

Variation among local health units in follow-up care of breast cancer patients in Emilia-Romagna, Italy

Maurizio Leoni^{1,5}, Radha Sadacharan², Daniel Louis², Fabio Falcini³, Carol Rabinowitz², Luca Cisbani³, Rossana De Palma³, Elaine Yuen⁴, and Roberto Grilli⁵

¹Ospedale Civile Ravenna, Ravenna, Italy; ²Jefferson Medical College, Thomas Jefferson University, Philadelphia, PA, USA; ³Registro Tumori, Forlì, Italy; ⁴Jefferson School of Population Health, Thomas Jefferson University, Philadelphia, PA, USA; ⁵Agenzia Sanitaria e Sociale Regionale, Regione Emilia-Romagna, Italy

ABSTRACT

Aims and background. This study examines the patterns of follow-up care for breast cancer survivors in one region in Italy.

Methods and study design. This retrospective analysis included 10,024 surgically treated women, with incident cases of breast cancer in the years 2002-2005 who were alive 18 months after their incidence date. Rates of use of follow-up mammograms, abdominal echogram, bone scans and chest x-rays were estimated from administrative data and compared by Local Health Unit (LHU) of residence. Logistic regression analyses were performed to assess possible "overuse", accounting for patient age, cancer stage, type of surgery and LHU of residence.

Results. A total of 7168 (72.1%) women received a mammogram within 18 months of their incidence date, while 6432 (64.2%) had an abdominal echogram, 3852 (38.4%) had a bone scan and 5231 (52.2%) had a chest x-ray. The rates of use of abdominal echograms, bone scans and chest x-rays were substantially higher in the population of breast cancer survivors than in the general female population. Taking account of patient age, cancer stage at diagnosis and type of surgery, multivariate analyses demonstrated significant variation in the use of these tests by LHU of residence.

Conclusions. The observed variation in the use of abdominal echograms, bone scans and chest x-rays supports the conclusion that there is substantial misuse of these tests in the population of postsurgical breast cancer patients in the Emilia-Romagna region in Italy. In the absence of a documented survival benefit, overtesting has both a human and financial cost. We recommend additional review of the methods of follow-up care in breast cancer patients in the LHUs of Emilia-Romagna, with the aim of developing, disseminating and evaluating the implementation of specific guidelines targeting primary care physicians and oncologists providing care to breast cancer survivors. Patient education materials may also help to reduce unnecessary testing.

Key words: breast cancer, follow-up care, abdominal echogram, bone scan.

Financial disclosure: This work was supported by funding from the Agenzia Sanitaria e Sociale Regionale, Regione Emilia-Romagna, Italy.

Correspondence to: Maurizio Leoni, Ospedale S Maria delle Croci, Via Randi 5, 48100 Ravenna, Italy.
Tel +39-333-7235194;
fax +39-051-6397053;
email m.leoni@ausl.ra.it

Received March 14, 2012;
accepted August 6, 2012.