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LETTER TO THE EDITOR

COVID-related upsurge in diagnoses of advanced breast cancer—is a disruption in mammography screening the one to be blamed?

We read with great interest the article by Toss et al.[1] The Authors observed a significant increase of node-positive and stage III breast cancer (BC) accompanied by a decrease of ductal carcinoma *in situ* (DCIS) cases, almost 1 year after the first wave of the COVID-19 outbreak. According to the Authors, this can be attributed to a 2-month disruption in mammographic screening (MS), which occurred during the most severe part of the pandemic. We commend the Authors for publishing this unquestionably valuable data, however, we would like to draw attention to several issues, which should be considered when interpreting these results.

In recent years, the clinical value of MS has remained a subject of heated debate.[2] Undoubtedly, a large-scale application of MS led to a rapid increase in the incidence of small tumors, with only a modest reduction in the incidence of large tumors. Thus, a decreased number of newly diagnosed DCIS could be expected after such a disruption in MS. However, the second finding of the study, a significant rise in advanced BC within such a short timeframe, is surprising. The Authors attributed this upsurge to only one major factor, namely the 2-month disruption in MS. We think that this phenomenon cannot be explained so simply.

The discussed critical 2-month period occurred during the hard lockdown in the northern part of Italy, including the province of Modena. In a recent report from England, it was reported that referrals for suspected cancer decreased by up to 84% in some parts of the country during lockdown.[3] Sud et al.[3] assessed the impact of a 2-month delay in cancer diagnosis and provide compelling evidence that such a backlog might result in increased not only incidence, but also mortality. It is therefore possible that BC 'upstaging' described by Toss et al.[1] might be, at least partially, explained by the COVID-19 pandemic measures, which resulted in a significant decrease in the number of people with symptoms seeking access to an oncologist.

When evaluating causality of MS to the presented findings, the Authors should have focused their analyses only on screen-detected non-symptomatic cancers, which occur rarely in cT4 patients. In such patients, mammography is rather of a diagnostic use and the delay in diagnosis (clinical, radiological and pathological), not in screening, should be considered firstly as a major contributor.

Other factors that should have been taken into consideration might be the fear of COVID and anxiety among the society. A survey by the European Society of Cardiology showed that even for acute conditions, i.e. ST-elevated myocardial infarction, both lower presentations and a higher rate of delayed presentations were observed.[4,5]

COVID-19 has disrupted oncology practice and our community had to adapt rapidly. Now, the growing body of evidence might support us in shaping our decisions. The data provided by Toss et al.[1] should be interpreted with caution, since it is unlikely that such profound changes are caused only, or even mainly by one factor. Hence, we urge a more in-depth and multifactorial analysis of the underlying causes in order to identify the true culprits.

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