

# CANADIAN PROSTATE CANCER SUPPORT GROUP

Newmarket, Ontario

Volume 13, Issue 8, April 15th, 2009

**A support group that provides understanding,  
hope and information to prostate cancer patients and their families**

One of the most important things we can take charge of in our battle with cancer is how and what we eat. It will probably do more in helping us to feel better, enjoy a better quality of life and probably help us to live longer and healthier. That's what we have for you for the April 16 meeting. Tanya Giaquinto, our guest speaker is a Dietician from Sunnybrook Cancer Health centre. Diet and Cancer...Reducing your risk and taking control is the title of her talk. Her presentation will focus on Prostate cancer and how important proper diet is for you. She said that in the past groups have wanted to know about weight management techniques as well. There should be an emphasis on ways to manage weight while being on treatment that involves hormones. Come to the meeting and start getting in shape.

**Meeting Date**      **April 16th 2009**

**Place**                      **Newmarket Seniors Meeting Place,  
474 Davis Drive, Newmarket**

**Time:**                      **7:00 pm to 9:00 pm**

**Speaker**                      **Tanya Giaquinto**

**Subject:**                      **Diet and Cancer...Reducing your risk, taking control.**

Canadian Prostate Cancer Support Group,  
Newmarket, Ontario. 905-830-0447

a member of the



Canadian Prostate Cancer Network

Assisted by the Canadian Cancer Society  
Holland River Unit  
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*The Newmarket Prostate Cancer Support Group does not recommend products, treatment modalities, medications, or physicians. All information is, however, freely shared.*

**March Meeting Notes . . .** In order to take a good look at what we have been doing for the past two years, what has worked and what hasn't, we focussed our March meeting on getting some answers from members on how we could better meet their needs. We got some very good suggestions, for example, they liked the round table setup. It gave them an opportunity to get to know each other better and they felt it improved the support aspect of our group. It also al-

lowed them to take their cafes to the tables and use that time to get to know each other. We will try this on a more regular basis, even when we have speakers. We will also be introducing more of the suggestions at future meetings.

Because the March meeting doesn't have a guest speaker for me to report on, it gives me the space to search the Web and see what studies or trials might introduce new treatments for us in our battle with prostate cancer. Here is some of what I found

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## Personalized medicine: Hunting tailored care for advanced prostate cancer

Mon Mar 23, 2009 By Luran Neergaard, The Associated Press

WASHINGTON - Prostate cancer has been left behind in the race for personalized medicine but that may be changing: Doctors are starting to attempt gene-guided treatment for men with advanced disease. It's an approach already offered in treating breast and certain other cancers. The new prostate work is a small initial step at catching up. And it targets the men in most dire need - those whose prostate cancer has spread to the bones or other parts of the body, and hormone treatment to slow its march has quit working. These are the men who ultimately wind up dying of prostate cancer, some 28,000 a year in the United States and 4,300 in Canada.

"Prostate cancer has learned some tricks," says Dr. Phillip Febbo of Duke University Medical Center, who is unravelling how to decode those tricks to better direct therapy - by looking directly at the tumour's genetic signature.

The research is very preliminary but if a gene-guided method ultimately works it could ease what the American Cancer Society's Dr. Durado Brooks calls today's "shotgun approach" to advanced prostate cancer. Patients slog their way through a handful of medications in no particular order, changing course only after the cancer quits responding. "This gives us a more scientifically reasoned, evidence-based approach to treating these men - hopefully. That's the theory," Brooks cautions.

Starting next month, Duke will recruit men for a study that will help determine their treatment.

Tumours carry a pattern of gene and protein activity that signal whether a cancer is more or less aggressive and whether it is susceptible to various treatments. Those signatures already have led to breast cancer tests that predict which tumours are more likely to return, helping patients decide whether to try or skip chemotherapy, for example. Everyone with advanced colon cancer is supposed to get a genetic test before trying one of two leading treatments, to see if their tumour will respond. Yet even though prostate cancer hits as many men as breast cancer hits women, finding genetic signatures in prostate tumours has been a struggle. Men tend to get prostate biopsies early on, before the cancer has spread. Very few get one after their cancer worsens, when the tumour has evolved, leaving few advanced tumour samples for scientists

to examine which genetic activity is most crucial, Febbo explains.

But that's slowly changing, and the result is a race to find genetic signatures that might predict a therapy's usefulness. First up, the "androgen receptor." It's the male counterpart to the estrogen receptor that determines how strongly estrogen fuels breast cancer growth. Hormone therapy to block testosterone production is a key prostate cancer treatment. But some cancers keep growing despite low testosterone levels, and researchers in the last few years have found that how tumour cells use their androgen receptor plays a major role. The cancer might make copies of its androgen receptor so a cell now has 10 instead of two, Febbo says, the better to suck in remaining testosterone. Or the receptors may become more sensitive, able to react to the tiniest bit of testosterone instead of usual levels. Prostate tumours sometimes even start making their own testosterone.

Febbo's team genetically profiled more than 100 samples of prostate cancer. A genetic signature separates which men with hormone-resistant advanced cancer still have a very active androgen receptor and which don't - something else, perhaps a gene named Src, is fuelling their cancer, he reported this month in the Journal of Clinical Oncology.

Next month, Duke and other hospitals that are part of the Defense Department's Prostate Cancer Consortium will begin recruiting 60 such patients and custom-profile their cancer to decide treatment. Those with highly active androgen receptors will get nilutamide, a receptor blocker. Those whose androgen receptors aren't the problem will receive an experimental treatment, the leukemia drug dasatanib that's known to target prostate-related factors.

Also under way: Testing whether there's a genetic signature that says which men will respond best to a different drug, docetaxel. It's proven to increase survival in hormone-resistant advanced prostate cancer but only in a fraction of patients. Separately, doctors are closely watching studies of an experimental drug named abiraterone that's supposed to target mutated androgen receptors.

It's way too soon to predict if any of these approaches will pan out. But the genetics rationale appeals to those of us who see prostate cancer running in our families.

# Fatty Fish May Cut Prostate Cancer Risk

*Study Shows Eating Fish High in Omega-3s Reduces Risk of Aggressive Prostate Cancer*

By **Salynn Boyles** WebMD Health News Reviewed by **Michael W. Smith, MD**

March 24, 2009 — Men who eat salmon and other fish high in omega-3 fatty acids on a regular basis have a decreased risk for developing advanced prostate cancer, new research suggests. The association was most pronounced among men believed to have a genetic predisposition for developing aggressive prostate cancer. Men in the study who ate one or more servings of fatty fish a week were found to have a 63% lower risk for developing aggressive prostate cancer than men who reported never eating fish, study co-researcher John S. Witte, PhD, tells WebMD.

The study is not the first to find that men who eat fatty fish have a lower risk for the most deadly forms of prostate cancer. But Witte says clinical trials are needed to show that eating foods high in omega-3 fatty acids actually lower risk of aggressive prostate cancer. The study appears in the April issue of *Clinical Cancer Research*.

“There is a lot of evidence that omega-3 fatty acids protect against heart disease and other diseases by targeting inflammation — and that may be what is going on here,” Witte says. A study by Witte and colleagues from the University of California, San Francisco, included 466 men with aggressive prostate cancer and 478 men without the cancer. The men were asked to fill out food-frequency questionnaires. Genetic analysis was also performed to identify variants of the Cox-2 gene, which helps regulate inflammation within the body. A certain variant of this gene is also known to increase the chance of developing prostate cancer.

The analysis revealed that men who ate little to no fatty fish and had a specific Cox-2 variant were five times more likely to develop advanced prostate cancer. But men with the highest intake of omega-3 fatty acids — equivalent to one or more servings of fatty fish a week — had a significantly reduced risk for advanced disease, even when they carried the Cox-2 variant. “The increase in risk associated

with having the Cox-2 variant was essentially reversed in men who ate fish one or more times a week,” Witte says.

Omega-3 researcher Jorge Chavarro, PhD, of Harvard Medical School tells WebMD that the findings are consistent with his own studies of omega-3 and prostate cancer.

In a 2007 study, Chavarro and colleagues with the Harvard School of Public Health reported a 41% reduction in prostate cancer risk among men who ate higher levels of omega-3s than men with the lowest intake.

In separate studies, the Harvard team found that men who ate fatty fish before being diagnosed with prostate cancer and after their diagnosis were less likely to die of the disease. Chavarro’s research also suggests that omega-3 is particularly protective against the most aggressive prostate cancers. He tells WebMD that this supports the growing belief that prostate cancer is a more complex disease than previously thought. “We call everything prostate cancer, but clinically aggressive cancers and more localized, benign cancers may be two very different diseases,” he says. “In the past we have studied overall disease. But it may be that the effects of fish and other anti-inflammatory interventions, like Cox-2-targeting drugs, affect only aggressive disease.”

Roswell Park Cancer Institute President and professor of oncology Donald Trump, MD, tells WebMD that there is enough evidence suggesting a protective role for omega-3 against prostate cancer to justify a large trial studying whether eating a diet rich in omega-3s — or even taking omega-3 supplements — can actually lower risk of prostate cancer.

“This is a very nicely done study, but we definitely need a clinical trial,” he says. “These results suggest that we may be able to identify men who will be most likely to benefit and least likely to benefit from this intervention.”

***Fish rich in omega-3 fatty acids include: Halibut, Herring, Mackerel, Oysters, Salmon, Sardines, Trout and Tuna.***

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## Key Piece to Prostate Cancer Puzzle Found

### Finding Promises New Tests, Treatments for Prostate Cancer

By **Daniel J. DeNoon** WebMD Health News Reviewed by **Louise Chang, MD**

Feb. 11, 2009 — An unexpected discovery has turned up a key piece to the prostate cancer puzzle.

The finding comes from a powerful new science called metabolomics. Using these new techniques, scientists discovered that urine levels of an obscure amino acid derivative called sarcosine show whether a man has aggressive or benign prostate cancer. To the scientists’ surprise, sarcosine wasn’t just a harmless marker. Benign prostate cancer cells exposed to sarcosine suddenly turn nasty, becoming aggressive and invasive cancer cells. Aggressive prostate cancer

cells that can’t get sarcosine are tamed, becoming much less invasive.

If confirmed and validated in larger studies, the findings have huge implications for prostate cancer treatment, says study leader Arul M. Chinnaiyan, MD, PhD. Chinnaiyan is professor of pathology and urology at University of Michigan, Ann Arbor. “We have tantalizing evidence that this sarcosine pathway may be involved in the pathogenesis of prostate cancer,” Chinnaiyan said at a news conference. “Therapeutically, we could envision small molecules or antibodies

### Key Piece to Prostate Cancer Puzzle (Continued)

that might inhibit some of the pathway components that lead to sarcosine upregulation.”

If the finding leads to new tests, it would have a huge impact on how prostate cancer is treated, University of Michigan urologist John T. Wei said at the news conference. “One big clinical issue in prostate cancer is trying to distinguish aggressive prostate cancer from the indolent version of the disease,” he said. “What we doctors end up doing is overtreating patients because we can’t distinguish aggressive from indolent disease.” The findings validate metabolomics and a brand new technology using computer-driven robotic machines that can rapidly identify all the various chemicals that build up inside the cells of the body. This chemical buildup consists of metabolites — the end products of the vast number of biochemical reactions that take place within cells. By comparing the metabolites from normal cells to those of indolent and aggressive prostate cancer cells, Chinnaiyan and colleagues detected at least 10 metabolites that distinguish normal cells from cancer cells — and which increase or de-

crease in frequency as cancer cells get more aggressive.

Once identified, a simple urine test can detect the metabolites. And if detecting sarcosine gives a lot of information, detecting additional cancer-specific metabolites will make an eventual test exponentially more useful. “Moving forward, we would develop a panel of these metabolites we could monitor in urine or in tissues,” he says. “The idea would be to develop several of these metabolites we could measure simultaneously.”

That’s still a long way off. Right now, just looking for sarcosine in urine would not give much information. Large numbers of men, at various stages of prostate cancer, will have to be enrolled in validation studies.

Might these future tests make dreaded needle biopsies of the prostate obsolete? “Right now, we don’t have enough confidence in these new biomarkers to do that, but that may be possible in the future,” Wei says. Chinnaiyan and colleagues report the findings in the Feb. 12 issue of the journal *Nature*.

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## Statins Cut Deaths From Prostate Cancer Study Shows Men Taking Cholesterol-Lowering Drugs Less Likely to Die From Prostate Cancer

By Charlene Laino WebMD Health News Reviewed by Louise Chang, MD

Feb. 26, 2009 (Orlando, Fla.) — Cholesterol-lowering statin drugs have been shown to cut the odds of dying from prostate cancer by about two-thirds. The findings come on the heels of other studies showing that statins reduce the risk of developing advanced, aggressive prostate cancer. Statins have also been shown to reduce prostate cancer patients’ risk of dying of any cause.

“When we look at all the evidence, there is a consistent and meaningful benefit to taking these drugs in terms of prostate cancer risks,” says Eric A. Klein, MD, chairman of the Glickman Urological and Kidney Institute at the Cleveland Clinic. Klein was not involved with the new research.

Nevertheless, it’s still too soon to recommend that men at high risk for the disease start taking statins simply for their antitumor properties, Klein tells WebMD. But newly diagnosed prostate cancer patients should have their cholesterol tested as part of a total heart-health evaluation, he says. “Heart disease is still the leading cause of death in the U.S., so we should be assessing our early prostate cancer patients for coronary heart disease risk factors. It may well turn out they would benefit from a statin drug anyway,” Klein says.

### Statins and Prostate Cancer Death

The new study involved 380 men ages 55 to 79 who died from prostate cancer between 1999 and 2001 and who had living spouses who could verify their medical histories. They were compared to 380 married men in the same age

group who were still alive. A total of 63 men who died from prostate cancer had taken statins, as had 109 of the men who were alive. After taking into account other risk factors for dying from prostate cancer, men taking statins were 63% less likely to die from the disease than men not taking statins. Stephen Marcella, MD, assistant professor of epidemiology at the University of Medicine and Dentistry of New Jersey in Piscataway, presented the findings at the 2009 Genitourinary Cancers Symposium.

Further analysis showed that high-potency statins like Lipitor, Zocor, and Crestor were linked to a lower risk of dying from prostate cancer even more than weaker statins like Mevacor, Pravachol, and Lescol. “The high-potency statins were about 2.5 times more effective at preventing prostate cancer death than the weak statins,” Marcella says.

“That makes sense,” Klein says. “The more potent the drug, the bigger the biologic effect.” That doesn’t mean high-potency statins are better than weaker statins, he stresses. “Their primary purpose is for cholesterol lowering and you typically want to use the least aggressive therapy you can to achieve the desired effect,” Klein says.

While the studies were not designed to examine how statins might protect against dying from prostate cancer, Klein notes that they are potent anti-inflammatory drugs. “There’s a lot of evidence that inflammation contributes to the development of prostate cancer.” Alternately, statins may directly kill cancer cells, Klein says.

# A New Approach To Prostate Cancer Detection

A new approach to prostate cancer detection - Sarcosine may distinguish between slow-growing and aggressive prostate cancers

## Chris Beecher at the Annual EAU Congress

On Friday 20 March, US researcher Dr. Chris Beecher from the University of Michigan gave a well attended lecture about sarcosine, an N-methyl derivative of the amino acid glycine, at the 24th Annual EAU Congress in Stockholm, Sweden. Dr Beecher is a colleague of lead author Dr. Arun Sreekumar. The research of Sreekumar, Beecher and their team looked at more than 1,000 small molecules in tissues associated with prostate cancer. These findings suggest that not only is sarcosine a marker of cancer aggressiveness, it also has a role in endowing a cancer with malignant properties.

Sreekumar's publication in 'Nature' (457, 12 February 2009: 910-914) has attracted a lot of scientific and also popular attention. The EAU Scientific Congress Office inserted a special breaking news session in the congress programme in order to present the most updated scientific information in Stockholm.

Sarcosine may distinguish slow-growing prostate cancers from those likely to spread and become lethal. Conveniently, sarcosine can be identified in urine, a less invasive test than the blood analysis needed for the standard prostate-specific antigen (PSA), a protein produced by the cells of the

prostate gland. PSA is present in small quantities in the serum of healthy men, and is often elevated in the presence of prostate cancer. Quite often men have PSA scores that fall into a grey area. Therefore, invasive biopsy is needed to clarify a diagnosis.

But even when a biopsy reveals cancer, it often remains unclear whether the cancer is aggressive and at risk of spreading, or indolent and likely to stay put. Rather than looking for genes or proteins, Dr. Arun Sreekumar and his team of the University of Michigan measured the levels of chemical by-products of the reaction inside the human cells. These chemicals are called metabolites. They looked into 42 tissue samples, 110 blood samples and the same number of urine samples from patients with advanced prostate cancer, early prostate cancer and men with benign disease. Ten of these chemicals were found at much higher levels in prostate cancer than normal samples. One of these metabolites stood out: sarcosine.

According to Dr. Beecher, the results are promising: "Sarcosine continues to predict the aggressiveness of the tumours". The metabolomic analysis yielded the observation that sarcosine was highly associated with tumour development. The scientific data support a correlation and provide biological insights.

European Association of Urology

## a lighter moment

There was this city doctor who started a practice in the countryside. He once had to go to a farm to attend to a sick farmer who lived there. After a few housecalls he stopped coming to the farm. The puzzled farmer finally phoned him to ask what's the matter, didn't he like him or somethin'. The doctor said, "No, it's your ducks at the entrance... Every time I enter the farm, they insult me!"

An elderly woman went into the doctor's office. When the doctor asked why she was there, she replied, "I'd like to have some birth control pills."

Taken aback, the doctor thought for a minute and then said, "Excuse me, Mrs. Smith, but you're 75 years old. What possible use could you have for birth control pills?"

The woman responded, "They help me sleep better."

The doctor thought some more and continued, "How in the world do birth control pills help you to sleep?"

The woman said, "I put them in my granddaughter's orange juice and I sleep better at night."

## Speakers for our Future 2009 meetings.

*Mark these dates on your calendar*

**April 16<sup>th</sup>**

**Tanya Giaquinto, Sunnybrook**

**Diet and Cancer . . . Reducing your risk, taking control.**

**May 21<sup>st</sup>**

**Dr. Robert Bristow, Clinician Scientist, PMH**

**"Prostate Cancer and Oxygen: New targets and New Therapies"**

**June 18<sup>th</sup>**

**Duhane Wong-Reiger**

# Nutrition for Seniors

## The Benefits of Supplementation for Seniors

In the coming decades, seniors will comprise a larger share of the Canadian population, growing from 3.5 million people in 1996 to an estimated 6.9 million by 2021. It is important to be aware that as we age there is increased risk of health problems. Fortunately, a growing body of research shows that proper nutrition and dietary supplementation may reduce health problems and extend the years of healthy living for seniors. Recent articles in the Journal of the American Medical Association recommend that seniors take a daily multivitamin to help meet their vitamin requirements. Research confirms that seniors face an increased risk of vitamin deficiency and that inadequate intake of several vitamins and minerals have been linked to chronic diseases, including coronary heart disease, cancer and osteoporosis.

The following is a summary of research demonstrating the beneficial effect of adequate vitamin and mineral intakes on chronic diseases often associated with aging.

### Nutrients and Brain Health: Alzheimer's Disease (AD) and cognitive functioning

- Alzheimer's is a degenerative brain disease that can cause a person to forget recent events or familiar tasks. The risk of Alzheimer's disease increases with age.
- Nutrients, such as antioxidants and B vitamins, play an important role in healthy brain functioning. High blood levels of antioxidants are associated with improved mental function, including memory.
- A diet rich in antioxidants may protect against Alzheimer's disease and slow the progression in people already diagnosed with Alzheimer's.
- B12 and folate may have beneficial effects on overall cognitive abilities. Low blood levels of folate and vitamin B12 and elevated homocysteine levels have been associated with a higher incidence of Alzheimer's Disease.
- A good multivitamin/mineral supplement, including vitamin C, B6, E, D, folic acid and minerals such as iron, zinc and selenium, could improve mental functioning and might even delay the onset of Alzheimer's disease.

### Antioxidants, phytochemicals and the prevention of eye disease

- As a large segment of the Canadian population ages, the incidence of age-related eye diseases increases. Two of the most prevalent eye conditions affecting those over 60 are age-related macular degeneration and cataracts.
- Antioxidants, in particular the carotenoid lutein, may prevent macular degeneration and cataract formation.
- Vitamins C, E and carotenoids have been shown to delay

the onset of age-related vision disorders such as cataracts and macular degeneration.

### Nutrients and immune functioning

- As a person grows older (50 years and above), their immune response declines. A challenged immune system can increase the risk and severity of infections in seniors.
- Supplementation with zinc, selenium and antioxidants (vitamin E and beta-carotene) may improve immune function and reduce the incidence of infectious illnesses in seniors.

### Nutrients and Cancer Prevention

- Vitamin E may also protect against prostate cancer and, when partnered with the carotenoid lycopene, may help kill cancerous cells in the prostate.
- Multivitamins may reduce the risk of colon and rectal cancer. This benefit has been attributed to the folic acid found in multivitamins, although other micronutrients may also have provided beneficial effects. A modest protective effect has also been attributed to calcium.
- Women who consume a diet low in folic acid may have an increased risk of developing breast cancer. The risk is believed to be higher in women who consume larger amounts of alcohol, as alcohol is believed to interfere with folate metabolism. The positive correlation between antioxidants (vitamin C, E, A and selenium), calcium, vitamin D and a reduction in the incidence of breast cancer is still being studied.

### Calcium, vitamin D & osteoporosis

- One in four post-menopausal women and one in five senior men are affected by osteoporosis.
- Daily supplementation with calcium and vitamin D may reduce morbidity and mortality from osteoporosis in men and women aged 65 and older. Calcium helps to build and maintain bone mass whereas vitamin D can help the body absorb calcium properly.
- Many seniors have inadequate vitamin D levels as the ability to synthesize vitamin D from sunlight or food sources declines with age. This can contribute to osteoporosis and is also associated with muscle weakness, which can affect functional mobility and put seniors at increased risk of falls and fractures.

Seniors should consider taking a trusted, complete multivitamin on a daily basis to avoid micronutrient deficiencies that may affect health. As most nutrients work more effectively when taken together, multivitamins provide several benefits not achieved by using single supplements.