

Significance of Age and Comorbidity in Management Decision-Making in Early Stage Prostate Cancer

Introduction and Objective: Active surveillance (AS) is a viable management option for select patients (pts) with early stage prostate cancer (PC). Comorbidity, long associated with all-cause mortality in PC, and age are important factors in PC management decision-making as surrogates of life expectancy.

Materials and Methods: A total of 226 pts with clinically localized PC enrolled in a prospective cohort study of AS between February 2006 and December 2008. Retrospective chart review identified 592 PC pts who received active treatment (AT) during this period. Pts, all at The University of Texas MD Anderson Cancer Center were matched by clinical stage (T1/T2), prostate-specific antigen (PSA) (<10 ng/mL), Gleason score (GS) (7 or less), and inclusion of AS in the management discussion. Comorbidity severity was scored using the medical record-based Adult Comorbidity Evaluation 27 index. Multivariate logistic regression was used to assess the effect of comorbidity and other covariates on the management decision.

Results: In the AS group, 52 (23.0%) had moderate or severe comorbidities, versus 128 (21.6%) in the AT group ($p=0.74$). In multivariate logistic regression (Table), older age was the only covariate associated with AS. Higher clinical stage, GS 7, white race, family history of PC in a first-degree relative, and higher baseline PSA were associated with higher likelihood of receiving AT.

Conclusions: The decision for AS versus AT was related to clinicopathologic risk factors and a family history of PC; severity of comorbidity was not a significant factor. Despite study limitations, findings underscore the need for real-time measure of comorbidity and the importance of better integration of comorbidity and age into management decision-making in these pts.

Multivariate Analysis

Factor	AS (N=226)	AT (N=592)	Odds Ratio	<i>p</i>
Gleason 7 (vs. 6)	33 (14.6%)	222 (37.7%)	4.90	<0.0001
Clinical stage, T2 (vs. T1)	17 (7.5%)	122 (20.8%)	3.09	<0.0001
Race, white (vs. non-white)	173 (76.5%)	483 (81.6%)	1.75	0.008
Family history of PC	46 (20.4%)	165 (28.1%)	1.64	0.015
Baseline PSA, ng/mL (range)	4.6 (0.4-9.6)	4.7 (0.2-9.97)	1.11	0.029
Age (range)	69.3 (48-89)	65.5 (43-87)	0.91	<0.001