

RELATIONSHIP BETWEEN THE NOTTINGHAM PROGNOSTIC INDEX AND LOCOREGIONAL RECURRENCE IN PATIENTS WITH EARLY-STAGE LUMINAL SUBTYPE BREAST CANCER AT DR. SARDJITO GENERAL HOSPITAL

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ABSTRACT:

Background: Breast cancer is the most commonly diagnosed malignancy in women and the second leading cause of cancer-related deaths worldwide. According to data from the Global Cancer Observatory (Globocan) in 2020, there were 65,858 new cases of breast cancer in Indonesia, ranking first, with an incidence of death reaching 22,430 cases. Locomotive recurrence can occur in approximately 25% of luminal subtype breast cancer cases even when diagnosed at an early stage. Therefore, further studies are needed to predict the risk of recurrence in luminal subtype breast cancer. The Nottingham Prognostic Index (NPI) is one potential predictor, but there has been no study on its usefulness in predicting the risk of locoregional recurrence in patients with early-stage (I, IIA, and IIB) luminal subtype breast cancer at Dr. Sardjito General Hospital.

Objective: This study aims to determine the relationship between the Nottingham Prognostic Index (NPI) and locoregional recurrence in patients with early-stage luminal subtype breast cancer.



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Hubungan Nottingham Prognostic Index Dengan Kekambuhan Lokoregional Pada Pasien Kanker Payudara Subtipe Luminal Stadium Awal di RSUP Dr. Sardjito

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Methods: This study used an analytical observational design with a retrospective cohort approach. Data were obtained from the medical records of 88 female patients diagnosed with luminal subtype breast cancer stages I, IIA, and IIB at Dr. Sardjito General Hospital during the period 2019-2023. The variables measured to calculate the NPI score were tumor size, lymph node involvement, and histopathological grading. Bivariate analysis was performed using the Chi-Square and Likelihood Ratio tests to examine the relationship between NPI and locoregional recurrence.

Results: The majority of patients in this study showed poor prognostic characteristics, with 53.4% in the high NPI category, 53.4% having T2 tumor size, and 58% experiencing lymph node involvement (N1). A total of 72.7% of patients had high histopathological grading, and 65.9% were classified as luminal B subtype. Locoregional recurrence was recorded in 13.6% of patients. Bivariate analysis showed a significant association between NPI and locoregional recurrence using the Likelihood Ratio test ($p=0.030$), although the Chi-Square test was not significant. The highest proportion of recurrence was found in the high NPI group (21.3%), compared to moderate (7.1%) and low (0%) NPI.

Conclusion: There is a significant association between the Nottingham Prognostic Index (NPI) and locoregional recurrence in patients with early-stage luminal subtype breast cancer. NPI can be used as an effective prognostic tool to predict the risk of locoregional recurrence, and patients with high NPI scores have a greater risk of recurrence.

Keywords: Breast Cancer, Locoregional Recurrence, Luminal, Nottingham Prognostic Index, Early Stage.

HUBUNGAN NOTTINGHAM PROGNOSTIC INDEX DENGAN KEKAMBUHAN LOKOREGIONAL PADA PASIEN KANKER PAYUDARA SUBTIPE LUMINAL STADIUM AWAL DI RSUP Dr. SARDJITO

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ABSTRAK:

Latar Belakang: Kanker payudara merupakan keganasan yang paling umum didiagnosis pada wanita dan menjadi penyebab kematian kedua terbanyak akibat kanker di seluruh dunia. Berdasarkan data Global Cancer Observatory (Globocan) tahun 2020, terdapat 65.858 kasus baru kanker payudara di Indonesia, menempati posisi nomor satu, dengan insidensi kematian mencapai 22.430 kasus. Kekambuhan lokoregional dapat terjadi pada sekitar 25% kasus kanker payudara subtipe luminal meskipun terdiagnosis pada stadium awal. Untuk itu, diperlukan kajian lebih lanjut untuk memprediksi risiko kekambuhan pada kanker payudara subtipe luminal. Nottingham Prognostic Index (NPI) adalah salah satu prediktor potensial, namun belum ada kajian mengenai kegunaannya dalam memprediksi risiko kekambuhan lokoregional pada pasien kanker payudara subtipe luminal stadium awal (I, IIA, dan IIB) di RSUP Dr. Sardjito.

Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan Nottingham Prognostic Index (NPI) dengan kekambuhan lokoregional pada pasien kanker payudara subtipe luminal stadium awal.



Metode: Penelitian ini menggunakan desain observasional analitik dengan pendekatan kohort retrospektif. Data diperoleh dari rekam medis 88 pasien perempuan yang didiagnosis kanker payudara subtipe luminal stadium I, IIA, dan IIB di RSUP Dr. Sardjito selama periode 2019-2023. Variabel yang diukur untuk menghitung skor NPI adalah ukuran tumor, keterlibatan limfonodi, dan grading histopatologi. Analisis bivariat dilakukan dengan menggunakan uji Chi-Square dan Likelihood Ratio untuk menguji hubungan antara NPI dan kekambuhan lokoregional.

Hasil: Mayoritas pasien dalam penelitian ini menunjukkan karakteristik prognostik yang kurang baik, dengan 53.4% berada di kategori NPI tinggi, 53.4% memiliki ukuran tumor T2, dan 58% mengalami keterlibatan limfonodi (N1). Sebanyak 72.7% pasien memiliki grading histopatologi tinggi, dan 65.9% tergolong subtipe luminal B. Kekambuhan lokoregional tercatat pada 13.6% pasien. Hasil analisis bivariat menunjukkan adanya hubungan yang signifikan antara NPI dan kekambuhan lokoregional dengan uji Likelihood Ratio ($p=0.030$), meskipun uji Chi-Square tidak signifikan. Proporsi kekambuhan tertinggi ditemukan pada kelompok NPI tinggi (21.3%), dibandingkan NPI sedang (7.1%) dan rendah (0%).

Kesimpulan: Terdapat hubungan signifikan antara Nottingham Prognostic Index (NPI) dan kekambuhan lokoregional pada pasien kanker payudara subtipe luminal stadium awal. NPI dapat digunakan sebagai alat prognostik yang efektif untuk memprediksi risiko kekambuhan lokoregional, dan pasien dengan skor NPI tinggi memiliki risiko kekambuhan yang lebih besar.

Kata Kunci: Kanker Payudara, Kekambuhan Lokoregional, Luminal, Nottingham Prognostik Indeks, Stadium Awal.
