PANCREATIC CANCER: NEWS & UPDATES

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BIOLOGY OF CANCER

The Evolving Science of Cancer Stem Cells
http://www.cancer.gov/ncicancerbulletin/072710/page4
The theory of the cancer stem cell has generated excitement and optimism in cancer research over the last decade. Biologically, these cells are distinct from the other cells that form the bulk of a tumor in that they can self-perpetuate and produce progenitor cells, the way that traditional stem cells do. However, to date, the stem cell model has not been adequately tested in most cancers and findings reported to date are inconclusive.

Cancer's 'Addiction' Spurs New Treatment Hopes
http://opa.yale.edu/news/article.aspx?id=7682
Yale researchers report that while cancer uses an array of genetic tricks to cause havoc, it can become dependent upon a tiny gene that allows it to adapt and proliferate. The identification of such an "oncogene addiction" within a tumor means that researchers have a potentially new and valuable therapeutic target with the potential to cripple it.

Adenosquamous Carcinoma of the Pancreas: A Distinct Clinicopathologic Entity
http://www.ncbi.nlm.nih.gov/pubmed/20697320
Among exocrine pancreatic tumors, adenosquamous carcinoma is a rare, aggressive subtype with a worse prognosis and a higher potential for metastases compared to its more conventional glandular counterpart, adenocarcinoma. Similar to the therapeutics of pancreatic adenocarcinoma, adjuvant chemotherapy or chemoradiotherapy is currently indicated for resectable ASC of the pancreas, while gemcitabine or gemcitabine combinations are used for a more advanced disease. Both pathologic and molecular features of pancreatic ASC characterize it as a distinct subtype of pancreatic cancer and its molecular and genetic makeup could be exploited for both diagnostic and therapeutic quests in the future.

ETIOLOGY

Statins Cleared of Causing Cancer
http://www.medpagetoday.com/MeetingCoverage/ESCCongress/21866
Researchers report statins neither cause nor prevent cancer. The finding comes from a meta-analysis of 25 randomized controlled trials of the lipid-lowering medications. In those trials, which included more than 166,000 participants, there were no differences between treatment and control arms in terms of the incidence of cancer or the rate of cancer mortality. They conclude statins are safe and do not increase cancer, and state the data meet the "gold standard" of randomized trials.

Statins and Pancreatic Cancer Risk: A Nested Case-Control Study
http://www.ncbi.nlm.nih.gov/pubmed/20697797
The study examined the relationship between statin use and pancreatic cancer risk in an UK population. A total of 1,141 pancreatic cancer cases and 7,954 controls were identified. Neither dose nor duration of statin use affected pancreatic cancer risk. Statin use at doses for managing hypercholesterolaemia was not associated with the risk of exocrine pancreatic cancer.

New Strategies in Pancreatic Cancer: Emerging Epidemiologic and Therapeutic Concepts
http://clincancerres.aacrjournals.org/content/early/2010/08/13/1078-0432.CCR-09-1942.abstract?papetoc
Data from recent studies suggest that obesity and long-term type II diabetes are two major modifiable risk factors for pancreatic cancer and seem to affect the clinical outcome of patients. Understanding the mechanistic effects of obesity and diabetes on the pancreas may help identify new strategies for prevention or therapy.

Does Body Mass Index/Morbid Obesity Influence Outcome in Patients Who Undergo Pancreatoduodenectomy for Pancreatic Adenocarcinoma?
http://www.ncbi.nlm.nih.gov/pubmed/20676790
Researchers examined the impact of body mass index on outcomes for resected pancreatic cancer. Of the 586 patients who underwent pancreatoduodenectomy for pancreatic adenocarcinoma from 1981 to 2007, body mass index and morbid obesity did not appear to influence long-term outcomes for patients undergoing pancreatoduodenectomy.

Intra-abdominal Fat Predicts Survival in Pancreatic Cancer
http://www.ncbi.nlm.nih.gov/pubmed/20725799
While measures of intra-abdominal fat correlate with medical and postoperative complications of obesity, the impact of intra-abdominal fat on pancreatic cancer survival is uncertain. The authors reviewed 61 patients who underwent pancreaticoduodenectomy for exocrine pancreatic adenocarcinoma. While preoperative BMI did not predict overall survival, patients with more intra-abdominal fat demonstrated worse overall survival in a non-linear fashion.

Obesity Adversely Affects Survival in Pancreatic Cancer Patients
http://www.ncbi.nlm.nih.gov/pubmed/20665496
Higher body-mass index (BMI) has been implicated as a risk factor for developing pancreatic cancer, but its effect on survival has not been thoroughly investigated. The authors reported higher BMI is associated with decreased survival in pancreatic cancer. Although the mechanism of this association remains undetermined, diabetes and hyperglycemia do not appear to account for the observed association.

The Relationship between New-onset Diabetes Mellitus and Pancreatic Cancer Risk: A Case-Control Study
http://www.ncbi.nlm.nih.gov/pubmed/20709528
Diabetes mellitus is associated with pancreatic cancer, though it is unclear whether it is a cause or consequence of the disease. When 1,458 pancreatic cancer patients at two university-affiliated hospitals were compared with a control group over a nine year period, a moderate increased risk of pancreatic ductal adenocarcinoma was observed among those with long-standing diabetes. A significantly higher risk was observed among cases with new-onset diabetes. The study suggested that diabetes could be both an early manifestation of pancreatic cancer and an etiological factor.

Fructose Induces Transketolase Flux to Promote Pancreatic Cancer Growth
http://www.ncbi.nlm.nih.gov/pubmed/20647326
Carbohydrate metabolism via glycolysis and the tricarboxylic acid cycle is pivotal for cancer growth, and increased refined carbohydrate consumption adversely affects cancer survival. The researchers report that fructose provides an alternative substrate to induce pancreatic cancer cell proliferation and show that cancer cells can readily metabolize fructose to increase proliferation. Efforts are reported to reduce refined fructose intake or inhibit fructose-mediated actions as they may disrupt cancer growth.

Glycemic Index, Glycemic Load, and Risk of Pancreatic Cancer among Postmenopausal Women
http://www.ncbi.nlm.nih.gov/pubmed/20711806
Several reports have suggested that conditions associated with hyperinsulinemia and insulin resistance, such as diets high in carbohydrates, may influence the risk of pancreatic cancer, although results from prior studies have been mixed. Researchers utilized data from the population-based women's health initiative and conclude that the cohort results did not show that dietary intake of carbohydrates increased pancreatic cancer risk.

Smoking Blamed for Increased Incidence of Pancreatic, Lung and Bronchus Cancers in Port Clinton, Ohio
http://www.thenews-messenger.com/article/20100824/NEWS01/8240302/ODH-study-No-PC-cancer-cluster
http://toledoblade.com/article/20100824/NEWS32/8230402/-1/SRMAIN
Port Clinton's rate of pancreatic cancer is 90% greater, and its rate of lung and bronchus cancers is 50% greater, than what the Ohio Department of Health believes should be expected for a city its size. From their investigation, they concluded that the increased incidence is more likely the result of excessive smoking than exposure to industrial chemicals or environmental pollutants as residents had believed.

Viruses May Cause More Cancer than Previously Thought
http://www.livescience.com/health/cancer-viruses-vaccines-100819.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+Livesciencecom+%28LiveScience.com+Science+Headline+Feed%29
University of Cambridge researchers report on a study that showed that a particular mouse herpesvirus could trigger cancer in mice but then practically disappear from the cancer cells. The study suggests that viruses might be implicated in more cancers than previously believed.

DETECTION, DIAGNOSIS AND PROGNOSIS

Pancreatic Cancer Tumor Size on CT Scan Versus Pathologic Specimen: Implications for Radiation Treatment Planning
http://www.ncbi.nlm.nih.gov/pubmed/20708856
Pancreatic cancer primary tumor size measurements are often discordant between computed tomography (CT) and pathologic specimen after resection. Researchers retrospectively evaluated 97 consecutive patients with resected pancreatic cancer at two Boston hospitals. All patients had CT scans before surgical resection. CT scans significantly under-represented pancreatic cancer tumor size compared with pathologic specimens in resectable cases.

PET Scan is Prognostic of Progression-free and Overall Survival in Locally Advanced Pancreas Cancer Treated with Stereotactic Radiotherapy
http://www.ncbi.nlm.nih.gov/pubmed/20056345
This study analyzed the prognostic value of positron emission tomography (PET) for locally advanced pancreas cancer patients undergoing stereotactic body radiotherapy. PET scan parameters were found to be predictive of length of survival in locally advanced pancreas cancer patients.

Functional Magnetic Resonance Imaging to Evaluate Pancreatic Cancer
http://www.eurekalert.org/pub_releases/2010-07/wjog-fmr073010.php
http://www.wjgnet.com/1007-9327/full/v16/i26/3292.htm
Current therapies for pancreatic adenocarcinoma offer minimal benefit. Given the success that local therapies (as opposed to intravenous systemic therapies) have had in treating diseases like liver cancer, it is thought that similar therapeutic approaches may benefit pancreatic cancer patients. To develop these therapies, researchers need targets that are easy to obtain and can indicate the efficacy of these treatments in models of pancreatic cancer. Northwestern University researchers addressed this need and recently published their work in the ***World Journal of Gastroenterology***. They report that two types of functional MRIs that they studied--diffusion-weighted MRI and transcatheter intra-arterial perfusion MRI--could be used to differentiate living tumor cells from dead tumor cells and can assess tumor viability.

Validation of Blood Testing for K-ras Mutations in Colorectal and Pancreatic Cancer
http://www.ncbi.nlm.nih.gov/pubmed/20683036
The authors reviewed studies in which K-ras mutation status was assessed in both blood and tumor to ascertain whether blood K-ras mutation is predictive of tumor K-ras mutation. The K-ras mutation in blood appears to indicate K-ras mutation in tumor, while the absence of blood K-ras mutation does not prove lack of mutation in the tumor. This funding suggests that a blood test for the detection of tumor K-ras may be possible, and could direct cancer treatment strategies.

Association of Pre-treatment Peripheral Blood Markers with Survival in Patients with Pancreatic Cancer
http://www.ncbi.nlm.nih.gov/pubmed/20698242
The study assessed the prognostic value of pretreatment lymphocyte, neutrophil and platelet counts in patients with pancreatic cancer. Pre-treatment hematological parameters (platelet, lymphocyte, neutrophil counts, and mean platelet volume) and tumor marker (CA 19-9) levels were recorded. Findings indicated that pretreatment neutrophil to lymphocyte may be used as a prognostic factor in pancreatic cancer. Further studies with larger patient cohorts are warranted, however.

Cancer Biomarkers Missing in Action
http://www.medpagetoday.com/HematologyOncology/OtherCancers/21649
http://www.ncbi.nlm.nih.gov/pubmed/20705936
In a commentary published online in the ***Journal of the National Cancer Institute***, Dr. Eleftherios Diamandis reports that despite large investments and scientific investigations by competent researchers,

no new major cancer biomarkers have been validated for clinical use in the past 25 years. Diamandis claims a range of common analytical errors lead to what he calls "false discovery," even when reports undergo detailed peer review and appear in high-profile journals.

Pilot Study of Blood Biomarker Candidates for Detection of Pancreatic Cancer
http://www.ncbi.nlm.nih.gov/pubmed/20467349
This study was conducted by a team of researchers including Drs. Teri Brentnall and Ru Chen, member of the Pancreatic Cancer Action Network's Scientific Advisory Board and 2006 Pancreatic Cancer Action Network-AACR Career Development Award recipient, respectively. A dozen biomarker candidates were analyzed for their potential as pancreatic cancer blood biomarkers using enzyme-linked immunosorbent assays. Among them, the macrophage migration inhibitory factor and osteopontin blood tests were nearly perfect in distinguishing pancreatic cancer cases from healthy controls (100% and 95% sensitivity, respectively, at 100% specificity). Five biomarker candidates were then tested on an expanded set of diseased controls, which included sera from patients with pancreatitis. The sensitivity dropped significantly for all 5 candidate markers. Results suggest that biomarker candidates could fail in various steps of biomarker development. Earlier knowledge of candidate biomarker flaws could lead to strategies to overcome the flaw or alternatively lead to earlier termination of biomarkers that are prone to failure in the later phases of validation testing.

Elevated Level of Anterior Gradient-2 in Pancreatic Juice from Patients with Pre-malignant Pancreatic Neoplasia
http://www.molecular-cancer.com/content/9/1/149
This study was conducted by a team of researchers including Drs. Teri Brentnall and Ru Chen, member of the Pancreatic Cancer Action Network's Scientific Advisory Board and 2006 Pancreatic Cancer Action Network-AACR Career Development Award recipient, respectively. Quantitative proteomics were applied to identify aberrantly elevated proteins in pancreatic juice samples derived from patients with PanIN3. Twenty proteins were found elevated in all three PanIN juices by at least two-fold. Among these proteins, anterior gradient-2 (AGR2) was found to be 2-10 fold elevated in PanIN3 juice samples analyzed by quantitative proteomics. An ELISA assay was developed to evaluate AGR2 levels in 51 pancreatic juice samples and 23 serum samples from patients with pancreatic cancer, pre-malignant lesions (including PanIN3, PanIN2, Intraductal Papillary Mucinous Neoplasms (IPMNs)) and benign disease controls (including chronic pancreatitis). AGR2 levels in the pancreatic juice samples were found significantly elevated in patients with pre-malignant conditions (PanINs and IPMNs) as well as pancreatic cancer compared to control samples ($p \leq 0.03$). By ROC analysis, the AGR2 ELISA achieved 67% sensitivity at 90% specificity in predicting PanIN3 juice samples from the benign disease controls. These results suggest that elevation of AGR2 levels in pancreatic juice occurs in early pancreatic cancer progression and could be further investigated as a potential candidate juice biomarker for early detection of pancreatic cancer.

Prognostic Factors for Survival in Patients With Unresectable Pancreatic Cancer
http://www.ncbi.nlm.nih.gov/pubmed/20683218
The study looked at the prognostic factors of survival in patients with unresectable pancreatic cancer after initial biliary drainage and reported the presence of distant metastases as the only independent prognostic factor for survival.

TREATMENT

Targeting Mutated K-ras in Pancreatic Adenocarcinoma Using an Adjuvant Vaccine
http://www.ncbi.nlm.nih.gov/pubmed/20686403
The objective of this study was to assess the safety and efficacy of immunizing patients with resected pancreatic cancer with a vaccine targeted against their tumor-specific K-ras mutation. Vaccinations were given to 24 patients. Median recurrence-free survival time was 8.6 months and median overall survival time was 20.3 months. K-ras vaccination for patients with resectable pancreatic adenocarcinoma proved to be safe and tolerable however, with no elicitable immunogenicity and unproven efficacy.

Phase II Study of Personalized Peptide Vaccination Combined with Gemcitabine for Non-resectable Pancreatic Cancer Patients
http://www.ncbi.nlm.nih.gov/pubmed/20664989
Researchers evaluated the safety and immune response of a personalized peptide vaccination with gemcitabine in patients with non-resectable pancreatic cancer. Twenty-one patients with untreated and

non-resectable pancreatic cancer were enrolled. The combination therapy was generally well tolerated. Median survival time of all 21 patients was 9.0 months with a one year survival rate of 38%. These results suggest a potential clinical benefit of this combination therapy for non-resectable pancreatic cancer patients as the first line therapy. Further exploration of this approach is warranted.

University Hospitals Case Medical Center Surgeon Leads Study on Promising Pancreatic Cancer Vaccine
http://www.cleveland.com/healthfit/index.ssf/2010/08/uh_surgeon_leads_study_on_prom.html
Dr. Jeffrey Hardacre, a surgeon at Case Medical Center, discusses the New Link Genetics phase II pancreatic cancer post resection vaccine study and the progress of the current phase III trial. Preliminary indications from the Phase II trial suggest that the vaccine may have some positive effects for patients.

Vaccine Shows Some Promise Against Advanced Cancers
http://www.cancercompass.com/cancer-news/article/33915.htm
http://www.jci.org/articles/view/42672
Scientists have genetically tweaked a virus to fashion a therapeutic vaccine that appears to attack a variety of advanced cancers. The vaccine was reported to provoke the required tumor-fighting immune response in early human trials, but only in a minority of patients tested. The vaccine was administered multiple times over a period of three months to 28 patients with advanced, recurrent forms of lung, colon, breast, appendix or pancreatic cancer. The patients had already failed several rounds of standard chemotherapy. Five patients displayed a response to the therapy including one patient with a liver lesion that was no longer visible.

Docetaxel Second-line Therapy in Patients with Advanced Pancreatic Cancer: A Retrospective Study
http://www.ncbi.nlm.nih.gov/pubmed/20683031
Researchers retrospectively evaluated the role of docetaxel as second-line therapy in patients with gemcitabine-refractory disease. Findings suggested that docetaxel has a mild affect in the treatment of gemcitabine-resistant metastatic pancreatic cancer.

Super-sizing a Cancer Drug Minimizes Side Effects
http://www.physorg.com/news199517081.html
Cisplatin is a chemotherapy drug that is effective in killing tumor cells, but can also seriously damage the kidneys. Harvard-MIT researchers have developed a way to package cisplatin into nanoparticles that are too big to enter the kidneys. This new compound could spare patients the usual side effects and allow doctors to administer higher doses of the drug. Tumors in mice treated with the new cisplatin nanoparticle shrank to half the size of those treated with traditional cisplatin, with minimal side effects.

Phase II Trial to Evaluate Gemcitabine and Etoposide for Locally Advanced or Metastatic Pancreatic Cancer
http://www.ncbi.nlm.nih.gov/pubmed/20682649
Chemo-naïve locally advanced and metastatic pancreatic cancer patients' response to gemcitabine and etoposide was evaluated. The median overall survival for locally advanced patients was 8.8 months; this compared to 6.75 months for metastatic patients. One-year survival was 10% for all patients and 11.4% for evaluable patients. Results showed that the gemcitabine and etoposide combination is generally well-tolerated and exhibits a response rate similar to what has been reported in other published studies.

Phase III Study Comparing Gemcitabine Plus Cetuximab Versus Gemcitabine in Patients With Advanced Pancreatic Adenocarcinoma: SWOG–Directed Intergroup Trial S0205
http://jco.ascopubs.org/content/28/22/3605.abstract?cmpid=jco_etoc_1August2010
S0205 was a randomized clinical trial that compared the therapeutic impact of gemcitabine versus gemcitabine plus cetuximab in patients with unresectable locally advanced or metastatic pancreatic adenocarcinoma. No significant difference was seen between the two arms of the study with respect to the median survival time (6.3 months for the gemcitabine plus cetuximab arm vs. 5.9 months for the gemcitabine alone arm). Although time to treatment failure was longer in patients on gemcitabine plus cetuximab ($P = .006$), the length of treatment was only 2 weeks longer in the combination arm. In this patient population, cetuximab did not improve the outcome compared with patients treated with gemcitabine alone.

Pain and Emotional Well-Being Outcomes in SWOG–Directed Intergroup Trial S0205: A Phase III Study Comparing Gemcitabine Plus Cetuximab Versus Gemcitabine As First-Line Therapy in Patients With Advanced Pancreas Cancer
http://jco.ascopubs.org/content/28/22/3611.abstract?cmpid=jco_etoc_1August2010
Patients enrolled in the SWOG S0205 trial completed the Brief Pain Inventory and a measure of emotional well-being at baseline and at weeks 5, 9, 13, and 17, post random assignment. Change in emotional well-being and worst pain were assessed over 17 weeks. Of the 766 enrolled patients, 720 contributed baseline health-related quality of life (HRQL) data. The two treatment arms did not differ statistically in the percentage of patients with successful worst pain palliation. Analyses showed significantly improved emotional well-being for patients on both arms by weeks 13 and 17; worst pain showed significant decreases at all time points for both arms. Palliated pain and improved well-being were observed for patients on this trial. These improvements were similar in both treatment arms, suggesting that the addition of cetuximab did not contribute to improvement in these HRQL outcomes.

Gemcitabine Plus Bevacizumab Compared With Gemcitabine Plus Placebo in Patients With Advanced Pancreatic Cancer: Phase III Trial of the Cancer and Leukemia Group B (CALGB 80303)
http://jco.ascopubs.org/content/28/22/3617.abstract?cmpid=jco_etoc_1August2010
Based on encouraging data reported in a phase II trial of combination gemcitabine plus bevacizumab in metastatic pancreatic cancer, a double-blind, placebo-controlled, randomized phase III trial of gemcitabine/bevacizumab versus gemcitabine/placebo in advanced pancreatic cancer patients was conducted. Of 602 enrolled patients, 535 were treated. Median overall survival was 5.8 months for gemcitabine/bevacizumab and 5.9 months for gemcitabine/placebo. Median progression-free survival was 3.8 and 2.9 months, respectively and overall response rates were 13% and 10%, respectively. The only statistically significant differences in grades 3 and 4 toxicity occurred for hypertension and proteinuria. The authors concluded that the addition of bevacizumab to gemcitabine does not improve survival in advanced pancreatic cancer patients.

ACOSOG Z05031 Phase II Trial of Adjuvant Therapy for Resected Pancreatic Cancer Using Cisplatin, 5-fluorouracil, and Interferon-Alfa-2b-Based Chemoradiation
http://www.ncbi.nlm.nih.gov/pubmed/20670978
The study aimed to confirm the efficacy of interferon-based chemoradiation regimen in a multicenter phase II trial. Patients with resected adenocarcinoma of the pancreatic head were treated with adjuvant interferon-alfa-2b, cisplatin, and 5-fluorouracil concurrently with external-beam radiation. Eighty-nine patients were enrolled. The all-cause grade >/=3 toxicity rate was 95% (80 patients) during therapy. Further development of this regimen will require additional modifications to mitigate toxic effects.

Weekly Paclitaxel After Failure of Gemcitabine in Pancreatic Cancer Patients with Malignant Ascites: A Retrospective Study
http://www.ncbi.nlm.nih.gov/pubmed/20656694
Peritoneal metastasis is one of the major sites of disease progression of pancreatic cancer. The safety and efficacy of weekly paclitaxel therapy was evaluated for pancreatic cancer patients with malignant ascites in a retrospective study. Researchers report that paclitaxel therapy may be a useful treatment option for pancreatic cancer patients with malignant ascites after gemcitabine failure.

Estimating Optimal Dose of Twice-weekly Gemcitabine for Concurrent Chemoradiotherapy in Unresectable Pancreatic Carcinoma: Mature Results of GEMRT-01 Trial
http://www.ncbi.nlm.nih.gov/pubmed/20056351
Mature data show that gemcitabine doses can be increased when delivered twice-weekly with concurrent radiotherapy. This combination shows promise to achieve better recurrence-free and overall survival and to serve as a basis for further implementation of the multimodal treatment of locally advanced pancreatic carcinoma.

Gemcitabine Metabolic and Transporter Gene Polymorphisms are Associated with Drug Toxicity and Efficacy in Patients with Locally Advanced Pancreatic Cancer
http://www.ncbi.nlm.nih.gov/pubmed/20665488
It has not been well established whether genetic variations can be biomarkers for clinical outcome of gemcitabine therapy. This study aimed to identify single nucleotide polymorphisms (SNPs) of gemcitabine metabolic and transporter genes that are associated with toxicity and efficacy of gemcitabine-based

therapy in patients with locally advanced pancreatic cancer. The results indicated that some polymorphic variations of drug metabolic and transporter genes may be potential biomarkers for clinical outcome of gemcitabine-based therapy in patients with locally advanced pancreatic cancer.

Court Ruling Could Pave Way for Gemzar Generics
http://www.reuters.com/article/idUSTRE66S0H320100729
http://pharmalive.com/news/index.cfm?articleID=720334&categoryid=9&newsletter=1
A decision by a U.S. appeals court could pave the way for cheaper generic forms of Eli Lilly and Co's Gemzar cancer drug to be launched in the United States beginning in mid-November. Gemzar is approved to treat ovarian, lung, breast and pancreatic cancer.

Noteworthy Clinical Case Studies in Cancer Gene Therapy: Tumor Targeted Rexin-G Advances as an Efficacious Anti-Cancer Agent
http://www.ncbi.nlm.nih.gov/pubmed/20428757
This paper highlights a series of noteworthy case studies in the emergent field of targeted genetic medicine, including several patients with treatment resistant pancreatic cancer.

Personalized Genome Sequencing In Cancer Treatment
http://www.medicalnewstoday.com/articles/197516.php
Researchers at the BC Cancer Agency Genome Sciences Center have provided the first published example of genome-scale RNA and DNA sequencing of a tumor to aid in clinical decision making and therapeutic choice. While the research focused on a rare tumor of the tongue, analysis of the complete genomic sequence allowed the discovery of the genetic changes that had accumulated within the tumor and a personalized drug regimen was initiated. This is the first application of this technology and ushers in the era of personalized medicine in oncology, whereby therapies will be tailored precisely to the genetic make-up of the tumor. While still in a preliminary stage, this approach is of particular relevance for cancer with no established treatment protocols and those with a lack of effective treatment options.

New Link Genetics Phase III Trial
http://www.bcm.edu/news/item.cfm?newsID=2667
Dr. William Fisher at Baylor College discusses the New Link Genetics phase III trial and shares some research that is being conducted as part of The Cancer Genome Atlas project. Fisher is hopeful that once the pancreatic cancer genome is complete, a patient's tumor can then be biopsied and subjected to a genetic analysis so doctors will know exactly what mutations are causing the tumor, and which treatment would be best.

Multimodality Treatment of Pancreatic Cancer with Liver Metastases Using Chemotherapy, Radiation Therapy, and/or Chinese Herbal Medicine
http://www.ncbi.nlm.nih.gov/pubmed/20683216
This study explored the utility of chemotherapy, radiation therapy, and/or Chinese herbal medicine in the treatment of patients with pancreatic cancer with liver metastases (PCLM). Overall median survival time of the 164 patients was 4.7 months; 14% were alive at least 12 months after initial diagnosis of liver metastases. Analysis showed that chemotherapy and Chinese herbal medicine were protective factors and multimodality treatment was well tolerated by patients with PCLM and may be effective in prolonging survival.

Adjuvant Chemoradiation Therapy for Adenocarcinoma of the Distal Pancreas
http://www.ncbi.nlm.nih.gov/pubmed/20680697
This study examined the effect of adjuvant 5-FU-based chemoradiation therapy after distal pancreatectomy. Patients who received adjuvant chemoradiation therapy were compared with those who underwent surgery alone. There was no significant difference in overall survival between patients treated with adjuvant CRT versus surgery alone ($p = 0.23$). An exploratory subgroup analysis suggested a potential survival benefit of adjuvant chemoradiation therapy in patients with lymph node metastases.

Taste Alterations in Cancer Patients Receiving Chemotherapy: A Neglected Side Effect?
http://www.ncbi.nlm.nih.gov/pubmed/20667968
Taste alterations are a frequent but under-recognized treatment side effect in cancer patients undergoing chemotherapy. This study assessed the prevalence of taste alterations and their relation to sociodemographic and clinical variables, especially chemotherapy regimens and their association with

quality of life. Pancreatic cancer patients comprised 19.3% of the sample. The prevalence of taste changes in chemotherapy patients was high (69.9%). There were clear differences in taste alterations among treatment groups. Fr example, patients receiving a combination of gemcitabine and a platinum agent reported the lowest taste alterations. Researchers conclude the there is an urgent need for increased attention to this side effect, both in research and in clinical practice.

Pancreatoduodenectomy for Ductal Adenocarcinoma in the Very Elderly
http://www.ncbi.nlm.nih.gov/pubmed/20714937
This study compared therapeutic outcomes for the elderly (80 years and above) and younger patients (under age 80) who underwent PD for pancreatic adenocarcinoma from 1981 to 2007. Results showed that in experienced institutions, PD for ductal adenocarcinoma is a viable option among the ambulatory elderly who were determined to be operative candidates.

Preoperative Endoscopic Tattooing of Pancreatic Body and Tail Lesions Decreases Operative Time for Laparoscopic Distal Pancreatectomy
http://www.ncbi.nlm.nih.gov/pubmed/20554299
Precise localization of small pancreatic tumors is critical to achieving adequate margins of resection while preserving as much healthy pancreas as possible. This study determined the effect of endoscopic tattooing of the distal pancreas on operative time. Patients with a tattoo had a shorter operative time compared with patients without a tattoo and none required repeat surgery. Researchers conclude that endoscopic ultrasound-guided tattooing of pancreas lesions before a laparoscopic distal pancreatectomy is safe and is associated with decreased operative time compared with nontattooed patients.

Postoperative External Beam Radiotherapy for Resected Pancreatic Adenocarcinoma: Impact of Chemotherapy on Local Control and Survival
http://www.ncbi.nlm.nih.gov/pubmed/20683039
Postoperative external beam radiotherapy (EBRT) for resected pancreatic adenocarcinoma was retrospectively reviewed from the records of 47 patients. Their median survival time and 2-year actuarial overall survival were 30.0 months and 54.5%, respectively. Post-operative EBRT with chemotherapy yielded a favorable local control rate for resected pancreatic adenocarcinoma. EBRT combined with chemotherapy conferred a survival benefit compared to EBRT alone.

Radiofrequency Ablation of Locally Advanced Pancreatic Adenocarcinoma: An Overview
http://www.ncbi.nlm.nih.gov/pubmed/20653055
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2909546/?tool=pubmed
Radiofrequency ablation (RFA) of pancreatic tumors is an ultrasound-guided procedure performed during laparotomy in open surgery. It is restricted to locally advanced, non-resectable but non-metastatic tumors. This paper provides an overview of the technique for pancreatic adenocarcinoma.

Radiofrequency Ablation, Heat Shock Protein 70 and Potential Anti-tumor Immunity in Hepatic and Pancreatic Cancers: A Minireview
http://www.ncbi.nlm.nih.gov/pubmed/20688598
http://www.hbpdint.com/text.asp?id=1375
Radiofrequency ablation (RFA) is a minimally invasive surgical procedure with popularity in the treatment of hepatic and pancreatic cancers. Increased evidence indicates that RFA stimulates anti-tumor immunity, possibly through the induction heat shock protein 70 (HSP70) expression. An English-language literature search was conducted on anti-tumor immunity, heat shock protein 70, radiofrequency ablation, hepatic cancer, pancreatic cancer, and other related subjects. Results indicated that RFA can induce the expression of HSP70, which possesses properties that enable it to influence a variety of immunological processes. Further investigations should be conducted.

Efficacy and Tolerability of Limited Field Radiotherapy with Concurrent Capecitabine in Locally Advanced Pancreatic Cancer
http://www.ncbi.nlm.nih.gov/pubmed/20650619
Patients with locally advanced pancreatic cancer (LAPC) are commonly managed with chemotherapy or concurrent chemoradiotherapy (CRT), which may or may not include non-involved regional lymph nodes in the clinical target volume. Researchers present results of CRT for LAPC using capecitabine and delivering radiotherapy to a limited radiation field that excluded non-involved regional lymph nodes from

the clinical target volume. They conclude CRT using capecitabine and limited field radiotherapy is a well-tolerated, relatively efficacious treatment for LAPC.

Morphine Blocks Tumor Growth
http://www.acor.org/news/display.html?id=9737
http://www.eurekalert.org/pub_releases/2010-07/ajop-mbt072710.php
Current research suggests that taking morphine can block new blood vessel and tumor growth. University of Minnesota researchers examined the effect of morphine use on new blood vessel growth in tumors and report that chronic morphine use decreased levels of tumor angiogenesis in a manner dependent on the opioid receptor. This effect was mediated by suppression of signaling induced by low oxygen concentrations, leading to a reduction in the levels of pro-angiogenic factors. Therefore, morphine may not only serve as an analgesic for cancer patients, but may also inhibit tumor angiogenesis and growth.

Cold Viruses Could Be Cancer Fighters
http://www.medpagetoday.com/HematologyOncology/OtherCancers/21878 *(includes video)*
Researchers at the Salk Institute for Biological Studies in La Jolla, California report an engineered cold virus could be used one day to destroy tumors. Both tumors and adenoviruses use a similar strategy to avoid cellular defenses- shutting down the tumor suppressor gene p53. In normal cells, p53 acts as a brake, preventing cell cycling when there is damage and in extreme cases causing the cell to self-destruct. In tumor cells and those infected with adenovirus, those brakes are turned off. When the engineered virus enters a cell the brakes turn on, but in tumor cells there are no brakes, so it replicates and kills tumor cells.

Curcumin in Cancer Chemoprevention: Molecular Targets, Pharmacokinetics, Bioavailability, and Clinical Trials
http://www.ncbi.nlm.nih.gov/pubmed/20726007
Curcumin, a derivative of turmeric, is one of the most commonly used and highly researched phytochemicals. Abundant sources provide interesting insights into the multiple mechanisms by which curcumin may mediate chemotherapy and chemopreventive effects on cancer. The authors report there is sufficient data exists to advocate phase II and phase III clinical trials of curcumin for a variety of cancer conditions including multiple myeloma, pancreatic, and colon cancer.

Scientists use Salmonella Bug to Kill Cancer Cells
http://www.reuters.com/article/idUSTRE67A40Q20100811
Treating tumors with salmonella bacteria can induce an immune response that kills cancer cells that may help create tumor-killing immune cells to inject into patients. Italian and American researchers worked with mouse and human cancer cells and report their work might help in developing a therapeutic vaccine. While the team used melanoma cells in the study, they report the same technique could be analyzed in other cancer types.

With Muscle-Building Treatment, Mice Live Longer Even as Tumors Grow
http://www.sciencedaily.com/releases/2010/08/100819121206.htm
In the vast majority of advanced cancer patients, their muscles will gradually waste away. The reasons for this are not well understood. Researchers report in the August 20 issue of ***Cell*** some new clues to this relationship and a way to reverse that process in mice. Animals with cancer that received a muscle-building experimental treatment lived significantly longer, even as their tumors continued to grow. This is the first demonstration that muscle mass plays a key role in cancer survival," said H.Q. Han of Amgen Research.

Funding May Affect Reporting of Trial Results
http://www.medpagetoday.com/PublicHealthPolicy/ClinicalTrials/21491
Among drug trials registered in ClinicalTrials.gov, those primarily funded by industry were more likely to report positive outcomes than those funded through other sources. The vast majority, 85.4%, of published industry-funded trials had positive findings, compared with 50% of those funded by government and 71.9% of those funded by nonprofit or nonfederal organizations.

Can Cancer Patients Benefit From Phase I Drug Trials?
http://www.medscape.com/viewarticle/726951?src=mpnews&spon=7&uac=61043SJ

There has been significant controversy about whether advanced cancer patients are get taken advantage of in phase I trials, and whether they actually benefit from experimental drugs. Findings from a recent study out of MD Anderson suggest that doctors should consider referring their terminally ill patients to such trials. They reported that patients with advanced head and neck cancer survived just as well on experimental drugs in phase I trials as they did on FDA-approved standard therapies.

Cancer Patients' Roles in Treatment Decisions: Do Characteristics of the Decision Influence Roles?
http://jco.ascopubs.org/content/early/2010/08/16/JCO.2009.26.8870.abstract
Patients with more active roles in decisions are more satisfied and may have better health outcomes. Patients making decisions about treatments for which no evidence supports benefit, and decisions about noncurative treatments, reported more physician control, which suggests that patients may not want the responsibility of deciding on treatments that will not cure them. While this study looked at lung and colorectal patients, better shared decision-making strategies are needed for all terminally ill patients when there is no evidence to support the benefit of a treatment.

Continental Divide? The Attitudes of US and Canadian Oncologists on the Costs, Cost-Effectiveness, and Health Policies Associated With New Cancer Drugs
http://jco.ascopubs.org/cgi/gca?sendit=Get+All+Checked+Abstract%28s%29&gca=JCO.2010.29.1625v1
Both U.S. and Canadian health care systems face challenges posed by the rising costs of cancer drugs. The study surveyed oncologists' attitudes regarding the costs and cost-effectiveness of medications and related health policy. More US oncologists reported favoring access to effective treatments regardless of cost, while more Canadians favored access to effective treatments only if they are cost-effective. Both groups reported patient out-of-pocket costs influence their treatment recommendations, but less than half the respondents always or frequently discuss the costs of treatments with their patients. Both groups have similar attitudes regarding cancer drug costs, cost-effectiveness, and associated policies, despite practicing in different health care systems.

Frank Talk About Care at Life's End
http://www.nytimes.com/2010/08/24/health/24brod.html?src=me&ref=health
Legislators have begun to recognize the medical, humanitarian and economic value of helping terminally ill patients and their families navigate treatment options as they approach the end of life. Last week, over the objections of New York State's medical society, Gov. Paterson signed into law the New York Palliative Care Information Act requiring physicians who treat patients with a terminal illness/condition to offer information about prognosis and options for end-of-life care, including aggressive pain management, hospice care and possibilities for further life-sustaining treatment. The need has been identified for education and training to increase physician competency in discussing palliative care with patients and families, and in identifying those with limited life expectancy.

Letting Go - What Should Medicine do When it Can't Save Your Life?
http://www.newyorker.com/reporting/2010/08/02/100802fa_fact_gawande
The August 2 issue of the ***New Yorker*** magazine discusses the difficulty of end-of-life discussions between doctor and patient noting the balancing act between not killing hope and confronting death. The article asks, "What should medicine do when it can't save your life?" The author uses as illustrations several case histories, including the story of a firefighter with pancreatic cancer.

Study Shows Value of Quality-of-Life Cancer Care
http://www.google.com/hostednews/ap/article/ALeqM5iXzZIJ8diAKIpyWggY9NPVjTA81AD9HM4JP01
http://www.nejm.org/doi/full/10.1056/NEJMoa1000678
A study published in the *New England Journal of Medicine* confirms the benefits of end-of-life care in the terminally ill. While the study looked at patients with terminal lung cancer, the findings can apply to pancreatic cancer, which also has a substantial symptom burden and need for comprehensive care. The study reported terminal lung cancer patients who began receiving palliative care immediately upon diagnosis not only were happier, more mobile and in less pain as their disease progressed, but they also lived nearly three months longer.