Thought For Today

“MEN HAVE TWO EMOTIONS: HUNGRY AND HORNY. IF YOU SEE HIM WITHOUT AN ERECTION, MAKE HIM A SANDWICH.”

-JIM LEDDY

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Thanks!

Cancer Information Service

Call toll free:
1-888-939-3333 or 1-905-387-1153

When you call the toll free number of the Cancer Information Service, your questions will be answered by someone who understands how confusing the subject of cancer can be. All calls are kept confidential

NEXT MEETING:
June 19th, 2008 7 - 9 P.M.
Dr. Piotr Czaykowski, MD. MSC. FRC. Prostate Cancer Oncologist
Dr. Yiu-Keung Lau MD., Ph.D. Dr. J. Gingerich Oncologist

Drug Therapy in Prostate Cancer - Past, Present, and Future
Location: AUDITORIUM of the Seven Oaks General Hospital - Leila & McPhillips

The Manitoba Prostate Cancer Support Group

Vol. 204 - June 2008

The Manitoba Prostate Cancer Support Group encourages wives, loved ones, and friends to attend all meetings.
Feel free to ask basic or personal questions without fear of embarrassment. You need not give out your name or other personal information.
The Manitoba Prostate Cancer Support Group does not recommend treatment modalities, medications, or physicians. All information is however freely shared.

Want to reach us by email?
manpros@mts.net

www.manpros.org
Dairy Products Linked To Increased Risk Of Prostate Cancer

By David Liu, Ph. D.

Apr 19, 2008 - 9:20:51 AM

SATURDAY April 19, 2008 (Foodconsumer.org) - Japanese researchers have recently conducted an epidemiologic study and confirmed the association between high intake of dairy products and increased risk of prostate cancer.

Kurahashi N from the National Cancer Center in Tokyo, Japan and colleagues found the prostate cancer risk was increased by more than 50 percent in those whose intake of dairy products was in the highest quartile, compared to that for the lowest quartile.

Many epidemiologic studies have reported a positive association between prostate cancer and dairy products. Calcium and saturated fatty acid in the products have been suspected to be the causative agents.

The current study was meant to investigate the association between dairy products, calcium, and saturated fatty acid and risk of prostate cancer in Japan where both intake of the products and the incidence of the cancer were low.

For the study, the researchers followed 43,435 Japanese men aged 45 to 74 for an average 7.5 years. The participants' dietary habits were surveyed using a validated questionnaire including 138 food items. During the follow-up, 329 men were diagnosed with prostate cancer.

Dairy consumption was associated with the risk of prostate cancer in a dose-dependent manner. Those whose consumption of total dairy products, milk, and yogurt was in the highest quartiles were 63, 53, and 52 percent more likely to develop prostate cancer, respectively, than those whose consumption was in the lowest quartiles.

There were also statistically significant associations for both calcium and saturated fatty acid, but the magnitude of the associations were attenuated after adjusting for potential confounding factors.

Specifically, those who consumed the highest amounts of myristic acid and palmitic acid were 62 and 53 percent more likely to develop prostate cancer than those who consumed the lowest amounts, respectively.

The researchers concluded that "our results suggest that the intake of dairy products may be associated with an increased risk of prostate cancer."


Men Wanted!!!

Wellam Yu Ko (a graduate student) wants to learn about your experience with Radical Prostatectomy.

He is currently doing his thesis on prostate cancer survivors, and is looking for volunteers to conduct brief interviews focusing on issues related to sexuality and sexual functioning.

For more information, please call: 947-0802, or email: umyukowf@cc.umanitoba.ca
Tiny Weapons, Huge Hopes In The Fight Against Cancer Nanoparticles May Detect, Treat Disease

By Stephen Smith, Globe Staff | April 20, 2008

For decades, the war on cancer has been waged with the medical equivalent of buckshot: Toxic drugs are injected into patients and then scatter, with only a small fraction landing on the intended target. Tumors may shrink, but patients often suffer horribly.

Now, inside laboratories in Massachusetts and around the world, scientists are developing cancer weapons that are made tiny enough to pierce cancerous cells and smart enough to spare healthy ones.

The devices, often made of common materials like plastic or rust, hold the promise of delivering payloads of powerful medication directly to tumors. Other diminutive devices would act like glowing beacons, quickly indicating when cancer has spread or returned.

The federal government is investing nearly $145 million in the quest, with $20 million of that devoted to research at the Massachusetts Institute of Technology and Harvard University. And the pace of discovery is accelerating: Already, one cancer-detection method developed at Massachusetts General Hospital is awaiting approval by federal regulators.

Still, the research must solve a host of medical and engineering riddles demanding the expertise of cancer doctors, as well as chemists, electrical engineers, and computer scientists.

"We're dreaming about how cancer [treatment] can be changed," said Dr. Sangeeta Bhatia, a physician and engineer at MIT. "But it has to be borne out in patients - that's the ultimate challenge."

This is a field in which size matters. The smaller, the better. Just how small? Think of a tennis ball. Now, think of something tens of millions of times smaller. That is the size of some of the tumor-detecting and drug-delivering vehicles being developed.

The devices are known as nanoparticles, and at their smallest, they are single crystals of a material. A favorite choice among scientists is iron oxide, better known as rust. Even if hundreds of the particles are suspended in liquid in a test tube, they are barely visible.

But their potential is huge.

Doctors have long been frustrated by their inability to know before they operate whether cancer has colonized surrounding lymph nodes. If cancer has traveled from a man's prostate to the adjacent tissue, for example, a doctor might very well opt for radiation rather than surgery.

"The goal of the surgery is cure," said Dr. Mukesh Harisinghani, a Massachusetts General Hospital radiologist. "But if I expose the patient to the [risk] of the surgery and he still has disease present elsewhere, I'm not curing him."

So the Mass. General scientists enlisted iron oxide nanoparticles to go hunting for cancer-riddled lymph nodes.

The nanoparticles are pumped into patients. If there's no cancer present, the slivers of iron are absorbed into the lymph nodes, which appear black on an MRI scan, signaling health. By contrast, if cancer has colonized the lymph nodes, the MRI will turn white, because malignant cells can't consume the iron nanoparticles.

The approach has been successfully tested in patients with prostate, breast, colon, and testicular cancer, and its wider use is awaiting approval by the US Food and Drug Administration.

"The availability of new imaging technology utilizing nanoparticles is very promising in allowing physicians" to more accurately determine the extent of a malignancy and offer patients the best treatment options, said Dr. William Kuy Oh, a prostate cancer specialist at Dana-Farber Cancer Institute.

In Bhatia's lab at MIT's David H. Koch Institute for Integrative Cancer Research, they are working on iron oxide nanoparticles that would be even more clever. The researchers want their particles to deliver medication as well as detect cancer. Like microscopic balloons, the particles could have the drug embedded inside, or glued onto the exterior.

But how do the thousands of nanoparticles get to their intended address, the tumor? It's a lot like making sure a letter gets to the right address. You have to know the ZIP code.

Bhatia and other researchers are coming up with a catalog of specific "addresses" for tumors by analyzing telltale molecular changes that occur in the network of blood vessels feeding cancer cells. The codes, once cracked, can

(Continued on page 4)
then be chemically attached to the iron oxide nanoparticles to assure proper delivery.

But coming up with the right address solves only one problem. Scientists must also make sure the medication doesn't fall off before reaching the tumor, and the nanoparticles must sneak past the liver, the organ trained to filter out foreign invaders.

Another MIT scientist, Michael Cima, is working on a different detection approach that takes iron oxide and places it inside a Lilliputian piece of plastic shaped like a hockey puck. Currently being studied in mice, it would be implanted at the same time a tissue biopsy is performed, and left behind.

"Some of these devices are going to be small enough that you don't care if the plastic dissolves [or stays in your body]," Cima said. "Which would you rather have? Cancer, or a little piece of plastic left in you?"

The chunk of plastic has holes on its surface big enough to allow a cancer-related protein to enter and be detected, but small enough to prevent the iron oxide from escaping. It's important for the iron oxide nanoparticle to remain inside because it carries the lure that attracts the cancer protein.

The plastic would remain in place so that MRI tests could be performed periodically to see if a benign growth has turned malignant or whether a tumor has spread. Cima's lab is developing an even more sophisticated technique to allow the device to be monitored with a wearable detector that doctors could use to quickly identify cancer's spread.

He is also doing preliminary work on implantable devices that would deliver medication directly to tumors. Building such sophisticated, small machinery requires microengineering akin to what is used to make iPods. Much like the slim music machines, the implantable cancer detectors and drug-delivery devices must withstand the body's equivalent of being stepped on or dropped.

"A lot of research went into the iPod to make it mechanically sound so that you can drop it, and it still works," Cima said. "We tried to use the same kind of approach with the design of medical devices."

Formidable obstacles exist before nanoparticles can be used widely in the detection and treatment of cancer. For one, researchers must prove that the materials they're using won't harm patients. Certain agents, such as plastics and iron oxide, are already widely used for other purposes in patients, but there's far less experience with those materials at such a tiny scale, fueling fears that the material's properties may change.

Additionally, adding a drug or a molecular address label to the particles triggers the need for more safety reviews.

Researchers must also guarantee that any new treatments meaningfully improve on options that already exist. And just like any screening method, doctors will need to ensure that they do not operate or give patients drugs when simply monitoring a troubling growth would suffice.

"If you recognize it immediately, it doesn't mean you need to treat it immediately," said Piotr Grodzinski, director of the National Cancer Institute's Alliance for Nanotechnology in Cancer. "It means you have an opportunity to be aware of it and monitor it."

Dr. Robert Cima, brother of MIT's Michael Cima, witnesses the potential for nanodevices every day at the Mayo Clinic in Minnesota, where he is a gastrointestinal surgeon. When he removes a tumor from a patient's colon, he cuts a wide swath around the growth to make sure he doesn't leave any cancer behind. But if he knew before operating that the areas around the tumor were cancer-free, the scope of surgery could be reduced and hospital stays and complications would decrease.

"There have been a lot of times when I call Mike and I tell him, 'I'm in the trenches, and you're in the ivory tower. I'm doing this work, and I know I can do it better if I had better solutions,' " Cima said.

"I look for him to give me better solutions."

...
The study supports the system's clinical flexibility in treating prostate cancer and expands the non-invasive options available to clinicians and patients.

HDR brachytherapy has been shown to be an extremely effective approach for treating prostate cancer, with substantial clinical evidence supporting its usage. Nevertheless, the required insertion of multiple catheters into the prostate, where they remain for the duration of the procedure (typically 1-3 days), makes it an invasive procedure.

This study demonstrates the CyberKnife System's ability to non-invasively deliver complex HDR-like radiation dose sculpting to the prostate, without the need for hospitalisation or anaesthesia, maximizing patient comfort and convenience. Early clinical outcomes of the study show a rapid reduction in prostate specific antigen (PSA) levels with minimal short-term side effects.

"HDR brachytherapy is an effective, accepted treatment for prostate cancer, but adoption has been limited because it is a difficult procedure for clinicians to deliver and for patients to undergo," said Donald Fuller, MD, radiation oncologist, CyberKnife Centers of San Diego and Radiation Medical Group, and principal investigator in the study. "Our study concluded that CyberKnife radiosurgery can offer the benefits of HDR brachytherapy non-invasively on an outpatient basis that is both easy to deliver and comfortable for patients."

This study, titled 'Virtual HDR(sm) CyberKnife Radiosurgery for Localized Prostatic Carcinoma: Dosimetry Comparison with HDR Brachytherapy and Preliminary Clinical Observations' supports the system's clinical flexibility and demonstrates its capability to create either a uniform distribution of radiation across the prostate or a pattern of dose that is similar to HDR brachytherapy.

The System's ability to track the location of the prostate, detect its position and correct the treatment beam angle continually throughout treatment ensures that either type of plan can be delivered accurately, accounting for the motion of the prostate during the treatment. The CyberKnife System gives clinicians a variety of non-invasive treatment delivery options, allowing them to customize the treatment to each patient's specific case.

"We are pleased to have published support of the CyberKnife System's diverse capabilities in prostate cancer planning and look forward to further clinical evidence following the publication of long term follow-up studies," said Eric Lindquist, senior vice president and chief marketing officer of Accuray, the manufacturer of CyberKnife.

**Explanation of HDR Brachytherapy**

HDR brachytherapy is a procedure commonly used in the treatment of prostate cancer. The procedure involves the insertion of catheters into the prostate gland, and then the delivery of a series of radiation treatments through these catheters.

A computer-controlled machine forces a seed containing a high energy radioactive source into the catheters one at a time, and then controls how long this seed remains in each of the catheters. This method allows different regions of the prostate to receive different doses of radiation (ie regions of the prostate expected to have large numbers of tumour cells receive higher doses of radiation than other parts of the prostate that may have a smaller amount of tumour cells).

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**DON’T BLOW IT ALL ON YOUR SUMMER VACATION**

We’d appreciate your help at this time, when we’re getting ready for the Prostate Cancer Awareness Week and the Awareness Evening.

Generally, all our funds are used to pay for the publication of the newsletter and the pharmaceutical industry does chip in for the Awareness Week promotion, but advertising is an added expense to our group and we could use an extra donation now. If you can afford it, please help out.

*YOUR SUPPORT GROUP*

[www.manpros.org](http://www.manpros.org)
Prostate Cancer Can Be Halted With Anti-inflammatory And Statin Used In Tandem, Study Suggests

ScienceDaily (Apr. 14, 2008) - Researchers at Rutgers' Ernest Mario School of Pharmacy have shown that administering a combination of the widely used drugs Celebrex (celecoxib, a nonsteroidal anti-inflammatory drug) and Lipitor (atorvastatin, a cholesterol lowering drug) stops the transition of early prostate cancer to its more aggressive and potentially fatal stage.

Prostate cancer is the second leading cause of cancer death in men in the United States, with more than a quarter-million new cases appearing each year, according to the American Cancer Society. The findings are being presented by Rutgers Professor Xi Zheng at the annual meeting of the American Association for Cancer Research in San Diego, April 14th.

In the early stage of the disease, when it is typically diagnosed, prostate cancer cells depend on androgen hormones, such as testosterone, to grow. Treatment at this stage involves either decreasing the production of the hormone or blocking its actions on the cancer cells.

"Anti-androgen therapy slows the prostate cancer but eventually the cancer becomes androgen-independent, the therapy becomes ineffective and the cancer cells become more aggressive," said Xi Zheng, assistant research professor at Rutgers, The State University of New Jersey, who conducted the study.

"Treatments available for the later stage cancers are not very good," said Allan Conney, director of Rutgers' Susan Lehman Cullman Laboratory for Cancer Research, another researcher on the project. "Oncologists employ classical chemotherapy drugs which are very toxic and don't work all that well."

Zheng and Conney's research objective was to find a way to indefinitely delay the transition to androgen-independence, prolonging the time during which the cancer would be responsive to effective, low-toxicity, anti-hormone therapy. Zheng explained that their experiments were first conducted on cell cultures in the laboratory, where the researchers tested the effects of the drugs on the growth of prostate cancer cells from four different cell lines. They then moved on to test the drugs on specially bred mice in which prostate cancer tumors were introduced under the skin. Celebrex alone, Lipitor alone, and the two in combination were tested at the lab bench and on the mice.

"A combination of low doses of Lipitor and Celebrex had a more potent inhibiting effect on the formation of later stage tumors than a higher dose of either agent alone," Zheng reported. "The results from our study indicate that a combination of Lipitor and Celebrex may be an effective strategy for the prevention of prostate cancer progression from the first to the second stage."

Zheng also noted that the team is exploring the underlying molecular mechanisms to understand how Lipitor and Celebrex work on prostate cancer, perhaps identifying an important signaling pathway for tumor cell growth that the drugs inhibit.

Conney pointed out that previous experiments reported in the Sept. 15, 2007, issue of Clinical Cancer Research had demonstrated that the Lipitor-Celebrex combination also inhibited the growth of prostate cancer cells in the later androgen-independent stage.

"So if you can affect the early stage and prevent it from becoming the more severe form, that's a good thing. If you can also inhibit the growth of the more severe form, that's also a good thing," Conney said.

Human clinical trials are being planned at the Robert Wood Johnson Medical School of the University of Medicine and Dentistry of New Jersey in New Brunswick.

"If the clinical trials go well, we could have something available in five years, but it would be nice to speed that up," Conney said. "If the trials show that the drug therapy does a good job of preventing the cancer from advancing, we won't need to worry about how to handle the more aggressive later stage cancer.

"This is something we hope is going to save lives," he added.

www.manpros.org
Biomarker Spots Which Lesions Likely to Progress to Prostate Cancer

Finding could help men with precancerous lesions avoid unnecessary needle biopsies

Kevin McKeever  Friday, May 2, 2008

HealthDay news - Spanish researchers report they may have found a way to tell which suspicious prostate lesions are likely to develop into cancer.

The findings, published in the May 1 issue of Clinical Cancer Research, show a link between high-grade prostatic intraepithelial neoplasia (HG-PIN) lesions and the PTOV1 gene. The more PTOV1 the lesion expresses, the more likely cancer will develop. The report also backs the reverse -- that the lack of PTOV1 means a reduced risk of prostate cancer.

PTOV1 is a protein that researchers don't fully understand the function of, but they have previously found too much of it appears to promote the spread of cancer cells.

If subsequent studies confirm PTOV1 as a biomarker for prostate cancer, it could help men with the lesions avoid repeated needle biopsies.

"Those patients with a high PTOV1 score should undergo an immediate repeat biopsy," study author Rosanna Paciucci, a researcher at the Vall d'Hebron Hospital Research Institute in Barcelona, said in a prepared statement. But those with low PTOV1 may not need to receive future "annoying and useless" biopsies, she said. "We estimate that we can save 40 percent of unnecessary biopsies -- those that are repetitively negative and contain HG-PIN lesions that do not develop into cancer."

HG-PIN, while present in most cancerous prostates, is a premalignant lesion and, given its association with other cancers, it is often repeatedly biopsied when found. Past studies have put the average risk of cancer being diagnosed in a HG-PIN biopsy at between 20 percent and 30 percent, the researchers said. However, none of these studies were to tell which lesions would progress to cancer, the researchers say.

Paciucci cautioned that her team's results need to be confirmed through a larger study group. "From this validation, we can expect to improve the current rate of early detection of cancer," she said.

Urine Test Accurately Diagnoses Prostate Cancer

May 06, 2008 03:45 PM EDT

Harvard Health Publications

When it comes to screening for prostate cancer, the prostate-specific antigen (PSA) test has been the gold standard. But PSA testing is not perfect. It cannot distinguish prostate cancer from benign conditions that elevate PSA levels, for example.

In recent years, scientists have been trying to develop more accurate tests to supplement or replace PSA screening. One, which is still experimental, checks for the presence of PCA3, a molecule associated with prostate cancer, in urine. In February, University of Michigan researchers reported developing another urine test that outperforms both PSA and PCA3 in distinguishing prostate cancer from benign conditions like prostatitis and prostate enlargement.

The Michigan team measured the expression of seven biomarkers associated with prostate cancer among 234 patients. By correlating the biopsy data with the urine test results, researchers found that four of the biomarkers were significant predictors of prostate cancer. In fact, the four together proved more accurate than either PSA or PCA3 alone, correctly identifying 80% of patients who were later found to have prostate cancer.

The next step: prove that these initial findings hold up in studies with more men at multiple institutions. Future efforts will also be directed at developing a urine test for biomarkers that might signal an aggressive form of prostate cancer.

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