

## Current Research In Manitoba

Editor's note: This article was written by Dr. Sabine Mai (Winnipeg) for our newsletter. Her research was partially funded by Motorcycle Ride for Dad. She will be speaking at our August Support Group Meeting – we especially thank her for her commitment to research on PCa.

### The patients and the research team.

200 patients have consented to participate in our study. They belong to the intermediate risk prostate cancer

patient group that we study (see below, for an explanation of intermediate risk). When they visit the Manitoba Prostate Center for blood work, they also give one vial of blood for our study. Every six months, when they come for a return visit, they donate another sample. We follow each patient for a period of 5 years. This is enough time to determine whether an intermediate risk prostate cancer patient is with stable disease (and requires no treatment, just monitoring) or whether his disease is aggressive

and needs treatment.

Our research team consists of two clinicians, Dr. Jeff Saranchuk and Dr. Darrel Drachenberg, the research nurse, Paula Sitarik, a cancer researcher, Dr. Sabine Mai, and a PhD student, Dr. Julius Adebayo Awe. Summer students, a medical student and a resident participate in part of the study. We will hire a technician to assist with the project and its diverse aspects.

*(Continued on page 2)*

### Medical Advisors

Paul Daeninck M.D.  
Pain Management

Darryl Drachenberg  
M.D. Urologist

Graham Glezerson  
M.D. Urologist

Ross MacMahon  
M.D. Urologist

John Milner  
M.D. Urologist

Jeff Sisler M.D.  
Family Practitioner

*Thanks!*

*There will be no meeting at  
Seven Oaks General Hospital  
in July.*

*Enjoy the summer holiday !*

*We will reconvene our  
meetings in August.*



*The Manitoba Prostate Cancer Support  
Group does not recommend treatment  
modalities, medications, or physicians.*

Thought of The Day

*Why do banks charge a fee due to insufficient funds; when they already know you're broke?*

(Continued from page 1)

### Intermediate risk prostate cancer

Intermediate risk prostate cancer is defined as Gleason 3+4=7 or 4+3=7, a serum PSA between 10-20 and clinical T2c disease. T2c indicates that the tumor involves both sides of the prostate, ([www.cancer.org/cancer/prostatecancer/detailedguide/prostate-cancer-staging](http://www.cancer.org/cancer/prostatecancer/detailedguide/prostate-cancer-staging)).

Intermediate risk prostate cancer in particular provides a diagnostic dilemma for clinicians because of the heterogeneity of this disease group. Gleason 4+3=7 is commonly called unfavourable intermediate risk as it is thought to include patients that are thought to have much higher risk of progression than the more favourable intermediate risk variant with Gleason pattern 3+4=7. This favorable disease group may comprise patients with disease that could be actively surveilled rather than definitively treated.

Our focus is to determine the outcomes of intermediate risk prostate cancer.

It is hard to know how patients in this group will do. Therefore, clinicians are in desperate need of other novel predictors of disease aggressiveness. Our study addresses this need specifically. We propose the clinical validation of three-dimensional (3D) nuclear telomeric signatures and genetic profiling of circulating tumor cells. 3D and genetic signatures as well as CTCs numbers may provide a novel and strong future biomarker for intermediate risk prostate cancer patients.

### Circulating tumor cells.

We isolate circulating tumor cells from the blood of prostate cancer patients. The method we use for isolation is size-based: We use a filtration device that keeps circulating tumor cells on top of the filter and

allows other blood cells to go through the filter. The filter is produced by a French company, ScreenCell ([www.screencell.com/](http://www.screencell.com/)).



### The laboratory analysis

Once blood is drawn from the patient, it is filtered in the lab to capture the circulating tumor cells from the prostate. After the cells are on the filter, we analyze their 3D profiles by 3D imaging and quantitation. Each patient has a specific 3D signature that tells us whether his circulating tumor cells are stable (not to worry about them) or have changed. If they have changed, the patient is likely to need treatment. Our laboratory results are obtained blindly, and we will know in the end of our study whether our 3D signatures can become a new diagnostic tool for prostate cancer that can replace biopsies and will be stronger than PSA.

### 3D signatures of circulating tumor cells.

What are 3D signatures? Each cell contains a nucleus. The nucleus contains the genetic material (the DNA). The DNA is packed into chromosomes, and chromosomes have ends, called telomeres. These telomeres have been compared to shoe laces that have a protective cap. If the cap is lost, the protection is lost as well. For our chromosomes, telomeres provide the protective cap. If the telomeres are too short or 'uncapped', the chromosomes are no longer protected and can fuse with each other. This leads to complex genetic changes that are found in cancer cells.

Using telomeres as indicators of the genetic stability of a person's cells, we perform 3D imaging analysis. We then measure where each telomere is located and identify many of its characteristics, such as its length, distance to the next telomere etc. We also measure how many telomeres are there. The number of telomeres is an indicator of genomic stability of the lack thereof. We have developed software that will measure all relevant parameters for each cell and give us the 3D profile or '3D signature' of the cell.

This is the method we use for the analysis of 3D signatures in circulating tumor cells of prostate cancer patients.

### Our results so far

Our study enters its third year, and we have 100s of samples collected and analyzed. To date, all patients in our study group had circulating tumor cells. The patients fall into three groups; the first group has stable profiles with no changes detected during our sampling period. The second group has minor changes, and the third group has significant changes in the 3D signatures of their circulating tumor cells.

We hope that the data we collect and the clinical outcomes we follow will enable us to propose a better tool to clinically manage the prostate cancer of each patient. In this personalized medicine approach, we hope to guide the treating clinician, the patient and his family so that patients who need treatment get it early and patients who don't will just be monitored by a simple blood sample. **This approach is also called 'precision medicine'.**

Sabine Mai, Ph.D.  
Senior Investigator, Manitoba Institute of Cell Biology  
Professor, University of Manitoba  
Director, The Genomic Centre for Cancer Research and  
Diagnosis

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## Tweaking the Gleason System:

### Is there a Better Way to Grade Prostate Cancer?

The Gleason grading system for prostate cancer is at once helpful and confusing for doctors and patients. Part of the confusion is that the Gleason number represents a combination of cell patterns that the pathologist sees in biopsied prostate tissue samples under the microscope. The most common cell pattern and the second-most common pattern are added together, and the sum is the Gleason score. "There are some problems with the Gleason system," says pathologist Jonathan Epstein, M. D., of Johns Hopkins Hospital in Baltimore. Briefly, the Gleason system assigns scores to prostate cancer cells based on how they look, on a scale from 2 to 10. The most normal-looking, slowest-growing cells have the lowest numbers; at the high end of the scale are very malignant cells that are more aggressive and spread quickly. But no man ever gets a score of Gleason 2.

"Gleason score 6 is typically the lowest grade assigned," says Epstein, and "patients are unduly concerned when they're told that they have Gleason score 6 cancer, logically but incorrectly assuming that their tumor is in the mid-range of aggressiveness." Gleason score 7 disease can have two meanings: If the most common cell type is Gleason 3, with fewer Gleason 4 cells, this is considered "Gleason score 3+4=7" disease. "In the past, any Gleason pattern 4 tumor was considered aggressive," says Epstein. "But we showed that Gleason score 3+4=7 cancer has a very favorable prognosis, with over 90 percent of men cured after radical prostatectomy." On the other hand, if there are more Gleason 4 and fewer Gleason 3 cells, this is "Gleason score 4+3=7" disease, and it is significantly

more aggressive. Gleason scores 8-10 tumors are routinely grouped together, Epstein continues, "but we found that although Gleason score 8 tumors are aggressive, they are not as aggressive as Gleason score 9-10 cancers."

In an article recently published in the British Journal of Urology, Epstein and colleagues Phillip M. Pierorazio, Patrick Walsh, and Alan Partin suggested grouping Gleason scores into five prognostic groups, as opposed to the individual nine Gleason scores. "Patients will be reassured," says Epstein, "that when they're diagnosed with a Gleason score 6, this means that their Prognostic Grade Group is I out of V, not six out of 10." Similarly, men with Gleason score 3+4=7 cancer would be placed in Prognostic Grade Group II, "which is in line with their tumor's relatively less aggressive behavior. At the other end of the grade spectrum, men with Gleason score 9-10 tumors will be more accurately considered to have more aggressive tumors than those with Gleason score 8, and this can be factored into their treatment decisions."

### Good News for Men with Gleason Score 6

In other news, Epstein and colleagues recently took a closer look at the behavior of Gleason score 6 prostate cancer. Their findings were published in the American Journal of Surgical Pathology. Although Gleason score 6 cancer is considered slow-growing and not aggressive, it has been found – rarely – in studies of prostate specimens after radical prostatectomy, to have spread outside the prostate. Could Gleason 6 cancer ever spread to the pelvic lymph nodes? Good news: The answer is no. "We performed a search of the radical prostatectomy databases at four large academic centers," says Epstein. "In more than 14,000 radical prostatectomies, there was not a single case of a Gleason score 6 tumor

ever spreading to lymph nodes." It takes a Gleason score of 7 or higher for prostate cancer to become aggressive enough to spread far beyond the prostate. Under the microscope, Gleason score 6 cells appear uniform, "and they have a more predictable, excellent prognosis," Epstein notes. Gleason score 6 disease has such a good reputation as being "indolent" – slow-growing and well behaved, as cancers go – among pathologists that some of them have questioned whether it should still be considered cancer. Yes it should, Epstein says. One important reason why is that the biopsy Gleason score is often adjusted after radical prostatectomy, when the prostate is studied by a pathologist, "because the biopsy often underestimates disease grade and extent." Also, "if men think that Gleason 6 tumors are not cancer, this could result in a missed opportunity for cure."

### A New Approach

Five Gleason Groups  
Based on Prognosis

**Prognostic Group I:**  
Gleason score <6,

**Prognostic Group II:**  
Gleason score 3+4=7

**Prognostic Group III:**  
Gleason score 4+3=7

**Prognostic Group IV:**  
Gleason score 8

**Prognostic Group V:**  
Gleason score 9-10

*Source: Johns Hopkins Hospital  
– pathologist Dr. Jonathan Epstein*

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## Prostate Cancer: Radiation Therapy

Radiation therapy, also called X-ray therapy, uses high levels of radiation to kill prostate cancer cells or keep them from growing and dividing, while minimizing damage to healthy cells.

Radiation can be produced from a machine outside the body (external radiation) and directed right at the prostate or by putting materials that produce radiation (radioisotopes) through thin plastic tubes into the cancer-infected area (internal radiation or brachytherapy).

Internal radiation therapy places radioactive implants directly into the tumor. These radioactive sources can be temporary (removed after the proper dose is reached) or permanent.

### What Happens on Treatment Days?

External radiation therapy requires regular sessions (generally five days per week) during a period of about eight to nine weeks. For each treatment, the radiation therapist will help you onto the treatment table and into the correct position. Once the therapist is sure you are positioned well, he or she will leave the room and start the radiation treatment.

You will be under constant observation during the treatment. Cameras and an intercom are in the treatment room, so the therapist can always see and hear you. Be sure to remain still and relaxed during treatment. Let the therapist know if you have any problems or discomfort.

The therapist will be in and out of the room to reposition the machine and change your position. The treatment machine will not touch you, and you will feel nothing during the treatment. Once the treatment is complete, the therapist will help you off the treatment table.

film, also known as an X-ray, on the first day of treatment and about every week thereafter. Port films verify that you are being positioned accurately during your treatments.

Port films do not provide diagnostic information, so radiation therapists cannot learn about your progress from these films. However, port films are important to help the therapists make sure the radiation is delivered to the precise area that needs treatment.

### Why Are There Marks on My Skin?

Small marks resembling freckles will be made on your skin along the treatment area by the radiation therapist. These marks provide points to aim the treatment machine at and are a semi-permanent outline of your treatment area. Do not try to wash these marks off or retouch them if they fade. The therapist will re-mark the treatment area when necessary.



### Will My Diet Affect My Treatment?

Yes. Good nutrition is an important part of recovering from the side effects of radiation therapy. When you are eating well, you have the energy to do the activities you want to do, and your body is able to heal and fight infection. Most important, good nutrition can give you a sense of well-being.

Since eating when you don't feel well can be difficult, consider working with a dietitian. He or she can help make sure that you are getting adequate nutrition during your radiation therapy.

### What Side Effects Will I Have?

During your treatment, radiation must pass through your skin. You may notice some skin changes in the area exposed to radiation. Your skin may become red, swollen, warm, and sensitive, as if you have a sunburn. It may peel or become

moist and tender. Depending on the dose of radiation you receive, you may notice a loss of hair or decreased perspiration within the treated area.

These skin reactions are common and temporary. They will subside gradually within four to six weeks of completing treatment. If skin changes appear outside the treated area, inform your doctor or primary nurse.

Long-term side effects, which can last up to a year or longer after treatment, may include a slight darkening of the skin, enlarged pores, increased or decreased sensitivity of the skin, and a thickening of tissue or skin.

Another possible side effect is erectile dysfunction and urinary symptoms such as frequency, bleeding, or, rarely, incontinence. Keep

these side effects in mind when considering your treatment options. If you have any concerns, don't hesitate to talk to your doctor about them.

### How Can I Reduce Skin Reactions?

- Gently cleanse the treated area using lukewarm water and a mild soap such as Ivory, Dove, Neutrogena, Basis, Castile, or Aveeno Oatmeal Soap. Do not rub. Pat your skin dry with a soft towel or use a hair dryer on a cool setting.
- Try not to scratch or rub the treated area.
- Do not apply any ointment, cream, lotion, or powder to the treated area unless your radiation oncologist or nurse has prescribed it.
- Do not wear tight-fitting clothing or clothes made from harsh fabrics such as wool or corduroy. These fabrics can irritate the skin. Instead, choose clothes made from natural fibers such as cotton.
- Do not apply medical tape or

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bandages to the treated area.

- Do not expose the treated area to extreme heat or cold. Avoid using an electric heating pad, hot water bottle, or ice pack.
- Do not expose the treated area to direct sunlight, as sun exposure may intensify your skin reaction and lead to severe sunburn. Choose a sunscreen of SPF 30 or higher. Protect the treated area from direct sunlight even after your course of treatment is over.

### **Will Radiation Therapy Make Me Tired?**

Everyone has his or her own energy level, so radiation treatment will affect each person differently. Patients often feel fatigue after several weeks of treatment. For most patients, this fatigue is mild. However, a loss of energy may require some patients to change their daily routine.

If your doctor thinks you should limit your activity, he or she will discuss it with you.

To minimize fatigue while you are receiving radiation treatment:

- Be sure to get enough rest.
- Eat well-balanced, nutritious meals.
- Pace your activities and plan frequent rest periods.

### **What is 3-D Conformal Radiation Therapy?**

3-D conformal radiation therapy uses CT-based treatment (CT is short for computed tomography, which uses X-rays to produce detailed pictures inside the body) combined with three-dimensional images of a prostate tumor.

Radiation is aimed at the prostate gland from numerous directions, thus minimizing the damage to normal tissue. This technique allows for precise delivery of radiation doses. So far, it has worked well for localized

tumors, such as prostate cancer limited to the prostate gland.

#### General Guidelines

- All patients have a CT scan specifically for radiation therapy treatment and planning.
- The CT data is electronically transferred to the 3-dimensional treatment planning computer.
- The doctor defines the area to be treated along with surrounding areas, such as the bladder, rectum, bowel, and bones.
- An optimal radiation beam and dose are analyzed using a 3-dimensional computer-generated model.
- When the exact dose of radiation to the prostate is determined, the patient returns for a treatment simulation.
- The simulation process transposes or maps the computer-generated plan to the patient. The doctor will review the treatment course and side effects with the patient.

#### **Possible Side Effects**

- Hair loss may occur in the area being radiated.
- Nausea and vomiting are uncommon unless the upper abdominal areas are radiated.
- Mild fatigue. Patients continue their normal routine during their treatment, including working full time.
- Frequent urination, a weak urine stream, or a mild burning with urination.
- Diarrhea, though uncontrolled diarrhea is rare. Because the radiation beam passes through normal tissues, such as the rectum, bladder, and intestines on its way to the prostate, it kills some healthy cells. This is why diarrhea may result.
- Possible long-term problems, including proctitis (inflammation of the rectum) with bleeding, bowel problems such as diarrhea, incontinence, and impotence.

### **What Is Intensity-Modulated**

### **Radiotherapy?**

Intensity-Modulated Radiotherapy (IMRT) is an advanced approach to 3-D conformal radiation therapy. The IMRT technique is very precise.

IMRT uses computer-generated images to plan and then deliver tightly focused radiation beams to prostate cancer tumors. With this capability, clinicians can "paint" a precise radiation dose to the shape and depth of the tumor, while significantly reducing the harmful effects of doses on healthy tissue. Clinical studies indicate that higher dose rates delivered with IMRT techniques improve the rate of local tumor control.

### **Who Can I Contact If I Have Personal Concerns About My Treatment?**

Many hospitals and clinics have a staff social worker who can help you during your treatment. Check with your doctor to see if this is available to you.

The social worker can discuss any emotional issues or other concerns about your treatment or your personal situation and provide information about resources.

People dealing with certain medical issues find it helpful to share experiences with others in the same situation. Your doctor can provide a list of support groups if you are interested. Your social worker can provide additional information, and you can look online for support group resources.

### **What About Follow-Up Care?**

After your radiation therapy sessions are complete, you will visit your doctor for periodic follow-up exams and tests. Your doctor will tell you how often to schedule your follow-up appointments.

*Source: webmd.com*

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## Advanced PCa: a Quick Review

Prostate cancer is the second most common cancer found in men. (Skin cancer is the most common cancer.) Chances are you know someone who has prostate cancer or has been treated for it. More than 2.5 million men in the United States are survivors of prostate cancer. The survival rate is rising. Awareness, screening and better treatments are some of the reasons.

If found at an early stage, prostate cancer has a very high chance of cure. Also, many prostate cancers that are found early may not be fast-growing or life threatening.

However, when prostate cancer spreads outside the prostate or reappears after initial treatment, it is known as advanced prostate cancer. Some men are told they have advanced prostate cancer when they are first diagnosed. Other men are diagnosed with advanced prostate cancer when their PSA levels rise months or years after surgery or radiation. At first, your doctor may suggest hormone therapy if you have advanced prostate cancer.

### Hormone Therapy

Male hormones can act as fuel to help prostate cancer grow. This is why one of the first treatments for advanced prostate cancer is hormone therapy. The goal is to lower or block male hormones, such as testosterone. This can cause prostate cancer to shrink or grow more slowly. Hormone therapy choices may include shots or oral pills to help control hormones. Another option is surgery to remove the testicles, where the male hormones are made. Most often, prostate cancer responds to this treatment, and patients see their PSA levels drop. Still, hormone therapy does not cure the cancer. It often returns after a few years, even though hormonal therapy has lowered testosterone levels. When prostate cancer shows signs of growing despite hormone therapy, it is known as castrate-resistant prostate

cancer (CRPC). If your only sign of CRPC is rising PSA levels while on hormone therapy, your CRPC is non-metastatic. The American Urological Association (AUA) recommends that men continue with hormonal therapy when diagnosed with non-metastatic CRPC.

Metastatic CRPC (mCRPC) is when cancer has spread to bones or other areas far from the prostate, despite hormone therapy. There is no cure for mCRPC. Still, there is a lot of hope that symptoms can be managed, and life can be extended.

Quite a few new treatments have been approved for mCRPC in the past few years. Yet there is no good scientific proof that these new treatments benefit men with non-metastatic CRPC. And all treatments have possible side effects. So the AUA recommends men with non-metastatic CRPC not use these treatments unless as part of a clinical trial.



### New Breakthroughs and Treatment Options for Metastatic Castrate-Resistant Prostate Cancer (mCRPC)

In recent years, scientists have made some landmark discoveries in how to treat mCRPC. Also, changes are being made to existing treatments so they work better. If you are diagnosed with mCRPC, your doctor may prescribe one of these treatments:

#### Vaccines or Immunotherapy

Usually, vaccines (shots) prevent infections. Lately, researchers have been looking into using vaccines to treat mCRPC. If your prostate cancer returns despite hormone therapy and is metastatic, your doctor may offer the

cancer vaccine sipuleucel-T (Provenge®). Sipuleucel-T works by boosting the body's immune system so it attacks cancer cells. This is the first vaccine that has been shown to help men with prostate cancer live longer. Other prostate cancer vaccines are also being studied.

#### New Hormone Therapies

Two new kinds of hormone therapies have helped men with mCRPC delay symptoms and live longer.

#### Androgen synthesis inhibitors

The oral drug abiraterone acetate (Zytiga®) stops your body and the cancer from making steroids (including testosterone). Because of the way it works, this drug must be taken with an oral steroid known as prednisone. Abiraterone is approved by the FDA for use before or after chemotherapy in men with mCRPC.

#### Androgen receptor binding inhibitors

Enzalutamide (Xtandi®) is an oral drug that blocks testosterone from binding to the prostate cancer cells. Because it works differently than abiraterone, men do not need to take a steroid with this drug. Enzalutamide was approved in August 2012 by the FDA for use in men with mCRPC after chemotherapy.

#### Bone Targeted Therapy

If you have advanced prostate cancer or are taking hormonal therapy for your cancer, your doctor may offer calcium or Vitamin D supplements. Some newer drugs can also help strengthen and protect your bones such as denosumab (Xgeva®) or zoledronic acid (Zometa®). Both drugs help prevent bad side effects from the cancer growing in your bones.

Another new treatment approved for men whose mCRPC has spread to their bones is Radium-223 (Xofigo®),

(Continued from page 6)

approved in 2013). This treatment is injected into your veins using an intravenous (IV) drip. It collects in the bones, mostly in areas where cancer has spread. There, it gives off small amounts of radiation that can only travel short distances. This can target radiation to the exact areas of the bone where cancer cells are growing. Radium-223 has been shown to help men live longer.

### Chemotherapy

Another treatment choice for men with mCRPC is chemotherapy. Chemotherapy drugs slow the growth of cancer and lessen symptoms. Most of the drugs are given into the vein (IV). Chemotherapy does not cure CRPC.

Still, it can lessen pain linked to

prostate cancer, shrink tumors and lower levels of PSA. 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. Other new chemotherapy drugs and mixtures of drugs are now being studied.

### Radiation

If your cancer has spread far from your prostate, your doctor may also suggest radiation. In mCPRC, radiation therapy can help ease pain or other symptoms. The bones are a common place for prostate cancer to spread. Radiation can help ease pain caused by cancer spreading to the bone. The radiation is most often given in one or a few visits. The treatment is like having an X-ray, and uses high-energy beams to kill tumors. New radiation techniques focus on cancer cells while

saving healthy tissue nearby. Many radiation therapies use computers to map the prostate and target radiation just where it is needed. New software allows doctors to better plan and target radiation doses. These methods are expected to increase the success of radiation therapy while reducing the side effects. Studies are being done to find out which radiation methods are best suited for which men with prostate cancer.

One of the best ways to get information is to ask your doctor and other health care professionals. Even if you have advanced cancer, there are many treatments ready to help make your daily life better. Many new treatments are being explored every day.

Source: *UrologyHealth.org*

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## Zytiga Now Approved Pre-Chemotherapy

Men with metastatic castration-resistant prostate cancer (mCRPC) in Manitoba, New Brunswick and Alberta now have access to a therapy that can be used prior to chemotherapy. ZYTIGA® (abiraterone acetate) has been added to the public drug formulary for the treatment of mCRPC in men who are asymptomatic or mildly symptomatic after failure of androgen deprivation therapy (ADT). This is exciting news for men who want a treatment option that helps delay disease progression, improve overall quality of life and that can be used earlier in advanced disease.

Prostate cancer is the most common cancer to afflict men in Canada. Prostate cancer has a great impact on quality of life, affecting men physically, psychologically and socially. Approximately 10 to 20 per cent of prostate cancer cases will present with metastatic disease, in which the tumour spreads beyond the

prostate. Fortunately, death rates have been declining since the mid-1990s.

In July 2011, ZYTIGA® was approved by Health Canada for the treatment of men with mCRPC who had received prior chemotherapy containing docetaxel after failure of ADT. Health Canada approved a second indication for ZYTIGA® in May 2013 for the treatment of men with mCRPC who are asymptomatic or mildly symptomatic after failure of ADT.

ZYTIGA® is now reimbursed by provincial cancer agencies or public drug plans in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Québec and New Brunswick.

Source: *News release from Janssen Pharmaceuticals May 2014*

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### Pathology Lab Tour

On May 7th, some Board members had the privilege of touring Dr. Robert Wightman's pathology lab at Grace Hospital. They were fortunate to view a fresh prostate specimen and see the various processes involved in analysis. We thank Dr. Wightman for allowing us this special opportunity. Pictured, are (l. to r.): Kirby, Brian, Darlene, Pat, Dr. Wightman, Mike, John and Betty.

The Manitoba Prostate Cancer Support Group has been providing services for 20 years:

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### Thanks to AstraZeneca

*The Manitoba Prostate Cancer Support Group Board would like to thank AstraZeneca for making a generous donation.*

We gratefully acknowledge this contribution and their commitment to assist our goals of awareness, education and support. AstraZeneca produces Casodex and Zoladex – 2 drugs used in the treatment for prostate cancer. We appreciate the research and work that AstraZeneca does to improve PCa treatments. Thank-you!



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#### MEETINGS

**July:** No Meeting this month.

#### **August 21, 2014**

Dr. Sabine Mai, Director,  
Genomic Centre for  
Cancer Research & Diagnosis

*Tracking Tumour Cells to Individualize Treatment*

#### **September 16, 2014 (Tuesday)**

*Prostate Cancer Awareness Evening*

Caboto Centre – 1055 Wilkes Ave. Time: 7 to 9 p.m.

Presenters: Dr. Kevin Saunders, Family Physician  
Dr. Darrel Drachenberg, Urologist

This once a year program is a general overview of prostate cancer - includes time for Q & A. Come for coffee and info. No registration. Free parking.

(Note: No meeting at Seven Oaks Hospital on Sept. 18th.)

All meetings are held at  
Seven Oaks General Hospital Auditorium  
7-9 p.m.

Everyone welcome

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