Prognosis for ovarian cancer in Denmark 1980-2005

Studies of use of hospital discharge data to monitor and study prognosis and impact of comorbidity and venous thromboembolism on survival

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ABSTRACT

This PhD dissertation was carried out during my employment at the Department of Clinical Epidemiology, Aarhus University Hospital.

Denmark has one of the highest ovarian cancer mortality rates, underscoring the need for quality assurance systems to monitor effectiveness of the treatment with updated data. Further, in order to improve survival after ovarian cancer we need better understanding of the disease itself, including knowledge about prognostic factors that can be acted upon for prevention.

This thesis is based on five epidemiologic studies built on data from the Danish Cancer Registry, the Hospital Discharge Registry of North Jutland County, the National Hospital Discharge Registry, the County Pathology Registry (Aalborg), and the Civil Registration System.

The aims of the thesis were to examine: 1) the quality of the ovarian cancer diagnosis in the updated County Hospital Discharge Registry and to quantify the impact of misclassified diagnoses on survival estimates, 2) ovarian cancer survival, from 1985 to 2004, 3) the impact of prior venous thromboembolism (VTE) on survival, and 4) impact of comorbidity on ovarian cancer survival while taking tumour stage into consideration.

We found that ovarian cancer data available as discharge diagnoses are of high quality and suitable for monitoring survival, despite some misclassification of patients with borderline tumours. The hospital discharge data were used in study II, and showed that ovarian cancer survival has improved over time. Further, we found that ovarian cancer patients diagnosed within four months after an episode of VTE were associated with an advanced stage and a poor prognosis. In the last two studies, we found that one quarter of Danish women with ovarian cancer had comorbidity, and 5% had severe comorbidity. Overall survival improved over time in patients without comorbidity, whereas no improvement was seen in patients with comorbidity. Severe comorbidity was a predictor of poor survival independently of tumour stage.

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