A commentary on PSA velocity and doubling time for clinical decisions in prostate cancer.

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Abstract

Although the value of prostate-specific antigen (PSA) velocity or doubling time has never been seriously questioned for aiding the clinical management of recurrent or advanced cancer, there has historically been considerable uncertainty about PSA kinetics for decisions about biopsy and initial treatment. Recent studies, including analyses of cohorts from all the major randomized trials of localized prostate cancer, have failed to find any evidence that PSA velocity and application of PSA cutpoints are of benefit in this setting. Given current data on PSA velocity and doubling time, we propose the following "take home" messages for the practicing urologist: (1) High PSA velocity is not an indication for biopsy; (2) for men with a low total PSA but a high PSA velocity, consideration should be given to having PSA taken at a shorter interval; (3) men with an indication for biopsy should be biopsied irrespective of PSA velocity; (4) changes in PSA after negative biopsy findings do not determine the need for repeat biopsy; (5) monitoring PSA over time can aid judgment in decisions about biopsy, as informed by the clinical context; (6) PSA velocity is uninformative of risk at diagnosis; (7) high PSA velocity is not an indication for treatment in men on active surveillance; (8) PSA velocity at the time of recurrence should be entered into prediction models (or "nomograms") to aid patient counseling; (9) PSA changes after treatment for advanced disease can help indicate therapeutic response.

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