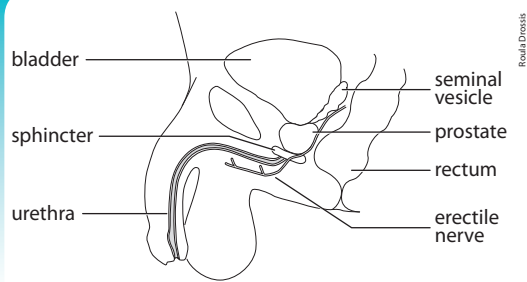


Active surveillance for prostate cancer

Prostate cancer often is very slow to progress. Some patients with low risk cancer may choose close observation with no immediate active treatment.

The prostate is a gland wrapped around the urethra, the urine channel, between the bladder and its control muscle, the urethral sphincter. Its main function is to produce part of the semen ejaculated at male orgasm. Each vas deferens carrying sperm from the testicles connects to the prostate. The nerves carrying signals to produce erections run on either side of the prostate.

Side view of male lower urinary anatomy



Cancer may develop in the prostate from which it can grow into surrounding tissues or spread to other parts of the body although most frequently the diagnosis of prostate cancer is made very early by an elevated **PSA** (prostate specific antigen) blood test. Microscopic examination of prostate biopsies confirms the suspicion of cancer and allows some prediction of the tumour's expected behaviour. This is known as the tumour **grade** or Gleason score.

Additional investigations may be performed, when necessary, to determine the extent or **stage** of the cancer. Your prostate cancer appears to be confined to the prostate, although there is a chance of undetectable, microscopic spread.

You have discussed several treatment options with your urologist, including:

- Active surveillance (observation without treatment; sometimes called watchful),
- surgical removal of the prostate, and,
- radiation therapy (by external beam or implantation of radioactive pellets, brachytherapy).

Each option has its own advantages and risks.

The concept of active surveillance has more recently been seen as a viable option for men who, for one reason or another, have decided not to undergo immediate surgery or radiation therapy. Active surveillance is not just postponing treatment. For many men who have slow growing or very early cancers, immediate treatment might not make sense. Instead, active surveillance allows close monitoring with subsequent treatment if it is decided that the cancer is becoming more concerning. Active surveillance might also be a good choice for men who have other serious medical conditions that affect the way they live their lives, or likely to shorten their lifespan.

Prostate cancer risk

It is well known that prostate cancer grows more slowly than others, and that some men are unlikely to get sick or die from their disease. Many reports have shown that most men in their later years of life have evidence of prostate cancer but this latent or dormant cancer may never progress or affect the patient. One large study of men with early, low-risk prostate cancer that were only watched carefully, with no active treatment, showed that the majority did not die from their disease, even after 20 years of follow-up.

However, the question of whether your cancer is more or less aggressive can be difficult to predict. Cancer aggressiveness can be determined to some degree using available evidence that you have already discussed with your doctor. The ones mostly widely used are tumor grade (Gleason score), PSA, and the extent of your tumor (stage). More favorable or low-risk prostate cancer is often described as a Gleason 6 or less, a PSA 10 or less, and early stage tumor based on your digital rectal examination (DRE). Intermediate risk cancer includes Gleason score 7, a PSA between 10 to 20 or more advanced cancer on rectal examination. The more aggressive the cancer, the higher the risk for early spread to other areas of the body and therefore active surveillance would be less of an appropriate option.

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Active surveillance

During active surveillance, the cancer is carefully monitored for signs of progression. This usually includes a PSA blood test and rectal examination several times a year to determine any significant changes. It is felt by many doctors that the rate of change of the PSA test is a good indication that the prostate cancer may be becoming more aggressive. Other tests (such as CT scans and MRI) may also be advised in special circumstances but are usually not a routine investigation in an active surveillance program. However, your doctor may suggest a repeat prostate biopsy between one and two years after your diagnosis to try and confirm that your cancer is low risk.

If symptoms develop, or if any of tests indicate that the cancer is growing, treatment such as surgery or radiation might be then warranted. The benefit of an active surveillance approach is being able to avoid the risks and complications of treatment, at least for many years, and only undergoing treatment if it is felt that your cancer is becoming more aggressive.

Although it appears to be safe to delay treatment with surgery or radiation in many men with lower risk prostate cancer, it can be difficult to accurately predict if, and when, your cancer will become more aggressive.

Side effects of surgery and radiation

The other available treatment options for prostate cancer, including surgery and radiotherapy, can have serious, long-lasting effects on your quality of life. In the longer term, many men having a radical prostatectomy may lose the ability to have natural erections. Also, some degree of urinary leakage after prostate surgery is common requiring protection in the form of pads and, rarely, additional surgery to restore control.

Similarly, radiation to the prostate can have early and more delayed side effects. Radiation to the rectum often causes increased number of bowel movements and some blood in the stool, although this often clears up soon after treatment. Radiation can occasionally cause a variety of long-term problems with the bowels including inflammation of the rectum (proctitis), with bleeding and bowel problems such as diarrhea. It is common to notice changes in your voiding pattern during radiation. Most

men will notice some increased urge to void as well as an increased need to void during the day or night. These changes are often short-lived but some patients will notice permanent changes to their bladder function and may develop urinary leakage. In the longer term, many men having radiation therapy may also lose the ability to have natural erections.

Who should consider active surveillance?

The option of active surveillance can sometimes be a difficult one to understand and accept. Every man's circumstances are unique, and there is no magic formula to help decide whether active surveillance is right for you. In general, active surveillance can be considered a reasonable option for older men with other health issues and are diagnosed with early and lower risk prostate cancer. Many of the treatment options for prostate cancer can be difficult to endure, and the healthier you are going into treatment, the more likely you are to have better outcomes. Especially if you have other health issues, such as heart disease, long-standing high blood pressure, or poorly controlled diabetes, active surveillance may allow you to avoid the risks and complications of treatment if the cancer does not progress. To put things bluntly, these men are likely to have fewer symptoms related to their disease and are more likely to die with prostate cancer than die of prostate cancer.

Some younger men diagnosed with lower risk prostate cancer may choose active surveillance in order to delay or possibly avoid the potential side effects of therapy such as incontinence and erectile dysfunction. It is important to realize this is a program of close observation with an option to choose active treatment at any point if it is felt the cancer is progressing. The potential for the cancer to grow and spread during active surveillance could be a concern. Some men find it stressful to know they have cancer and may find it difficult to delay active treatment.

Discussing the pros and cons of the different treatment options with your physician and family can help you confidently choose the right treatment for you.

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