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Expectant management of prostate cancer with curative intent: an update of the Johns Hopkins experience
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Purpose: We updated our experience with a strategy of expectant treatment for men with stage T1c prostate cancer and evaluated predictors of disease intervention.

Materials and Methods: A total of 407 men with a median age of 65.7 years (range 45.8 to 81.5) with stage T1c (99.8%) or T2a (0.2%) prostate cancer suspected of harboring small volume prostate cancer based on needle biopsy findings and prostate specific antigen density have been followed in a prospective, longitudinal surveillance program with a median followup of 2.8 years (range 0.4 to 12.5). A recommendation for treatment was made if disease progression was suggested by unfavorable followup needle biopsy findings (Gleason pattern 4 or 5, greater than 2 biopsy cores with cancer or greater than 50% involvement of any core with cancer). Cox proportional hazards regression was used to evaluate the affect of multiple covariates on the outcome of curative intervention.

Results: Of 407 men 239 (59%) men remained on active surveillance at a median followup of 3.4 years (range 0.43 to 12.5), 103 (25%) underwent curative intervention at a median of 2.2 years after diagnosis (range 0.96 to 7.39) and 65 (16%) were either lost to followup (12), withdrew from the program (45), or died of causes other than prostate cancer (8). Older age at diagnosis (p = 0.011) and an earlier date of diagnosis (p = 0.001) were significantly associated with curative intervention.

Conclusions: Recognizing that over treatment of prostate cancer is prevalent, especially among elderly patients, a program of careful selection and monitoring of older men who are likely to harbor small volume, low grade disease may be a rational alternative to the active treatment of all.

Editorial Comment
The preliminary results of this study were published in 2002 (1). In the conclusion of this update, the authors, considering that over treatment of prostate cancer is prevalent, especially among elderly patients, a program of careful selection and monitoring of older men who are likely to harbor small volume, low grade disease may be a rational alternative to the active treatment of all. Of 407 men, 239 (59%) men remained on active surveillance at a median follow-up of 3.4 years (range 0.43 to 12.5) and less than half 103 (25%) underwent curative intervention at a median of 2.2 years after diagnosis. The recommendation for treatment was made if
disease progression was suggested by unfavorable follow-up needle biopsy findings based on extension of the tumor and Gleason grading.

The pathology report has a decisive importance for the selection of patients for expectant management. In patients with stage T1c prostate cancer and prostate-specific antigen (PSA) < 0.15 ng/mL, the biopsy should not show Gleason pattern 4 or 5, greater than 2 biopsy cores with cancer or greater than 50% involvement of any core. Patients that fulfill these criteria have a 79.9% probability for harboring insignificant tumors (less than 0.5 cm³) (2). Insignificant, however, does not mean latent (dormant or indolent) tumor. It means a small volume tumor with favorable pathological findings: low-grade Gleason score, confined to the prostate and no positive surgical margins. Unfortunately, so far there is no marker for the biological behavior of prostate cancer.

References

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INVESTIGATIVE UROLOGY

Protective effects of cranberries on infection-induced oxidative renal damage in a rabbit model of vesico-ureteric reflux
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Objective: To evaluate the protective effects of cranberry fruit, which have known antioxidant effects, on infection-induced oxidative renal damage in a rabbit model of vesico-ureteric reflux (VUR).

Materials and Methods: In all, 36 New Zealand male rabbits were divided into five groups, with a sham operation in four rabbits serving as the control (group 1). To create unilateral VUR the roof of the left intravesical ureter was incised, and VUR confirmed 2 weeks after surgery. In all, 32 rabbits with VUR were divided into four groups; 2, VUR alone (with sterile urine); 3, a group infected with Escherichia coli; 4, with intravesical E. coli instillation but fed cranberries; and 5, intravesical E. coli instillation plus an intraperitoneal injection with melatonin group. At 3 weeks after surgery the rabbits were killed, the kidneys obtained and examined histopathologically to evaluate inflammation, fibrosis and tubular changes. Oxidative renal damage was evaluated by measuring malondialdehyde in the renal tissue.

Results: Grossly, the refluxing kidney was larger than the contralateral normal kidney, and the refluxing ureter was dilated and tortuous. Microscopy of tissues from the kidneys in group 3 showed apparent periglomerular mononuclear cell infiltration, tubular dilatation and atrophy, and interstitial fibrosis. The kidneys from groups 2, 4 and 5 showed mild mononuclear cell infiltration with no interstitial fibrosis. The level of malondialdehyde in the