

# Management of breast cancer patients during the COVID-19 pandemic

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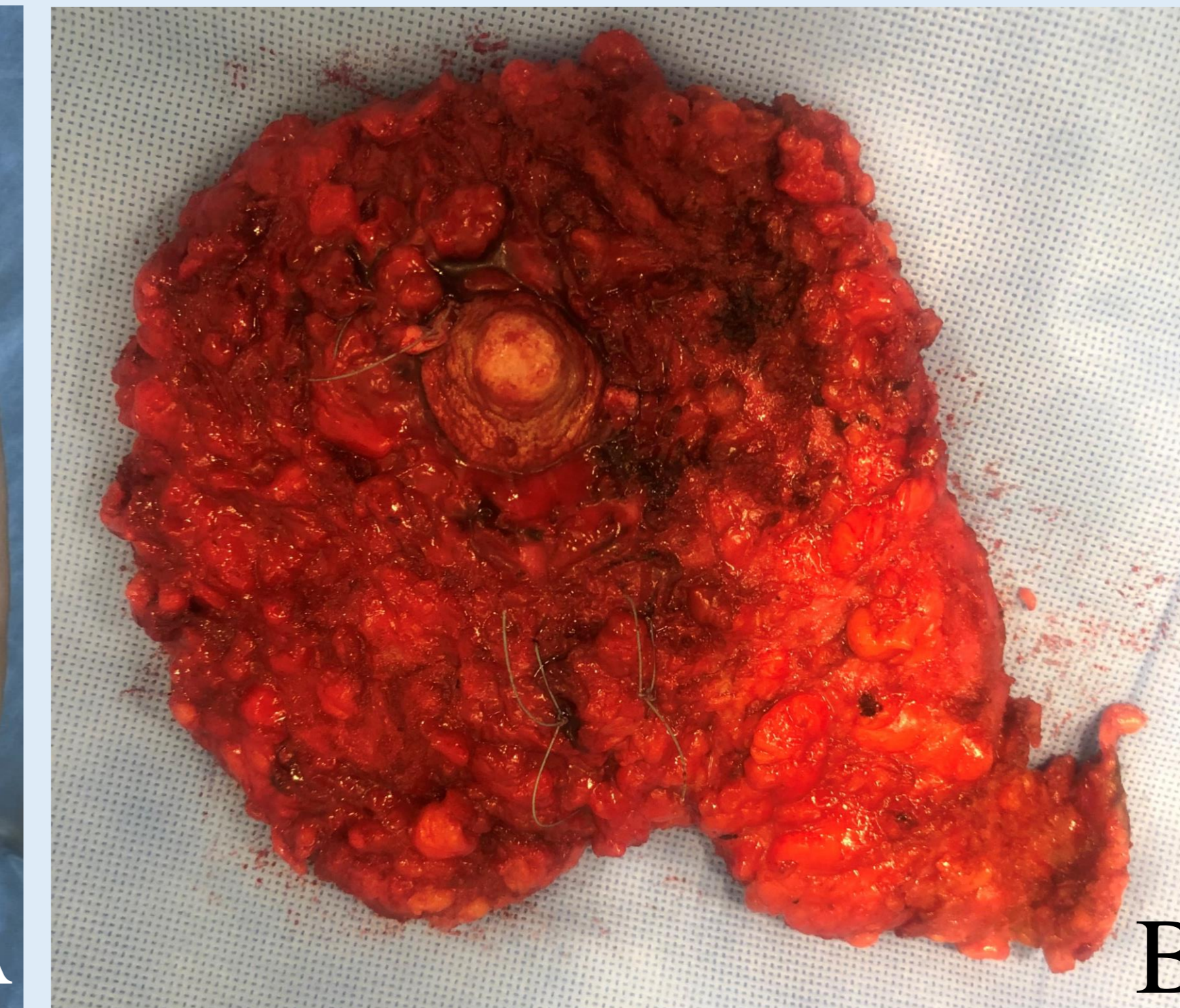


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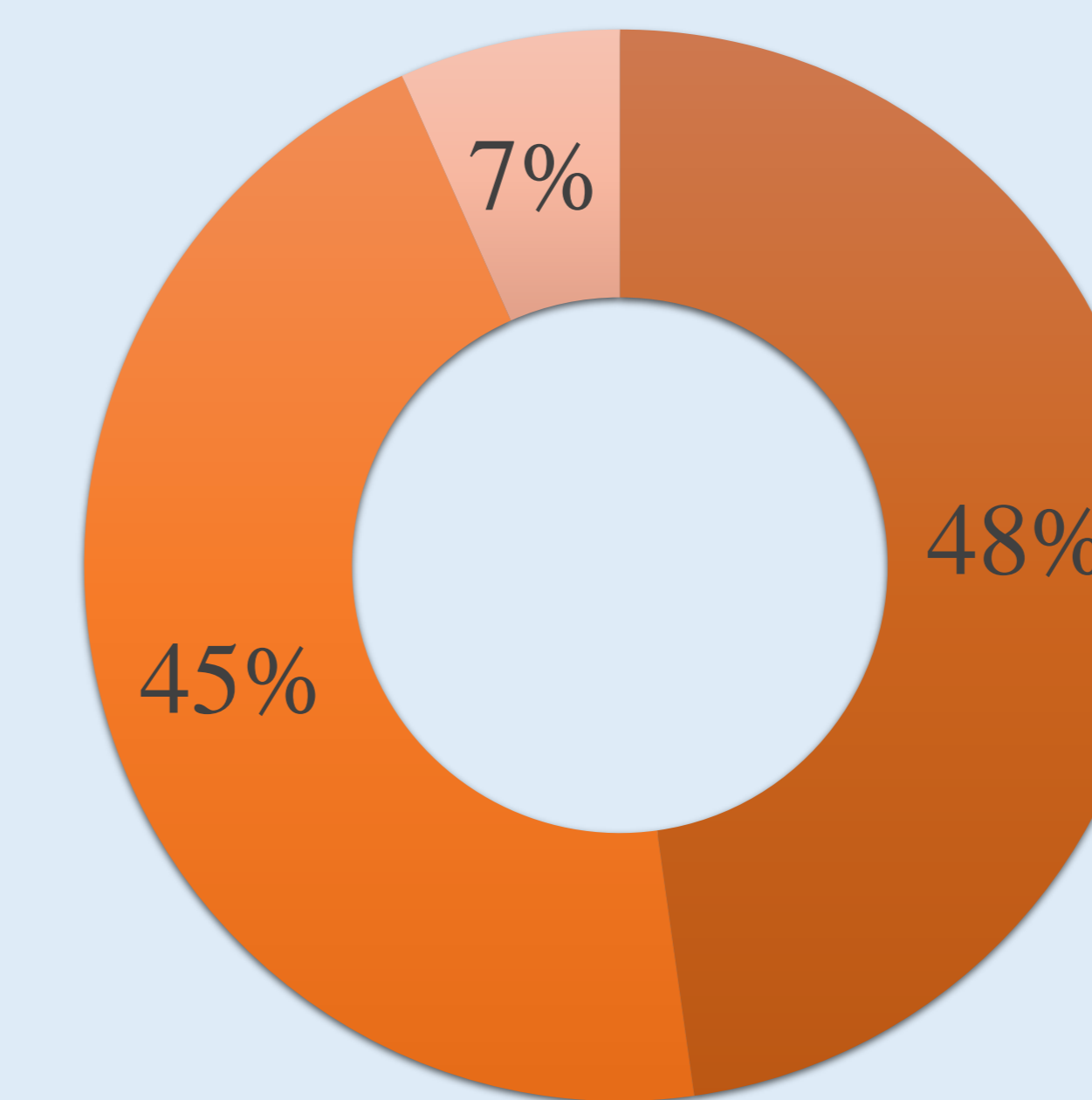
**Introduction:** The COVID19 pandemic significantly impacted the management of diagnosis and treatment of breast cancer patients. There was a paradoxical decrease in the number of newly diagnosed patients, who delayed their regular mammograms in fear of getting infected by COVID19. In addition, there was a greater number of patients with advanced disease who required more radical surgical procedures compared to the time period before COVID19. There was a visible shift from breast-conserving procedures towards radical mastectomies. In co-operation with oncologists, there was also an increase in the number of patients, who were indicated for neoadjuvant oncological therapy. Finally, surgical procedures were delayed, either due to the patients being positive for COVID19, or, in cases of polymorbid patients requiring intensive care postoperatively, surgeries were delayed due to limited intensive care because they were being used for COVID19 patients.



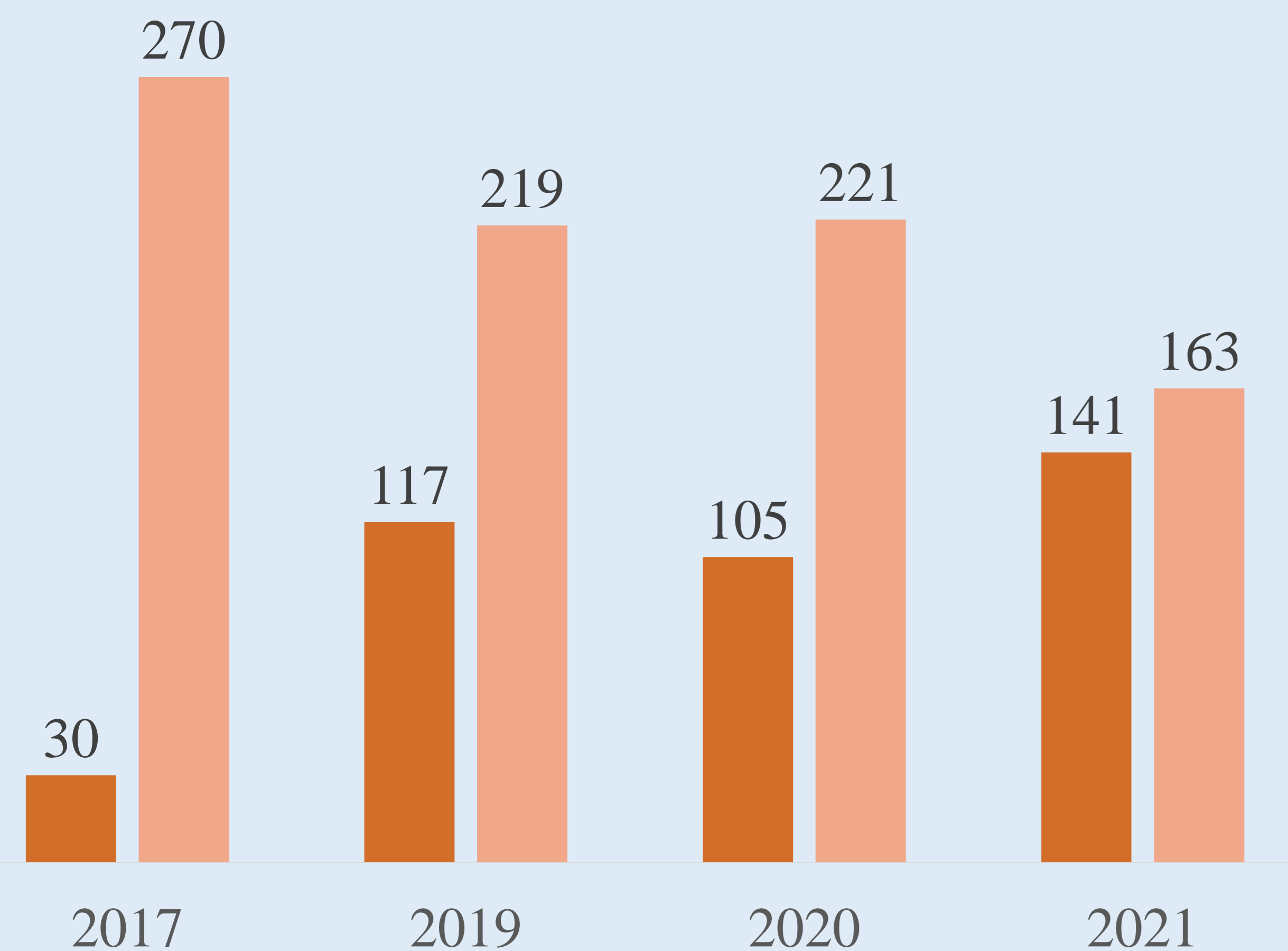
**Aim:** The aim of our work was to analyse how COVID19 impacted the care and management of breast cancer patients.

**Method:** We analysed patients receiving neoadjuvant hormonal or classical chemotherapy and its effect on the tumor size and lymph node involvement. We also evaluated the number and ratio of breast-conserving procedures to radical mastectomies during the COVID19 pandemic compared to the time prior to COVID19.

Patients on neoadjuvant therapy, 2020



- Negative lymph node involvement at diagnosis
- Positive lymph node involvement at diagnosis
- Negative lymph node involvement at diagnosis, but positive after surgery



- Mastectomies
- Breast conserving surgeries

Before COVID19, we discovered that the normal percentage range of mastectomies carried out (from 2012-2018) was maintained within the range of 26.7-30% of total surgical procedures per year. During COVID19 there was a percentage increase in the number of mastectomies carried out per year and the new range was calculated to be within 32.2-46%, which is a significant increase.

**Conclusion:** Our results showed that the COVID19 pandemic significantly affected the current guidelines for the diagnosis and treatment of breast cancer patients. This was seen at the level of radiological examinations (mammograms, ultrasounds) and establishing the diagnosis of breast cancer, and in the change in the strategy of treatment. There was a greater proportion of patients indicated for neoadjuvant treatment, which in some cases was beneficial, in some cases only delayed the surgical procedure without negatively affecting the patient, and unfortunately in a few cases resulted in disease progression. In addition, a general increase in the number of mastectomies carried out per year was observed. Despite our best efforts to ensure the same quality of care as was provided before the pandemic, there was a small number of patients who were negatively affected, and the pandemic led to unwanted disease progression.

Image A: Patient after mastectomy; Image B: Excised tumor (mastectomy); Image C: Breast conserving procedure. Credits: MUDr. Vomáčková Katherine