NFPTR
national familial pancreas tumor registry
NEWS

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FROM THE NFPTR TEAM

NFPTR (left to right): David Huang (Coordinator), Dr. Alison Klein (NFPTR Director), Colleen McDermott (Coordinator)

To all of the NFPTR families and friends, thank you for your ongoing participation and support of the registry. 2014 marked the registry's twentieth anniversary. We have learned a tremendous amount about pancreatic cancer and what causes pancreatic cancer to cluster in some families over the past two decades. Despite this progress, we still have much to learn before we reach our ultimate goal of preventing pancreatic cancer from developing!

This year's issue includes ongoing initiatives in screening, treating, and understanding the genetic basis of pancreatic cancer. On page two, we highlight some of the NFPTR's biggest accomplishments from the past twenty years. On page three, we describe the importance of multidisciplinary care for pancreatic cancer patients and also detail our ongoing efforts to develop effective early detection screening for pancreatic cancer.

This year has come with some big changes for the NFPTR team which include new staff and a transition to an electronic version of our questionnaire. After five years with the NFPTR, Diane Echavarria left this past May to train to become a Physician Assistant. In July, Chelsea Michael took a new opportunity in New York where continues to work in cancer research. We would like to thank both Chelsea and Diane for all of their hard work and wish them the best of luck on their exciting new endeavors.

We would like to welcome our two new study coordinators, Colleen McDermott and David Huang, to the NFPTR team. Colleen and David bring a strong background in biology and public health, as well as a strong commitment to educate patients and families, to the NFPTR. Ms. McDermott earned her B.A. in Writing Seminars and B.S. in Molecular and Cellular Biology from Johns Hopkins University in 2014. She began working for the NFPTR in June of 2014 and has been working in collaboration with the Pancreas Multidisciplinary Clinic at the Johns Hopkins Hospital. Colleen has enjoyed meeting patients and families who come through the clinic and discussing our work with them. We are excited to have Colleen as a member of the NFPTR team.

"I remember telling my fifth grade teacher that I wanted to cure cancer when I grew up. Although I now understand the complexity of this goal, I'm glad to have a chance to work with families who help us make impactful strides against pancreatic cancer."
- Colleen

Mr. Huang graduated from Johns Hopkins University in 2011 with a B.A. in Public Health Studies. In 2013, he received his Master of Science from the Johns Hopkins Bloomberg School of Public Health in Biochemistry and Molecular Biology with a focus in Reproductive and Cancer Biology. David has enjoyed working with families who connect with us through the internet as well as the NFPTR's well-established families who have been helping our research for the past two decades. We are happy to have Colleen and David as part of the NFPTR and encourage you to reach out to them if you have any questions or updates.

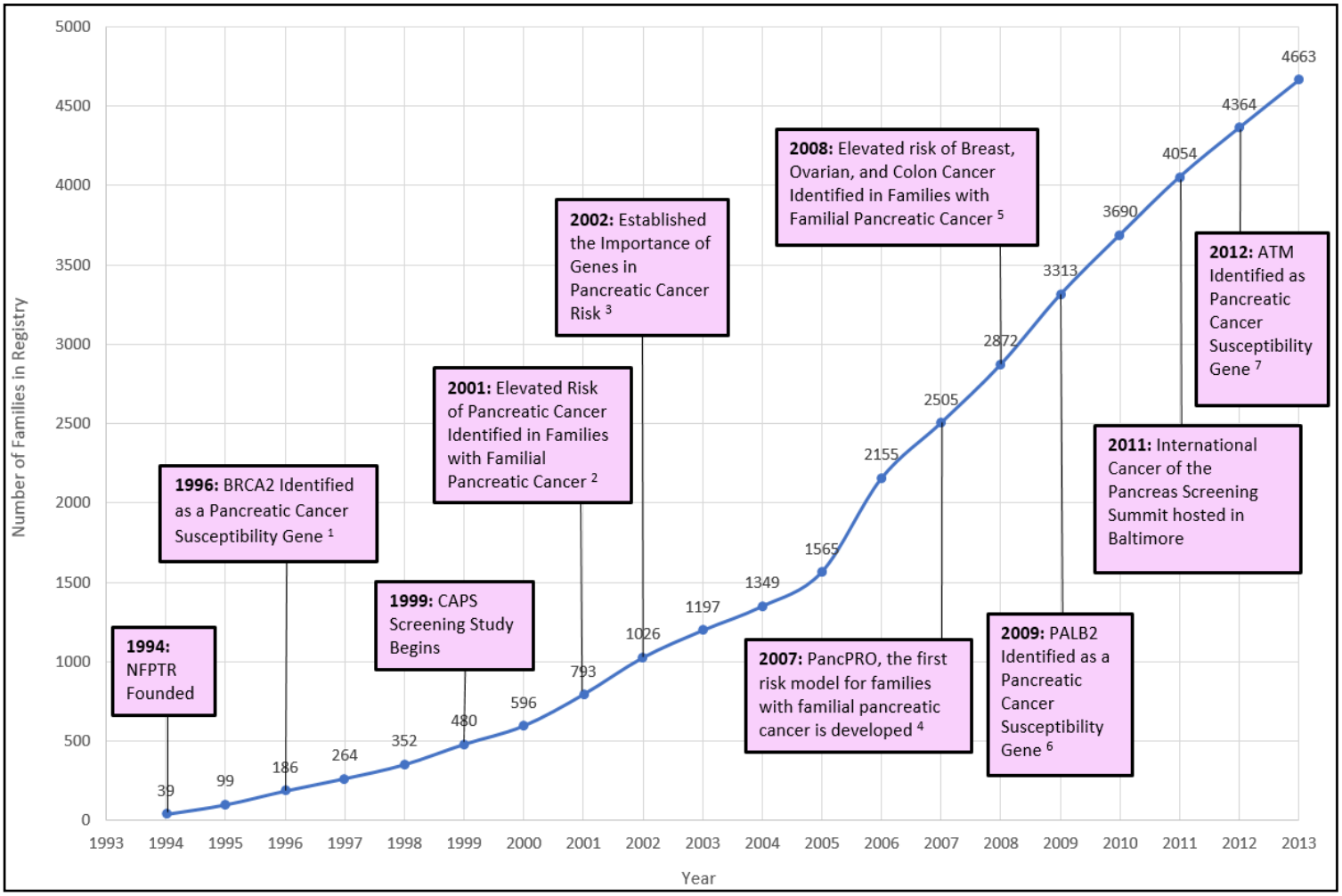
"My previous research in Orthopaedic Oncology and the study of bone metastasis inspired me to work at the NFPTR to better understand the causes of pancreatic cancer. I know that the research being done by myself, my colleagues, and the researchers at Johns Hopkins offers invaluable insight into the biology and nature of this disease."
- David

As 2014 comes to a close, we would once again like to thank all of those who have participated in the National Familial Pancreas Tumor Registry. Without your help, our research would not be possible. Your participation and support allow us to investigate and fight this terrible disease. Please remember to complete and return your family's update card (even if there have been no changes) and please contact us if you have any questions, concerns, or updates!

- Dr. Alison Klein, PhD, MHS

Inside this issue:

1994-2014: A LOOK BACK ON 20 YEARS OF DISCOVERY WITH THE 20TH ANNIVERSARY OF THE NFPTR



20 years of progress with the NFPTR: The graph above describes how the NFPTR has grown over the past twenty years and highlights some of the key discoveries! See back page for a full list of references.

When the NFPTR began in 1994, many thought that pancreatic cancer did not run in families. Over the past twenty years we have demonstrated that approximately 10% of pancreatic cancer cases cluster within families. Inherited factors play a role in the development of pancreatic cancer in those with a strong family history of pancreatic cancer, but also among individuals without a family history of this cancer. To date, mutations in several genes have been shown to confer a high-risk of pancreatic cancer. These findings include the discovery of how mutations in the *BRCA2*, *PALB2* and *ATM* genes lead to the development of pancreatic cancer in some NFPTR families. While these are significant discoveries, it is important to note that most families with pancreatic cancer do not have mutations in one of these known genes. For this reason, much of our ongoing research is devoted to identifying additional pancreatic cancer susceptibility genes.

In addition to identifying new pancreatic cancer susceptibility genes, over the past two decades our research has been focused on understanding the significance of having a strong family history of pancreatic cancer. Family members want to know what their risk of developing pancreatic cancer is and if they are at an increased risk for other cancers. Our studies have shown that individuals with a single relative with pancreatic cancer have about twice the risk of developing pancreatic cancer and individuals with two close relatives have about a seven-fold increased risk of developing pancreatic cancer. A patient's risk depends on their family's history of other cancers and the age at which their relatives developed pancreatic cancer. With this in mind, we developed the risk tool, PancPRO, to help guide genetic counselors when providing individualized risk estimates. This model was built using data from the NFPTR families. For more information regarding and these studies please see our website (www.NFPTR.org).

While it is impossible to summarize twenty years of research in a single newsletter story, we do want to highlight a few of the discoveries made possible by the NFPTR families. We hope the next decade will bring many more discoveries and lead us closer to our goal of preventing pancreatic cancer.

PANCREAS MULTIDISCIPLINARY CLINIC: BENEFITS OF MULTIDISCIPLINARY CARE

While much of the work of the NFPTR is devoted to better understanding the causes of pancreatic cancer, at Johns Hopkins, our first goal is to provide the best clinical care to patients with pancreatic cancer. To achieve this goal, the Pancreas Multidisciplinary Clinic (PMDC) began in 2006. As part of this clinic, patients receive a comprehensive evaluation by a clinical team that includes surgeons, medical oncologists, radiation oncologists, gastroenterologists, pathologists, geneticists, nutritionists and social workers.

Some of the benefits of a multidisciplinary approach are highlighted in "*More Than the Sum of its Parts: How Multidisciplinary Cancer Care Can Benefit Patients, Providers, and Health Systems*" [JNCCN 2013] a recent publication co-authored by our radiation oncologist, Dr. Joseph Herman. In this paper, the authors discuss how a patient's treatment can often be delayed by weeks while waiting to be seen by a specialist; conversely, a multidisciplinary approach allows a patient to be evaluated by all relevant specialties at once. After looking at PMDC data we've collected over the past eight years, we've found that the multidisciplinary approach has facilitated a better quality of patient care.

Not only does the multidisciplinary clinic allow patients to receive advice about standard-of-care treatments, but in Dr. Herman's experience, "Most of these patients sign up for the NFPTR, as well as novel prospective clinical trials." In addition to the benefits of cutting-edge research, evaluating patients in a centralized manner allows physicians to learn more about the disease and direct future research projects.

"We evaluated the first 1,241 PMDC patients seen and found that almost 30% of patients had a change in diagnosis or management," Dr. Herman notes. "What was most interesting is that the subsequent survival/outcomes correlated very well with what would be the expected outcome for a patient with a specific stage of disease [as diagnosed at the PMDC]. Our next goal is to match genetic data with clinical data to see if we can "personalize" each patient's plan."

Dr. Joseph Herman MD, MSc

This clinic demonstrates how both patients and doctors can benefit from a collaborative approach. As researchers, we want patients to benefit from scientific advances; however, we've learned that our patients can also help direct future research and allow ideas for new projects to travel from the bedside back to the bench as well. We've been amazed at how the clinic has evolved, and we're excited to see the new directions our clinic, and pancreatic cancer care as a whole may take.

CANCER OF THE PANCREAS SCREENING BEGINS NEXT PHASE OF EARLY DETECTION STUDY (CAPS5)

In 1999, the Cancer of the Pancreas Screening (CAPS) Study was established at Johns Hopkins to investigate the clinical potential of pancreatic cancer screening in asymptomatic high risk individuals. Over the past fifteen years, the NFPTR has worked in conjunction with several phases of the CAPS study to improve our understanding of how to best screen individuals who are at high-risk of developing pancreatic cancer. Previous phases of our CAPS studies (CAPS1-4) have demonstrated that endoscopic ultrasonography (EUS) and magnetic resonance imaging (MRI) are better at detecting pancreatic lesions than computed tomography (CT). To date, only a very small fraction (<5%) of those screened had worrisome lesions requiring surgery. While we are able to detect some early cancers, we want to reassure patients and family members that the majority of individuals screened were not found to have early pancreatic cancer. In 2011, we hosted a 49-expert multidisciplinary international consortium to discuss early detection screening for pancreatic cancer. One important conclusion of this meeting was that "Screening and subsequent management should take place at high-volume centres with multidisciplinary teams, preferably within research protocols."

In 2014, the 5th phase of the CAPS study CAPS5 was opened. CAPS5, a multi-center study led by Drs. Michael Goggins and Marcia Canto, is screening the largest cohort of high-risk individuals to date. Johns Hopkins is the lead center for the CAPS study. Other participating investigators include Dr. Anil Rustgi at the University of Pennsylvania, Dr. Randall Brand at the University of Pittsburgh, Dr. Sapna Syngal at the Dana Farber Cancer Institute, Dr. Amitabh Chak at Case Western Reserve University, and Dr. Fay Kastrinos at Columbia University. The CAPS5 study will not only screen patients using imaging, but will also investigate early pancreatic cancer markers, look at the prevalence of mutations in pancreatic fluid, and try to better determine the prevalence and time of disease progression.

Unaffected individuals with a strong family history or other high-risk factors who may be eligible for this study include:

1. Those with a history of pancreatic cancer in two or more members.
2. Individuals who are carriers of a confirmed *p16/CDKN2A, BRCA2, or PALB2* mutation and have more than one pancreas cancer in the family.
3. Individuals who are carriers of a confirmed *BRCA1* or Lynch Syndrome (HNPCC) gene mutation and have more than one pancreatic cancer in the family.

"I wage hope by screening for pancreatic cancer"
- Dr. Michael Goggins, MD

For more information on enrolling and the complete list of eligibility and inclusion criteria, please email Hilary Cosby at caps5@jhmi.edu.

HOW YOU CAN HELP:

Spouses are eligible to serve as a "control" for us by donating a blood or saliva sample and completing a family history questionnaire. A control group is crucial for our research as it allows us to validate the significance of pancreatic cancer genes that we discover. If you are interested in enrolling as a spouse control, please email us at pancreas@jhmi.edu with "Control" in the subject line to receive further information on how to help with this important task!

PLEASE REMEMBER TO RETURN YOUR UPDATE CARD ENCLOSED WITH THIS NEWSLETTER.
Even if there have been no changes in your family, this information is very important to our research!

CERTIFICATE OF CONFIDENTIALITY

We want to remind the participants that the NFPTR continues to be protected by a Certificate of Confidentiality (NCI-01-062) from the National Institutes of Health, Department of Health and Human Services. This certificate further helps us protect the confidential information that you have provided by giving us legal protection from being required to involuntarily release any information about you. With this certificate, we cannot be forced by court order to disclose any information for criminal, administrative, legislative, or other proceedings.

If you have any questions regarding this or would like a copy, please contact Colleen or David: (410) 955-3502

NFPTR GOES ONLINE

Coming Soon in 2015: We will have an online version of our family history questionnaire for new families to use to enroll in the registry. This online version will allow families to complete the questionnaire by using a safe and secure electronic format. The online family history questionnaire will not need to be completed by families already enrolled in the registry and the paper system will remain available for those who prefer. If you have information that you would like to share with us, please complete the annual update card or contact a coordinator at pancreas@jhmi.edu.

LEARN MORE ABOUT OUR RESEARCH

Below is a short list of citations of key discoveries made by the NFPTR over the past twenty years as shown on page two. Due to space limitations, we can only show a few of our publications, but we hope that this conveys some of the progress we have made. To view abstracts and full versions of these publications, please visit the NCBI PubMed website (http://www.ncbi.nlm.nih.gov/pubmed) and search by the **PMID** number.

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