

# To Test or Not To Test for Prostate Cancer:

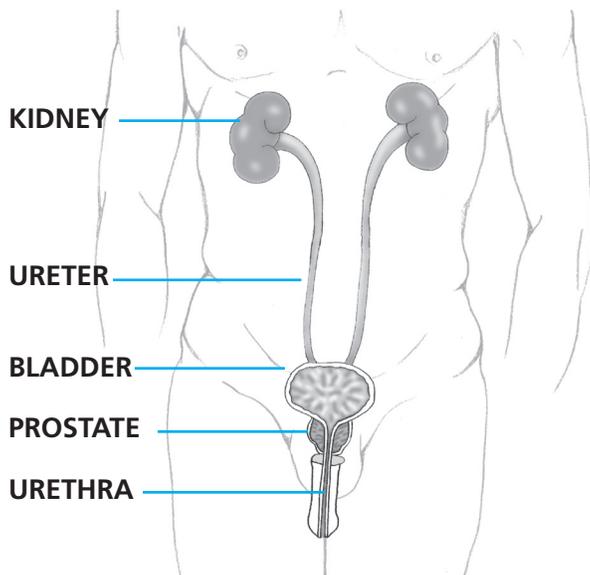
A SHARED DECISION BETWEEN A PATIENT AND A HEALTH CARE PROVIDER



About Prostate Cancer®

This discussion tool is about the prostate specific antigen test, or 'PSA.' The PSA test is a blood test to help detect prostate cancer and other prostate health issues. With recent changes in guidelines to doctors of how the PSA test should be used, patients may be confused about whether PSA testing is right for them.

This tool will give you facts to help you and your doctor make a decision about whether a PSA test is right for you. It is not meant to replace a visit to your doctor. This tool will take about 10 minutes to read.



## WHERE IS THE PROSTATE FOUND?

The prostate is found only in men. It is about the size of a walnut and found in front of the rectum, behind the penis, and under the bladder.

## WHAT DOES THE PROSTATE DO?

The prostate makes semen, the fluid that protects and feeds sperm.

## PROSTATE CANCER

After skin cancer, prostate cancer is the most common cancer in men. Prostate cancer is the second leading cause of cancer-related deaths for men. The National Cancer Institute says that one in

seven men will get cancer of the prostate during their lifetime.<sup>1</sup> African-American men and men with a family history of prostate cancer have a higher chance of getting prostate cancer.

Prostate cancer is different from many cancers because it often grows very slowly. In 2014, only about 29,500 Americans will die from prostate cancer, compared to 222,000 men diagnosed with the disease. Many men with prostate cancer will never know they have it unless they get tested. In these cases, symptoms or problems are more likely to result from testing and treatment than from the cancer itself.

## PSA

PSA (prostate specific antigen) is a substance made by the prostate gland. The level of PSA in a man's blood can be a marker of many different prostate diseases, not just prostate cancer. High PSA levels can be caused by more than just prostate cancer. Other causes of higher PSA levels are:

- prostatitis (swelling of the prostate) and other types of urinary tract infections (UTIs);
- benign prostatic hyperplasia (BPH – enlargement of the prostate);
- injury; or
- treatments such as prostate biopsies (tissue samples) or cystoscopy (a test to look inside the urethra and bladder).

**A prostate biopsy (tissue sample) is the only way to know for sure if you have prostate cancer.**

## SHOULD I GET A PSA TEST?

One use of the PSA test is to screen for prostate cancer. Screening means to look for cancer early, before you see any signs of illness. If prostate cancer has spread outside the prostate by the time it is found, treatment is less likely to cure the cancer. The PSA test may let doctors find the cancer early when treatment might work better. This may stop the cancer from harming your health. This is the major possible benefit of screening.

On the other hand, follow-up tests and treatment can have risks. A biopsy can sometimes cause bleeding or infection. Treatment for prostate cancer can harm your health by causing sexual, urinary and



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bowel problems. Many prostate cancers are so slow growing they don't need treatment. If the cancer does not need treatment, the side effects of treatment may be worse than having the cancer. On the other hand, if the cancer does do better with treatment, then the harms of treatment may be worthwhile.

The problem is that doctors cannot know for certain which cancers will spread and which will never cause health problems.

## IF I GET A PSA TEST, WHAT HAPPENS NEXT?

There are four possible outcomes to a PSA test:

1. Your PSA is normal and you DO NOT have prostate cancer (a true negative).
2. Your PSA is higher than normal and you DO have prostate cancer (a true positive).
3. Your PSA is higher than normal but you DO NOT have prostate cancer (a false positive).
4. Your PSA is normal but you DO have prostate cancer (a false negative).

Below is a drawing showing the chance of a true negative, false negative, false positive or true positive test. Most high PSA results are false positives (about 70 percent). Also, there is a small chance

you may have prostate cancer even with a normal PSA test (about a 1-2 percent risk).

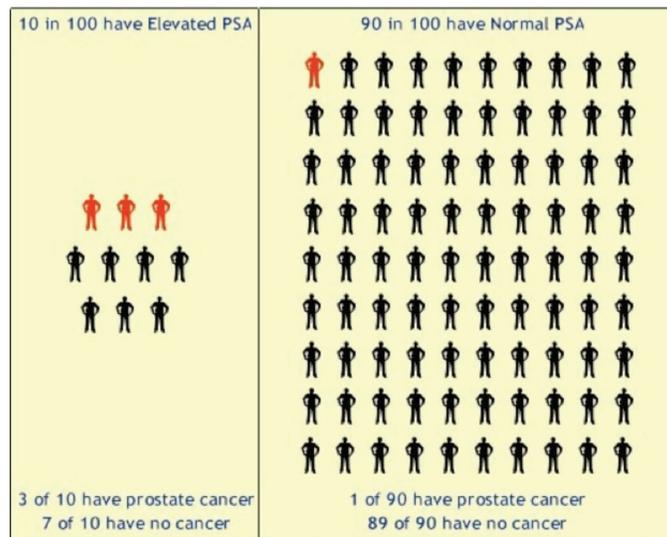
## WHAT HAPPENS IF MY PSA RESULT IS HIGH?

*Don't panic.* If your doctor says that your PSA is high, this does not necessarily mean that you have prostate cancer. Most causes of a high PSA are not due to cancer. To know if your high test result is from cancer or some other cause, your doctor may repeat your PSA test or may suggest a prostate biopsy (tissue sample). A biopsy is the only way to know for sure if you have prostate cancer. Your doctor may send you to a urologist (a doctor who specializes in prostate problems). During a prostate biopsy, your doctor removes tiny samples of prostate tissue to look at under a microscope. Often, twelve or more samples are taken. The doctor gets the samples by placing a thin needle through the wall of the rectum. The biopsy is often done in the doctor's office and takes about half an hour. A prostate biopsy can sometimes cause bleeding or infection.

## WHAT IS THE AVERAGE RISK OF PROSTATE CANCER?

One in seven men will be diagnosed with prostate cancer in their lifetime. On average, the risk of dying from prostate cancer is about

For example...



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three out of 100 American men. African-American men are at increased risk. They face a one-in-three chance of being diagnosed. About five out of 100 African-American men die from prostate cancer. Men whose father, brother, uncle, grandfather or son had prostate cancer are also at increased risk of getting prostate cancer.

## DOES PSA TESTING LOWER PROSTATE CANCER DEATH?

Two large studies have looked at the effect of PSA testing on death from prostate cancer. Both studies showed that PSA testing increased the numbers of prostate cancers found. (About 40 more men were diagnosed per 1,000 tested.) Only one study showed a benefit from testing. In that study, out of every 1,000 men who were screened with PSA and followed for 11 years, there was one fewer prostate cancer death. So we know that testing finds more cases of prostate cancer. Some of these extra prostate cancers would cause harm without treatment. But some of the extra prostate cancers found would not have caused harm or death. Current research studies suggest that if PSA testing lowers the risk of dying from prostate cancer, it does so by a small amount. But testing finds more prostate cancer in men, and some of these men are bothered by treatment side effects.

## WHAT ARE MY TREATMENT CHOICES IF I HAVE PROSTATE CANCER?

In deciding whether to get a PSA test, it may be helpful to think about what you might do if you found out you had prostate cancer. Three common treatment choices are:

1. Prostatectomy (surgery to remove the prostate)
2. Radiation
  - a. External beam radiation
  - b. Brachytherapy (placing radioactive seeds in the prostate)
3. Active surveillance (watch closely with tests, possibly treat in future)
4. Watchful waiting (watch for signs of prostate cancer, possibly treat in future)

## PROSTATECTOMY OR RADIATION?

Prostatectomy or radiation tries to remove all the cancer cells. Prostatectomy is surgery to remove the prostate. Radiation tries to kill the prostate cancer with high-dose X-rays. The X-rays can come from a source outside the body (external beam radiation) or from radioactive seeds placed in the prostate (brachytherapy). Some research has shown that surgery or radiation may make it less likely for men with prostate cancer to die from prostate cancer within 10 to 20 years.<sup>2</sup> Other research has shown that surgery or radiation may not lower the chances that men with prostate cancer will die from prostate cancer.<sup>3</sup> However, it is also known that these treatments can cause problems. Below are the chances of common problems from two treatment choices.

## SIDE EFFECTS FROM TREATMENT

How many men out of 100 say they are having these problems<sup>4</sup>?

|  | Surgery         | Radiation       |
|--|-----------------|-----------------|
| Bothered by problems with sexual function <sup>a</sup> | 43 to 63 in 100 | 38 to 57 in 100 |
| Bothered by problems with urination <sup>b</sup>       | 15 to 42 in 100 | 13 to 52 in 100 |
| Bothered by problems with bowel movements <sup>c</sup> | 5 to 11 in 100  | 10 to 17 in 100 |

- a Problems with sexual function* can include not being able to get an erection, not being able to have intercourse, or being unhappy with the erections you can get.
- b Problems with urination* can include having to wear pads because you leak urine, frequent dribbling of urine, or having no control over your bladder.
- c Problems with bowel movements* can include frequent bowel movements, sudden urges to have bowel movements, or pain or bleeding with bowel movements.

## ACTIVE SURVEILLANCE OR WATCHFUL WAITING (NO IMMEDIATE TREATMENT)

Men with slower-growing tumors and older men may choose not to be treated right away. Remember, many prostate cancers,



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especially those with lower PSA values, won't grow quickly enough to cause harm. Active surveillance is when your doctors watch you closely with regular PSA (and other) tests. If your cancer starts to grow quickly, you can choose a more active treatment in the future. Watchful waiting involves no active treatment or testing. If you start to show signs of prostate cancer, you could choose a more active treatment in the future. While these choices may seem like 'doing nothing,' some studies have shown that in the short term (10 years or so), men who choose no immediate treatment are no more likely to die from prostate cancer than men who choose surgery or radiation. These men may spare themselves treatment side effects. Remember that many prostate cancers grow slowly and may never cause harm. In these cases, active treatment may pose a greater risk to health than active surveillance or watchful waiting.

## IN SUMMARY...

There are possible benefits to having a PSA test.

1. A normal PSA test may put your mind at ease.
2. A PSA test may find prostate cancer early before it has spread.
3. Early treatment of prostate cancer may help some men to avoid problems from cancer.
4. Early treatment of prostate cancer may help some men live longer.

## THERE ARE POSSIBLE RISKS OF HAVING A PSA TEST.

1. A normal PSA test may miss some prostate cancers (a "false negative").
2. Sometimes the test results suggest something is wrong when it isn't (a "false positive"). This can cause unneeded worry and stress.
3. A "false positive" PSA test may lead to an unneeded prostate biopsy (tissue sample).
4. A high PSA test may find a prostate cancer that is slow-growing and never would have caused you problems.
5. Treatment of prostate cancer may cause you harm. Problems with getting erections, leaking urine or bowel function can occur.

**You have been given a lot of information in this discussion tool. You are encouraged to talk with your doctor, friends, family members and other men who have had to make the choice whether to get a PSA test. Make sure that the information you get is correct.**

**After finding out the risks and benefits of getting a PSA test, many men decide to have the PSA test; others decide not to have the test. The final choice is up to you. Your choice should be based on your own values and your views on the benefits and risks of PSA testing.**

*This tool was developed based on a webpage written by Alex Krist, MD, MPH; at the Department of Family Medicine, Virginia Commonwealth University. Used with permission from the author.*

- 1 SEER Stat Fact Sheets: Prostate. National Cancer Institute, Surveillance Epidemiology and End Results. Available at: <http://seer.cancer.gov/statfacts/html/prost.html>.
- 2 Wong YN, Mitra N, Hudes G, et al. Survival associated with treatment vs. observation of localized prostate cancer in elderly men. *JAMA*. Dec 13 2006;296(22):2683-2693.
- 3 Wilt TJ, Brawer MK, Jones KM, et al. Radical prostatectomy versus observation for localized prostate cancer. *N Engl J Med*. July 19 2012; 367:203-213.
- 4 Potosky AL, Davis WW, Hoffman RM, et al. Five-year outcomes after prostatectomy or radiotherapy for prostate cancer: the prostate cancer outcomes study. *J Natl Cancer Inst*. Sep 15 2004;96(18):1358-1367.

[www.KnowYourStats.org](http://www.KnowYourStats.org)

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