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Delayed radical prostatectomy in intermediate-risk prostate cancer is associated with biochemical recurrence: Results from the SEARCH Database

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Background: Active surveillance (AS) is increasingly accepted as appropriate management for low-risk prostate cancer (PC) patients. While it appears safe to delay treatment in low-risk men, it is unknown whether this is safe for intermediate-risk men.

Objectives: We sought to determine whether delaying radical prostatectomy (RP) is safe for men with intermediate-risk PC.

Design, Setting, and Participants: We performed a retrospective analysis of 1,886 men from the Shared Equal Access Regional Cancer Hospital (SEARCH) database treated with RP.

Intervention: All patients had RP either ≤3, 3-6, 6-9, or >9 months after diagnostic biopsy.

Outcome Measurements and Statistical Analysis: Patients were stratified as low, intermediate, or high-risk using the D'Amico classification. Cox proportional hazard models were used to analyze biochemical recurrence (BCR) stratified by delay to RP. Logistic regression was used to analyze positive surgical margins (PSM), extracapsular extension (ECE), and pathologic upgrading. Models were adjusted for age, race, surgery year, surgical center, pre-operative PSA, % cores with cancer, biopsy Gleason, and clinical stage.

Results and Limitations: Overall, 813 (43.1%) men were low-risk, 748 (39.7%) intermediate-risk, and 325 (17.2%) high-risk. Median follow-up among men without recurrence was 51.4 months, during which 595 men (31.5%) recurred. For low-risk men, RP delays were unrelated to BCR, ECE, PSM, or upgrading (all $p>0.05$). For intermediate-risk men, however, delays >9 months were significantly related to BCR (HR 2.10, $p=0.01$) and PSM (OR 4.08, $p<0.01$). Delays >9 months were associated with BCR in subsets of intermediate-risk men with biopsy Gleason score ≤3+4 (HR 2.51, $p<0.01$), PSA≤6 (HR 2.82, $p=0.06$), and low tumor volume (HR 2.59, $p=0.06$).

Conclusions: For low-risk men, delayed RP did not affect outcome. For men with intermediate-risk disease, delays >9 months predicted greater BCR and PSM risk. These associations were present even in men with low-volume intermediate-risk disease, suggesting that perhaps these men are ideal candidates for expedient focal therapy.