PROSTATE CANCER

Active surveillance for low-risk disease: who will benefit most?

Active surveillance (AS) protocols are intended to avoid the morbidity associated with definitive treatment in patients with low-risk prostate cancer. However, many clinicians still routinely implement aggressive treatment for these men, probably owing to a lack of clarity regarding precisely which patients are most-suited to AS. Two prospective studies published in *The Journal of Urology* aimed to characterize predictors of progression that could be used to accurately categorize disease risk, thus identifying patients for whom AS protocols would be appropriate.

The first, by Francisco and colleagues, followed 135 patients diagnosed as having low-risk localized disease on the basis of 20-core needle biopsy. Inclusion criteria were Gleason score ≤6 (with neither grade ≥4), <3 positive cores and no cores with >50% cancer content. Patients with diagnostic biopsies with <20 cores performed at an outside institution underwent a 20-core confirmatory biopsy to determine study eligibility. The AS protocol involved serum PSA assessment and digital rectal examination (DRE) every 6 months, and 20-core needle biopsy every 12–18 months. Progression was defined as failure to fulfil any one or more of the biopsy inclusion criteria during follow-up.

Of the 120 patients who underwent at least one rebiopsy, 36 (30%) experienced disease progression during follow-up (median 2.4 years). PSA density, PSA velocity and a family history of prostate cancer seemed to be important predictors of progression, and might be useful as part of a risk-stratification approach when identifying patients suitable for AS.

The second study, performed by Adamy and colleagues, included 531 patients identified as having low-risk prostate cancer. The inclusion criteria were no Gleason grade ≥4, <3 positive cores, no cores with >50% cancer (minimum 10-core biopsy), and PSA level <10 ng/ml. Only 346 patients remained eligible after confirmatory biopsy. Of these, 249 patients elected to be managed via AS, which involved PSA assessments and DRE every 6 months, and repeat biopsy after the first 12–18 months and every 2–3 years thereafter. Progression was defined as a patient no longer meeting one or more of the inclusion criteria.

The probability of meeting all criteria was 60% at 5 years. Interestingly, this

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5-year probability improved to 76% when the PSA criterion was excluded, as most patients who failed because of an increased PSA level showed no other evidence of progression.

Together, these studies indicate that AS is a feasible management approach in patients with low-risk prostate cancer. In particular, they underscore the importance of confirmatory biopsy prior to initiation of AS.

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Original articles Francisco, I. F. *et al.* Risk stratification and validation of prostate specific antigen density as independent predictor of progression in men with low risk prostate cancer during active surveillance. *J. Urol.* **185**, 471–476 (2011) | Adamy, A. *et al.* Role of prostate specific antigen and immediate confirmatory biopsy in predicting progression during active surveillance for low risk prostate cancer. *J. Urol.* **185**, 477–482 (2011)