PANCREATIC CANCER NEWS & UPDATES – JULY 2012

PANCREATIC CANCER ACTION NETWORK AND COMMUNITY NEWS

Share your federal funding experiences: Help our advocacy efforts

http://www.pancan.org/section_research/resources_for_scientists/form_funding_experiences.php

Have you struggled to receive grants from the NCI or other federal institutions? Have you been successful? We're looking for information to help us understand what is working well for pancreatic cancer researchers and what could be improved (including, but not limited to, funding levels). We will use this information in our public policy efforts. Please click above and share your stories (they can be submitted anonymously).

Funding Opportunity Announcements for the new NCI National Clinical Trials Network Program

http://ctep.cancer.gov/investigatorResources/default.htm

The NIH released the 6 Funding Opportunity Announcements (FOAs) for the new NCI National Clinical Trials Network (NCTN) Program. The website includes links to the new FOAs and NCTN Program Guidelines. Each FOA lists the NCI/DCTD (Division of Cancer Treatment and Diagnosis) staff and other NCI staff (along with the appropriate email addresses) to which questions may be addressed.

Pancreas Cancer Research Fellowship at Virginia Mason Cancer Center

http://jobs.virginiamason.org/job/Seattle-Pancreas-Cancer-Research-Fellowship-Job-WA-98101/1913701/

Virginia Mason Cancer Center in Seattle is now accepting applications for a Pancreas Cancer Research Fellowship (PCRF) program and hopes to have their first PCRF fellow start on July 1, 2013 (the beginning of the next academic year). Vincent J. Picozzi, Jr., MD (Medical Advisory Board) is the Fellowship Director for this program. More information about the Digestive Disease Institute can be found here: https://www.virginiamason.org/ddi.

Support of the Cancer Genome Atlas Program (TCGA): Funding opportunity

http://www.fdbdo.com/s12-335/

Financial support is available for submissions to the TCGA pancreas project. Please see the note from Kenna Shaw, PhD of the TCGA Program Office:

"Because of the poor prognosis and overall public health impact, pancreatic ductal adenocarcinoma has been selected to be studied by TCGA. However, the pancreatic cancer project might end before it even begins unless more collaborators provide tissue samples. The collapse of this research project would be a lost opportunity for the pancreatic cancer community ... If you have frozen, untreated samples in your tissue bank accompanied by blood, please help by providing them, either retrospectively or prospectively, to TCGA."

Advocates join together to raise awareness about pancreatic cancer
http://unclineberger.org/news/pancreatic-cancer-awareness
This article describes the North Carolina delegation at the Pancreatic Cancer Action Network's Annual Advocacy Day, including Channing Der, PhD, 2012 Tempur-Pedic® Retailers Innovative Grant recipient.

A comparison of cancer burden & research spending reveals discrepancies in distribution of funding
http://www.ncbi.nlm.nih.gov/pubmed/22800364

- Journal: *BMC Public Health*
- Institution(s): California State University Long Beach, Long Beach, CA
- Corresponding author(s): Ashley Carter
- Major finding: The authors' analysis reveals a considerable mismatch between funding levels and burden. Some cancers are funded at levels far higher than their relative burden suggests (breast cancer, prostate cancer, and leukemia) while other cancers appear underfunded (bladder, esophageal, liver, oral, *pancreatic*, stomach, and uterine cancers). These discrepancies indicate that an improved method of health care research funding allocation should be investigated to better match funding levels to societal burden.

Scientists create first ever 3-D "pancreas in a dish"
http://www.cancer.ca/Canada-wide/About%20us/Media%20centre/CW-Media%20releases/CW-2012/Scientists%20create%20first%20ever%203-D%20pancreas%20in%20a%20dish.aspx?sc_lang=en
Scientists in Toronto have created a tiny, living 3-D organ model of pancreatic ducts to help them conduct research on pancreatic cancer. Dr. Senthil Muthuswamy will use the 3-D biological model he created to unravel the mystery of how pancreatic cancer begins to develop deep within the organ's duct system.

BIOLOGY OF CANCER

RNA sequencing of pancreatic circulating tumour cells implicates WNT signalling in metastasis
http://www.ncbi.nlm.nih.gov/pubmed/22763454
Pancreatic Cancer Action Network write-up:
http://pancan.org/section_research/strategic_research_program/news/topic_pancreatic_tumor_cells_reveal_mechanism.php

- Journal: *Nature*
- Institution(s): Harvard Medical School, Boston, MA and others
- Corresponding author(s): Shyamala Maheswaran and Daniel Haber
- PanCAN affiliated authors:
    - Co-first author: David Ting, MD: 2009 Fellowship
    - Middle author: Nabeel Bardeesy, PhD: 2008 Randy Pausch, PhD Pilot Grant
- Major finding: The authors adapted a microfluidic device for efficient capture of circulating tumor cells (CTCs) from an endogenous mouse pancreatic cancer model and subjected CTCs to single-molecule RNA sequencing, identifying Wnt2 as a candidate gene enriched in CTCs.

TGF-β and αvβ6 integrin act in a common pathway to suppress pancreatic cancer progression
http://www.ncbi.nlm.nih.gov/pubmed/22787119

- Journal: *Cancer Research*
- Institution(s): University of Rochester Medical Center, Rochester, NY and others
- Corresponding author(s): Aram Hezel

- PanCAN affiliated authors:
    - First author: Aram Hezel, MD: 2005 Samuel Stroum Young Investigator Award
    - Final author: Nabeel Bardeesy, PhD: 2008 Randy Pausch, PhD Pilot Grant
- Major finding: The authors' findings indicate that αvβ6 and TGFβ act in a common tumor suppressor pathway whose pharmacologic inactivation promotes pancreatic cancer progression.

Genetically defined subsets of human pancreatic cancer demonstrate unique in vitro chemosensitivity
http://www.ncbi.nlm.nih.gov/pubmed/22753594

- Journal: *Clinical Cancer Research*
- Institution(s): Johns Hopkins University, Baltimore, MD
- Corresponding author(s): James Eshleman
- PanCAN affiliated authors:
    - Final author: James Eshleman, MD, PhD: 2011 Innovative Grant
    - Middle author: Ralph Hruban, MD: Emeritus Scientific Advisory Board
    - Middle author: Anirban Maitra, MBBS: 2004 Career Development Award and Chair, Scientific Advisory Board
    - Middle author: Christine Iacobuzio-Donahue, MD, PhD: 2007 Pilot Grant and Scientific Advisory Board member
- Major finding: Chemosensitivity of pancreatic cancer cells correlated with some specific genetic profiles. These results support the hypothesis that genetic subsets of pancreatic cancer exist, and these genetic backgrounds may permit one to personalize the chemotherapy of PC in the future. Further work will need to confirm these responses and determine their magnitude in vivo.

The gamma secretase inhibitor MRK-003 attenuates pancreatic cancer growth in preclinical models
http://www.ncbi.nlm.nih.gov/pubmed/22752426

- Journal: *Molecular Cancer Therapeutics*
- Institution(s): Tohoku University Graduate School of Medicine, Miyagi, Japan and others
- Corresponding author(s): N.V Rajeshkumar
- PanCAN affiliated authors:
    - Middle author: Zeshaan Rasheed, MD, PhD: 2010 Tempur-Pedic® Retailers Pathway to Leadership Grant
    - Middle author: Anirban Maitra, MBBS: 2004 Career Development Award and Chair, Scientific Advisory Board
- Major finding: The authors used a panel of human pancreatic ductal adenocarcinoma cell lines, as well as patient-derived PDAC xenografts, to determine whether pharmacological targeting of Notch pathway could inhibit PDAC growth and potentiate gemcitabine sensitivity. Their findings strengthen the rationale for small molecule inhibition of Notch signaling as a therapeutic strategy in PDAC.

Molecular pathways in pancreatic carcinogenesis
http://www.ncbi.nlm.nih.gov/pubmed/22806689

- Journal: *Journal of Surgical Oncology*
- Institution(s): Johns Hopkins University, Baltimore, MD
- Corresponding author(s): Christine Iacobuzio-Donahue

- PanCAN affiliated author: Christine Iacobuzio-Donahue, MD, PhD: 2007 Pilot Grant and Scientific Advisory Board member
- Major finding: This review article discusses precursor lesions of pancreatic cancer, insights that they provide into the fundamental origins of pancreatic cancer, and opportunity for improving early diagnosis and management of cystic precursors.

Genetic evolution of pancreatic cancer: Lessons learnt from pancreatic cancer genome sequencing
http://www.ncbi.nlm.nih.gov/pubmed/21749982

- Journal: *Gut*
- Institution(s): Johns Hopkins University, Baltimore, MD
- Corresponding author(s): Christine Iacobuzio-Donahue
- PanCAN affiliated author: Christine Iacobuzio-Donahue, MD, PhD: 2007 Pilot Grant and Scientific Advisory Board member
- Major finding: Pancreatic cancer is a disease caused by the accumulation of genetic alterations in specific genes. New insight into the mutational spectra characteristics of this lethal tumor type indicate potential targets for personalized diagnostic and therapeutic intervention as well as the optimal timing for intervention based on the natural history of pancreatic carcinogenesis and progression.

Emerging frontiers in pancreatic cancer research: Elaboration of key genes, cells & extracellular milieu
http://www.ncbi.nlm.nih.gov/pubmed/22759592

- Journal: *Current Opinion in Gastroenterology*
- Institution(s): University of Michigan Medical Center, Ann Arbor, MI
- Corresponding author(s): Diane Simeone
- PanCAN affiliated author: Diane Simeone, MD: 2010 The Randy Pausch Family Innovative Grant and Scientific Advisory Board member
- Major finding: This review article discusses recent publications that shed new light on the mutational landscape of pancreatic cancer and further delineate the distinctive pancreatic cancer-stroma ecosystem as determined by the dynamic interplay of inflammation, hallmark mutations, EMT, and cancer stem cells.

S100P-derived RAGE antagonistic peptide reduces tumor growth and metastasis
http://www.ncbi.nlm.nih.gov/pubmed/22718861

- Journal: *Clinical Cancer Research*
- Institution(s): The University of Texas MD Anderson Cancer Center, Houston, TX and others
- Corresponding author(s): Craig Logsdon
- PanCAN affiliated author: Craig Logsdon, PhD: Scientific Advisory Board member
- Major finding: RAP (RAGE [receptor for advanced glycation end products] antagonist peptide) shows promise as a tool for the investigation of RAGE function and as an in vivo treatment for RAGE-related disorders. Systemic in vivo administration of RAP reduced the growth and metastasis of pancreatic tumors.

Relevance of amyloid precursor-like protein 2 C-terminal fragments in pancreatic cancer cells
http://www.ncbi.nlm.nih.gov/pubmed/22797723

- Journal: *International Journal of Oncology*

- Institution(s): University of Nebraska Medical Center, Omaha, NE and others
- Corresponding author(s): Joyce Solheim
- PanCAN affiliated author: Middle author Tony Hollingsworth, MD: Scientific Advisory Board member
- Major finding: The authors' data demonstrate that abundant amyloid precursor-like protein 2 (APLP2), but not amyloid precursor protein (APP), C-terminal fragment expression is conserved in pancreatic cancer cell lines; however, APP and APLP2 equally regulated the growth of S2-013 pancreatic cancer cells. Chiefly, their discoveries establish a role for APLP2 in the growth of pancreatic cancer cells and show that inhibitors preventing APLP2 cleavage reduce the viability of pancreatic cancer cells.

Secreted semaphorin 5A suppressed tumour burden, increased metastasis & endothelial proliferation
http://www.ncbi.nlm.nih.gov/pubmed/22782341

- Journal: *British Journal of Cancer*
- Institution(s): University of Nebraska Medical Center, Omaha, NE and others
- Corresponding author(s): Rakesh Singh
- Major finding: The authors' results suggest that a bioactive, secreted form of Sema5A-ECD (semaphorin 5A extracellular domain) has an intriguing and potentially important role in its ability to enhance pancreatic tumor invasiveness, angiogenesis, and micrometastases.

MUC4 potentiates invasion and metastasis through stabilization of fibroblast growth factor receptor 1
http://www.ncbi.nlm.nih.gov/pubmed/22791819

- Journal: *Carcinogenesis*
- Institution(s): University of Nebraska Medical Center, Omaha, NE
- Corresponding author(s): Surinder Batra
- Major finding: The results of the present study suggest that MUC4 promotes invasion and metastasis by FGFR1 stabilization through N-Cadherin up-regulation.

Requirement of NEMO/IKKγ for effective expansion of KRAS-induced precancerous lesions in pancreas
http://www.ncbi.nlm.nih.gov/pubmed/22751123

- Journal: *Oncogene*
- Institution(s): University of Ulm, Ulm, Germany
- Corresponding author(s): Thomas Wirth
- Major finding: The authors' study suggests that NEMO, an IKK subunit necessary for canonical NF-κB activation, is dispensable for normal pancreatic development and function, but essential for the propagation of KRAS-induced pancreatic intraepithelial neoplasm lesions.

Cell intrinsic role of Cox-2 in pancreatic cancer development
http://www.ncbi.nlm.nih.gov/pubmed/22784710

- Journal: *Molecular Cancer Therapeutics*
- Institution(s): UCLA, Los Angeles, CA
- Corresponding author(s): Hong Wu
- Major finding: The authors' results support a cell intrinsic role for cyclooxygenase-2 (COX-2) in pancreatic ductal adenocarcinoma development and suggest that, while anti-COX-2 therapy may

delay the development and progression of PDAC, mechanisms known to increase chemoresistance through AKT activation must also be overcome.

Targeting anticancer drug delivery to pancreatic cancer cells using a fucose-bound nanoparticle
http://www.ncbi.nlm.nih.gov/pubmed/22808043

- Journal: *PLoS One*
- Institution(s): Sapporo Medical University School of Medicine, Sapporo, Japan
- Corresponding author(s): Junji Kato
- Major finding: Intravenously injected L-fucose-bound liposomes carrying Cisplatin were successfully delivered to pancreatic cancer cells, mediating efficient tumor growth inhibition as well as prolonging survival in mouse xenograft models. This modality represents a new strategy for pancreatic cancer cell-targeting therapy.

Pancreatic cancer cells' ability of collagen internalization during epithelial-mesenchymal transition
http://www.ncbi.nlm.nih.gov/pubmed/22792318

- Journal: *PLoS One*
- Institution(s): Kyushu University, Fukuoka, Japan and others
- Corresponding author(s): Kenoki Ohuchida and Kazuhiro Mizumoto
- Major finding: Pancreatic cancer cells are capable of collagen internalization, which is enhanced by epithelial-mesenchymal transition. This extracellular matrix clearance system may be a novel mechanism for cellular invasion and a potential therapeutic target in pancreatic cancer.

Evaluation of a gene-directed enzyme-product therapy (GDEPT) in human pancreatic tumor cells
http://www.ncbi.nlm.nih.gov/pubmed/22815775

- Journal: *PLoS One*
- Institution(s): University of Veterinary Medicine, Vienna, Austria and others
- Corresponding author(s): Matthias Renner
- Major finding: Gene-directed enzyme prodrug therapy (GDEPT) is a two-step treatment protocol for solid tumors that involves the transfer of a gene encoding a prodrug-activating enzyme followed by administration of the inactive prodrug that is subsequently activated by the enzyme to its tumor toxic form. These data qualify the cell lines as part of valuable in vitro and in vivo models for the use in defined GDEPT preclinical studies for pancreas tumor therapy.

Activated K-Ras, INK4a/Arf deficiency promote aggressiveness by EMT, cancer stem cell phenotype
http://www.ncbi.nlm.nih.gov/pubmed/22806240

- Journal: *Journal of Cellular Physiology*
- Institution(s): Karmanos Cancer Institute, Wayne State University School of Medicine, Detroit, MI and others
- Corresponding author(s): Fazlul Sarkar
- Major finding: The authors' results suggest that the acquisition of epithelial to mesenchymal transition phenotype and induction of cancer stem cell characteristics could be linked with the aggressiveness of pancreatic ductal adenocarcinoma mediated in part through the activation of platelet-derived growth factor-D signaling.

The GCTM-5 epitope associated with the mucin-like glycoprotein FCGBP marks progenitor cells
http://www.ncbi.nlm.nih.gov/pubmed/22761039

- Journal: *Stem Cells*
- Institution(s): Monash University, Victoria, Australia and others
- Corresponding author(s): Martin Pera
- Major finding: Neoplasms arising in the liver and pancreas expressed the GCTM-5 antigen, with pancreatic adenocarcinoma in particular showing strong and consistent reactivity. Based on these findings, the authors conclude that the GCTM-5 epitope on the mucin-like glycoprotein FCGBP is a cell surface marker for the study of normal differentiation lineages, regeneration, and disease progression in tissues of endodermal origin.

Molecular biology of pancreatic cancer: How useful is it in clinical practice?
http://www.ncbi.nlm.nih.gov/pubmed/22797383

- Journal: *Journal of the Pancreas*
- Institution(s): Athens University, Attikon University Hospital, Athens, Greece
- Corresponding author(s): George Sakorafas
- Major finding: Molecular biology may have important clinical implications in patients with pancreatic cancer and represents one of the most active areas on cancer research. Hopefully clinical applications of molecular biology in pancreatic cancer will expand in the future, improving the effectiveness of treatment and prognosis of patients with pancreatic cancer.

ETIOLOGY

Dietary antioxidants, aetiology of pancreatic cancer: A cohort study using food diaries and biomarkers
http://www.ncbi.nlm.nih.gov/pubmed/22826513
Pancreatic Cancer Action Network summary:
http://pancan.org/section_research/strategic_research_program/news/topic_intake_of_antioxidants_may_impact_pancreatic_cancer_risk.php
Media attention, for example: http://www.webmd.com/cancer/pancreatic-cancer/news/20120724/eat-antioxidants-to-lower-pancreatic-cancer-risk

- Journal: *Gut*
- Institution(s): University of East Anglia, Norwich, UK and others
- Corresponding author(s): Andrew Hart
- Major finding: Participants in the EPIC-Norfolk Study completed 7-day food diaries which recorded foods, brands and portion sizes. Those eating a combination of the highest three quartiles of all of vitamins C and E and selenium had a decreased risk of developing pancreatic cancer. The results support measuring antioxidants in studies investigating the etiology of pancreatic cancer. If the association is causal, 1 in 12 cancers might be prevented by avoiding the lowest intakes.

Pancreatitis and pancreatic cancer risk: A pooled analysis in the PanC4
http://www.ncbi.nlm.nih.gov/pubmed/22767586

- Journal: *Annals of Oncology*
- Institution(s): Catalan Institute of Oncology, Barcelona, Spain and others
- Corresponding author(s): Eric Duell
- PanCAN affiliated author: Middle author Gloria Petersen, PhD, Scientific Advisory Board member

- Major finding: Data from the International Pancreatic Cancer Case-Control Consortium (PanC4) suggested that, despite a moderately strong association between pancreatitis and pancreatic cancer, the population attributable fraction was estimated at 1.34%, suggesting that a relatively small proportion of pancreatic cancer might be avoided if pancreatitis could be prevented.

Impact of diabetes duration and chronic pancreatitis on type 2 diabetes and pancreatic cancer risk
http://www.ncbi.nlm.nih.gov/pubmed/22831166

- Journal: *Diabetes, Obesity and Metabolism*
- Institution(s): Merck Sharp & Dohme Corp., Whitehouse Station, NJ and others
- Corresponding author(s): Kimberly Brodovicz
- Major finding: Patients with type 2 diabetes mellitus had an 80% increased risk of pancreatic cancer versus patients without diabetes. Patients with T2DM and chronic pancreatitis were 12 times more likely to develop pancreatic cancer.

Insulin resistance and cancer: Epidemiological evidence
http://www.ncbi.nlm.nih.gov/pubmed/22851686

- Journal: *Endocrine-Related Cancer*
- Institution(s): National Cancer Center, Chuo-ku, Japan
- Corresponding author(s): Manami Inoue
- Major finding: Inverse relationships between liver, pancreatic, and endometrial cancers and physical activity and coffee consumption have been shown, both of which are known to reduce the risk of diabetes mellitus. Interventions directed at or involving these variables should contribute to decreasing the risk of insulin resistance-associated cancer.

Diabetes and pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22843556

- Journal: *Endocrine-Related Cancer*
- Institution(s): Johns Hopkins University, Baltimore, MD and others
- Corresponding author(s): Dana Andersen
- Major finding: The authors conclude that diabetes and pancreatic cancer have a complex relationship that requires more clinical attention. The risk of developing pancreatic cancer can be reduced by aggressive and successful treatment of type 2 diabetes and obesity, and the prompt diagnosis of type 3c diabetes may allow detection of a tumor at a potentially curable stage.

Environmental tobacco smoke and the risk of pancreatic cancer among non-smokers: A meta-analysis
http://www.ncbi.nlm.nih.gov/pubmed/22843437

- Journal: *Occupational & Environmental Medicine*
- Institution(s): Brown University, Providence, RI and others
- Corresponding author(s): Dominique Michaud
- Major finding: The authors' meta-analysis does not provide evidence for an association between exposure to environmental tobacco smoke and risk of pancreatic cancer.

Exenatide therapy and the risk of pancreatitis and pancreatic cancer in a privately insured population
http://www.ncbi.nlm.nih.gov/pubmed/22845701

- Journal: *Diabetes Technology & Therapeutics*
- Institution(s): USC, Los Angeles, CA and others
- Corresponding author(s): Anne Peters
- Major finding: The authors found no association between exenatide use and either hospitalization for acute pancreatitis or pancreatic cancer in a large sample of privately insured U.S. patients.

Challenging the axiom: Does occurrence of oncogenic mutations limit cancer development with age?
http://www.ncbi.nlm.nih.gov/pubmed/22751134

- Journal: *Oncogene*
- Institution(s): University of Colorado School of Medicine, Aurora, CO
- Corresponding author(s): James DeGregori
- Major finding: Dr. DeGregori argues that age-dependent alteration of selection for oncogenic mutations provides a more plausible explanation for increased cancer incidence in the elderly. Although oncogenic mutations are clearly required for cancer evolution, together these observations counter the common view that age dependence of cancers is largely explained by the time required to accumulate sufficient oncogenic mutations.

EARLY DETECTION, DIAGNOSIS, AND PROGNOSIS

Diagnosing and treating metastatic pancreatic cancer
http://www.cancernetwork.com/pancreatic-cancer/content/article/10165/2087593?CID=rss
Diane Simeone, MD, recipient of the 2010 The Randy Pausch Family Innovative Grant and Scientific Advisory Board member, was interviewed for this *Cancer Network* podcast and article.

A novel survival-based tissue microarray validates MUC1 and mesothelin as biomarkers
http://www.ncbi.nlm.nih.gov/pubmed/22792233

- Journal: *PLoS One*
- Institution(s): Thomas Jefferson University, Philadelphia, PA and others
- Corresponding author(s): Peter Allen
- PanCAN affiliated authors:
    - Middle author: Jonathan Brody, PhD: 2010 Skip Viragh Career Development Award
    - Middle author: Eileen O'Reilly, MD, Medical Advisory Board
- Major finding: Results from a survival tissue microarray comprised of short-term and long-term survivors who underwent resection for pancreatic ductal adenocarcinoma revealed that MUC1 and MSLN (mesothelin) were superior to pathologic features and other putative biomarkers as predicting survival group. Molecular assays comparing cancers from short and long survivors are an effective strategy to screen biomarkers and prioritize candidate cancer genes for diagnostic and therapeutic studies.

Feasibility Study of EUS-NOTES as a novel approach for pancreatic cancer staging and therapy
http://www.ncbi.nlm.nih.gov/pubmed/22776721

- Journal: *Hepato-Gastroenterology*
- Institution(s): University of Texas MD Anderson Cancer Center, Houston, TX and others
- Corresponding author(s): Manoop Bhutani
- PanCAN affiliated author: Final author Jason Fleming, MD: Medical Advisory Board member

- Major finding: An international collaborative study showed that it is technically possible by endoscopic ultrasound-guided Natural Orifice Transluminal Endoscopic Surgery (EUS-NOTES) procedures to achieve a systematic anterior and posterior access for NOTES transgastric peritoneoscopy and direct pancreatic endoscopic procedures.

Multi-color palette of fluorescent proteins for imaging the tumor microenvironment
http://www.ncbi.nlm.nih.gov/pubmed/22573550

- Journal: *Journal of Cellular Biochemistry*
- Institution(s): AntiCancer, Inc., San Diego, CA and others
- Corresponding author(s): Robert Hoffman
- PanCAN affiliated author: Middle author Jason Fleming, MD: Medical Advisory Board member
- Major finding: Pancreatic-cancer-patient tumor specimens were passaged orthotopically in transgenic nude mice ubiquitously expressing red fluorescent protein (RFP). The primary patient tumors acquired RFP-expressing stroma, suggesting that this model can be used to image progression of patient pancreatic tumors and to visually target stroma as well as cancer cells and to individualize patient therapy.

Prognostic significance of L-type amino-acid transporter 1 expression in resected pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22805328

- Journal: *British Journal of Cancer*
- Institution(s): Gunma University Graduate School of Medicine, Gunma, Japan
- Corresponding author(s): Izumi Takeyoshi
- Major finding: L-type amino-acid transporter 1 expression is a promising pathological marker for the prediction of outcome in patients with pancreatic cancer.

RhoT1 and Smad4 are correlated with lymph node metastasis and overall survival in pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22860091

- Journal: *PLoS One*
- Institution(s): Tongji University School of Medicine, Shanghai, China and others
- Corresponding author(s): Hua Jiang and HengJun Gao
- Major finding: The authors' results indicated that the low-expression levels of RhoT1 and Smad4 were significantly associated with lymph node metastasis and shorter survival. RhoT1 may be considered as a potential novel marker for predicting the outcome in patients with pancreatic cancer.

851 resected cystic tumors of the pancreas: 33-year experience at the Massachusetts General Hospital
http://www.ncbi.nlm.nih.gov/pubmed/22770958

- Journal: *Surgery*
- Institution(s): Massachusetts General Hospital, Harvard Medical School, Boston, MA
- Corresponding author(s): Carlos Fernández-del Castillo
- Major finding: Cystic neoplasms of the pancreas are being diagnosed and treated with increasing frequency. At present, most are incidentally discovered intraductal papillary mucinous neoplasms.

Carbohydrate antigen 19-9 is a prognostic and predictive biomarker
http://www.ncbi.nlm.nih.gov/pubmed/22786786

- Journal: *Cancer*
- Institution(s): Ohio State University, Columbus, OH and others
- Corresponding author(s): Tanios Bekaii-Saab
- Major finding: In patients who have advanced pancreatic cancer treated with gemcitabine-containing regimens, baseline CA19-9 is prognostic for outcome.

Elevated baseline CA19-9 levels correlate with adverse prognosis in patients with pancreas cancer
http://www.ncbi.nlm.nih.gov/pubmed/22729400

- Journal: *Medical Oncology*
- Institution(s): Ohio State University, Columbus, OH
- Corresponding author(s): Tanios Bekaii-Saab
- Major finding: Higher than normal CA19-9 level is an adverse prognostic factor in both early and advanced stage pancreatic cancer and may prove to be useful in the selection of patients for more aggressive therapy in future trials. CA19-9 level decrease of >25 % predicts improved survival in advanced disease on chemotherapy.

Effect of genetic polymorphisms on therapeutic response and clinical outcomes in pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22838950

- Journal: *Pharmacogenomics*
- Institution(s): Sungkyunkwan University School of Medicine, Seoul, Korea
- Corresponding author(s): Soo-Youn Lee
- Major finding: Genetic polymorphisms in genes related to metabolism and action sites of gemcitabine showed associations with the therapeutic efficacy, in terms of overall survival, time to progression, and disease progression in pancreatic cancer patients treated with gemcitabine-based chemotherapy. In particular, polymorphisms of the *CMPK1* gene seem to provide important prognostic information.

Pancreatic ductal adenocarcinoma: Long-term survival does not equal cure
http://www.ncbi.nlm.nih.gov/pubmed/22763261

- Journal: *Surgery*
- Institution(s): Massachusetts General Hospital, Boston, MA
- Corresponding author(s): Cristina Ferrone
- Major finding: Pancreatic ductal adenocarcinoma demonstrates a very heterogeneous biology, but patients with negative resection margins and node negative cancers are more likely to survive 5 years after resection. However, the authors' data demonstrate that the biology of the cancer rather than simple pathologic factors determine a patient's prognosis.

Early diagnosis of pancreatic cancer: Role of stroma, surface proteases, glucose-homeostatic agents
http://www.ncbi.nlm.nih.gov/pubmed/22695086

- Journal: *Pancreas*
- Institution(s): Charles University, Prague, Czech Republic
- Corresponding author(s): Filip Zavoral

- Major finding: The interactions of surface proteases with glucose-homeostatic agents may adequately explain the evolution of new-onset diabetes that may help diagnose pancreatic adenocarcinoma, and differentiate it from the common type 2 diabetes.

Searching for indicators of malignancy in pancreatic intraductal papillary mucinous neoplasms
http://www.ncbi.nlm.nih.gov/pubmed/22752369

- Journal: *Annals of Surgical Oncology*
- Institution(s): University of Brescia, Brescia, Italy
- Corresponding author(s): Gian Luca Baiocchi
- Major finding: (18)FDG-PET is useful for detection of malignancy in intraductal papillary mucinous neoplasm, improving the differential diagnosis with benign cases by functional data. The choice of maximum standardized uptake value (SUV(max)) cutoff should maximize specificity.

Trovagene to study trans-renal KRAS mutation detection in pancreatic cancer
http://www.prnewswire.com/news-releases/trovagene-to-study-trans-renal-kras-mutation-detection-in-pancreatic-cancer-161186565.html

- Company: Trovagene, Inc., San Diego, CA
- Major finding: Trovagene announced that they will be collaborating with The University of Texas MD Anderson Cancer Center on the detection of transrenal KRAS mutations in the urine of patients with pancreatic cancer.

TREATMENT

***Journal of the Pancreas* highlights from the "2012 ASCO Annual Meeting": Chicago, IL, June 1-5, 2012**
http://www.serena.unina.it/index.php/jop/issue/current
This issue of *JOP* contains summaries of research presented at the 2012 ASCO Annual Meeting. The journal also includes an editorial by Muhammad Wasif Saif about the current state of pancreatic cancer research: http://www.serena.unina.it/index.php/jop/article/view/962/967.

Emerging strategies to prevent the development of pancreatic fistula after distal pancreatectomy
http://www.ncbi.nlm.nih.gov/pubmed/22766362

- Journal: *Surgery*
- Institution(s): University of Connecticut Medical School, Farmington, CT and Washington University, St. Louis, MO
- Corresponding author(s): Ramon Jimenez
- PanCAN affiliated author: Final author William Hawkins, MD: 2005 Skip Viragh Career Development Award
- Major finding: Based on these results, the authors postulate that stapler transection with mesh reinforcement is the best currently available method of pancreatic remnant closure. Results of ongoing trials using energy sealing devices are eagerly awaited, and further research into this area is necessary to make further progress in this field.

Gemcitabine triggers a pro-survival response in pancreatic cancer cells through MNK2/eIF4E pathway
http://www.ncbi.nlm.nih.gov/pubmed/22797067

- Journal: *Oncogene*
- Institution(s): University of Rome, Rome, Italy
- Corresponding author(s): Claudio Sette

- Major finding: Our results highlight a novel pro-survival pathway triggered by gemcitabine in pancreatic ductal adenocarcinoma cells, which leads to MNK2-dependent phosphorylation of eIF4E, suggesting that the MNK/eIF4E pathway represents an escape route utilized by PDAC cells to withstand chemotherapeutic treatments.

Gemcitabine + erlotinib followed by capecitabine vs. capecitabine + erlotinib followed by gemcitabine
http://www.ncbi.nlm.nih.gov/pubmed/22773551

- Journal: *Gut*
- Institution(s): Ludwig-Maximilians-University of Munich, Munich, Germany and others
- Corresponding author(s): Volker Heinemann
- Major finding: AIO-PK0104 investigated two treatment strategies in advanced pancreatic cancer: a reference sequence of gemcitabine/erlotinib followed by 2nd-line capecitabine was compared with a reverse experimental sequence of capecitabine/erlotinib followed by gemcitabine. Both treatment strategies were found to be feasible and demonstrated comparable efficacy; KRAS may serve as biomarker in patients with advanced pancreatic cancer treated with erlotinib.

Phase II clinical trial of fixed dose rate gemcitabine + cisplatin & chemoradiotherapy w/ capecitabine
http://www.ncbi.nlm.nih.gov/pubmed/22806305

- Journal: *Cancer Chemotherapy and Pharmacology*
- Institution(s): Seoul National University Hospital, Seoul, Korea
- Corresponding author(s): Yung-Jue Bang and Yong Bum Yoon
- Major finding: Induction chemotherapy with gemcitabine and cisplatin followed by chemoradiotherapy with capecitabine and maintenance gemcitabine was well tolerated and exhibited promising efficacy for the treatment of locally advanced pancreatic cancer.

Regional intra-arterial vs. systemic chemotherapy: A systematic review and meta-analysis
http://www.ncbi.nlm.nih.gov/pubmed/22815840

- Journal: *PLoS One*
- Institution(s): Tianjin Medical University Cancer Institute and Hospital, Tianjin, China
- Corresponding author(s): Jihui Hao
- Major finding: A systematic review and meta-analysis of randomized controlled trials suggested that regional intra-arterial chemotherapy is more effective and has fewer complications than systemic chemotherapy for treating advanced pancreatic cancer.

Resection after neoadjuvant therapy for locally advanced, "unresectable" pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22770956

- Journal: *Surgery*
- Institution(s): University Hospital Heidelberg, Heidelberg, Germany
- Corresponding author(s): Jens Werner
- Major finding: In locally advanced, unresectable pancreatic cancer, R0/R1 resections can be achieved in up to 40% of patients who undergo operation after neoadjuvant therapy. In these cases, survival rates are similar to those observed for initially resectable pancreatic cancer.

R1 resection has impact on long-term outcome in standardized pathology modified for routine use
http://www.ncbi.nlm.nih.gov/pubmed/22766366

- Journal: *Surgery*
- Institution(s): University of Rostock, Germany
- Corresponding author(s): Bettina Rau
- Major finding: Our 51% rate of R1 resections in ductal pancreatic carcinoma indicates a high quality standard of pathologic evaluation. The vast majority of R1 margins are located at the retroperitoneal dissection surface. Standardization of histopathologic analysis has a clinically relevant impact on survival after oncologic resection of pancreatic cancer and can be achieved by less extensive protocols.

Induction gemcitabine, oxaliplatin followed by gemcitabine, concurrent external-beam radiation
http://www.ncbi.nlm.nih.gov/pubmed/22778019

- Journal: *Cancer*
- Institution(s): University of Turin, Candiolo, Italy
- Corresponding author(s): Francesco Leone
- Major finding: The current results indicated that induction gemcitabine and oxaliplatin followed by chemoradiotherapy is feasible in patients with locally advanced pancreatic cancer, and patients with both borderline resectable and unresectable disease received clinical benefit.

Aggressive local treatment containing intraoperative radiation therapy for isolated local recurrences
http://www.ncbi.nlm.nih.gov/pubmed/22809267

- Journal: *BMC Cancer*
- Institution(s): German Cancer Research Center, Heidelberg, Germany and others
- Corresponding author(s): Falk Roeder
- Major finding: Combination of surgery, intraoperative radiation therapy (IORT), and external beam radiation therapy (EBRT) in patients with isolated local recurrences of pancreatic cancer resulted in encouraging local control and overall survival in our cohort with acceptable toxicity. The authors' approach seems to be superior to palliative chemotherapy or chemoradiation alone and should be further investigated in a prospective setting specifically addressing isolated local recurrences of pancreatic cancer.

Prospective randomised evaluation of traditional Chinese medicine combined with chemotherapy
http://www.ncbi.nlm.nih.gov/pubmed/22782343

- Journal: *British Journal of Cancer*
- Institution(s): Fudan University Shanghai Cancer Center, Shanghai, China and MD Anderson Cancer Center, Houston, TX
- Corresponding author(s): Lorenzo Cohen
- Major finding: A randomized, single-blinded, phase II clinical study of huachansu (an intravenous formulated extract of the venom of the wild toad Bufo bufo gargarizans Cantor or Bufo melanostictus Schneider) plus gemcitabine versus placebo plus gemcitabine demonstrated that huachansu when combined with gemcitabine did not improve the outcome of patients with locally advanced and/or metastatic pancreatic cancer.

BAYPAN study: A double-blind phase III randomized trial of gemcitabine plus sorafenib
http://www.ncbi.nlm.nih.gov/pubmed/22771827

- Journal: *Annals of Oncology*
- Institution(s): Institut Paoli-Calmettes, Marseille, France and others
- Corresponding author(s): Anthony Gonçalves
- Major finding: The addition of sorafenib to gemcitabine does not improve progression-free survival in advanced pancreatic cancer patients.

Learning curve for laparoscopic distal pancreatectomy in a high-volume hospital
http://www.ncbi.nlm.nih.gov/pubmed/22763577

- Journal: *Updates in Surgery*
- Institution(s): Vita-Salute San Raffaele University, Milan, Italy
- Corresponding author(s): Marco Braga
- Major finding: The purpose of this study was to identify the learning curve period for performing laparoscopic distal pancreatectomy. The authors found that strict selection criteria, high-volume hospitals, and experienced teams in open pancreatic surgery may have played a role in shortening the learning curve.

Pathological, clinical impact of neoadjuvant chemoradiotherapy using gemcitabine and radiation
http://www.ncbi.nlm.nih.gov/pubmed/22766692

- Journal: *Journal of Hepato-Biliary-Pancreatic Sciences*
- Institution(s): Nara Medical University, Kashihara, Japan
- Corresponding author(s): Masayuki Sho
- Major finding: The authors' current protocol of neoadjuvant chemoradiotherapy (full-dose gemcitabine preoperatively with concurrent radiation) is feasible and substantially improves the pathology of patients with resectable pancreatic cancer. However, it has some detrimental effects on postoperative nutritional status and performance of adjuvant chemotherapy. Furthermore, it should be noted that there is a possibility of arterial complications.

Effect of adjuvant chemotherapy with fluorouracil plus folinic acid or gemcitabine in periampullary
http://www.ncbi.nlm.nih.gov/pubmed/22782416

- Journal: *JAMA*
- Institution(s): University of Liverpool, Liverpool, England and others
- Corresponding author(s): John Neoptolemos
- Major finding: Among patients with resected periampullary adenocarcinoma, adjuvant chemotherapy, compared with observation, was not associated with a significant survival benefit in the primary analysis; however, multivariable analysis adjusting for prognostic variables demonstrated a statistically significant survival benefit associated with adjuvant chemotherapy.

Prospective study of bevacizumab + temozolomide in patients with advanced neuroendocrine tumors
http://www.ncbi.nlm.nih.gov/pubmed/22778320

- Journal: *JCO*
- Institution(s): Harvard Medical School, Boston, MA and others
- Corresponding author(s): Jennifer Chan

- Major finding: Temozolomide (an oral analog of dacarbazine) and bevacizumab (a monoclonal antibody targeting VEGF) can be safely administered together in patients with advanced neuroendocrine tumors (NETs), and the combination regimen appears promising for patients with pancreatic NETs. Studies evaluating the relative contributions of these two agents to the observed antitumor activity are warranted.

Pasireotide shows efficacy, tolerability in neuroendocrine tumors refractory to octreotide LAR
http://www.ncbi.nlm.nih.gov/pubmed/22807497

- Journal: *Endocrine-Related Cancer*
- Institution(s): H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL and others
- Corresponding author(s): Larry Kvols
- Major finding: Pasireotide (a novel multireceptor-targeted somatostatin analogue) was effective and generally well tolerated in controlling the symptoms of carcinoid syndrome in 27% of patients with advanced NET refractory or resistant to octreotide LAR therapy.

First patient dosed with M402 in Phase 1/2 clinical trial in metastatic pancreatic cancer
http://www.marketwatch.com/story/first-patient-dosed-with-m402-in-phase-12-clinical-trial-in-metastatic-pancreatic-cancer-2012-07-02

- Company: Momenta Pharmaceuticals, Inc., Cambridge, MA
- Major finding: Dosing has begun in the Phase 1/2 proof-of-concept clinical trial of M402 (a novel heparan sulfate mimetic that binds to multiple growth factors, adhesion molecules, and chemokines to inhibit tumor angiogenesis, progression, and metastasis) in combination with gemcitabine in patients with advanced metastatic pancreatic cancer.

Jefferson Hospital performs first robot-assisted distal pancreatectomy
http://www.newswise.com/articles/jefferson-hospital-performs-first-robot-assisted-distal-pancreatectomy?ret=/articles/list&category=medicine&page=1&search%5Bstatus%5D=3&search%5Bsort%5D=date+desc&search%5Bsection%5D=10&search%5Bhas_multimedia%5D=

- Institution: Thomas Jefferson Hospital, Philadelphia, PA
- Major finding: Harish Lavu, MD, FACS, an assistant professor in the Department of Surgery, performed a distal pancreatectomy and splenectomy with the assistance of the da Vinci robot.

The price we pay for progress: A meta-analysis of harms of newly approved anticancer drugs
http://www.ncbi.nlm.nih.gov/pubmed/22802313

- Journal: *JCO*
- Institution(s): Princess Margaret Hospital and University of Toronto, Toronto, Canada and others
- Corresponding author(s): Eitan Amir
- Major finding: New anticancer agents that lead to improvements in time-to-event end points also increase morbidity and treatment-related mortality. The balance between efficacy and toxicity may be less favorable in clinical practice because of selection of fewer patients with good performance status and limited comorbidities. Patients' baseline health characteristics should be considered when choosing therapy.

CANCER CONTROL, SURVIVORSHIP, AND OUTCOMES RESEARCH

Medscape CME Activity - Exocrine pancreas cancer and thromboembolic events

http://www.medscape.org/viewarticle/766716_10

This *Medscape Oncology Education* article is coauthored by Eileen O'Reilly, MD, Medical Advisory Board member. Drs. Epstein and O'Reilly provide a systematic and comprehensive review of the literature to address the clinical and pathologic features recognized in pancreas cancer pertaining to thrombosis, and to discuss ongoing investigations of prophylactic anticoagulation in the hopes of improving disease-related outcomes.

Longitudinal health-related quality of life assessment implications for Stage IV pancreatic cancer

http://www.ncbi.nlm.nih.gov/pubmed/22850626

- Journal: *Pancreas*
- Institution(s): Cancer Treatment Centers of America, Zion, IL
- Corresponding author(s): Edgar Staren
- Major finding: This study provides preliminary evidence to indicate that patients with stage IV pancreatic cancer who have a better global health at baseline as well as those whose cognitive function improves within 3 months of treatment have a significantly increased probability of survival.

L-Carnitine-supplementation in advanced pancreatic cancer (CARPAN) - a randomized multicentre trial

http://www.ncbi.nlm.nih.gov/pubmed/22824168

- Journal: *Nutrition Journal*
- Institution(s): University Medicine Greifswald, Germany and others
- Corresponding author(s): Markus Lerch
- Major finding: Patients suffering from advanced pancreatic cancer were enrolled in a prospective, multi-center, placebo-controlled, randomized, and double-blinded trial to receive oral L-Carnitine or placebo to combat cachexia. While the authors' data are preliminary and need confirmation, they indicate that patients with pancreatic cancer may have a clinically relevant benefit from the inexpensive oral supplementation of L-Carnitine.

Incidence of preventable postoperative readmissions following pancreaticoduodenectomy

http://www.ncbi.nlm.nih.gov/pubmed/22750899

- Journal: *Oncology Nursing Forum*
- Institution(s): University of Pittsburgh Medical Center, PA
- Corresponding author(s): Margaret Rosenzweig [no relation]
- Major finding: Patients undergoing pancreaticoduodenectomy (PD) experience an increase in self-care demand post-discharge. Poor discharge education can lead to high rates of readmission, specifically for dehydration and malnutrition, mandating an assessment of patient education prior to discharge.

Evidence for treatment and survival disparities by age in pancreatic adenocarcinoma

http://www.ncbi.nlm.nih.gov/pubmed/22836862

- Journal: *Pancreas*
- Institution(s): Columbia University College of Physicians and Surgeons, New York, NY
- Corresponding author(s): Harold Frucht

- Major finding: Treatment disparities exist by age despite advances in radiation and surgical treatment. Increased treatment in the elderly will increase overall survival from pancreatic adenocarcinoma.

Racial disparities in gastrointestinal cancers-related mortality in the US population
http://www.ncbi.nlm.nih.gov/pubmed/22797822

- Journal: *Digestive Diseases and Sciences*
- Institution(s): Wayne State University, Detroit, MI
- Corresponding author(s): Suthat Liangpunsakul
- Major finding: Analyses of the third National Health and Nutrition Examination Survey (NHANES III) and related mortality data files suggested that overall gastrointestinal cancer-related mortality is significantly higher among non-Hispanic black compared to non-Hispanic white in the US population. Esophageal and pancreatic cancer mortalities were higher in NHB women compared to NHW women.

Advance care planning in patients with cancer referred to a phase I clinical trials program
http://www.ncbi.nlm.nih.gov/pubmed/22778314

- Journal: *JCO*
- Institution(s): University of Texas MD Anderson Cancer Center, Houston, TX
- Corresponding author(s): Siqing Fu
- Major finding: Although most patients referred to a phase I clinic remained optimistic, many had discussed a living will, medical power of attorney, and/or DNR order with their physician, family, and/or attorney. However, a significant minority had not addressed this issue with anyone, and many refused to take a survey on the topic, suggesting that extra effort to address advance care planning is needed for these patients.

Reasons why physicians don't discuss poor prognosis, why it matters, and what can be improved
http://www.ncbi.nlm.nih.gov/pubmed/22753911

- Journal: *JCO*
- Institution(s): Dana-Farber Cancer Institute and Children's Hospital, Boston, MA and others
- Corresponding author(s): Jennifer Mack
- Major finding: The authors found several underlying misconceptions held by health care professionals in relation to divulging prognostic information. Much of this work has been done in the cancer population but applies across serious illnesses.

Meta-analysis: Interventions improve depression in cancer patients
http://www.ncbi.nlm.nih.gov/pubmed/22767203

- Journal: *JNCI*
- Institution(s): UCLA, Los Angeles, CA
- Corresponding author(s): Annette Stanton
- Major finding: The authors' findings suggest that psychological and pharmacologic approaches can be targeted productively toward cancer patients with elevated depressive symptoms. Research is needed to maximize effectiveness, accessibility, and integration into clinical care of interventions for depressed cancer patients.

Factors affecting quality of life at the end of life
http://www.ncbi.nlm.nih.gov/pubmed/22777380

- Journal: *Archives of Internal Medicine*
- Institution(s): Harvard Medical School, Boston, MA
- Corresponding author(s): Holly Prigerson
- Major finding: Advanced cancer patients who avoid hospitalizations and the intensive care unit, who are less worried, who pray or meditate, who are visited by a pastor in the hospital/clinic, and who feel a therapeutic alliance with their physicians have the highest quality of life at the end of life.