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Prostate Cancer – Who Needs Treatment?

By Jeffrey Norris

Many men with early-stage prostate cancers may be undergoing treatment unnecessarily with surgery or radiation, according to a leading prostate cancer surgeon.

Heads-up diagnosis and treatment have undoubtedly played an important role in decreasing deaths due to prostate cancer. But even so, “about half the men currently being treated for prostate cancer have low-risk disease,” says Peter Carroll, MD, chair of urology at UCSF. Some of these men may never need treatment.

Carroll also is clinical director of one of 11 collaborating centers nationwide that are funded by the National Cancer Institute (NCI) to conduct innovative prostate cancer research, heads a committee that is revising screening guidelines for the American Urological Association, and is principal investigator for CaPSURE, a longitudinal observational study of prostate cancer patients nationwide.

Carroll and leading experts from across the nation and overseas are convening at UCSF’s Mission Bay campus on Jan. 12 and 13 to discuss how to arrive at better guidelines about who needs treatment – and when – among the increasing number of men being diagnosed with early-stage prostate cancer.

These international clinical and research leaders aim to develop a new research agenda, as well as new approaches to collaborating on and sharing research data across national boundaries.

Tumor Cells Sometimes Do No Harm

The idea that individuals with cancer may not need treatment seems odd. But among men who die of other causes, bits of prostate cancer that never caused any signs of disease can often be found. Autopsy studies indicate that even men in their 20s sometimes have prostate cancer, and that among men age 50 or older, perhaps 40 percent harbor tumor cells somewhere within the walnut-sized organ.

The implication is that many small prostate tumors are slow-growing and may not progress to clinical disease, even after many years or decades.

Over the past decade, there has been an explosion of prostate-specific antigen (PSA) screening. In addition, the PSA value that is used to trigger follow-up – through extraction of prostate tissue via needle biopsy – has been lowered. This has further increased the number of needle biopsies performed. Over the same period, the number of core samples taken during each biopsy procedure also has increased.

The controversial question of how and when to measure levels of PSA protein in blood to screen for prostate cancer is a separate issue from figuring out who should be treated after diagnosis.
Even so, the net result of all this screening is that prostate tumors that otherwise would have gone unnoticed now are being detected – at a lower grade and smaller size on average than prostate tumors that were detected a decade ago, Carroll says.

The vast majority of these tumors are treated by getting rid of the prostate through surgery or radiation. Such treatment – even for small, low-grade prostate tumors – can result in impotence, urinary incontinence or other side effects.

But about half of men diagnosed with small prostate tumors after workup for an abnormal PSA may not need treatment, at least not right away, according to Carroll. As with the autopsied men found to have had prostate cancer, many may live out their lives never exhibiting troubling tumor growth or symptoms of disease.

"Unlike with many other cancers, among men with prostate cancer there is a significant reservoir of silent disease that is destined to remain silent," Carroll says.

Watchful Waiting Evolves into Active Surveillance

Two recently reported retrospective reviews based on clinical data available to researchers through SEER, a network of regional cancer registries supported by the NCI, concluded that patients with early-stage disease fare better with immediate treatment.

But the clinical scenarios in those retrospective studies do not reflect today's standards for screening, and for treating or monitoring disease, Carroll says. Patients had more advanced disease on average, compared with patients diagnosed today.

Untreated patients were once said to be undergoing "watchful waiting." Oncologists now prefer the term "active surveillance."

"The watchful waiting paradigm was not enough watching and too much waiting," Carroll says. Men often were not monitored carefully, and often were treated only after cancer spread beyond the prostate.

Carroll and UCSF colleagues are now monitoring more than 400 men via active surveillance. The physicians are using imaging and biopsy to measure changes in PSA and changes in tumor size and characteristics. Ongoing surveillance has led to subsequent treatment of fewer than one in four of these men, who have been tracked for an average of three years. So far, disease outcomes for the active surveillance group have been comparable to outcomes for men with similar, early-stage cancer who chose immediate treatment, Carroll says.

UCSF research reveals that just 8 percent of low-risk prostate cancer patients choose active surveillance nationwide, Carroll says. Reasons include uncertain risk and patients' anxiety associated with not treating a diagnosed cancer, Carroll says, but also to some degree include physicians' previous training and clinical habits, which are hard to undo. In addition, financial incentives that lead oncologists to recommend treatment may play a part.

To reduce uncertainties, better tools are needed to stratify early-stage patients according to risk. Developing these tools is a major goal for participants in this weekend's symposium, which include physician-scientists who have led or are leading clinical trials on active surveillance worldwide.

Related Links:

International Symposium: Active Surveillance for Early Stage Prostate
Cancer: Patient Selection, Monitoring, Outcomes, and Opportunity for Novel Research
UCSF Mission Bay Campus, January 12 and 13, 2007

Genitourinary Cancer Epidemiology and Population Science (G-CEPS)
UCSF Department of Urology

Prostate Cancer Conference Presents Worldwide Experts
UCSF News Release, January 4, 2007

Long-Term Costs of Prostate Cancer Treatments Compared in New Study
UCSF Today, January 2, 2007

"Early stage prostate cancer—do we have a problem with over-detection, overtreatment or both?"
Peter R. Carroll
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"Active surveillance for prostate cancer: For whom?"
Laurence Klotz
Journal of Clinical Oncology 2005;23:8165-8169
Abstract | Full Text | Full Text (PDF)
Note: Dr. Klotz will be a speaker at the January 12-13 symposium