

Using administrative data to identify and stage breast cancer cases: implications for assessing quality of care

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ABSTRACT

Aims and background. The study evaluated the use of Italian hospital discharge data (SDO, *scheda di dimissione ospedaliera*) for identifying women with incident breast cancer, determining stage at diagnosis and assessing quality of care.

Study design. Women aged 20+ years residing in the *Regione Emilia-Romagna*, Italy, between 2002 and 2005 were studied. Case identification using algorithms based on ICD-9-CM codes on hospital discharge data were compared with AIRTUM-accredited cancer registry data. Sensitivity, specificity and positive predictive value were computed overall, by age and cancer stage. Compliance with guidelines for radiation therapy using registry and hospital data were compared.

Results. A total of 11,615 women was identified by AIRTUM-accredited cancer registries as incident cases, whereas 10,876 women were identified by the SDO algorithm. Sensitivity was 84.8%, specificity was 99.9%, and the positive predictive value was 90.6%. Of the 1,022 who were false positives, 363 (35.5%) were women identified in registry data as having an incident case prior to 2002 and therefore were not included in the analysis. There were 1,761 false negatives; nearly 50% were over 70 years of age or did not undergo a surgical procedure and therefore were not included in our SDO-based case finding. Sensitivity declined as the patient population became older. However, we observed relatively good positive predictive value for all age groups. Algorithms using the SDO data did not clearly identify specific cancer stages. However, the algorithm may have utility where stages are grouped together for use in quality measures.

Conclusions. Cases were identified with good sensitivity, specificity and positive predictive value with SDO data, with better rates than similar previously published algorithms based on Italian data. These hospital claims-based algorithms facilitate quality of care analyses for large populations when registry data are not available by identifying individual women and their subsequent use of health care services.

Key words: breast cancer, case finding, epidemiology, quality indicators.

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