Does age matter?—the significance of age in breast cancer

Jorge Díaz Roldán

Department of General Surgery, Hospital Universitario Valme, Sevilla, Spain

Correspondence to: Jorge Díaz Roldán, PhD. Department of General Surgery, Hospital Universitario Valme, Ctra, de Cádiz SN, 41014 Sevilla, Spain. Email: jorgediazcirujano@gmail.com.

Comment on: Yang H, Ouyang QC, Yan M, *et al*. Age at initial diagnosis and prognosis of breast cancer: a nationwide multicenter retrospective study in China. Ann Transl Med 2022;10:813.

Submitted Jul 09, 2022. Accepted for publication Jul 28, 2022.

doi: 10.21037/atm-2022-26

View this article at: https://dx.doi.org/10.21037/atm-2022-26

Rivers of ink are written regarding this question related to the treatment and prognosis of many diseases. In this issue Yang *et al*. (1) report more than 1,800 patients with advanced breast cancer. The relationship between prognosis and age is analyzed. The information obtained from such number of patients should always be taken as something important that really happens. It is well established the impact of aggressive oncologic treatments in older people in such a way that we always have to balance the risks and benefits of it.

This question is so relevant that the National Comprehensive Cancer Network (NCCN) has published Guidelines for Older Adult Oncology to address specific issues related to the management of cancer in older adults. Hence, there is an increasing interest in the development of some tools to assess this question, not only for chemotherapy but, for example, for surgery: American College of Surgeons (ACS) Geriatric Surgery Verification Program (2), ACS National Surgical Risk calculator, etc.

In breast cancer, the multidisciplinary approach has given relevant benefits to patients, as well as has brought a complicated individualized analysis of each treatment: surgery, chemotherapy, hormonal therapy, radiotherapy, HER2-targeted immunotherapy of monoclonal antibodies, and so. Furthermore, it is important to point out the different biological behavior of many histopathological features leading to adopt the biological subtypes classification of patients for therapeutic purposes in The St Gallen International Breast Cancer Conference [2011]: Luminal A, Luminal B, HER2 and Triple negative (3). Even more, the stage of disease when diagnosis and treatment is also relevant.

So, it's not easy to identify which independent factors are relevant to the prognosis because there are so many factors influencing it. The article of Yang *et al*. (1) published in this issue tries to help in this question, as they bring new data regarding prognosis and age in breast cancer. Nevertheless, the point of the determinant importance of age in prognosis is unsolved because the treatment strategies are applied according to the characteristics of the patients. As a result of this, treatments in elderly patients were less aggressive, introducing a disturbing factor to prognosis.

On the other hand, it is well known that young women are more likely to have tumors with higher incidence of negative clinicopathologic features (4), and also biological characteristics of breast cancer show a pattern of change with advancing age, where 40 and 70 years appear as important milestones: below 40 years seems to be the phase with aggressive phenotypes, and over 70 years as the less aggressive phase as recently published (5).

Finally, the statement that age matters in breast cancer seems to be true, but is not yet clarified the reason why. Meanwhile, every effort should be done to treat patients into multidisciplinary teams according to evidence.

Acknowledgments

Funding: None.

Footnote

Provenance and Peer Review: This article was commissioned by the editorial office, *Annals of Translational Medicine*. The

article did not undergo external peer review.

Conflicts of Interest: The author has completed the ICMJE uniform disclosure form (available at https://atm.amegroups.com/article/view/10.21037/atm-2022-26/coif). The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Cite this article as: Díaz Roldán J. Does age matter?—the significance of age in breast cancer. Ann Transl Med 2022;10(15):810. doi: 10.21037/atm-2022-26

References

1. Yang H, Ouyang QC, Yan M, et al. Age at initial diagnosis and prognosis of breast cancer: a nationwide multicenter retrospective study in China. Ann Transl Med 2022;10:813.
2. Hornor MA, Ma M, Zhou L, et al. Enhancing the American College of Surgeons NSQIP Surgical Risk Calculator to Predict Geriatric Outcomes. J Am Coll Surg 2020;230:88-100.e1.
3. Goldhirsch A, Wood WC, Coates AS, et al. Strategies for subtypes--dealing with the diversity of breast cancer: highlights of the St. Gallen International Expert Consensus on the Primary Therapy of Early Breast Cancer 2011. Ann Oncol 2011;22:1736-47.
4. Lin NU, Vanderplas A, Hughes ME, et al. Clinicopathologic features, patterns of recurrence, and survival among women with triple-negative breast cancer in the National Comprehensive Cancer Network. Cancer 2012;118:5463-72.
5. Syed BM, Green AR, Rakha EA, et al. Age-Related Biology of Early-Stage Operable Breast Cancer and Its Impact on Clinical Outcome. Cancers (Basel) 2021;13:1417.

