

## 血管内皮生长因子受体3与PI3K/AKT在胃癌组织中的表达及意义

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### Expression and Significance of Vascular Endothelial Growth Factor Receptor 3 and PI3K/Akt in Gastric Carcinoma Tissue

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全文: PDF (7100 KB) HTML (0 KB) 输出: BibTeX | EndNote (RIS) 背景资料

#### 摘要 目的

观察血管内皮生长因子受体3 (VEGFR-3) 和磷脂酰肌醇-3-激酶(PI3K)、蛋白激酶B (PKB或Akt)在胃癌组织及相应癌旁组织中的表达情况。

#### 方法

采用RT-PCR法检测36例胃癌及相应癌旁对照组织中VEGFR-3、PI3K、Akt mRNA 的表达;免疫组织化学法检测VEGFR-3、P-Akt蛋白的表达,并用图像分析方法测定平均吸光度值。

#### 结果

1. RT-PCR 胃癌组织中VEGFR-3mRNA、PI3KmRNA、AktmRNA与癌旁对照组织的表达水平相比,差异有统计学意义(  $P < 0.05$  ),且VEGFR-3mRNA与PI3KmRNA、AktmRNA表达呈正相关(  $P < 0.05$  )。VEGFR-3 mRNA表达与TNM分期、浸润深度、淋巴结转移与远处转移有关(  $P < 0.05$  )。2. 免疫组织化学 VEGFR-3、P-Akt蛋白在胃癌组织中的表达水平明显高于癌旁对照组织(  $P < 0.05$  ),且VEGFR-3、P-Akt蛋白表达水平呈正相关(  $P < 0.05$  )。

#### 结论

VEGFR-3阳性表达的胃癌患者可能更易发生淋巴结转移, VEGFR-3可作为评估患者预后的重要指标。VEGFR-3与PI3K/Akt的表达具有一定的相关性。

关键词: 血管内皮生长因子受体3 胃癌 磷脂酰肌醇-3-激酶 蛋白激酶 B 淋巴结转移

#### Abstract: Objective

To examine the expression of the vascular endothelial growth factor receptor 3 ,phosphatidylinositol 3-kinase (PI3K) and protein kinase B ( PKB or Akt) in gastric carcinoma and their adjacent normal tissues.

#### Methods

The mRNA expressions of VEGFR-3, PI3K and Akt in 36 cases of gastric carcinoma and their adjacent normal tissues were detected by reverse transcription polymerase chain reaction (RT-PCR) . The protein expressions of VEGFR-3, P- Akt in the same tissues were detected by immunohistochemical method.

#### Results

1. RT-PCR the mRNA expression levels of VEGFR-3, PI3K and Akt in gastric carcinoma tissues were higher than those of the adjacent normal tissues (  $P < 0.05$  ) . VEGFR-3 mRNA expression was correlated with PI3K mRNA and Akt mRNA expression(  $P < 0.05$  ) . The mRNA expression level of VEGFR-3 was related TNM stage, depth of invasion, lymphnode metastasis and distant metastasis (  $P < 0.05$  ) . 2. Immunohistochemical the protein expression levels of VEGFR-3 and P Akt in gastric carcinoma tissues were higher than those of the adjacent normal tissues (  $P < 0.05$  ) . VEGFR-3 protein expression was correlated with P-Akt protein expression (  $P < 0.05$  ) .

#### Conclusion

The tumors with VEGFR-3 expression are more likely to have lymphnode metastasis VEGFR-3 is an important

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predictor for the prognosis of gastric carcinoma.

The expression of VEGFR-3 and PI3K/Akt have some relations.

**Key words:** Vascular endothelial growth factor receptor-3 Gastric carcinoma Phosphatidylinositol-3 kinase (P13K) Protein kinase B (Akt) Lymphnode metastasis

收稿日期: 2009-01-04;

引用本文:

苗莹莹,朱正秋,黄广清 . 血管内皮生长因子受体3与PI3K/AKT在胃癌组织中的表达及意义[J]. 肿瘤防治研究, 2009, 36(12): 1039-1042.

MIAO Ying-ying,ZHU Zheng-qiu,HUANG Guang-qing . Expression and Significance of Vascular Endothelial Growth Factor Receptor 3 and PI3K/Akt in Gastric Carcinoma Tissue[J]. CHINA RESEARCH ON PREVENTION AND TREATMENT, 2009, 36(12): 1039-1042.

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