

LETTER TO THE EDITOR

Breast cancer screening of mutation carriers in the era of COVID-19 pandemic

Dear Editor,

The current COVID-19 pandemic has posed extraordinary challenges for patients, clinicians and healthcare systems. Clinicians have responded to the pandemic by re-organizing and adapting allocation of healthcare resources, staff as well as infrastructures, to minimize exposure risk and preserve resources without compromising patients' outcomes.¹ Even in those countries where COVID-19 did not attain very high incidence rates, containment measures were implemented to prevent infections both of patients and healthcare professionals. On these grounds, the American Society of Breast Surgeons (ASBrS), the National Accreditation Program for Breast Centers (NAPBC), the National Comprehensive Care Network (NCCN), the Commission on Cancer (CoC) and the American College of Radiology (ACR) provided preliminary guidance on the prioritization and treatment of breast cancer during this particular period.² Parallel, many national and international associations, cancer centers and research groups published their recommendations driven by the common goal to preserve hospital resources for COVID-19 patients by prioritizing breast cancer management strategies.³⁻⁶ In line with the other national oncological association, on April 25, 2020, the Italian Association of Medical Oncology (AIOM) published a Special Communication providing guidelines, including selection criteria to service provision and prioritization of breast cancer treatments.⁷ The majority of these guidelines agreed that population mammographic screening and screening of mutation carriers should have been suspended until the pandemic has subsided, while one recommended to continue screening in *BRCA* carriers <40 years of age if delays of >6 months were expected. Moreover, risk-reducing breast surgery has been given low priority with a clear preference to delay these procedures.

Nevertheless, it is noteworthy that population mammographic screening significantly differs from cancer screening of mutation carriers for some crucial points. First of all, the most common screen-detected breast cancer is the luminal-like subtype, more frequently of low grade, small size and node-negative.⁸⁻¹⁰ It is likely that a delay of a few months of these diagnoses does not significantly impact on patients' outcomes. On the other hand, mutation carriers, especially *BRCA1* mutation carriers, are more frequently affected by high-grade triple-negative tumors and high grade serous ovarian carcinomas.

Early detection of these tumors is of utmost importance to improve clinical outcomes. Delays of 3-6 months lead to a prolonged interval to therapy initiation and can therefore compromise the patient's prognosis.^{11,12} Moreover, it should be noted that risks for hospital admission and critical illness of COVID-19 are associated with age and male sex.^{13,14} Indeed, while women attending the population mammographic screening are mostly aged >50 years, cancer screening of mutation carriers usually start at 25 years old. This means that the median age of high-risk women attending the screening of mutation carriers is lower than the population screening, and these women represent a population less prone to develop the worst clinical picture of COVID-19.


It is the opinion of the authors that, compatibly with the management of COVID-19 emergency, interruption or significant delay in cancer screening of mutation carriers should be carefully pondered and possibly personalized. In particular, cancer screening of *BRCA1* mutation carriers should not be modified unless strictly necessary.

CONFLICT OF INTEREST

Angela Toss reports conflicts of interest with Lilly and Roche outside the submitted work.

Matteo Lambertini reports conflicts of interest with Roche, Novartis, Theramex, Lilly and Pfizer outside the submitted work. Kevin Punie reports conflicts of interest with Astra Zeneca, Eli Lilly, Novartis, Pfizer, Pierre Fabre, Roche, Vifor Pharma, Mundi Pharma, Sanofi and Pharma Mar outside the submitted work. Giovanni Grandi reports conflicts of interest with Teva/Theramex, Bayer AG, Sandoz Novertis, Exeltis, MSD and Effik outside the submitted work. Laura Cortesi reports conflicts of interest with MSD, Astra Zeneca, Pfizer, Novartis, Tesaro and Clovis outside the submitted work.

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Abbreviations: ACR, American College of Radiology; AIOM, Italian Association of Medical Oncology; ASBrS, American Society of Breast Surgeons; CoC, Commission on Cancer; NAPBC, National Accreditation Program for Breast Centers; NCCN, National Comprehensive Care Network.

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