

Fact sheet 3 – Important studies on prostate cancer

Prostate cancer is the second leading cause of cancer death in men in Western Europe and the United States. To study whether the effect of early detection and treatment of prostate cancer may reduce the disease-specific mortality several important studies have been carried out.

- The **European Randomized study of Screening for Prostate Cancer (ERSPC)** is a major European effort with 8 participating countries. The study has a co-operation with the Prostate Lung Colonrectal and Ovarian Cancer Screening Trial in the US. This study should result in advice to governments around the world as to whether screening for prostate cancer should be a part of the general provision of health care to our populations.

The European team behind the world's largest ever randomised prostate cancer screening study launched the PRIAS Project (Prostate Cancer Research International Active Surveillance) - designed to radically change the management of prostate cancer – in March 2007.

The Rotterdam team leading the ERSPC indicates that the rate of diagnosis of cancers that do not threaten life (slow growing or indolent cancers) to be over 50%. These cancers then run the risk of being treated unnecessarily.

ERSPC director Prof Chris Bangma, chairman of the Urology Department, Erasmus Medical Centre, Rotterdam, Holland, revealed encouraging first findings on the safe identification of these indolent, slow growing cancers and their management by 'active surveillance', so avoiding aggressive early treatment. Over an eight-year follow up, new studies indicate that 98 percent of patients offered active surveillance would not progress towards metastatic disease. This compares with at least 15 percent of men who still face a return of cancer, 10 years after standard surgical treatment or radiotherapy. Over two million men in Europe live with prostate cancer and most have been actively treated - even though treatment carries serious, well-documented side effects.

In Stockholm, Prof Fritz Schröder will be presenting groundbreaking results from the study.

PRIAS is a 4-year study to confirm the identification of risk groups in the population carrying indolent cancers. Currently, there is no universal medical agreement on their treatment.

Established 10 years ago, ERSPC is the largest ever randomised study on screening for prostate cancer. It should answer the pivotal question whether screening leads to an improvement of cancer-specific survival and identify men at risk. It will also address the quality of life during screening, and the role of serum markers. The study involves 220,000 men in eight countries – The Netherlands, Sweden, Finland, Belgium, France, Spain, Italy and Switzerland - with a follow-up of up to 12 years. Final results are due between 2008 and 2010.

- A milestone study was the one performed by Peter C. Albertsen, James A. Hanley, Judith Fine: **20-Year Outcomes Following Conservative Management of Clinically Localized Prostate Cancer**, published in *JAMA*. 2005;293:2095-2101.

ABSTRACT

Context The appropriate therapy for men with clinically localized prostate cancer is uncertain. A recent study suggested an increasing prostate cancer mortality rate for men who are alive more than 15 years following diagnosis.

Objective To estimate 20-year survival based on a competing risk analysis of men who were diagnosed with clinically localized prostate cancer and treated with observation or androgen withdrawal therapy alone, stratified by age at diagnosis and histological findings.

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Design, Setting, and Patients A retrospective population-based cohort study using Connecticut Tumor Registry data supplemented by hospital record and histology review of 767 men aged 55 to 74

years with clinically localized prostate cancer diagnosed between January 1, 1971, and December 31, 1984. Patients were treated with either observation or immediate or delayed androgen withdrawal therapy, with a median observation of 24 years.

Main Outcome Measures Probability of mortality from prostate cancer or other competing medical conditions, given a patient's age at diagnosis and tumor grade.

Results The prostate cancer mortality rate was 33 per 1000 person-years during the first 15 years of follow-up (95% confidence interval [CI], 28-38) and 18 per 1000 person-years after 15 years of follow-up (95% CI, 10-29). The mortality rates for these 2 follow-up periods were not statistically different, after adjusting for differences in tumor histology (rate ratio, 1.1; 95% CI, 0.6-1.9). Men with low-grade prostate cancers have a minimal risk of dying from prostate cancer during 20 years of follow-up (Gleason score of 2-4, 6 deaths per 1000 person-years; 95% CI, 2-11). Men with high-grade prostate cancers have a high probability of dying from prostate cancer within 10 years of diagnosis (Gleason score of 8-10, 121 deaths per 1000 person-years; 95% CI, 90-156). Men with Gleason score of 5 or 6 tumors have an intermediate risk of prostate cancer death.

Conclusion The annual mortality rate from prostate cancer appears to remain stable after 15 years from diagnosis, which does not support aggressive treatment for localized low-grade prostate cancer.

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