I. Article manuscript: Economic and epidemiological burden of pancreatic cancer in Europe

Abstract

Background: Pancreatic cancer is especially common in high-income countries, where the number of cases is expected to rise. Resources in healthcare need to be allocated to demands. Therefore decision makers need to be informed on diseases' burden. This study aims at giving an overview on the epidemiological and economic burden of pancreatic cancer for society in Europe.

Methods: To assess the epidemiological burden of pancreatic cancer, data of the Global Burden of Disease report 2019 were gathered and visualized. For the economic burden a systematic literature review was conducted, searching EconLit, Google Scholar, Pubmed and Web of Science. Information on costs were extracted and analysed. Costs were transferred into Euro 2019 and into costs per patient per month (PPM) and year (PPY).

Results: All European countries surpass global rates for incidence, prevalence and mortality. While age-standardized rates decreased, the raw number of cases increased. The literature review yielded 27 studies giving costs of pancreatic cancer in Europe. Total average costs due to pancreatic cancer in Europe were 4,091 Euros PPM and 71,308.01 Euros PPY. Lowest costs were estimated for the United Kingdom and highest for Sweden.

Discussion: Compared to other cancer sites, pancreatic cancer is not very common but results into a high number of deaths. The costs due to pancreatic cancer are higher, compared to other common cancer sites.

Conclusion: Pancreatic cancer puts a huge burden on society in Europe, which's impact on healthcare systems needs to be further evaluated.

Data availability: Epidemiological data are freely accessible via the IHME's Global Burden Disease Results Tool (http://ghdx.healthdata.org/gbd-results-tool). For the data used in the economic estimation, please contact the corresponding author.

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