

Review article

Tumor-Infiltrating Lymphocytes and Breast Cancer: Are Immune Checkpoint Inhibitors Ready for Prime Time in Breast Cancer?

Ana Cvetanović¹, Slađana Filipović^{1,2}, Nikola Živković^{2,3}, Miloš Kostić⁴,
Svetislav Vrbić^{1,2}, Ivica Pejčić^{1,2}

¹*Clinic of Oncology, Clinical Center Niš, Serbia*

²*University of Niš, Faculty of Medicine, Niš, Serbia*

³*Center for Pathology and Pathological Anatomy, Clinical Center Niš, Serbia*

⁴*Department of Immunology, Medical Faculty, University of Niš, Serbia*

SUMMARY

In recent years, results obtained from different studies with large cohorts have revealed a bond between the presence of extensive lymphocytic infiltration and favourable prognostic associations in the early-stage of breast cancer (BC) and high response rates to neoadjuvant chemotherapy. Examiners used tumors from large cohorts of patients who took part in randomized neoadjuvant and adjuvant clinical trials. The importance of tumor infiltrating lymphocytes (TILs) appears to be subtype-specific and varies depending on the histological characteristics of the tumor. TILs have proven to be a good prognostic marker, but only in highly proliferative breast tumors such as triple negative breast tumors (TNBC) or HER 2 positive BC.

In the era when standard, well-known, prognostic and predictive biomarkers are ever changing and the use of molecular profiling analyses are increasing, we are looking for techniques to improve our understanding of tumor biology and improve patient outcome. The relevance of TILs cannot be ignored but needs to be properly evaluated in larger prospective studies which must encompass the parameters set out in previous studies. The use of TILs as prognostic biomarkers in early breast cancer may represent a new dawn, and use of immunotherapy, especially immune checkpoint inhibitors, probably is the future for the breast cancer but it is not yet ready for prime time.

Key words: breast cancer, tumor infiltrating lymphocytes, immune checkpoint inhibitors

Corresponding author:

Ana Cvetanović

Email: ana.stankovic@yahoo.com