

Pancreatic Cancer Signature Center: Providing the Research Tools Necessary to Advance Pancreatic Cancer Patient Care

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Abstract

There were approximately 43,000 new cases of pancreatic ductal adenocarcinoma (PDAC) in the U.S. in 2010, and approximately 37,000 deaths. PDAC thus constitutes the fourth leading cause of cancer deaths, and PDAC patients have a dismal 5-year survival rate of 6%. PDAC is notoriously resistant to chemotherapy and radiation and even with our best treatment options, a complete margin-negative surgical resection, few patients achieving long-term survival. Despite these statistics, surprisingly only a small number of NCI-designated cancer centers have a specialized pancreatic cancer program. The creation of the IUPUI Signature Center for Pancreatic Cancer Research has been the foundation for putting IUPUI, the IU School of Medicine, Purdue University and the IU Simon Cancer Center at the forefront of pancreatic cancer treatment and research across the nation. The Signature Center, comprised of basic, translational and clinical researchers, represents the continuum of the disease from biological / molecular investigation to clinical trials. Funding from the Signature Center Initiative is being utilized to develop genetically engineered mouse models, orthotopic pancreatic cancer models as well as a human pancreatic cancer xenograft model. Establishment and characterization of these *in vivo* models provides the groundwork to be used by all members in their translational research projects. Additionally, work has begun on a web portal to promote and educate both patients and clinicians about the IUSCC Pancreas Cancer Clinic which became operational in 2010. Taken together the development of these *in vivo* models as well as web support of the Pancreas Cancer Clinic provides the infrastructure to support pancreas cancer research across the continuum of bench to bedside to practice. The availability of these resources to all members promotes inter-disciplinary collaborations aimed at increasing our understanding of pancreatic cancer so that advancements can be made in diagnosis, prevention and treatment of this malignancy.