

## Detection of CEA mRNA on non-small lung cancer and it's significance

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### 摘要

**Background and objective** In recent years, many studies on micrometastasis in non-small cell lung cancer (NSCLC) have been reported, this study is to investigate the effect of operation on micrometastasis from NSCLC and evaluate the relation between micrometastasis and clinicopathological parameters. **Methods** The blood samples were taken from 70 cases of NSCLC and 18 patients with benign diseases at 3 intervals during the operation from peripheral vein. The transcription of carcinoembryonic antigen messenger ribonucleic acid (CEA mRNA) was assayed by means of nested reverse transcriptase polymerase chain reaction (RT-PCR) and micro-fluid chip. **Results** The CEA mRNA positive rates of all 3 time spots were as follows: 50% at beginning of the operation (Time 1), 62.8% at ligating the pulmonary vein (Time 2) and 57.1% at 1 h after ligating pulmonary vein (Time 3). There is significant difference between Time 1 and Time 2 ( $\chi^2=7.114, P < 0.05$ ). The positive rates of well-differentiation and middle-differentiation, stage ? and state ?, Tis, T1 and T2, N0 were significant less than non-differentiation and low-differentiation, stage ? and state ?, T3 and T4, N1, N2 and N3, respectively. No negative control samples was found to be positive, and no positive control samples was found to be negative. The sensitivity of our test was 10 cells/mL. **Conclusion** The cancer cells dissemination during operation was demonstrated indirectly in our study, the time of pulmonary vein ligation (earlier or later) may affect the quantity of tumor cells released into circulation; The patients with lower differentiation, advanced TNM stage, larger tumor size and metastasis of lymph node have higher rates of metastasis in peripheral, so the detection of CEA mRNA can guide the therapy of NSCLC to a certain extent.






### 关键词

Lung neoplasms; Neoplasm metastasis; Carcinoembryonic antigen; RT-PCR; Microfluidic analytical techniques



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