



November 2015 - Issue #92

Prostate Cancer Canada Network



Montreal West Island

EVERYONE IS INVITED TO ATTEND OUR MEETINGS

We meet every fourth
Thursday of each month except
July, August and December

MEETING LOCATION

Sarto Desnoyers Community Centre
1335 Lakeshore Drive, DORVAL

OUR NEXT MEETING

Our next meeting is scheduled
for November 26, 2015 at



7:30PM. Dr. Jean-Baptiste Lattouf will be our speaker. The title of his talk is

"Advanced Prostate Cancer: Available Treatments and Future Prospects."

What's new in prostate cancer research and treatment?

Research into the causes, prevention, detection, and treatment of prostate is going on in many medical centers throughout the world.

<http://www.cancer.org/cancer/prostatecancer/detailedguide/prostate-cancer-new-research>

Genetics

New research on gene changes linked to prostate cancer is helping scientists better understand how prostate cancer develops. This could make it possible to design medicines to target those changes. Tests to find abnormal prostate cancer genes could also help identify men at high risk who might benefit from screening or from chemoprevention trials, which use drugs to try to keep them from getting cancer.

Recently, a mutation in a gene called *HOXB13* has been linked to early onset prostate cancer that runs in some families. This mutation is rare, though, found in less than 2% of the men with prostate cancer that were studied.

The *HOXB13* gene mutation and most of the other gene mutations that have been studied so far as factors that might increase prostate cancer risk are from chromosomes that are inherited



Make an
In Memoriam
Donation

Consider making a gift in memory of a loved one who has died of prostate cancer. While flowers are beautiful, many people today prefer to make memorial contributions in honour of a loved one's memory. A tax receipt will be issued upon receipt of a donation.

This Newsletter is available at our website:

<http://mtlwiprostcansupportgrp.ca/>,
as well as at www.pccn.org

**Support your local prostate cancer support group
PCCN - Montreal West Island
Get Involved!**



**PCCN - The Montreal West Island Prostate
Cancer Support Group**

Our Website

Be sure to check out our website. Our internet address is <http://mtlwiprostcansupportgrp.ca/>. The website provides information about our group, links to PCCN and Procure and gives access to current and past issues of our newsletter as well as up-to-date information about our meetings and other items of interest. Check it out and give us your feedback. Our Director Monty Newborn is the creator and manager of the site and our WEBMASTER.

from both parents. Some research has found that a certain variant of mitochondrial DNA, which is inherited only from a person's mother, might double or even triple a man's risk of developing prostate cancer.

One of the biggest problems now facing men with prostate cancer and their doctors is figuring out which cancers are likely to stay within the gland and which are more likely to grow and spread (and definitely need treatment). New discoveries may help with this in the near future. For example, the product of a gene known as *EZH2* seems to appear more often in advanced prostate cancers than in those at an early stage. Researchers are now trying to decide whether the presence of this gene product, or others, indicates that a cancer is more aggressive. This could eventually help tell which men need treatment and which might be better served by [active surveillance](#).

Prevention

Researchers continue to look for foods (or substances in them) that can help lower prostate cancer risk. Scientists have found some substances in tomatoes (lycopenes) and soybeans (isoflavones) that might help prevent prostate cancer. Studies are now looking at the possible effects of these compounds more closely. Scientists are also trying to develop related compounds that are even more potent and might be used as dietary supplements. So far, most research suggests that a balanced diet including these foods as well as other fruits and vegetables is of greater benefit than taking these substances as dietary supplements.

Some studies have suggested that certain vitamin and mineral supplements (such as vitamin E and selenium) might lower prostate cancer risk. But a large study of this issue, called the Selenium and Vitamin E Cancer Prevention Trial (SELECT), found that neither vitamin E nor selenium supplements lowered prostate cancer risk after daily use for about 5 years. In fact, men taking the vitamin E supplements were later found to have a slightly higher risk of prostate cancer.

Another vitamin that may be important is vitamin D. Some studies have found that men with high levels of vitamin D seem to have a lower risk of developing the more lethal forms of prostate cancer. Overall though, studies have not found that vitamin D protects against prostate cancer.

Many people assume that vitamins and other natural substances cause no harm, but recent research has shown that high doses may be harmful, including those in supplements marketed specifically for prostate cancer. For example, one study found that men who take more than 7 multivita-

min tablets per week may have an increased risk of developing advanced prostate cancer. Another study showed a higher risk of prostate cancer in men who had high blood levels of omega-3 fatty acids. Fish oil capsules, which some people take to help with their heart, contain large amounts of omega-3 fatty acids.

Some research has suggested that men who take aspirin daily for a long time might have a lower risk of getting and dying from prostate cancer, but more research is needed to confirm this.

Scientists have also tested certain hormonal medicines called *5-alpha reductase inhibitors* as a way of reducing prostate cancer risk. The results of these studies are discussed in our document [Prostate Cancer Prevention and Early Detection](#).

Early detection

Doctors agree that the prostate-specific antigen (PSA) blood test is not a perfect test for finding prostate cancer early. It misses some cancers, and in other cases it is elevated when cancer isn't present. Researchers are working on two strategies to address this problem.

One approach is to try to improve on the test that measures the total PSA level, as described in our document [Prostate Cancer Prevention and Early Detection](#).

The other approach is to develop new tests based on other tumor markers. Several newer blood tests seem to be more accurate than the PSA test, based on early studies. But these and other new tests are not yet available outside of research labs and will need more study before they are widely used to test for prostate cancer.

Other new tests being studied are urine tests. One test, ProgenSA[®], looks at the level of prostate cancer antigen 3 (PCA3) in the urine after a digital rectal exam (DRE). (The DRE pushes some of the prostate cells into the urine.) The higher the level, the more likely that prostate cancer is present. In studies, this test was used along with the PSA test.

Another test looks for an abnormal gene change called *TMPRSS2:ERG* in prostate cells in urine collected after a DRE. This gene change is found in about half of all localized prostate cancers. It is rarely found in the cells of men without prostate cancer. Studies are under way to see if this test can be used for early detection of prostate cancer.

Diagnosis

Doctors doing prostate biopsies often rely on [transrectal ultrasound](#) (TRUS), which creates black and white images of the prostate using sound waves, to know where to take samples from. But standard ultrasound may not detect some areas containing cancer.

A newer approach is to measure blood flow within the gland using a technique called *color Doppler ultrasound*. (Tumors often have more blood vessels around them than normal tissue.) It may make prostate biopsies more accurate by helping to ensure the right part of the gland is sampled.

An even newer technique may enhance color Doppler further. In this approach, the patient is first injected with a contrast agent containing microbubbles, which helps improve the ultrasound images. Promising results have been reported, but more studies will be needed before its use becomes common.

Doctors are also studying whether MRI can be used to help guide prostate biopsies in men who previously had negative TRUS-guided biopsies but when the doctor still suspects cancer.

Staging

Staging plays a key role in determining a man's treatment options. But imaging tests for prostate cancer such as CT and MRI scans can't detect all cancers, especially small areas of cancer in lymph nodes.

A newer method, called *enhanced MRI*, may help find lymph nodes that contain cancer. Patients first have a standard MRI. They are then injected with tiny magnetic particles and have another scan done the next day. Differences between the 2 scans point to possible cancer cells in the lymph nodes. Early results of this technique are promising, but it needs more research before it becomes widely used.

A newer type of positron-emission tomography (PET) scan that uses radioactive carbon acetate instead of labeled glucose (sugar) may also be helpful in detecting prostate cancer in different parts of the body, as well as helping to determine if treatment is working. Studies of this technique are now in progress.

Treatment

Newer treatments are being developed, and improvements are being made among many standard prostate cancer treatment methods.

Surgery

Doctors are constantly improving the [surgical techniques](#) used to treat prostate cancer. The goal is to remove all of the cancer while lowering the risk of complications and side effects from the surgery.

Radiation therapy

As described in the section "[Radiation therapy for prostate cancer](#)," advances in technology are making it possible to aim radiation more precisely than in the past. Current methods such as conformal radiation therapy (CRT), intensity modulated radiation therapy (IMRT), and proton beam radiation help doctors avoid giving radiation to normal tissues as much as possible. These methods are expected to increase the effectiveness of radiation therapy while reducing the side effects.

Technology is making other forms of radiation therapy more effective as well. New computer programs allow doctors to better plan the radiation doses and approaches for both external radiation therapy and brachytherapy. Planning for brachytherapy can now even be done during the procedure (intraoperatively).

Newer treatments for early stage cancers

Researchers are looking at newer forms of treatment for early stage prostate cancer. These new treatments could be used either as the first type of treatment or after radiation therapy in cases where it was not successful.

One treatment, known as *high-intensity focused ultrasound (HIFU)*, destroys cancer cells by heating them with highly focused ultrasonic beams. This treatment has been used more in Europe, but it has just recently become available in the United States. Studies are now under way to determine its safety and effectiveness.

Nutrition and lifestyle changes

Some early research has found that in men with a rising PSA level after surgery or radiation therapy, drinking pomegranate juice or taking a pomegranate extract may slow the time it takes for the PSA level

to double. Larger studies are now looking for possible effects of pomegranate juices and extracts on prostate cancer growth.

Some encouraging early results have also been reported with flaxseed supplements. One small study in men with early prostate cancer found that daily flaxseed seemed to slow the rate at which prostate cancer cells multiplied. More research is needed to confirm this finding.

Another study found that men who choose not to have treatment for their localized prostate cancer may be able to slow its growth with intensive lifestyle changes. The men in the study ate a vegan diet (no meat, fish, eggs, or dairy products) and exercised frequently. They also took part in support groups and yoga. After one year the men saw, on average, a slight drop in their PSA level. It isn't known if this effect will last since the report only followed the men for 1 year. The regimen may also be hard to follow for some men.

A recent study showed that taking soy supplements after surgery (radical prostatectomy) for prostate cancer did not lower the risk of the cancer coming back.

Hormone therapy

Several newer forms of hormone therapy have been developed in recent years. Some of these may be helpful even if standard forms of hormone therapy are no longer working.

Some examples include abiraterone (Zytiga) and enzalutamide (Xtandi), which are described in the section "[Hormone therapy for prostate cancer.](#)" Others are now being studied as well.

5-alpha reductase inhibitors, such as finasteride (Proscar) and dutasteride (Avodart), are drugs that block the conversion of testosterone to the more active dihydrotestosterone (DHT). These drugs are normally used to shrink the prostate in men with benign prostatic hyperplasia. They are also being studied to treat prostate cancer, either to supplement active surveillance or if the PSA level rises after prostatectomy.

Chemotherapy

Studies in recent years have shown that many [chemotherapy](#) drugs can affect prostate cancer. Some, such as docetaxel (Taxotere) and cabazitaxel (Jevtana) have been shown to help men live longer.

Early results from a recent large study found that in men with metastatic prostate cancer, giving chemotherapy earlier in the course of the disease seemed to help them live longer. Those in the study who got docetaxel along with hormone therapy as their first treatment lived more than a year longer than men who got only hormone therapy as their first treatment. These results are encouraging, but this study was done before newer forms of hormone therapy (abiraterone and enzalutamide) became available, so it's not clear if the results would be the same today.

Other new chemo drugs and combinations of drugs are now being studied as well.

Immunotherapy

The goal of immunotherapy is to boost the body's immune system to help fight off or destroy cancer cells.

Vaccines

Unlike vaccines against infections like measles or mumps, prostate cancer vaccines are designed to help treat, not prevent, prostate cancer. One possible advantage of these types of treatments is that they seem to have very limited side effects. An example of this type of vaccine is sipuleucel-T (Provenge), which has received FDA approval (described in the section "[Vaccine treatment for prostate cancer](#)").

Several other types of vaccines to treat prostate cancer are being tested in [clinical trials](#).

One example is PROSTVAC, which uses a virus that has been genetically modified to contain prostate-specific antigen (PSA). The patient's immune system should respond to the virus and begin to recognize and destroy cancer cells containing PSA. Early results with this vaccine have been promising, and a larger study is now under way.

Immune checkpoint inhibitors

An important part of the immune system is its ability to keep itself from attacking other normal cells in the body. To do this, it uses "checkpoints" – molecules on immune cells that need to be turned on (or off) to start an immune response. Cancer cells sometimes use these

checkpoints to avoid being attacked by the immune system. But newer drugs that target these checkpoints hold a lot of promise as cancer treatments.

For example, the drug ipilimumab (Yervoy) targets a checkpoint molecule called *CTLA-4* on certain immune cells. This drug is already used to treat advanced melanoma, and is now being tested in men with advanced prostate cancer. Early study results with this drug have shown some benefit, but a recent larger study didn't find it helped men live longer.

Other new drugs target immune checkpoints such as PD-1 or PDL-1. In some other cancers such as melanoma, these types of drugs have been shown to shrink a larger portion of tumors than ipilimumab. Studies are now being done to see how well they might work against prostate cancer.

One promising approach for the future might be to combine a checkpoint inhibitor with a prostate cancer vaccine. This might strengthen the immune response and help the vaccine to work better.

Targeted therapy drugs

Newer drugs are being developed that work in different ways from standard chemo drugs. These drugs target specific parts of cancer cells or their surrounding environments. Each type of targeted therapy works differently, but all alter the way a cancer cell grows, divides, repairs itself, or interacts with other cells.

For example, drugs called *angiogenesis inhibitors* target the growth of

new blood vessels (angiogenesis) that cancer cells need to grow. Cancers that stimulate many new vessels to grow are harder to treat and have a poorer outlook.

Several anti-angiogenic drugs have been tested in clinical trials. One of these is thalidomide (Thalomid[®]), which has been approved by the FDA to treat patients with multiple myeloma. It was combined with chemotherapy in an early study of men with advanced prostate cancer. It has also been studied to see if it could help hormone therapy work better. While promising, this drug can cause major side effects, including nerve damage and serious blood clots.

Several other angiogenesis inhibitors are now being tested as well.

Treating cancer that has spread to the bones

Doctors are studying the use of radiofrequency ablation (RFA) to help control pain in men whose prostate cancer has spread to one or more areas in the bones. During RFA, the doctor uses a CT scan or ultrasound to guide a small metal probe into the area of the tumor. A high-frequency current is passed through the probe to heat and destroy the tumor. RFA has been used for many years to treat tumors in other organs such as the liver, but its use in treating bone pain is still fairly new. Still, early results are promising.

Last Medical Review: 12/22/2014

Last Revised: 10/23/2015

We are currently in need of an individual who is proficient and highly interested in navigating the internet in search of the latest information on prostate cancer, and compile interesting news items into a newsletter for our membership. Some knowledge in the use of Microsoft Publisher – a highly intuitive software, would be an asset, although training would be provided if necessary. We urgently require such an individual to fill the post of Newsletter Editor. If interested please approach any of the members of the Steering Committee at your earliest.

Newsletter Disclaimer:

All articles appearing in this newsletter are for information purposes only and not intended to be a substitute for the advice of a doctor or healthcare professional or recommendations for any particular treatment plan. It is of utmost importance that you rely on the advice of a doctor or a healthcare professional for your specific condition.

Prostate Cancer Canada Network – Montreal West Island

WE NEED YOUR SUPPORT

Newsletters – General Meetings – Hospital Visits – One-on-One Visits – Speakers

WE ASK FOR YOUR FINANCIAL HELP TO AID US IN OUR WORK – NOW IS A GOOD TIME.

Make a donation on the occasion of a celebration or bereavement.

We will send a card acknowledging your generosity to the family or person.

Please include full information: name and the address of the recipient and the occasion.

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Enclosed is a cheque or money order for \$ _____. A tax deductible receipt will be issued.

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Prostate Cancer Canada Network – Montreal West Island
P.O. Box 722, Pointe Claire, Que. Canada, H9R 4S0

Please note that due to constraints in the cost of processing, tax receipts, will only be issued for contributions of \$25.00 or greater.



Telephone Helpline (514) 694-6412

IMPORTANT NOTICES:

- ❖ The PCCN—Montreal West Island Prostate Cancer Support Group encourages wives, loved ones and friends to attend all meetings. Please ask basic or personal questions without fear or embarrassment. You need not give your name or other personal information.
- ❖ The PCCN—Montreal West Island Prostate Cancer Support Group does not recommend treatment procedures, medications or physicians. All information is, however, freely shared. Any errors and omissions in this newsletter are the responsibility of the authors.
- ❖ The PCCN—Montreal West Island Prostate Cancer Support Group is a recognized charitable Organization (registration # 87063 2544 RR0001). All donations are acknowledged with receipts suitable for income tax deductions. Your donations and membership fees (voluntary) are a very important source of funds vital to our operations. Together with contributions from several pharmaceutical companies these funds pay the cost of printing and mailing our newsletter, hall rental, phone helpline, equipment, library, etc.

Your support is needed now! Please help us continue helping you!

Steering Committee:

John Bauer, member at large	514-543-9400
John.bauer@sympatico.ca	
Fred Crombie, E-mail Contact	514-694-8149
fred.crombie@videotron.ca	
George Larder, Membership & Secretary	450-455-8938
gflarder@sympatico.ca	
Allen Lehrer, Vice President	514-694-7595
allen.lehrer@videotron.ca	
Allan Moore, Library	514-234-7583
nmoore@total.net	
Francesco Moranelli, Editor	514-696-1119
f.moranelli@sympatico.ca	
Monty Newborn, Publicity & Website	514-487-7544
newborn@cs.mcgill.ca	
Ron Sawatzky, President	514-626-1730
ronsaw@hotmail.com	
Frank Scully, member at large	514-637-8409
frankscully@gmail.com	

Senior Advisors:

Charles Curtis, Lorna Curtis and Tom Grant.

Prostate Cancer Canada Network
Montreal West Island Support Group
P.O. Box 722, Pointe-Claire, QC
Canada H9R 4S8

<http://mtlwiprostcansupportgrp.ca/>

**Your help is urgently needed
Please offer your services**