Radical prostatectomy reduces prostate cancer-specific mortality among men with intermediate-grade disease, but provides minimal benefit for men with low-grade and high-grade disease

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Randomised controlled trial

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Findings

After 33.3 years, 209 of 342 men undergoing surgery and 247 of 348 men followed by watchful waiting had died. Absolute risk (AR) of death from any cause during follow-up was lower with radical prostatectomy (AR=3.1%, 95% CI 1.0% to 6.4%) than with watchful waiting (AR=5.4%, 95% CI 3.4% to 8.6%) in 78.9% of the deaths. A total of 61 men with intermediate-risk prostate cancer were treated by radical prostatectomy and 59 men who initially received watchful waiting died from prostate cancer (AR=16.7%, 95% CI 16.0% to 21.4%) vs AR=7.5%, 95% CI 4.4% to 13.7%) to AR=7.5%, 95% CI 4.4% to 13.7% in 78.9% of the deaths. Of the deaths, 61 men with intermediate-risk prostate cancer were treated by radical prostatectomy and 59 men who initially received watchful waiting died from prostate cancer (AR=16.7%, 95% CI 16.0% to 21.4%), 59 men who initially received watchful waiting died from prostate cancer (AR=16.7%, 95% CI 16.0% to 21.4%) vs AR=7.5%, 95% CI 4.4% to 13.7% in 78.9% of the deaths. This represents an absolute reduction of 11% and a relative risk reduction of 54%.

Men undergoing radical prostatectomy had a 29% lower need for androgen deprivation therapy (AD) (6.5% vs 7.0%) and a reduced risk of metastases (AR=16.1%, 95% CI 11.9% to 21.4%) in 56.8% of the deaths. A total of 61 men with intermediate-risk prostate cancer were treated by radical prostatectomy and 59 men who initially received watchful waiting died from prostate cancer (AR=16.7%, 95% CI 16.0% to 21.4%) vs AR=7.5%, 95% CI 4.4% to 13.7%).

Commentary

This landmark study provides critical long-term follow-up data from a well-conducted randomized trial comparing surgical intervention with conservative management. The findings reinforce several recent paradigm shifts in the field of prostate cancer management.

Of most significance, the new definitive evidence that radical prostatectomy can alter the natural history of this disease. Subsequently, this effect is seen primarily among men younger than 65 years and among those men who have intermediate-grade (Gleason 7) disease. In this group of patients, surgery reduces the likelihood of dying from prostate cancer from about 40% after 30 years of follow-up to about 20%. Furthermore, it can reduce the need for androgen deprivation therapy in a quarter of all older men. These findings argue against abandoning prostate cancer screening.

Equally significant, this study demonstrates that nearly all men who presented clinically with low-grade disease went on to die from prostate cancer. While considering conservative practices, it is unlikely that men presenting with low-volume, low-grade disease as a result of PSA testing harbour more aggressive disease than the Swedish men enrolled in the study. The SPCC 4 trial demonstrates benefits of any, nontoxic, treatment associated with surgery and minimizes the growing enthusiasm for active surveillance for these men.

A surprising finding was the impact of age and the relative efficacy of surgery. Older men did not benefit from surgery. While the majority of men in SPCC 4 study did not undergo screening, the European Randomised Study of Prostate Cancer Screening demonstrated that PSA testing preferentially identifies men with less aggressive disease.

The SPCC 4 study suggests that surgery is unlikely to benefit contemporary patients over the age of 60. Hopefully the Prostatect study will provide additional insights when results are published in 2016.

Finally, the study highlights the lethal nature of high-grade disease. Nonetheless, occur among these men and surgery does not appear to provide much benefit. We need new treatment strategies for this unfortunate group of men.

Competing interests None.

Provenance and peer review Commissioned, internally peer reviewed.

References


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