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# The impact of the COVID-19 pandemic on the navigation, diagnosis, and treatment of breast cancer patients: assessment of pre- and pandemic results

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**Introduction:** Breast cancer is sensitive to mammographic screening and the organization of the health system, a fact that influences staging at diagnosis. During the COVID-19 pandemic, diagnosis was compromised, with changes in patient navigation and treatment. **Objective:** The aim of this study was to compare the changes determined by the pandemic in an oncology hospital. **Methods:** This retrospective study, carried out in a tertiary oncology hospital, evaluated exclusively patients from the Unified Health System (SUS). It was approved by the regional research ethics committee (CAAE 69791523.9.0000.5105). The patients were divided into two periods of 18 months, before and during the pandemic. Data on age range, presence of symptoms at diagnosis, molecular subtype, clinical pathological stage, clinical prognosis stage, type of first treatment, and surgical treatment performed were evaluated and compared. Chi-square test was used to compare between groups. Statistical analyses were performed using the IBM Statistical Package for Social Sciences (SPSS) program, version 20.0. **Results:** From July 2018 to December 2022, 460 patients were evaluated. The first treatment was surgery (59.8%), then chemotherapy (32.6%), hormone therapy (3.3%), and palliative care (4.3%). The main surgery was breast-conserving (79.2%), followed by mastectomy without reconstruction (15.0%) and with reconstruction (5.9%); where oncoplastic procedures occurred in 14.0% of the patients. Several changes were observed during the period ( $p < 0.01$ ): (1) patients diagnosed by screening mammography (40.7% vs. 26.2%); (2) palpable tumor at diagnosis (64.7% vs. 73.1%); (3) age group 40–69 years (72.3% vs. 75.6%); (4) carcinoma in situ (10.9% vs. 5.0%); (5) clinical stage II (33.4% vs. 23.8%); (6) clinical stage III (20.1% vs. 30.0%); (7) oncoplastic quadrantectomy (4.1% vs. 15.5%); and (8) axillary lymphadenectomy (18.3% vs. 28.9%). **Conclusion:** In our oncology care region, the COVID-19 pandemic determined negative changes in the health system. Although SUS has limitations, worse tumors characteristics and treatment were observed, based on worse diagnostic flow and patient navigation.

**Keywords:** breast neoplasms; COVID-19; retrospective study; disease progression.