

论著

## 乳腺癌中间隙连接蛋白Cx43、Cx26的表达及其预后意义

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**摘要** 背景与目的: 检测间隙连接蛋白Cx43(Connexin43,Cx43)、Cx26(Connexin26,Cx26)、血管内皮生长因子VEGF-C(Vascular endothelial growth factor-C,VEGF-C)和 雌激素受体(Estrogen receptor,ER)、孕激素受体(Progesterone receptor,PR)在乳腺癌中的表达及其与临床病理指标的关系。材料与方法: 应用免疫组化S-P法检测乳腺癌、癌旁乳腺组织共125例石蜡包埋标本中各种蛋白的表达情况,并结合临床随访资料,用Cox比例风险模型分析其预后意义。结果: Cx43和Cx26在癌组织中的阳性表达率分别是38.74%、43.24%,低于癌旁正常组织的阳性表达率; VEGF-C蛋白在癌组织中的阳性表达率47.75%,显著高于癌旁正常组织的阳性表达率。53例VEGF-C阳性患者中,淋巴结转移阳性者37例(69.81%),高于无转移组。多因素Cox比例风险模型分析显示,VEGF-C、Cx26和淋巴结转移与预后密切相关,危险度分别为11.118、0.266和10.126。结论: 间隙连接蛋白Cx43和Cx26的缺乏是人类乳腺癌的一个主要特点。随着Cx43和Cx26的阳性表达率降低,乳腺肿瘤的恶性程度增高。VEGF-C阳性表达、ER和PR阴性表达在淋巴结转移组明显高于无转移组。VEGF-C、Cx26和淋巴结转移均可能作为判断预后的独立因素。临床上联合检测这些基因产物的表达将有助于推测乳腺癌患者的预后和选择治疗方案。

**关键词** [乳腺癌](#); [间隙连接蛋白Cx43](#); [血管内皮生长因子Cx26](#); [血管内皮生长因子VEGF-C](#); [免疫组织化学](#); [预后](#)

## Expression of Cx43, Cx26 in Breast Carcinoma and Their Prognosis Significance

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**Abstract** **BACKGRAND & AIM:** To investigate the relationship among the expression of connexin43(Cx43), connexin26(Cx26), vascular endothelial growth factor-C(VEGF-C), Estrogen receptor(ER), Progesterone receptor(PR); the clinicopathological characteristics in breast carcinoma. **MATERIAL AND METHODS:** A total of 125 paraffin-embedded breast carcinoma and non-carcinomatous breast tissues were stained using S-P method, and the patients' prognosis significance was analyzed by Multivariable Cox proportional hazards model according to the clinical follow-up material. **RESULTS:** The expression levels of Cx43 and Cx26 were significantly lower in the tumors (38.74% and 43.24% respectively) than that in the non-carcinomatous breast tissues ( $P<0.05$  and  $P<0.01$ , respectively). And the expression level of VEGF-C was significantly higher in the tumors (47.75%) than that in the non-carcinomatous breast tissues ( $P<0.05$ ). Out of 53 VEGF-C positive staining, the positive rate of lymph node metastasis was 37(69.81%), which was significantly higher than that in the no lymph node metastasis group ( $P<0.05$ ). By the Cox regression model, VEGF-C, Cx26, and lymph node metastasis were closely associated with prognosis. VEGF-C and lymph node metastasis were risk factors. The hazard ratios of VEGF-C expression and lymph node status were 11.118 and 10.126, respectively.  $P=0.007$  and  $0.042$ , respectively. There was significant association with prognosis. **CONCLUSION:** The lack of Cx43, Cx26 gap junctions is a main feature of human breast cancer tissues. Breast tumor malignant degree increased with Cx43 and Cx26 positive expression decreased. It was significantly higher in VEGF-C positive expression and ER, PR negative expression in lymph node metastasis group than that in the no lymph node metastasis

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group. VEGF-C, Cx26 and Lymph node metastasis status may be indicators of prognosis of breast carcinoma, which would be helpful in assessment prognosis and selecting the higher risk cases for further treatment.

**Keywords** [breast carcinoma](#) [connexin43](#) [connexin26](#) [vascular endothelial growth factor-C](#) [immnuohistochemistry](#) [prognosis](#)

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