

Clinicopathological Significance of VEGF-C, VEGFR-3 and Cyclooxygenase-2 in Early-Stage Cervical Cancer

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vascular endothelial growth factor-C, vascular endothelial growth factor receptor-3, cyclooxygenase-2, lymphangiogenesis, lymph node metastasis, cervical cancer

To investigate the roles of VEGF-C, VEGFR-3 and cyclooxygenase-2 (COX-2) in tumor progression and lymph node metastasis. The expression of VEGF-C, VEGFR-3 and COX-2 were examined in 93 cases of surgical specimens of cervical diseases by immunohistochemical staining. The correlation between expression of these factors and tumor aggressiveness was evaluated. The expression levels of VEGF-C and COX-2 were much higher in cervical cancer than in cervical intraepithelial neoplasia (CIN) and in chronic cervicitis. VEGF-C expression correlated with lymph node metastases ($P < 0.01$). Multivariate analysis indicated that lymph vessel density (LVD) was associated with the coexpression of VEGF-C and COX-2. Expression of VEGF-C and VEGFR-3 were both in coincidence with lymph node metastasis. VEGF-C and COX-2 may promote the canceration of cervical cancer and that VEGF-C/ VEGFR-3 system had a significant association with the lymphangiogenesis and lymph node metastasis.

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