The Mayo Clinic SPORE in Pancreatic Cancer is designed to facilitate and promote research in pancreatic cancer that is highly likely to result in benefit to patients who currently have very little hope or treatment options. We are focused on discovery of novel mechanisms and pathways that will help understand causes and processes of pancreatic cancer development which in turn will be translated into strategies for prevention, early detection, and treatment.

Pancreatic Cancer Facts:
- In 2016, there will be an estimated 53,070 new patients with pancreatic cancer and an estimated 41,870 deaths.
- 1-year survival is 28%, and 5-year survival is 7%.
- Cigarette smoking, diabetes, obesity, and family history have been identified as risk factors.
- Each year, Mayo Clinic is visited by approximately 450 pancreatic cancer patients.
- Mayo Clinic has a large staff of medical professionals who diagnose or treat pancreatic cancer. Across its three campuses in Rochester (MN), Jacksonville (FL), and Scottsdale (AZ), pancreatic cancer clinical experts include gastroenterologists, medical oncologists, radiologists, radiation oncologists, and surgeons.

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For more information, and a link to the Mayo Clinic Pancreatic Cancer SPORE webpage:
https://specimens.cancer.gov/details/278/?c1=61&c1=60
At a glance . . .

Projects: All of our projects have a scientific basis with a translational trajectory.

- NFAT Transcription Factors as Therapeutic Targets in Pancreatic Cancer (Principal Investigators: Daniel D. Billadeau, PhD and Steven R. Alberts, MD) will identify nuclear factor of activated T-cell (NFAT) and NFAT-dependent target genes and roles for GSK-3β in NFAT regulation, pancreatic cancer cell survival, and conduct a Phase I study using a GSK-3 inhibitor and gemcitabine-Abrazxane.

- Targeting NAD catabolism in Pancreatic Cancer Cells: Role of small molecule SIRT1 activating compounds (STACs) in the Therapy of Pancreatic Cancer (Principal Investigators: Eduardo N. Chini, MD PhD and Charles Erlichman, MD) will establish the role of metabolism of nicotinamide adenine dinucleotide (NAD) in pancreatic cancer and use new pharmacological compounds, SIRT1 activators, that induce NAD degradation in preclinical studies as well as a Phase I trial using SRT3025 with gemcitabine and Abrazxane.

- Optimal Pairing of Chemotherapy with Immunotherapy for Pancreatic Cancer (Principal Investigators: Peter A. Cohen, MD and Sandra J. Gendler, PhD) builds on findings that immunotherapy and chemotherapy can synergize against pancreatic cancer, also building on a newly perfected ability to activate and expand T-cells in culture which recognize cancer-associated MUC1, a novel form of vaccination performed entirely outside the body. Phase I-II trials which combine cyclophosphamide chemotherapy with reinfusion of ex vivo vaccinated T-cells as second line therapy after FOLFIRINOX will help optimize this innovative strategy for targeting pancreatic cancer.

- Targeting DNA Repair in Selected Patients with Pancreatic Cancer: An Approach to Individualized Treatment (Principal Investigators: Fergus J. Couch, PhD and Robert R. McWilliams, MD) will identify roles of DNA repair in pancreatic cancer and offer patients with chemotheraphy refractive PC and who have double-stranded DNA repair defects a new option for individualized treatment in a Phase II study of the PARP inhibitor, rucaparib.

Cores: An Administrative and three Scientific Cores provide support to SPORE Investigators.

- Administrative Core (Core Directors: Gloria M. Petersen, PhD and Daniel Billadeau, PhD)
- Biostatistics Core (Core Director: Ann Oberg, PhD)
- Clinical Research (Core Directors: Gloria M. Petersen, PhD and Charles Erlichman, MD)
- Tissue Core (Core Directors: Thomas Smyrk, MD and Lizhi Zhang, MD PhD)

Developmental Research Program: The SPORE funds three to five pilot research projects annually with $35,000 to $50,000 awards. Projects must have high translational potential for pancreatic cancer. Projects are selected on a competitive basis following review by the Scientific Advisory Committee. Director: Martin Fernandez-Zapico, MD

Career Development Program: Annually the SPORE funds one promising investigator with up to a $50,000 award. Decisions are made by the Steering Committee following review of nominated candidates. Director: Daniel Billadeau, PhD

Advocacy for Pancreatic Cancer: The SPORE interacts closely with a group of survivors, relatives, and friends of pancreatic patients, along with the Pancreatic Cancer Action Network (PanCAN) which provides support for pancreatic cancer patients and caregivers. PanCAN also actively works to increase research funding in pancreatic cancer.

Administration: The SPORE is organized through an Administrative Core and is guided by a Steering Committee with input from External and Internal Advisory Committees and a Scientific Advisory Committee.

- Steering Committee:
  - Gloria M. Petersen, PhD
  - Daniel D. Billadeau, PhD
  - Charles Erlichman, MD
  - Martin E. Fernandez-Zapico, MD
  - Sandra J. Gendler, PhD
  - Robert McWilliams, MD

- External Advisory Committee:
  - Fritz Breitenbach, Pancreatic Cancer Action Network (PanCAN)
  - Esteban Celis, MD PhD, Georgia Regents University
  - Michael A. (Tony) Hollingsworth, PhD, Nebraska Medical Center
  - Christine Iacobuzio-Donohue, MD PhD, Memorial Sloan Kettering Cancer Center
  - Scott Kern, MD, Johns Hopkins University
  - Paula Kim, Translating Research Across Communities (TRAC)
  - Diane Simeone, MD, University of Michigan Medical Center
  - Margaret Tempero, MD, University of California – San Francisco

- Internal Advisory Committee:
  - Leif Bergsagel, MD
  - Robert B. Diasio, MD
  - Matthew P. Goetz, MD
  - Scott H. Kaufmann, MD PhD
  - Brian P. O’Neill, MD
  - Lewis R. Roberts, MB ChB PhD
  - Thomas E. Witzig, MD
  - Edward B. Leof, PhD
  - Mark A. McNiven, PhD
  - Ping Yang, MD PhD

- Scientific Advisory Committee:
  - Lisa A. Boardman, MD
  - Michael B. Farnell, MD
  - Eva Pont, MD
  - Mark A. McNiven, PhD
  - Frank A. Sinicrope, MD
  - Stephen N. Thibodeau, PhD
  - Jan van Deursen, PhD