Personalized medicine in breast cancer: a step forward

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We have read with great interest the article by Kim *et al.*, comparing the prognostic value of the AJCC eighth edition of the TNM classification for breast cancer (BC) with the previous one, in a retrospective series of 2,790 stage I-III BC patients with a median follow up of 116.2 months (1).

The most significant change introduced by the eighth edition (2) is the incorporation of immunohistochemical markers such as estrogen receptor (ER), progesterone receptor (PR), human epidermal growth factor receptor (HER2), tumor grade and genomic prognostic panels to improve prediction of BC prognosis.

With the use of the AJCC 8th TNM breast cancer classification, in the population studied by the Authors, an upstaging was observed in 968 BCs (34.7%) whereas it determined a downstaging in 654 BCs (23.4%) as compared to the 7th edition. No variation in TNM staging was observed in 921 BC patients (33.0%). It was impossible to classify twenty BCs because of the absence of genomic testing (Oncotype Dx) and 200 BCs were not considered because proper stages were not defined in the 8th edition.

AJCC 8th TNM edition showed a better prognostic value for disease specific survival (DSS): C-index of AJCC 7th edition staging on DSS was 0.735 and for 8th was 0.761.

The study has significant points of strength, such as the large number of patients, the long term follow up and the detailed analysis of disease specific survival.

However, some weaknesses exist in the analysis of distant recurrence free survival for the 20.1% of HER2+ BC (among which 9.3% were hormone receptor-positive) and 17% triple negative BCs included in the study.

It is not clear whether patients with HER2 positive BC did or did not receive trastuzumab (that at the time of the study was not reimbursed in Korea) and what type of systemic treatment was administered to patients with triple negative BC. Moreover, the authors do not mention if they extended endocrine treatment to prevent late recurrences of hormone receptors-positive breast cancers and whether genomic testing was used for adjuvant treatment selection. Lack of these information leave some uncertainties when interpreting survival data.

Nonetheless, the article adds consistent evidence to the improvements that the new AJCC 8th staging system has introduced in the direction of personalized oncology.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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