

INTISARI

PROGNOSTIC NUTRITIONAL INDEX (PNI) SEBAGAI FAKTOR PROGNOSIS MORTALITAS PADA ADENOKARSINOMA PARU STADIUM IV

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Latar Belakang. Penelitian mengenai biomarker prognosis pada kanker paru terus dilakukan. Beberapa indikator nutrisi dan imunologis, seperti *Prognostic Nutritional Index* (PNI), *Platelet-to-Lymphocyte Ratio* (PLR), dan *Glasgow Prognostic Score* (GPS), telah digunakan sebagai penilaian prognosis pasien kanker paru dan untuk menentukan terapi yang optimal. Dari sejumlah indeks nutrisi dan imunologis ini, PNI adalah yang sering digunakan.

Tujuan Penelitian. Penelitian ini bertujuan untuk menganalisis hubungan antara nilai PNI yang rendah (PNI < 40) dengan peningkatan risiko mortalitas pasien kanker paru Adenokarsinoma stadium IV

Metode. Penelitian ini dilakukan dengan metode kohort-retrospektif, dengan melihat data status *Prognostic Nutritional Index* (PNI) di catatan medis dan kemudian menghitung mortalitas pasien kanker paru Adenokarsinoma stadium IV. Jumlah sampel penelitian ini sebanyak 265 yang telah memenuhi kriteria inklusi dan eksklusi, diambil dari catatan medis pasien Adenokarsinoma paru stadium IV yang dirawat di RSUP dr. Sardjito Yogyakarta kurun waktu 1 Januari 2016 – 1 Juli 2019. Nilai PNI dihitung dengan rumus $10 \times \text{serum albumin (g/dl)} + 0,005 \times \text{lymphocyte count (per mm}^3\text{)}$. Data mortalitas dihitung 6 bulan sejak tegak diagnosis. Uji statistik dengan chi square digunakan untuk menganalisis beda proporsi mortalitas dan variabel pengganggu. Uji regresi logistik multipel digunakan untuk menganalisis keeratan hubungan antara *prognostic nutritional index* (PNI) dengan mortalitas.

Hasil. Subyek yang memiliki skor PNI < 40 berisiko mengalami kematian 3 kali dari subjek yang memiliki skor PNI ≥ 40 (*adjusted OR* 3,356, 95% CI 1,165-9,670, nilai $p = 0,025$).

Kesimpulan. Skor PNI terbukti berpengaruh secara bermakna terhadap prognosis mortalitas pada pasien kanker paru jenis adenokarsinoma stadium IV

Kata Kunci. PNI (*Prognostic Nutritional Index*), Adenokarsinoma paru, mortalitas

ABSTRACT

PROGNOSTIC NUTRITIONAL INDEX (PNI) AS A PROGNOSTIC FACTOR IN STAGE IV LUNG ADENOCARCINOMA

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Background. Studies of biomarkers for prognostic prediction in lung cancer is an ongoing effort. Several nutritional and immunological indicators, such as *Prognostic Nutritional Index* (PNI), *Platelet-to-Lymphocyte Ratio* (PLR), and *Glasgow Prognostic Score* (GPS), have been used to assess the outcome of lung cancer patients and to determine optimal treatments. Of all potential nutritional and immunological indices, PNI is the frequently used.

Objectives. To analyze the association between low PNI score (PNI <40) and increased risk of mortality among stage IV pulmonary adenocarcinoma patients

Methods. A cohort-retrospective study was performed by extracting *prognostic Nutritional Index* (PNI) data from medical records and the mortality of patients with stage IV pulmonary adenocarcinoma. A Total of 265 patients met the inclusion and exclusion criteria, based on the medical records of patients with stage IV pulmonary adenocarcinoma who were hospitalized at dr. Sardjito hospital Yogyakarta between January 1st, 2016 and July 1st, 2019. PNI score were calculated as follows: $10 \times \text{serum albumin (g/dl)} + 0.005 \times \text{lymphocyte count (per mm}^3\text{)}$. Mortality was considered six months since the diagnosis. Chi square tests were used to analyze the proportions of mortality and confounders. Multiple logistic regression tests were used to analyze the association between *prognostic nutritional index* (PNI) and mortality.

Results. Subjects who had PNI score <40 were at risk of mortality three times higher than subjects with PNI score ≥ 40 (*adjusted OR 3.356, 95% CI 1.165 - 9.670, p = 0.025*).

Conclusion. PNI score had a significant effect on the mortality in patients with stage IV pulmonary adenocarcinoma.

Keywords. PNI (*Prognostic Nutritional Index*), Pulmonary adenocarcinoma, mortality