

Serum HER2 Level Predicts Therapeutic Efficacy and Prognosis in Advanced Breast Cancer Patients [Letter]

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Dear editor

We have read the paper written by Shuling Wang et al about Serum HER2 Level Predicts Therapeutic Efficacy and Prognosis in Advanced Breast Cancer Patients.¹ Serum HER2 has changed the treatment paradigm for half of patients with advanced breast cancer, and HER2 is currently defined as an expression immunohistochemistry without amplification via in-situ hybridization and therefore remains a clinical challenge in the treatment of breast cancer.² The introduction of antibody drug conjugates (ADCs) targeting HER2 offers a new treatment option for female breast cancer patients (FBC) who exhibit low HER2 levels; however, there is no evidence to show that low serum HER2 represents a new subtype of FBC; therefore, research is still needed to determine the impact of serum HER2 levels on breast cancer.³

A study conducted by Shuling Wang et al analyzed sHER2 levels from 200 advanced breast cancer patients who received first or second-line treatment. Indicators of therapeutic efficacy and prognosis were objective response rate (ORR), disease control rate (DCR), and time to progression (TTP).¹ The indicator used is effective for the purposes of this study, however several other studies measure HER2 expression based on DNA, mRNA and protein tests which will most likely optimize HER2 testing with the aim of providing targeted therapy for patients who will benefit, while limiting exposure to treatment and toxicity, given that HER2 low breast cancer does not appear to represent a distinct breast cancer subtype then commonly used biomarkers and treatments should be used to guide initial treatment decisions.²

In this study, Shuling Wang et al found that high levels of sHER2 were correlated with molecular subtypes, visceral metastases, liver metastases, HER-2 tissue, and were associated with a higher proportion of brain metastases.¹ However, several clinical studies showed that proliferation in breast cancer may persist despite clinical response after neoadjuvant treatment, indicating resistance may develop at a later stage. We recommend selecting additional biomarkers such as Ki67 to stratify patients into clinically distinct groups in an effort toward personalized therapy to help improve response to anti-estrogen therapy in patients with HER2 tumors.⁴

In conclusion, we support the researchers' findings that the detection of sHER2 can help predict the efficacy of therapy and prognosis of breast cancer patients so that measurement of sHER2 levels is recommended every two treatment cycles.¹ However, HER2 negative levels can affect the treatment results of patients with HER2-zero who have low response rates and the better progression-free survival (PFS) compared with patients with HER2-low disease; therefore, studies with larger samples are recommended that can help oncologists select HER2-low patients for better treatment options.⁵

Disclosure

All authors report no conflicts of interest in this communication.

References

1. Wang S, Chen Y, Li W, Zhao W, Shi Y, Tong Z. Serum HER2 level predicts therapeutic efficacy and prognosis in advanced breast cancer patients. *Breast Cancer Targets Ther.* 2024;16:163–179. doi:10.2147/BCTT.S449510</INTDOI>
2. Schlam I, Tolaney SM, Tarantino P. How I treat HER2-low advanced breast cancer. *Breast.* 2023;67:116–123. doi:10.1016/j.breast.2023.01.005
3. Nobbe K, Erices-Leclercq M, Foerster F, et al. HER2 low expression in primary male breast cancer. *Breast Cancer Targets Ther.* 2024;16:141–148. doi:10.2147/BCTT.S450682
4. Alataki A, Dowsett M. Human epidermal growth factor receptor-2 and endocrine resistance in hormone-dependent breast cancer. *Endocr Relat Cancer.* 2022;29(8):R105–R122. doi:10.1530/ERC-21-0293
5. Sharaf B, Abu-Fares H, Tamimi F, et al. Differences in treatment outcomes between patients with HER2-low versus HER2-zero, hormone receptor-positive advanced-stage breast cancer treated with ribociclib. *Breast Cancer Targets Ther.* 2023;15:541–548. doi:10.2147/BCTT.S415432

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