



5ARIs in BPH treatment and prostate cancer prevention

What is the prostate?

The prostate is a small gland about the size and shape of a walnut. It is located just below the bladder and is wrapped around the male urethra, the passageway that carries urine from the bladder through the penis during urination. The prostate secretes fluid, which forms part of the semen in which sperm are transported.

What is benign prostatic hyperplasia (BPH)?

As men age, it is common for the prostate to grow. This increase in size is called benign prostatic hyperplasia (BPH). This growth may not cause any problems, but about half of men who have it will have symptoms. The most common symptoms caused by BPH include problems with urination, a delayed urination, a weak urine flow, an urge to urinate, leaking, or sometimes dribbling in your underwear. BPH is NOT cancer.

How do you know that you have BPH?

It is usually symptoms like the ones described above that will cause you to see a doctor. The doctor will need to do some tests to confirm your diagnosis of BPH.

Your doctor will ask you a number of questions to determine how severe your symptoms are and if these symptoms bother you. Your prostate will be examined with a gloved, lubricated finger in the rectum. This is called a digital rectal exam (DRE), which is done to determine if the prostate is enlarged. You may be asked to provide a urine sample to ensure that you do not have any infection. A prostate specific antigen (PSA) blood test will likely be suggested, which is used to rule out cancer in some men. If the PSA is elevated, it does not necessarily mean that you have prostate cancer, as BPH can also cause the PSA to be elevated.

5ARIs for the treatment of BPH

The treatment of BPH is determined by the severity and how much you are bothered by your symptoms. It is also determined by your general health and your personal preferences. After consideration of various factors, your urologist may recommend a 5-alpha reductase inhibitor (5ARI) to control your symptoms.

5ARIs (e.g. Proscar™, Avodart™) block the hormones that stimulate the prostate to grow and actually shrink the prostate. They are most effective in men with a large prostate. It takes some time for a 5ARI to shrink the prostate, so improvement in urination symptoms may not be noticed for up to six months. Side effects include a decrease in semen volume and less frequently a loss of sexual desire (libido) and difficulties with erections. 5ARIs can be taken together with an alpha-blocker (e.g. Flomax™, Xatral™, RAPAFLO®) to give you the best control of your symptoms. Alpha-blockers relax the muscle in and around the prostate gland and the bladder opening to relieve your symptoms and make urination easier.

What monitoring is necessary when you are taking a 5ARI for BPH?

If you have BPH, your doctor will monitor your PSA levels before you start taking a 5ARI. Your PSA levels will be measured again about six months later and at least once a year afterwards. Your PSA usually drops when you are on a 5ARI. If your PSA levels rise while on a 5ARI, further testing may be done to make sure that you do not have prostate cancer. An elevated level of PSA while you are on a 5ARI does NOT necessarily mean you have prostate cancer.

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Why are 5ARIs used to prevent prostate cancer?

5 ARIs inhibit the production of a hormone called dihydrotestosterone (DHT) that stimulates prostate cells to grow. It is therefore thought that these drugs might also prevent the growth of prostate cancer. In two clinical studies involving more than 20,000 men, men who took a 5ARI (Proscar™ or Avodart™) were 25% to 30% less likely to be diagnosed with a low-grade prostate cancer than men who were not taking a 5ARI. In absolute terms, 18% of men taking a 5ARI were diagnosed with low-grade prostate cancer compared with 24% of men who were given a placebo or “sugar pill”. Low-grade prostate cancer is the type of cancer that is less aggressive and is sometimes referred to as a “Gleason 6” prostate cancer. In the same set of clinical studies, 1% of patients taking Proscar™ or Avodart™ developed a more aggressive or “high-grade” prostate cancer (Gleason 7 or higher) compared with 0.5% of men who were taking a placebo. Many experts believe that the explanation for this slight increase in diagnoses of high-grade prostate cancers is that these drugs shrink the normal prostate cells and therefore reduce the amount of PSA made by these cells. There is therefore a greater chance that high-grade cancer, if present, will be diagnosed. Other experts believe that a small ‘real’ increase in high-grade cancers cannot be excluded. All agree that the risk, if real, is small.

How can 5ARIs be helpful to patients who are on active surveillance for their prostate cancer?

For men who have slow growing or very early prostate cancers and/or may have other serious medical conditions, active surveillance may be chosen as a

treatment option. Your urologist will discuss the pros and cons of this with you. Active surveillance involves close observation of patients who have decided not to undergo immediate surgery or radiation therapy for their prostate cancer. 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 evaluate for changes. In clinical studies, 5ARIs have been shown to prevent further rise of PSA levels in men on an active surveillance program. This means that 5ARIs have a potential to slow down the growth and progression of prostate cancers.

Who can receive 5ARI therapy for the prevention of prostate cancer?

Your urologist will discuss the pros and cons of the use of a 5ARI for your case.

You may be a candidate to receive 5ARI therapy for prostate cancer prevention if your PSA levels are elevated and your prostate biopsy shows no appearance of cancer. If you are at high risk of developing prostate cancer, but you have not had a prostate biopsy, you could also be considered to receive a 5ARI to prevent prostate cancer. If you take a 5ARI under these conditions, you will also need to undergo a yearly PSA test.

For each of these possible uses, your doctor or urologist will discuss the pros and cons. If you have any questions concerning the 5ARI, speak with your doctor.

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