

Latar Belakang : Karsinoma kolorektal adalah keganasan saluran pencernaan, berada pada urutan kedua penyebab kanker paling umum pada wanita dan nomor tiga penyebab kanker paling umum pada pria di seluruh dunia. Risiko terjadinya karsinoma kolorektal mulai meningkat setelah umur 40 tahun dan meningkat tajam pada umur 50 sampai 55 tahun. Netrofil merupakan jenis sel darah putih yang melalui suatu reaksi enzimatik memicu pembentukan matriks ekstrasel yang menghasilkan pelepasan faktor pertumbuhan fibroblas, migrasi sel endotel dan disosiasi sel pada sel tumor. Selain itu, netrofil menurunkan sifat adhesi dan properti promosi dari matriks ekstrasel serta menghambat apoptosis sel tumor melalui aktivasi *nuclear factor* (NK)-kB. Hal ini akan menyebabkan peningkatan angiogenesis, pertumbuhan tumor dan perkembangan ke *fenotif metastatic*. Sedangkan jumlah limfosit pra terapi yang tinggi juga sebagai faktor independen prognosis baik pada pasien dengan adenokarsinoma duktus pankreas. Hubungan antara tingginya rasio netrofil dan limfosit dari donor penderita karsinoma belum banyak diteliti.

Tujuan: Penelitian ini bertujuan untuk mengetahui Karakteristik Kesintasan Hidup Pasien Kanker Kolorektal di RSUP Dr. Sardjito dan Hubungannya Terhadap Demografi Pasien dan Rasio Netrofil –Limfosit Preoperatif.

Metode: Rancangan penelitian ini merupakan penelitian analitik observasional dengan menggunakan metode kohort retrospektif, Data sampel penelitian diambil dari Populasi dan subjek penelitian yang terdiagnosis karsinoma kolorektal yang telah menjalani operasi atau perawatan di RSUP Dr. Sardjito, Yogyakarta mulai tahun 2014. Sampel penelitian diambil menggunakan Lameshow, setelah itu analisis data dengan SPSS 22.

Hasil: Penelitian ini telah mencapai tujuan penelitian dengan mendapatkan Karakteristik sampel penelitian yang terdistribusi baik dan mencerminkan gambaran populasi penderita kanker kolorektal. Sebagian besar penyakit karsinoma kolorektal di RSUP DR Sardjito yang dihubungkan antara karakteristik demografi dan NLR terhadap kesintasan pasien kanker kolorektal dengan jenis kelamin laki-laki % usia ≤ 63 tahun 74%, stadium early 53%, PA1 differensiasi baik 55%, NLR ≤ 5.09 74%, Tingkat kesintasan pasien kanker kolorektal yang

pengobatan di RSUP Sardjito adalah 29.4%. Didapatkan 3 variabel independen penelitian yang paling berpengaruh secara statistik terhadap kesintasan pasien kanker kolorektal yakni variabel usia dan rasio netrofil limfosit (Cox-Regresion $p\text{-value} < 0,05$), dimana tingkat kesintasan pasien kanker kolorektal pada kelompok usia ≤ 63 tahun lebih tinggi 38.72 kali dibandingkan kelompok usia > 63 tahun, pada kelompok rasio netrofil limfosit (NLR) $\leq 5,09$ lebih tinggi 24.87 kali dibanding kelompok NLR $> 5,09$ dan pada kelompok PA2 lebih tinggi 28.85 kali dibandingkan kelompok PA1 NLR $> 5,09$.

Kesimpulan: Hasil penelitian ini menunjukkan bahwa beberapa karakteristik demografi sampel penelitian berhubungan dengan prognosis luaran pascaoperasi kanker kolorektal.

Kata kunci: Kolorektal karsinoma, Demografi, Rasio Netrofil – Limfosit Preoperatif

ABSTRACT

Background: Colorectal carcinoma is a malignancy of the digestive tract, is the second most common cause of cancer in women and number three causes of cancer in men worldwide. The risk of developing colorectal carcinoma begins to increase after age 40 years and increases sharply at age 50 to 55 years. Neutrophils are a type of white blood cell that through an extracellular matrix message order request reaction which results in the release of fibroblast growth factor, reothelial cells and cell dissociation in tumor cells. In addition, neutrophils decrease the adhesion and promotional properties of the extracellular matrix and inhibit apoptosis of tumor cells through activation of nuclear factor (NK) -kB. This will increase the increase in angiogenesis, tumor growth and progression towards metastasis. Meanwhile, the high pre-therapy lymphocyte count is also an independent factor for the good prognosis in patients with pancreatic duct adenocarcinoma. The relationship between the high ratio of neutrophils and lymphocytes from donors with carcinoma has not been widely studied.

Objective: This study aims to determine the Characteristics of the Life Survival of Colorectal Cancer Patients at Dr. Sardjito and its Relationship to Patient Demographics and Preoperative Neutrophil-Lymphocyte Ratio.

Method: The design of this study was an observational analytic study using a retrospective cohort method. The study sample data were taken from the population and study subjects diagnosed with colorectal carcinoma who had undergone surgery or treatment at Dr. Sardjito, Yogyakarta starting in 2014. The research sample was taken using Lameshow, after that the data were analyzed using SPSS 22.

Results: This study has achieved the research objectives by obtaining the characteristics of the study sample that is well distributed and reflects the description of the population with colorectal cancer. Most of the colorectal carcinomas at DR Sardjito General Hospital were associated between demographic characteristics and NLR on the survival of colorectal cancer patients with male sex% age ≤ 63 years 74%, early stage 53%, PA1 with good differentiation 55%, NLR ≤ 5.09 74 %, The survival rate of colorectal cancer patients undergoing treatment at RSUP Sardjito is 29.4%. There were 3 independent research variables that had the most statistically significant effect on the survival of colorectal cancer patients, namely the variable

age and lymphocyte ratio (Cox-Regression p-value <0.05), where the survival rate of colorectal cancer patients in the age group ≤ 63 years was higher 38.72 times compared to the age group > 63 years, in the group the ratio of neutrophil lymphocytes (NLR) ≤ 5.09 was 24.87 times higher than the NLR group > 5.09 and in the PA2 group 28.85 times higher than the PA1 group NLR > 5.09.

Conclusion: The results of this study indicate that several demographic characteristics of the study sample are associated with the prognosis of postoperative colorectal cancer outcome.

Keywords: Colorectal carcinoma, Demographics, Preoperative neutrophil-lymphocyte ratio