

The effect of COVID-19 pandemic on breast imaging: a clinical observations

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Dear Editor,

On December 2019, a viral pneumonia known as coronavirus disease 2019 (COVID-19) was reported in China and has spread rapidly throughout the world. The official announcement of the first case of COVID-19 in Turkey was made on March 11th, 2020, and strict pandemic measures have been taken since then. Routine healthcare for non-COVID-19 disorders have been either restricted or interrupted due to COVID-19 patient overload. Considering the published declarations of International Breast Imaging Societies in March 2020, breast cancer screening, mammography, and breast MRI were delayed for 2.5 months in our country in line with the pandemic precautions (1, 2).

Since the mitigation of COVID-19 pandemic measures, we started to accept patients in our breast clinic as of June 1st, after a 2.5-month break. In June 2020, 333 patients were admitted to our clinic, 179 for screening and the remaining 154 for diagnostic work-up. Seventeen of these patients were diagnosed with breast cancer. The mean and the median tumor sizes were 33.9 mm and 15 mm (range, 6–100 mm) respectively. The staging of these patients was as follows; five were classified as Stage III, three were Stage IV (one bone, one liver and one orbital metastasis), one was stage IIA, four were stage IB, and four were Stage IA. Only two of these cancers were detected by screening and presented as stage I in both cases. Our data showed that 47.1% of our patients were diagnosed with advanced-stage breast cancer whereas 52.9% were at an earlier stage. When compared with our 3-year breast cancer data, early-stage breast cancer rate was 52.9% vs. 81.2% and advanced breast cancer rate was 47.1% vs. 18.8%. We have observed a significant rise in higher stage cancers after the pandemic period in which screening was discouraged. In line with these findings, we have observed late diagnosis in patients who have missed their screening period or were scared to visit a breast clinic after finding a lump in their breast. Our patients declared that they have postponed their visits considering that their findings were not urgent, even in the presence of a newly developed lump. However, tumor extent at the time of diagnosis is important as the stage of the disease is one of the main prognostic factors of breast cancer. On the other hand, one of our patients was detected by the thorax CT examination which was held for COVID-19 pneumonia. Regarding this patient, it is apparent that thorax CT examinations of patients with COVID-19 suspected symptoms may play an important role in detecting silent breast cancers. We believe that meticulous evalua-

tion of the breast tissue in these CT exams is essential.

The rate of survival from breast cancer decreases significantly when the stage is higher at the time of diagnosis (3, 4). In other words, the diagnosis and treatment of early-stage breast cancer increases both the survival rate and the quality of life (5, 6). In the COVID-19 pandemic, women were discouraged from screening, as well as scared to visit a health clinic. We believe that this is the main reason for the late diagnoses observed in our clinic. In case of a second wave of pandemic, women should be well informed about breast cancer via social media. Women must be encouraged to perform self-breast examination at home and consult a health professional in case of any suspicious findings such as new-onset lump, skin or nipple retraction, orange peel skin, or unilateral nipple discharge (2). Furthermore, screening of women at high risk must be pursued. We believe that it is the responsibility of breast radiologists to maintain the continuity of both the information and imaging of women during the pandemic measures.

In conclusion, during the pandemic, continuous information of the women, an elective screening strategy, and ongoing diagnostic breast cancer imaging with necessary safety measures should be ensured. Furthermore, a meticulous evaluation of thorax CT examinations for breast lesions should be kept in mind in the assessment of women with suspected COVID-19.

Conflict of interest disclosure

The authors declared no conflicts of interest.

References

1. Seely J, Barry M. Canadian Society of Breast Imaging and Canadian Association of Radiologists Joint Position Statement on COVID-19. Canadian Society of Breast Imaging, 2020. Available at: <https://car.ca/news/canadian-society-of-breast-imaging-and-canadian-association-of-radiologists-joint-position-statement-on-covid-19/>
2. Pediconi F, Mann RM, Gilbert FJ et al. European Society of Breast Imaging (EUSOBI) recommendations for breast imaging and cancer diagnosis during and after the COVID-19 pandemic 2020. EUSOBI, 2020. Available at: <https://www.eusobi.org/news/recommendations-breast-covid19/>
3. Wyant T, Alteri M, Kalidas M, et al. Survival Rates for Breast Cancer. American Cancer Society, 2019. Available at: <https://www.cancer.org/cancer/breast-cancer/understanding-a-breast-cancer-diagnosis/breast-cancer-survival-rates.html>
4. Office for National Statistics (ONS). Cancer survival in England: National estimates for patients followed up to 2017. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/cancersurvivalinengland/nationalestimatesforpatientsfollowedupto2017>
5. Kornblith AB, Zhang C, Herndon JE, et al. Long-term adjustment of survivors of early-stage breast cancer 20 years after adjuvant chemotherapy. *Cancer* 2003; 98:679–689. [\[Crossref\]](#)
6. Caplan L. Delay in breast cancer: implications for stage at diagnosis and survival. *Front Public Health* 2014; 2:87. [\[Crossref\]](#)

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