Analysis of the time interval between breast cancer detection and diagnosis in the Brazilian Unified Health System from 2008 to 2014

Eler da Silva Reis[1], Clécio Ênio Murta de Lucena[2], Mariangela Leal Cherchiglia[3], Ilka Afonso Reis[4]

[1]Universidade Federal de Minas Gerais, Medical School, Postgraduate Program in Public Health.
[2]Universidade Federal de Minas Gerais, Department of Obstetrics and Gynecology – Women's Health Division.
[3]Universidade Federal de Minas Gerais, Department of Preventive and Social Medicine – Public Health Division.
[4]Universidade Federal de Minas Gerais, Department of Statistics – Public Health Division.

Objective: This study aimed to present an analysis of the time interval between the detection and diagnosis of breast cacer among women whose diagnosis was registered in the Unified Health System (SUS) between 2008 and 2014 in the five geographic regions of Brazil. **Methodology:** This study is part of the project "Evaluation of the epidemiological, economic and care trajectory of high-cost procedures in the SUS," approved by the UFMG Research Ethics Committee. This is a retrospective cohort study using data from the "National Oncology Database," analyzed using descriptive and exploratory statistics. The results, presented in tables and graphs, included medians and interquartile ranges (Q1 and Q3) stratified by sociodemographic variables, tumor staging, and occurrence of death during the study period. Women diagnosed with breast cancer registered with the SUS between January 1, 2008, and December 31, 2014 (204,305 women), participated. The main reason for exclusion was not having undergone any breast cancer diagnostic exam through the SUS (125,480 women; 61.42%). After exclusions, data from 65,555 women (32.07%) were analyzed. **Results:** The time interval between detection and diagnosis of breast cancer varied depending on the geographic region, with a Brazilian median of 132 days (Q1=61; Q3=294); only 11% of women completed the diagnosis within 30 days. The majority of the population was made up of white women (59%) aged between 40 and 59 years; 75.5% of women had stage 2 or more advanced tumors. Women with stage 3 and 4 tumors had the shortest time intervals to diagnosis. Similar patterns were found among women who died from breast cancer, with a higher proportion of deaths among indigenous and black women. **Conclusion:** These results indicate the fragility of the care trajectory and highlight the challenge of implementing the diagnosis within 30 days, as determined by Law No. 13,896/2019, which came into force in Brazil in April 2020.

Keywords: breast neoplasms; public health service; early diagnosis; delayed diagnosis.