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Basics
on Treatment
for prostate
cancer



Prostate Cancer
Canada

SECTION 1:

TREATMENTS

This pamphlet provides information about different treatments for prostate cancer including what to expect and any risks and side-effects.

Treating Prostate Cancer

There are a number of factors to consider when working together with your doctor or specialist to choose your treatment:

- Your age
- The stage and grade of your cancer (i.e. how far the cancer has spread and how fast it is capable of growing)
- Your general health
- Your values and preferences

It is important to remember that some prostate cancer grows slowly. Unless your doctor tells you that your cancer is very aggressive, you can normally take the time to fully explore different treatment options and you may wish to request a second opinion.

Treatment refers to a proactive strategy, and it includes active surveillance. Active surveillance is used to monitor slow growing cancers through PSA blood tests, DRE's, or Ultrasounds. If there is a change in your results, your doctor will then talk to you about your options.

New Treatments

The most common treatments for prostate cancer are outlined on the other side of this pamphlet. However, there are always new treatments being developed.

One way to access new treatments before they become widely available is to participate in a clinical trial. A clinical trial is a research study that uses volunteers to determine whether or not a new treatment, drug or device is effective and safe.

Participating in a clinical trial is a valuable contribution to research but there is the risk of unknown side effects and there may also be additional costs involved in participating, e.g. frequent travel to the study site.

If you are interested in participating in a clinical trial you should talk to your doctor and make sure you understand all of the facts before making your decision.

For more information about clinical trials, please visit:

- clinicaltrials.gov
- canadiancancertrials.ca
- cancer.gov

Complementary and Alternative Therapies

Alternative therapies are those used in place of the conventional treatment options listed on the other side of this pamphlet. For example, using naturopathy or herbal medicine to treat your cancer instead of conventional care. Alternative therapies are considered scientifically unproven treatments.

While the terms are often used together, alternative therapy is different to complementary therapy. Complementary therapy is not used to treat cancer but is sometimes used together with conventional treatments to help manage treatment side-effects, or improve mental and physical wellbeing.

Before using any complementary or alternative therapies, talk to your doctor or other members of your healthcare team about all the possible risks and benefits.

Glossary and Further Information

Androgen

A hormone, such as testosterone, that promotes male characteristics such as sexual function and muscle mass.

Anesthetic

A drug used to numb an area of skin ("local") or put someone to sleep ("general").

Catheter

A narrow, flexible tube that is inserted into the body to drain urine or other fluids.

Erectile Dysfunction

The inability to have a satisfactory sexual relationship. It often specifically refers to an inability to achieve or keep an erection.

Hormone

A chemical produced in the body that regulates the activity of certain cells or organs.

Incontinence

The inability to control urine flow, resulting in urine leakage. It may be partial or total.

Infertility

The inability to father offspring. This may be a result of several factors, including treatment for prostate cancer.

Kegel Exercises

Pelvic muscle exercises you can do to strengthen the muscles which help with regaining urine control.

Perineum

The area between the anus and scrotum.

QUESTIONS FOR YOUR DOCTOR

There are many considerations when it comes to prostate cancer treatment and there will be a lot of information to take in during appointments. It is a good idea to bring a pen and paper to make notes and you may like to bring someone with you.

Your doctor will likely cover most, if not all, of the points in the checklist below. Ask your doctor to answer any of the questions that have not been covered in the appointment.

1. What are the risks if my cancer is not treated soon?
2. What treatment options might be right for me?
3. What are the major side-effects of the treatments available to me?
4. What are the chances I will have problems with incontinence, erectile dysfunction or rectal issues?
5. How would the various treatments affect my quality of life?
6. What is your experience with this treatment?
7. How frequent are complications?
8. What happens if the cancer spreads beyond my prostate?
9. When will my treatment begin and how long is it expected to last?
10. What if the first line of treatment doesn't work?
11. How will I be monitored after treatment or during active surveillance?

Treatment Options						
	Active Surveillance	Radical Prostatectomy: Open/Laparoscopic/Robotic	Radiation Therapy		Hormone Therapy	Chemotherapy
			External Beam	Brachytherapy		
What is it	<p>Active surveillance may be recommended if:</p> <ul style="list-style-type: none"> Your cancer is small and low-grade. The possible side-effects of other treatments are felt to outweigh the benefits at this time. 	<ul style="list-style-type: none"> Surgery that completely removes the prostate gland, as well as the seminal vesicles and part of the urethra within the prostate. Potentially removes all cancer cells. May be recommended if your cancer has not spread outside the prostate (stage T1 or T2). May be used in combination with other treatments e.g., radiation. 	<ul style="list-style-type: none"> External beam radiation delivers therapeutic x-rays to a localized area in order to kill cancer cells. May be a good option if age or general health makes surgery too risky. Can be used in combination with other treatments although surgical removal of the prostate is very difficult after radiotherapy. <p>3-Dimensional Conformal Radiation and Intensity Modulated Radiation are commonly used techniques. They use either CT scans or MRIs to pinpoint where radiation is needed. The radiation beams “conform” to the prostate, sparing neighbouring tissue. This allows the delivery of high-dose radiation to cancerous areas while minimizing risk of damage to healthy cells.</p>	<p>Brachytherapy delivers radiation internally. There are 2 main types: low-dose seed implant brachytherapy and high-dose rate brachytherapy (HDR).</p> <p>Low-dose seed implant brachytherapy</p> <ul style="list-style-type: none"> Usually recommended to men with lower-grade cancers that are contained within the prostate gland. Between 80 and 100 radioactive seeds, the size of a grain of rice, are implanted directly into the prostate. Each seed releases low-energy level radiation steadily over several months. <p>HDR</p> <ul style="list-style-type: none"> Reserved for patients with high-grade cancers. High-dose radiation is received through approximately 15 needles in the prostate, concentrating on the cancerous areas. 	<ul style="list-style-type: none"> Hormone therapy works by depriving cancer cells of the male hormones (androgens) they need to grow. Affects the whole body rather than a particular area. <p>Most often used to treat:</p> <ul style="list-style-type: none"> Cancer that has spread outside the prostate Recurrence of prostate cancer after an other therapy has been used Men who are at a high risk of experiencing cancer recurrence after surgery or radiation therapy. 	<ul style="list-style-type: none"> The use of specific drugs to treat cancer. Normally used to treat recurring or metastatic prostate cancer if hormone therapy does not work anymore. Chemotherapy drugs affect both cancer cells and healthy cells. Healthy cells tend to regenerate whereas cancer cells struggle to do so. It is sometimes used to treat more advanced cancer in conjunction with surgical removal of the prostate.
What is done	<ul style="list-style-type: none"> A responsible program of active surveillance will include regular PSA tests and DREs. Your doctor will track your PSA levels over time, and any changes in DRE findings. Repeat biopsies will be required to determine there has been a significant progression of the cancer. 	<p>There are 3 main types:</p> <ul style="list-style-type: none"> Open: One cut, 3 to 4 inches long, made from below the belly button to the pubic bone. Laparoscopic: Several small cuts are made in the abdomen and a video camera is inserted to view the prostate. The surgeon operates the instruments by the bedside. Robot-assisted: Similar to laparoscopic surgery except that the video camera and instruments are connected to a robotic system that is controlled by the surgeon. <p>Nerve-sparing techniques can be used to try to preserve the nerves that control erections, rather than removing them with the prostate. If you have a more advanced or aggressive cancer, this may not be recommended as there is increased risk that cancer cells may remain.</p>	<ul style="list-style-type: none"> Radiation works by interfering with cell division. Because normal cells are affected along with cancerous ones, radiation is given in small doses over a period of eight weeks. Usually treatment is given Monday–Friday, with a break on weekends to give the healthy cells some time to recover. 	<p>Low-dose seed implant brachytherapy</p> <ul style="list-style-type: none"> The seeds are inserted through the skin in the perineum. Procedure is performed under either general or spinal anesthesia and lasts approximately 1 hour. <p>HDR</p> <ul style="list-style-type: none"> Under anesthesia, approximately 10–15 needles are inserted through the perineum. These needles are wired to the radiation source that delivers a high radiation dose to the prostate. The needles are then removed. The treatment takes 10–20 minutes. 	<p>There are two methods of hormone therapy:</p> <ul style="list-style-type: none"> Surgical removal of the testicles to prevent testosterone production (rarely used). Medication. <p>The 2 main categories of medication are:</p> <ul style="list-style-type: none"> Luteinizing hormone releasing hormone (LHRH) analogues and LHRH agonists, both of which interfere with androgen production. Anti-androgens which block the effects of male hormones on prostate cells. 	Chemotherapy is usually given through the vein but some forms can be taken as a pill.
What to expect	<ul style="list-style-type: none"> You will need to have regular appointments with your doctor. Your doctor may suggest changing your treatment options if your PSA levels begin to rise or the feel of your prostate changes during a DRE. 	<p>Day of surgery:</p> <ul style="list-style-type: none"> You will be admitted to hospital. Procedure takes 2–4 hours and is carried out under anaesthetic. A catheter is inserted at the end of surgery. <p>After surgery:</p> <ul style="list-style-type: none"> Hospital stay is typically 2–5 days. Most men have minimal pain and discomfort after surgery. Catheter is removed after 1–2 weeks. Recovery process at home takes 4–6 weeks. <p>Even after the prostate gland is removed, a small amount prostate tissue may remain and produce PSA. After surgery, it is important to have regular PSA tests to monitor your PSA level for any changes.</p>	<p>Before treatment:</p> <p>You will have one or more planning sessions (with different scans or x-rays) to identify the exact area to be treated.</p> <p>During treatment:</p> <ul style="list-style-type: none"> A machine sends painless high-energy beams into your body. You will be fully awake for the treatment. One session takes 10–30 minutes. No hospitalization is needed. During treatment you will have regular meetings with your radiation oncologist to monitor side-effects and review your progress. <p>After treatment:</p> <p>You will have follow-up appointments and PSA tests to check how effective the treatment has been.</p>	<p>Low-dose seed implant brachytherapy</p> <ul style="list-style-type: none"> A catheter may be used for a short time for urine drainage. <p>HDR</p> <ul style="list-style-type: none"> Often preceded or followed by a few weeks of external beam radiation. Sometimes HDR treatments are given over a few days and the external beam radiation is not needed. 	<p>Hormone therapy is used in various ways to treat prostate cancer.</p> <p>Combination hormone therapy</p> <p>Anti-androgens are combined with either LHRH analogue therapy or surgical removal of the testicles.</p> <p>Intermittent hormone therapy</p> <p>Hormone therapy is stopped once PSA number is lowered and stabilized. It then resumes when PSA number increases again.</p> <p>Neoadjuvant hormone therapy</p> <p>Hormone therapy is given before local treatment. This reduces the size of the tumour to make the “main” treatment potentially more effective.</p> <p>Adjuvant hormone therapy</p> <p>Used directly after surgery or radiation to treat cancerous cells that may remain.</p>	Chemotherapy is typically used to slow the prostate cancer’s spread, prolong life, and relieve pain associated with the late stages of cancer.
Side-effects and risks	<ul style="list-style-type: none"> There may be no physical side-effects in the short-term. Some men may experience anxiety or depression. With time, some of the more common symptoms of prostate cancer may progress. Talk to your doctor or local support group for help. 	<ul style="list-style-type: none"> Short-term constipation is a common side-effect. Incontinence is temporary in most men, but around 10% will continue to have stress incontinence when sneezing, coughing etc. 2–3% of men may have serious incontinence long-term. Erectile dysfunction is a common side-effect that may be permanent or temporary. Recovery may take up to a couple of years. Radical prostatectomy results in infertility. Blood loss during surgery may require a transfusion (under 10% of cases). Very rarely (in less than 1% of cases) there is injury to the rectum requiring a temporary colostomy. Very small risk of death (as with any major surgery). 	<p>Immediate side-effects:</p> <ul style="list-style-type: none"> May appear within a few weeks of radiation and disappear some weeks after treatment has ended. Some men experience fatigue, decreased energy, weight loss or changes in appetite. Less common are gastrointestinal or rectal problems such as diarrhea, pain during defecation and rectal bleeding. Urinary problems are also possible e.g., blood in the urine, frequent urination, urine leakage. <p>Long-term side-effects:</p> <ul style="list-style-type: none"> These may appear anywhere from 6 months to several years after treatment. Side-effects can range from scar tissue in the urinary passage (causing a slow urinary stream) to infertility. Erectile dysfunction may occur in up to 50% of patients. 	<ul style="list-style-type: none"> Side-effects of brachytherapy are similar to those of external beam radiation. Brachytherapy differs slightly in the following ways: <ul style="list-style-type: none"> Dominant short-term side-effect is irritation to the bladder and urethra Acute urinary retention may develop Bowel irritation is relatively uncommon Side effects may last months 	<p>Possible side-effects include:</p> <ul style="list-style-type: none"> Hot flashes Erectile dysfunction Loss of energy, general weakness Breast enlargement and tenderness Irritability Emotional disturbance including depression Headache Itching, dry skin, rash Gastrointestinal issues: diarrhea, nausea, vomiting Loss of muscle mass Weight gain (mainly due to increased body fat) Shrinkage of testicles <p>Long-term use may lead to:</p> <ul style="list-style-type: none"> Osteoporosis Lower blood counts or “anemia” Higher levels of “bad” lipids in the blood 	<p>Specific side-effects depend on the type of drugs that are given. The following side-effects are common with most types of chemotherapy:</p> <ul style="list-style-type: none"> Gastrointestinal side-effects such as nausea, vomiting and diarrhea Anemia Total or partial hair loss Sensitive skin Infertility Vulnerability to infection (most commonly chest, mouth, throat and urinary infections) Nail changes <p>Some side-effects can be treated with other drugs; others continue until chemotherapy is stopped.</p>

Notes:

Prostate Cancer Support Groups

Supporting the newly diagnosed and those living with prostate cancer is one important part of Prostate Cancer Canada's mandate. Over 75 Prostate Cancer Canada Network (PCCN) support groups provide services at the grass roots level, through monthly peer meetings, special educational events and outreach programs. Our informal and friendly settings allow attendees to interact with other prostate cancer survivors and take part in discussions and presentations on various prostate cancer topics.

Participation is free. To find a group near you, visit prostatecancernetwork.ca or call **1.888.255.0333**.



Prostate Cancer Canada recognizes the Movember Foundation as a key funder of this resource.



For more information on prostate cancer, please contact:
Tel: 416-441-2131
Toll-free: 1-888-255-0333
prostatecancer.ca

For additional copies and information please contact:
info@prostatecancer.ca or call **1-888-255-0333**

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