

Survival from breast cancer in relation to access to tertiary healthcare, body mass index, tumor characteristics and treatment: a Hellenic Cooperative Oncology Group (HeCOG) study.

[Panagopoulou P](#), [Gogas H](#), [Dessypris N](#), [Maniadakis N](#), [Fountzilas G](#), [Petridou ET](#).

Source

Department of Hygiene, Epidemiology and Medical Statistics, Athens University Medical School, Mikras Asias 75, 115 27, Athens, Greece.

Abstract

Apart from tumour, treatment and patient characteristics at diagnosis, access to healthcare delivery may as well play a significant role in breast cancer prognosis. This study aimed to assess the additional impact exerted on survival by travel burden-a surrogate indicator of limited access to healthcare- expressed as geographical distance and/or time needed to reach the tertiary healthcare center from the patient's residence. Between 1997 and 2005, 2,789 women participated in therapeutic clinical trials conducted by the Hellenic Cooperative Oncology Group. The effect of geographical distance and travel time between patient's residence and treating hospital on survival was estimated using Cox proportional hazards regression adjusting for age, menopausal status, tumour size/grade, positive nodes (number), hormonal receptor status, HER2 overexpression, surgery type/treatment protocol as well as for body mass index $>30 \text{ kg/m}^2$). More aggressive tumour features, older treatment protocols and modifiable patient characteristics, such as obesity (HR: 1.27) adversely impacted on breast cancer survival. In addition, less studied indicators of access to healthcare, such as geographic distance $>350 \text{ km}$ and travel time $>4 \text{ h}$ were independently and significantly associated with worse outcomes (HR = 1.43 and 1.34 respectively). In conclusion, to address inequalities in breast cancer survival, improvements in access to healthcare services related to increased travel burden especially for patients of lower socioeconomic status should be considered, more than ever at times of financial crisis and independently of already known modifiable patient characteristics.