P059 The past, present, and future of prostate cancer incidence, mortality and prevalence in Denmark during 2006 through 2030

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Introduction & Objectives: Within a few decades, prostate cancer has become the most common male cancer form in Western societies, representing the leading cause of death in men. To better understand the epidemiological trends of prostate cancer in Denmark we have developed a forecasting model based on available information on the incidence, mortality and prevalence.

Materials & Methods: Using data from Danish nationwide registers, we described the trends in incidence, mortality and prevalence of prostate cancer in Denmark during the period January 1, 2006 to December 31, 2015. The future prevalence of prostate cancer in Denmark up till 2030 was forecasted year by year, using projections of incidence rates from NORDCAN (http://www-dep.iarc.fr/NORDCAN/english/frame.asp) combined with our own forecasted mortality rates in the patient population.

Results: A total of 43,628 prostate cancer patients were diagnosed in Denmark during 2006-2015. From 2006-2009 a steep increase in incidence rate was observed followed by a drop in 2010. A subsequent steady but small increase in incidence is projected to continue through the projection period (Figure 1). The changing pattern in incidence is explained by the introduction of opportunistic prostate specific antigen screening in Denmark in 2010, combined with the effect of an ageing population. We project that the annual number of new cases will increase more than the annual number of deaths in the patient population, leading to an exponentially increasing prevalence. Thus, the prevalence of prostate cancer in Denmark increased from 13,000 in 2005 to 36,000 in 2015 and is projected to increase to >70,000 in 2030.

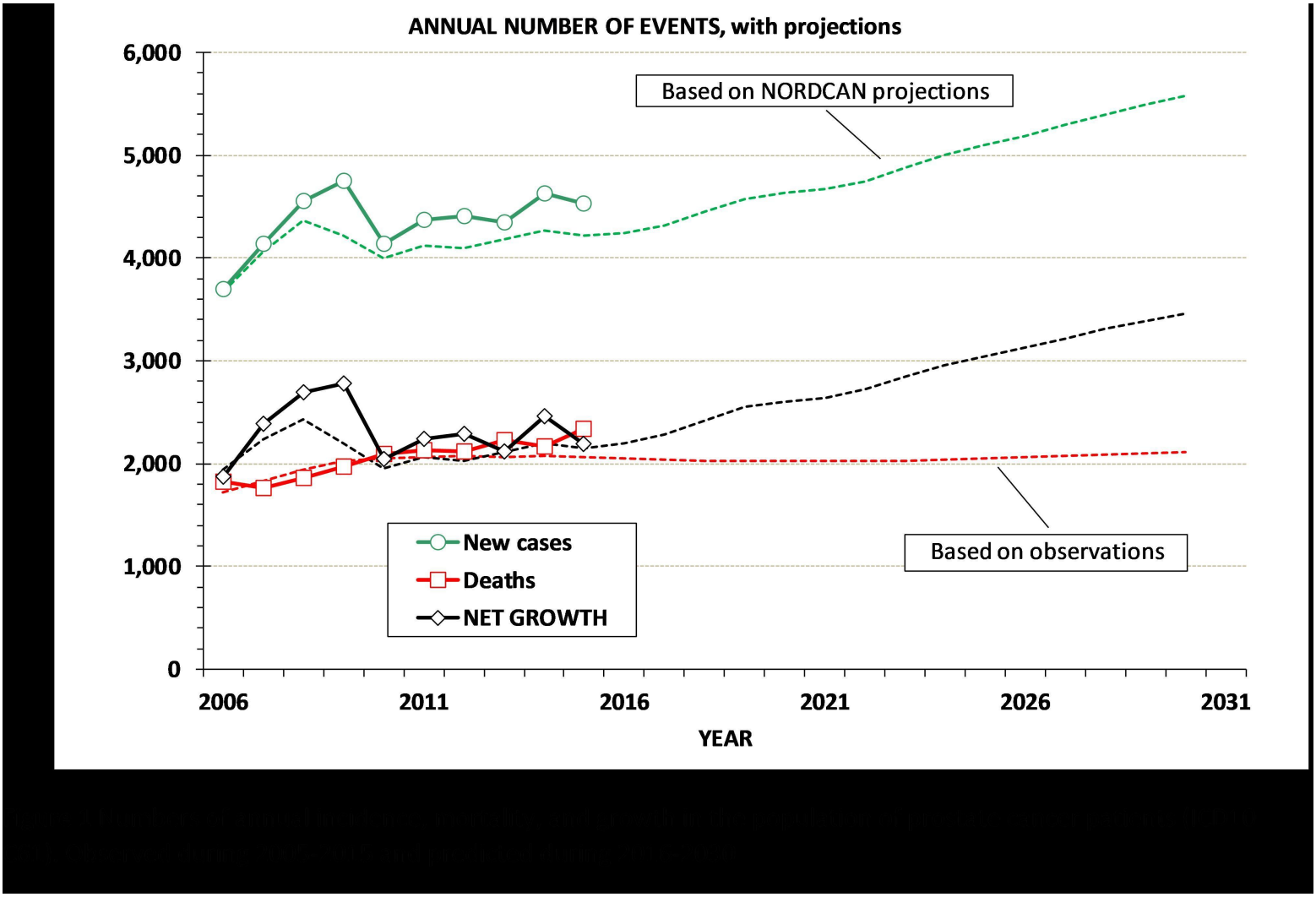

Figure 1 Numbers of annual incidence, mortality, and growth in the population of prostate cancer patients (ICD10 C61). Observed during 2006-2015 and predicted during 2016-2030

Conclusions: Our results suggest a doubling in the prevalence of prostate cancer in Denmark over the next decade. This trend is driven by improving prognosis, combined with a stable incidence rate in a growing ageing population. Our epidemiological forecasting methods may be implemented in a routinely updated monitoring tool, thereby providing relevant new information in the planning and prioritization of cancer care and in the assessment of effects of implementing new modalities for the diagnosis, treatment, and follow-up of prostate cancer.