

# Understanding Prostate Cancer

If you or someone you know has been diagnosed with prostate cancer, you may be scared or overwhelmed. This resource will help you understand what the diagnosis means.

Prostate cancer is the **most commonly diagnosed cancer among Canadian men.**

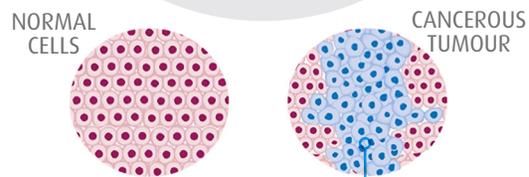
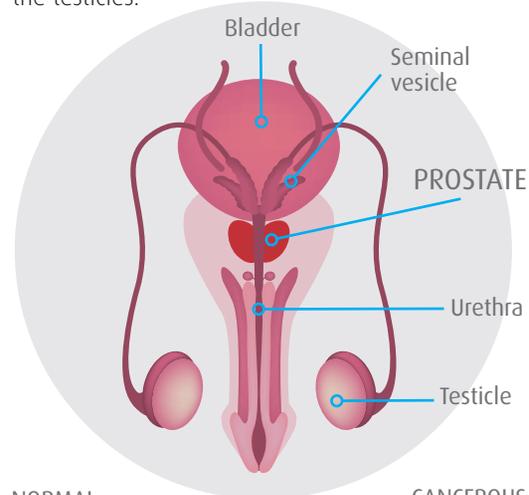


# 1 in 9

will be diagnosed in their lifetime, so you are not alone.

## What is the prostate?

The prostate is part of the male reproductive system. It sits below the bladder and in front of the rectum. Its job is to help form semen by producing fluid that mixes with sperm from the testicles.



Prostate cancer develops when normal cells in the prostate grow faster or die more slowly than usual. This can lead to a cancerous tumour over time.

## Understanding your test results

The grade and stage of the tumour will help you and your healthcare team decide which treatment is best for you.



### Tumour grade

Describes how quickly the cancer is growing and the chance of it spreading. The Gleason score is the most common grading system, and is based on how different tumour cells look compared to normal prostate cells. Biopsy samples are examined under a microscope and given a **grade** of 1 to 5. Grades 1 and 2 look like normal cells. Grades 3, 4 and 5 are cancer cells. The overall **Gleason score** is calculated by adding up the two most common cancer grades (i.e. 3+4=7). A higher score means more aggressive cancer.

### GLEASON SCORE

**6 or less**

Slow growing, less likely to spread

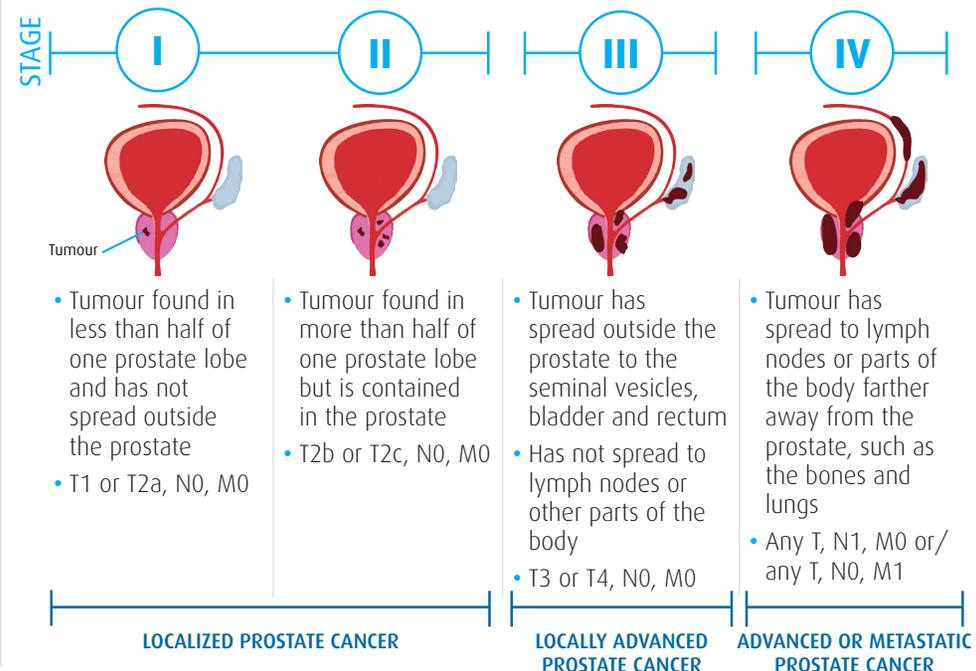
**7**

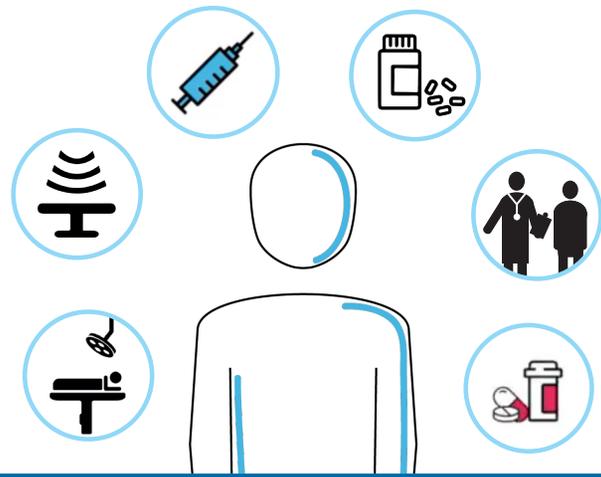
Growing at a moderate pace, may spread

**8-10**

Growing quickly, more likely to spread

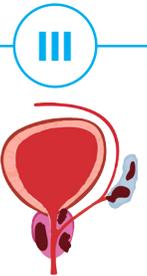
**Stage** Describes how big the tumour is and how far it has spread. The most common staging system in Canada is the TNM system which describes the size of the tumour (T1-T4) and if the cancer has spread to lymph nodes (N0, N1) or further, called metastases (M0, M1). The results of the T, N and M scores are grouped to give the overall prostate cancer stage (I, II, III or IV).





## How is prostate cancer treated?

In addition to the stage and grade of your tumour, your prostate specific antigen (PSA) test results and overall health will help decide what treatments are best. If you have a slow-growing and early-stage prostate cancer, you may choose a monitoring strategy like active surveillance instead of immediate treatment.

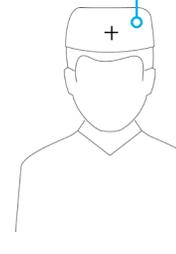
STAGE	LOCALIZED PROSTATE CANCER		LOCALLY ADVANCED PROSTATE CANCER	ADVANCED OR METASTATIC PROSTATE CANCER
	I	II	III	IV
				
	active surveillance	active surveillance		
	surgery	surgery	surgery	
	radiation therapy	radiation therapy	radiation therapy	radiation therapy
		hormone therapy/ androgen deprivation therapy (ADT)	hormone therapy/ androgen deprivation therapy (ADT)	hormone therapy/ androgen deprivation therapy (ADT)
				chemotherapy

■ Treatment used   
 ■ Treatment sometimes used   
 ■ Treatment not used

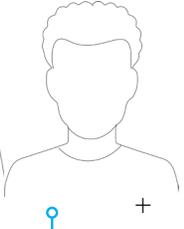
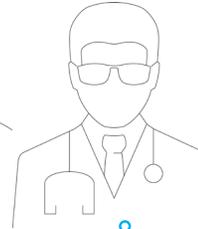
## Your healthcare team

**Urologist:** treats diseases of the urinary tract and male reproductive system including the prostate; performs biopsies and prostate surgery

**Medical oncologist:** treats cancer with drug therapies such as chemotherapy and hormone therapy



**Radiation oncologist:** treats cancer with radiation therapy



**Nurse:** administers drugs and provides care, information and support throughout treatment and monitoring

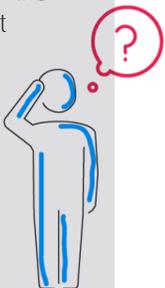
## Talking to your team

You'll be supported by your healthcare team and may see some of them more than others depending which treatment you choose. You may also see other healthcare professionals like physical or occupational therapists or counsellors to help you recover and cope with your diagnosis and treatment.

Don't be afraid to ask them for advice or get a second opinion if you still have questions. It's important to understand treatment options and side effects to decide what is best for you.

## Questions to ask

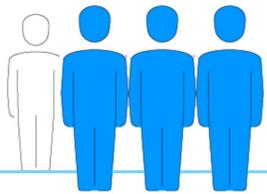
1. What is the tumour grade? Does this grade mean the cancer is likely to grow and spread fast?
2. What is the cancer stage? Has my cancer spread outside the prostate?
3. What if I choose to monitor the cancer instead of treating it immediately?
4. What types of treatments are best for me? What are the benefits and risks of each?



For more information and support, visit [prostatecancer.ca](http://prostatecancer.ca).

# Understanding localized prostate cancer

This resource is for men who have been diagnosed with localized prostate cancer. Also known as early-stage disease, the tumour is found only in the prostate and includes both stage I and II cancers.



## 3 in 4

Canadian men diagnosed with prostate cancer have early-stage disease.

Close to  
**100%**  
of men diagnosed with early-stage prostate cancer will be alive five years after diagnosis

because the cancer is slow growing

and can be treated or monitored successfully.



## Will my cancer spread?

The cancer grade (Gleason score), tumour size and your prostate specific antigen (PSA) level will help your doctor rate the cancer based on how likely it is to spread. Your healthcare team may use these risk levels to help them develop a treatment plan.

### RISK CANCER WILL SPREAD



	LOW	INTERMEDIATE	HIGH
<b>TUMOUR SIZE</b>	Limited to half of one prostate lobe	Found in more than half of one prostate lobe	Found in both prostate lobes but still contained in the prostate
<b>PSA LEVEL (ng/mL)</b>	Less than 10	10-20	Greater than 20
<b>GLEASON SCORE</b>	6 or less	7	8, 9 or 10

Some prostate cancers grow so slowly, a monitoring approach may be recommended. If you and your healthcare team decide to treat the cancer, the goal is to get rid of the tumour.

## Active surveillance for localized prostate cancer



### Active surveillance

USED FOR THESE RISK LEVELS

- This is a monitoring strategy
- Can be used if your prostate cancer is growing slowly and is not very large
- Can help delay or avoid treatments that have side effects
- Will be monitored regularly, tests may include PSA tests, digital rectal exams (DREs) and biopsies
- Many men will never need treatment; however, if the tests show that your cancer is growing, your team may recommend other treatment options



Other treatments on the next page.

## Other treatments for localized prostate cancer

 <b>Surgery</b> Also called prostatectomy	USED FOR THESE RISK LEVELS	POTENTIAL SIDE EFFECTS
<ul style="list-style-type: none"> <li>The goal is to remove the cancer from the body</li> <li>Involves removing the prostate, seminal vesicles and other surrounding tissue</li> <li>Different surgery techniques can be used:               <ul style="list-style-type: none"> <li><b>Open surgery</b> (radical retropubic prostatectomy): The prostate is removed through a single cut made below the belly button</li> <li><b>Laparoscopic surgery</b> (keyhole surgery): Several small cuts are made in the abdomen and the prostate is removed with special tools</li> <li><b>Robotic-assisted radical prostatectomy:</b> Laparoscopic surgery can be done with the help of a robot, but not every hospital offers it. The surgeon guides the robot's arms to perform the surgery</li> </ul> </li> <li>Nerve sparing techniques may be used to reduce erectile dysfunction by trying to avoid nerves that control erections</li> </ul>	 <p>Low Risk</p>  <p>Intermediate Risk</p>  <p>High Risk</p>	<ul style="list-style-type: none"> <li>Problem controlling urination</li> <li>Difficulty getting and keeping an erection</li> </ul>
 <b>Radiation therapy</b>	USED FOR THESE RISK LEVELS	POTENTIAL SIDE EFFECTS
<ul style="list-style-type: none"> <li>Radiation damages and kills the cancer cells. It can be delivered in different ways:               <ul style="list-style-type: none"> <li><b>External beam radiation therapy (EBRT):</b> A machine targets the tumour with radiation</li> <li><b>Brachytherapy:</b> Radioactive pellets (seeds) are placed in or near the prostate to kill the cancer and may be used alone or in combination with EBRT</li> </ul> </li> </ul>	 <p>Low Risk</p>  <p>Intermediate Risk</p>  <p>High Risk</p>	<ul style="list-style-type: none"> <li>Problem controlling urination</li> <li>Difficulty getting and keeping an erection</li> <li>Bowel problems</li> <li>Fatigue</li> </ul>
 <b>Hormone therapy</b> Androgen deprivation therapy	USED FOR THESE RISK LEVELS	POTENTIAL SIDE EFFECTS
<ul style="list-style-type: none"> <li>Some men may receive short-term doses of hormone therapy, in addition to radiation therapy</li> <li>Hormone therapy injections or implants slow the growth of the tumour by reducing levels of male hormones, like testosterone, which the cancer needs to grow</li> </ul>	 <p>Intermediate Risk</p>  <p>High Risk</p>	<ul style="list-style-type: none"> <li>Decrease in sex drive</li> <li>Difficulty getting and keeping an erection</li> <li>Hot flashes</li> <li>Muscle weakness</li> </ul>

## Taking care of yourself

A prostate cancer diagnosis can be overwhelming. Talking to a loved one about your feelings may help you overcome anxiety or stress. It may also help to talk to other men about their experience with prostate cancer. Physical activity, healthy eating and mental wellness can help you maintain and improve your health during and after treatment.

## Questions to ask your healthcare team

- Do I need immediate treatment or can I use active surveillance to monitor my cancer?
- If I am on active surveillance, how will my cancer be monitored? How will I know if I need other treatment?
- What are the side effects of the different treatments? How mild or serious can they be? Will side effects be short-term or long-lasting?
- Are there other risks or complications I might experience from treatment or active surveillance?
- Can I prevent any side effects or help reduce their impact?
- What happens after I finish treatment? Will I be monitored?
- What happens if my prostate cancer comes back?



Understanding the benefits and side effects of each treatment option and talking to your team about your treatment goals, such as whether you would like to monitor the tumour or start treatment right away, will help you and your healthcare team select the treatment that is right for you. You can also seek a second opinion to make sure you are comfortable with your treatment decision. It is important to tell your healthcare team about any side effects you experience so that they can help you manage them.

For more information and support, visit [prostatecancer.ca](http://prostatecancer.ca).

# Understanding advanced prostate cancer

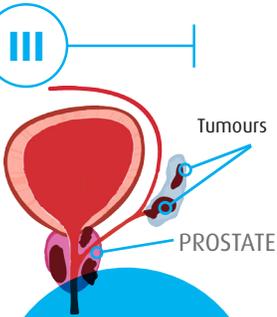
This resource is for men who have just been diagnosed with advanced prostate cancer or who have been told by their doctor that their cancer has now spread.

If you need information about prostate cancer not responding to hormone therapy, please see our resource called **Understanding options after hormone therapy**.

## Types of advanced prostate cancer

**LOCALLY ADVANCED PROSTATE CANCER**

STAGE III

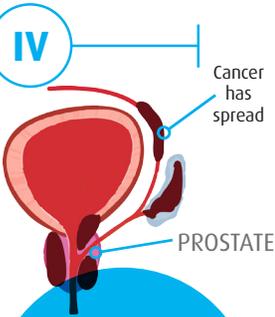


Locally advanced prostate cancer or stage III prostate cancer has spread outside the prostate to nearby parts of the body like the seminal vesicles, bladder and rectum

**Treatment Goals: remove or control the growth of the cancer**

**ADVANCED OR METASTATIC PROSTATE CANCER**

STAGE IV



Metastatic or stage IV prostate cancer has spread to other parts of the body even further away from the prostate such as the lymph nodes or bones

**Treatment Goals: control the growth of the cancer**



## Treatments for advanced prostate cancer

The treatment you receive will depend on your overall health, how far the cancer has spread and the type of treatment you received before the cancer started to spread.

 <b>Radiation therapy</b>	<b>USED FOR:</b> LOCALLY ADVANCED	<b>POTENTIAL SIDE EFFECTS</b>
<p><b>External beam radiation therapy (EBRT)</b></p> <ul style="list-style-type: none"> <li>A machine delivers a high-energy x-ray to the tumour</li> <li>Can be combined with hormone therapy before, during and after radiation therapy</li> <li>May also be combined with another kind of radiation called <b>brachytherapy</b> where radioactive pellets (seeds) are inserted directly into or near the prostate to kill nearby cancer cells</li> </ul>		<ul style="list-style-type: none"> <li>Fatigue</li> <li>Urinary or bowel problems</li> <li>Difficulty getting and keeping an erection</li> </ul>
 <b>Surgery</b> Also called prostatectomy	<b>USED FOR:</b> LOCALLY ADVANCED	<b>POTENTIAL SIDE EFFECTS</b>
<ul style="list-style-type: none"> <li>Surgery removes the prostate, tissues around it, and sometimes the pelvic lymph nodes if the cancer is there</li> <li>Radiation therapy or hormone therapy may be offered after surgery to lower the risk of the cancer coming back</li> </ul>		<ul style="list-style-type: none"> <li>Difficulty controlling urination</li> <li>Difficulty getting and keeping an erection</li> </ul>

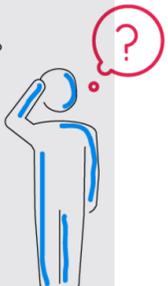
	<b>Hormone therapy</b> Androgen deprivation therapy	<b>USED FOR:</b> <b>LOCALLY ADVANCED/            METASTATIC</b>	<b>POTENTIAL            SIDE EFFECTS</b>
<ul style="list-style-type: none"> <li>• Drugs or surgery block the production or effects of male hormones, like testosterone, which prostate cancer needs to grow</li> <li>• Hormone therapy may be used as a standalone treatment or in combination with radiation therapy, chemotherapy or newer hormone therapies</li> <li>• Your doctor will recommend that you take calcium and vitamin D to keep your bones strong</li> <li>• Some common hormone therapy drugs:               <ul style="list-style-type: none"> <li>• Luteinizing hormone-releasing hormone (LHRH) agonists                   <ul style="list-style-type: none"> <li>- Goserelin acetate    - Leuprolide acetate</li> <li>- Histrelin acetate    - Triptorelin pamoate</li> </ul> </li> <li>• LHRH antagonists                   <ul style="list-style-type: none"> <li>- Degarelix</li> </ul> </li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Low sex drive</li> <li>• Difficulty getting and keeping an erection</li> <li>• Hot flashes</li> <li>• Mood swings</li> <li>• Breast tenderness and growth of breast tissue</li> <li>• Loss of muscle and physical strength</li> <li>• Decrease in bone strength and risk of bone fractures</li> </ul>	
	<b>Chemotherapy</b>	<b>USED FOR:</b> <b>METASTATIC</b>	<b>POTENTIAL            SIDE EFFECTS</b>
<ul style="list-style-type: none"> <li>• Uses drugs to kill cancer cells</li> <li>• For metastatic prostate cancer, a chemotherapy drug called docetaxel may be offered at the same time as hormone therapy</li> </ul>		<ul style="list-style-type: none"> <li>• Nausea</li> <li>• Hair loss</li> <li>• Decline in blood cell production, which may make it difficult to fight infections</li> <li>• Numbness</li> <li>• Weakness or tingling in hands and feet</li> </ul>	
	<b>New hormone drugs</b> Also called antiandrogens	<b>USED FOR:</b> <b>METASTATIC</b>	<b>POTENTIAL            SIDE EFFECTS</b>
<ul style="list-style-type: none"> <li>• Abiraterone acetate is an antiandrogen drug that blocks the production or use of testosterone that the cancer cells need to grow</li> <li>• May be offered at the same time as hormone therapy</li> </ul>		<ul style="list-style-type: none"> <li>• Decrease in sex drive</li> <li>• Difficulty getting and keeping an erection</li> <li>• Hot flashes</li> <li>• Muscle weakness</li> </ul>	
	<b>Clinical Trials</b>	<b>USED FOR:</b> <b>LOCALLY ADVANCED/            METASTATIC</b>	<b>POTENTIAL            SIDE EFFECTS</b>
<ul style="list-style-type: none"> <li>• A clinical trial is a type of research study that tests new treatments and medical approaches</li> <li>• Ask your healthcare team about clinical trials that may be open to patients with prostate cancer</li> </ul>		<ul style="list-style-type: none"> <li>• Different for each clinical trial</li> <li>• Ask your team about them before joining</li> </ul>	

## Treatment follow-up and monitoring

Your healthcare team will continue to measure your prostate specific antigen (PSA) levels to monitor how well the treatment is working. All treatments carry the risk of side effects and it is important to remember that not everyone will react the same way. Your healthcare team may be able to help you control side effects and some may go away when treatment is finished.

## Questions to ask your healthcare team

1. What treatment or combination of treatments is best for me?
2. How do I know if my treatment is working? How will I be monitored?
3. What happens if my treatment stops working?
4. What can I do to reduce side effects? How long will they last?
5. Can I change the treatment I'm on or take medication to help with the side effects?



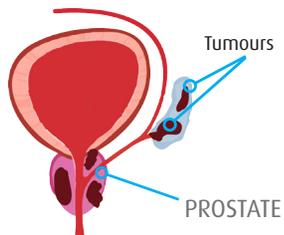
For more information and support, visit [prostatecancer.ca](http://prostatecancer.ca)

# Understanding options after hormone therapy

This resource is for men whose prostate cancer has been treated and is no longer responding to hormone therapy. This is called **castration-resistant prostate cancer (CRPC)**. When this happens, prostate specific antigen (PSA) levels will continue to rise which shows that the cancer may be growing or spreading to other parts of the body.

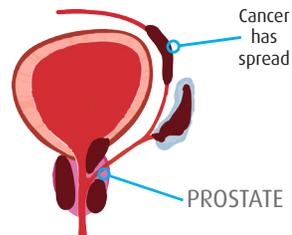
## There are two types of CRPC:

### NON-METASTATIC CASTRATION-RESISTANT PROSTATE CANCER (nmCRPC)



The cancer has not spread to other parts of your body.

### METASTATIC CASTRATION-RESISTANT PROSTATE CANCER (mCRPC)



The cancer has spread or metastasized to other parts of your body such as the bones or lungs. The most common place for prostate cancer to spread is to nearby bones. You may experience bone pain and are at risk for fractures and spinal cord compression.

**Treatment Goals:**  
keep cancer under control and manage symptoms including pain

## How is CRPC treated?

Your treatments will depend on where the cancer has spread, how severe your symptoms are, your overall health, and the treatment you received before the cancer stopped responding. Your doctor will monitor your PSA levels and do imaging tests (such as MRI and bone scans) to see where the cancer is in your body. You may have to see your doctor more frequently based on how fast your PSA level is rising. If you stop responding to one treatment you may be offered other treatments that can slow the growth of the cancer or reduce your pain.

	<b>Hormone therapy</b> Androgen deprivation therapy	<b>USED FOR:</b> nmCRPC mCRPC	<b>POTENTIAL SIDE EFFECTS</b>
<b>DRUG NAME</b>	<ul style="list-style-type: none"> <li>Luteinizing hormone-releasing hormone (LHRH) agonists               <ul style="list-style-type: none"> <li>Goserelin acetate</li> <li>Histrelin acetate</li> <li>Leuprolide acetate</li> <li>Triptorelin pamoate</li> </ul> </li> <li>LHRH antagonist               <ul style="list-style-type: none"> <li>Degarelix</li> </ul> </li> </ul>	<b>BENEFITS OF TREATMENT</b>	<ul style="list-style-type: none"> <li>Low sex drive</li> <li>Difficulty getting and keeping an erection</li> <li>Hot flashes</li> <li>Mood swings</li> <li>Breast tenderness and growth of breast tissue</li> <li>Loss of muscle and physical strength</li> <li>Decrease in bone strength and risk of bone fractures</li> </ul>
	<b>New hormone drugs</b> Antiandrogens	<b>USED FOR:</b> nmCRPC mCRPC	<b>POTENTIAL SIDE EFFECTS</b>
<b>DRUG NAME</b>	<ul style="list-style-type: none"> <li>Abiraterone acetate</li> <li>Apalutamide</li> <li>Darolutamide</li> <li>Enzalutamide</li> </ul>	<b>BENEFITS OF TREATMENT</b>	<ul style="list-style-type: none"> <li>Fatigue, physical weakness</li> <li>Fluid retention</li> <li>Joint swelling or pain</li> <li>Hot flashes</li> <li>Diarrhea</li> <li>Constipation</li> <li>High blood pressure</li> <li>Headache</li> <li>Decreased appetite, weight loss</li> <li>Dizziness</li> </ul>

Other treatments on the next page.

 <b>Chemotherapy</b>		USED FOR: mCRPC	POTENTIAL SIDE EFFECTS
<b>DRUG NAME</b> <ul style="list-style-type: none"> <li>Docetaxel</li> <li>Cabazitaxel</li> </ul>	<b>BENEFITS OF TREATMENT</b> <ul style="list-style-type: none"> <li>Docetaxel is the main chemotherapy offered to men with advanced prostate cancer. It can help men live longer, control the disease and symptoms and may improve quality of life</li> <li>Cabazitaxel is offered to men if the cancer progresses on or following docetaxel treatment</li> </ul>		<ul style="list-style-type: none"> <li>Nausea</li> <li>Hair loss</li> <li>Low blood cell count, which may make it difficult for you to fight infections</li> </ul>
 <b>Radionuclide therapy</b>		USED FOR: mCRPC	POTENTIAL SIDE EFFECTS
<b>DRUG NAME</b> <ul style="list-style-type: none"> <li>Radium-223</li> </ul>	<b>BENEFITS OF TREATMENT</b> <ul style="list-style-type: none"> <li>A form of radiation therapy using radioisotopes as the radiation source</li> <li>Is injected into the bloodstream</li> <li>Helps to relieve bone pain and prevents fractures and may help men live longer</li> </ul>		<ul style="list-style-type: none"> <li>Nausea</li> <li>Diarrhea</li> <li>Vomiting</li> <li>Swelling of the arms or legs</li> <li>Low blood count</li> </ul>
 <b>Clinical Trials</b>		USED FOR: mCRPC	POTENTIAL SIDE EFFECTS
	<b>BENEFITS OF TREATMENT</b> <ul style="list-style-type: none"> <li>A clinical trial is a type of research study that tests new treatments and medical approaches</li> <li>Ask your healthcare team about clinical trials that may be open to patients with prostate cancer</li> </ul>		<ul style="list-style-type: none"> <li>Different for each clinical trial</li> <li>Ask your team about them before joining</li> </ul>

### Monitoring symptoms and side effects

Symptoms such as pain, weakness or fatigue may be signs the cancer is spreading. Take note of these symptoms and tell your healthcare team about them or any other side effects you may experience.

### What is advance care planning?

Advance care planning is a time for you to reflect on your values and wishes, and to let others know your future health and personal care preferences so that they can speak for you, if you can't speak for yourself.

### Questions to ask your healthcare team

1. How do I know if the cancer is growing or spreading? What symptoms should I look out for?
2. When and how often will I be monitored?
3. What are my chances of a long-term response with good quality of life?
4. What clinical trials are available to me?
5. What can I do to reduce side effects?
6. What do I need to know about advance care planning or palliative care?



## Managing pain and distress with palliative care



- Enosumab and zoledronic acid along with calcium and vitamin D supplements help to keep the bones strong and decrease the risk of bone fractures
- External beam radiation therapy (EBRT) helps relieve bone pain
- Palliative care is a supportive approach that helps men live well in spite of having advanced cancer. It helps reduce distress, control pain, provide support and comfort, and improves quality of life, allowing men to live as well as possible for as long as possible.

For more information and support, visit [prostatecancer.ca](http://prostatecancer.ca).