

## Rasio hemoglobin-trombosit sebelum terapi sebagai prediktor kesintasan tiga tahun pasien kanker nasofaring stadium lokal lanjut = Pre-treatment hemoglobin to platelet ratio as predictor on three-year survival in locally advanced nasopharyngeal cancer

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### Abstrak

**Latar Belakang.** Kesintasan 3 tahun pasien KNF stadium lokal lanjut di Indonesia lebih rendah dibandingkan luar negeri. Prediktor alternatif dari rasio hemoglobin-trombosit (RHT) lebih sederhana, murah, dan stabil nilainya dibanding rasio dari komponen sel leukosit, namun belum ada studi yang meneliti perannya dalam memprediksi mortalitas tiga tahun pasien KNF stadium ini.

**Tujuan.** Mengetahui peran RHT sebelum terapi dalam memprediksi kesintasan tiga tahun pasien KNF stadium lokal lanjut.

**Metode.** Studi kohort retrospektif yang meneliti 289 pasien KNF stadium lokal lanjut yang diterapi di Rumah Sakit Cipto Mangunkusumo (RSCM) dalam rentang waktu Januari 2012 - Oktober 2016. Nilai RHT optimal didapatkan menggunakan receiver operating curve (ROC). Subjek penelitian dibagi menjadi 2 kelompok, di bawah dan di atas titik potong. Kurva Kaplan-Meier digunakan untuk menilai kesintasan tiga tahun dan dilakukan uji regresi Cox sebagai uji multivariat terhadap variabel perancu (usia <u></u> 60 tahun, stadium, jenis kelamin, dan indeks massa tubuh) untuk mendapatkan nilai <em>adjusted</em> <em>hazard ratio</em> (HR) <em>.</em>

**Hasil.** Nilai titik potong RHT optimal adalah 0,362 (AUC 0,6228, interval kepercayaan (IK) 95% : 0,56-0,69, sensitivitas 61,27%, spesifisitas 60,34%). 48,44% pasien memiliki nilai RHT <u></u> 0,362 dan memiliki mortalitas tiga tahun lebih besar dibandingkan kelompok lainnya (50% vs 31,54%). RHT <u></u> 0,362 secara signifikan memprediksi kesintasan tiga tahun ( $p = 0,003$ ; HR 1,75; IK 95% 1,2-2,55). Pada analisis multivariat, RHT <u></u> 0,362 sebelum terapi merupakan faktor independen dalam memprediksi kesintasan tiga tahun pada pasien KNF stadium lokal lanjut (<em>adjusted</em> HR 1,82; IK 95% 1,25-2,65).

**Simpulan.** RHT <u></u> 0,362 sebelum terapi dapat memprediksi kesintasan tiga tahun pasien KNF stadium lokal lanjut.

.....**Background.** The 3-year survival of locally advanced nasopharyngeal cancer (NPC) patients in Indonesia is lower than in foreign countries. Alternative predictors from the hemoglobin-platelet ratio (HPR) as single variable are easier, cheaper, and stable in value than the ratio of leukocyte cell components, but there are no study conducted to know its potential in predicting three-year survival in locally advanced nasopharyngeal cancer.

**Objective.** To determine the role of pre-treatment hemoglobin to platelet ratio in predicting three-year survival of locally advanced nasopharyngeal cancer patients.

**Method.** Retrospective cohort study that examined 289 locally advanced NPC patients who underwent therapy at the National Government General Hospital-Cipto Mangunkusumo from January 2012 to October 2016. HPR cut-off was determined using ROC, and then subjects were divided into two groups according to its HPR value. The Kaplan-Meier curve was used to determine the three-year survival of the patients and

cox regression test used as multivariate analysis with confounding variables in order to get adjusted hazard ratio (HR).

Results. The optimal cut-off for HPR was 0,362 (AUC 0,6228, 95% CI: 0,56-0,69, sensitivity 61,27%, specificity 60,34%). Patients with HPR < 0,362 occurred in 48, 44% and had higher three-year mortality (50% vs. 31, 54%). HPR <0.362 significantly predicted the three years of survival ( $p = 0,003$ ; HR 1, 75; CI 95% 1, 2-2, 55). In multivariate analysis, it was concluded that pre-treatment HPR < 0,362 was an independent factor in predicting three-year survival in locally advanced NPC patients (adjusted HR 1, 82; CI 95% 1, 25-2, 65).

Conclusion. Pre-treatment HPR 0, 362 could predict the three-year survival of locally advanced nasopharyngeal cancer patients.