

2020

Cancer Research Stewardship Report



#FINISHCANCER

 **PROVIDENCE**
Foundations of Oregon

From the Director

Dear friends,

Recently, I presented the year-in-review to the Robert W. Franz Cancer Center Leadership Cabinet. As I was sharing our accomplishments and progress in 2020, I was again reminded of the critical role you and donors like you play in this work each year. And what struck me the most was that your support had not wavered despite the pandemic. Your contributions in support of research not only allowed us to continue our pursuit to finish cancer, but supported our pivot to engage in COVID-19 research as well.

With your generous support, more than \$11 million was raised last year toward cancer research and COVID-19 research efforts. I am deeply humbled and extremely grateful for your support. Here and in the ensuing pages are just a few of the accomplishments your support has helped to bring about.

- We've grown our team!
 - Matthew Taylor, M.D., joined us in December 2019. He is working with Brendan Curti, M.D., in our melanoma and biotherapy programs on developing new clinical trials, and working with Bryan Bell, M.D., D.D.S., FACS, to build a thyroid cancer program in addition to his own laboratory research on Fas ligand (page 5).
 - Sasha Stanton, M.D., Ph.D., joined the institute in January 2020 and is seeing breast cancer patients in the clinic as well as researching prevention strategies, including vaccines for breast cancer and one with Dr. Bell that would prevent early premalignant lesions of the lip, tongue and mouth from becoming malignant (head and neck cancers).
 - Christopher "Topher" Darus, M.D., was named the inaugural medical director of our new gynecologic cancer program.
 - Rebecca Armendariz, M.D., joined Providence as our new medical director of oncology palliative care.
 - We also recruited Daniel Guy, M.D., a specialist in hematologic malignancies with interest in CAR-T cell therapy and blood cancers, like leukemia and lymphoma.
- The clinical trials team more than doubled the number of trial patients compared to 2019. This vast increase was due to the recruitment of more than 200 patients with COVID-19 to clinical trials.
- Bernie Fox, Ph.D., launched a first-in-human COVID-19 vaccine trial for which we are anticipating preliminary results in early May. Dr. Fox's findings may be important for patients who don't respond



Walter J. Urba, M.D., Ph.D.
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well to the vaccines currently available under Emergency Use Authorization. He is also working on another clinical trial involving a triplet of immunotherapy drugs, including a homegrown vaccine for women with triple-negative breast cancer.

- Carlo Bifulco, M.D., is working with Brian Piening, Ph.D., to lead research on identifying the genetics of each patient's tumor and understanding how these changes in the DNA of the tumor will help clinicians personalize therapy for their patients. Brady Bernard, Ph.D., and his bioinformatics team are critical to this work and the research of many other labs at the EACRI.
- Research led by Eric Tran, Ph.D., about adoptive cellular therapy (where because patients cannot make their own immune response to the tumor we develop one for them) was a focus in 2020 and will continue into 2021 and beyond.
- The MR-Linac machine, which was funded through philanthropy, is now being used by our radiation oncology team, led by Kristina Young, M.D., Ph.D., to treat patients with a variety of malignancies more safely.
- The Head and Neck Cancer Research Fund was established last year, and our first internal fellows award program for head and neck cancer projects was launched. Six of our scientists are focusing part of their research on this cancer that has reached epidemic proportions.
- In December, the Michael Kelley Endowed Chair for Cancer Research was established (page 6). The first recipient is Marka Crittenden, M.D., Ph.D., EACRI faculty member and the radiation oncologist who served on Mike's care team. Dr. Crittenden says this endowment will enable more research and training to improve the lives of our cancer patients.

There are many things I look forward to in 2021 and beyond, but the single most important driver of these past accomplishments – and lying straight ahead of us – is finishing cancer. Thank you for believing in our team and supporting this cause.

Gratefully yours,

Walter J. Urba, M.D., Ph.D.

*Director and Endowed Chair, Earle A. Chiles Research Institute
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Alison Conlin, M.D., pictured here with David Page, M.D., oversees a vast portfolio of cancer clinical trials and serves as principal investigator of two new studies.

New studies aim to improve treatments for advanced breast cancer

Advancements in treatment and early detection have improved survival for women diagnosed with breast cancer. For patients with locally advanced or metastatic breast cancer, better therapies are needed. Medical oncologist Alison Conlin, M.D., MPH, oversees a vast portfolio of cancer clinical trials and serves as principal investigator of two new studies at Providence Cancer Institute that seek to improve treatment options for patients with advanced breast cancer:

1. A Study of Tucatinib Plus Trastuzumab Deruxtecan in HER2+ Breast Cancer (HER2CLIMB-04):

The HER2CLIMB-04 phase II, single-arm study will evaluate the effectiveness of tucatinib (Tukysa) when given with trastuzumab deruxtecan (Enhertu) in patients with metastatic or unresectable HER2-positive breast cancer whose disease progressed on prior therapies. Tucatinib is a HER2 inhibitor, and trastuzumab deruxtecan is an antibody-drug conjugate. Both therapies are approved for HER2-positive breast cancer after prior studies found clinical benefit.

2. A Study Evaluating the Efficacy and Safety of GDC-0077 plus Palbociclib and Fulvestrant versus Placebo plus Palbociclib and Fulvestrant in PIK3CA-Mutant, HR+, HER2- Advanced Breast Cancer:

This phase III, randomized, double-blind study tests the effectiveness of GDC-0077, an experimental PI3K inhibitor, compared to placebo in patients with HER2-negative locally advanced or metastatic breast cancer that contains hormone receptors and the PIK3CA gene mutation. Both GDC-0077 and placebo will be given in combination with standard-of-care palbociclib (Ibrance) and fulvestrant (Falsodex).

Studies like these are made possible by philanthropic support.

Providence Head and Neck Cancer Surgeons Use New Transoral Robotic Technology to Improve Surgical Outcomes

Providence Portland Medical Center is one of only a few hospitals in the United States equipped with the DaVinci SP (single port) robot. Our head and neck surgeons are using this new technology to personalize treatment, lessen radiation or chemotherapy, and protect taste and swallowing in cancer patients.

“The flexible arms and high-resolution camera on the new SP robot will allow for expanded indications to safely remove cancers from the back of the throat in a minimally invasive manner that optimizes functional outcomes,” says Bryan Bell, M.D., D.D.S., medical director, Providence Head and Neck Cancer Program.

In 2011, Dr. Bell was one of the first surgeons in the world to begin using transoral robotic surgery (TORS) to treat head and neck cancer. Ashish Patel, M.D., also an accomplished robotic surgeon, has since joined Providence Cancer Institute as a member of the head and neck surgical team. TORS is minimally invasive and offers personalized treatment for each patient. For many patients, TORS eliminates the need for radiation or chemotherapy. Even if radiation is recommended after TORS, the dose is usually much less, which protects the patient’s ability to taste and swallow.

Recently members of the Providence Head and Neck Cancer Program published a paper in the Oral Oncology Journal on their experience with TORS and risk adapted adjuvant therapy. Important findings of this research study, funded in large part through philanthropy, included:

- The **5-year survival rate is 91%** for patients with human papilloma virus-related oropharynx cancer.
- Since 2015, **more than 80% of patients** did not need chemotherapy.



The DaVinci SP robot is used to personalize treatment for oral cancer patients.

Clinical trials

Many patients in the Providence study were also treated on a National Institutes of Health-funded clinical trial, ECOG 3311. This was a randomized trial of de-escalated radiation following TORS for intermediate-risk HPV-positive oropharyngeal cancer. Results of this trial were presented at the American Association of Clinical Oncology 2020 Virtual Scientific Program.

Providence researchers have opened a clinical trial involving radiation plus an immunotherapy called nivolumab to improve treatment outcomes. Nivolumab boosts the immune system response in patients with cancer and has been shown to improve survival for patients with head and neck cancer. This trial, open at only a few sites in the world, provides a new approach for the body’s own immune system to eliminate cancer cells after surgery and low-dose radiation.

New Michael Kelley Endowed Chair in Cancer Research

Providence Cancer Institute's Marka Crittenden, M.D., Ph.D., has been named the recipient of the Michael Kelley Endowed Chair for Cancer Research. Michael "Mike" Kelley died in October 2020 after a 22-month battle with stage IV head and neck cancer. Mike's wife, Laurie Kelley, the chief philanthropy officer for Providence, and his family and friends wanted to honor his memory by supporting further research at Providence Cancer Institute where he received his care.

Mike was a community leader and volunteer; a successful attorney at the law firm Haglund Kelley; and a long-time supporter of non-profit organizations and Catholic high school education and sports. He was also a father of four and grandfather of three. When Mike got his diagnosis on Christmas Eve in 2018, the Kelleys turned to world-class experts at Providence Cancer Institute. Like thousands of patients cared for by Providence, Mike's doctors suggested he participate in clinical trials searching for new treatments, specifically in the area of immunotherapy. This newly endowed chair in his name will guarantee new research that will push the boundaries in Providence's focus on immunotherapy.

The \$2 million endowed chair was funded by gifts of \$1 million each from Mark and Kathy Parker and from Darlene Shiley. Kathy is a community volunteer, and Mark is executive chairman and former president and CEO of Nike. Darlene is president of The Shiley Foundation and a long-time patron of the arts, medical research and education.

"It is generous donors like Mark, Kathy and Darlene who believe in our commitment to finish cancer and who are moved by Mike's courageous fight that will help us find cures and treatments," said Walter J. Urba, M.D., Ph.D., director of cancer research, Earle A. Chiles Research Institute, and chief medical officer, Robert W. Franz Cancer Center at Providence Cancer Institute. "Cancer is a disease that touches all of us, and gifts like these help fund cancer research and improve cancer care."

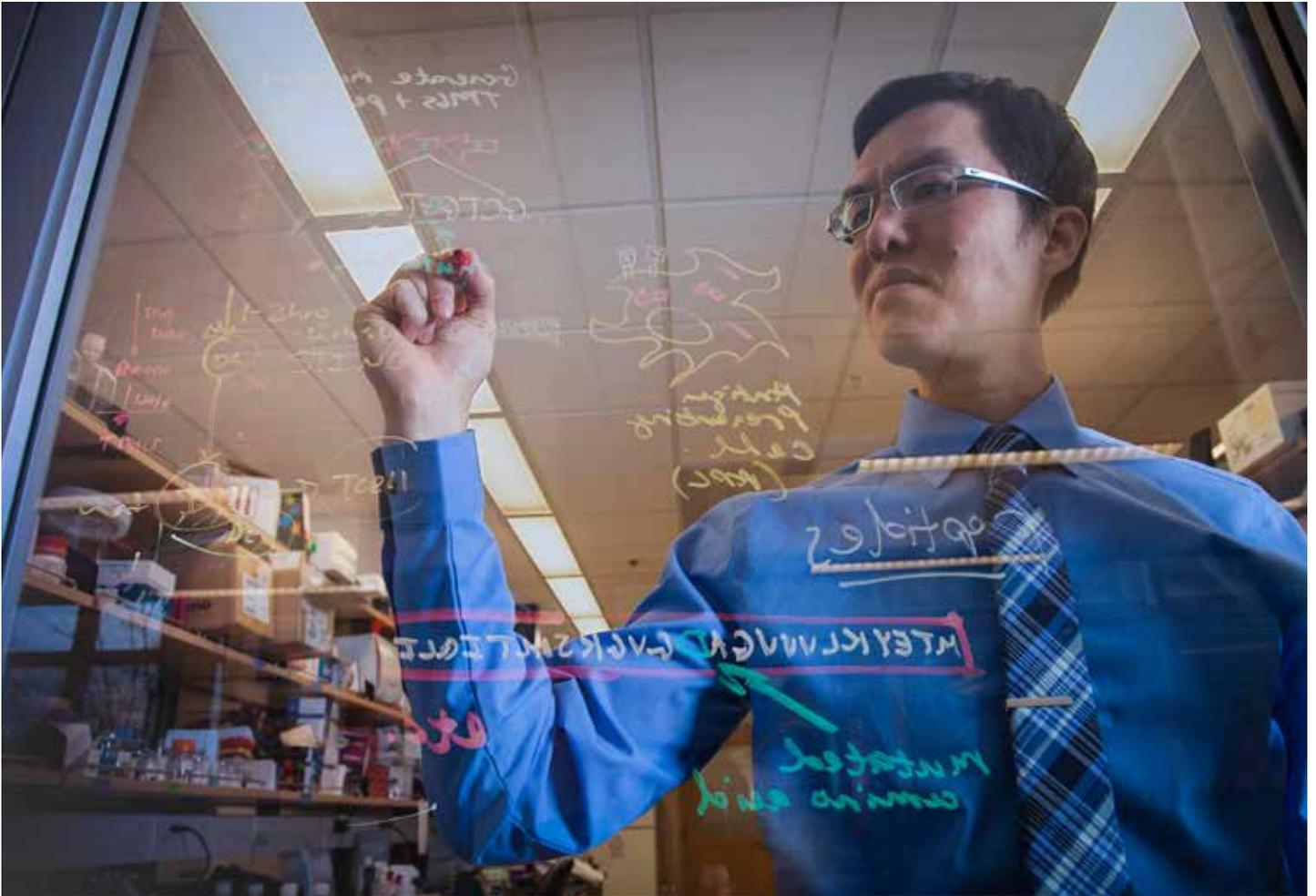


Marka Crittenden, M.D., Ph.D., is the inaugural recipient of the Michael Kelley Endowed Chair for Cancer Research.

Endowed chairs enable research institutes to recruit and retain the best scientist leaders. The endowment will allow Dr. Crittenden and her team to hire additional scientists, conduct leading-edge cancer research and provide new treatments for patients with cancer.

"This also will allow us to teach the techniques we learn here to people all over the world," said Dr. Crittenden. "They will go back to their own countries, back to their own universities, back to their own communities and really broaden the impact of our research."

Although the initial phase of the endowed chair has been funded, Providence Foundations of Oregon continues to seek additional support to further the important work of this endowed chair.



Eric Tran, Ph.D., assistant member, Antitumor T-Cell Response Laboratory, is the inaugural recipient of the Dr. Steven A. Rosenberg, M.D., Ph.D., Scholars Award. The two-year fellowship award was decided by a distinguished review committee of the Society for Immunotherapy of Cancer leadership to support Dr. Tran's important work to advance the field of cancer immunotherapy and continue Dr. Rosenberg's legacy.

Conferences go virtual in 2020

Researchers at Earle A. Chiles Research Institute, a division of Providence Cancer Institute in Portland, Oregon, joined cancer immunotherapy professionals around the world for virtual conferences in 2020. It was the first time each conference was online only.

SITC 2020

The reimagined 35th annual meeting of the Society for Immunotherapy of Cancer included the most recent advances in tumor immunology and cancer immunotherapy, cutting-edge clinical trials research presented by experts in the field, oral and poster abstract presentations, and networking opportunities.

Our team of immunologists and physician researchers received several notable awards. Eric Tran, Ph.D., assistant member, Antitumor T-Cell Response Laboratory, was announced as the inaugural recipient of the Dr. Steven A. Rosenberg, M.D., Ph.D., Scholars Award. Dr. Tran joined our institute after completing a postdoctoral fellowship with Dr. Rosenberg at the NCI Surgery Branch where he studied adoptive cellular therapy.

The award for Extraordinary Service to the Society was given to Bernard A. Fox, Ph.D., Harder Family Chair and member, Molecular and Tumor Immunology Laboratory, for his many years of leadership and dedication. Among his numerous roles of service to the society, Dr. Fox is a SITC past-president, and chair of the World Immunotherapy Council.

Our institute was presented with the SITC Team Science Award for fostering success in the field of cancer immunotherapy through long-standing and continued collaborative contributions of energy, activity and intellect by team members. We are honored to receive this recognition, which reflects our steadfast commitment to improving patient outcomes through cancer immunotherapy, none of which has been possible without your generous support.



2020 ASCO

The 2020 ASCO Virtual Scientific Program featured over 250 oral abstract presentations and 2,500 poster presentations in 24 disease-based and specialty tracks.

The Providence team presented more than 20 abstracts, reflecting our breadth of investigation to advance cancer science and medicine. Highlights included oral presentations and discussion at sessions for Developmental Therapeutics, Head and Neck Cancer, Symptoms and Survivorship, and a clinical science symposium on Drug Development for Rare Mutations.

Rachel E. Sanborn, M.D., associate member and director, Phase I Clinical Trials Program and co-director of the Providence Thoracic Oncology Program, was an invited discussant for the oral abstract session on Lung Cancer – Non-Small Cancer Metastatic where she presented “Maximizing the Benefits of (EGFR) Targeted Therapies.”



Rachel E. Sanborn, M.D., associate member and co-director of the Providence Thoracic Oncology Program, presents a poster at ASCO.

ESMO 2020

ESMO Virtual Congress 2020 is the annual meeting of the European Society for Medical Oncology. Promising new developments aimed at improving cancer patient care were presented.

Several abstracts with contributions by investigators at Earle A. Chiles Research Institute were selected for presentation at the conference. Lung cancer and early-phase immunotherapy research by Rachel E. Sanborn, M.D., are highlighted in various abstracts, and a pilot study in head and neck cancer featured contributions by Rom S. Leidner, M.D., co-director, Providence Head and Neck Cancer Clinic.

We are deeply grateful to the patients, donors, community organizations and industry partners who have supported our pursuit to finish cancer.

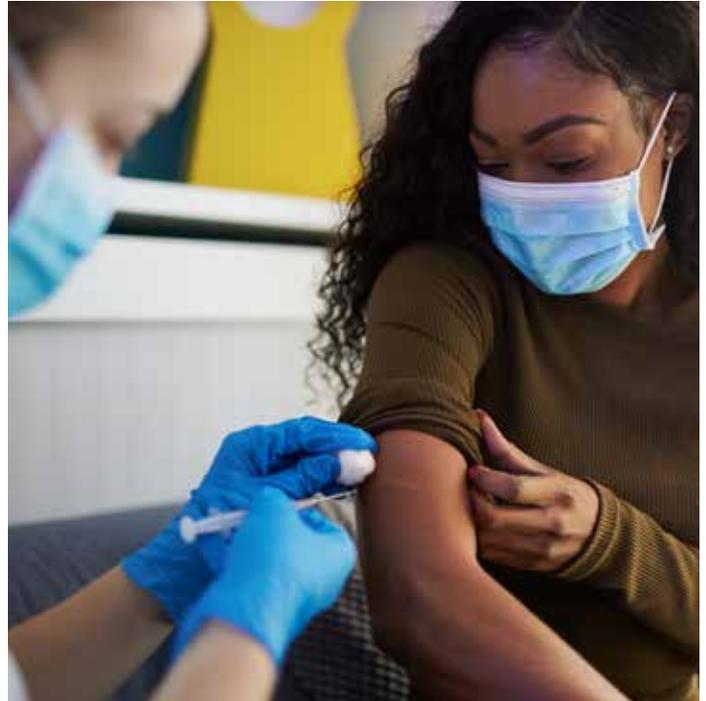
COVID-19 Vaccine

Scientists at Earle A. Chiles Research Institute have spent three decades singularly focused on immunotherapy and cancer vaccines. In mid-March 2020 they turned their expertise and knowledge to the COVID-19 fight and began developing a vaccine against SARS-CoV-2.

In October, the FDA approved Providence researchers to begin a first-in-human clinical trial of a vaccine for protection against COVID-19. The Providence vaccine is unique in that it incorporates immunotherapy expertise, which scientists have developed over 30 years at the institute.

The important innovation in the phase I clinical trial is that it includes a combination of “spike” protein DNA vaccine and immune-boosting interleukin 12 (IL-12) plasmid, which may promote a more effective two-pronged immune response. Providence scientists have shown that IL-12 can boost the immune response in preclinical cancer studies.

Led by co-investigators Bernard Fox, Ph.D., and Rom Leidner, M.D., the goal of the study is to learn if IL-12 will help the older population respond better with the vaccine lasting longer and creating more memory cells; and in the younger population, to see if it helps turn on the cells that become memory cells.



Providence is the only research facility using this two-pronged approach in the cancer setting to respond to COVID-19. The knowledge gained from their studies may help inform the global COVID-19 research efforts, including future COVID-19 studies.

This trial is only possible because of the generosity of donors.

Clinical Trials Statistics 2020

Providence Cancer Institute is a leader in cancer immunotherapy and personalized medicine. Through our world-renowned Earle A. Chiles Research Institute, we have more than 150 research studies open for enrollment, including early phase clinical trials and novel combination therapy approaches. The following activity was made possible in part by your philanthropic support:

- 75 newly opened trials
- 225 total trials opened
- 1,458 enrollments to oncology studies
 - 242 enrollments were to therapeutic trials (studies of new cancer treatments).
 - 922 were to the Lung Cancer Screening program.

In addition to the 1,458 oncology enrollments, our team also had 280 enrollments to COVID-19 studies.





Building a Rapid Precision Oncology Program

Last summer, the MJ Murdock Charitable Trust offered a 1:1 matching grant if Providence Portland Medical Foundation could raise \$245,000 to build out a Rapid Precision Immuno-Oncology Program. Thanks to several generous donors, including the HEDCO Foundation and the Hitchman Foundation, we met the match in record time.

This program requires highly specialized and expensive equipment. The Digital Spatial Profiler, Fluorescence Microscope and CODEX have all been purchased, installed and tested. Thirty full-time staff members at EACRI have been trained on the equipment. In addition, one individual has been identified to focus solely on operating and coordinating use of the machines.

We continue to seek funding for this program, including grants for research projects using the new equipment.

One research proposal uses the entire equipment suite to help the research team determine which cancer patients did or did not respond well to immunotherapy. Using the new equipment, researchers will be able to look inside and around tumors to determine biomarkers associated with both the positive and negative responses. This research proposal has been submitted for a grant from the American Cancer Society.

This equipment has the potential for providing better diagnostics in a very short amount of time. Researchers will be better able to predict who will respond well to certain types of immunotherapy.

Thank you. Your generous philanthropic support propels us closer to finishing cancer.

For more information contact:

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OUR MISSION

As expressions of God's healing love, witnessed through the ministry of Jesus, we are steadfast in serving all, especially those who are poor and vulnerable.

OUR VALUES

Compassion, Dignity, Justice,
Excellence, Integrity

ProvidenceFoundations.org

