

Trends in prostate cancer incidence and mortality before and after the introduction of PSA testing in the Slovak and Czech Republics

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ABSTRACT

Aims and background. As two neighboring countries in central Europe with national cancer registries, the Slovak (SR) and Czech Republics (CR) are countries with a medium global rate in the occurrence of prostate cancer. This paper analyzes the incidence of prostate cancer and mortality before and after the introduction of PSA testing in the two Republics and the possible reasons for any differences discovered and compares the results with selected regions and countries of the world.

Study design and results. In the Slovak Republic, prostate cancer incidence (age-adjusted to the world standard population) has risen from 14.6/100,000 in 1968 (95% CI, ± 1.5772) to 36.2/100,000 in 2005 (95% CI, ± 2.0678). The estimated annual increase in the incidence during the period 1968-1991 (before nationwide PSA testing) was 0.421; from 1991 (when nationwide PSA testing began) to up to 2003 it was 0.941. Mortality rates grew from 7.3/100,000 in 1968 to 14.9/100,000 in 2005. In spite of the geographic proximity of the two countries, the increase in incidence occurred faster in the Czech than in the Slovak Republic, from 15.8/100,000 in 1977 (95% CI, ± 0.9748) to 59.5/100,000 in 2005 (95% CI, ± 1.7187). The estimated annual increase in incidence in the Czech Republic for the period of 1977-1991 was 0.581. From 1991 (when national PSA testing began) until 2003, it was 1.981. In the period before 1991, mortality rose more sharply in the Czech than in the Slovak Republic, whereas after the introduction of PSA testing mortality stabilized more quickly in the Czech than in the Slovak Republic. In the Slovak Republic, a significant reduction in mortality was observed after 2002 and has continued to the present and probably is not affected only by the results connected with the increase in PSA testing.

Conclusions. The difference in the incidence and mortality of prostate cancer in the Slovak and the Czech Republics results from a difference in the intensity of PSA testing as well as from the introduction of complex, more effective treatment in advanced clinical stages.

Key words: mortality, prostate cancer incidence, PSA testing.

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