PANCREATIC CANCER NEWS & UPDATES – JANUARY 2012

PANCREATIC CANCER ACTION NETWORK AND COMMUNITY NEWS

The Pancreatic Cancer Action Network welcomes Lynn Matrisian, PhD

http://www.pancan.org/section_about/news_press_center/2012_press_releases/01_10_12_pr.php

We are delighted to report that Lynn Matrisian, PhD has joined our organization as the new Vice President of Scientific and Medical Affairs!

National Pancreatic Cancer Clinical Trials Awareness Month

http://pancan.org/section_facing_pancreatic_cancer/learn_about_pan_cancer/clinical_trials/clinical_trials_awareness_month.php

In accordance with the Pancreatic Cancer Action Network policy that all patients should consider clinical trials when exploring treatment options, January was deemed National Pancreatic Cancer Clinical Trials Awareness Month. Our Patient and Liaison Services (PALS) Associates performed **over 400** personalized clinical trial searches during the month of January alone. This number was **548 percent** higher than an average month's quota of clinical trial searches!

AACR Special Conference – Pancreatic Cancer: Progress and Challenges – registration is open

http://www.aacr.org/home/scientists/meetings--workshops/special-conferences/pancreatic-cancer-progress-and-challenges.aspx

The first AACR special conference on pancreatic cancer will take place June 18-21, 2012 at the Hyatt Regency Lake Tahoe. Registration is now open. The deadline for abstract submission and award application is Wednesday, April 11, and advance registration closes on Monday, May 7.

Therapeutic and Diagnostic Modalities Targeting Hypoxia in Cancer meeting

www.nyas.org/Hypoxia

Ken Olive, PhD (2011 Tempur-Pedic® Retailers Career Development Award) is one of the organizers for this meeting, taking place at the New York Academy of Sciences on March 14, 2012, 12:30-6:00pm. The scope of the meeting is described as: "The altered chemical environment of hypoxic regions provides a mechanistic basis for the development of novel cancer therapies and imaging agents. This symposium will explore advances in the development of tumor-specific drugs targeting hypoxia."

Pathway to Leadership recipient promoted

http://www.pancan.org/section_research/research_grants_program/grants_awarded/all_recipients/2011/seeley_2011.php

One of our 2011 Pathway to Leadership Grant recipients, E. Scott Seeley, MD, PhD, has been promoted to Assistant Professor of Pathology at the University of California, San Francisco Medical School. Dr. Seeley applied for the grant as a clinical and research fellow at Stanford, and has quickly been offered an independent position at UCSF. Congratulations Dr. Seeley, and good luck in your new position!

Cancer Facts & Figures 2012

http://www.pancan.org/section_about/news_press_center/2012_press_releases/01_05_12a_pr.php

Facts & Figures:

http://www.cancer.org/acs/groups/content/@epidemiologysurveilance/documents/document/acspc-031941.pdf

The American Cancer Society released their annual *Facts & Figures* in January this year. The "special section" this year was devoted to "Cancers with Increasing Incidence Trends in the US: 1999-2008," which included cancers of the pancreas.

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."

Moving the pancreas cancer specialty forward: When tissue is the issue

http://gicasym.org/2012GastrointestinalCancersSymposium/GastrointestinalCancersSymposiumDailyNews/Pancreastissue.aspx

The 2012 Gastrointestinal Cancers Symposium (GI ASCO) featured this article by Margaret Tempero, MD (Scientific Advisory Board) in its daily news. Dr. Tempero discusses the urgent need for pancreatic cancer tissue specimens, and the potential benefits of a clinically annotated tissue repository in a collaborative setting.

MD Anderson Orlando moves pancreatic cancer research forward

http://www.newswise.com/articles/md-anderson-orlando-move-pancreatic-cancer-research-forward

A $75,000 grant, funded by the Shirley E. Noland Foundation, will support the Pancreatic Cancer Translational Research Project at MD Anderson – Orlando. The grant will go towards research on tolfenamic acid (a non-steroidal anti-inflammatory drug) and its potential to inhibit the growth of pancreatic cancer cells.

National Foundation for Cancer Research funds critical TGen-UA cancer research

http://www.eurekalert.org/pub_releases/2012-01/ttgr-nff013012.php

The Translational Genomics Research Institute (TGen) and the University of Arizona (UA) have received a three-year, $600,000 grant to study targeted pancreatic cancer therapies from the National Foundation for Cancer Research (NFCR).

BIOLOGY OF CANCER

Oncogenic Kras is required for both the initiation and maintenance of pancreatic cancer in mice

http://www.ncbi.nlm.nih.gov/pubmed/22232209

Pancreatic Cancer Action Network write-up:

http://www.pancan.org/section_research/strategic_research_program/news/topic_protein_necessary_for_pancreatic_cancer.php

Marina Pasca di Magliano, PhD (2009 Paul Mitchell Career Development Award) cites her Pancreatic Cancer Action Network funding as partially supporting this study, published in *Journal of Clinical Investigation*. Dr. Pasca di Magliano and her colleagues at the University of Michigan developed two novel mouse models of pancreatic cancer, whereby expression of mutant K-Ras was dependent on an inducible promoter, with or without the co-expression of mutant p53. Ensuing experiments allowed for a deeper understanding of the "addiction" of pancreatic cancer cells to mutant K-Ras, at all stages of cancer development and progression.

Understanding metastasis in pancreatic cancer: A call for new clinical approaches

http://www.ncbi.nlm.nih.gov/pubmed/22265397

This *Cell* preview article is coauthored by Dave Tuveson, MD, PhD (2003 Career Development Award and Emeritus Scientific Advisory Board). Drs. Tuveson and Neoptolemos discuss two articles in that edition of *Cell* (see below) that further our understanding of the mechanism and timing of pancreatic cancer metastasis, and suggest treatment strategies.

EMT and dissemination precede pancreatic tumor formation

http://www.ncbi.nlm.nih.gov/pubmed/22265420

Pancreatic Cancer Action Network write-up of this study and Dr. Iacobuzio-Donahue's work (see below):

http://www.pancan.org/section_research/strategic_research_program/news/topic_improving_understanding_of_mechanism_and_timing_of_pancreatic_cancer_metastasis.php

This research primarily took place in the laboratory of Ben Stanger, MD, PhD (2007 Ralph H. Hruban, MD Career Development Award) at the University of Pennsylvania. Other authors include Jennifer Bailey, PhD (2011 Pathway to Leadership Grant), Anirban Maitra, MD (2004 Career Development Award and member, Scientific Advisory Board), as well as Scientific Advisory Board members Anil Rustgi, MD and Bob Vonderheide, MD, DPhil. The Pancreatic Cancer Action Network grants awarded to Drs. Stanger and Bailey are cited among the funding sources for this work. Unexpectedly, Dr. Stanger and colleagues found that fluorescently-labeled K-Ras mutant pancreas cells could be found in the circulation of mice when only pancreatic intraepithelial neoplasm (PanIN) lesions were detectable in the pancreas. The circulating cells showed evidence of epithelial-to-mesenchymal transition, and had features characteristic of cancer stem cells.

Computational modeling reveals kinetics of metastasis suggesting optimum treatment strategies

http://www.ncbi.nlm.nih.gov/pubmed/22265421

Pancreatic Cancer Action Network write-up of this study and Dr. Stanger's work (see above):

http://www.pancan.org/section_research/strategic_research_program/news/topic_improving_understanding_of_mechanism_and_timing_of_pancreatic_cancer_metastasis.php

This paper was based on work primarily out of the laboratories of Christine Iacobuzio-Donahue, MD, PhD (2007 Pilot Grant and member, Scientific Advisory Board) and Franziska Michor, PhD. Joe Herman,

MD (2008 Blum-Kovler Career Development Award) was also an author on this study. Here, specimens from the Johns Hopkins Gastrointestinal Cancer Rapid Medical Donation Program and patient data were used to create a mathematical framework of pancreatic cancer metastasis. Their data suggest that patients are likely to harbor metastatic growth at diagnosis, reinforcing the usefulness of neoadjuvant treatment, administered as quickly as possible.

A new branch on the tree: Next-generation sequencing in the study of cancer evolution
http://www.ncbi.nlm.nih.gov/pubmed/22245832
Christine Iacobuzio-Donahue, MD, PhD (2007 Pilot Grant and member, Scientific Advisory Board) also coauthored this *Seminars in Cell & Developmental Biology* review article, discussing the cancer biology field's understanding of clonal expansion of tumor cells due to genetic changes leading to growth advantage, metastatic dissemination, etc.

MUC1 regulates PDGFA expression during pancreatic cancer progression
http://www.ncbi.nlm.nih.gov/pubmed/22266848
The final author in this *Oncogene* article is Pinku Mukherjee, PhD (2007 Pilot Grant). Dr. Mukherjee and colleagues investigated the function and mechanism of mucin1 (MUC1), a transmembrane mucin glycoprotein, and found a novel association with platelet-derived growth factor A (PDGFA), inducing invasion and proliferation of pancreatic cancer cells.

Kras(G12D)-induced IKK2/B/NF-kB activation by IL-1a and p62 feedforward loops is required
http://www.ncbi.nlm.nih.gov/pubmed/22264792
Authors on this *Cancer Cell* paper include Huamin Wang, MD, PhD (2007 Skip Viragh Career Development Award) and Jason Fleming, MD (Medical Advisory Board). The research team found that inactivation of IKK2/b in the pancreas of mice bearing pancreas-specific mutations in K-Ras or K-Ras and Ink4a/Arf led to inhibition of pancreatic cancer development. A feed-forward loop whereby K-Ras activates IKK2/b and NFkB was found to be necessary for induction of IL-1a and p62 activity, and required for the formation of pancreatic ductal adenocarcinoma.

Convergent structural alterations define SWI/SNF chromatin remodeler as tumor suppressive complex
http://www.ncbi.nlm.nih.gov/pubmed/22233809
Published in *PNAS*, this article picked up some media attention (such as: http://medicalxpress.com/news/2012-01-swisnf-protein-complex-role-suppressing.html). An international collaboration of investigators, including Anirban Maitra, MD (2004 Career Development Award and Scientific Advisory Board), describes sequence-based analyses of pancreatic cancer genomes. The authors found, for the first time, multiple types of alterations in genes encoding components of the SWItch/Sucrose NonFermentable (SWI/SNF) chromatin remodeling complex. At least one-third of pancreatic cancer specimens studied had alterations that disrupt the activity of the SWI/SNF complex, implicating this pathway as an important tumor suppressor in pancreatic cancer.

Arousal of cancer-associated stroma: overexpression of palladin activates fibroblasts
http://www.ncbi.nlm.nih.gov/pubmed/22291919
Teri Brentnall, MD (Emeritus Scientific Advisory Board) describes this paper as "some of [her team's] very best work." Dr. Brentnall is the first author on this *PLoS One* paper, and the final author is Ru Chen,

PhD (2006 Career Development Award). Drs. Brentnall, Chen, and their colleagues used a pancreatic cancer model system to evaluate the role of the cytoskeletal protein palladin in myofibroblasts surrounding the tumor, especially in regard to invasion.

Presence of somatic mutations in most early-stage pancreatic intraepithelial neoplasia
http://www.ncbi.nlm.nih.gov/pubmed/22226782
Scientists at Johns Hopkins University, including Ralph Hruban, MD (Emeritus Scientific Advisory Board) and Anirban Maitra, MD (2004 Career Development Award and member, Scientific Advisory Board), searched for somatic mutations in early PanIN-1 lesions, in order to better understand their progression to malignant disease.

Biochemical role of the collagen-rich tumour microenvironment in pancreatic cancer progression
http://www.ncbi.nlm.nih.gov/pubmed/22187935
This *Biochemical Journal* review out of Northwestern University describes the complex relationship between the collagen-rich desmpolastic reaction surrounding pancreatic tumors and increased expression of MT1-MMP, a key collagenase.

The RON-receptor regulates pancreatic cancer cell migration through breakdown of hemidesmosome
http://www.ncbi.nlm.nih.gov/pubmed/22275185
UCSD researchers looked at the expression and function of the RON receptor tyrosine kinase in pancreatic cancer cells. They found that RON interacts with plectin, and disrupts its binding to integrin-B4, leading to cell migration.

Autophagy mediates survival of pancreatic tumour-initiating cells in a hypoxic microenvironment
http://www.ncbi.nlm.nih.gov/pubmed/22262369
Rausch *et al* wrote this *Journal of Pathology* paper to determine whether autophagy occurs in pancreatic cancer stem cells (CSCs) in response to a hypoxic microenvironment. Indeed, markers for autophagy, "stem-ness," and hypoxia were seen to be co-expressed via immunohistochemistry. Formation of autophagic vesicles under hypoxic conditions was more pronounced in pancreatic cancer cells with stem-like qualities, suggesting that autophagy may be a means of survival for CSCs in low-oxygen.

Autophagy in pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22291707
This review article in the *International Journal of Cell Biology* discusses our current understanding of the mechanism and role of autophagy in pancreatic cancer.

Imexon induces an oxidative endoplasmic reticulum stress response in pancreatic cancer cells
http://www.ncbi.nlm.nih.gov/pubmed/22275514
Investigators at the University of Arizona studied the effects of imexon, a small molecule chemotherapeutic agent that induces oxidative stress by binding glutathione, on pancreatic cancer cells. Their data suggest that imexon does induce oxidative stress and inhibit protein synthesis in a pancreatic cancer cell line.

New gene-immunotherapy combining TRAIL-lymphocytes and EpCAMxCD3 bispecific antibody
http://www.ncbi.nlm.nih.gov/pubmed/22228630
In this *Clinical Cancer Research* article, pancreatic cancer cells were used as a model to evaluate a way to target TRAIL-induced cell death to cancer cells positive for EpCAM/ESA via lymphocytes. *In vitro* and *in vivo* experiments demonstrated that this approach could induce an endogenous immune response against a tumor, even in its advanced stages.

Interplay between B1-integrin and Rho signaling regulates differential scattering and motility
http://www.ncbi.nlm.nih.gov/pubmed/22232555
This *JBC* paper out of Northwestern University describes the role of transcription factors Snail and Slug in pancreatic cancer motility and scattering, and the involvement of signaling by Rho and B1-integrin.

MUC13 mucin augments pancreatic tumorigenesis
http://www.ncbi.nlm.nih.gov/pubmed/22027689
Molecular Cancer Therapeutics published this paper evaluating the expression and function of MUC13, a newly discovered transmembrane mucin, in pancreatic cancer. MUC13 was found to be over-expressed in pancreatic tumor compared to normal pancreas tissue, and blocking expression of MUC13 via short hairpin RNAs led to a decrease in cancer-like phenotypes, including blocking critical signaling pathways.

Metformin inhibits cell proliferation, migration and invasion by attenuating CSC function
http://www.ncbi.nlm.nih.gov/pubmed/22086681
Based on data surrounding the diabetes drug metformin and pancreatic cancer risk, this *Cancer Prevention Research* article describes the molecular mechanism by which metformin affects pancreatic cancer cells, and, more specifically, cancer stem cells. Metformin was found to decrease cell growth and ability to form pancreatospheres. Their results suggest that metformin exerts these effects by decreasing expression of stem cell-specific genes and inducing the re-expression of specific miRNAs.

Cardiff University's pancreas molecule research go ahead
http://www.bbc.co.uk/news/uk-wales-16390320
Researchers at Cardiff University were awarded a grant of two million pounds from the Medical Research Council in the UK. This money will go towards studying the role of calmodulin in chronic pancreatitis and pancreatic cancer, and how calmodulin modifies the effects of alcohol on the pancreas.

ETIOLOGY

Molecular Carcinogenesis Special Issue: Epidemiology & Etiological Mechanisms in Pancreatic Cancer
http://onlinelibrary.wiley.com/doi/10.1002/mc.v51.1/issuetoc
The January 2012 edition of *Molecular Carcinogenesis* was completed devoted to the epidemiology and etiological mechanisms in pancreatic cancer. As mentioned last month, Gloria Petersen, PhD (Scientific Advisory Board) served as an editor, and an article is authored by Martin Fernandez-Zapico, MD, PhD (2007 Carole and Bob Daly Career Development Award). Please also note the cover illustration, featuring the history of pancreatic cancer.

Use of antidiabetic agents and the risk of pancreatic cancer: A case-control analysis
http://www.ncbi.nlm.nih.gov/pubmed/22290402
Pancreatic Cancer Action Network write-up:
http://www.pancan.org/section_research/strategic_research_program/news/topic_complex_link_between_diabetes_drugs_and_pancreatic_cancer_risk.php
Published in *American Journal of Gastroenterology*, this study picked up a good amount of media attention last month. Researchers in Switzerland utilized the UK-based General Practice Research Database (GPRD) to analyze connections between diabetes drugs and pancreatic cancer risk.

Red & processed meat consumption & risk of pancreatic cancer: Meta-analysis of prospective studies
http://www.ncbi.nlm.nih.gov/pubmed/22240790
Pancreatic Cancer Action Network write-up:
http://www.pancan.org/section_research/strategic_research_program/news/topic_processed_meats_pancreatic_cancer.php
This story garnered a LOT of media attention, including a somewhat humorous rebuttal from the British pig industry: http://www.thepigsite.com/swinenews/28618/meat-industry-hits-back-over-cancer-and-meat-claims. Epidemiologists at the Karolinska Institutet in Sweden performed a meta-analysis of prospective studies to look at the association between consumption of red and processed meat, and pancreatic cancer risk. Processed meat was found to statistically significantly increase the risk of pancreatic cancer in both men and women.

PREVENTION

Diabetes and pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22162232
Donghui Li, PhD wrote this piece for *Molecular Carcinogenesis*, discussing the complex relationship between diabetes as a risk factor and a symptom for pancreatic cancer. Dr. Li hypothesizes that diabetes may be a modifiable risk factor, like smoking or obesity, in the prevention of pancreatic cancer.

EARLY DETECTION, DIAGNOSIS, AND PROGNOSIS

Integrative survival-based molecular profiling of human pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22261810
Dave Dawson, MD, PhD (2008 Seena Magowitz Career Development Award) is among the authors on this *Clinical Cancer Research* article. The team of UCLA researchers analyzed DNA copy number and expression of mRNA and microRNA in pancreatic cancer clinical specimens. They found 171 genes whose expression levels fit into two prognosis subgroups. The protein products of these genes could be considered biomarkers for pancreatic cancer diagnosis and determination of prognosis.

Tumor invasion of muscular vessels predicts poor prognosis in pancreatic ductal adenocarcinoma
http://www.ncbi.nlm.nih.gov/pubmed/22301496
The final two authors on this *American Journal of Surgical Pathology* paper are Jason Fleming, MD (Medical Advisory Board) and Huamin Wang, MD, PhD (2007 Skip Viragh Career Development Award). The authors analyzed lymphovascular invasion in pancreatic cancer patients who had undergone neoadjuvant therapy and pancreaticoduodenectomy, to determine its prognostic relevance under those

treatment conditions. The authors found that invasion specifically into muscular vessels was correlated with poorer disease-free and overall survival rates.

Recurrences after surgical resection of intraductal papillary mucinous neoplasm of the pancreas
http://www.ncbi.nlm.nih.gov/pubmed/22076564
Passot *et al* sought to determine which features would best predict recurrence in patients who underwent surgery to remove pancreatic intraductal papillary mucinous neoplasm (IPMN). Their single-center analyses showed that histological type was associated with risk of recurrence of IPMN.

Role of the ductal transcription factors HNF6 and Sox9 in pancreatic acinar-to-ductal metaplasia
http://www.ncbi.nlm.nih.gov/pubmed/22271799
Published in *Gut*, this manuscript looks at the ductal transcription factors hepatocyte nuclear factor 6 (HNF6) and SRY-related HMG box factor 9 (Sox9) and their role in inducing pancreatic acinar-to-ductal metaplasia (ADM). The results suggest that HNF6 and, to a lesser extent, Sox9 were required for repression of acinar genes, for modulation of ADM-associated changes in cell polarity, and for activation of ductal genes in metaplastic acinar cells. Therefore, HNF6 and Sox9 may be characterized as new biomarkers for ADM.

The utility of a novel antibody in the pathological diagnosis of pancreatic acinar cell carcinoma
http://www.ncbi.nlm.nih.gov/pubmed/22228907
Journal of Clinical Pathology featured this article, describing a novel means to diagnose pancreatic acinar cell carcinoma (ACC), a rare disease. Researchers at Kurume University School of Medicine in Japan developed a monoclonal antibody, 2P-1-2-1, that showed 100 percent specificity and sensitivity for diagnosing pancreatic ACC.

The prognostic and predictive value of serum CA19.9 in pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22241899
This study evaluates usefulness of CA19.9 values, when detectable, in predicting pancreatic cancer patients' outcome and response to treatment regimens.

Clinical impact of K-ras mutation analysis in EUS-guided FNA specimens from pancreatic masses
http://www.ncbi.nlm.nih.gov/pubmed/22284089
An international team of researchers evaluated whether K-ras mutation status could improve diagnosis of endoscopic ultrasound-guided fine needle aspiration (EUS-FNA). The authors concluded that the presence of mutant K-ras could differentiate pancreatic ductal adenocarcincoma from other pancreas abnormalities, like inflammation, when the EUS-FNA cytology results were inconclusive.

Abcodia tackles pancreatic cancer via Oxbridge Alliance
http://www.businessweekly.co.uk/biomedtech-/13374-abcodia-tackles-pancreatic-cancer-via-oxbridge-alliance
The UK startup Abcodia houses a prospective serum biobank, including specimens from patients up to seven years prior to a pancreatic cancer diagnosis. Oxbridge Alliance has expertise in protein and microRNA expression arrays. The companies will work together to identify sensitive and specific biomarkers to aid in the early detection of pancreatic cancer.

Immunomedics announces presentations showcasing pancreatic cancer diagnosis and therapy
http://www.marketwatch.com/story/immunomedics-announces-presentations-at-gastrointestinal-cancers-symposium-showcasing-advances-in-pancreatic-cancer-diagnosis-and-therapy-2012-01-12
GI ASCO abstracts:
http://www.asco.org/ASCOv2/Meetings/Abstracts?&vmview=abst_detail_view&confID=115&abstractID=88297
http://www.asco.org/ASCOv2/Meetings/Abstracts?&vmview=abst_detail_view&confID=115&abstractID=88370
http://www.asco.org/ASCOv2/Meetings/Abstracts?&vmview=abst_detail_view&confID=115&abstractID=88394
Please also see an Immunomedics abstract about pancreatic cancer treatment below. All of the studies are based on Immunomedics' proprietary humanized anti-PAM4 antibody, clivatuzumab.

Adenocarcinoma risk to whole pancreatic gland found in patients with IPMN
http://gicasym.org/GastrointestinalCancersSymposiumDailyNews/GI152.aspx
GI ASCO abstract:
http://www.asco.org/ASCOv2/Meetings/Abstracts?&vmview=abst_detail_view&confID=115&abstractID=87425
Researchers from Memorial Sloan-Kettering presented their analyses at GI ASCO. Patients who underwent surgical resection for intraductal papillary mucinous neoplasm (IPMN) of the pancreas were found to be at equal risk of recurrence at the same site as the original lesion, as anywhere on the entire pancreatic gland. Therefore, it's important to survey the entire pancreas, not just the area surrounding the original cyst.

TREATMENT
Data presented at the 2012 Gastrointestinal Cancers Symposium ("GI ASCO")
Immunomedics announces presentations showcasing pancreatic cancer diagnosis and therapy
http://www.marketwatch.com/story/immunomedics-announces-presentations-at-gastrointestinal-cancers-symposium-showcasing-advances-in-pancreatic-cancer-diagnosis-and-therapy-2012-01-12
Abstract:
http://www.asco.org/ASCOv2/Meetings/Abstracts?&vmview=abst_detail_view&confID=115&abstractID=88502
Please also see Immunomedics abstracts about pancreatic cancer diagnosis above. All of the studies are based on Immunomedics' proprietary humanized anti-PAM4 antibody, clivatuzumab.

Doubt cast on safety of vascular reconstruction during pancreaticoduodenectomy
http://gicasym.org/GastrointestinalCancersSymposiumDailyNews/GI153.aspx
Abstract:
http://www.asco.org/ASCOv2/Meetings/Abstracts?&vmview=abst_detail_view&confID=115&abstractID=88506
Retrospective analyses of data from the American College of Surgeons National Surgical Quality Improvement Program suggest that vascular reconstruction during pancreaticoduodenectomy results in a greater chance of pancreatic cancer patient morbidity and mortality.

Cost-benefit data shows neoadjuvant chemoradiation improves survival, more cost effective
http://gicasym.org/GastrointestinalCancersSymposiumDailyNews/GI156.aspx
Abstract:
http://www.asco.org/ASCOv2/Meetings/Abstracts?&vmview=abst_detail_view&confID=115&abstractID=87856
This study out of MD Anderson confirms that neoadjuvant chemoradiation improves survival of resectable pancreatic cancer patients, as opposed to surgery first. Moreover, their data suggest that this regimen is also more cost-effective.

RADIANT-2 reanalysis: Everolimus might be more beneficial against advanced NETs
http://gicasym.org/GastrointestinalCancersSymposiumDailyNews/GI157.aspx
Abstract:
http://www.asco.org/ASCOv2/Meetings/Abstracts?&vmview=abst_detail_view&confID=115&abstractID=88080
Initial analyses of the Phase III RADIANT clinical trial results showed a benefit of the addition of everolimus to octreotide to treat advanced pancreatic neuroendocrine tumors (NETs), but did not reach statistical significance. Here, the authors looked at the data further, and determined that the effect of everolimus was even greater than preliminarily reported, and statistically significant.

Other treatment stories from January

Infinity reports update from Phase 2 study of saridegib plus gemcitabine in pancreatic cancer
http://phx.corporate-ir.net/phoenix.zhtml?c=121941&p=irol-newsArticle&ID=1653550&highlight
Infinity Pharmaceuticals, Inc. reported the voluntary stoppage of their Phase 2 trial of saridegib (Hedgehog inhibitor, also known as IPI-926) and gemcitabine in patients with metastatic pancreatic cancer. Interim analyses revealed failure to meet the primary endpoint of a benefit in overall survival. There were no unexpected toxicities observed. There are still clinical trials underway to test other versions of Hedgehog inhibitors in pancreatic cancer patients. Encouragingly, a few days after Infinity's announcement, the FDA approved the Roche Hedgehog inhibitor, Erivedge (vismodegib), for the treatment of metastatic basal cell carcinoma:
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm289545.htm.

A live-attenuated listeria vaccine (ANZ-100) expressing mesothelin (CRS-207) for advanced cancers
http://www.ncbi.nlm.nih.gov/pubmed/22147941
Liz Jaffee, PhD (Emeritus Scientific Advisory Board) is an author on this *Clinical Cancer Research* article. The collaborative team of investigators evaluated a live-attenuated listeria monocytogenes strain (ANZ-100) in patients with liver metastases, and a listeria strain engineered to express mesothelin (CRS-207) in patients with a variety of solid tumors that are known to express mesothelin, including pancreatic. Results so far suggest that both agents are safe, and induce an immune response.

Analysis of local control in patients receiving IMRT for resected pancreatic cancers
http://www.ncbi.nlm.nih.gov/pubmed/22284684
Joe Herman, MD (2008 Blum-Kovler Career Development Award) contributed to this study. Their data suggest that intensity-modulated radiation therapy (IMRT) was not associated with an increased risk of local recurrence among pancreatic cancer patients.

Defined clinical classifications are associated with outcome of pancreatic adenocarcinoma
http://www.ncbi.nlm.nih.gov/pubmed/22258816
Medical Advisory Board members Jason Fleming, MD and Chris Crane, MD contributed to this *Annals of Surgical Oncology* paper. The authors developed and evaluated a system to classify pancreatic cancer patients' disease as clinically resectable, suspicious for extra-pancreatic disease, or marginal performance status / significant comorbidity. These classifications may be useful in the context of neoadjuvant therapy, to predict response and individualize treatment accordingly.

Phase I evaluation of intravenous ascorbic acid in combination with gemcitabine and erlotinib
http://www.ncbi.nlm.nih.gov/pubmed/22272248
Thomas Jefferson press release: http://www.jeffersonhospital.org/The-Daily-Dose/2012/January/high-dose-vitamin-c-for-advanced-pancreatic-cancer.aspx
Scientists at Thomas Jefferson University undertook a Phase I clinical trial of ascorbic acid in metastatic pancreatic cancer patients; results were published in this *PLoS One* article. Patients were treated with ascorbic acid plus gemcitabine and erlotinib, and found no evidence of increased toxicity, and a potential clinical benefit from the administration of ascorbic acid.

Adjuvant PEFG or gemcitabine followed by chemoradiation in pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22237835
Investigators in Milan, Italy launched a Phase II randomized clinical trial to compare an adjuvant regimen of either PEFG (cisplatin, epirubicin, 5-fluorouracil, gemcitabine) or gemcitabin, followed by chemoradiation, in resectable pancreatic cancer patients. Promising survival results with minimal increased toxicity suggested that the PEFG combined regimen warrants further examination in pancreatic cancer patients.

Local control of experimental malignant pancreatic tumors
http://www.ncbi.nlm.nih.gov/pubmed/22153808
Researchers at Tel Aviv University looked at treating experimental pancreatic tumors with a combination of chemotherapy (gemcitabine) and intratumoral (224)radium-loaded wires releasing alpha-emitting atoms to irradiate the tumor. In mouse xenograft models, the insertion of (224)radium-loaded wires into pancreatic tumors in combination with gemcitabine achieved significant local control and was superior to each treatment alone. This study also picked up some media attention, like here: http://www.eurekalert.org/pub_releases/2011-12/afot-bcf120611.php.

Randomized phase II study of gemcitabine and S-1 combination versus gemcitabine alone
http://www.ncbi.nlm.nih.gov/pubmed/22249272
The Japan Clinical Cancer Research Organization PC-01 multicenter randomized phase II study measured the effects of treating surgically unresectable pancreatic cancer patients with gemcitabine plus S-1 vs. gemcitabine alone. The clinical research team observed statistically significant improvements in progression free survival, disease response rate, and overall survival in patients treated with gemcitabine plus S-1, suggesting that a large randomized phase III trial is warranted.

Neoadjuvant therapy of pancreatic cancer: The emerging paradigm?
http://www.ncbi.nlm.nih.gov/pubmed/22250057
Lim *et al* from the National Cancer Institute wrote this review to discuss clinical evidence surrounding the benefits and potential risk factors of neoadjuvant therapy for pancreatic cancer patients.

Drugs in preclinical and early-stage clinical development for pancreatic cancer
http://www.ncbi.nlm.nih.gov/pubmed/22217246
This review article written by scientists at the University of Illinois discusses potential treatment options for pancreatic cancer by identifying molecular targets including those involved in cell proliferation, survival, migration, invasion, and angiogenesis.

The impact of the activated stroma on pancreatic ductal adenocarcinoma biology, therapy resistance
http://www.ncbi.nlm.nih.gov/pubmed/22272725
This *Current Molecular Medicine* review describes the stroma surrounding pancreatic tumors, and how it's thought to influence drug response and resistance, as well as the tumor cells themselves.

Neuroendocrine tumors of the pancreas
http://www.ncbi.nlm.nih.gov/pubmed/22080942
Drs. Stacey Milan and Charlie Yeo wrote this review in *Current Opinion in Oncology* about pancreatic neuroendocrine tumors, and recent findings related to their treatment.

Clovis Oncology announces size of initial hENT1-low population in pivotal LEAP trial
http://www.marketwatch.com/story/clovis-oncology-announces-size-of-initial-hent1-low-population-in-pivotal-leap-trial-and-provides-financial-guidance-for-2012-2012-01-09
Clovis Oncology's LEAP (Low hENT1 and Adenocarcinoma of the Pancreas) trial is designed to test if their compound CO-101 (lipid-conjugated gemcitabine) can be more effective in patients with low expression of the nucleoside transporter hENT1. The Independent Data Monitoring Committee for the study has reported that approximately 65 percent of metastatic pancreatic cancer patients enrolled in the trial have low expression of hENT1. The diagnostic tool to test hENT1 expression is being developed in collaboration with Ventana Medical Systems. Clovis hopes to complete enrollment of this clinical trial by the end of the first quarter of 2012.

Kadmon acquires first-in-class Ras antagonist from Concordia Pharmaceuticals
http://www.marketwatch.com/story/kadmon-acquires-first-in-class-ras-antagonist-from-concordia-pharmaceuticals-2012-01-09
Kadmon Corporation, LLC has signed an agreement with Concordia Pharmaceuticals, Inc for all rights to salirasib (now called KD032). KD032 is a Phase 2, novel, orally available, small molecule therapeutic designed to inhibit overactive cell growth in cancer caused by various Ras proteins, including H-Ras and K-Ras. Phase I/II clinical trials of KD032 in combination with gemcitabine have shown potentially promising clinical results and tolerability in pancreatic cancer patients.

TCT receives patent on therapeutic monoclonal antibody targeting pancreatic cancer
http://world.einnews.com/pr_news/76083642/tct-receives-patent-on-therapeutic-monoclonal-antibody-targeting-pancreatic-cancer
Targeted Cancer Therapeutics LLC (TCT) was awarded a patent for their monoclonal antibody against CEACAM6. CEACAM6 is over-expressed on the surface of many cancer types, including pancreatic, and binding of the antibody is designed to induce apoptosis and inhibit angiogenesis and proliferation.

Publication of NIH funded trials registered in ClinicalTrials.gov: Cross-sectional analysis
http://www.ncbi.nlm.nih.gov/pubmed/22214755
A team at Yale investigated whether and when NIH-funded clinical trials were published in peer-reviewed biomedical journals. Less than half of the trials registered at clinicaltrials.gov were published within 30 months of completion, and one-third of the trials had not been published after a median of 51 months after completion.

Chemotherapy drug shortages in the United States: Genesis and potential solutions
http://www.ncbi.nlm.nih.gov/pubmed/22291078
This *JCO* paper was written to discuss the current chemotherapy drug shortages in the US, and to discuss potential solutions to this crisis.

CANCER CONTROL, SURVIVORSHIP, AND OUTCOMES RESEARCH

Supportive care considerations during concurrent chemoradiotherapy for pancreatic adenocarcinoma
http://www.ncbi.nlm.nih.gov/pubmed/22237148
Vince Picozzi, MD (Medical Advisory Board) is the senior author on this study. Dr. Picozzi and colleagues took lessons learned from clinical experiences to compile this review, discussing the importance of anticipating and planning for potential side effects before beginning anti-cancer therapies.

Meta-analysis of psychosocial interventions to reduce pain in patients with cancer
http://www.ncbi.nlm.nih.gov/pubmed/22253460
Researchers at the Moffitt Cancer Center conducted a meta-analysis of randomized controlled studies determining the effects of psychosocial interventions on pain in adult patients with cancer. They found that psychosocial interventions had a medium-sized effect on pain interference and minimization, supporting its usefulness as palliative care in cancer patients.