PANCREATIC CANCER NEWS & UPDATES – SEPTEMBER 2012

PANCREATIC CANCER ACTION NETWORK AND COMMUNITY NEWS

Apply now for a 2013 Pancreatic Cancer Action Network – AACR research grant
http://www.pancan.org/section_research/research_grants_program/apply_for_a_grant.php
Applications are now being accepted for some of the 2013 Pancreatic Cancer Action Network – AACR research grant mechanisms. Full applications for the Pathway to Leadership, Career Development, and Fellowship awards will be accepted until October 31. Spread the word!

New York Academy of Sciences symposium: Pancreatic Cancer: Translation of New Ideas
http://www.nyas.org/Events/Detail.aspx?cid=69ef8d62-85ef-461a-943f-5353cdc3228d
Note: this event is tomorrow! This symposium on October 12 will cover the latest research developments in pancreatic cancer, with a focus on preclinical and early clinical investigations of rationally targeted drugs that were translated from basic science observations. The event is co-organized by Ken Olive, PhD, 2011 Tempur-Pedic® Retailers – Career Development Award recipient, and features talks by Drs. Dafna Bar-Sagi, Dave Tuveson, Alec Kimmelman, and others. This event will also be broadcast as a webinar (go to https://ams.nyas.org/nyasssa/evtssareg.custid?p_program_nm=7039 to sign up for the webinar).

New report projects pancreatic cancer to become the second leading cause of cancer death by 2020
http://pancan.org/section_about/news_press_center/2012_press_releases/09_11_12_pr.php
Executive summary and full report:
http://www.pancan.org/section_research/reports/incidence_report.php
The Pancreatic Cancer Action Network has released a special report called, *The Alarming Rise of Pancreatic Cancer Deaths in the United States: Why We Need to Stem the Tide Today*. This report was written by the organization's Research and Scientific Affairs team, led by our Vice President of Scientific and Medical Affairs Lynn Matrisian, PhD. The alarming findings presented in the report include the fact that by the year 2020, and possibly as early as 2015, pancreatic cancer is projected to move from the fourth leading cause of cancer death to the second leading cause of cancer death in the United States.

An ominous outlook for pancreatic cancer
http://thehill.com/blogs/congress-blog/healthcare/249809-an-ominous-outlook-for-pancreatic-cancer
Anirban Maitra, MBBS, recipient of a 2004 Career Development Award and Chair, Scientific Advisory Board, wrote this powerful piece for *The Hill's Congress Blog*. Dr. Maitra discusses the Pancreatic Cancer Action Network's *Alarming Rise* report and concludes: "We can defeat this horrible disease, but we can't do so without a real, actionable plan. If Congress finally takes action and passes this legislation, future patients will finally have what has been almost nonexistent for so long: hope."

Pancreatic Cancer Action Network applauds House passage of the *Recalcitrant Cancer Research Act*
http://www.pancan.org/section_about/news_press_center/2012_press_releases/09_19_12_pr.php
On September 19, 2012, the United States House of Representatives passed unanimously the *Recalcitrant Cancer Research Act* (H.R. 733), formerly known as the *Pancreatic Cancer Research & Education Act*. The bill requires the National Cancer Institute (NCI) to create a long-term plan, referred to as a scientific framework, for pancreatic and other recalcitrant cancers that includes evaluating its current efforts in the disease and making recommendations on ways to accelerate progress and improve outcomes.

The 15th Annual An Evening with the Stars gala
http://pancan.org/ewts2012/index.html
The Pancreatic Cancer Action Network will present the 15th annual **An Evening with the Stars** gala on Saturday, October 20, 2012 at the elegant Beverly Wilshire Hotel in Beverly Hills, California. We invite you to join us for a very special evening dedicated to advancing research, supporting patients and creating hope for everyone in the pancreatic cancer community.

AACR Annual Meeting 2013: Abstract submissions now open
http://www.aacr.org/home/scientists/meetings--workshops/aacr-annual-meeting-2013/abstracts.aspx
Deadlines for the 2013 American Association for Cancer Research Annual Meeting in Washington, DC are now open. Abstract submission deadline: Thursday, November 15; late-breaking abstract submission deadline: Monday, January 28; clinical trials placeholder abstracts – final results and conclusions deadline: Friday, March 1.

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).

Clinical studies of safety and effectiveness of Orphan Products Research Project Grant (R01)
http://www.fda.gov/ForIndustry/DevelopingProductsforRareDiseasesConditions/WhomtoContactaboutOrphanProductDevelopment/ucm134580.htm
The Food and Drug Administration (FDA) is announcing the availability of grant funds for the support of FDA's Office of Orphan Products Development (OPD) grant program. The goal of FDA's OPD grant program is to support the clinical development of products for use in rare diseases or conditions where no current therapy exists or where the proposed product will be superior to the existing therapy.

Funding opportunities in extracellular RNA communication
http://commonfund.nih.gov/exrna/grants.aspx
The recent finding that RNA molecules are secreted in the extracellular space and act as endocrine signals to alter the phenotypes of target cells represents a novel paradigm in intracellular signaling. Extracellular RNAs (exRNAs) have both protective and pathogenic roles in a variety of human disease. To address critical needs and opportunities in this nascent field, the NIH Common Fund has launched the Extracellular RNA Communication program.

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."

Chair of Surgery, Charles Yeo, MD, performs 500th Whipple procedure at Thomas Jefferson Hospital
http://www.newswise.com/articles/chair-of-surgery-charles-yeo-m-d-performs-500th-whipple-procedure-at-thomas-jefferson-university-hospital
As he celebrates this milestone, Dr. Yeo also acknowledges the laboratory research taking place at Thomas Jefferson, including mention of Jonathan Brody, PhD, recipient of the 2010 Skip Viragh – Career Development Award.

I'm sorry, Steve Jobs: We could have saved you
http://www.thedailybeast.com/newsweek/2012/09/23/we-failed-steve-jobs.html
NPR interview with Dr. Siddhartha Mukherjee: http://www.npr.org/2012/09/27/161863465/americas-failure-to-treat-prevent-cancer
Dr. Mukherjee reflects on Steve Jobs' death one year later, and reflects on how the community failed to save an icon and why we will lose so many more lives if we do not give cancer research the funding it deserves.

BIOLOGY OF CANCER
Ready, set, go: the EGF receptor at the pancreatic cancer starting line
http://www.ncbi.nlm.nih.gov/pubmed/22975369

- Journal: *Cancer Cell*
- Institution(s): Massachusetts General Hospital and Harvard Medical School, Boston, MA
- Corresponding author(s): Nabeel Bardeesy
- PanCAN affiliated author: Final/corresponding author Nabeel Bardeesy, PhD: 2008 Randy Pausch, PhD – Pilot Grant
- Major finding: This preview refers to the following two *Cancer Cell* articles, discussing the requirement for EGFR signaling in acinar-to-ductal metaplasia- and KRAS-driven pancreatic cancer, revealing a mechanism for developmental reprogramming that primes tumorigenesis.

EGF receptor is required for KRAS-Induced pancreatic tumorigenesis
http://www.ncbi.nlm.nih.gov/pubmed/22975374
Mayo clinic press release: http://www.mayoclinic.org/news2012-jax/7073.html
http://www.ncbi.nlm.nih.gov/pubmed/22785201

- Journal: *Cancer Cell*
- Institution(s): Stony Brook University, Stony Brook, NY and others
- Corresponding author(s): Howard Crawford and Jens Siveke

- PanCAN affiliated author: Middle author Peter Storz, PhD: 2008 Patty Boshell – Career Development Award
- Major finding: The authors show that oncogenic KRAS upregulates endogenous EGFR expression and activation, the latter being dependent on the EGFR ligand sheddase, ADAM17. Genetic ablation or pharmacological inhibition of EGFR or ADAM17 effectively eliminates KRAS-driven tumorigenesis in vivo. Without EGFR activity, active RAS levels are not sufficient to induce robust MEK/ERK activity, a requirement for epithelial transformation.

EGF receptor signaling is essential for k-ras oncogene-driven pancreatic ductal adenocarcinoma
http://www.ncbi.nlm.nih.gov/pubmed/22975375

- Journal: *Cancer Cell*
- Institution(s): Centro Nacional de Investigaciones Oncológicas, Madrid, Spain and others
- Corresponding author(s): Mariano Barbacid
- Major finding: Development of pancreatic ductal adenocarcinomas driven by K-Ras oncogenes is totally dependent on EGFR signaling. Similar results were obtained using human pancreatic tumor cell lines. EGFRs were also essential even in the context of pancreatic injury and absence of p16Ink4a/p19Arf. Only loss of p53 made pancreatic tumors independent of EGFR signaling. Additional inhibition of PI3K and STAT3 effectively prevented proliferation of explants derived from these p53-defective pancreatic tumors.

Adrenomedullin is upregulated in patients with pancreatic cancer and causes insulin resistance
http://www.ncbi.nlm.nih.gov/pubmed/22960655

- Journal: *Gastroenterology*
- Institution(s): Mayo Clinic College of Medicine, Rochester, MN and others
- Corresponding author(s): Craig Logsdon and Suresh Chari
- PanCAN affiliated authors:
    - Corresponding author Craig Logsdon, PhD: Scientific Advisory Board member
    - Middle author Gloria Petersen, PhD: Scientific Advisory Board member
    - Middle author Martin Fernandez-Zapico, MD: 2007 Carole and Bob Daly – Career Development Award
- Major finding: Since new onset diabetes in patients with pancreatic cancer is likely to be a paraneoplastic phenomenon caused by tumor-secreted products, the authors aimed to identify diabetogenic secretory product(s) of pancreatic cancer. Their data suggest that expression of adrenomedullin is upregulated in patients with pancreatic cancer, and causes insulin resistance in β cells and mice.

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: Final/corresponding author Diane Simeone, MD: 2010 The Randy Pausch Family – Innovative Grant and Scientific Advisory Board member
- Major finding: This review article summarizes 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.

Overexpression of ecdysoneless in pancreatic cancer and role in oncogenesis by regulating glycolysis
http://www.ncbi.nlm.nih.gov/pubmed/22977192

- Journal: *Clinical Cancer Research*
- Institution(s): University of Nebraska Medical Center, Omaha, NE
- Corresponding author(s): Surinder Batra
- PanCAN affiliated author: Middle author Tony Hollingsworth, PhD: Scientific Advisory Board member
- Major finding: Ecdysoneless (Ecd) is a novel tumor promoting factor that is differentially expressed in pancreatic cancer and potentially regulates glucose metabolism within cancer cells.

AGR2 is a SMAD4-suppressible gene that modulates MUC1 levels, promotes the initiation, progression
http://www.ncbi.nlm.nih.gov/pubmed/22945649

- Journal: *Oncogene*
- Institution(s): Dartmouth Medical School, Hanover, NH
- Corresponding author(s): Murray Korc
- Major finding: The authors propose that loss of Smad4 may convert TGF-β from a tumor suppressor to a tumor promoter by causing the upregulation of anterior gradient 2 (AGR2), which then leads to increased mucin MUC1 expression, at which point both AGR2 and MUC1 facilitate mouse pancreatic intraepithelial neoplasia initiation and progression to pancreatic ductal adenocarcinoma.

Hypoxia induces EMT in low and highly aggressive pancreatic tumor cells
http://www.ncbi.nlm.nih.gov/pubmed/23050024

- Journal: *PLoS One*
- Institution(s): University of Heidelberg and German Cancer Research Center, Heidelberg, Germany
- Corresponding author(s): Ingrid Herr
- Major finding: The authors' data indicate that hypoxia-induced epithelial-mesenchymal transition (EMT) occurs in pancreatic ductal adenocarcinoma. However although hypoxia-induced EMT signaling occurs in all tumor cell populations, only the stem-like cells acquire high migratory potential and thus may be responsible for invasion and metastasis.

Sonic hedgehog signaling inhibition provides opportunities for targeted therapy by sulforaphane
http://www.ncbi.nlm.nih.gov/pubmed/23029396

- Journal: *PLoS One*
- Institution(s): The University of Kansas Medical Center, Kansas City, KS
- Corresponding author(s): Sharmila Shankar
- Major finding: The authors' data reveal the essential role of sonic hedgehog (Shh)-Gli signaling in controlling the characteristics of pancreatic cancer stem cells. The authors propose that pancreatic cancer preventative effects of sulforaphane (SFN, an active compound in cruciferous vegetables) may result from inhibition of the Shh pathway.

Validation of a robust proteomic analysis carried out on FFPE tissues of the pancreas
http://www.ncbi.nlm.nih.gov/pubmed/22997103

- Journal: *Proteomics*
- Institution(s): University of Alabama at Birmingham, Birmingham, AL
- Corresponding author(s): James Mobley
- Major finding: Together, these data support the validation of an approach for the proteomic analysis of formalin-fixed paraffin-embedded (FFPE) tissues that is straightforward and highly robust, which can also be effectively applied toward translational studies of disease.

CXCL12/CXCR4 signaling axis induces SHH expression via ERK- and Akt- mediated activation of NF-κB
http://www.ncbi.nlm.nih.gov/pubmed/22995914

- Journal: *Journal of Biological Chemistry*
- Institution(s): University of South Alabama, Mobile, AL and others
- Corresponding author(s): Ajay Singh and Seema Singh
- Major finding: Altogether, the authors' data reveal a novel mechanism underlying the aberrant sonic hedgehog expression in pancreatic cancer and identify a molecular link facilitating bidirectional tumor-stromal interactions.

Endoneurial macrophages induce perineural invasion by secretion of GDNF and activation of RET
http://www.ncbi.nlm.nih.gov/pubmed/22971345

- Journal: *Cancer Research*
- Institution(s): Tel Aviv Medical Center, Israel and others
- Corresponding author(s): Ziv Gil
- Major finding: Although perineural invasion of cancer cells is found in most patients with pancreatic adenocarcinomas, its exact mechanism is undefined. The authors' results identify a paracrine response between endoneurial macrophages and pancreatic adenocarcinoma cells which orchestrates the formation of cancer nerve invasion.

Targeting a novel onco-glycoprotein antigen at tumoral pancreatic cell surface by mAb16D10
http://www.ncbi.nlm.nih.gov/pubmed/22956586

- Journal: *Journal of Immunology*
- Institution(s): Centre de Recherche en Oncologie Biologique et Oncopharmacologie, Marseilles, France and others
- Corresponding author(s): Eric Mas
- Major finding: Overall, this study reveals that mAb16D10 holds great potential to prevent pancreatic tumor proliferation by apoptotic cell death, thus promising therapeutic prospects for treatment of pancreatic adenocarcinoma, a highly lethal disease.

REG4 contributes to the invasiveness of pancreatic cancer by upregulating MMP-7 and MMP-9
http://www.ncbi.nlm.nih.gov/pubmed/22957785

- Journal: *Cancer Science*
- Institution(s): Key Laboratory of Gastroenterology of Zhejiang Province, Hangzhou, China and others
- Corresponding author(s): Hou-Quan Tao

- Major finding: Regenerating gene family member 4 (REG4) promotes not only growth but also in vitro invasiveness of pancreatic cancer cells by upregulating matrix metalloproteinases MMP-7 and MMP-9.

Cancer specific promoter CpG Islands hypermethylation of HOPX gene and its tumor suppressive role
http://www.ncbi.nlm.nih.gov/pubmed/22958219

- Journal: *BMC Cancer*
- Institution(s): Kitasato University Hospital, Kanagawa, Japan
- Corresponding author(s): Masahiko Watanabe
- Major finding: Defective expression of homeodomain only protein X (HOPX) which is consistent with promoter DNA hypermethylation may explain aggressive phenotype of pancreatic cancer, and intense expression of HOPX in the Langerhans cells may in turn uniquely contribute to pancreatic carcinogenesis.

Inhibition of pancreatic intraepithelial neoplasia progression by nitric oxide-releasing aspirin
http://www.ncbi.nlm.nih.gov/pubmed/23019409

- Journal: *Neoplasia*
- Institution(s): University of Oklahoma Health Sciences Center, Oklahoma City, OK and others
- Corresponding author(s): Chinthalapally Rao
- Major finding: The authors' results suggest that low-dose nitric oxide-releasing aspirin possesses inhibitory activity against pancreatic carcinogenesis by modulating multiple molecular targets.

Metronomic ceramide analogs inhibit angiogenesis in pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/23019415

- Journal: *Neoplasia*
- Institution(s): University of Pisa, Pisa, Italy and others
- Corresponding author(s): Guido Bocci
- Major finding: Human endothelial cells and pancreatic cancer cells were treated with ceramide analogs at low concentrations. Metronomic C2 and AL6 analogs were found to have antitumor and antiangiogenic activity, determining the up-regulation of caveolin-1 and thrombospondin-1 and the suppression of cyclin D1.

New insights into pancreatic cancer biology
http://www.ncbi.nlm.nih.gov/pubmed/22987949

- Journal: *Annals of Oncology*
- Institution(s): Centro Nacional de Investigaciones Oncologicas, Madrid, Spain
- Corresponding author(s): Manuel Hidalgo
- Major finding: Over the last few years, there have been important advances in the molecular and biological understanding of pancreatic cancer. This includes understanding of the genomic complexity of the disease, the role of pancreatic cancer stem cells, the relevance of the tumor microenvironment, and the unique metabolic adaptation of pancreas cancer cells to obtain nutrients under hypoxic environment. In this paper, the Dr. Hidalgo reviews the most salient developments in these few areas.

ETIOLOGY

Plasma antibodies to oral bacteria and risk of pancreatic cancer in European prospective cohort study
http://www.ncbi.nlm.nih.gov/pubmed/22990306
Brown University press release: http://news.brown.edu/pressreleases/2012/09/periodontic; this article has picked up a significant amount of media coverage.

- Journal: *Gut*
- Institution(s): Brown University, Providence, RI and others
- Corresponding author(s): Dominique Michaud
- Major finding: Periodontal disease might increase the risk for pancreatic cancer. Moreover, increased levels of antibodies against specific commensal oral bacteria, which can inhibit growth of pathogenic bacteria, might reduce the risk of pancreatic cancer. Studies are needed to determine whether oral bacteria have direct effects on pancreatic cancer pathogenesis or serve as markers of the immune response.

Alcohol consumption and digestive tract cancer
http://www.ncbi.nlm.nih.gov/pubmed/22797570

- Journal: *Current Opinion in Clinical Nutrition & Metabolic Care*
- Institution(s): Karolinska Institutet, Stockholm, Sweden
- Corresponding author(s): Johannes-Matthias Löhr
- Major finding: Alcohol overconsumption is a serious avoidable risk factor for the development of gastrointestinal tract cancer, both alone but even more in combination with other risk factors such as tobacco and obesity. Among the digestive tract cancers evaluated, weaker correlations were established regarding pancreatic neoplasias.

Irrelevance of microsatellite instability in the epidemiology of sporadic pancreatic adenocarcinoma
http://www.ncbi.nlm.nih.gov/pubmed/23029359

- Journal: *PLoS One*
- Institution(s): Humanitas Clinical and Research Center, Rozzano, Milan, Italy and others
- Corresponding author(s): Luigi Laghi and Alberto Malesci
- Major finding: Pancreatic cancer risk is increased in Lynch syndrome (LS) patients with mismatch repair gene defects predisposing to colonic and extracolonic cancers with microsatellite instability (MSI). Aims of this study were to determine the prevalence of MSI in surgically resected pancreatic cancers. The authors found that microsatellite instability prevalence is negligible in sporadic, resected pancreatic ductal adenocarcinoma. But, the prevalence of pancreatic cancer is 2.5% in LS patients, and cancers other than pancreatic may be encountered in this setting.

Menstrual and reproductive factors in women, genetic variation in CYP17A1 & pancreatic cancer risk
http://www.ncbi.nlm.nih.gov/pubmed/23015357

- Journal: *International Journal of Cancer*
- Institution(s): Catalan Institute of Oncology, Barcelona, Spain and others
- Corresponding author(s): Eric Duell
- Major finding: The authors conclude that, with the possible exception of an early age of menarche, none of the menstrual and reproductive factors, and none of the 12 common genetic variants they evaluated at the CYP17A1 (an essential gene in sex steroid metabolism) locus

makes a substantial contribution to pancreatic cancer susceptibility in the European prospective investigation into cancer and nutrition (EPIC) cohort.

PREVENTION

Chemoprevention of pancreatic cancer using solid-lipid nanoparticulate delivery of drug combination
http://www.ncbi.nlm.nih.gov/pubmed/23007664

- Journal: *International Journal of Oncology*
- Institution(s): Western University of Health Sciences, Pomona, CA
- Corresponding author(s): Sunil Prabhu
- Major finding: This study successfully demonstrated the feasibility of using a solid lipid nanoparticulate system for the first time to deliver this novel combination chemoprevention regimen (aspirin, curcumin, and free sulforaphane), providing valuable evidence for the usability of nanotechnology-based drug regimens towards pancreatic cancer chemoprevention.

Will an apple a day keep pancreatic cancer away?
http://www.medscape.com/viewarticle/770268?src=mp&spon=7

- Journal: *Medscape Oncology News*
- Institution(s): University of Oxford, Oxford, UK
- Corresponding author(s): David Kerr
- Major finding: This article discusses "Proanthocyanidins and other flavonoids in relation to pancreatic cancer: a case-control study in Italy" (http://www.ncbi.nlm.nih.gov/pubmed/22052986). Dr. Kerr describes, "a very beautiful study from La Vecchia and colleagues suggesting that a diet rich in flavonoids and glycans can reduce the chances of developing pancreatic cancer by more than 25% … The take-home message for us, for our families, and for the population of patients we care for is that an apple a day may indeed keep pancreatic cancer away."

EARLY DETECTION, DIAGNOSIS, AND PROGNOSIS

Rapid characterization of candidate biomarkers for pancreatic cancer using cell microarrays
http://www.ncbi.nlm.nih.gov/pubmed/22985314

- Journal: *Journal of Proteome Research*
- Institution(s): Johns Hopkins University, Baltimore, MD
- Corresponding author(s): Akhilesh Pandey
- PanCAN affiliated authors:
    - 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
    - Middle author Elizabeth Jaffee, MD: Emeritus Scientific Advisory Board member
    - Middle author Ralph Hruban, MD: Emeritus Scientific Advisory Board member
- Major finding: The authors' results demonstrate the utility of cell microarrays (CMAs) as a useful resource for rapid screening of molecules of interest and suggest that CMAs can become a universal standard platform in cancer research.

Clinical significance of the genetic landscape of pancreatic cancer and implications
http://www.ncbi.nlm.nih.gov/pubmed/22991414

- Journal: *Clinical Cancer Research*
- Institution(s): Johns Hopkins University, Baltimore, MD
- Corresponding author(s): Christine Iacobuzio-Donahue
- PanCAN affiliated authors:
    - Corresponding author Christine Iacobuzio-Donahue, MD, PhD: 2007 Pilot Grant and Scientific Advisory Board member
    - Middle author Joseph Herman, MD: 2008 Blum-Kovler – Career Development Award
    - Middle author Ralph Hruban, MD: Emeritus Scientific Advisory Board member
- Major finding: Determinations of the status of the four major driver genes in pancreatic cancer (KRAS, CDKN2A, TP53 and SMAD4), and specifically the extent to which they are coexistent in an individual patients cancer, provides distinct information regarding disease progression and survival that is independent of clinical stage and treatment status.

Prognostic value of K-ras mutation status and subtypes in EUS-FNA specimens
http://www.ncbi.nlm.nih.gov/pubmed/22983505

- Journal: *Journal of Gastroenterology*
- Institution(s): Aichi Cancer Center Hospital, Nagoya, Japan and others
- Corresponding author(s): Kenji Yamao
- Major finding: The authors analyzed overall survival and prognostic factors according to *K-ras* mutation status and subtypes in only unresectable pancreatic cancer determined from tissues obtained by endoscopic ultrasound-guided fine-needle aspiration. They found that K-ras mutation status and subtypes may be associated with survival duration in pancreatic cancer patients.

RON is not a prognostic marker for resectable pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22958871

- Journal: *BMC Cancer*
- Institution(s): Garvan Institute of Medical Research, Sydney, Australia and others
- Corresponding author(s): Roger Daly
- Major finding: Although the receptor tyrosine kinase RON is implicated in pancreatic cancer progression in experimental models, and may constitute a therapeutic target, RON expression is not associated with prognosis or therapeutic responsiveness in resected pancreatic cancer.

Tumor size as measured at initial X-ray examination, not length of bile duct stricture, predicts survival
http://www.ncbi.nlm.nih.gov/pubmed/23009736

- Journal: *BMC Cancer*
- Institution(s): Blekinge Hospital, Karlskrona, Sweden
- Corresponding author(s): Forssell Henrik
- Major finding: The size of the maximum tumor diameter of the primary tumor during the initial X-ray examination of patients with pancreatic cancer may predict survival time for those patients who had no surgical resection. Stricture length at endoscopic retrograde cholangiopancreatography (ERCP) gave no information on survival.

Performance status of patients is the major prognostic factor at all stages of pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22996141

- Journal: *International Journal of Clinical Oncology*
- Institution(s): University of Istanbul, Turkey
- Corresponding author(s): Faruk Tas
- Major finding: The performance status of a patient is the major prognostic factor predicting overall survival for all stages of pancreatic cancer. Severe weight loss, large tumor, and metastatic disease were found to be unfavorable prognostic factors in patients with poor performance status.

Is there a survival difference for R1 resections versus locally advanced? What is a "true" R0 resection?
http://www.ncbi.nlm.nih.gov/pubmed/22968073

- Journal: *Annals of Surgery*
- Institution(s): Massachusetts General Hospital, Boston, MA
- Corresponding author(s): Cristina Ferrone
- Major finding: The authors observed that patients undergoing an R1 resection still have an improved survival compared with patients with locally advanced unresectable pancreatic adenocarcinoma. R0 resections have an improved survival compared with R1 resections, but this survival benefit is lost when the tumor is within 1 mm of the resection margin.

Should portal vein be routinely resected during pancreaticoduodenectomy for adenocarcinoma?
http://www.ncbi.nlm.nih.gov/pubmed/22968078

- Journal: *Annals of Surgery*
- Institution(s): Institut Paoli-Calmettes and Université de la Méditerranée, Marseille, France
- Corresponding author(s): Jean Robert Delpero
- Major finding: The authors found that patients with pancreatic adenocarcinoma and no venous involvement who had pancreaticoduodenectomy (PD) with portal vein/superior mesenteric vein resection had a significantly longer overall survival than patients in a matched control group who had PD without venous resection.

Survival among pancreaticoduodenectomy patients treated for pancreatic head cancer <1 or 2 cm
http://www.ncbi.nlm.nih.gov/pubmed/22941171

- Journal: *Annals of Surgical Oncology*
- Institution(s): Mercy Medical Center, Des Moines, IA and others
- Corresponding author(s): Jan Franko
- Major finding: Small pancreatic cancers have a poor prognosis and surprisingly high rate of nodal involvement; therefore, they cannot be considered early cancers. Size-based screening is unlikely to save lives with current treatment options.

Obesity and survival in population-based patients with pancreatic cancer in San Francisco Bay Area
http://www.ncbi.nlm.nih.gov/pubmed/23015286

- Journal: *Cancer Causes and Control*
- Institution(s): University of California San Francisco, CA and others
- Corresponding author(s): Zhihong Gong

- Major finding: The authors' results in general provide limited support for an association between pre-diagnostic obesity and decreased survival in patients with pancreatic cancer. Patterns of reduced survival associated with obesity in some patient subgroups could be due to chance and require assessment in larger pooled studies.

Clinical outcomes of chemotherapy for diabetic and nondiabetic patients with pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/23000889

- Journal: *Pancreas*
- Institution(s): The University of Tokyo, Tokyo, Japan
- Corresponding author(s): Kazuhiko Koike
- Major finding: Neither diabetes mellitus nor anti-diabetic treatment had prognostic impact on advanced pancreatic cancer. Statin use was associated with better survival in the diabetic patients.

Prevalence of diabetes mellitus in pancreatic cancer compared to common cancers
http://www.ncbi.nlm.nih.gov/pubmed/23000893

- Journal: *Pancreas*
- Institution(s): Mayo Clinic College of Medicine, Rochester, MN and others
- Corresponding author(s): Suresh Chari
- Major finding: Whereas the prevalence of diabetes mellitus (DM) in pancreatic cancer is very high, DM prevalence in other common cancers is no different from that in non-cancer controls. In particular, new-onset DM is a phenomenon that is unique to pancreatic cancer.

Strategies for discovering novel pancreatic cancer biomarkers
http://www.ncbi.nlm.nih.gov/pubmed/23026552

- Journal: *Journal of Proteomics*
- Institution(s): University of Toronto, Toronto, Ontario, Canada and others
- Corresponding author(s): Ivan Blasutig
- Major finding: This review focuses on the classical tumor markers for pancreatic ductal adenocarcinoma (PDAC) as well as emerging markers. In addition, the authors discuss an integrative proteomic approach used in their lab to identify a panel of biomarkers that have the potential to allow the early detection of PDAC.

Early diagnosis of pancreatic cancer; looking for a needle in a haystack?
http://www.ncbi.nlm.nih.gov/pubmed/22990305

- Journal: *Gut*
- Institution(s): Erasmus University Medical Center, Rotterdam, The Netherlands
- Corresponding author(s): Marco Bruno
- Major finding: This article is a commentary on "Mutant GNAS detected in duodenal collections of secretin-stimulated pancreatic juice" (http://www.ncbi.nlm.nih.gov/pubmed/22859495).

TREATMENT

Outcomes following resection of pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22991309

- Journal: *Journal of Surgical Oncology*
- Institution(s): University of Massachusetts Medical School, Worcester, MA and others
- Corresponding author(s): Jennifer Tseng
- PanCAN affiliated author: Final/corresponding author Jennifer Tseng, MD: 2006 Samuel Stroum – Young Investigator Award
- Major finding: Surgical resection is a modest tool in pancreatic cancer, but it provides the only potential for curative therapy and often prolongs survival. This article reviews the progress made on both local and national levels towards an era of safer pancreatic surgery, while discussing both perioperative outcomes and long-term survival after resection.

A phase I trial of nab-paclitaxel, gemcitabine, and capecitabine for metastatic pancreatic cancer
http://www.springerlink.com/content/v271264g53271746/

- Journal: *Cancer Chemotherapy and Pharmacology*
- Institution(s): University of California, San Francisco, CA and others
- Corresponding author(s): Andrew Ko
- PanCAN affiliated authors:
  - First/corresponding author Andrew Ko, MD: 2003 Career Development Award
  - Final author Margaret Tempero, MD: Scientific Advisory Board
- Major finding: While well tolerated overall, the regimen of nab-paclitaxel, gemcitabine, and capecitabine demonstrated only modest antitumor activity in patients with metastatic pancreatic cancer. Recognizing the limits of cross-study comparisons and small sample size, these results do not match those reported at maximum-tolerated dose in the phase I/II trial of gemcitabine/nab-paclitaxel. The lower doses used in the current study suggest that dose intensity may be a critical aspect to optimize multidrug regimens.

Anti-DLL4 has broad activity dependent on targeting DLL4-Notch signaling in tumor, vasculature cells
http://www.ncbi.nlm.nih.gov/pubmed/22952347

- Journal: *Clinical Cancer Research*
- Institution(s): OncoMed Pharmaceuticals Inc., Redwood City, CA and University of Michigan Medical Center, Ann Arbor, MI
- Corresponding author(s): Wan-Ching Yen and Timothy Hoey
- PanCAN affiliated author: Middle author Diane Simeone, MD: 2010 The Randy Pausch Family – Innovative Grant and Scientific Advisory Board member
- Major finding: The combination of anti-hDLL4 (Delta-like ligand 4) and anti-mDLL4 was efficacious in a broad spectrum of pancreatic tumor xenografts and showed additive antitumor activity together with gemcitabine. The authors' findings suggest a novel therapeutic approach for pancreatic cancer treatment through antagonism of DLL4/Notch signaling.

Cost-effectiveness of treatment strategies and potential opportunities for improvement
http://www.ncbi.nlm.nih.gov/pubmed/22965567

- Journal: *Annals of Surgical Oncology*
- Institution(s): University of Cincinnati, Cincinnati, OH and others

- Corresponding author(s): Karl Bilimoria
- PanCAN affiliated authors: Middle authors Jason Fleming, MD and Christopher Crane, MD: Medical Advisory Board members
- Major finding: Surgery plus adjuvant therapy for resectable pancreatic head adenocarcinoma extends survival, but at considerable expense. Significant cost reductions could be realized by improving treatment outcomes to levels of high-performing centers and development of increasingly effective adjuvant therapies.

Open-label, multicenter, randomized Phase III trial of adjuvant chemoradiation plus interferon alfa-2b
http://www.ncbi.nlm.nih.gov/pubmed/23008325

- Journal: *Journal of Clinical Oncology*
- Institution(s): Ruprecht-Karls-University, Heidelberg, Germany and others
- Corresponding author(s): Markus Büchler
- Major finding: The fluoruracil (FU), cisplatin, and interferon alfa-2b (IFN α-2b) plus radiotherapy regimen did not improve the survival compared with FU monotherapy. Given the substantial adverse effects, this treatment can currently not be recommended. Nevertheless, the outcome in both arms represents the best survival, to our knowledge, ever reported for patients with resected pancreatic cancer in randomized controlled trials. Future studies will demonstrate whether immune response to IFN α-2b challenge has a predictive value.

Does gemcitabine-based combination therapy improve prognosis of unresectable pancreatic cancer?
http://www.ncbi.nlm.nih.gov/pubmed/23002368

- Journal: *World Journal of Gastroenterology*
- Institution(s): Second Affiliated Hospital of Harbin Medical University, Harbin, China and others
- Corresponding author(s): De-Quan Wu
- Major finding: A quantitative up-to-date meta-analysis was undertaken to investigate the efficacy of gemcitabine-based combination treatment compared with gemcitabine monotherapy in locally advanced or metastatic pancreatic cancer. The results suggest that gemcitabine combination therapy provides a modest improvement of survival, but is associated with more toxicity compared with gemcitabine monotherapy.

Role of gemcitabine-based combination therapy in the management of advanced pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22989511

- Journal: *European Journal of Cancer*
- Institution(s): "Magna Graecia" University and "Tommaso Campanella" Cancer Center, Catanzaro, Italy and others
- Corresponding author(s): Pierosandro Tagliaferri
- Major finding: The combination chemotherapy as compared to gemcitabine alone significantly improves overall survival in advanced pancreatic cancer. However, this advantage is marginal whereas the treatment-related toxicity is increased, suggesting the use of gemcitabine-based combination regimens only in selected patient populations. New prospective trials, based on translational approaches and innovative validated biomarkers, are eagerly awaited on this topic.

FOLFIRI regimen in metastatic pancreatic adenocarcinoma resistant to gemcitabine and platinum-salts
http://www.ncbi.nlm.nih.gov/pubmed/22969226

- Journal: *World Journal of Gastroenterology*
- Institution(s): Hôpital Beaujon, Clichy La Garenne, France and others
- Corresponding author(s): Pascal Hammel
- Major finding: The authors evaluated the efficacy and safety of the FOLFIRI regimen in patients with metastatic pancreatic adenocarcinoma after the failure of gemcitabine and platinum salts, and found that the FOLFIRI regimen had an acceptable toxicity and an interesting efficacy, limited to patients in good condition (performance status 0-1).

Radiation dose >=54 Gy and CA 19--9 response are associated with improved survival

- Journal: *Radiation Oncology*
- Institution(s): University of Chicago, Chicago, IL
- Corresponding author(s): Stanley Liauw
- Major finding: Chemoradiation (CRT) as definitive treatment for unresected pancreatic cancer had low survival. However, the authors' retrospective data suggest that patients treated to >=54 Gy or who experienced a minimum post-CRT CA 19--9 <90 U/mL had improved likelihood of long-term survival.

Feasibility and safety of EUS-guided cryothermal ablation in locally advanced pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/23021160

- Journal: *Gastrointestinal Endoscopy*
- Institution(s): Vita-Salute San Raffaele University-Scientific Institute San Raffaele, Milan, Italy and others
- Corresponding author(s): Paolo Giorgio Arcidiacono
- Major finding: Endoscopic ultrasound-guided cryothermal ablation is feasible and safe. Further investigations are needed to demonstrate progression-free survival and local control.

Effect of high-dose intravenous vitamin C on inflammation in cancer patients
http://www.ncbi.nlm.nih.gov/pubmed/22963460

- Journal: *Journal of Translational Medicine*
- Institution(s): Riordan Clinic, Wichita, KS
- Corresponding author(s): Nina Mikirova
- Major finding: High dose intravenous ascorbic acid therapy (IVC) affects C-reactive protein levels and pro-inflammation cytokines in cancer patients. In this study, the investigators found that modulation of inflammation by IVC correlated with decreases in tumor marker levels. Their data support the hypothesis that high dose intravenous ascorbate treatments may reduce inflammation in cancer patients.

Molecular mechanism of pancreatic tumor metastasis inhibition by Gd@C82(OH)22 and its implication
http://www.ncbi.nlm.nih.gov/pubmed/22949663

- Journal: *PNAS*
- Institution(s): IBM Thomas J. Watson Research Center, Yorktown Heights, NY and others
- Corresponding author(s): Chunying Chen, Yuliang Zhao, and Ruhong Zhou

- Major finding: The endohedral metallofullerenol $Gd@C_{82}(OH)_{22}$ can successfully inhibit the neoplastic matrix metalloproteinase activity in pancreatic cancer at animal, tissue, and cellular levels. The authors' findings provide insights for de novo design of nanomedicines for fatal diseases such as pancreatic cancer.

Knockdown of clusterin sensitizes pancreatic cancer cells to gemcitabine by ERK1/2 inactivation
http://www.ncbi.nlm.nih.gov/pubmed/22967941

- Journal: *Journal of Experimental & Clinical Cancer Research*
- Institution(s): Tianjin Medical University Cancer Institute and Hospital, Tianjin, China and others
- Corresponding author(s): Shaochuan Sun
- Major finding: The authors' objective was to study the hypothesis that gemcitabine treatment augments the chemoresistance to gemcitabine by clusterin upregulation. Knockdown of clusterin by OGX-011 transfection sensitizes pancreatic cancer cells to gemcitabine by inhibition of gemcitabine-induced clusterin-pERK1/2 activation.

Dual ErbB1 and ErbB2 receptor tyrosine kinase inhibition exerts synergistic effect with chemotherapy
http://www.ncbi.nlm.nih.gov/pubmed/23007710

- Journal: *Oncology Reports*
- Institution(s): Temple University Hospital, Philadelphia, PA and others
- Corresponding author(s): Jeffrey Drebin
- Major finding: The authors observed that simultaneous dual ErbB1 and ErbB2 receptor tyrosine kinase inhibition with lapatinib results in significant reduction of pancreatic cancer cell growth and proliferation. These effects occur at clinically achievable concentrations and are synergistic with the effects of 5-FU or gemcitabine.

The flavonoid quercetin inhibits pancreatic cancer growth in vitro and in vivo
http://www.ncbi.nlm.nih.gov/pubmed/23000892

- Journal: *Pancreas*
- Institution(s): University of California, Los Angeles, CA and others
- Corresponding author(s): Oscar Hines
- Major finding: The authors' data provide evidence that oral administration of the flavonoid quercetin was capable of inhibiting growth of orthotopic pancreatic tumors in a nude mouse model. These data suggest a possible benefit of quercetin in patients with pancreatic cancer.

Treatment of locoregional disease: adjuvant versus neoadjuvant
http://www.ncbi.nlm.nih.gov/pubmed/22987951

- Journal: *Annals of Oncology*
- Institution(s): Ludwig-Maximilian-University of Munich, Munich, Germany
- Corresponding author(s): Volker Heinemann
- Major finding: Dr. Heinemann points out that randomized studies comparing neoadjuvant with adjuvant regimens in pancreatic cancer patients have not been performed, and the superiority of one strategy over the other still has to be confirmed.

Treatment of advanced pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22987950

- Journal: *Annals of Oncology*
- Institution(s): Ospedali Riuniti, Bergamo, Italy
- Corresponding author(s): Roberto Labianca
- Major finding: This review article summarizes the state of the art in the treatment of advanced pancreatic cancer, and discusses recommendations so that significant progress in this difficult field could be made in the next few years.

Drug companies look to biomarkers to salvage cancer target
http://www.ncbi.nlm.nih.gov/pubmed/22961144

- Journal: *Nature Medicine*
- Institution(s): *Nature Medicine* journalism, Cambridge, MA
- Corresponding author(s): Elie Dolgin
- Major finding: This news article discusses recent failures of IGF-receptor-targeted drugs, including Amgen's ganitumab in pancreatic cancer, and the need to identify patients with predictive biomarkers.

Threshold Pharmaceuticals to present updated data from Phase 2b clinical trial of TH-302 at ESMO
http://investor.thresholdpharm.com/releasedetail.cfm?releaseid=707158

- Company: Threshold Pharmaceuticals, South San Francisco, CA
- Major finding: Data from a randomized open-label Phase 2b clinical trial of investigational hypoxia-targeted drug TH-302 in patients with advanced pancreatic cancer was presented at the European Society for Medical Oncology (ESMO) 2012 Congress in Vienna, Austria.

CANCER CONTROL, SURVIVORSHIP, AND OUTCOMES RESEARCH

Troublesome symptoms in cancer survivors: fatigue, insomnia, neuropathy, and pain
http://www.ncbi.nlm.nih.gov/pubmed/23008320

- Journal: *Journal of Clinical Oncology*
- Institution(s): Mayo Clinic, Rochester, MN
- Corresponding author(s): Charles Loprinzi
- Major finding: Fatigue, insomnia, neuropathy, and pain are among the most common troublesome symptoms experienced by cancer survivors. This article focuses on the management of these symptoms, including an assessment of the current research and proposed best-management practices.

Quality of life across chemotherapy lines in patients with cancers of the pancreas and biliary tract
http://www.ncbi.nlm.nih.gov/pubmed/22950826

- Journal: *BMC Cancer*
- Institution(s): Kufstein County Hospital, Kufstein, Austria
- Corresponding author(s): August Zabernigg
- Major finding: The authors' results suggest early palliative treatment initiation to stabilize quality of life (QOL) on a level as high as possible. The continuous QOL improvement during adjuvant treatment, probably reflecting post-operative recovery, may indicate that deleterious effects of adjuvant chemotherapy on QOL are highly unlikely.

The effect of depression on stage at diagnosis, treatment, and survival in pancreatic adenocarcinoma
http://www.ncbi.nlm.nih.gov/pubmed/22938900

- Journal: *Surgery*
- Institution(s): The University of Texas Medical Branch, Galveston, TX
- Corresponding author(s): Casey Boyd
- Major finding: Using Surveillance, Epidemiology and End Results and Medicare linked data, the authors concluded that decreased survival associated with depression appears to be mediated by a lower likelihood of appropriate treatment in depressed patients. Accurate recognition and treatment of pancreatic cancer patients with depression may improve treatment rates and survival.