

Overtreatment and Underutilization of Watchful Waiting in Men with Limited Life Expectancy: An Analysis of the Michigan Urological Surgery Improvement Collaborative Registry

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INTRODUCTION AND OBJECTIVES: Guidelines recommend life expectancy (LE) calculation as a critical tool to inform treatment decisions in prostate cancer (PCa). Overtreatment of candidates for watchful waiting (WW) is multifactorial and includes patient preferences, physician risk tolerance, and disease characteristics. We aimed to determine the rates of WW vs. treatment in favorable-risk PCa (FRPCa) and limited LE and assess determinants of treatment.

METHODS: Patients with <10 years LE were identified from the prospective Michigan Urological Surgery Improve Collaborative (MUSIC) PCa registry. LE was calculated as described by Cho et al. Binary and multinomial logistic regression models were used to compare factors associated with management (WW vs. active surveillance (AS) vs. definitive treatment; WW vs. any other management) in FRPCa. Data from high-volume practices (n>30) was analyzed to understand practice variation. FRPCa was defined as Gleason Grade (GG) 1 or low-volume GG 2 (1-3 cores positive, no core with 3+4 >50%).

RESULTS: A total of 2,393 patients were included. Across all risk categories, WW was performed in only 8.1%, while 23.3%, 25%, 11.2%, 3.5%, and 28.9% underwent AS, external beam radiation therapy (EBRT), radical prostatectomy (RP), brachytherapy (BT), or other treatments, respectively. In men with NCCN low-risk PCa (n=358), WW was performed in only 15%, compared to AS (69.3%), EBRT (4.2%), RP (6.7%), and BT (2.5%). In FRPCa (n=704), there was wide practice-level variation; WW (3.3%-33.3%), AS (44.4%-73.3%), and definitive treatment (21.9%-46.7%) (p=0.019) [Figure 1]. Higher GG (OR 0.17, p<0.001), cT2 or higher stage (OR 0.57, p=0.03), higher PSA (OR 0.69, p=0.02), and more positive cores (OR 0.78, p<0.001) were associated with less likelihood of AS vs. definitive therapy. Older age was associated with undergoing AS vs. definitive treatment (OR 1.05, p=0.015), undergoing WW vs. AS (OR 1.12, p<0.001), and undergoing WW vs. any other management (OR 1.13, p<0.001). Higher GG reduced the odds of WW vs. other management (OR 0.54, p=0.044).

CONCLUSIONS: Wide practice level variation exists in treatment for patients with low- and FRPCa and <10 year LE. Utilization of WW is poor, suggesting overtreatment in men who will experience little benefit.

Source of Funding: Blue Cross Blue Shield of Michigan

