

Use of Health Care Administrative Databases to Estimate the Burden of Breast Cancer

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Objectives

To assess the epidemiologic and economic burden of breast cancer (BC) at any stage from a large population-based study.

Methods

Lombardy Region includes 9.9 million individuals. Eligible patients were identified through a data warehouse (DENALI), which matches with a probabilistic linkage demographic, clinical and economic data of different Healthcare Administrative databases. All female individuals who had a first hospital discharge with a IDC-9 CM code 174.XX from 1st January 2004 were selected and followed up to 5 years. These subjects were considered incident patients since they had no cause-specific hospitalizations during 2000-2003 period. We calculated yearly incidence, mortality and health care costs (hospitalizations, drugs and outpatient examinations/visits) from the National Health Service's perspective (NHS).

Results

A total of 50,868 eligible subjects (mean age \pm SD equals to 62.5 \pm 14.2) were identified. Incidence patients were homogeneously distributed during the observational period: 20.5% in 2004, 20.1% in 2005, 19.7% in 2006, and 19.4% and 20.2 in 2007 and 2008. During the 2005-2008 period, the mean cost/patient-year for incident and prevalent cases were: 12,973€ versus 4,428€ in 2005, 13,847€ versus 4,237€ in 2006, 14,742€ versus 4,400€ in 2007, 15,671€ versus 4,336€ in 2008. Of the total cost of incident patients, hospitalizations were the driver (70%), with drugs and outpatient claims contributing to 16.3% and 16.2%, respectively. The driver of total costs in prevalent patients was drugs (41.1%), followed by hospitalizations and outpatients claims, contributing to 37.1% and 21.8%, respectively. Overall 46.3 deaths/1,000 patients-year were estimated with a probability of survival equals to 80% after 5 years from the index date.

Conclusions

The high epidemiological and economic burden of BC, indicates the primary importance in monitoring the developing of the disease from the NHS's perspective. DENALI shows to be an efficient instrument combining administrative databases to accurately estimate the burden of BC.