



Safe lipid nanocapsule-based gel technology to target lymph nodes and combat mediastinal metastases from an orthotopic non-small-cell lung cancer model in SCID-CB17 mice

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The purpose of this study is the assessment of gel technology based on a lauroyl derivative of gemcitabine encapsulated in lipid nanocapsules delivered subcutaneously or intravenously after dilution to

1. target lymph nodes,
2. induce less systemic toxicity and
3. combat mediastinal metastases from an orthotopic model of human, squamous, non-small-cell lung cancer Ma44-3 cells implanted in severe combined immunodeficiency mice.

Résumé en
anglais

The gel technology mainly targeted lymph nodes as revealed by the biodistribution study. Moreover, the gel technology induced no significant myelosuppression (platelet count) in comparison with the control saline group, unlike the conventional intravenous gemcitabine hydrochloride treated group ($P < 0.05$). Besides, the gel technology, delivered subcutaneously twice a week, was able to combat locally mediastinal metastases from the orthotopic lung tumor and to significantly delay death ($P < 0.05$) as was the diluted gel technology delivered intravenously three times a week.

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