

Birth outcome in Danish women with breast cancer, cutaneous malignant melanoma and Hodgkin's disease

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ABSTRACT

The studies in this PhD dissertation were carried out at the Department of Clinical Epidemiology, Aarhus University Hospital, based on Danish administrative registers with nationwide coverage.

We aimed at examining the risk of adverse birth outcomes in Danish women diagnosed with breast cancer, cutaneous malignant melanoma, or Hodgkin's disease by comparing the births of these women with the outcome of births from a cohort of women without cancer. We included births occurring from 1973 to 2002.

In study I, we found no substantially increased risk of preterm birth, low birth weight at term, stillbirth, or congenital abnormalities (CAs) among 216 newborns of women diagnosed with breast cancer before pregnancy. Stratification by mother's treatment did not change the results. Among newborns of women diagnosed with breast cancer during pregnancy, there was an increased risk of preterm birth which reflected a higher rate of elective early delivery. Among 442 births of women diagnosed within two years after delivery, we found a slightly increased risk of preterm birth.

In study II, we did not observe an increased risk of preterm birth, low birth weight at term, stillbirth, or CAs among 620 newborns of women diagnosed with melanoma before pregnancy or among 88 newborns of women diagnosed during pregnancy. We found an increased risk of stillbirth among 351 newborns of women diagnosed within two years after delivery (Prevalence odds ratio (POR) = 4.6; 95% CI: 1.7-12). This unexpected result was, however, based on only five stillbirths in the exposed group.

In study III, we found no increased risk of preterm birth, low birth weight at term, or stillbirth among 192 newborns of women diagnosed with Hodgkin's disease before pregnancy. However, we cannot rule out the possibility of an increased risk of CAs among the children of these women (POR = 1.7; 95% CI: 0.9-3.1). Among 15 newborns of women diagnosed during pregnancy, we found an increased risk of preterm deliveries, which reflected a higher rate of elective early deliveries. We found no substantially increased risk of adverse birth outcomes for women diagnosed with Hodgkin's disease within two years of delivery, but the risk estimates were imprecise.

Overall, our results regarding the risks of adverse birth outcomes for women with breast cancer, melanoma, and Hodgkin's disease are reassuring. Our studies have also shown that the Danish population-based registers are suitable data sources for studying the associations between cancer and birth outcomes. Still, our risk estimates were based on few adverse birth outcomes, indicating the need for international collaboration in future studies on this topic, if a higher statistical precision is to be achieved.