Prostate Cancer Prognosis Favorable in PSA Era

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San Francisco — Men diagnosed with prostate cancer in the era of prostate-specific antigen screening and treated with radical prostatectomy are unlikely to die of the disease, even if they have adverse risk factors, a review of 6,398 patients found.

The patients were treated between 1987 and 2005, and had a 15-year risk of dying of prostate cancer of 12%. Their 15-year all-cause mortality rate was 38%, Dr. Andrew J. Stephenson reported at a symposium on genitourinary cancers.

The retrospective study was described as the first to assess disease-specific mortality risk in the era of prostate-specific antigen (PSA) screening.

The favorable prognosis may be a result of the effectiveness of prostatectomy or could reflect a lower degree of lethality in most screen-detected prostate cancers, said Dr. Stephenson of the Cleveland Clinic Foundation, and his associates. Before the PSA era, 15%-20% of patients treated with radical prostatectomy died of prostate cancer within the 10-15 years after treatment, population-based studies showed.

"This is important information for patients and physicians to consider when deciding upon treatment options for localized prostate cancer," he said. "Even patients [with] an extremely low probability of cure based on a PSA criterion [PSA recurrence] still have an excellent chance of being alive 15 years after radical prostatectomy."

Only 13% of patients had a greater than 5% risk of dying of prostate cancer within 15 years. Among patients treated since 1998, only 3% had a greater than 5% risk of prostate-specific mortality, he reported.

Risk of dying of prostate cancer ranged from 5% to 37% for patients in the lowest and highest quartiles of risk for a PSA-defined recurrence as predicted by a nomogram that was developed by the investigators and was based on five clinical characteristics, with predictions adjusted for the year of surgery.

The 6,398 patients were in a prediction modeling cohort; all had been treated by radical prostatectomy at Memorial Sloan-Kettering Cancer Center, New York, or at Baylor College of Medicine, Houston, during 1987-2005. The investigators also performed external validation of the modeling

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by applying it to retrospective data on 4,103 patients treated by radical prostatectomy at the Cleveland Clinic during 1989-2005.

In the modeling cohort, 2% of patients died of prostate cancer and 5% died of competing causes. In the validation cohort, 2% died of prostate cancer and 6% died of competing causes. The median follow-up in both cohorts was 48 months.

The predicted risk closely matched observed outcomes. Factors that were significantly associated with prostate-specific mortality included the biopsy Gleason grade, preoperative PSA level, clinical stage, use of neoadjuvant androgen deprivation therapy, and year of surgery.

Surgery in more recent years was associated with improvements in survival until 1998, after which the favorable impact leveled off. PSA velocity and body mass index were not associated with the risk of dying of prostate cancer.

The investigators looked further at survival by risk stratification in 9,481 patients with data using the D'Amico criteria. These criteria for assessing the risk of PSA recurrence after treatment of prostate cancer were described by Dr. Anthony V. D'Amico of Harvard Medical School, Boston (JAMA 1998;280:969-74).

Dr. Stephenson reported the 19% of patients classified as high risk comprised 79% of cancer deaths (and all cancer deaths since 1998). The 15-year risk of dying of prostate cancer in this high-risk subgroup was 19%, compared with a 31% risk of dying from competing causes. The 15-year prostate-specific mortality rate was 10% in patients classified as having intermediate risk of recurrence by D'Amico criteria, and 2% in patients with a good risk profile. The American Society of Clinical Oncology, American Society for Therapeutic Radiology and Oncology, and Society of Urologic Oncology sponsored the symposium. ■