Socio-economic Costs of Breast Cancer: an Italian Analysis

Piccolo F [1], Gazzillo S[2], Nardone C [2], Sciattella P [2], Marcellusi A [2,4], Migliorini R [3], Trabucco Aurilio M [3], Barni S [5], Mennini FS [2,4]

[1]Roche Spa. [2]Economic Evaluation and HTA (EEHTA), CEIS, Faculty of Economics, University of Rome "Tor Vergata", Italy. [3]Office of Medical Forensic Coordination, Italian National Social Security Institute (INPS), Rome, Italy. [4]Department of Accounting and Finance at Kingston University, London, UK. [5]ASST Bergamo Ovest.

OBJECTIVES

Breast Cancer is the most prevalent cancer affecting women and it represents an important economic burden for both the National Health System (NHS) and social perspective. The aim of this study was to estimate the socio-economic burden of breast cancer (BC) in Italy analyzing the factor that predict these costs.

METHODS

The economic analysis was based on the costs incurred by the NHS (direct costs related to hospitalizations) and costs sustained from the National Social Security Institute (INPS) for patients with breast cancer. The analysis was based on two main administrative databases: a) Hospital Information System (HIS), which collects all information about hospital discharges in public and private hospitals and b) disability insurance awards, Disability Benefit (DB), for workers with reduced workability, and Incapacity Pension (IP) for workers without workability were considered. For both the databases the first inclusion criteria was 1) all hospitalizations or benefit with primary or secondary diagnosis of Malignant neoplasm of female breast (ICD 9 CM code 174.xx), Carcinoma in situ of breast (ICD 9 CM 233.0), or Secondary malignant neoplasm of breast (ICD 9 CM 198.81) and with a discharge dates between 2009 and 2016 for hospitalization and approved requests between 2009-2015 for DB and IP. A specific analysis was performed for HIS database stratifying population between primary with no progression, primary with progression within 5 years and secondary BC patients.

Figure 1: Trends of Cost Hospitalization/Patients

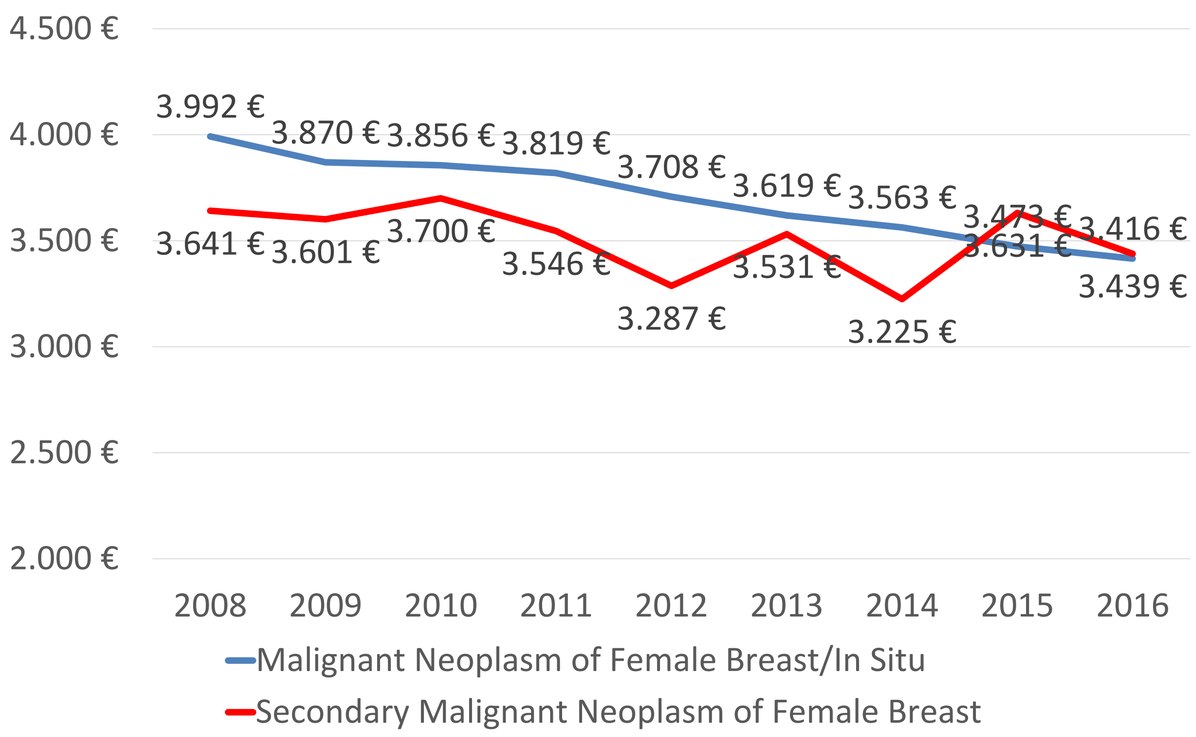


Figure 2: Annual costs of patients with hospitalizations for BC

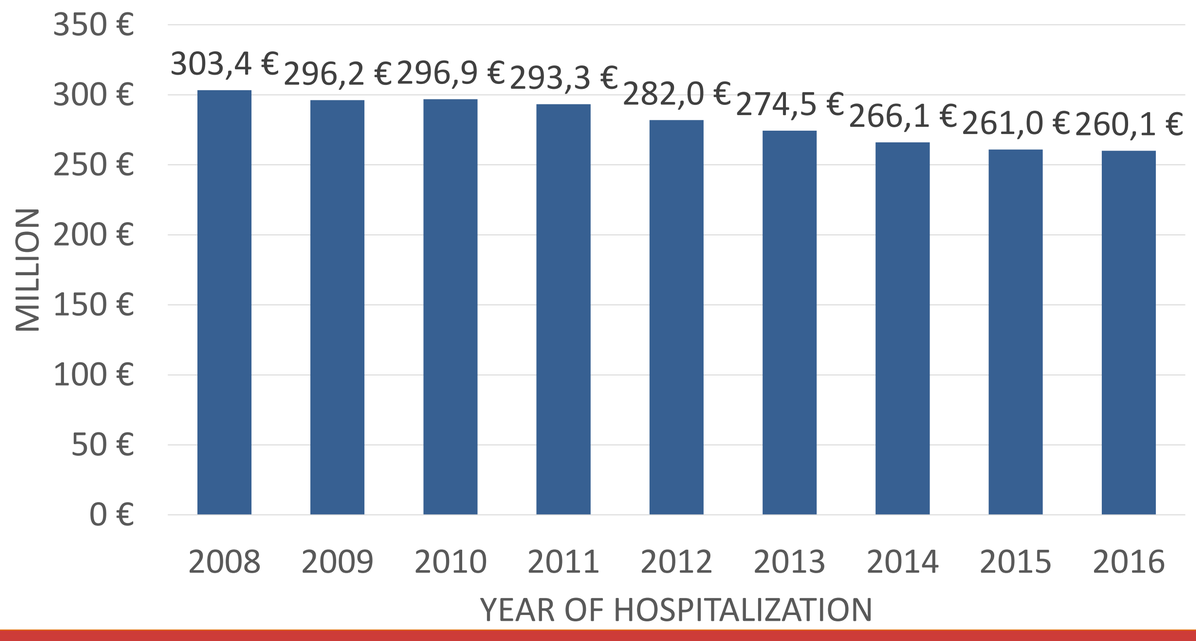
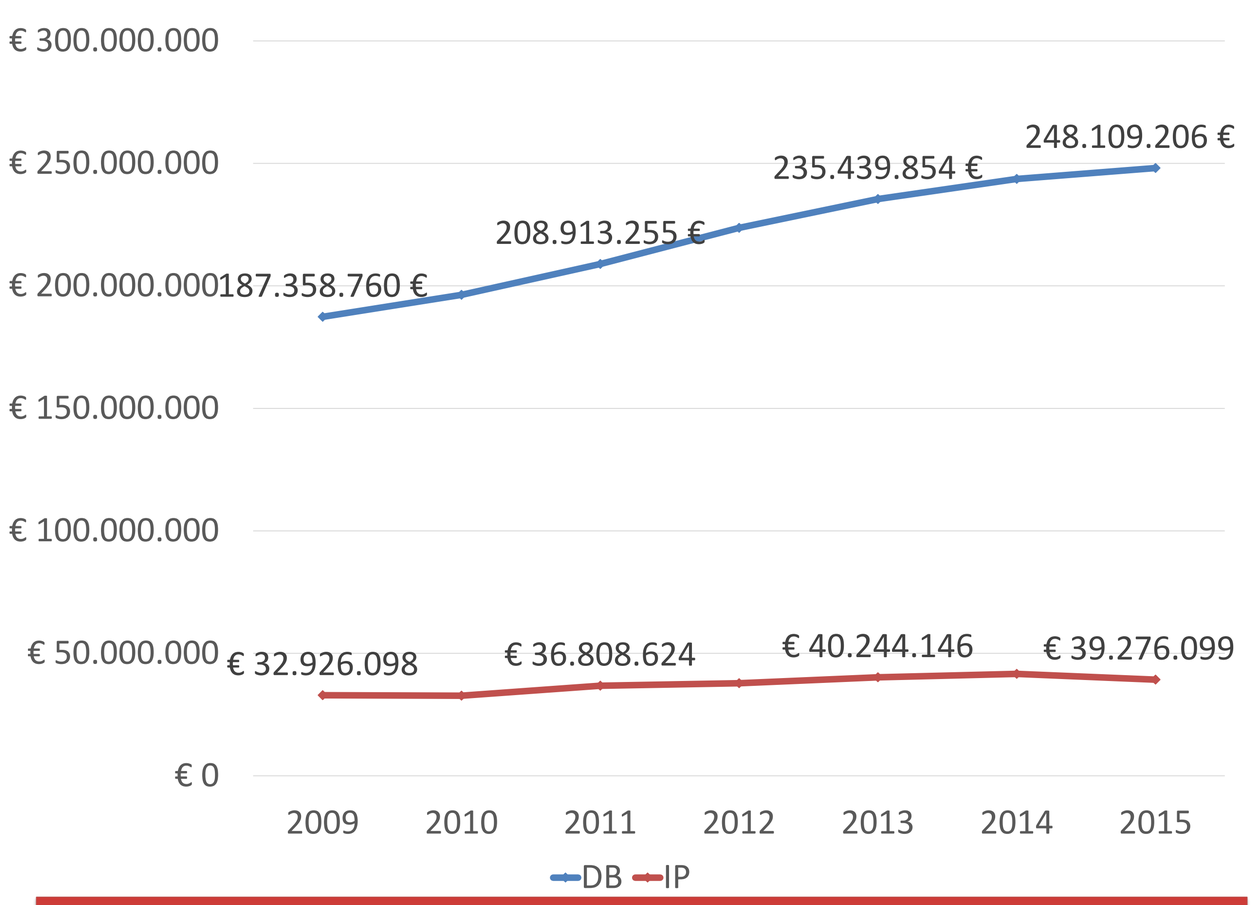


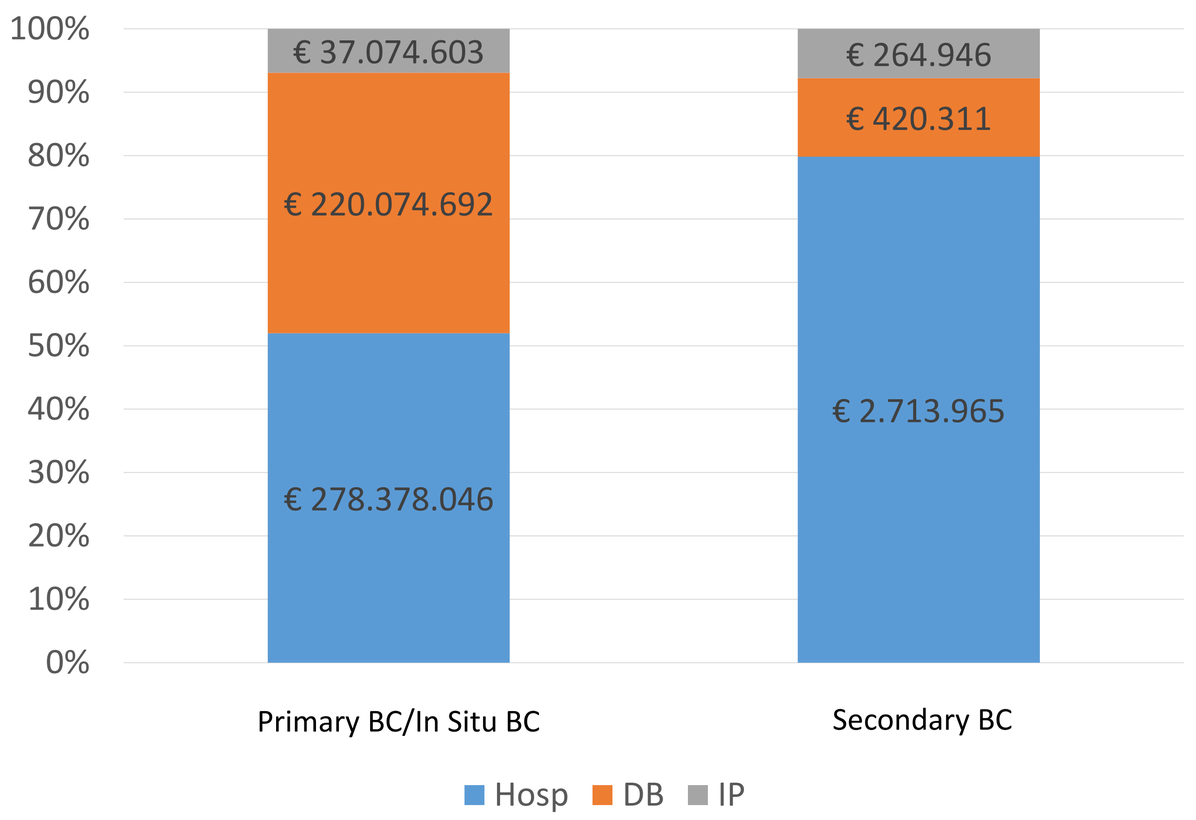
Figure 3: Trends of costs of Social Security Benefits



RESULTS

Women hospitalized for breast cancer were more than 75,000 every year for an overall cost for hospitalization of about € 300 million per year. Even though the number of patients was constant during the study period, hospital spending decreased by over 17.3% between 2009 and 2016. The cost of patients with an early diagnosis of BC and that does not progress in metastasis are significantly lower compared both to progressed and secondary BC patients (€3,322, €10,111 and €5,883 respectively). From the Social Security analysis, a number of 29,000 beneficiaries each year was estimated. Considering per capita social costs, breast cancer at the primary stage caused € 8.828 per year, while secondary neoplasms cost € 9.780 with an average total economic burden of € 257 million per year.

Figure 4: Distribution of cancer costs



CONCLUSION

This analysis focused on the economic impact of Breast Cancer in Italy, showing that the advanced stage of the disease was associated with higher cost. The ability to detect patients in an early stage of BC could reduce the total economic burden of disease.

Contact: federica.piccolo@roche.com

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Centre for Economic and International Studies – Economic Evaluation and HTA (EEHTA)