



## IN FOCUS

### The Prostate Cancer Screening Controversy

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The need for prostate cancer screening in the U.S. has been a hotly debated topic in the medical community and general public for several years. The controversy came to a head in 2009 with two medical studies that were published in the *New England Journal of Medicine*.

The preliminary results of these studies came to completely opposite conclusions, making the controversy more confusing to patients and doctors alike. In this short article, I hope to provide some background on the topic and demonstrate why prostate cancer screening is still recommended by TUCC and numerous national medical organizations.

Prostate cancer is the most commonly diagnosed cancer in men in the U.S. and more than 3,000 men in Colorado were diagnosed with the disease in 2009. Prostate cancer is the second leading cause of cancer death among American men. Eighty percent of men diagnosed with prostate cancer will be found to have cancer totally confined to the prostate (localized) and not outside the prostate (locally advanced or metastatic). Localized prostate cancer is diagnosed through screening efforts with the PSA (Prostate Specific Antigen) blood test and DRE (Digital Rectal Examination). Localized prostate cancer is curable and metastatic prostate cancer is treatable, but not curable.

In 1987, PSA was found to be a blood marker for prostate cancer and it has since been performed as a screening test by doctors worldwide to help detect prostate cancer. PSA can be elevated for numerous other reasons besides prostate cancer, making it an imperfect test. Whether PSA decreases deaths from prostate cancer is still controversial, 20 years after the first published article on the test.

Before the PSA era, at the time of prostate cancer diagnosis 35 percent of men had metastatic cancer and 67 percent had locally advanced cancer. With PSA screening today, 80 percent of men diagnosed with prostate cancer have localized disease. In addition, the death rate from prostate cancer has decreased by 30 percent since routine PSA testing began. Thanks to PSA testing, the incidence of prostate cancer has dramatically increased. U.S. men have a 1 in 6 chance of being diagnosed with the

disease, but only a 1 in 30 chance of dying of prostate cancer. This means many men diagnosed with prostate cancer will never die of their disease.

Two prostate cancer screening studies published preliminary data in 2009, one from the U.S. and one from Europe. The European Randomized Study of Screening for Prostate Cancer (ERSPC) demonstrated a 20 percent reduction in the rate of death from prostate cancer with PSA-based screening. ERSPC study physicians determined that more than 1,400 men would need to be screened with PSA and 48 men would need to be treated for prostate cancer to prevent one prostate cancer death. Conversely, the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer screening trial in the U.S. demonstrated no reduction in mortality with PSA screening. The PLCO trial has received extreme criticism in the U.S. because of the large amount of contamination within the control-arm of the study group. What this means is that of the patients randomized to the no-screen arm, 52 percent had PSA screening performed outside the study by their primary care physician. In contrast, the ERSPC study had only a 6 percent contamination rate with its study participants. The extraordinary amount of contamination within the PLCO trial has made many prostate cancer experts question the study's validity.

The prostate cancer screening controversy is still an ongoing debate, but I contend that debating over whether to screen or not screen for prostate cancer is not where our research and debate should be focused. It is my belief that most men would prefer to know whether or not they have prostate cancer. I think our research focus should be on finding a molecular marker that can help us distinguish which patients truly need aggressive life-saving treatment for their prostate cancer and which patients do not need treatment. This marker has yet to be found.

Currently at TUCC, we follow and recommend the American Urologic Association's (AUA) PSA Best Practice Statement that was updated in 2009 after the release of the two previously mentioned screening studies. The AUA recommends a baseline PSA and DRE at age 40 if a man has a greater than 10 year life expectancy. The screening follow-up regimen for men after age 40 and later years in life depends on prior PSAs, prior DREs, a patient's family history, a patient's life expectancy and, most importantly, a patient's decision to be screened or not. The absolute PSA value that warrants a prostate biopsy is unknown, as patients with PSA levels below 2 ng/mL still have at least a 30 percent chance of prostate cancer.

In conclusion, TUCC physicians recommend prostate cancer screening for patients after they receive proper risk-benefit counseling by their primary care physician or urologist.