

## Development of a High Metastatic Orthotopic Model of Renal Cell Carcinoma

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Development of cancer therapies depends on animal models that reproduce the clinical metastasis that frequently affect the prognosis and quality of life of patients. Cancer cells have been injected into mice to reproduce cancer metastasis. Major routes for this injection have been used: i.v. or s.c.. Example, the i.v. injection model leaves out invasion, the initial, critical step in cancer metastasis and in the s.c. injection model, low incidence of metastasis limits assessment of therapeutic efficacy. Over the past decade, orthotopic inoculation models have been developed to overcome these disadvantages. This study was to develop a metastatic orthotopic model of renal cell carcinoma. Two biological assays were performed: efficacy and survival. In both Balb/c mice were inoculated with  $3 \times 10^5$  murine renal cell carcinoma in the left kidney subcapsula and, after 10 days were submitted the nephrectomy. The removal kidneys were weighed and tumor growth was measured. In the efficacy assay mice were sacrificed 14 days after the nephrectomy. In the survival assay mice were monitored until they died. The medium kidney weight was  $0,28 \pm 0,01$ g for injected animals and the medium of area tumoral measured was 13,3%. In the efficacy assay the lungs weight was  $0,56 \pm 0,12$ g for injected animals and  $0,19 \pm 0,01$ g for normal animals. In the survival assay the medium of life was 100% at day of nephrectomy, 75% after 4 days and 25% after 12 days. Nowadays, several orthotopic models have succeeded in reproducing a high incidence of the metastasis similar to that observed in clinical cancers.

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