

**KORELASI ANTARA EKSPRESI CD44 DAN CD8 DENGAN STATUS  
METASTATIK KELENJAR GETAH BENING REGIONAL  
PADA ADENOKARSINOMA KOLOREKTAL**

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**ABSTRAK**

**Latar Belakang:** Adenokarsinoma kolorektal merupakan salah satu keganasan terbanyak di dunia. Salah satu faktor prognosis adenokarsinoma kolorektal adalah metastasis pada kelenjar getah bening regional. CD 44 merupakan protein transmembran dan penanda sel punca kanker yang memiliki pengaruh pada pertumbuhan tumor, metastasis, dan rekurensi. Lingkungan mikro tumor mempunyai peran dalam tahap perkembangan tumor. CD8 merupakan salah satu komponen lingkungan mikro tumor yang berperan membunuh sel tumor.

**Tujuan:** Menjelaskan adanya korelasi antara ekspresi CD44 dan CD8 dengan status metastatik kelenjar getah bening regional pada adenokarsinoma kolorektal.

**Metode:** Penelitian observasional analitik dengan pendekatan *cross sectional* ini menggunakan 56 sampel blok parafin penderita adenokarsinoma kolorektal di Instalasi Patologi Anatomi RSUD Dr. Soetomo Surabaya periode Januari 2017 - Desember 2018. Sampel dibagi dalam 2 kelompok yaitu kelompok adenokarsinoma kolorektal dengan metastasis kelenjar getah bening regional sebanyak 28 blok parafin dan kelompok tanpa metastasis 28 blok parafin. Sampel dilakukan pulasan imunohistokimia dengan antibodi monoklonal CD44 dan CD8. Parameter penilaian adalah jumlah persentase sel tumor dan sel limfosit yang terpulsa positif dengan antibodi CD44 dan CD8.

**Hasil:** Ekspresi CD44 didapatkan lebih tinggi pada adenokarsinoma kolorektal dengan metastasis kelenjar getah bening regional ( $p=0,008$ ), sedangkan ekspresi CD8 didapatkan lebih tinggi pada adenokarsinoma kolorektal tanpa metastasis kelenjar getah bening regional ( $p=0,001$ ). Analisis statistik menunjukkan adanya korelasi signifikan antara ekspresi CD44 dan CD8 ( $r=-0,316$ ,  $p=0,018$ ).

**Kesimpulan:** Penelitian ini menunjukkan bahwa ekspresi CD44 dan CD8 memiliki korelasi yang signifikan dengan metastasis kelenjar getah bening regional pada adenokarsinoma kolorektal. Hasil penelitian ini menunjukkan bahwa CD44 dan CD8 memiliki peran penting dalam kejadian metastasis kelenjar getah bening pada adenokarsinoma kolorektal.

**Kata kunci :** Adenokarsinoma kolorektal, CD44, CD8, status metastatik kelenjar getah bening regional

## **CORRELATION BETWEEN CD44 AND CD8 EXPRESSIONS WITH REGIONAL LYMPH NODES METASTATIC STATUS IN COLORECTAL ADENOCARCINOMA**

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### **ABSTRACT**

**Backgrounds:** Colorectal adenocarcinoma is one of the most prevalent malignancies in worldwide. The presence of regional lymph node metastases is an important prognostic indicator in colorectal adenocarcinoma. CD44 is a transmembrane protein and a cancer stem cell biomarker that plays role in tumor proliferation, metastasis, and recurrence. Tumor microenvironment has an important role in the stage of tumor development. CD8 is a one of microenvironment's component which kill the tumor cells.

**Objectives:** To explain the correlation between CD44 and CD8 expressions with regional lymph nodes metastatic status in colorectal adenocarcinoma.

**Methods:** An observational research with cross sectional approach were conducted on 56 formalin fixed paraffin-embedded tissue of patients diagnosed as colorectal adenocarcinoma during January 2017 - December 2018 in Anatomical Pathology Laboratory of Dr. Soetomo Hospital will be evaluated. 28 blocks of colorectal adenocarcinoma patients with regional lymph node metastases and 28 blocks of patients without regional lymph node metastases will be collected. The paraffin blocks will be sectioned and stained with immunohistochemistry for CD44 and CD8. The parameter were positive percentage of tumor cell and lymphocyte immunoreactivity against CD44 and CD8 antibodies.

**Result:** Percentage of CD44 are higher in the metastatic group ( $p=0,008$ ), whereas percentage of CD8 are higher in non metastatic group ( $p=0,001$ ). These expressions were significantly correlated with regional lymph nodes metastatic status of colorectal adenocarcinoma. There were significant negative correlation between CD44 and CD8 expression in regional metastatic lymph nodes metastatic status ( $p=0,018$ ).

**Conclusion:** This study showed expression of CD44 and CD8 were significantly correlated with regional lymph nodes metastasis in colorectal adenocarcinoma. Our data suggest that CD44 and CD8 might be particularly important in facilitating lymph nodes metastasis in colorectal adenocarcinoma.

**Keywords:** colorectal adenocarcinoma, CD44, CD8, regional lymph node metastatic status