

Outcome Following Surveillance of Men with Screen-Detected Prostate Cancer: Results from the Göteborg Randomized Population-Based Prostate Cancer Screening Trial

Introduction and Objective: Over-diagnosis and risk of over-treatment is a major drawback in screening for prostate-cancer. One strategy to avoid unnecessary over-treatment is managing patients with surveillance until signs of progression. This study was undertaken to assess outcomes following surveillance (S) of men with screen-detected prostate cancer (PC).

Materials and Methods: Of the 968 men who were diagnosed with screen-detected PC between 1995 and 2010 in the Göteborg randomized population-based prostate cancer screening trial, 439 were managed with S and were included in this study. They were followed at intervals of 3-12 months and were recommended to switch to deferred active treatment in case of a progression in PSA, grade or stage. Tumors were divided into risk groups (lowlow, low, intermediate, high and advanced) to investigate whether failure after S (PC death, progression to M1, initiation of hormonal therapy or PSA recurrence after radical prostatectomy and/or radiation therapy) was associated with risk group and/or age at diagnosis.

Results: Forty-five percent of all screen-detected PC were managed with S and lowlow-risk and low-risk PC constituted 60% of all screen-detected PC. Median age at diagnosis was 65.4 years and median follow-up was 6.0 years from diagnosis. Thirty-seven percent (162/439) switched from S to deferred active treatment and 39 men failed surveillance. The 10-year treatment-free and failure-free survival figures were 45.4% and 86.4% respectively. Men with low-risk and intermediate + high-risk tumours had a hazard ratio for failure of 2.1 ($p = 0.09$) and 3.6 ($p < 0.001$) respectively, compared to lowlow-risk tumors.

Conclusion: A large proportion of men with screen-detected PC can be managed with S. Surveillance appears safe for men with low-risk PC and may also be an alternative for selected men with intermediate-risk PC.