

Pancreatic cancer: patient survival by stage and histologic type in Germany

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Background: Pancreatic cancer is one of the most rapidly fatal cancers. The aim of this analysis is to provide up-to-date survival estimates stratified by age, sex, histology and stage, based on a pooled German national dataset from 11 population-based cancer registries, covering 33 million inhabitants which extend the data that formerly often included only patients from Saarland.

Methods: Patients aged 15-74 years in Germany and US (SEER 13 database) diagnosed from 1997–2006 were analyzed and compared. Period analysis was used to calculate five-year relative survival for the period 2002-2006 after excluding death certificate only (DCO) cases (Germany 24.1%, US 3.8%). The impact of excluding DCO-cases was investigated using the approach by Brenner and Holleczeck. The Ederer-II method was employed to estimate expected survival. Model-based period analysis was used to test for differences (two-sided $\alpha=0.05$). All calculations were carried out with SAS-software (version 9.2).

Results: 18.484 German patients were analyzed (men 57.7% vs. women 42.3%). The median age at diagnosis was 64 for men and 66 for women. In Germany, overall, five-year age-standardized relative survival was 10.1%, women showed higher survival compared to men (12.0% vs. 8.9%; $p<0.0001$). Survival for the smaller group of patients with endocrine carcinomas ($n=587$) was much higher than for patients with exocrine carcinomas ($n=17897$); (49.8% vs. 8.2%; $p<0.0001$). Patients diagnosed at localized stage had significantly better survival compared to advanced and metastasized stages (35.9% vs. 13.7% vs. 3.7% respectively). 23.226 US-patients were analyzed. Survival seemed lower in the US than in Germany (7.9% vs. 10.1%; $p<0.0001$), but were comparable after accounting for the higher DCO proportion in Germany (7.9% vs. 8.0%).

Conclusions: Survival continues to be very poor for the majority of patients with pancreatic cancer which underlines the need of intensified efforts of primary and secondary prevention of this highly fatal cancer.