



# The impact of the COVID-19 pandemic on breast cancer patients awaiting surgery: Observational survey in an Italian University hospital

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The SARS-CoV-2 pandemic has created an unprecedented health care emergency.<sup>1</sup> As of April 21, 2020, 2 478 948 confirmed cases of COVID-19 have been registered, with more than 170 000 deaths worldwide.<sup>2</sup>

The need to provide priority care to such a huge number of patients has forced many hospitals to undergo internal reorganization, with a consequent slowdown in all other clinical services, including cancer care.

To properly react to these unexpected changes, many cancer organizations have issued specific guidelines that redefine priorities in the management of cancer patients during the COVID-19 pandemic.<sup>3,4</sup> These guidelines take into account the forced reduction in personnel and access to cancer services caused by the pandemic and the preliminary data of a study conducted in China during the early outbreak of the infection,<sup>5</sup> that seem to indicate a higher risk for cancer patients of being infected and developing severe complications.

In this evolving scenario, newly diagnosed cancer patients find themselves challenged not only by fears related to their oncologic problem but also by the emotional stress of the pandemic.

In order to better understand these challenges, we conducted a survey inviting 125 women recently diagnosed with breast cancer in our institution and awaiting surgery to respond to a 35-item Internet-mediated specific questionnaire (Figure 1).

The questionnaire, completely anonymous, was sent on March 30th, during the fourth week of complete national lockdown in Italy.

The 35 items were selected to describe age, habits, and social status of the women interviewed (items 1-12), oncologic features of their disease (items 13-20), and impact of the COVID-19 emergency on their cancer experience (items 21-35).

All questions had a multiple choice answer format, except one which required open answers. Statistical significance of the answers was evaluated through Student's *t* test ( $P$ -value < .05), and statistical analysis was conducted using the GRETLL software package.

Eighty-six out of 125 invited patients responded to the questionnaire (participation rate: 69%). Mean age of respondents was 56.3 years (range: 30-86 years).

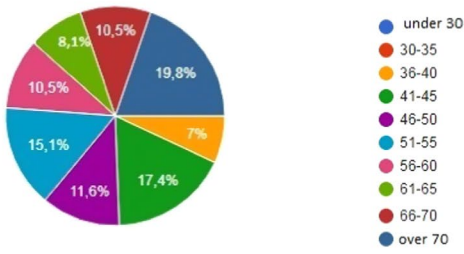
All patients had histologically confirmed invasive or intraductal cancers and were awaiting surgery. Nineteen patients had completed a preoperative chemotherapy regimen, and twelve had started endocrine therapy.

Results of the survey indicated that in the majority of women with breast cancer, regardless of age, the COVID-19 pandemic generated significant additional distress.

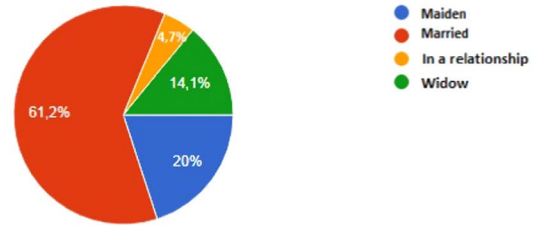
Almost one third of the patients (28,6%) indicated that the emotional distress due to the infection had become prevalent as compared to the distress determined by the diagnosis of cancer.

More than 53% of patients reported that COVID-19 had exacerbated the already existing "oncologic" fears. This was particularly noted in women with invasive cancers and in women that referred not to recall with certainty the pathologic features of their tumor (invasive vs intraductal: 27.4% of the sample) (Figure 2).

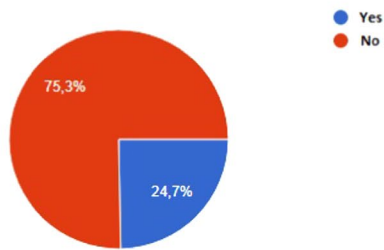
1. Age



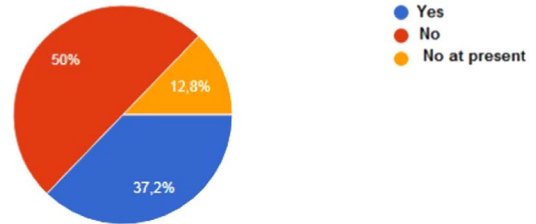
2. Marital status



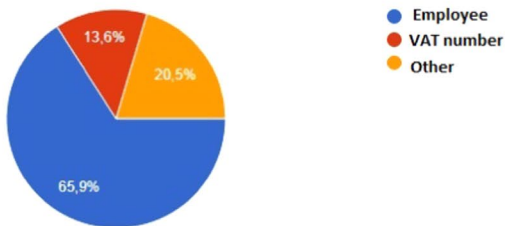
3. Do you live alone?



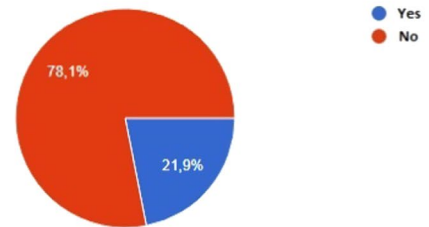
4. Do you work?



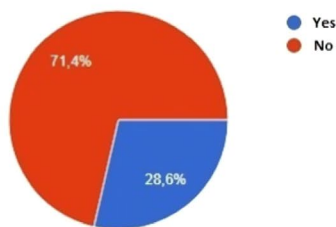
5. If yes, what is your working status



6. If yes, are you currently in smart-working?



7. Are you experiencing economic problems due to the pandemic?



8. Do you feel that you are well informed by the media about what is happening?

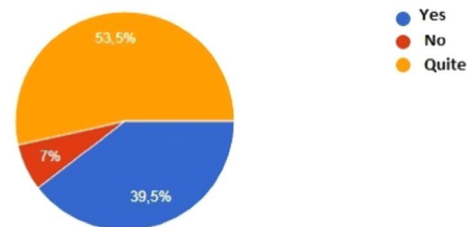
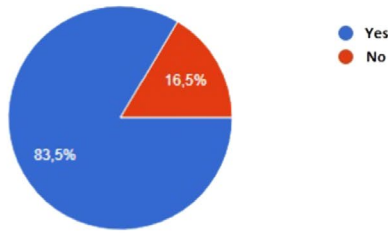
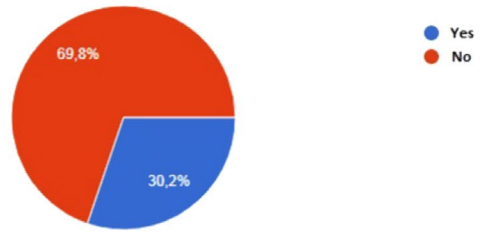


FIGURE 1 Questionnaire with complete answers [Color figure can be viewed at wileyonlinelibrary.com]

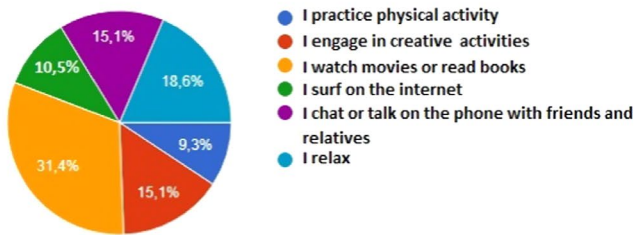
9. Does technology make you more confident in handling this emergency?



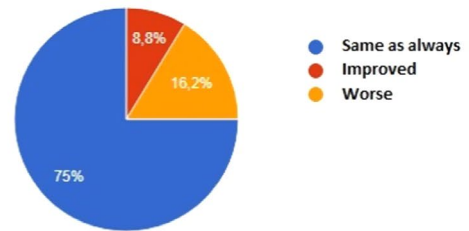
10. Have you changed your diet?



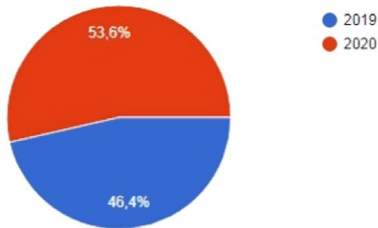
11. How do you spend your free time in this period at home? (Choose between the following two more practiced activities)



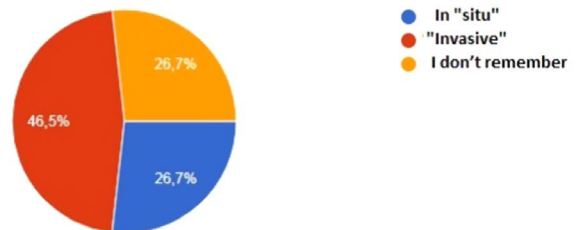
12. How is your daily life with your family members or the people with whom you share your home?



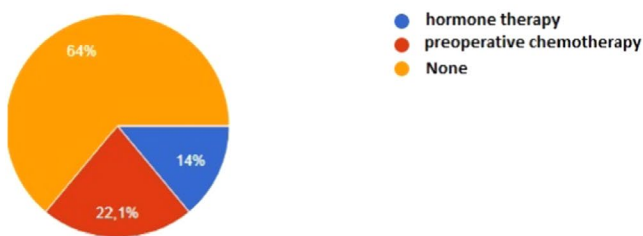
13. When did you receive your diagnosis of breast cancer?



14. What kind of breast cancer have you been diagnosed with?



15. Are you receiving or have already completed some of the following cancer therapies?



18. Can you tell us, at the moment, what concerns you more? (Only one of the two)

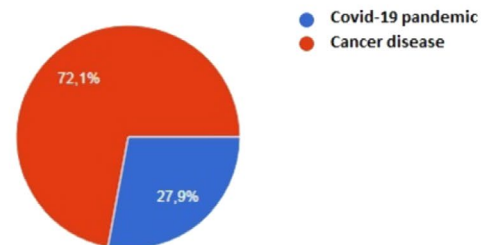
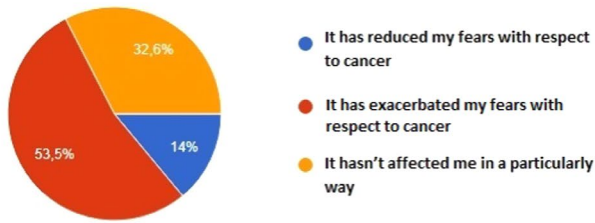
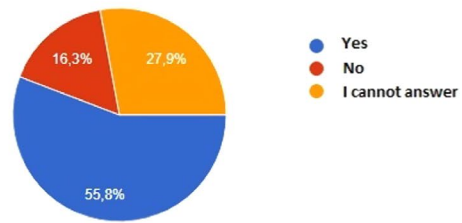


FIGURE 1 (Continued)

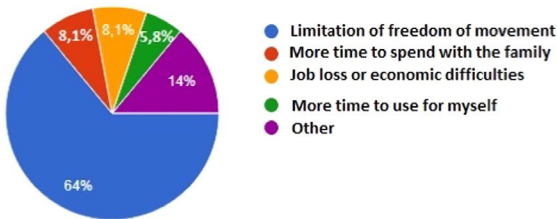
19. How has this epidemic changed your perception of breast cancer diagnosis?



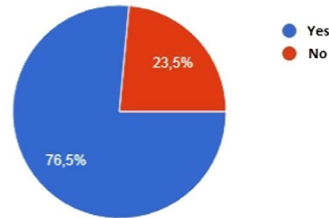
20. Do you think cancer makes you more vulnerable than the general population risk of being infected?



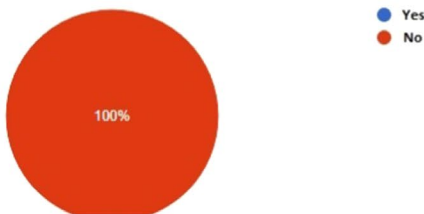
22. What do you think is the biggest change this epidemic has brought to your life?



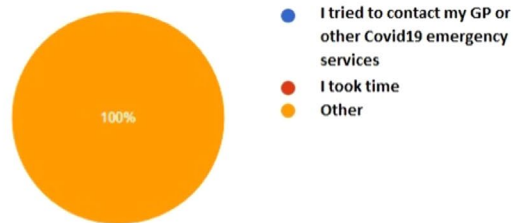
23. Do you feel this emergency is changing the world at a worrisome speed?



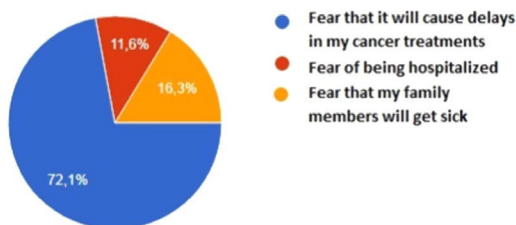
24. Have you recently had symptoms related to Covid19 that have worried you about being infected?



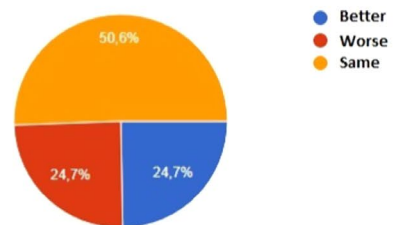
25. If so, what have you done?



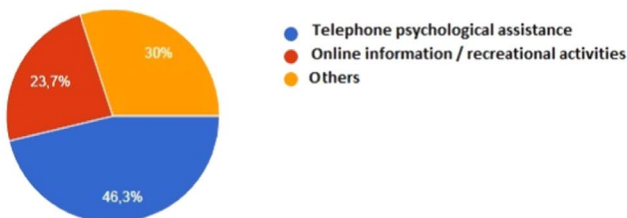
26. What's your biggest fear about Covid-19?



27. How do you think you are reacting to the emergency, compared to people you know who don't have cancer problems?



28. If you think that keeping in touch with your cancer facility would be helpful during this period, which tool would you choose?



29. Do you believe that pandemic has made your loved ones more sympathetic to your cancer problems?

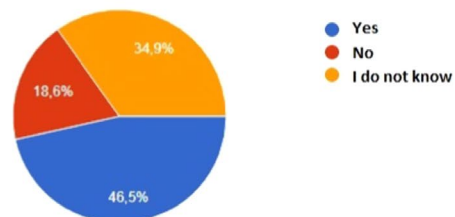
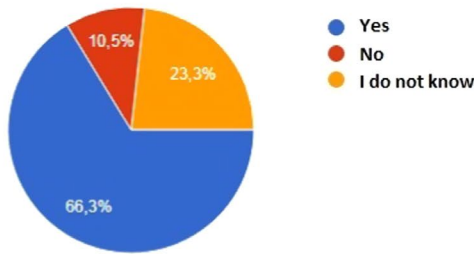
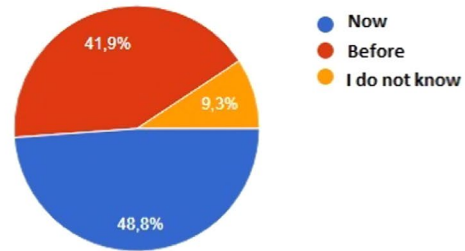


FIGURE 1 (Continued)

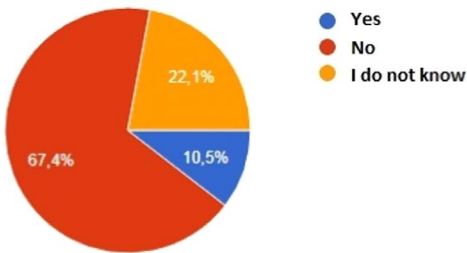
**30. Do you think that attention towards Covid19 takes too much space from other pathologies?**



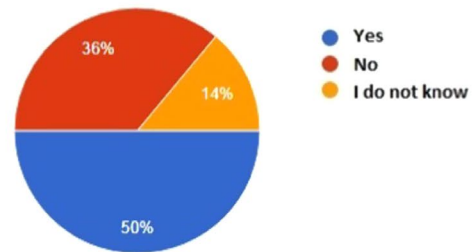
**31. Are you having more fear and / or anxiety now or when you received the diagnosis of breast cancer?**



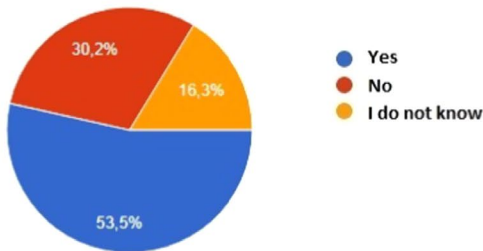
**32. The Covid19 epidemic makes everyone more vulnerable. Do you feel that this new situation makes your cancer problem more tolerable?**



**33. In this emergency, you feel more alone facing your cancer problem?**



**34. Do you think your experience as a cancer patient makes you psychologically stronger to face pandemic?**



**35. Among the main organizational problems related to Covid19, which do you think are the most urgent?**

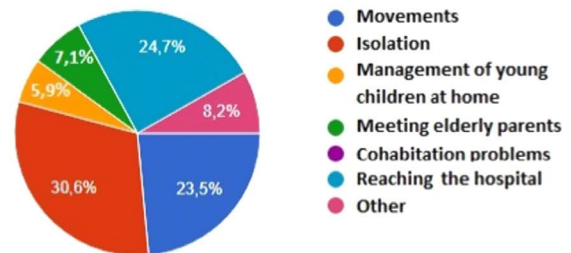


FIGURE 1 (Continued)

Similar findings were noted in women who had undergone neo-adjuvant chemotherapy.

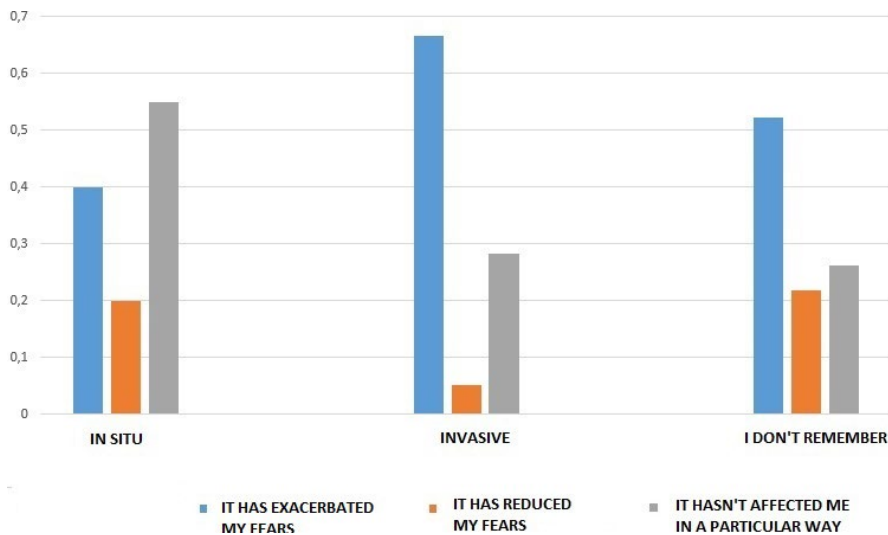
Among women with increased COVID-19 related distress, major concerns referred to the fear that the pandemic could cause a delay in their oncological treatments (71.4%) and the fear that, as cancer patients, they could be more vulnerable to the infection compared to the general population (56%). These concerns were stronger in women with invasive cancer; patients who were uncertain of the exact tumor pathology showed an attitude similar to invasive cancer patients.

More than 70% of the women stated that in this particular period receiving information and specific support (both in terms of

psychological counseling and/or complementary treatments) would prove extremely beneficial.

Even if limited to the breast cancer population of a single Italian academic institution, these preliminary insights may help multi-disciplinary breast teams in better understanding the additional distress that patients awaiting surgery during the pandemic could experience.

In the meantime that timely access to regular cancer services is restored, offering psychological support, other online supportive resources, and proper information on risks generated by COVID-19 to patients awaiting surgery may help them cope better with the additional fears generated by this emergency.



**FIGURE 2** Correlation between perceived fears and stage of tumor [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

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