

INTISARI

SYSTEMIC IMMUNE-INFLAMMATION INDEX SEBAGAI FAKTOR PROGNOSTIK PADA *DIFFUSE LARGE B-CELL LYMPHOMA* YANG MENDAPAT KEMOTERAPI BERBASIS RITUXIMAB DI RSUP DR. SARDJITO

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Latar Belakang : Inflamasi berperan penting dalam perkembangan, invasi dan metastasis sel kanker, sedangkan sistem imun melindungi pejamu dari perkembangan sel kanker. Evaluasi lingkungan mikro tumor telah terbukti berperan sebagai penanda untuk memperkirakan luaran pasien dengan limfoma, termasuk *diffuse large B-cell lymphoma* (DLBCL).

Tujuan: Menilai *systemic immune-inflammation index* (SII) sebagai prediktor kesintasan hidup pasien *diffuse large B cell lymphoma* (DLBCL) yang menerima terapi R-CHOP di RSUP dr. Sardjito.

Metode : Penelitian ini menggunakan metode kohort retrospektif, berlangsung pada bulan Maret 2022 sampai dengan Agustus 2022 di RSUP dr. Sardjito Yogyakarta. Sumber data penelitian ini yaitu data rekam medis fisik dan elektronik pasien DLBCL yang terdiagnosis sejak tahun 2012 sampai 2019 yang memenuhi kriteria inklusi maupun eksklusi. Analisis kurva *receiver operating characteristic* (ROC) digunakan untuk menentukan nilai *cut-off* optimal SII dalam memprediksi kesintasan, dan pasien dikelompokkan menjadi kelompok SII tinggi dan rendah. Analisis Kaplan Meier dan *cox proportional hazard model* digunakan untuk mengevaluasi nilai prognostik SII.

Hasil Penelitian : Sejumlah 184 pasien dianalisis dalam penelitian ini. Kesintasan hidup 3 tahun pada seluruh sampel adalah 72,7%. Nilai *cut off* optimal SII sebesar 2.062. Pasien dengan SII tinggi memiliki kesintasan hidup lebih rendah dibandingkan dengan SII rendah (52% vs 87,4%, $p = 0,001$). Analisis univariat menunjukkan SII tinggi dan status performa rendah berhubungan dengan kesintasan hidup lebih rendah. Pada analisis multivariat SII tinggi (HR 4.03; IK 1,92-8,44; $p = 0,000$) dan status performa rendah (HR 2,49; IK 1,11-5,59; $p = 0,026$) tetap konsisten bermakna menjadi prediktor terhadap kesintasan hidup pasien DLBCL.

Kesimpulan: Nilai SII berhubungan signifikan dan independen dengan penurunan kesintasan hidup pasien DLBCL yang mendapat terapi R-CHOP.

Kata kunci: *Diffuse Large B-Cell Lymphoma (DLBCL)*, *systemic immune-inflammation index (SII)*, kesintasan hidup

ABSTRACT

SYSTEMIC IMMUNE-INFLAMMATION INDEX AS A PROGNOSTIC FACTOR IN DIFFUSE LARGE B-CELL LYMPHOMA RECEIVING RITUXIMAB-BASED CHEMOTHERAPY AT DR SARDJITO HOSPITAL

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Background: Inflammation plays an important role in the development, invasion and metastasis of cancer cells, while the immune system protects the host from the development of cancer cells. Evaluation of the tumor microenvironment has been shown to act as a marker for predicting the outcome of patients with lymphoma, including diffuse large B-cell lymphoma (DLBCL)

Objective : To analyze the prognostic value of systemic immune-inflammation index (SII) in DLBCL patients who had R-CHOP therapy at dr. Sardjito Hospital.

Methods : This retrospective cohort study was conducted from March to August 2021 at dr. Sardjito Hospital. Data were obtained from physical and electronic medical records of patients diagnosed with DLBCL from 2012 to 2019, which met the inclusion and exclusion criteria. Receiver operating characteristic (ROC) curve analysis was used to determine the optimal cut-off value for the SII to predict survival, and patients were stratified into high and low groups. Kaplan-Meier method and cox proportional hazard model were used to assess the prognostic value of SII

Results : A total of 184 patients were analyzed in this study. The 3-years overall survival in the entire subjects was 72,7%. The optimal cut-off value of SII was 2.062. Patients with high SII have lower 3-year overall survival than those with low SII (52% vs 87,4%, $p = 0,001$). In univariate analyses, high SII and low performance status were associated with lower overall survival. In multivariate analyses, high SII (HR 4.03; IK 1,92-8,44; $p = 0,000$) and low performance status (HR 2,49; IK 1,11-5,59; $p = 0,026$) were the independent prognostic factor for overall survival of DLBCL patients.

Conclusion : High SII was significantly and independently associated with decreased overall survival of DLBCL patients receiving R-CHOP therapy.

Keywords: *Diffuse Large B-Cell Lymphoma (DLBCL), systemic immune-inflammation index (SII), overall survival*