

When Prostate Cancer Advances

Understanding prostate cancer that has spread to the bones

Prostate cancer is the second most common form of cancer in men

In 2020, prostate cancer represented 12.5% of all new cases and 24.7% of new cancer cases in men in the US.

Risk factors:

- Age is one of the most significant risk factors for developing prostate cancer
- About 60% of cases of prostate cancer are in individuals over the age of 65
- If you have a close family member with prostate cancer, you are twice as likely to be diagnosed, compared to the average individual



In the US, approximately 300,000 new cases of prostate cancer are expected to be diagnosed in 2024.

How prostate cancer is diagnosed

Your healthcare team reviews information from a variety of tests to determine the stage of your prostate cancer.



Medical history and physical exam:

- Your healthcare team may ask if you are experiencing any symptoms, such as any urinary or sexual problems, and how long these symptoms have lasted
- You may get a physical exam called a digital rectal exam (DRE), in which your doctor inserts a lubricated, gloved finger into the rectum to check for any bumps or hard areas on the prostate



Blood test:

 The test measures prostate-specific antigen (PSA) levels, which, in conjunction with a biopsy, can lead your doctor towards a prostate cancer diagnosis or determine if other tests are needed



Imaging test:

 A transrectal ultrasound (TRUS) is a procedure in which a small, lubricated probe is placed in the rectum to create an image of the prostate and determine the size of the prostate gland



Visual exam of tissue sample:

- If a PSA blood test or DRE suggests you might have prostate cancer, a prostate biopsy will confirm the diagnosis
- A prostate biopsy is a procedure in which a piece of prostate tissue is removed and analysed under a microscope to see if prostate cancer cells are present



Gleason score:

- A Gleason score is used to predict if cancer is likely to grow and spread slowly or quickly.
 A low score of 2 to 6 indicates that the cancer might never spread or that it is likely to take years before the cancer spreads
- A high score of 8 to 10 means that the cancer is more likely to spread fast and it may be more aggressive



Genetic Testing:

- Your healthcare team may recommend genetic testing to look for changes, also called "mutations," in certain genes
- Some inherited mutations have been linked to an increased risk of prostate cancer

Prostate cancer forms in the prostate gland, which is part of a man's reproductive system.

Stages of prostate cancer

There are 4 stages of prostate cancer.

Stage I	Cancer is found only in the prostate		
Stage II	Cancer has grown, but is still only in the prostate		
Stage III	Cancer has spread outside the prostate, but only to nearby tissues	These stages are also	
Stage IV	Cancer has spread to other parts of the body, which may include the lymph nodes, bones, liver, or lungs	known as advanced prostate cancer	

What is advanced prostate cancer?

Advanced prostate cancer is defined as prostate cancer that has spread to other parts of the body.

- Cancer can spread through blood or lymph fluid to other parts of the body
- When cancer spreads, it can form tumors in other organs including bone, lymph nodes, lungs, liver, and brain

What are bone metastases?

Prostate cancer typically spreads to the bone first—this is referred to as bone metastasis. When prostate cancer advances to this stage, survival and quality of life are at risk. If prostate cancer has spread to your bones, talk to your doctor about ways to manage.

Signs and symptoms of bone metastases:

- Bone pain
- Fractures
- Pressure on the spinal cord

90% of individuals with metastatic prostate cancer show signs of bone metastasis.

How to monitor advanced prostate cancer

Lab tests examine blood and prostate tissue.



PSA test: If you have already been treated for prostate cancer, the PSA test may be used to determine if the prostate cancer has returned. High levels of PSA may mean that your prostate cancer has spread outside the prostate.

In advanced prostate cancer, studies have shown that a PSA test alone should not be used to determine long-term outcomes, like living longer. Treatments may still be working, even if they do not lower PSA. Other tests should be considered.



Calcium and ALP: When bones break down, ALP and calcium are released in the bloodstream. If these markers are at a high levels in your bloodstream, doctors have a better idea if prostate cancer has spread to your bones.

Imaging tests provide a clearer picture of what is happening inside your body.



X-ray: Usually one of the first tests ordered if a patient is complaining of bone pain. This test is able to show signs that cancer has spread to bones.

MRI: An imaging test that uses a magnetic field and radio waves to make detailed images of the inside of the body.





Bone scan: A small amount of low-level radioactive material is sent throughout the body to highlight areas of bone that have been affected by cancer.

PSMA-PET scan: In some cases, after the bone scan, you need to do a prostate-specific membrane antigen PET (PSMA-PET scan) to locate the cancer lesions. This is a new imaging technique for prostate cancer. A radioactive imaging agent binds to prostate cancer cells to help localize prostate cancer cells.

It is important to talk to your doctor to see if a different test may be in your best interest.

Nearly half of individuals with advanced prostate cancer ignore their symptoms

Nobody knows your body better than you. You may think these signs and symptoms are occurring because of your age, a busy day, or a simple change in routine. But they may be a sign that your prostate cancer has spread to the bone.

Early signs and symptoms of bone metastases include:

	Sign and symptom	% reported by patients in the survey
ZZZ	Fatigue The most common advanced prostate cancer symptom reported by men with bone metastases.	87%
5	Pain or aches in specific areas	83%
125	General allover body pain	72 %
н	Numbness or weakness	70%
(Difficulty sleeping	64%

Note: You should consult your treating physician and should not modify your current treatment on your own.

Patient Support

Bayer Pharmaceuticals and an international partnership of patient support groups conducted the world's largest survey in advanced prostate cancer involving more than 1300 patients and caregivers. They are hopeful their experiences will bring awareness and help others recognize these signs and symptoms earlier. These are the organizations that helped make the survey results possible.

CANCERCARE®	cancercare.org	1-800-813-HOPE (1-800-813-4673)
NATIONAL CANCER INSTITUTE	cancer.gov	1-800-4-CANCER (1-800-422-6237)
PROSTATE CANCER RESEARCH INSTITUTE	pcri.org	1-310-743-2116
PROSTATE HEALTH EDUCATION NETWORK (PHEN)	prostatehealthed.org	1-617-481-4020
ZERO—THE END OF PROSTATE CANCER	zerocancer.org	1-202-463-9455
MALECARE	malecare.org	1-917-301-1913
AMERICAN CANCER SOCIETY	cancer.org/cancer/ prostate-cancer	1-800-227-2345
PROSTATE CONDITIONS EDUCATION COUNCIL	prostateconditions.org	866-4PROST8 (1-866-477-6788)

Keep track of your symptoms and speak up about any you are experiencing.

Be an active participant in your treatment decision

There are many treatments to choose from. Make sure you and your doctor choose the appropriate option(s) for you.

Advanced prostate cancer treatment options:

- Androgen-deprivation therapy (ADT): These therapies work to lower hormone levels (such as testosterone) that help prostate cancer grow
- Surgery: Surgical operations may include the removal of all or part of the prostate to stop the cancer from growing or spreading
- **Second-generation hormones:** These therapies work to reduce the effects of androgen when your regular anti-androgen therapies have stopped working. Some patients may benefit from receiving second-generation hormones up front in combination with ADT when diagnosed with metastatic disease
- Radiopharmaceuticals: These therapies contain a radioactive element that delivers radiation near cancer cells to kill them
- **Chemotherapy:** Chemotherapy may be used when prostate cancer has spread outside the prostate and hormonal therapy isn't working. Some patients may benefit from receiving chemotherapy up front in combination with ADT when diagnosed with metastatic disease
- Immunotherapy: This type of therapy uses a person's own immune system cells to fight cancer cells
- DNA repair inhibitors (PARP inhibitors): This type of therapy targets specific proteins to keep cancer cells from repairing damage to their DNA
- Radiation: These therapies deliver radiation using a machine from outside your body in order to kill cancer cells
- Supportive care: These therapies help manage the effects cancer can have on the bone

Treatments are typically taken one at a time, but some may be combined.

Your treatment team

There are many people you can talk to.

Here are the different healthcare professionals you may meet while being treated for prostate cancer.

Treatment Team	Support Team
• Urologist	Oncology nurse
Medical oncologist	Nurse practitioner
Surgical oncologist	Radiation therapist
Radiation oncologist	Physician assistant
Nuclear medicine specialist	Pharmacist
Primary care physician/general practitioner	
Diagnosis Team	Additional Support
 Pathologist 	Nutritionist
Radiologist	Social worker
	Psychiatrist
	Physical therapist
	Pharmacist
	Other skilled professionals

Speak up to any of these people about what you are experiencing.

They are here to help you every step of the way.

The better prepared you are, the better the conversation

Preparing a list of questions will help you remember what you want to ask during your next appointment.

What treatment are you recommending and why?

When should I start this treatment?

What kind of results can I expect?

What are the benefits of this treatment?

What are the potential risks and side effects?

Is there anything I can do to help manage the side effects?

Specific questions can help your healthcare team better address your needs.

Notes

Keeping a diary to track your symptoms is an important step to receive the right care. Write any other questions you may have on the lines below.

It's time to speak up



Break the silence about advanced prostate cancer and take an active role in your health by talking to your doctor.