

## Stromal Tumor Infiltrating Lymphocytes were Associated with a Higher Grade and the Lower Stage of Indonesian Triple Negative Breast Cancers

Irianiwati Widodo\*, Paranita Feronika, Ahmad Ghozali and Ibnu Pruwanto

\*Department of Anatomic Pathology, Faculty of Medicine, Gadjah Mada University, Indonesia.

Published February 25, 2021

### ABSTRACT

Triple negative breast cancer (TNBC) is an aggressive subtype of breast cancer with poor prognosis. This subtype is negative for hormonal receptors and Her2. Stromal Tumor Infiltrating Lymphocytes (sTILs) are widely studied for their role as a predictor of prognosis and treatment response of TNBC patients. However, controversial results are revealed by many studies and those need to be clarified. This study aimed to investigate the association of TILs with clinicopathological parameters and survival in TNBC patients.

One hundred and twenty five paraffin embedded tissue of TNBC patients, taken from Sardjito General Hospital Yogyakarta Indonesia, year of 2008-2017, were used in this study. Stromal TILs were examined from Hematoxylin and eosin (H&E)-stained and classified as low and high score using 20% cut off. The association of sTILs with clinicopathological parameters as well as survival was analyzed.

The higher proportion of TNBC patients in this study were >50 years old (52.8%), high grade (68%), stage > IIIa (56%), alive (50.4%) and with low sTILs (54.4%). The results showed no association between sTILs and age or survival,  $p=0.175$ ,  $RR=0.805$  (95%  $CI=0.548-1.818$ ) and  $p=0.391$ ,  $RR=0.915$  (95%  $CI=0.623-1.348$ ) respectively. Meanwhile, sTILs were associated with a higher grade and a lower stage,  $p=0.020$ ,  $RR=1.701$  (95%  $CI=1.019-2.838$ ) and  $p=0.025$ ,  $RR=0.659$  (95%  $CI=0.449-0.967$ ) respectively.

This study found the association of sTILs with a higher grade and the lower stage in Indonesian TNBC patients. No standardized methodology for sTILs evaluation nor the cutoff value of TILs influence the research results. Therefore, standardized cutoff of sTILs is needed for integrating this parameter in standard histopathological practice and clinical setting.

**Keywords:** TNBC, sTILs, Clinicopathological parameters, Survival

**Corresponding author:** Irianiwati Widodo, Department of Anatomic Pathology, Faculty of Medicine, Gadjah Mada University, Indonesia, E-mail: irianiwati@ugm.ac.id

**Citation:** Widodo I, Feronika P, Ghozali A and Pruwanto I. (2021) Stromal Tumor Infiltrating Lymphocytes were Associated with a Higher Grade and the Lower Stage of Indonesian Triple Negative Breast Cancers. *BioMed Res J*, S(1): 05.

**Copyright:** ©2021 Widodo I, Feronika P, Ghozali A and Pruwanto I. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.