Familial mortality and familial incidence in cancer.

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Abstract

PURPOSE: An overwhelming majority of data on familial risk in cancer is based on incident cancer, whereas familiality in cancer mortality is largely unknown. If fatal form of cancer was a highly familial subtype, then familial risk for mortality may exceed that of incidence, which would be particularly relevant for clinical decision making and counseling.

PATIENTS AND METHODS: The individuals in the nationwide Swedish Family-Cancer Database were classified according to family history of fatal and nonfatal cancer. Familial risks of incident and fatal concordant cancer were calculated for offspring based on their parental family history using a Cox model with hazard ratio (HR); offspring without family history were the reference.

RESULTS: Most HRs for offspring incident cancers were somewhat higher for fatal compared with nonfatal parental family history. For breast (HR, 1.87 fatal v 1.66 nonfatal; P < .001) and prostate (HR, 2.30 fatal v 1.84 nonfatal; P < .001) cancers, 51.0% of patients with familial breast cancer and 56.6% of patients with prostate cancer had fatal family history. HRs for death in offspring according to a fatal compared with nonfatal family history were significantly increased for colorectal (HR, 1.76 v 1.47, respectively; P = .02), breast (HR, 1.97 v 1.51, respectively; P = .002), and prostate (HR, 2.03 v 1.59, respectively; P = .002) cancers. TNM classification did not seem to differ between the family histories. We showed also that an overwhelming proportion of offspring were diagnosed after the parental death.

CONCLUSION: Familial breast, prostate, and colorectal cancers might have a yet unidentified genetic component associated with poorer survival. It may be useful to record survival data in family history records.

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