

**ANALISIS EKSPRESI CD133 DAN SOX2 DENGAN STATUS  
METASTATIK KELENJAR GETAH BENING AKSILA  
PADA KARSINOMA PAYUDARA  
*INVASIVE CARCINOMA OF NO SPECIAL TYPE***

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**ABSTRAK**

**Latar Belakang :** Kanker payudara merupakan keganasan terbanyak kedua dengan angka kematian terbesar kelima di seluruh dunia. Salah satu faktor penyebab angka kematian tinggi adalah metastasis. CD133 merupakan transmembran glycoprotein penanda sel punca kanker. Peningkatan ekspresi CD133 dapat meningkatkan proliferasi sel, migrasi sel dan transisi epitelial ke mesenchimal yang mendorong terjadinya metastasis. Ekspresi CD133 dipengaruhi oleh HIF yang memerlukan ikatan dengan SOX2 pada regio promoter. SOX2 merupakan faktor transkripsi embrional yang berperan dalam perkembangan keganasan.

**Tujuan :** Menganalisa ekspresi CD133 dan SOX2 dengan status metastatik kelenjar getah bening aksila pada karsinoma payudara *invasive carcinoma of no special type* (NST)

**Metode :** Penelitian observasional analitik dengan pendekatan *cross sectional*. Sampel berupa 45 blok paraffin penderita karsinoma payudara *invasive carcinoma of NST* di RSUD dr. Soetomo periode Januari - Desember 2018. Sampel dibagi dalam 2 kelompok, dengan metastasis dan tanpa metastasis KGB aksila. Dilakukan pulasan imunohistokimia dengan antibodi monoklonal CD133 dan SOX2. Ekspresi CD133 dinilai dengan skor IRS dan ekspresi SOX2 dengan persentase.

**Hasil :** CD133 tidak menunjukkan adanya perbedaan ekspresi pada status metastasis KGB aksila karsinoma payudara ( $p=0,887$ ), sementara ekspresi SOX2 menunjukkan hubungan yang positif dengan status metastasis KGB aksila dengan koefisien korelasi  $r_s = 0,518$  ( $p=0,000$ ). Uji korelasi ekspresi CD133 dan SOX2 menunjukkan hubungan tidak bermakna ( $p=0,082$ ).

**Kesimpulan :** Peningkatan ekspresi SOX2 sejalan dengan peningkatan potensi metastasis KGB aksila, sedangkan ekspresi CD133 tidak menunjukkan hubungan dengan metastasis KGB aksila. Ekspresi CD133 dan SOX2 tidak menunjukkan hubungan satu sama lain.

**Kata Kunci :** karsinoma payudara, *invasive carcinoma of NST*, CD133, SOX2, metastasis KGB aksila

**ANALYSYS OF CD133 AND SOX2 EXPRESSION WITH  
AXILLARY LYMPH NODES METASTATIC STATUS  
IN INVASIVE CARCINOMA OF NO SPECIAL TYPE  
BREAST CARCINOMA**

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**ABSTRACT**

**Background:** Breast carcinoma is the second most common carcinoma with fifth largest number of mortality rate in the world. One of the mortality factor is metastasis. CD133 is a transmembran glycoproteins cancer stem cell marker. CD133 overexpression promote cell proliferation, migration, and epithelial-mesenchymal transition (EMT) which further support metastatic process. CD133 expression is induced by HIF which required SOX2 binding on its promoter region. SOX2 plays significant role in organogenesis and cancer development.

**Objective:** To analyze CD133 and SOX2 expression with axillary lymphnodes metastatic status in invasive carcinoma of no special type breast carcinoma.

**Methods:** Study is an observational analytic in cross-sectional design. 45 samples were retrieved from pathology archives in Dr. Soetomo hospital during January – December 2018. Samples were divided in 2 groups, with and without axillary lymphnode metastasis and stained with CD133 and SOX2 monoclonal antibody. CD133 was assessed with immunoreactive score, while SOX2 assessed by percentage.

**Results:** CD133 expression did not show any difference in axillary lymph node metastatic status ( $p=0,887$ ), while SOX2 expression show positive correlation to metastatic status with coefficient  $r_s = 0,518$  ( $p=0,000$ ). CD133 and SOX2 expression did not show any significant correlation ( $p=0,082$ ).

**Conclusion:** SOX2 overexpression was in line with axillary lymph node metastatic status, while CD133 expression did not correlate with axillary lymph node metastatic status. CD133 and SOX2 expression did not show correlation between each other.

**Keywords :** breast carcinoma, invasive carcinoma of NST, CD133, SOX2, axillary lymph nodes metastasis