

RESEARCH ARTICLE

Recent incidence and surgery trends for prostate cancer: Towards an attenuation of overdiagnosis and overtreatment?

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Abstract

Background

Screening for prostate cancer is frequent in high-income countries, including Switzerland. Notably due to overdiagnosis and overtreatment, various organisations have recently recommended against routine screening, potentially having an impact on incidence, mortality, and surgery rates. Our aim was therefore to examine whether secular trends in the incidence and mortality of prostate cancer, and in prostatectomy rates, have recently changed in Switzerland.

Methods

We conducted a population-based trend study in Switzerland from 1998 to 2012. Cases of invasive prostate cancer, deaths from prostate cancer, and prostatectomies were analysed. We calculated changes in age-standardised prostate cancer incidence rates, stratified by tumor stage (early, advanced), prostate cancer-specific mortality, and prostatectomy rates.

Results

The age-standardised incidence rate of prostate cancer increased greatly in men aged 50–69 years (absolute mean annual change +4.6/100,000, 95% CI: +2.9 to +6.2) between 1998 and 2002, and stabilised afterwards. In men aged ≥ 70 years, the incidence decreased slightly between 1998 and 2002, and more substantially since 2003. The incidence of early tumor stages increased between 1998 and 2002 only in men aged 50–69 years, and then stabilised, while the incidence of advanced stages remained stable across both age strata. The rate of prostatectomy increased markedly until 2002, more so in the 50 to 69 age range than among men aged ≥ 70 years; it leveled off after 2002 in both age strata. Trends in surgery were driven by radical prostatectomy. Since 1998, the annual age-standardised

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mortality rate of prostate cancer slightly declined in men aged 50–69 years (absolute mean annual change -0.1/100,000, 95% CI: -0.2 to -0.1) and ≥ 70 years (absolute mean annual change -0.5/100,000, 95% CI: -0.7 to -0.3).

Conclusions

The increases in the incidence of early stage prostate cancer and prostatectomy observed in Switzerland among men younger than 70 years have concomitantly leveled off around 2002/2003. Given the decreasing mortality, these trends may reflect recent changes in screening and clinical workup practices, with a possible attenuation of overdiagnosis and overtreatment.
