

OHSU KNIGHT CANCER INSTITUTE

A collaboration of science and medicine

Brenden-Colson Center for Pancreatic Care



Continual collaboration.
Rapid translation.
Multidisciplinary team.

Integrated approach

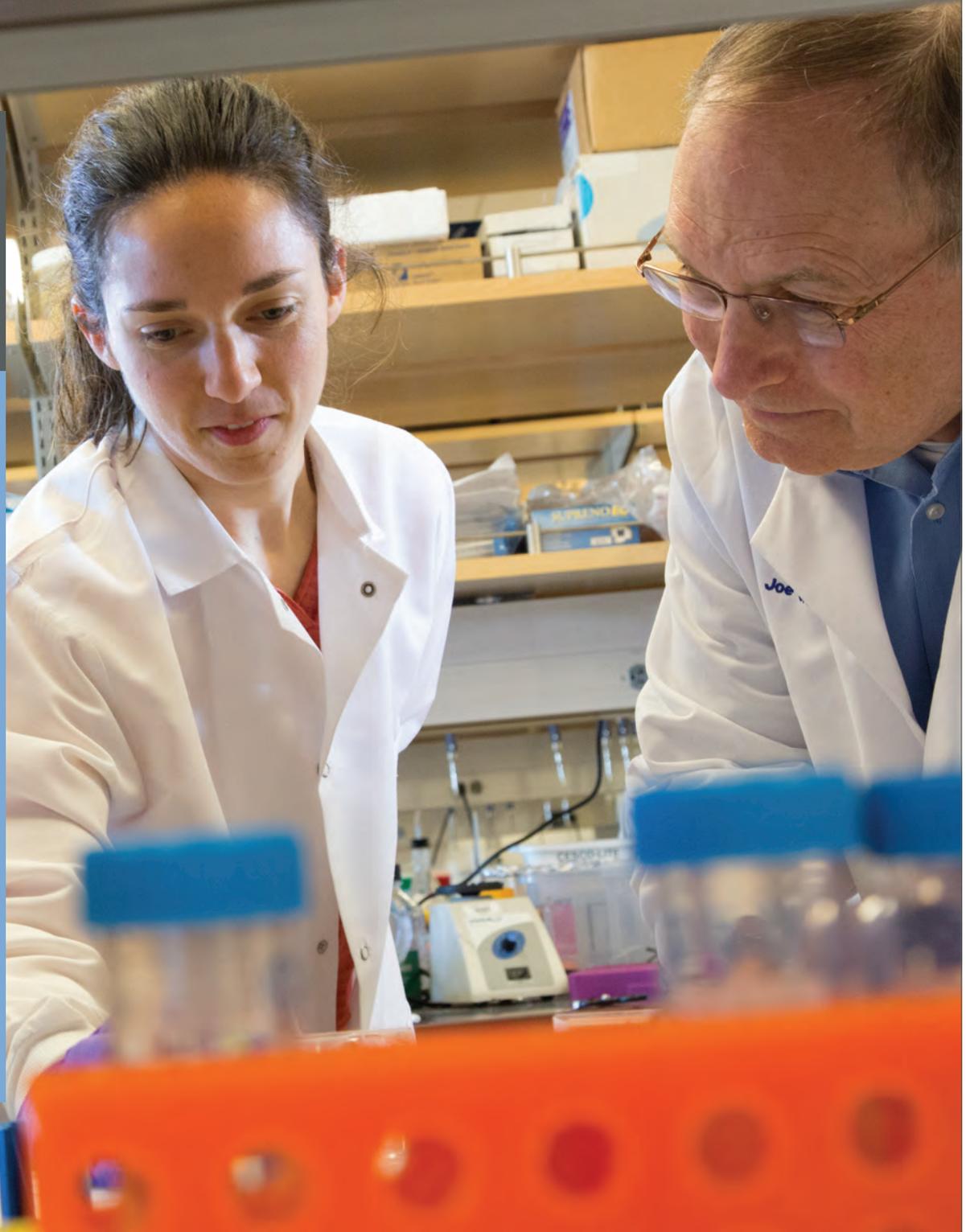
More than 40 years ago, Congress enacted the National Act to Wage War on Cancer. Since then, little has changed to improve the outcomes for patients with pancreatic malignancy.

At the same time, improvements in care for patients with pancreatitis and the aftermath of pancreatitis have also lagged behind successes seen in other acute and chronic diseases.

Now is the time to chart a new course for pancreatic disease.

At the OHSU Brenden-Colson Center for Pancreatic Care, renowned experts in pancreatic surgery, genomics, cell biology and precision medicine work together to translate emerging knowledge into rapid action. Read about our leadership team on page 7.

Through fully integrated clinical and research programs, the center advances the search for new detection methods, moves promising and novel therapies into clinical trials and develops therapeutics to enhance quality of life for patients. Learn more on pages 4-6.



Portrait of pancreatic disease today

It's time to change the statistics.

4th

Pancreatic cancer is the **fourth leading cause of cancer-related death** in the U.S.

Recent data projects pancreatic cancer will be the **second leading cause of cancer-related deaths by 2020.**

6%

Pancreatic cancer has the **highest mortality rate** of all major cancers.

There is a **six percent 5-year survival rate.**

25%

If pancreatic cancer is detected early, **5-year survival rates shift to 20 - 25%**

10%

There are 160,000 cases of chronic pancreatitis. Of the chronic pancreatitis cases, **10% develop pancreatic cancer.**

80%

Cachexia (weight loss and muscle wasting) is present in up to **80% of patients with pancreatic cancer.**

It is associated with **reduced survival and deterioration of quality of life.**

Science and medicine integrated for impact

Nowhere else does a team of scientists and clinicians come together to tackle pancreatic disease with such a unified, comprehensive and vigorous approach.

Scientific foundation

The center is distinctive for its systematic approach to collecting tissue samples from every patient who consents to be enrolled in our registry. It then integrates molecular analysis and clinical information into a single database called the Molecular and Cellular Atlas of Pancreatic Disease.

The atlas is a detailed view of how pancreatic disease initiates and progresses. This unique body of information is applied to basic research and clinical efforts, such as predicting patient response to therapies.

Cooperating with other initiatives across the world, the center will also compare these data to broad patient populations to strengthen analyses. Key to developing this computational framework is a long-term collaboration with Intel Corporation.

Early detection

When pancreatic disease is detected early, survival can be significantly improved. Through access to patient samples, the Molecular and

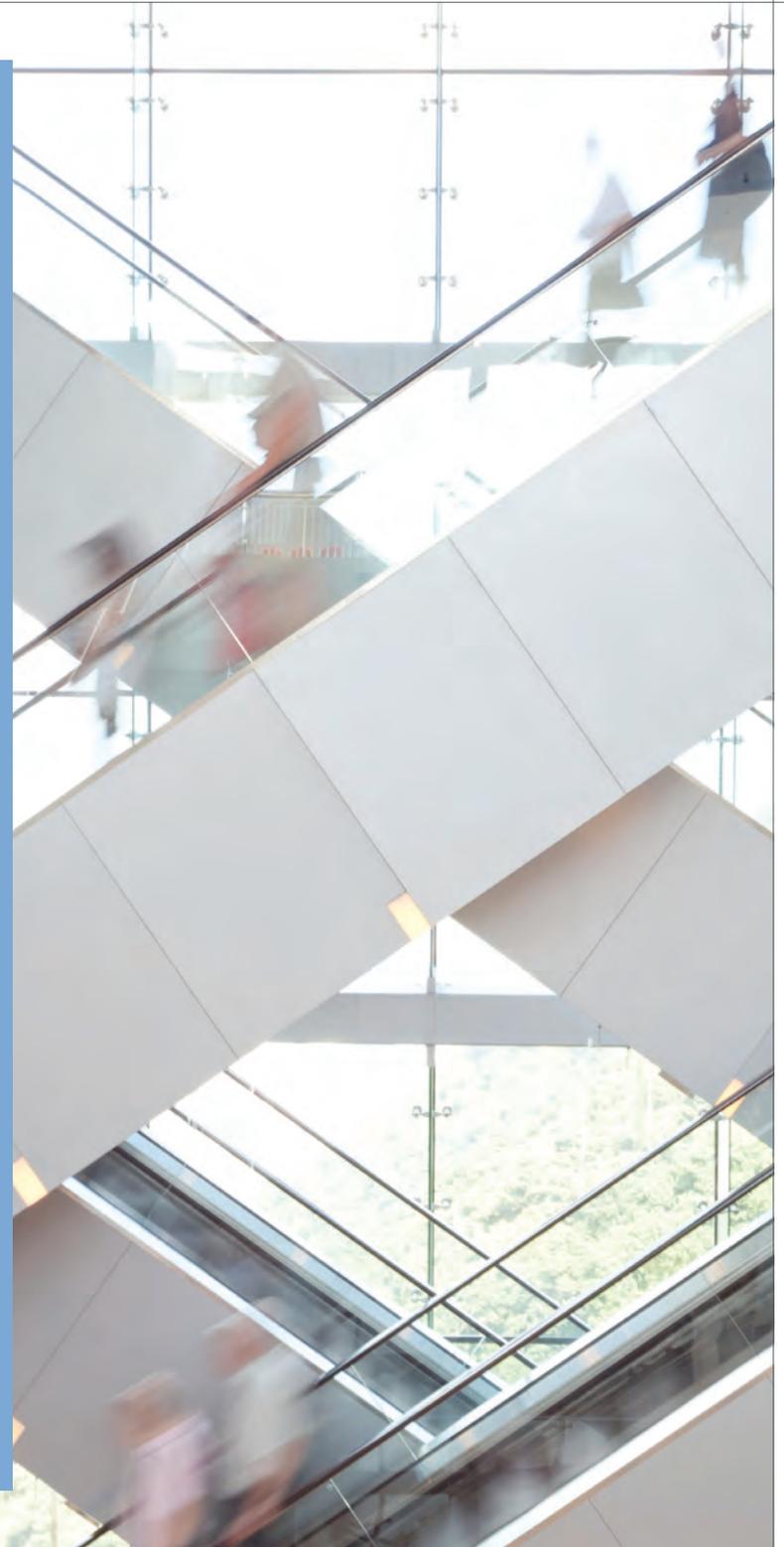
Cellular Atlas of Pancreatic Disease and OHSU clinical resources such as the Oregon Pancreatic Tumor Registry, the center is breaking down barriers to early detection. Scientific teams work with academic and industry collaborators to develop new assays and trials in order to test novel diagnostic strategies — all with the goal of moving them quickly into clinical practice.

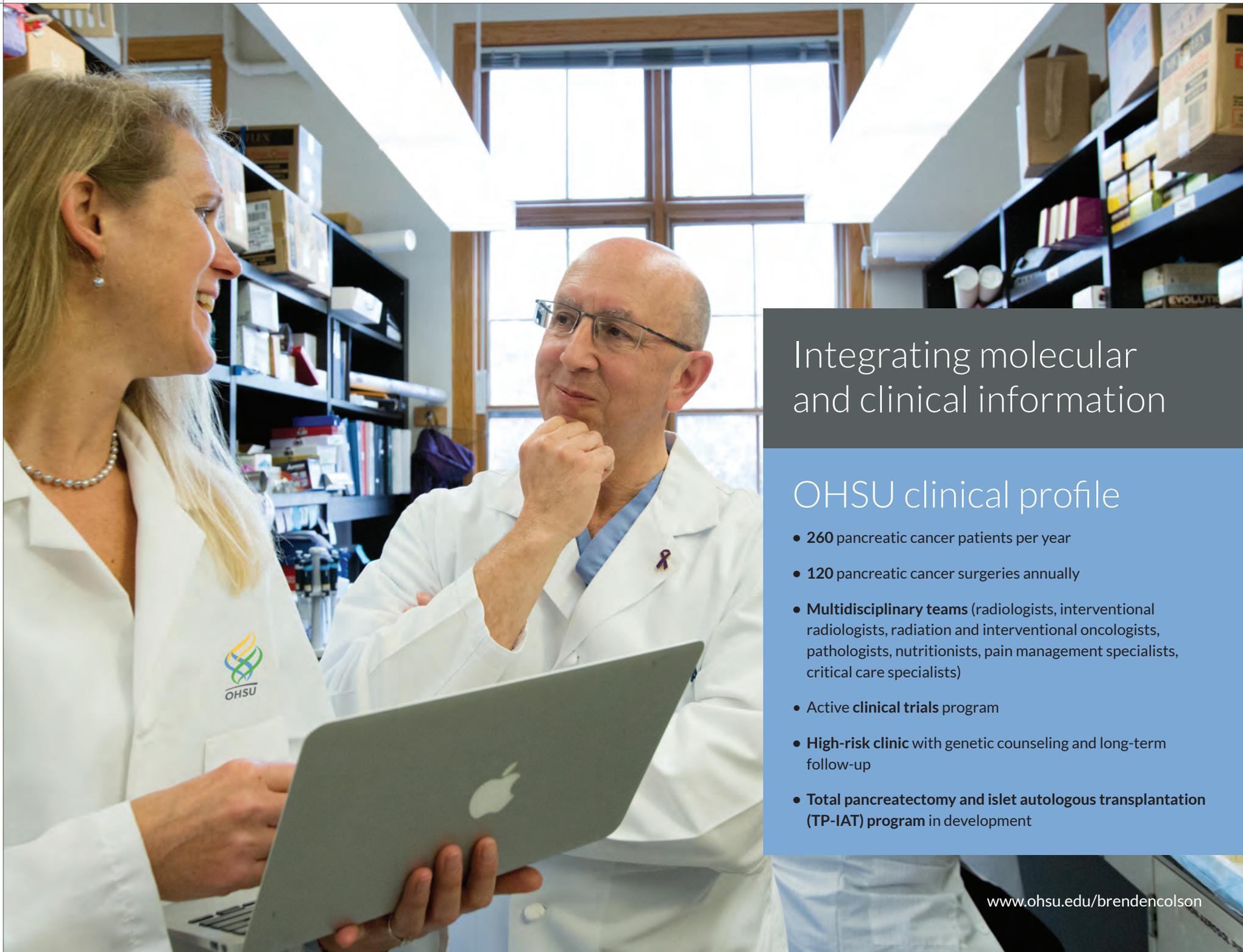
Advanced therapeutics

Every patient of pancreatic disease has a chance to benefit from the center's integrated approach to clinical activity and basic science. Using a platform coined SMART treatment trials (Serial Measurements of Architecture and Theranostics), the center couples the assessment of therapeutic response with changes in tumor genomic, epigenomic and microenvironmental factors. A translational tumor board of clinicians, scientists and staff review care in context of both the patients' clinical outcomes and their molecular profiling data.

Quality of life

The center delivers precision medicine that targets not just the disease, but the constellation of symptoms. Treatment of pain, cachexia and psychosocial support are fundamental for whole-person patient care. The center implements clinical programs and new therapies to help patients get out of the hospital and back to their lives.





Integrating molecular and clinical information

OHSU clinical profile

- 260 pancreatic cancer patients per year
- 120 pancreatic cancer surgeries annually
- **Multidisciplinary teams** (radiologists, interventional radiologists, radiation and interventional oncologists, pathologists, nutritionists, pain management specialists, critical care specialists)
- Active **clinical trials** program
- **High-risk clinic** with genetic counseling and long-term follow-up
- **Total pancreatectomy and islet autologous transplantation (TP-IAT) program** in development



The OHSU difference

Oregon Health & Science University has a strong culture of collaboration, institutional investments in vital core resources and a commitment to computational biology. The Brenden-Colson Center utilizes a broad range of OHSU resources to translate emerging knowledge into rapid action.

OHSU Knight Cancer Institute

OHSU's prominent, NCI-designated multidisciplinary cancer center is internationally recognized for its role in advancing precision medicine as well as its cutting-edge therapeutic research and innovative treatment.

OHSU Center for Spatial Systems Biomedicine (OCSSB)

This OHSU-wide research resource is developing the technical tools that will enable scientists to observe the behavior of both diseased and healthy cells and tissues in four dimensions — from every angle and over time. The OCSSB will help OHSU's experts be among the first in the world to understand the underlying genetics of these microscopic structures and to discern how genetic defects lead to cancer and other diseases.

OHSU Harold Schnitzer Diabetes Health Center

This center brings together physicians from different specialties with scientists, nurses, nutritionists and other providers to offer the most advanced diabetes care to patients with all ages and stages of the disease.

OHSU Bob and Charlee Moore Institute for Nutrition & Wellness

To improve human health for future generations, the center translates OHSU's world-leading knowledge about nutritional health into high-impact educational and outreach programs, including interprofessional training.

Oregon Stem Cell Center

This regionally unique resource provides advanced expertise in the development of antibodies with great potential in early screening for pancreatic disease.

Oregon National Primate Research Center (ONPRC)

One of the eight National Primate Research Centers in the United States, the ONPRC provides nonhuman primate (NHP) resources for the very best scientific programs, both within the OHSU community and beyond.

Leadership – A renowned team of experts



Brett C. Sheppard, M.D.

Co-director, Clinical Programs, Brenden-Colson Center for Pancreatic Care

Professor of surgery, OHSU School of Medicine

William E. Colson Chair for Pancreatic Disease Research

Director, OHSU Pancreatic Cancer Program

Gastrointestinal surgical oncologist, OHSU Knight Cancer Institute

Dr. Sheppard has an extensive background in surgical management of benign and malignant pancreatic disease with an additional focus on improvement in surgical outcomes and systems. He has served on numerous national and institutional committees. He chaired the OHSU Quality Committee and served on multiple, state and federal working groups to improve and transform health care. In 2006 he co-founded the Oregon NSQIP Collaborative (ONC) to improve surgical care in Oregon. In 2007 Dr. Sheppard started the Oregon Pancreatic Tumor Registry, which forms the backbone of the Brenden-Colson Center collaborative research.



Rosalie C. Sears, Ph.D.

Co-director, Research Programs, Brenden-Colson Center for Pancreatic Care

Professor of molecular and medical genetics, OHSU School of Medicine

Gastrointestinal Sub-Program leader, OHSU Knight Cancer Institute

Sears is studying cellular signaling pathways that control the generation of human cancer. Her pioneering research has identified new ways to targeting cancer cells that may apply to nearly all types of cancer. Sears uses advanced pre-clinical experimental models and is collaborating in novel drug development to facilitate the generation of meaningful therapies. Her work has been supported by the Susan G. Komen Breast Cancer Foundation, the Department of Defense, the NCI and The Leukemia & Lymphoma Society.



Joe Gray, Ph.D.

Vice chair and professor of biomedical engineering, OHSU School of Medicine

Gordon Moore Chair of Biomedical Engineering

Director, OHSU Center for Spatial Systems Biomedicine

Associate director for biophysical oncology, OHSU Knight Cancer Institute

An internationally renowned cancer and genomic researcher, Gray is known for developing the FISH test that transformed how treatments are selected for breast cancer patients. He co-leads the Stand Up To Cancer initiative's "Breast Cancer Dream Team," serves as a key player in the Cancer Genome Atlas Project and is spearheading the use of computer models to predict how promising targeted therapies will work in attacking cancer cells. Gray, a physicist, is known for breakthroughs that have transformed clinical practices for cancer patients.



Lisa Coussens, Ph.D.

Chair and professor of cell, developmental and cancer biology, OHSU School of Medicine

Hildegard Lamfrom Chair in Basic Science

Associate director for basic science, OHSU Knight Cancer Institute

Coussens' pioneering studies have fueled a paradigm shift in understanding the role of the tumor microenvironment and immune cells in regulating breast and skin cancer development and their response to cytotoxic therapy. In addition to receiving a prestigious Susan G. Komen Promise Grant to further her important work, Coussens is a principal investigator on a Stand Up To Cancer "Pancreatic Cancer Dream Team" award that is enabling translation of her research in mouse models of pancreas cancer to the clinic.



Charles Lopez, M.D., Ph.D.

Associate professor of medicine, Division of Hematology and Medical Oncology, OHSU School of Medicine

Medical oncologist, OHSU Knight Cancer Institute

A gastrointestinal medical oncologist, Dr. Lopez serves as a bridge between clinical and basic sciences. With expertise in clinical/translational research in gastrointestinal oncology and a focus on pancreatic cancer, his efforts are focused on integrating active patient care with ongoing scientific studies at OHSU. He has launched investigator-initiated clinical trials that have directly evolved from pre-clinical observations in the laboratory. Trials underway today are designed to improve outcomes for patients with treatable tumors, to make non-resectable tumors operable, and to create hope of life-prolonging therapies for patients with advanced metastatic disease.

Contact us

Now is the time to chart a new course
for pancreatic disease.

The center is looking for collaborators, partners and
affiliates who want to join in making an impact on
pancreatic disease.

Are you interested?

Brenden-Colson Center for Pancreatic Care
Oregon Health & Science University
3181 SW Sam Jackson Park Road Mail Code L102
Portland, OR 97239

brendencolsoninfo@ohsu.edu

www.ohsu.edu/brendencolson