

Overexpression of tyrosine kinase receptor B promotes metastasis of ovarian serous adenocarcinoma by lymphangiogenesis

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ABSTRACT

Aims and background. The aim of this study was to detect the expression features of tyrosine kinase receptor B (TrkB) and analyze the possible correlation between TrkB expression and lymph vessel density (LVD) in metastasis of ovarian serous adenocarcinoma.

Methods. An immunohistochemical method was used to evaluate TrkB expression in 139 ovarian tumor sections (103 primary ovarian serous adenocarcinomas and 36 serous adenomas) and investigate the correlation between TrkB expression and LVD, which was estimated by means of VEGFR-3 assessment.

Results. TrkB was significantly upregulated in serous adenocarcinomas and absent in serous adenomas. There was no association between TrkB expression and the histological grade of cancer cells. The expression of TrkB was correlated with surgical-pathological stage and metastasis in serous adenocarcinomas. The level of TrkB was higher in advanced-stage than in early-stage disease. TrkB was overexpressed in metastatic lesions compared with the corresponding primary lesions. Furthermore, a positive correlation between TrkB expression and LVD in serous adenocarcinomas was observed.

Conclusions. TrkB was overexpressed in ovarian serous adenocarcinomas and might be involved in cancer metastasis by associated lymphangiogenesis.

Key words: ovarian serous adenocarcinoma, tyrosine kinase receptor B, metastasis, lymph vessel density, immunohistochemistry.

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