

## A study on the relationship between RRM1 single nucleotide polymorphisms and clinical characteristics in lung cancer patients

Li LIN, Xiaoqing LIU, Santai SONG, Shengqi WANG

### 摘要

Background and objective Gemcitabine is representative agent for chemotherapy in non-small cell lung cancer (NSCLC). The aims of this study are to investigate the single nucleotide polymorphism (SNP) of the gene such as ribonucleotide reductase subunit M1 (RRM1), which is the molecular target of gemcitabine, probably contribute to the resistance progress. Methods Allele-specific primers (wild, mutant and the same antisense primers) were designed according to the sequence of RRM1. The allelotyping of RRM1 promoter polymorphisms was conducted via SYBR Green I real-time PCR using genomic DNA obtained from peripheral WBC of 110 lung cancer cases and 40 cases of healthy subjects and the relationship of genotype and characteristic, response and survival time of lung cancer patients were also analyzed. Results Using Fluorescence PCR, the occurrence of allele A genotype at the promoter 37 site is 32 percent and 30 percent separately in lung cancer patients and healthy individuals. There were no relations between AA frequency and general characteristic of lung cancer patients such as sex, pathologic, clinical stage, response rate and over-all survival time in patients receiving gemcitabine reagents ( $P > 0.05$ ). Conclusion The specific primer real-time PCR can detect the SNP of RRM1 gene.






### 关键词

Ribonucleotide reductase subunit M1; Single nucleotide polymorphism; Gemcitabine; Lung neoplasms


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
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### ABOUT THE AUTHORS

Li LIN

Xiaoqing LIU

Santai SONG

Shengqi WANG

 <p>thoracic CANCER www.thoraciccancer.net</p>	<p>主编 Qinghua Zhou Yan Sun</p>	 <p>CJLC Chinese Journal of Lung Cancer</p>
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