

The study of the tumorigenicity and metastasis ability in human lung cancer cell line L9981 using in vivo imaging

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摘要

Background and objective The aim of this work is to study the tumorigenicity and metastasis ability in human large cell lung cancer cell line L9981 by in vivo imaging. **Methods** We firstly transfected the plasmids with firefly luciferase (luc) gene into L9981 cells and then established the stable transfected L9981-luc cell line with G418. Then the positive L9981-Luc cells were implanted subcutaneously into mice and were monitored for tumor growth and micrometastases with in vivo imaging technique. **Results** The results showed that the bioluminescence density of the stable transfected L9981-Luc cells correlated to the numbers of the tumor cells in vitro. The L9981-Luc cells still keep the high metastasis characterization. After the L9981-Luc cells were implanted into mice subcutaneously for several weeks, we found the metastasis lesions in the different organs of the mice using in vivo imaging machine and the bioluminescence of the tumor correlated with its size. Furthermore, we confirmed the metastasis lesions by sacrificing the mice and analyzing with pathological staining. **Conclusion** We established a stable L9981-Luc cell line with high metastasis character that can be used to analyze the tumor invasion and metastasis in animal model by in vivo imaging.

关键词

Lung neoplasms; Tumorigenicity; Bioluminescence

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