

Prostate Cancer and the PSA Blood Test

Prevalence of prostate cancer

In the United States, it is estimated that nearly 250,000 new cases of prostate cancer are diagnosed each year, with nearly 30,000 deaths due to prostate cancer each year.

Men with a family history of prostate cancer, and African-American men are at higher risk than others.

Screening for prostate cancer

Prostate cancer is most easily cured when it is detected early. The American Urologic Association now recommends annual screening for prostate cancer beginning at age 40 for all men expected to live another 10 years (so if you have an illness that is expected to take your life in the next 10 years, you don't need to be screened).

Screening is accomplished by a doctor doing a rectal exam with his/her gloved finger ("a digital rectal exam") and by having a PSA blood test drawn.

What is the PSA?

PSA stands for **Prostatic Specific Antigen**. An antigen is a protein that the immune system can recognize. So the PSA is a protein unique to (specific to) the prostate gland. There is always some of this protein "breaking off" from the prostate and floating around in the blood stream of men.

As we age, the prostate grows steadily larger. As the prostate enlarges, the PSA then typically increases slowly over time.

If the prostate is inflamed the PSA can increase dramatically. An example of an inflamed prostate is a prostate infection (either an acute or chronic prostatitis).

If the prostate is physically traumatized the PSA can increase. Something as simple as prolonged bicycle riding can cause enough trauma to the perineum (where the bicycle seat meets your bottom) to cause an increase in the PSA.

Recent sexual activity with ejaculation can increase the PSA.

Rapid growth of the prostate caused by prostate cancer increases the PSA.

With so many things causing an increase in the PSA, not everyone with an elevated PSA needs a biopsy. It must be used intelligently.

With so many things affecting the PSA level, why do we use it for cancer screening?

As noted above, prostate cancer is best cured when detected early. While it is obvious the PSA test has its limitations, the use of the PSA test has enabled doctors to diagnose prostate cancer while it is still curable. There has been a 40% decrease in deaths from prostate cancer since the PSA was first introduced in the early 1990s. By the time prostate cancer can be felt by rectal exam alone it has often reached such an advanced stage that curing it is not an option. Before the PSA test, most prostate cancers were treated with palliation (easing the symptoms without curing it) as the only goal. With intelligent use of the PSA test, we more commonly achieve our goal of diagnosing the cancer while it is still curable. Without the PSA test, it is seldom possible to diagnose while it is still curable.

What about the USPSTF recommendation discouraging the PSA for prostate cancer screening?

In October of 2011, the United States Preventative Services Task Force (a governmental body) issued a recommendation discouraging the use of the PSA for prostate cancer screening. At the same time this was happening, the American Urologic Association was suggesting starting the routine use of the PSA at a younger age. Certainly the PSA has to be used and interpreted appropriately. Not everyone with an elevated PSA needs a biopsy. If the patient has symptoms consistent with an infection, the infection should be treated and the PSA repeated. If the patient just finished a 50 mile bicycle ride in the days before he had his PSA tested, he should be allowed to heal and the test repeated. If the PSA test is elevated and the patient ejaculated within the 2-3 days prior to the test, then it should be repeated after a three-day period of abstinence.

If all that sounds complicated, then you can begin to see why the USPSTF issued their recommendation discouraging the use of the PSA.

I do not feel "the baby should be thrown out with the bath water". I disagree with the USPSTF and agree with the American Urologic Association. I recommend screening with a yearly PSA beginning at age 40.