



Thank you for being ambassadors for Michigan Medicine. We value your partnership and appreciate your commitment. Together, we are improving and saving lives.



THE DYNAMI FOUNDATION

Supporting crucial lobular breast cancer efforts at University of Michigan Health.

Breast cancer is the second most common type of cancer diagnosed in women. Invasive lobular carcinoma (ILC), or lobular breast cancer, is the second most common type of breast cancer and accounts for about 10% to 15% of all breast cancers. Despite its prevalence, ILC is severely understudied and treated the same as other breast cancers, even though ILC carries distinct long-term risks. **Support from the Dynami Foundation supports some of the country's most important lobular breast cancer research and allows us to collaborate with various institutions as we bring new knowledge and awareness to this form of breast cancer.**

LEADING THE FIELD

The Rogel Cancer Center hosts several of the world's most promising medical oncologists that specialize in an array of cancers and diseases, including many areas of breast cancer research. **Daniel F. Hayes, M.D., is the Stuart B. Padnos Professor of Breast Cancer Research and clinical director of the Breast Oncology Program.** Dr. Hayes is an internationally-recognized medical oncologist who focuses on translational research in breast cancer, specifically circulating tumor cells and tissue markers of prognosis and prediction for lobular breast cancer.

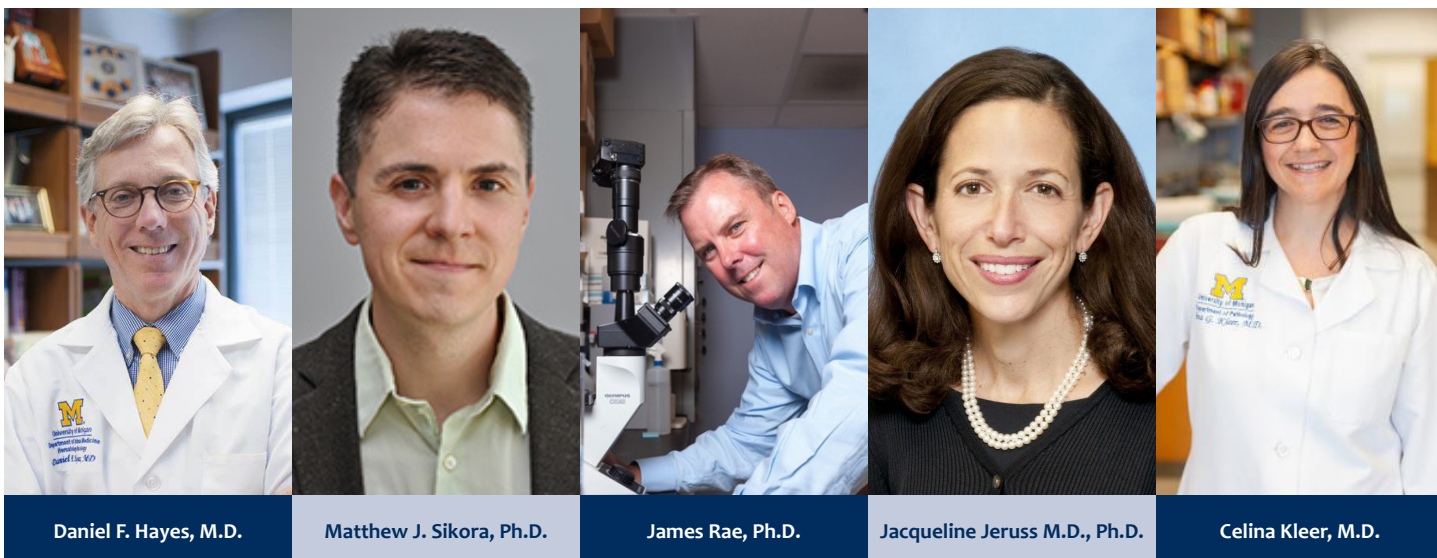
Your generosity has propelled Dr. Hayes's cutting-edge research on circulating tumor cells. These are cells that have broken off of a tumor and are carried in the bloodstream. Using state-of-the-art methods,

Dr. Hayes and his team look at the variety of circulating tumor cells, noting that patients with lobular cancer are more likely to have circulating cells than patients with ductal cancer. They study the cells with technology that purifies and then sequences each cell's unique DNA. The team can then compare the DNA and see how the cells differ from each other. This advanced science aims to combat cancer cells' tendency to mutate and rapidly evolve in random ways that make them resistant to treatments.

By capturing individual cells in the bloodstream and studying the effects of numerous therapies on them, Dr. Hayes hopes to develop new ways to treat lobular breast cancer patients. **Currently, Dr. Hayes and his team have an entire data set of samples from patients with lobular breast cancer and have been sequencing them for several months.** With the vast amount of cells available from the liquid biopsy process, the team is able to get the data right on mutations and bring forth the most accurate and science-driven information.

A DUAL-INSTITUTION EFFORT

In our mission to combat cancer and give patients the treatments and solutions they need to live their healthiest lives, we often collaborate with other top medical institutions to consolidate efforts. **By bringing the nation's top thinkers together to streamline research efforts, we can bring results to patients faster.** This is true for the visionary partnership between



Daniel F. Hayes, M.D.

Matthew J. Sikora, Ph.D.

James Rae, Ph.D.

Jacqueline Jeruss, M.D., Ph.D.

Celina Kleer, M.D.

Matthew J. Sikora, Ph.D., an associate professor of breast cancer research at University of Colorado Anschutz Medical Campus, and **James Rae, Ph.D.**, the Thomas H. Simpson Collegiate Professor of Cancer Research and associate professor of pharmacology here at U-M Health.

Dr. Sikora is a Michigan native and a U-M trained researcher who now leads the Sikora Lab, where his team conducts research on invasive lobular carcinoma. Specifically, they study how ILC tumors evade some medications and are able to keep growing rapidly. They also work to determine which new medications should be introduced to the tumor to stop this progression. This is where Dr. Rae and his lab come in, to test current therapies and drugs on ILC tumor slices to predict therapy responses in real time.

“There is no treatment or treatment plan specifically for lobular breast cancer, and that is the hurdle we are trying to get over,” said Dr. Sikora when asked about the mission of the project. The team uses cross-departmental efforts from University of Michigan Department of Chemistry to come up with new combinations of drugs or even possibly a new drug that can be tested on these tumor slices and ultimately approved for patients. **This work will bring precision medicine directly to patients who are diagnosed with lobular breast cancer and potentially save hundreds of lives.**

SURGICAL EXCELLENCE

A breast cancer diagnosis often has surgery in one’s care plan. **Jacqueline S. Jeruss, M.D., Ph.D.**, associate dean for regulatory affairs and associate professor of

surgery, pathology, and biomedical engineering is a leader in the field of cancer surgery. **Your philanthropy helps to propel her research into the mechanism and detection of lobular cancer cell transformation.** “The Dynami Foundation is impactful in so many critical ways, through the support for novel lobular-focused basic and clinical research, support for young physician scientists, and support for the compassionate care for patients with lobular cancer,” stated Dr. Jeruss.

Dr. Jeruss’s research is specifically looking at the connection between immune cells and ILC cells to see potential opportunities for treatment using immunotherapy. Additionally, she and her team suggest using a novel device that can give clinicians crucial intercellular signals that can alert them of disease progression before it begins. This will also give clinicians a never-before-seen opportunity to monitor ILC recurrence.

MEDICAL BREAKTHROUGHS

Cancer biology and the study of cancer progression is critically important to our overall understanding of how to best combat cancer now and for future patients. Your support of **Celina Kleer, M.D.**, the Harold A. Oberman Collegiate Professor of Pathology and director of the Breast Pathology Program, bridges the gap between basic science and clinical application. Dr. Kleer works within the Department of Pathology and the University of Michigan Medical School and leads her own lab within the cancer center.

Dr. Kleer’s research is focused on discovering specific biomarkers for ILC, specifically the role of EZH2, a regulator of cell type identity through H3K27me3-



“The Dynami foundation is improving patient care and elevating the **patient-centered decision making process**”

mediated gene repression in breast cancer progression. The study found that ILCs with negative estrogen receptor or HER2 overexpression have a higher frequency of histological grade, which is an indicator of how aggressive tumor cells will be. **Dr. Kleer and her team presented these findings at the annual meeting of the United States and Canadian Academy of Pathology in 2022.**

Her next plans include investigating the significance of this finding and how it relates to the cancer’s response to treatment, development of metastasis, and its overall survival within the body. Additionally, Dr. Kleer and her team plan to look into the rates of low HER2 expression in ILC with negative estrogen receptors and progesterone receptors.

PATIENT-CENTERED CARE

Cancer patients often face an array of decisions regarding their treatment plan and surgery options, and our surgeons here at U-M want each patient to have the best educational resources and autonomy to make the correct decisions for their body. Breast reconstruction surgery is an entirely preference-sensitive decision and depends on a patient’s personal goals and clinical factors that are specific to the type of breast cancer. For plastic surgeon **Paige Myers, M.D.**, a clinical assistant professor who specializes in breast reconstruction surgery, the lack of investigative research into the decision-making process of patients with lobular carcinoma was troublesome.

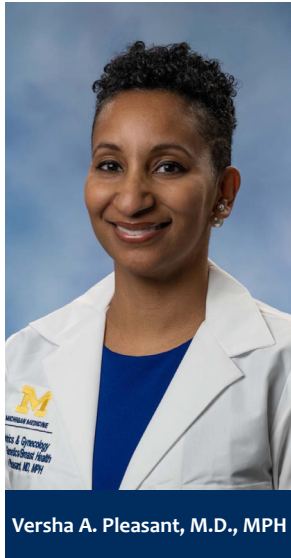
Support from the Dynami foundation is improving patient care and elevating the patient-centered decision-making process **by funding an initiative that**

aims to increase our understanding of the goals of lobular breast cancer patients. Dr. Myers and her team, including medical students, residents, data analysts, and statisticians are working to query the largest database of breast reconstruction options and to analyze the data. The team will then create a unique survey with tailored questions for lobular breast cancer patients that will help generate further insights on how to best personalize the breast reconstruction experience.

“We know we can do these surgeries very well, but what do the patients want?” This question drives Dr. Myers as she works to personalize breast cancer care.

Preservation of fertility can be a delicate topic for reproductive-aged women who are diagnosed with breast cancer. Breast cancer is often a hormone-responsive cancer, and fertility preservation can be an intimidating topic when patients are faced with an onslaught of options. **Molly B. Moravek, M.D., MPH**, is an associate professor in the Department of Obstetrics and Gynecology Division of Reproductive Endocrinology and Infertility and the director of the Fertility Preservation Program at University of Michigan Health

The Dynami Foundation is supporting Dr. Moravek’s research on women who either underwent fertility preservation prior to treatment for breast cancer or who are in remission from breast cancer and using in vitro fertilization (IVF) to have children. By using the IVF process, patients are able to screen their embryos for inherited genes that put them at higher risk for breast cancer when they are adults. Despite the potential benefits of this testing, Dr. Moravek finds that patients often do not choose to pursue genetic testing.



Versha A. Pleasant, M.D., MPH



Dr. Moravek hopes to better understand the dynamics that prevent women from utilizing this option and raise awareness of the potential impact of genetic testing.

REACHING UNDERSERVED POPULATIONS

Your support of lobular breast cancer is truly impacting the lives of many patients across the state of Michigan. By giving a **diverse network of breast cancer experts** resources and funding to pursue this work, we are expanding our reach to communities that we otherwise would not be able to reach as effectively. **Versha A. Pleasant, M.D., MPH**, a clinical assistant professor of obstetrics and gynecology who specializes in breast health and cancer genetics, is conducting important research into breast cancer risk among Black women who have a prior history of benign breast disease.

Understanding that U-M does not have a large population of Black patients, Dr. Pleasant works in

conjunction with the Henry Ford Health System in Detroit to utilize their database. Currently, Dr. Pleasant is in conversations with experts from Henry Ford and they are finalizing a plan to set forth on sharing data.

WITH GRATITUDE

The leadership and bravery that you have shown for the lobular breast cancer community is humbling. We are eternally grateful to be partnering with you on this mission. Your philanthropy will impact the lives of many, and we look forward to all that we will accomplish together. Thank you.

For more information, please contact the Michigan Medicine Office of Development:

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