking philanthropy not only to increase financial support, but to do so in a way that addresses longstanding disparities linked to race and socioeconomic status.

A total of 1.9 million new cancer cases and 609,360 deaths from cancer are expected to occur in the U.S. in 2022. Looking ahead, public health officials fear that an aging population, deferred cancer
screenings during the pandemic, and a growing obesity epidemic will lead to a rise in cancer rates in the next five to 10 years, and that the disease will overtake heart disease as the leading cause of death in the United States.

Speaking to IP, Breast Cancer Research Foundation Chief Scientific Officer Dorraya EL-Ashry expressed similar concerns, saying that scientists are reporting a rise in incident rates and an increase in late-stage breast cancer diagnosis. Her perspective encapsulates the sentiments of funders, researchers and health experts across the cancer research ecosystem. "The need for philanthropy," EL-Ashry said, "has never been more urgent to fill the dearth of funding between federally funded research and what is needed to accelerate progress for those waiting on lifesaving breakthroughs."

## The Lay of the Land

## Who's Giving

The ecosystem of philanthropy supporting the cancer research field consists of individual donors, private foundations (including family foundations), community foundations and corporate funders. Unlike most other areas of giving, like education and health more generally, major individual donors lead the way in giving for cancer research.

It is always difficult to quantify support from individual donors for cancer research (or any other field, for that matter) with precision because recipient organizations are not required to list individual donations on Form 990s. However, compelling anecdotal evidence, along with donor appreciation lists on annual reports, point to individual donors' disproportionately large footprint in the cancer research space.

While not comprehensive, the Chronicle of Philanthropy's Big Gift Database tracks publicly announced gifts totaling or exceeding \$1 million. A search of giving in 2020 reveals seven gifts from individual donors earmarked for cancer research, totaling $\$ 66.2$ million. This figure exceeds the total research grantmaking to domestic organizations in the most recently available tax year from funders like the American Cancer Society (\$51 million), the Parker Institute for Cancer Immunotherapy (\$35 million), American Cancer Research Foundation (\$30 million), Cancer Research Institute (\$26 million), and the Mark Foundation for Cancer Research ( $\$ 16.4$ million).

With the pandemic subsiding, donors are giving even more in this area. A search of the Chronicle's
database generates five gifts for cancer research from individual donors totaling $\$ 260$ million in the first eight months of 2022.

The explosion of giving through donor-advised funds (DAF) also underscores individual donors' enormous footprint in the space. Fidelity Charitable is the largest holder of DAFs in the country, having disbursed over $\$ 61$ billion in grants since launching the first national DAF program in 1991. According to Fidelity Charitable's 2021 Giving Report, three of the 10 most popular charities in the grantmaker's history are cancer-related - St. Jude Children's Research Hospital (No. 3), American Cancer Society (No. 5), and the Leukemia \& Lymphoma Society (No. $10)$.

An IP analysis of Candid data from 2015 to 2019 found that donors at the Silicon Valley Community Foundation and Fidelity Charitable gave approximately $\$ 221$ million and $\$ 158$ million, respectively, toward cancer-related giving. While Candid did not provide specific data for researchrelated giving, even if $25 \%$ of these figures flowed to cancer research, the amounts would exceed the annual grantmaking of some of the field's largest private foundations.

Family foundations in which the living donor or spouse is the grantmaker's primary decision maker are also a major vehicle for individual giving. In 2022, the Medical College of Wisconsin Cancer Center in Milwaukee received $\$ 15$ million from Nevada residents Tim and Barbara Michels through the Michels Family Foundation. The gift established the Michels Rare Cancers Research Laboratories to accelerate research and advance treatments for rare forms of cancer.

Major donors support comprehensive cancer centers, private research institutions, and prominent universities in major metropolitan areas like New York, Boston and Los Angeles. However, thanks to the growth of regional wealth, this surge in giving has extended far beyond affluent coastal enclaves. In 2020, Ginny Clements, whose fortune derives from a beverage distribution company, gave the University of Arizona Cancer Center $\$ 8.5$ million to endow the Ginny L. Clements Breast Cancer Research Institute. Two years later, Dartmouth College and DartmouthHitchcock Health received $\$ 25$ million from New Hampshire philanthropist Dorothy Byrne to establish the Byrne Family Cancer Research Institute at Norris Cotton Cancer Center.

Our research was not able to pin down an average percentage of research dollars that organizations derive from private philanthropy versus government funding. As far as the broader medical research space is concerned, the Milken Institute found that private philanthropy comprises only $3 \%$

## Foundation Spotlight

W. The Mark Foundation ${ }^{\text {T }}$

The Mark Foundation for Cancer Research has been supporting general research for all cancer types since 2017. Historically, the majority of its more than \$150 million grants awarded have gone toward basic research, technology innovation, and translational science. It also makes venture investments and has provided over $\$ 20$ million in financing to six companies working in diagnostics, small molecule therapy, cell and gene therapy, and biologics. Foundation partners include Cancer Research UK, the Chordoma Foundation, and the Pershing Square Sohn Cancer Research Alliance, among others.
of overall spending on medical R\&D in the United States. That said, the amount of funding coming from private philanthropy can vary drastically between recipient organizations. For the fiscal year ending September 2020, the Dana-Farber Cancer Institute received $\$ 87$ million in government grants versus $\$ 427$ million from other types of contributions, including gifts and grants from private sources. In contrast, the corresponding figures for Memorial Sloan Kettering Cancer Center were $\$ 205$ million and $\$ 271$ million, respectively. Note that organizations do not specify whether grants were earmarked for research versus other purposes like patient support.

Among private foundations funding cancer research, specific interests vary considerably. Those interests hinge on a number of factors, such as the extent to which research is part of its broader mission or if the funder focuses on cancer writ large as opposed to a specific disease. Rather than paint all private foundations with a broad brush, IP has identified the following subset of foundations providing support to cancer research organizations.

General Research Funders. These funders focus on cancer writ large, rather than a specific disease like breast, colon, or skin cancer, and grants are primarily earmarked for research purposes as opposed to advocacy, treatment, endowments, capital purposes or education. The mission of the Mark Foundation for Cancer Research is to "actively partner with scientists to accelerate research that will transform the prevention, diagnosis and treatment of cancer." In 2020, the foundation disbursed $\$ 16.4$ million in grants to domestic organizations, accounting for 76\% of its total operating expenses. The foundation earmarked $99 \%$ of these grants for research purposes.

Other examples of general funders and the corresponding percentage of their operating expenses that flow to research grants or individuals for the most recent tax year include the American Association for Cancer Research (75\%) and the Cancer Research Institute (67\%).

Disease-Specific Research Funders. These funders focus on a specific disease, like breast, pancreatic or pediatric cancer. Like the general research funders, these organizations devote a substantial portion of operating expenses towards grants. Examples of disease-specific research funders that devote at least $50 \%$ of total expenses to cancer research are the Prostate Cancer Foundation, the Breast Cancer Research Foundation, the Melanoma Research Alliance, and Alex's Lemonade Stand Foundation for Childhood Cancer.

| $\frac{10 \text { Cancer Research Funders to Know }}{\text { American Association for Cancer Research }}$ |
| :---: |
| American Cancer Society |
| Breast Cancer Research Foundation |
| Break Through Cancer |
| Cancer Research Institute |
| Leukemia and Lymphoma Society |
| Marc Lustgarten Pancreatic Cancer Foundation |
| Mark Foundation for Cancer Research Foundation for Cancer Immunotherapy |
| V Foundation for Cancer Research |

Patient advocacy organizations. These institutions make grants and engage in a broad swath of cancer-related activities like research, education, prevention, patient care, and advocacy. The Leukemia \& Lymphoma Society’s (LLS) Chief

Operating Officer Troy Dunmire told IP that "advocacy is a key component to addressing health inequities," citing the society's 10-year effort to encourage lawmakers to "minimize barriers to care for patients and promote equitable care."

Given patient advocacy organizations' broad charter, these institutions typically allocate a smaller percentage of operating expenses toward research. The LLS disbursed $\$ 29$ million in research grants to domestic organizations for the fiscal year ending June 2021. This figure accounted for $8 \%$ of its total operational expenses. However, given the society's large size - it had $\$ 478$ million in total revenues - that $\$ 29$ million figure is similar to the annual grantmaking budgets of many funders exclusively devoted to research.

Another striking example is the American Cancer Society (ACS), the largest cancer-related organization in the United States. In 2020, it had $\$ 576$ million in revenues and disbursed $\$ 51$ million for research grants. While this figure accounted for only $9 \%$ of its operational expenses, it nonetheless places the ACS among the ecosystem's largest funders. The ACS also provides grants for such purposes as "transportation assistance," "colorectal health and education" and "access to care."

Prominent patient advocacy organizations and their corresponding percentage of operating expenses that flow to research grants to domestic organizations for the most recent tax year include the Pancreatic Cancer Action Network (7\%) and the American Lung Association (11\%).

Medical Research Funders. This group consists of foundations that provide funding for cancer research as part of its larger giving portfolio. Examples include Bill \& Melinda Gates Foundation,

Doris Duke Charitable Foundation, Chan
Zuckerberg Initiative (technically an LLC, not a private foundation), Gates Family Foundation, Gordon and Betty Moore Foundation, Lasker Foundation, Leona M. and Harry B. Helmsley Charitable Trust, Robert Wood Johnson Foundation, Simons Foundation, Starr Foundation, Atlantic Philanthropies (which has now spent down its endowment), and W.M. Keck Foundation.

Cancer Centers. As we'll see in the following "Who's Getting" section of this brief, funding flows to the nation's expansive network of cancer centers providing patient treatment, outreach and education. Cancer centers also disburse research grants, although they generally constitute a small percentage of the organizations' operating expenses. With $\$ 630$ million in 2020 revenues, the Fred Hutchinson Cancer Research Center is one of the largest cancer nonprofits in the U.S. However, in 2020, it only allocated $\$ 4$ million in grants earmarked for "clinical research."

Single-organization funders. These entities, which are the in-house fundraising arms for affiliated organizations, fall under the National Taxonomy of Exempt Entities' "Single Organization Support (Medical Research)" classification, used by the IRS to categorize taxexempt organizations (These are not to be confused with "operating foundations," which are 501(c)(3) private foundations that are endowed and run their own programs and make few grants to external organizations).

Launched In 1995 with a $\$ 100$ million pledge from businessman and philanthropist Jon Huntsman, the Huntsman Cancer Foundation awards grants for research at the Huntsman Cancer Institute at
the University of Utah. Another singleorganization funder, the Jonsson Cancer Center Foundation, raises money for the UCLA Jonsson Comprehensive Cancer Center. This brief will only provide cursory references to single-organization funders since non-affiliated organizations cannot access this support.

It is beyond the scope of this brief to explore giving for non-research-related activities like community outreach, patient care or financial assistance, or non-research related endowments.

## Inside Philanthropy <br> August 2020 Survey

"I would say the most important trend [in the philanthropic community] is the growing understanding of the need for long-term funding for research."

## -Fundraiser, Madison, Wisconsin

## Who's Getting

Funders support research at university and academic medical centers, hospitals and private institutes across the cancer research continuum, which includes basic or discovery research, clinical research, population-based research, and translational research, with the goal of bringing new treatments and diagnostics to market. Organizations also receive funding for cancer prevention research, albeit to a significantly smaller degree than support earmarked for treatment. We will address the need for additional prevention research in the "Challenges \& Opportunities" section of this brief.

There are approximately 1,500 cancer centers in the U.S. conducting laboratory, clinical, and population-based research. Most cancer centers provide patient care, but some only conduct laboratory research. Within this group of roughly

1,500 centers are 71 NCI-designated Cancer Centers located in 36 states and the District of Columbia. Almost all of these centers are associated with a university. Of these 71 institutions:

- Eleven are cancer centers recognized for their scientific leadership, resources, and breadth of their research in basic, clinical, and/or prevention, cancer control, and population science. Examples include the Stephenson Cancer Center at the University of Oklahoma and Massey Cancer Center at Virginia Commonwealth University.
- Fifty-three are comprehensive cancer centers that are also recognized for their leadership and research, including transdisciplinary research that bridges scientific areas. Examples include the Moffitt Cancer Center (Tampa) and the Chao Family Comprehensive Cancer Center at the University of California, Irvine.
- Seven are basic laboratory cancer centers that primarily focus on laboratory research and often conduct preclinical translation in collaboration with other institutions. Examples include Purdue University Center for Cancer Research (West Lafayette, Indiana) and Salk Institute Cancer Center (La Jolla, California).

Each of the centers solicit donations on their websites. One of these institutions, University of California at Irvine Health, received a pledge of \$20 million from Allen Chao and his family to back research, cancer treatments, clinical trials, precision medicine and patient care at the Chao Family Comprehensive Cancer Center and Ambulatory Care. This gift represents the kind of general research support discussed in the previous section. In an example of disease-specific support,
in 2022, the Lustgarten Foundation, which focuses on pancreatic cancer, announced a five-year, \$5 million partnership with the Salk Institute to support research identifying and validating potential targets for new pancreatic cancer drugs.

Examples of support flowing to recipients that are not NCI-designated cancer centers include a \$25 million gift from the Brian and Sheila Jellison Family Foundation to the the Sarasota Memorial Healthcare Foundation (Florida) to create the Brian D. Jellison Cancer Institute, and $\$ 25$ million from philanthropist Helena Theurer to the Hackensack U. Medical Center Foundation (New Jersey) to expand research at the John Theurer Cancer Center. As we'll see in the "Major Donors" section of this brief, support from affluent regional donors like Jellison and Theurer are a critical funding source for cancer research organizations.

Funders also provide support to institutes and academic medical centers where cancer is one of the institute's research priorities. Examples include the Mayo Clinic, the Salk Institute and the Cold Spring Harbor Laboratory. These are private, nonprofit institutions with research programs focusing on cancer, neuroscience and quantitative biology.

An analysis of the Chronicle of Philanthropy's Big Gift database shows that New York City's Memorial Sloan Kettering Cancer Center, which had $\$ 5$ billion in revenues for the tax year ending December 2020, received four gifts from individual donors totaling $\$ 275$ million in 2021 and 2022. Boston's Dana Farber Cancer Institute received seven gifts or pledges from individual donors totaling \$146.5 million between 2020 and 2022. The institute had $\$ 2$ billion in revenues for the tax year ending September 2020.

Much like their peers in higher education, development officers at these large research organizations secure large gifts due to their access to affluent donors, many of whom have been personally affected by cancer, and sophisticated and well-resourced fundraising operations. ProPublica's David Armstrong and Ryan Gabrielson note that St. Jude Children's Research Hospital, which focuses on childhood cancer and is the nation's largest healthcare charity, spent $\$ 626$ million on fundraising expenses in fiscal 2021. Hospital officials said the figure, which represents about 35\% of the organization's total expenses, is in line with industry standards.

| 10 Cancer Research Recipients to Watch <br> Dana Farber Cancer Institute <br> Fred Hutchinson Cancer Center <br> Mayo Clinic <br> Memorial Sloan Kettering Cancer Center <br> Salk Institute <br> Sidney Kimmel Comprehensive Cancer <br> Center at Johns Hopkins <br> St. Jude Children's Research Hospital <br> Stanford Cancer Institute <br> Tisch Cancer Institute at Ichan School <br> of Medicine at Mount Sinai <br> University of Texas MD Anderson <br> Cancer Center |
| :---: |

Individual donors are more likely than private foundations to make big gifts for the construction of new cancer treatment centers, often coupling this support with funding earmarked for research purposes. For example, Helena Theurer's donation for cancer research to the Hackensack U. Medical Center Foundation also called for the expansion of the John Theurer Cancer Center, which she established in 2010 with a $\$ 10$ million gift.

## Giving \& Getting Deeper Dive

"Cancer research" is a complex and nuanced term. According to the NCI, the "cancer research continuum" consists of four categories, each serving a distinct purpose-basic or discovery research, clinical research, population-based research, and translational research. This continuum serves as a useful organizing framework to help development officers get a deeper understanding of what funders are supporting.

Basic Research or Discovery Research. This area explores such issues as why cells become cancerous, why cancer cells grow and spread, and why immune systems attack and kill cells. Projects tend to be intensive and last months to many years, and the findings can shape research questions to study in humans, such as identifying drugs to test in clinical trials.

Funders may be less attracted to supporting basic research because the work may not translate into cures or commercialized treatment for years, if ever. "It's very difficult for us to raise money for basic research, even though our research has led to some spectacular breakthroughs," Teresa CoffeyGordon, director, innovation funds, at DanaFarber Cancer Institute told IP in 2020. "Most funding coming in is for a specific cancer fund."

Moreover, pharmaceutical companies do not prioritize basic research. "For companies, funding more basic research would not be wise, given that the primary function of the pharmaceutical industry is drug discovery and development," said biochemist Nicholas Lydon.

Clinical Research. Researchers conduct clinical trials with human volunteers to test the safety and efficacy of new drugs before they are used in
patients. Early-phase trials generally include a handful of participants, while later-phase trials involve hundreds or thousands, and can last several years. Research is conducted in private research institutes, government laboratories, and public and private hospitals. Donors and foundations provide robust support for clinical trials and clinical research programs. Some grantmakers, like the Doris Duke Charitable Foundation, only fund clinical research.

In 2020, the Rosalie and Harold Brown Charitable Foundation gave $\$ 8$ million to Saint John's Health Center Foundation, the fundraising arm of the John Wayne Cancer Institute at Providence St. John's Health Center in Santa Monica, California. The gift, which was the largest in the center's history at the time, was earmarked to strengthen clinical research programs focused on immunotherapy and precision genomic medicine.

The pharmaceutical industry provides extensive support for clinical research. When a drug starts to work in clinical trials, these companies "can quickly move into large scale and roll it out internationally," said Charles Sawyers, a Howard Hughes Medical Institute investigator who studies the molecular details underlying tumor growth and progression. That said, pharmaceutical companies may bypass promising treatment options due to cost concerns.

Despite philanthropy's ample support across this stage of the research continuum, BIPOC cancer patients have far lower clinical trial participation rates compared to their white counterparts, a problematic disparity that has contributed to adverse health outcomes for underrepresented demographics. The "Challenges \& Opportunities" section of this brief explores how funders are tackling this challenge.

Population-Based Research. This area is where researchers generate information about the causes of cancer and its impact by focusing on variables and risk factors across a given population, such as family history, genetics, health histories and environmental conditions. Pediatric cancer funders like St. Baldrick's Foundation, Alex's Lemonade Stand Foundation, and the Pediatric Cancer Research Foundation fall within this category. Funders can support population-based research across different stages of the continuum. For example, Penn Medicine's Basser Center for BRCA provides funding for basic, clinical, and translational research projects related to mutation in genes BRCA1/2, the genes most commonly affected in hereditary breast and ovarian cancer. In September 2022, the center received a $\$ 55$ million gift from Jon Gray, the president and COO of the investment firm Blackstone, and his wife Mindy, to establish the Basser Cancer Interception Institute.

## Partnership Spotlight



The \$5 million partnership between Salk and Lustgarten allows researchers to explore understudied areas related to the diagnosis and treatment of pancreatic cancer. According to David Tuveson, Lustgarten's chief scientist, American Association for Cancer Research (AACR) president and director of the Cold Spring Harbor Laboratory Cancer Center, the funding model "... gives scientists at leading research institutions the freedom to build the right team and infrastructure to support the kind of high-risk, high-reward studies."
"Population-based research can identify associations or highlight trends that would be difficult or impossible to find otherwise," notes the NCI. "Important data about disparities in diagnosis or survival rates among certain racial or socioeconomic groups or the long-term health of pediatric cancer survivors, for instance, only came to light as a result of population-based research."

Translational Research. In this stage, researchers assess how an intervention can improve outcomes outside of a controlled study like a clinical trial so that it can be used in everyday care a process described as taking findings from "the bench to the bedside." Some researchers consider clinical trials to be a component of translational research. Foundations like Break Through Cancer primarily focus on translational research, while the V Foundation for Cancer Research's Stuart Scott Memorial Cancer Fund provides translational grants to fund research of the biological basis of cancer disparities experienced by patients of minority populations. The NCI notes that cancer research "is often a marathon, not a sprint." To this point, an analysis of 10 cancer drugs by researchers at JAMA Internal Medicine found that the median time from discovery to approval was 7.3 years. But lack of funding or an unclear path to commercial use often precludes countless promising therapies from advancing to the translational stage of the continuum - a failure point known as "the Valley of Death." The "Funder Trends and Strategies"
section of this brief will look at how grantmakers aim to shepherd promising treatments through the translational research stage.

## The Big Issues \& Beyond

The cancer research field is a vast and technically complex terrain, intersecting with many equally complex societal issues, including how we (society and government) fund healthcare in America, who gets first access to the latest advances, and who gets to profit at what level from discoveries that should be for all mankind. We have already alluded in this brief to one critical issue: funders' efforts to reduce treatment disparities pertaining to ethnic and racial groups that have been historically underrepresented across the cancer research continuum. It is a huge issue, and so we address it in its own "Perspectives on Equity" section of this brief. Here in this section, we take up two other thorny issues being confronted by the cancer research field: the challenges of keeping up with fast-evolving technologies and disparities in funding that many argue should track more closely with lethality and impacts on society.

## Rapid Advances, But Can Funding Keep

 Pace? For the purposes of this brief, which is primarily aimed at fundraisers and philanthropic professionals, we have identified two researchrelated areas that receive substantial philanthropic support - immunotherapy and precision medicine.
## Funder Spotlight



Foundation for Childhood Cancer

When Alex Scott passed away from childood cancer at the age of eight, her lemonade stand had already raised over $\$ 1$ million. In 2005, her parents established Alex's Lemonade Stand Foundation to carry on their daughter's legacy. The foundation has raised more than $\$ 250$ million supporting more than 1,000 childhood cancer research projects. It has also created the Travel for Care Program, which supports families of children receiving cancer treatment.

We will also look at how patient advocacy organizations and individual donors are attempting to close the funding gaps for specific disease types.

## Immunotherapy

One of the most promising fields in cancer research is immunotherapy, which aims to direct the body's immune system to fight cancers. According to Mark A. Lewis, MD, immunotherapy "has risen as the fourth pillar of treatment beyond the traditional triumvirate of chemotherapy, surgery and radiation." Immunotherapy has proven to be effective for patients with melanoma, lymphoma and kidney cancer.

## HUNTSMAN <br> CANCER FOUNDATION

"The only reason that we are now being able to treat cancer with immunotherapy drugs is because donors were willing to put some dollars into initial research. Now, immunotherapy is a burgeoning treatment in many respects for various types of cancers."

- Loren Savage, executive director of major giving, Huntsman Cancer Foundation

Experts attribute the field's growth to private philanthropy. "The only reason that we are now being able to treat cancer with immunotherapy drugs is because donors were willing to put some dollars into initial research," Loren Savage, executive director of major giving at the Huntsman Cancer Foundation, told IP. "Now, immunotherapy is a burgeoning treatment in many respects for various types of cancers."

In 2011, the FDA announced its first approval of immunotherapy treatment. Four years later, Ralph Whitworth and his wife Fernanda Whitworth launched the San Diego-based Immunotherapy Foundation with a $\$ 1.5$ million gift. Ralph had been diagnosed with oropharyngeal cancer and sought to accelerate research in the field, with a focus on

HPV-driven cancers, including cervical cancers. Speaking to IP in 2021, Executive Director Christina Jordan said the foundation was broadening its immunotherapy research into more cancers, like breast cancer.

In 2016, tech billionaire and former Facebook President Sean Parker launched the Parker Institute for Cancer Immunotherapy with a $\$ 250$ million investment to foster collaboration between scientists, clinicians and industry experts. At the time, less than $1 \%$ of cancer patients were treated with immunotherapy. "We're focused on immunotherapy for a reason ... because it's a treatment modality that has the potential to treat all cancers," Parker said. The institute focuses on "high-risk, high-reward" research projects in four key areas that hold the most promise to advance immunotherapy - chimeric antigen receptor (CAR) T-cell therapy, checkpoint inhibitors, tumor antigen discovery, and tumor microenvironment. The institute disbursed $\$ 35$ million in research grants to domestic organizations in the fiscal year ending December 2019.

The same year Parker launched the institute, billionaire and former New York Mayor Michael Bloomberg and businessman Sidney Kimmel donated $\$ 50$ million each to launch the BloombergKimmel Cancer Immunotherapy Institute at Johns Hopkins University. More than a dozen additional donors contributed a total of $\$ 25$ million to the center, which conducts immunology research across multiple cancer types.

Grantmakers like the American Cancer Society, American Association for Cancer Research and the Mark Foundation for Cancer Research have made immunotherapy a top research priority. The Cancer Research Institute focuses exclusively on
immunotherapy, calling it "the most promising cancer treatment of our time," and noting, like Parker, that all cancer can potentially be treated immunotherapeutically. The institute awarded \$28.5 million in research grants in 2021 and has funded over 120 clinical trials.

In June 2021, researchers at the annual meeting of the American Society of Clinical Oncology presented a set of promising developments in immunology, such as the potential benefit of using immunotherapy earlier in a patient's treatment and progress involving checkpoint inhibitors, which work by blocking certain signals in the body and allowing the immune system to attack cancer. In 2022, one of the nation's largest comprehensive cancer centers, the University of Texas MD Anderson Cancer Center, announced the launch of the James P. Allison Institute to bring "the benefits of immunotherapy to all patients." The announcement did not disclose the name of the center's donors.

Looking ahead, the Bloomberg-Kimmel Cancer Institute cites a handful of challenges in the field, such as low participation in clinical trials, how treatment works well for some cancers and not others, and the excessive costs of treatment.

## Precision Medicine

According to the Dana-Farber Cancer Institute, the aim of precision medicine, sometimes called personalized medicine, is to "match treatments to individual patients taking into account their genetic makeup, medical history, test results, and other distinctive characteristics. Unlike precision medicine, immunotherapy is a particular form of treatment, aimed at manipulating the patient's own immune system to treat disease."

In precision medicine for cancer, treatments may be attached to the tumor's genetic abnormalities, which can be revealed by genetic testing or DNA sequencing. Doctors also use precision medicine to identify people who might be at high risk of cancer, detect cancers early, and evaluate how well a treatment is working.

Stacy Gray, MD, the director of Clinical Cancer Genomics at City of Hope, a private, nonprofit clinical research center, hospital and graduate school in Duarte, California, calls genomic testing, which determines if an individual is genetically predisposed to cancer, "the future of oncology," noting that "right now there are hundreds of thousands of people at high risk for cancer who don't know it." For the tax year ending September 2020, City of Hope gave $\$ 25$ million to Phoenix's Translational Genomics Research Institute and $\$ 113$ million to the organization's in-house Beckman Research Institute.

In late 2021, the estate of Paul Allen, the Microsoft co-founder who passed away from non-Hodgkin's lymphoma in 2018, made a $\$ 20$ million bequest to Swedish Health Services, the Seattle-based health system that had provided specialized care to Allen during his years-long battle with the disease.

The bequest funded the creation of the Paul G. Allen Research Center, which focuses on a "multiomics" approach in which researchers identify the DNA mutations and changes in gene expressions of cancer cells to better understand how to treat and prevent cancer. Researchers consider it a paradigm shift in the study and treatment of cancer - a shift that has already led to the development of new molecularly targeted therapies for leukemia, lung and breast cancer, and others that have extended lives and lessened the toxicity of some treatments.
"Cancer medicine is evolving incredibly quickly," Sara Jo Grethlein, the institute's executive medical director, told IP at the time. "If we can understand the patient and the tumor, we may be able to truly personalize treatment."

In September 2022, Seattle-based businessman Stuart Sloan and his wife Molly pledged $\$ 78$ million to support the Fred Hutchinson Cancer Center. The gift was earmarked to establish a new institute for precision oncology research, recruit personnel, and support the construction of a new research facility. A month later, the Bezos family made a 10-year, $\$ 710.5$ million commitment to the center to galvanize cancer and infectious disease research. The commitment sets aside $\$ 225$ million to construct a new building that will house the Stuart and Molly Sloan Precision Oncology Institute. Members of the Bezos family cited in the center's press release included Jeff Bezos' mother Jackie and stepfather Mike. Kelly O’Brien, Fred Hutch's vice president of philanthropy, told IP that the commitment was the culmination of an "iterative process of looking at what was most important to the family and putting a lot of rigor behind how we would use the funding over the course of the decade."

## Major Gift Spotlight

SWEDISH

[^0]Funders also support precision medicine programs in which cancer is just one area of focus. The Harvard Business School Kraft Precision Medicine Accelerator was established in 2016 with a $\$ 20$ million endowment from the Robert and Myra Kraft Family Foundation, the giving vehicle of billionaire businessman and New England Patriots owner Robert Kraft. The center partners with organizations to advance precision medicine opportunities across cancers, among other diseases. "The accelerator is helping us to democratize cures by identifying and teaching the best business models to nonprofits, biotechs and any organization working to cure a range of devastating diseases," Kraft said. "It's our hope that this work will one day mean that no one loses a spouse, parent or loved one to a disease like cancer."

Funding disparities by cancer type. In 2017 and 2018, researchers at Northwestern University Feinberg School of Medicine and Robert H. Lurie Comprehensive Cancer Center of Northwestern University accessed the IRS tax records of 119 organizations that provided cancer research funding and had at least $\$ 5$ million in annual revenue in 2015 . Of the $\$ 5.98$ billion in organizations' combined revenues for the year, $\$ 4.59$ billion (77\%) flowed to general charities and advocacy organizations like the American Cancer Society (ACS).

Of the $\$ 1.39$ billion in funding earmarked for specific cancers, organizations focused on breast cancer had the most revenues ( $\$ 460$ million), followed by leukemia (\$201 million), pediatric cancer (\$177 million), and lymphoma (\$145 million). The least-funded cancers were liver and bile duct ( $\$ 5.8$ million), cervical ( $\$ 5.4$ million), endometrial (\$5.4 million) and sarcoma (\$5.1 million).

Researchers then correlated organizations' annual revenue by cancer type to variables like incidence rates, mortality rates, and years of life lost, with the latter metric taking into account cancers that affect younger people. They concluded that the amount of revenue flowing to specific types of cancers had little correlation with the cancer's incidence and mortality rates. Specifically, colon, endometrial, liver and bile duct, cervical, ovarian, pancreatic and lung cancers were all poorly funded compared to their commonality and relative lethality. Conversely, researchers found that breast cancer, leukemia, lymphoma and pediatric cancers were all well-funded respective to their impact on society.

It should be noted that research correlated specific outcomes with organizations' revenues and not the total amount of research money they allotted. However, the report notes that "increased spending on research funding, patient education, and patient treatment was also highly correlated with higher annual revenue."

The study's co-author, Suneel Kamath, MD, posited a handful theories explaining the funding disparities. Most cancer funding flows to organizations that "raise a lot of money for awareness for those diseases," he told IP. These organizations engage in "hope-based messaging," which can be very effective when a specific type of cancer has a relatively higher cure rate. For Kamath, this may explain why fields like breast cancer and lymphoma are well-funded compared to pancreatic or colorectal cancer, the latter of which is the second-highest cause of cancer-related deaths and one of the least-funded cancer types. "They are just intrinsically harder diseases," Kamath said. "You're going to have a lot of negative outcomes for many years, and it's going to take a lot of fortitude to stick with it."

The report found that less funding flows to cancers that can be caused by "stigmatized behaviors" like smoking (lung), alcohol consumption (liver), intravenous drug use (liver), sex (cervical) and tanning beds (skin). The authors theorize that some donors believe that other cancer areas are more worthwhile since the patient's behavior was unrelated to the diagnosis.

Commenting on the study, Mona Khanna, MD, who was not affiliated with the research, cited the demographic angle, noting that if "a cancer occurs in someone of a higher socioeconomic class, it may attract more funding." To Khanna's point, the "Major Donors" section of this brief looks at how affluent donors are helping to shape research priorities across the space.

## $[7$ Cleveland Clinic <br> "We found, unfortunately, that there's a significant racial disparity involved as well. Diseases that have higher incidence rates among black patients, in particular, tend to not get as much as much funding." <br> - Suneel Kamath, Gastrointestinal oncologist, Cleveland Clinic

Health journalist Liz Highleyman, who was also not affiliated with the Northwestern study, wrote that "a factor not mentioned by the researchers is the fact that breast cancer affects mostly women, so it receives attention and funding from organizations and political entities that support women's issues much as HIV/AIDS has received attention and funding from groups that support the LGBT community."

Kamath has identified similar disparities in federal cancer funding and how these disparities affect Black patients. "We found, unfortunately, that there's a significant racial disparity involved as
well," he said. "Diseases that have higher incidence rates among black patients, in particular, tend to not get as much as much funding."

Cognizant of funding disparities across the field, some grantmakers and donors are supporting research focused on historically under-resourced disease types.

Initiative Spotlight


The Dare to Dream Project is a new phase of the Leukemia \& Lymphoma Society's (LLS) Children's Initiative. Along with its AML Data Commons and PedAL Master Clinical Trial, Dare to Dream also offers patients and families support services, educational tools, and financial assistance. LLS also advocates for policies and practices that break down barriers to affordable health care and accelerate the development of new, safer blood cancer treatments.

According to the NCI, cancer in children and adolescents is the leading cause of death by disease past infancy among children in the United States. The New York-based Leukemia \& Lymphoma Society (LLS) aims to raise $\$ 175$ million over the next five years for its "Dare to Dream" initiative, which focuses on research and treatments for children's blood cancers, which constitute $40 \%$ of all childhood cancers. Through the initiative, the LLS has provided funding for the pediatric AML Data Commons, the first platform that ensures consistency in global data reporting, and the firstever acute leukemia LLS PedAL Master Clinical Trial, which matches patients to treatment based on their cancer's unique tumor biology. The society encourages donors to contribute to "Dare to Dream" on its website. Supporters include family foundations, individual donors, universities,
cancer funders like Gateway for Cancer Research and Rally Foundation for Cancer Research, and Walgreens.

In 2022, an anonymous donor, whose family member received cancer treatment at the University of North Carolina Lineberger Comprehensive Cancer Center, made a $\$ 25$ million gift to establish the UNC Lineberger Center for Triple Negative Breast Cancer. The largest donation in the center's history was earmarked to advance its research on diagnosing and treating this highly aggressive breast cancer that disproportionately affects Black, Latina, and young women and which has received limited research funding historically. The previous year, Dana-Farber Cancer Institute received a $\$ 5$ million donation from real estate developer Randy Benderson and his family to accelerate research in triple-negative breast cancer and strengthen the hospital's capabilities for treating the disease.

IP encourages development officers looking for a more detailed overview of key research issues for specific cancers to view the American Cancer Society's Research Highlights, which explores recent advancements in fields like lung, skin and prostate cancer, as well as "healthy eating and active living" and cancer disparities.

## Funder Trends and Strategies

IP surfaced three operationally oriented tactics deployed by funders to support cancer research organizations. First, funders adopt the principles of "venture philanthropy" to accelerate the return on high-risk, high-reward treatments. These practices inform the second key strategy, in which grantmakers target funding interventions to extricate a promising treatment from "The Valley of Death" and usher it into the translational stage
of the research continuum. Funders are also driving cross-interdisciplinary collaboration across a field replete with administrative, regulatory and funding restraints, all while attempting to streamline grant application and research processes.

Venture Philanthropy. "In the strictest sense, venture philanthropy connotes nonprofit organizations that invest directly in for-profit companies," notes the Milken Institute's FasterCures, an advisory organization that aims to lower barriers to biomedical innovation. In more general parlance, "venture philanthropy" means a lot of things to a lot of people, but is mostly applied to situations where a funder/investor has deep engagement with an investee (sometimes perceived as meddlesome) and provides large infusions of capital with the hope of major payoff (sometimes, but not always, in the form of profit for the donor).

Examples include a venture philanthropy alliance between biotechnology investment firm MPM Capital and Dana-Farber Cancer Institute that raised a $\$ 100$ million investment fund and $\$ 26$ million in donations to support early stage research. "If a venture capital alliance comes with a significant amount of philanthropic donations, in this case $\$ 26$ million, that is obviously an advantage," said MPM co-founder and managing director Ansbert Gadicke. "That's an additional \$26 million for their research."

BrightEdge is the American Cancer Society's (ACS) donor-funded, impact venture capital fund. Launched with an initial $\$ 25$ million investment from the ACS, the fund invests in for-profit companies that are developing cutting-edge, cancer-focused therapies. BrightEdge's leadership hopes to grow the fund to $\$ 100$ million by 2023.

Funders are also adopting venture philanthropy in disease-specific fields. According to the Coalition Against Childhood Cancer, at least 12 childhood cancer nonprofits have invested in Oncoheroes Biosciences, a biotech company that is developing new therapies for children with cancer.

FasterCures finds the term "venture philanthropy" limiting as it can leave out "many disease research organizations that are taking a new, more outcomes-driven approach to philanthropy, whether or not they are investing in for-profit companies." To this point, the Cancer Research Foundation refers to itself as "cancer research venture philanthropists" by funding promising young researchers. Similarly, Liz Scott, coexecutive director of Alex's Lemonade Stand, a grantmaker focused on childhood cancer, told IP, "It is hard for scientists to receive funding for innovative new approaches because they lack preliminary data; we provide seed funding for innovative, high-risk, high-reward projects."

Funding Interventions in "the Valley of Death." "The Valley of Death" is a failure point in the cancer research continuum in which a lack of funding or an uncertain path to commercialization prevents a treatment from advancing to the translational stage. Funders seek to insert themselves at this critical juncture to move promising treatments forward.
"Too many of these breakthroughs in cancer research have been met with a deafening silence, sitting inside the laboratories, not able to get to the clinics," wrote the National Foundation for Cancer Research CEO Emeritus Franklin C. Salisbury and President and CEO Dr. Sujuan Ba. In response, the foundation launched the AIM-HI Accelerator Fund using venture philanthropy and impact
investments to "raise and provide sustainable funding to allow these disruptive innovations to be advanced from laboratory bench to patients at their bedsides through the so-called 'Valley of Death."'

Writing in Exponent Philanthropy, Sheri Sobrato, the eldest daughter of billionaire Silicon Valley real estate mogul and philanthropist John Sobrato and his wife Sue, writes that the most challenging part of the broader medical research lifecycle is "the early stage of commercialization, also known as the 'Valley of Death." At this stage, Sobrato said, "the company must raise money to continue development, but the technology might still be unproven and the risks are high." Sobrato argues that this stage of development represents an impactful intervention point for philanthropists looking to advance promising treatments.

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> "[Donors] need to stick with organizations longer
> and make multi year commitments so organizations

can plan and adjust without spending all their time dialing for dollars or explaining necessary
adjustments. This work is not rocket science and does not need to be made more complicated." -Foundation professional, Rockland, Maine

Sobrato provides support to the Catalytic Impact Foundation (CIF), a New York-based nonprofit that uses funds to invest in early-stage life science and healthcare companies and guide innovative treatments through "the Valley of Death." The Houston-based Stingray Therapeutics is using CIF funding to develop cutting-edge immunotherapy treatments for childhood cancer. The project is in the pre-clinical phase at the time of this writing.

## Boosting Collaboration and Streamlining the

Research Process. For some philanthropists, the biggest challenges in the cancer research space do
not involve funding as much as institutional obstacles to collaboration, which include a culture of secrecy among competing organizations, researchers' inability to share data due to privacy regulations, and an onerous grant application process.

Previously speaking to IP in 2021, Lisa Schwarz, the chief operations officer and chief philanthropy officer of the Cambridge, Massachusetts-based Break Through Cancer, said that "a great many foundations have given money to promote collaboration between institutions, not just for cancer, but for many diseases. But what you see more often than not is people taking that money and going back to their own institutions."

Break Through Cancer launched in 2021 with a challenge pledge of $\$ 250$ million from Richmond, Virginia-based businessman William H. Goodwin Jr., his wife Alice T. Goodwin, and the estate of William Hunter Goodwin III. It aims to reduce what it calls the "day-to-day barriers to crossinstitutional collaboration such as contract negotiations, data sharing, intellectual property, and authorship policies" across five of the top cancer research centers in the world.
"Change is hard for individuals, but especially institutions - especially when you're talking about intellectual property and data, which is a sticking point for many institutions," Schwarz said. "But we have an enthusiastic commitment to collaboration on the part of five cancer center heads."

The Parker Institute for Cancer Immunotherapy brings together some of the country's top cancer centers to facilitate the sharing of intellectual property and access to each other's work. "To do the research that really moves the field forward, you
need a lot of collaboration, but you (also) need one big, open sandbox for everyone to play in, in order for that collaboration to take place," said its founder, Sean Parker. "So a breakthrough made by one scientist at one center is immediately available to be used by any scientist within the network, and they improve upon it."

The Susan G. Komen Metastatic Breast Cancer Collaborative Research Initiative pairs researchers from the Duke Cancer Institute and the University of North Carolina Lineberger Comprehensive Cancer Center to address significant gaps in metastatic breast cancer knowledge. "It's this strong belief in the power of collaboration to advance discovery that led to this novel partnership between some of the leading researchers at two institutions that are known for their rivalry," said Susan G. Komen president and CEO Paula Schneider.
Gateway for Cancer Research is one of the few
nonprofits soley focused on supporting Phase I
and II clinical trials for all cancer types. Founded
in 1991 by Richard Stephenson, Gateway has
raised over \$95 million, funded more than 190
clinical trials and nearly 10,00 patients have
enrolled in its studies. Recent grantees include
Dana-Farber Cancer Institute, Memorial Sloan
Kettering, and MD Anderson Cancer Center.

Funders also seek to accelerate the notoriously time-intensive grant application process. The Prostate Cancer Foundation (PCF) requires researchers to fill out a brief, five-page application and alerts applicants about funding decisions within 60 days. This streamlined approach has "attracted the best and brightest to the field," PCF's founder, Michael Milken, told Bridgespan Group.

ALS's Scott told IP that many of the funders' researchers "identified data access as an impediment to research progress." In response, the foundation launched the Childhood Cancer Data Lab to "empower researchers across the globe by removing roadblocks and developing resources to accelerate new treatment and cure discovery."

## Perspectives on Equity

This section focuses not only on funders' perspectives on racial and socioeconomic equity, but how this thinking informs their grantmaking strategies. We'll begin with a brief overview of disparities in cancer outcomes and incidence rates before pivoting to three key themes - how genomic research can yield treatment breakthroughs for disproportionately affected racial groups, the pervasive representation gaps in clinical trials, and the growing adoption of a holistic approach to research that acknowledges how underlying economic and social issues contribute to health disparities.

While improved care and treatment coupled with a dramatic decrease in smoking have translated into a $32 \%$ reduction in the cancer death rate for men and women from 1991 to 2019, progress has not been evenly distributed across the broader population. According to the American Cancer Society, Black people have the highest death rate and shortest survival of any racial/ethnic group in the U.S. for most cancers. American Indian and Alaska Native (Native American) people have much higher rates of getting several cancers, including lung, colorectal, liver, stomach and kidney cancers, compared to non-Hispanic white people in the U.S.

Communities living close to industrial plants are at higher risk of getting cancer. Perhaps the most striking example of this correlation is Louisiana's
"Cancer Alley," a region that includes 30 large petrochemical plants and where adjacent, predominantly Black and poor communities face severely elevated cancer risks, according to the Environmental Protection Agency.

In 2022, the American Association for Cancer Research (AACR) published its Cancer Disparities Progress Report, which looked at the factors that drive cancer health disparities, including socioeconomic status, social environments, mental health, biological factors, and healthcare access, as well as disparities in the "burden of preventable cancer risk factors" like tobacco use, UV exposure, body weight, and physical activity. Acknowledging that the COVID-19 pandemic "may further exacerbate cancer health disparities," the authors lay out a series of action items, including eliminating disparities in cancer screening, clinical research, and cancer treatment, and recruiting and training cancer researchers from underrepresented ethnic groups.

## Genomic Research Holds Promise to Improve

Equity. Genomic research looks at the influence of abnormalities in genes on the development and growth of many types of cancers. However, a review of close to 4,000 genome-related studies from 2005 to 2018 found that $88 \%$ of participants had European ancestry. "Treatments developed with samples and tested on individuals from European backgrounds often show decreased effectiveness in other populations around the world," Cara Altimus,managing director of the Milken Center for Strategic Philanthropy, told IP.

Speaking to IP in 2020, Prostate Cancer Foundation President and CEO Jonathan Simons said that researchers were better understanding how genetics makes Black men particularly vulnerable
to the disease thanks, in part, to increased participation of Black men in clinical research. "Same as sickle cell trait in Mediterranean populations. Or the gene for cystic fibrosis, which arose in Scotland. Genes don't need to be your destiny, but they are an essential part of human disease," Simons said.

## Initiative Spotlight

The LLS created the Equity in Access Research Program to "better understand the modifiable, underlying causes contributing to health disparities and inequities and to identify solutions we can urge lawmakers and those in the healthcare industry to adopt," said Troy Dunmire, the society's chief operating officer. During its first year, the program funded research to better understand how insurance status and type impact access to care for blood cancer patients and survivors. The program's first cohort of award recipients received more than $\$ 1.3$ millionin combined funding.

Leaders who spoke with IP cited the need to provide more equitable access to genetic testing moving forward. "Grantmakers could be looking to see where those gaps for underrepresented communities are to make sure it's not just about immediate treatment once they're diagnosed, but providing a better understanding about the testing prevention measures that can be put in place," said Savage of the Huntsman Cancer Foundation.

AACR's Cancer Disparities Progress Report cited advancing genetic testing as a top priority for the research field. "As we look to the future, we strongly believe that a deeper understanding of the ancestryrelated differences in cancer biology is key if we are to achieve the full potential of precision
cancer medicine, an approach to treatment that harnesses our growing knowledge of the specific characteristics of individual patients and their cancers," the report read.

An example of this kind of support is the $\$ 1$ million grant from Mark Foundation for Cancer Research to Dr. David Tuveson and his collaborators at the New York Genome Center for the Polyethnic-1000 project to improve outcomes for cancer patients of multiple ethnicities across New York City and surrounding areas. "The projects provide new genomic methods that transform all aspects of oncology to patient populations that are generally underrepresented in research and too often deprived of the benefits of scientific progress," foundation CEO Ryan Schoenfeld, Ph.D., told IP.

## Taking on Pervasive Representation Gaps in

 Clinical Trials. As discussed in the "Giving \& Getting Deeper Dive" section, clinical research is one of the four key components of the NCI's cancer research continuum. This work finds researchers testing interventions on human volunteers to determine if a drug can prevent cancer in individuals with a heightened genetic risk for the disease, or if a new screening test can reduce deaths.Yet according to U.S. Food and Drug Administration data, only $5 \%$ of Black patients with cancer are typically enrolled in clinical trials, despite accounting for $13.4 \%$ of the U.S. population. Recent data is even more alarming. According to the 2019 FDA Drug Trial Snapshots Summary Report, of the 8,700 patients who participated in trials related to the 28 oncology drugs approved by the agency in 2018 and 2019, only 4\% were Black.

Experts cite a litany of reasons for this disparity, including financial and logistical obstacles, lack of
access, and what ProPublica's Caroline Chen and Riley Wong called "the reluctance of the FDA to force drugmakers to enroll more minority patients." The Black community is also infused with a "lingering distrust of the medical community due to a history of being victimized by medical experimentation," like the Tuskegee experiments from 1932 to 1972 , in which federal researchers observed the effects of untreated syphilis on nearly 400 Black patients without their knowledge or consent. A ProPublica analysis of FDA data surfaced gaps in clinical trial participation among Blacks, Asian-Americans, Native Americans and Alaska Natives.

When clinical trials lack sufficient representation from a specific racial group, researchers lack the data to gauge a drug's effectiveness and safety on this demographic, leading to adverse health outcomes. For example, Black women are $40 \%$ more likely to die from breast cancer than white women - a disparity that health experts attribute to the lack of Black women participating in clinical trials. The underrepresentation of Black women in studies of treatments that affect them is "a significant issue," says Laurie Zephyrin, senior vice president, Advancing Health Equity, at the Commonwealth Fund, a private foundation committed to promoting an equitable healthcare system. "There needs to be intentional efforts to recruit women of color in clinical trials."

The "Analysis of Opportunities and Challenges" section of this brief will take a closer look at how funders are working to close the representation gap in clinical trials.

## Taking a Holistic Approach to Cancer

Research. Speaking to IP, Cara Altimus, Ph.D., managing director of the Milken Institute for

Strategic Philanthropy, said, "The first step in addressing equity issues in cancer research is to completely understand the landscape that has led to inequities." To that end, funders are launching research initiatives and funding training programs that educate cancer researchers on the root causes of these disparities.

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"Most [foundations] give lip service to the
importance of racial justice, but do not fund it- and
certainly don't fund smaller, minority-led
organizations who are leading on racial justice work.
Gifts are being given to large organizations considered
safe or non-threatening by the white donors."
-Fundraiser, Minneapolis, Minnesota

The Virginia Commonwealth Massey Cancer Center has partnered with the LUNGevity Foundation and Bristol Myers Squibb to provide staff skills to carry out science and research efforts through a social justice lens. Speaking to Nature about the center's work, director Robert A. Winn, MD, said, "We acknowledge that social determinants of health can sometimes masquerade as biological - no, African Americans aren't simply genetically predisposed to cancer risk factors such as obesity, diabetes and hypertension, it's systemic issues at play, such as redlining, that reduce access to healthy food and preventive medical care - and acknowledging these root causes is critical to making a real impact on health equity."

Breast cancer funder Susan G. Komen's Training Researchers to Eliminate Disparities program provides grants to graduate students seeking careers dedicated to understanding and eliminating disparities in breast cancer outcomes across population groups, specifically among minority populations. The funder also holds the

Disparities Summit to discuss ways to boost equity in breast cancer research and treatment. Summit sponsors include biopharmaceutical company Amgen, Bank of America, Ford, Merck and Walgreens.

The AACR's Cancer Disparities Progress Report noted that racial and ethnic minorities are considerably underrepresented in the cancer research workforce. While our research did not surface substantial funder support for cultivating diverse representation specifically in the oncology field, IP's white papers on Giving for Higher Education and Giving for STEM Education cited boosting racial diversity in the STEM field as a top priority for foundations and individual donors.

Funders are also looking at how environmental determinants correspond with cancer incidence. The Mark Foundation for Cancer Research gave the (Dr. Charles) Swanton Lab of the Francis Crick Institute (UK) a grant to study how environmental factors, such as air pollution, can trigger lung cancer and adversely impact certain individuals living in communities with poor air quality. "We have seen an increase in funding for research to advance health equities, but there is much more to learn, and more funding is needed to expose the severity and impact of these disparities," said foundation CEO Ryan Schoenfeld.

For more information about disparities in the cancer field, the OncLive Disparities in Cancer Care condition center page is a comprehensive resource for clinical news and expert insights on disparities in care with regard to race, gender, demographics, geographics and socioeconomic status.

## A Closer Look at Funder Types

The cancer research fundraising ecosystem is dominated by affluent individual donors, including billionaires who hail from Wall Street and Silicon Valley, as well as successful entrepreneurs who provide relatively smaller but nonetheless critical gifts to regional cancer research organizations. For many of these individuals, a gift or commitment earmarked for cancer research is deeply personal they may have been diagnosed with cancer or perhaps lost a loved one to the disease, and they often direct support to the cancer center that provided treatment. Private foundations have a relatively smaller philanthropic footprint, but many are equally committed to advancing innovative research and closing funding gaps. Corporate support takes the form of grants and partnerships, while community foundations channel giving through discretionary grantmaking programs and donor-advised funds.

## Major Donors

As noted in the "Who's Giving" section of this brief, it can be difficult to determine the true extent of individual giving to cancer research organizations, since recipient institutions do not need to report gifts on Forms 990. That said, an IP analysis of the Chronicle of Philanthropy's Big Gifts database, while not comprehensive, tracks gifts of $\$ 1$ million or more, and Philanthropy New Digest's news feed, provides a revealing look into the influence of top-of-the-pyramid donors across the field.

Our analysis generated 36 gifts or commitments from donors totaling \$1.4 billion from January 2020 to August 2022. These donors earmarked 62\% of support for general cancer research without
specifying a specific tumor type (e.g., breast, lung). For example, in 2020, Columbia Sportswear CEO Tim Boyle and his wife, Mary, gave Oregon Health \& Science University in Portland a $\$ 10$ million gift in support of a center dedicated to using "big data" to "more effectively fight cancer and other diseases."

A closer look at the data finds that 12 of the gifts and commitments were earmarked for the creation of new cancer research centers and institutes, for a total of $\$ 350$ million. In 2021, businessman Ronald Weiser pledged $\$ 30$ million to create the Ronald Weiser Center for Prostate Cancer at the University of Michigan Medicine in Ann Arbor. At \$30 million, the Weiser gift was also the average amount of a gift or commitment earmarked for a new cancer center. These types of gifts have a capital component, as the support often entails the construction of new treatment facilities, thereby making it difficult to gauge from a press release how much money is earmarked for research itself.

Here, we begin to see parallels with the broader higher education giving ecosystem, where donors frequently make huge gifts to construct new engineering buildings or athletic facilities that can attract top-tier talent, catalyze economic development, and boost the university's prestige. To this point, a 2019 Public Administration Review study cited the "desire to have an impact" by increasing "the quality and/or reputation" of a university as the top motivating factor behind mega-donor gifts. Other key motivations include altruism, exchange (i.e., self-interest), and leaving a legacy. Many of these large gifts for capital purposes frequently coincide with a recipient university's ambitious, multiyear fundraising campaign.

Below, we've listed a handful of prominent major donors in the cancer research space that present portraits of the giving interests in this space.

William H. and Alice T. Goodwin. Billionaire William Goodwin is the retired Chairman of CCA Industries, Inc., a diversified holding company with several hotel and resort businesses. Along with his wife Alice, he created the Richmond-based Commonwealth Foundation for Cancer Research in 2022 after witnessing several friends and family members battle with cancer. The foundation disbursed \$24.3 million in general support for cancer research to seven organizations for the fiscal year ending December 2019. The couple also gave $\$ 25$ million to the Massey Cancer Center of Virginia Commonwealth University and $\$ 30$ million to Johns Hopkins University for cancer research.

In 2020, the couple's son, William Hunter III, passed away at the age of 51 after a sixteen-month battle with colon cancer. A year later, the Goodwin Family and the Estate of Hunter Goodwin made a $\$ 250$ million challenge pledge to launch Break Through Cancer (BTC), a foundation dedicated to supporting translational research in the most difficult-to-treat cancers. BTC funds collaborative, multidisciplinary research by teams from five major U.S. cancer centers, including the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins and the Koch Institute for Integrative

Cancer Research at MIT. Its initial areas of focus include pancreatic cancer, ovarian cancer, glioblastoma, and acute myelogenous leukemia. Officials are in the process of raising an additional $\$ 250$ million and plan to include additional research institutes to its network.

Robert Smith. Vista Equity Partners founder and CEO Robert Smith is the richest Black American and one of the nation's most prolific philanthropists. Smith's Fund II Foundation has provided support to Susan G. Komen to address the high breast cancer mortality rate among African American women, who are nearly $40 \%$ more likely to die from the disease than white women. In 2018, Smith made a $\$ 2.5$ million donation to the Prostate Cancer Foundation (PCF) to focus research on African American men and to aid veterans who are battling the disease. Black men are $76 \%$ more likely to develop prostate cancer than white men, and more than twice as likely to die from the disease compared to men of other ethnicities.

In 2020, Smith announced a $\$ 1.9$ million gift to the PCF for the development of the Smith Polygenic Risk Test for Prostate Cancer, which aims to identify a man's likelihood of developing prostate cancer over his lifetime. "Robert's most recent philanthropic gift is the largest single philanthropic commitment to ending, I think, the largest disparity in all of cancer," PCF President and
Major Donor Spotlight
In 2016, Robert F. Smith's Fund II Foundation made a \$27 million grant to Susan
G. Komen in support of its African American Health Equity initiative, which
aims to reduce Black breast cancer disparities by 25\%. The following year, Smith
made a \$2.5 million donation to establish the Robert Frederick Smith Precision
Oncology Center of Excellence at the Jesse Brown VA Medical Center in Chicago,
Illinois. In 2021, he made a \$3.8 million gift to Mount Sinai in New York to
launch a mobile MRI unit to support prostate health in the Black community.

CEO Jonathan Simons told IP in 2020. "When you control for access to care and class, most all cancer disparities go away, except the prostate cancer disparity."

In February 2021, Smith made a $\$ 3.8$ million donation to launch the Robert F. Smith Mobile MRI Unit in partnership with the Mount Sinai Health System to support prostate health in the Black community. "Black men have the highest rate of prostate cancer," he told IP after the announcement. "So let's get out into the community with a mobile van, and if it works, then do it at scale."


Stanley and Fiona Druckenmiller. Billionaire financier Stanley Druckenmiller has served on the board of Memorial Sloan Kettering Cancer Center (MSK) since 1997. During the early years of his tenure, he and his wife Fiona would give the center approximately $\$ 2$ million to $\$ 5$ million a year. Speaking to IP, Druckenmiller said that about 10 years ago, he began to realize that "cancer outcomes were going to take off" thanks to rapid advancements in genetic sequencing and immunotherapy.

As a result, in 2016, the couple announced a \$25 million commitment to launch the Fiona and Stanley Druckenmiller Center for Lung Cancer Research at MSK. Six years later, the couple made a $\$ 100$ million commitment to launch the Fiona and Stanley Druckenmiller Presidential Innovation Fund as part of MSK's capital campaign. The fund aims to support the most promising projects in translational cancer medicine that might otherwise go unfunded.

Rodger and Paula Riney. With a net worth of approximately $\$ 3.3$ billion, Rodger Riney is the founder of Scottrade, a stock brokerage that was acquired by TD Ameritrade in 2017. The couple established the Paula and Rodger Riney Foundation with proceeds from the sale and has emerged as a major supporter of research into multiple myeloma, a type of blood cancer, after Rodger was diagnosed with the disease in 2016. "There's a lot of research around cancer, but not multiple myeloma," Riney said in 2021. "I wanted to help find a cure for this disease."

Grants include $\$ 7.8$ million to create the Riney Family Multiple Myeloma Research Program Fund at the Winship Cancer Institute at Emory University in Atlanta, $\$ 10$ million to support myeloma drug discovery at the Ohio State University Comprehensive Cancer Center, and over $\$ 60$ million to support multiple myeloma research at the Dana-Farber Cancer Institute, including a $\$ 40$ million gift in 2022 that coincided with the the Dana-Farber Campaign, the institute's multiyear $\$ 2$ billion fundraising effort, anticipated to close in September 2024.

James and Merryl Tisch. In 2008, Loews
Corporation CEO James Tisch and his wife Merryl made a $\$ 40$ million gift to establish the Tisch

Cancer Institute, which focuses on research across basic science, clinical care, and population, at Mount Sinai Hospital in New York City. In 2021, the couple announced a $\$ 60$ million gift to establish the Mount Sinai Tisch Cancer Center at the Mount Sinai Hospital campus.

The gift was the largest received by the Mount Sinai Health System for a cancer initiative and coincides with the system's $\$ 2$ billion capital campaign, which is set to close in 2025. It also underscored the extent to which research can be intermixed with funding for capital purposes, as it supports the construction of a modern cancer hospital while broadening access to breakthrough therapies, diagnostics and clinical trials. "We believe that this new gift will transform cancer care and expand access to life-saving breakthroughs, enhancing Mount Sinai's leadership in cancer treatment and research," said James, who is co-chairman of the system's boards of trustees.

Other major donors. Other prominent donors include Napster co-founder and former Facebook president Sean Parker, who launched the the Parker Institute for Cancer Immunotherapy with a \$250 million commitment; private equity billionaire Henry Kravis and his wife, Marie-Josée Kravis, who made two \$100 million gifts to MSK, earmarked for molecular oncology (2014) and the interconnected elements that contribute to the relapse of cancer (2022); businessman Richard J. Stephenson, who founded Gateway for Cancer Research, which has supported more than 170 clinical trials and funded over $\$ 85$ million in cancer research since 1991; Elon Musk and entrepreneur Jared Isaacman, who pledged $\$ 50$ million and $\$ 100$ million, respectively, to support the expansion of research programs at St. Jude Children's Research Hospital; the Massachusetts-based Hale Family, which
established the Hale Family Center for Pancreatic Cancer Research at the Dana-Farber Cancer Institute in 2016 and pledged an additional \$50 million in 2021; and billionaire entrepreneur Mike Repole, who, along with his wife Maria, move their philanthropy through their Nonna's Garden Foundation and gave $\$ 50$ million to establish the Nonna's Garden Foundation Initiative for Cancer Care and Research at MSK in 2021.

Beneath the top strata of these mega-wealthy donors is a broad, deep network of affluent individuals who are not billionaires but make gifts or commitments in the $\$ 10$ million to $\$ 50$ million range. They may not be household names, but they are the charitable backbone for most cancer research organizations.

## Funder Spotlight BREAK THROUGH CANCER

Break Through Cancer was established in 2021 with a \$250 million pledge from William and Alice Goodwin and their late son, Hunter's estate. In April 2021, it announced \$50 million in grants to support four "Team-Lab based" research projects related to ovarian cancer, pancreatic cancer, and glioblastoma. The Team Lab structure is a model of collaboration among research institutions aiming to overcome barriers to multi-institution teamwork, streamline systems, encourage data sharing, and reduce administrative burdens and policies on intellectual property and authorship.

Our analysis of gifts from the Chronicle of Philanthropy's Big Charitable Gifts database and Philanthropy News Digest's news feed generated 29 named donors, a majority of whom (62\%) do not appear to be billionaires based on publicly available
information. One donor, Mark Gleiberman, is the president and founder of the MG Properties Group, who, along with his wife, Hannah, gave the University of California at San Diego Health \$12 million to support programs at the Head and Neck Cancer Center at UC San Diego Health.

As noted in the "Who's Giving" section of this brief, major donors often channel support to cancer research organizations through donor-advised funds managed by financial services firms like Fidelity, Vanguard and Schwab, as well as community foundations. While donors will give to organizations they are familiar with, they may also ask DAF managers to recommend organizations that may be a good fit. IP encourages leaders at cancer research organizations to introduce their organizations to DAF fund managers at community foundations, which are more accessible than large financial services firms. If a DAF holder asks their fund manager for advice on which cancer research organizations are doing good work, the organization might get a mention.

The infusion of support from mega-donors for cancer research mirrors the growing gap between top-of-the-pyramid givers and less-affluent individuals across the broader philanthropic landscape. A 2022 report from the Institute for Policy Studies found that from 2000 to 2018, the proportion of households giving to charity decreased from 66\% to under 50\%. In 2019, households earning \$200,000 or more accounted for $67 \%$ of all charitable deductions, with "ultrawealthy" donors channeling support through their own private foundations and DAFs. A year later, for the first time, donations to DAFs were equal to contributions to private foundations, with both receiving roughly $\$ 48$ billion from donors.

These trends present two distinct challenges for fundraisers at cancer research organizations. First, it amplifies the importance of engaging high-networth donors. While development officers work diligently to engage with these individuals, many affluent donors are either inaccessible or give through opaque DAF providers. At the same time, the importance of large gifts can make it more difficult for development officers to engage lessaffluent and increasingly skeptical donors and prospects. "There's always that question for some folks, knowing that big dollars that can go into cancer research, of 'How does my small gift really make a difference?" said Savage of the Huntsman Cancer Foundation.

## Donor-Named Public Charities

Under IRS guidelines, every 501(c)(3) organization is classified as either a public charity or private foundation. Whereas private foundations are usually endowed by a single benefactor, steadily distribute $5 \%$ of assets annually to other charities and do not fundraise, public charities typically receive most of their support from the general public through fundraising activities or government sources.

Both types of organizations support cutting-edge research across the continuum of types outlined in the "Deeper Dive" section of this brief, with an eye toward filling gaps in government or corporate funding. Grantseekers will find that funders' level of accessibility varies by the institution, as some put out requests for proposals or have public applications, while others solicit proposals on an invite-only basis. Here are a handful of prominent public charities devoted to cancer research.

Based out of New York City, the Mark Foundation for Cancer Research was established in 2017 and
seeded by British billionaire Alexander Knaster, who made his fortune in investment management and hedge funds. Chief Executive Officer Ryan Schoenfeld, Ph.D., told IP that the foundation does not limit funding to any particular cancer type and focuses on projects largely in the translational research space "that are often too new, interdisciplinary, or unproven to receive funding from academic or government entities." Since 2017, the Mark Foundation has awarded more than $\$ 180$ million in grants. Research priority areas include metastasis, immuno-oncology, artificial intelligence, and drug discovery. In February of 2022, Knaster committed to funding an additional $\$ 500$ million to the foundation, bringing his total commitment to more than $\$ 650$ million in the foundation's first decade.

The V Foundation for Cancer Research, based in Cary, North Carolina, was founded by college basketball coach Jim Valvano, who passed away in 1993 from adenocarcinoma, a type of cancerous tumor that can occur in several parts of the body. In 2020, the foundation awarded $\$ 21$ million in research grants to domestic organizations, a figure

[^1]that accounted for $80 \%$ of total operational expenses. Since its formation in 1993, the V Foundation has awarded nearly $\$ 290$ million in cancer research grants nationwide. The foundation awards grants focused on fundamental (basic) or translational research, as well as projects that advance research processes such as clinical trial identification, outreach and enrollment. The foundation issues calls for proposals to NCIdesignated cancer centers.

The Damon Runyon Cancer Research Foundation in New York City is one of the country's largest funders of young scientists conducting high-risk, high-reward cancer research. The foundation views cancer research very broadly, "including the full spectrum of basic questions important to normal human biology and carcinogenesis, as well as development of new platforms and technologies." Since its founding in 1946, the foundation has awarded nearly $\$ 420$ million and funded over 3,900 scientists. The foundation's site includes its award programs and application guidelines for scientists.

Alex's Lemonade Stand Foundation (ALSF) was founded by Alexandra "Alex" Scott wholived in Pennsylvania and suffered from neuroblastoma, a rare form of childhood cancer. The foundation was started in 2005 by Alex's parents. In 2019, ALSF launched the Crazy 8 Initiative, a grant program designed to create roadmaps toward cures for specific, hard-to-treat childhood cancers. The foundation has funded six collaborative projects that span 21 institutions with a total commitment of $\$ 26$ million."Childhood cancer research remains underfunded from a federal level compared to adult cancers, so we are always trying to fill those gaps to provide kids opportunities for new treatments and cures they sorely need," Liz Scott, Alex's mother and ALSF co-executive director, told IP.

Founded in 1982, the Dallas-based Susan G. Komen has invested nearly $\$ 1.1$ billion in breast cancer research since its inception - more than any other nonprofit and second only to the U.S government, according to the foundation. In June 2022, the funder awarded more than $\$ 21.7$ million to 48 research grants, $79 \%$ of which were focused on aggressive breast cancers, metastasis, and breast cancer recurrence. Of the remaining funding, $33 \%$ supported clinical trials, and $20 \%$ supported research focused on eliminating breast cancer disparities. The funder's website includes a page listing current funding opportunities.

## Other Public Charities and Intermediaries

As noted in the "Who's Giving" section of this brief, some of the cancer research field's largest patient advocacy organizations are also extraordinarily prominent funding intermediaries. Examples include the American Cancer Society, Leukemia \& Lymphoma Society, National Breast Cancer Foundation, Pancreatic Cancer Action Network, and the American Lung Association.

The organizations listed in the subsection "DonorNamed Public Charities" would also be considered by many experts to be intermediaries. Intermediaries in any given field gather philanthropic resources from multiple entities and make grants according to their own criteria, with widely varying levels of input from the donor entities. That is certainly true of the funders detailed in that previous subsection.

The American Cancer Society has six research priority areas - etiology (causes of cancer), obesity/healthy eating and active living, screening and diagnosis, treatment, survivorship, and health equity. All of the society's research programs
include discovery research, which, as noted in the "Giving and Getting Deeper Dive" section of this brief, is another name for basic research. The society continually publishes requests for applications on its site.

The New York City-based Breast Cancer Research Foundation was founded in 1993 by Evelyn Lauder, an Austrian American businesswoman and wife of Leonard Lauder who, along with his brother Ronald, are the sole heirs to the Estée Lauder Companies cosmetics fortune. Its research focus areas include tumor biology, heredity and ethnicity, and metastasis. The foundation, which currently funds more than 250 researchers at leading academic and medical institutions across 14 countries, does not list open funding opportunities on its site.


Citing "industrial silos" as a major hindrance to progress in breast cancer researh, BCRF attempts to bridge the gap between scientists, research institutions, and disciplines. It supports "the entire spectrum of research from basic science...to clinical trials moving precision treatments from the lab to the bedside." BCRF recently awarded nearly $\$ 53$ million in grants to 255 investigators around the world. BCRF's corporate supporters including Estee Lauder, Ulta Beauty, Aveda, and Clinique.

The Prostate Cancer Foundation was established by financier and prostate cancer survivor Michael Milken and calls itself "the world's leading philanthropic organization dedicated to funding life-saving prostate cancer research." The foundation's research principles include identifying "the most promising research not being
funded" and recruiting "the best scientists to energize the field." In 2020, it awarded \$18.7 million in research grants. Since its inception in 1993, the foundation has raised more than $\$ 800$ million in support of cutting-edge research by more than 2,200 research projects in 22 countries. The foundation posts new open requests for applications and proposals on its site.

## Private Foundations

While there are a number of private and family foundations donating to cancer research, they have a relatively smaller footprint in the cancer research space. Most of the large "legacy" foundations primarily fund social issues rather than medical research. Nonetheless, there are a few private foundations that consistently support some cancer research, and they tend to be either health-focused foundations or foundations whose founder had a personal connection to a particular form of cancer.

The Gordon and Betty Moore Foundation was established by Intel co-founder Gordon E. Moore and his wife Betty I. Moore in 2000 to support scientific discovery, environmental conservation, and health issues. In recent years, the foundation, which has an endowment of approximately $\$ 8$ billion, has funded organizations like the Baylor College of Medicine and Northwestern University to support the development of clinical quality measures to improve the diagnosis of cancer.

The Robert Wood Johnson Foundation supports a variety of health-related organizations with a focus on transformative approaches that improve the nation's overall health and wellbeing. A search of its grants database reveals it disbursed $\$ 31$ million in cancer-related grants between 2018 and 2022. Of this amount, the foundation disbursed $\$ 2.1$ million in grants to researchers under the rubric of "Health

Leadership Development." It also earmarked a combined $\$ 10$ million for Disease Prevention and Health Promotion, or Health Disparities grants. For example, in 2021, it awarded $\$ 3.4$ million to the American Cancer Society for "embedding healthequity approaches" in the society's "mission priorities to reduce the unequal burdens of cancer outcomes."

## Inside Philanthropy

August 2020 Survey
"Donors should give funds to those they trust, with missions they support and then get out of the way. They should act more like equity investors and less like program managers. The key question a donor should ask is 'how can I be useful'."
-Foundation professional, Rockland, Maine
Research funding by the Doris Duke Charitable Foundation is mostly disease-agnostic - cancerrelated or otherwise - and conducted via open competitions of national grant programs that are open to clinical research in any disease area. Sindy Escobar Alvarez, the foundation's program director for medical research, told IP that "in terms of grantmaking dollars as of 2021, cancer research is the largest disease area of support." The foundation's support for cancer is largely for bloodrelated cancers, but also includes research of solid tumors such as breast, colon, prostate, lung, kidney, ovarian, brain and liver cancers.

The Starr Foundation was established in 1955 by insurance entrepreneur Cornelius Vander Starr. Since its inception, the foundation has made more than $\$ 3.8$ billion in grants in education, medicine and healthcare, and the environment, with a focus on organizations in New York City and New York State. In 2006, a gift from the Starr Foundation established the Starr Cancer Consortium, which is committed to advancing cancer research and includes five participating institutions, including

Weill Cornell Medicine and Rockefeller University. The foundation renewed its commitment consortium with a renewal grant of $\$ 50$ million over five years starting in 2019. In 2022, the foundation announced a $\$ 50$ million gift to Memorial Sloan Kettering Cancer Center for basic cancer research by establishing the Starr Foundation Program for Discovery Science.
"The most exciting days in cancer research are ahead of us, and we are proud to establish a program that lays the foundation for the breakthroughs of the future," said Starr Foundation's chair, Maurice Greenberg.

Operating out of offices in New York City and San Francisco, the Hearst Foundations' priority areas are education, arts and culture, public health, and mental health. A search of Hearst's online grants database revealed that it awarded $\$ 9$ million in

## Corporate Funder Spotlight

Northwestern Mutual ${ }^{\circ}$ Foundation

The Northwestern Mutual Foundation is the philanthropy arm of financial services firm Northwestern Mutual. Its Childhood Cancer Program supports children and families impacted by childhood cancer. Speaking to IP in 2020, Eric Christophersen, Northwestern Mutual Foundation president and vice president of strategic philanthropy and community relations, said that the decision to adopt childhood cancer as the national focus was based on impact. Research showed it to be one of the most consistently underfunded areas. Since 2012, Northwestern Mutual has donated over \$45 million to support families and survivors and has funded more than 520,000 hours of research with partners and other nonprofits.
cancer-related gifts from 2018 to 2022, although a majority of funding flowed toward non-research activities like patient care, capital expenses, and prevention. The foundation did, however, disburse a $\$ 1$ million gift to the V Foundation, earmarked for its restricted endowment to fund its operating expenses. It also provided support for the Providence Portland Medical Foundation's research in personalized cancer immunotherapy and the Translational Genomics Research Institute Foundation's pancreatic cancer research program.

## Corporate Funders

Corporate philanthropy for cancer research takes the form of grants, which flow from corporate foundations, or collaborative partnerships. Corporate funders typically approach philanthropy from a different vantage point than institutional grantmakers, community foundations and individual donors. "A lot of corporations have questions about 'what do you have in terms of programs that I can put my name and logo on now?' And that's just different than a private foundation," Ben Cameron, Jerome Foundation president and former manager of community relations at Target, told IP in 2021. "A private foundation isn't looking for market share. Corporations, though, have a bottom-line responsibility to shareholders."

A broad range of corporations provide support for cancer research. Examples include Hyundai Motor America, which awarded $\$ 31$ million in pediatric cancer research grants in 2021; Amazon, which is developing cancer vaccines in collaboration with the Fred Hutchinson Cancer Research Center; and health and pharmacy retail chain CVS, which pledged to contribute more than $\$ 25$ million over the next five years to the Leukemia \& Lymphoma Society and Susan G. Komen to fund research into
metastatic breast and pediatric blood cancers. Alternatively, companies partner with cancer research or advocacy organizations to sponsor fundraising events.

Pharmaceutical companies are a significant source of funding for cancer research organizations. In 2021, AbbVie Foundation, the charitable arm of AbbVie, a publicly traded biopharmaceutical company, gave a $\$ 10$ million grant to advance research initiatives at the University of Chicago Medicine Comprehensive Cancer Center. A year later, Royalty Pharma announced a five-year, \$1.5 million commitment to support the Leukemia \& Lymphoma Society's (LLS) Equity in Access Research program, which seeks to identify causes contributing to health disparities, and other related LLS initiatives.

Merck \& Co, Bristol-Myers Squibb, and Genentech are three charter funding sponsors of Stand Up to Cancer, a 501(c)(3) organization committed to developing promising cancer treatments. Wendy Blackburn, executive vice president at Intouch Solutions, called the partnerships "a smart move" by the participating companies.
"When pharmaceutical companies join these collaborative initiatives, it's a win for everyone," Blackburn said. "Instead of creating their own initiative, which can seem narrow and self-serving, they're demonstrating true altruism and perhaps helping bring treatments to market faster by supporting a cause already in motion. It's also a catalyst for companies to collaborate with a broader collection of organizations - to pool innovations, ideas and science - in ways not previously possible."

Other prominent givers from the pharmaceutical industry include the Centene Charitable

Foundation, the Pfizer Foundation, and the Lilly Foundation at Eli Lilly and Company.

Crowdfunding charitable gifts has become an increasingly common strategy among corporate funders looking to support nonprofits while strengthening their brand. Engage for Good's 2019 study, "America’s Charity Checkout Champions," found that charity checkout campaigns raised more than $\$ 486$ million in 2018 . Some critics question the effectiveness and transparency of these programs. Speaking to IP in 2022, Lucy Bernholz, a senior research scholar at Stanford University's Center on Philanthropy and Civil Society, said, "At the same time that philanthropy is talking about 'outcomes' and 'impact' and being able to trace your dollar to the number of lives saved, there's this boom in this highly intermediated, completely opaque process of giving money to CVS or Safeway."

Bernholz has been unable to determine how much money companies raise through customer crowdsourcing or how much flows to the intended charity. "What probably happens is that a company sets a budget for how much money they're going to give to a charity and they raise that money off the backs of customers, and when they hit their preset number, they give it," Bernholz said. "And as for the rest of it - who the hell knows?"

In a similar vein, breast cancer advocates have accused corporate brands of "pinkwashing" - a term to describe the commodification of breast cancer by applying the color to a product to appeal to a shopper's sense of activism. Speaking to Vox's Chavie Lieber, Gayle Sulik, a medical sociologist with the University at Albany and the author of "Pink Ribbon Blues," said, "The industry is completely unregulated, so anyone can make
products that are pink and say they are donating money to breast cancer, and no one is held accountable." Sulik believes that many corporate leaders have good intentions, "but in this industry, it's not about intentions; it's about following the money and seeing where it lands. I've seen companies get specific, like saying they are raising money for a specific research project or helping someone pay off their medical bills. But because of the ubiquity of this, people are not looking to see where the money is going."

## Community Foundations

Community foundations support cancer research organizations through discretionary grantmaking and donor-advised funds (DAF), which constitute the majority of funding.

The New York Community Trust, which had \$3.5 billion in total assets as of 2021, provides discretionary grants for cancer research. Recent recipients include the Albert Einstein College of Medicine, Cold Spring Harbor Laboratory, and New York Stem Cell Foundation, which has used the support to fund clinical trials in the city's first center for women with triple-negative breast cancer. Rather than support intermediaries or patient advocacy organizations, the trust funds institutions conducting the research.

Irfan Hasan, the trust's deputy vice president for grants, told IP that the common theme across its discretionary medical research grantmaking is "to help early and mid-career researchers start projects and gather data needed to apply for larger government or private grants and to primarily support research projects."

When it comes to DAF giving, the trust's DAF manager connects the donor with the philanthropic
advisory department. Based on the donor's goals and needs, the advisor provides "a simple list of vetted organizations, complete with their mission, programs, financial health and contact information," Hasan said. Trust staff also introduce donors to nonprofit executives, arrange site visits, and facilitate meetings between donors and grantees in its offices.

## Inside Philanthropy <br> August 2020 Survey

"Intermediary funding organizations (New Venture, Aspen, Women's Funding Network, etc.) tout their ability to expand reach or create efficiencies, but there is no real data to support these assertions. Ultimately, they are businesses, not philanthropies, and their primary concern is the client and renewing contracts, not the project or solving the problem."
-Fundraiser, Morgantown, West Virginia
Other community foundations that manage DAFs take a similar approach. As previously noted in the "Major Donors" section of this brief, IP advises fundraisers to reach out to their local community foundations to introduce the organization to DAF managers and discuss discretionary funding opportunities or potential partnerships.

With $\$ 11$ billion in total assets, the Silicon Valley Community Foundation (SVCF) is the country's largest community foundation. A review of publicly available information suggests it does not provide significant discretionary support to cancer research organizations. Previous cancer-related grantees include Latinas Contra Cancer, a San Josebased advocacy organization.

In April 2020, approximately $\$ 10$ billion of the SVCF's total assets sat in DAFs. A review of the foundation's Form 990 for the tax year ending December 2019 shows that donors gave at least
$\$ 95$ million to organizations that conduct cancer research, including CureSearch for Children's Cancer, Pancreatic Cancer Action Network, Memorial Sloan Kettering Cancer Center, Cancer Research Institute, the American Cancer Society (ACS), and the Parker Institute for Cancer Immunotherapy. This $\$ 95$ million figure comes with a caveat, as $96 \%$ of this amount was attributable to a $\$ 92$ million gift to the Parker Institute. (Like all DAF managers, the foundation is not required to disclose donor names or report grants under $\$ 5,000$.)

Similarly, a search of the Chicago Community Trust's database of discretionary grants did not generate any support for cancer research. However, an analysis of the trust's Form 990 for the fiscal year ending September 2020 revealed donoradvised grants to the MD Anderson Cancer Center, St. Jude Children's Research Hospital, and the ACS.

## Funder Spotlight <br> F!GHT <br> COLORECTAL CANCER

Fight Colorectal Cancer is an important funder in a field that is disproportionately underfunded, despite the fact that colorectal cancer is the second-leading cause of cancer-related deaths in the U.S., according to the American Cancer Society. In addition to funding grants and fellowships solely for colon and rectal cancer research, FCC trains researchers to become colorectal cancer advocates through its Research Advocacy Training and Support Program. Through this unique two-year program, research advocates learn about treatment, survivorship and palliative care before collaborating with experts at partner institutions.

## Funder Collaboratives and Associations

Funders also join forces with grantmakers and cancer centers to address gaps in research. However, these collaboratives constitute a relatively small part of the larger cancer research funding ecosystem. Notable funder collaboratives and selected corresponding partners include the Brain Tumor Funders' Collaborative (Sontag Foundation, James S. McDonnell Foundation, American Brain Tumor Association), the Cancer Stem Cell Consortium (American Cancer Society and the Lisa Dean Moseley Foundation), and the Fred Hutchinson/University of Washington Cancer Consortium (Fred Hutchinson Cancer Center, University of Washington, Seattle Children's, and the Seattle Cancer Care Alliance).

Friends of Cancer Research, which functions more like an association than a funding intermediary, is a nonprofit cancer research think tank and advocacy organization based in Washington, D.C. While the organization does not explicitly provide research funding, it spearheads public-private cancer research partnerships. Friends of Cancer Research partners include many of the field's most prominent funders, including the Melanoma Research Foundation, Stand Up to Cancer, and Prevent Cancer Foundation. The organization also hosts annual meetings addressing issues surrounding the development and regulation of cancer drugs and therapies.

Another organization that operates somewhat like an association, the Milken Institute's FasterCures, is dedicated to lowering the barriers to medical innovation and helping funders maximize their philanthropic impact. FasterCures does not provide funding, and while its primary audience is
executives at medical research foundations, development officers can leverage these findings to engage donors more effectively. FasterCures provides white papers, podcasts and videos with medical experts, and policy issue briefs like " A Call to Action for Diversity in Clinical Trials." FasterCures is also home to a handful of affinity networks composed of leaders at medical research foundations. One such group, the Research Acceleration and Improvement Network, consists of foundations interested in the venture philanthropy approach to medical research.

The National Association of Cancer Center Development Professionals (NACCDO) is a cooperative venture of comprehensive, clinical, basic and consortium cancer centers designated by the NCI, or that have investigators that receive NCI grant funds. The network seeks to share information and resources among the development programs of the cancer centers and to address critical development issues. Member benefits include research, conferences, a mentorship program, and webinars like "Big Data and Grateful Family Donor" and "The Ghost in the Pipeline: Restarting the Dialogue with Prospective Donors Who 'Go Dark.'" The NACCDO also has 13 affinity groups focused on issues like major and principal gifts, planned giving, and research centers.

IP encourages development officers to connect with cancer-related giving circles by contacting their local community foundation or searching Giving Compass' Giving Circle Directory.

## Research Institution Spotlight <br> \& CSH \& Cold Spring Harbor Laboratory

Cold Spring Harbor Laboratory is an NCI-
designated Cancer Center and basic research
institution that has been around since 1890. In
2021, its annual research budget was \$125
million with $48 \%$ of that funding going toward cancer research. Cold Spring Harbor's Cancer Center focuses on "exploring the fundamental biology of human cancer." Its research covers a broad range of cancer types, including but not limited to breast, prostate, leukemia, glioma, pancreatic, sarcoma, lung, and melanoma. The Cancer Center has received funding from NCI since 1987.

## An Analysis of Opportunities \& Challenges

Speaking to IP, David Vaught, the senior manager of research grants at Susan B. Komen, said that "donors look for return on the investments, so a best practice is to have a robust evaluation system to track the products or discoveries associated with awarded grants. Tracking the outcomes from discoveries or research products can demonstrate the incremental but meaningful progress of research."

Patient advocacy organizations, many of which are the cancer research ecosystem's largest funders, also grapple with this challenge of making the case to donors. The Leukemia \& Lymphoma Society's "Giving Promise" equips fundraisers with the society's eight strategic priorities, which include focusing on disease, treatment, and long-term outcomes research, and its "Dare to Dream" initiative which accelerates research and treatment for childhood blood cancers. "For each mission priority, we indicate the issue at hand and clearly articulate how LLS is taking action to address it," Troy Dunmire, the society's chief operating officer, told IP. "We also indicate what our work entails, how our constituents can help move forward through the support of the key programs within it."

Regardless of the cancer field in question, foundation leaders encourage development officers at research organizations to operate in a collaborative and transparent manner. Susan G. Komen's Vaught said that fundraisers must "involve stakeholders, leaders in the field and most importantly, patients and caregivers when developing a cancer research program." In a similar vein, Breast Cancer Research Foundation Chief Scientific Officer Dorraya EL-Ashry, Ph.D., said,
"It's important to remember to elevate the human aspect of the investigators - not just highlighting the wins, but their ability to navigate unforeseen challenges or change course to maximize the impact of research."

## Closing Racial Representation Gaps in

 Clinical Trials. The "Perspectives on Equity" section of this brief examined how insufficient racial and ethnic representation in clinical trials leads to adverse health outcomes for affected populations. Cara Altimus, Ph.D., senior director at the Milken Institute Center for Strategic Philanthropy, told IP that donors should "prioritize seeking out and investing in diverse, multidisciplinary research teams, working to ensure clinical trials are inclusive and treatments are affordable."Funders looking to move the needle on this issue are pulling from an emerging playbook that focuses on partnering with organizations to educate and build trust with individuals in underrepresented communities, as well as partnering with historically black colleges and universities (HBCUs).

Stand Up to Cancer (SU2C) is a charitable program of the Entertainment Industry Foundation that funds translational cancer research through online and televised efforts. In 2020, it launched its Health Equity Initiative, which requires all future SU2Csupported research grant proposals to address the recruitment and retention of BIPOC patients in cancer clinical trials.

A year later, SU2C awarded $\$ 6$ million to a team of researchers tasked with addressing the low
participation rates of BIPOC individuals in clinical trials in three cancer types that disproportionately affect racial and ethnic minority groups - breast, prostate and liver cancers. The funding was provided by the San Francisco-based Genentech, a member of the Swiss multinational healthcare company Roche Group, and will enable researchers to work with community organizations by raising awareness around cancer research, train scientists to better understand how circumstances affect the health of certain communities, and create a digital system to link patients with clinical trials in the New York City area.

In June 2022, pharmaceutical giant Novartis and the Novartis US Foundation provided grants totaling \$17.7 million over 10 years to co-create clinical trial centers of excellence at three historically Black medical colleges. The support was part of the company's Beacon of Hope initiative, a collaboration launched the previous year with 26 HBCUs and historically Black medical schools, the Thurgood Marshall College Fund, and other organizations to co-create programs that address the root causes of disparities in health and education.

## Bringing Cancer Screenings Back to Pre-

Pandemic Levels. Even before COVID-19, "funding for research focused on prevention screening or early detection has lagged other
research areas," Michael Neal, American Cancer Society's chief of organizational advancement, told IP. The pandemic should further incentivize grantmakers to address this critical funding gap.

In July 2022, JAMA Oncology published a study citing significant decreases in the number of screenings for breast, colorectal and cervical cancers during the early phase of COVID-19. The findings corroborate research from the NCI, which found an estimated 9.4 million screening tests that normally would have taken place in the United States in 2020 didn't happen. The NCI notes that "these missed screenings, many experts worry, could potentially lead to cancers being diagnosed at a more advanced stage and, ultimately, to more people dying from cancer."

It is incumbent upon philanthropists to support research and related efforts to incentivize individuals to get screened. One such initiative is the Return-to-Screening study, a collaboration between the American Cancer Society (ACS) and the American College of Surgeons that helps cancer facilities implement a broad range of strategies to bring their screening rates back up to their prepandemic levels.

While screenings help doctors proactively identify and treat cancer, Managed Healthcare Executive magazine notes that $70 \%$ of incident cancers

## Initiative Spotlight

In 2021, the American Cancer Society launched the Return to Screening initiative encouraging patients to obtain appropriate cancer screenings and follow-up care. Supported by founding sponsor Genentech, the multi-sector, national initiative aims to bring screening rates for breast, cervical, colorectal, and lung cancer back to pre-pandemic levels and supports the development of resources to improve cancer screening rates in under resourced and underserved communities.
currently have no routine tests to detect the disease in its early stages. This presents an enormous opportunity for funders, especially for highly deadly cancer types like pancreatic cancer, where $74 \%$ of patients die within a year of diagnosis. Giving Compass, the Seattle-based donor advisory group, argues that genetic testing and breath analysis are two areas where the pancreatic cancer field could benefit from increased philanthropic support. Another promising technology is what Fast Company called the "holy grail of medicine" for oncologists - liquid biopsy blood tests that can allow doctors to screen for multiple cancers.

## Recipient Spotlight



PennMedicine
Abramson Cancer Center

## The Abramson Cancer Center (ACC) at the

University of Pennsylvania is named after the Abramson family. Leonard Abramson was the founder and CEO of U.S. Healthcare which sold to Aetna for $\$ 8.6$ billion in 1996. Madlyn Abramson, a cancer survivor, passed away in 2020. As of April 2022, the family has given more than $\$ 163$ million to the ACC, which has maintained its designation as a Comprehensive Cancer Center by the NCI since 1973.

## Ramping Up Support for Prevention

Research. A report by the ACS titled "Cancer Statistics, 2022" found that at least $42 \%$ of the projected new cancers are potentially avoidable. This includes $19 \%$ of cancers caused by smoking and at least $18 \%$ caused by a combination of excess body weight, drinking alcohol, poor nutrition and physical inactivity.

Speaking to IP, EL-Ashry of the Breast Cancer Research Foundation (BCRF) called "preventing the disease from ever occurring in the first place" one of the "most pressing challenges" facing the breast
cancer research field. Similarly, Alvarez of the Doris Duke Charitable Foundation told IP that "there are other aspects of the disease that also need attention - for example, how to prevent different forms of cancer."

Public health experts agree."We have made far less progress preventing cancer than preventing its predecessor scourges" like infections and heart disease, says Madeline Drexler, a visiting scientist at the Harvard T.H. Chan School of Public Health. Drexler cites a handful of reasons for this failure, such as the fact that "the final phases of research on treatment are simpler than research on prevention" and, for pharmaceutical companies, "treatments earn far higher profits than do new diagnostics or prevention measures."

To be clear, many funders do provide support for cancer prevention research, including the BCRF, DDCF, the ACS, Prevent Cancer Foundation, and the American Institute for Cancer Research. Researchers at the University of Texas MD Anderson Cancer Center explore ways to reduce an individual's risk of getting cancer and translate those findings into advances in clinical care and recommendations to the community. In 2019, a gift from an anonymous donor family helped launch the Zhu Family Center for Global Prevention at the Harvard H.T. Chan School of Public Health. The center's mission is to generate research aimed at preventing people from getting cancer, improving early detection, and educating the public. The center also offers funding opportunities to train the next generation of prevention and early detection researchers.
"With further research, we envision that cancer death rates could be reduced by $70 \%$ around the world, even without the development of any new
therapies," wrote the authors of a 2018 study in Science - but only "if research priorities are changed." The authors specifically called for increased investment in molecular, behavioral and policy research on prevention.

Arguably the most alarming trend in the cancer field is the rise in obesity, which is linked to at least 13 types of cancer and could reverse the downward trend in cancer incidence driven by the decline in smoking. "Obesity," says Harvard's Drexler, "could soon become the No. 1 risk factor for cancer in the United States and eventually around the world."

Patient advocacy organizations frequently take the lead in educating individuals on the link between cancer and obesity while promoting exercise and a healthy diet. Research funders have also sought to broaden the body of research in this area. In 2018, the American Association for Cancer Research held a conference exploring the connection between obesity and cancer. With grant support from the Lustgarten Foundation and other funders, Harvard Medical School investigators identified how obesity can increase the likelihood of pancreatic and breast cancer. And in 2021, the Damon Runyon Cancer Research Foundation bankrolled research aimed at identifying new approaches for the prevention and treatment of pancreatic cancer and other obesityassociated cancers.

Looking ahead, however, funders will need to do a lot more. Approximately $39.5 \%$ of American adults are considered obese and $32 \%$ are overweight. "Given obesity’s seeming irreversibility, thwarting cancer's concomitant rise will be exceedingly difficult," Harvard's Drexel said.

August 2020 Survey
"Historically, philanthropy has moved where there is urgency and opportunity for problem-solving. This is one of those moments in time. However, individuals will always give where they have a personal mission and to have an impact."

- Fundraiser, United States


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## Thank You

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## Feedback?

The State of American Philanthropy is an ongoing project. Each SAP brief will be updated periodically to integrate new information, additional data and evolving perspectives. This brief was originally posted to Inside Philanthropy in December 2022. It has not yet been updated. If you have comments or information you'd like to share with us, please email us at managingeditor@insidephilanthropy.com.


[^0]:    The late Paul Allen's \$20 million bequest to
    Swedish Health Services helped establish the Paul G. Allen Research Center at the Swedish Cancer Institute (SCI). SCI focuses its research on the molecular and genomic evaluation of cancer, has a center for immuno-oncology, and a program for cancer prevention and early detection. The Norcliffe and Ben and Catherine Ivy foundations, as well as, the Fred Hutchinson Cancer Center are among Swedish Health's supporters

[^1]:    Progam Spotlight NORTHWESTERN MUTUAL CHILDHOOD CANCER PROGRAM

    The Northwestern Mutual Childhood Cancer program has three components: accelerating research, family support, and survivorship. Northwestern partnered with Alex's Lemonade Stand Foundation (ALSF) to create the Young Investigator grant program that funds scientific collaboration among leading pediatric oncology researchers. In July of 2022, it committed \$2 million to the ALSF's Crazy 8 Initiative, which aims to bring researchers to accelerate the pace of new cure discovery.

