THANK YOU FROM THE NFPTR TEAM!

NYFPTR NEWS  
2017

GREETINGS FROM THE NFPTR TEAM

We at the NFPTR are grateful to our families for the continued support you provide for our research and registry! Your participation has helped us make substantial strides this year in understanding the genetics of pancreas cancer. Every year, we make progress towards our goal of understanding the origins of this terrible disease, and this would not be possible without the help of our families. We still have much to learn before we reach our goal of preventing the development of pancreas cancer, and we look forward to your continued support as we work to achieve this.

Over the last year, we underwent a few changes to our team. We would like to thank Zoe Norris, one of our previous research coordinators, for her hard work and dedication to our pancreas cancer research team. Zoe started attending medical school at the NYU School of Medicine this past year, and we are confident in and excited for the strides she will make in medical and global health.

We are also happy to introduce our new senior coordinator, Nancy Porter. Nancy graduated from The Pennsylvania State University with a BS in Biobehavioral Health in 2008, and received her MA in Public Health Sciences in 2011. While at Penn State, Nancy worked with the Northern Appalachia Cancer Network pursuing her research interests of cancer prevention and survivorship. Nancy then went on to pursue a PhD in Cancer Epidemiology at the University of South Carolina; she plans to complete her medical dissertation next year. Nancy is excited to work with the NFPTR in helping families fight and prevent pancreatic cancer.

We are also excited to announce several new initiatives this year. First, in collaboration with the MD Anderson Cancer Center, Dana Farber Cancer Center, Mayo Clinic, and University of San Diego we were awarded a Stand Up to Cancer Interception Grant (see page 2 for more detail). The goal of this study is to improve the early detection of pancreatic cancer through expanding genetic testing of pancreatic cancer patients and their family members, early detection studies, and prevention studies. We hope to launch these studies in early 2018.

This past August, our director Alison Klein joined the Pancreatic Cancer Action Network’s (PanCAN) Scientific and Medical Advisory Board (SMAB) and attended their annual meeting in San Antonio. The SMAB consists of 29 pancreatic cancer scientists, clinicians, and other healthcare professionals who assist PanCAN in the planning and implementation of their research initiatives. Dr. Klein remarked about how much she enjoyed not only hearing about the exciting science but also her interactions with the exceptional volunteers from all over the country dedicating their time to raising awareness and fighting this deadly disease.

As 2017 comes to a close, we would like to thank all of you who have participated over the years. It is through the continued support of families like yours that our research is possible. Without your help, we would not be able to make advancements in how we prevent, diagnose, and treat pancreatic cancer. Please complete and return the enclosed update card, and please contact us with any questions, concerns, or updates. We would like to wish you all a happy holiday season!

- Dr. Alison Klein, & the NFPTR Team

WE’RE GOING ELECTRONIC!

Starting this year, we will also be offering an electronic newsletter!

Please send pancreas@jhmi.edu to your e-mail contacts to ensure that you receive our annual newsletters. If you would like to receive electronic newsletters from us in the future, check “Yes, I would like to only receive electronic newsletters in the future” at the bottom of the enclosed update card.

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**STAND UP TO CANCER LAUNCHES “DREAM TEAM” TO DETECT PANCREATIC CANCER IN EARLY STAGES**

Cancer interception, or finding cancer at its earliest stages, has the potential to improve survival in cancer patients. Early detection of pancreatic cancer particularly in those individuals at higher risk because of the family history of cancer, has been a longstanding focus of the NFPTR. It is our continued hope, with the right chemoprevention, vaccines, and more sensitive screening, cancer interception can help us block the cancer early, while it is still treatable.

The Stand Up To Cancer (SU2C) Cancer Interception initiative was created to make this possible, dedicated to finding both the technologies and treatments needed to find early pre-cancerous markers and stop its progression. In October 2017, SU2C, along with the Lustgarten Foundation for Pancreatic Research, LUNGevity, and the American Lung Association announced four teams of top researchers to be awarded grants for cancer interception research projects on cancers of the lung and pancreas.

We are proud to announce that one of the research teams awarded is the SU2C-Lustgarten Foundation Pancreatic Cancer Interception Dream Team is co-led by NFPTR team members. The Dream team is led by Dr. Anirban Maitra at the University of Texas MD Anderson Center, Dr. Scott Lippman of University of California, San Diego, and Dr. Michael Goggins at Johns Hopkins. The team, which includes several institutions: Johns Hopkins University, University of Texas MD Anderson Cancer Center, University of California, San Diego, Mayo Clinic, Dana-Farber Cancer Institute and MIT.

The team’s research will focus on intercepting pancreas cancer through targeted immune prevention and careful early detection, as well as developing an early detection screening test by searching for distinct characteristics of the blood. As part of their research, they will also explore the utility of offering genetic testing for inherited pancreatic cancer genes to all pancreatic cancer patients, regardless of their family history of cancer and how best to reach out to the family members of pancreatic cancer patients found to have a mutation in a pancreatic cancer susceptibility gene. We anticipate over 2,000 high-risk pancreatic patients with cancer will be tested across the 5 cancer centers as part of this endeavor.

In addition to the genetic testing study described above, relatives carrying a mutation but are cancer-free will be eligible to enter an active screening protocol, involving computer-based "deep learning" imaging algorithms to detect smaller cancers hidden from human eye. Relatives without cancer, but who are carrying a mutation but are cancer-free, will be invited to a novel clinical trial of a vaccine in order to help induce their body’s immune system to fight and prevent cancer.

Through these studies, the team hopes to broaden the current guidelines for genetic testing of pancreatic cancer patients with pancreatic cancer, and to ultimately save many lives by intercepting this disease as early as possible.

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**Dna Protein Markers in Blood May Help Spot Early Pancreatic Cancer**

While a blood based screening test for the early detection of pancreatic cancer is not yet available, recent work by researchers at Johns Hopkins, including Dr. Anne Marie Lenxon and Joshua Cohen have made significant progress in developing such a test. Earlier this year, our scientists published an initial study on a blood test that spots tumor-specific DNA and protein biomarkers for pancreatic cancer. Pancreatic tumors are most often found late, when treatment options are limited. This new blood test builds on previous research, combining what we know about tumor DNA and biomarkers. Biomarkers are different types of molecules that can inform us about a patient’s current health status. They can be in the form of DNA, proteins, or hormones, which can be produced by the cancer or by other cells in your body. A popular protein biomarker is the carbohydrate antigen 19-9 (CA19-9). Although it is not sensitive enough on its own to be used for screening, we are hopeful that it can be combined with other biomarkers to be used for screening. Recently, mutant tumor DNA shed into a patient’s blood stream has been explored as a biomarker (so called “liquid biopsy”). Cancer cells have a high turn-over rate, and these dying cells release its mutant DNA which then escapes into bodily fluids such as urine, stool, and blood plasma. This mutant DNA is referred to as circulating tumor DNA (ctDNA). Over 85% of patients with advanced cancers have detected levels of ctDNA, and patients with earlier stages of cancer (although, a much smaller percentage, than those with advanced cases) have detectable levels of ctDNA in their plasma. This new blood test combines ctDNA with protein biomarkers, like CA19-9, to increase the chances of detecting pancreatic cancer.

This study looked at 221 patients with surgically treatable pancreatic cancer (patients with stage III or IV disease were excluded) and 182 persons with no known history of cancer. This new blood test detected pancreatic cancer among 141 (64%) patients. Most notably, 45 of the patients in this study had no symptoms of pancreatic cancer; among these non-symptomatic patients, the blood test identified cancer in 27 (60%) of these patients. This new blood test also showed promising results (in comparison with the earliest stages of disease, identifying 12 of the 29 cases (41%). While these results are exciting, this potential screening test is not yet ready to be used outside of a research setting. “While we are hopeful that this work will help lead us to a blood-based early detection test, more work is needed, including evaluating the test in a large series of individuals to see if this test correctly identifies individuals with early stage, asymptomatic cancer and does not result in a large number of false positive findings” says study co-author and NFPTR director Alison Klein. Researchers are hopeful that they are getting closer to developing a screening test that can detect pancreatic cancer at an earlier stage and help to lessen the burden of this awful disease.

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**In the Spotlight: Mary Hodgin**

For 10 years, the Pancreas Multidisciplinary Care Clinic (PMDC) at Johns Hopkins has been dedicated to providing patients with the highest quality of care. Patients seen here at the PMDC receive a comprehensive single day evaluation from our top-notch team, which includes medical, radiation, surgical oncology, gastroenterology, pathology, radiology, pain management, and research teams. We would like to highlight one member of the team in particular who helps make it all possible.

Mary Hodgin has spent the last half of her 20 year (and counting) career here at Johns Hopkins working with the PMDC. Mary says her job is to ‘organize patients’ treatment’ ensuring that each patient is exactly where they need to be and that they have all the tools necessary to navigate this difficult time in their lives. Mary and her team spend countless hours on the phone with physicians’ offices, tracking down every report, and more sensitive screening. Cancer interception can help us block the cancer early, while it is still treatable.

Mary Hodgin, BSN, MS

Dr. Michael Goggins

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**Johns Hopkins Hosts Research Day for PanCan**

On Sunday, November 12th, the Baltimore and Washington D.C. affiliates of PanCAN, the national pancreas cancer advocacy group, along with the Johns Hopkins faculty host an educational and informational seminar on our work in the research and treatment of pancreatic cancer. Visitors were able to meet with clinicians and scientists in small group sessions to learn about recent advances in pancreatic cancer. This was a wonderful opportunity for the Johns Hopkins Pancreatic Cancer Team to meet with the patients and families affected by this disease. In addition to working with the local PANCAN chapter. We are thankful for the valuable opportunity we had to share what we are doing and chat with each of you individually.

**Thank you for your support!**

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Research Discussions Included:

- Dr. Lei Zheng: Chemotherapy for pancreatic cancer
- Dr. James Eshleman: New approaches to discovering novel therapies
- Dr. Elliott Fishman: Recent advances in radiology
- Dr. Michael Goggins: Early detection of pancreatic cancer
- Dr. Jin He: Minimal invasive surgery in the management of pancreatic cancer
- Dr. Jody Hooper: Rapid autopropag program
- Dr. Alison Klein, Nancy Porter & Sharon Varghese: Familial pancreatic cancer – The NFPTR
- Dr. Papadopoulos: Genetic discoveries