

**Correlation of Neutrophil Lymphocyte Ratio and Time To Metastasis
In Early Breast Cancer Patients At RSUP Dr. Sardjito
during 2016-2021**

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Abstract

Background: Breast cancer is one of the most common cancers worldwide. As developing countries lack in sophisticated laboratories, we intended to see whether simple laboratory workups may help to define the time to metastasis in early breast cancer. The complete blood count, may as such be an early indicator of the patients prognosis in this study defined as time to metastasis.

Method: This study was carried out in a retrospective analytical design, patients data were obtained from medical records and the Cancer Registry of RSUP Dr. Sardjito during 2006-2021, after the ethical approval was received.

Result: This study included 309 female patients diagnosed with early stage breast cancer. Even though initial NLR, cancer stage, age and hormonal status of the breast cancer were analyzed, only initial NLR (p value 0,241 (p < 0.25, CI 95%)) and cancerstage (p 0,199 (p < 0.25, CI 95%)) were significantly correlated to time to metastasis.

Conclusion: There was a correlation between neutrophil lymphocyte ratio (NLR) and the time to metastasis in patients with early breast cancer in RSUP Dr Sardjito, lower NLR (<2.8) was associated with a longer time to metastasis.

Keywords: early breast cancer, NLR, time to metastasis

**Hubungan Rasio Neutrofil Limfosit Terhadap *Time To Metastasis*
Pada Pasien Kanker Payudara Stadium Awal di RSUP Dr. Sardjito
Pada Periode 2016-2021**

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Intisari

Latar Belakang: Kanker payudara merupakan salah satu keganasan tersering secara global. Keperluan laboratorium yang canggih seringkali tidak dapat dipenuhi di negara berkembang, sehingga peneliti mencaai alternatif pemeriksaan laboratorium sederhana yang dapat menjadi indikator prognosis, terutama *time to metastasis* pada pasien kanker payudara stadium awal

Metode Penelitian: Penelitian ini menggunakan design analitik retrospektif, data pasien diperoleh dari instalasi rekam medis dan Registrasi Kanker RSUP Dr. Sardjito selama 2006-2021 setelah diperoleh perizinan *ethical clearance*.

Hasil: Penelitian menginklusikan 309 pasien perempuan dengan kanker payudara stadium awal. Meskipun telah NLR, stadium kanker, usia, dan status hormonal kanker, hanya NLR (p value 0,241 (p < 0.25, CI 95%)) dan stadium kanker inisial (p 0,199 (p < 0.25, CI 95%)) yang memiliki hubungan signifikan.

Kesimpulan: Terdapat hubungan antara rasio neutrofil limfosit (NLR) dan *time to metastasis* pada pasien dengan kanker payudara stadium awal di RSUP Dr Sardjito NLR yang rendah (<2.8) berkaitan dengan *time to metastasis* yang lebih lama.

Kata kunci: *early breast cancer, NLR, time to metastasis*