

➤ Metastasizing mouse tumor models

In metastatic tumor models, tumor spreading originates either from a primary tumor or is artificially induced by intravenous or intracardiac tumor cell injection. The metastatic pattern is dependent on the tumor cell line with a preference of lung metastasis in case of intravenous injection. For human tumor cell lines immune-compromised mice are used with the advantage to study classical antitumoral test compounds. In contrast, murine tumor cell lines can be grown in immune-competent mice (syngeneic), providing a functional immune system to assess novel immunotherapeutic approaches.

➤ Tumor cell line JIMT-1

Origin: breast / human
Description: pleural effusion of ductal breast cancer

➤ Study example

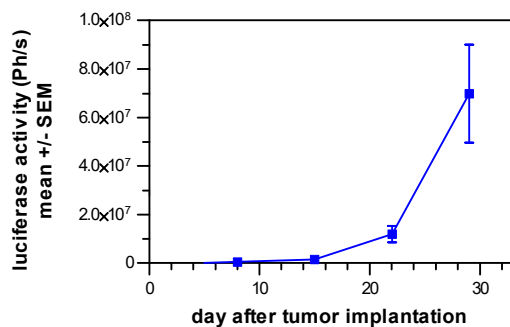


Figure 1:

JIMT-1 metastases growth monitored by in vivo bioluminescence imaging

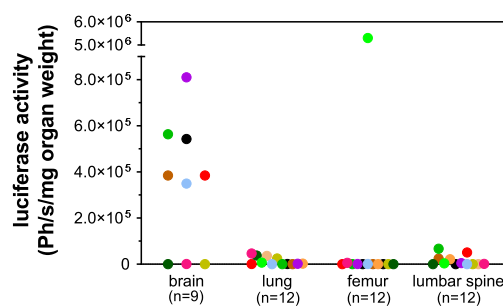


Figure 2:

Detection of JIMT-1 metastases in different organs monitored by ex vivo luciferase measurement. Metastasis of one mouse are represented by dots of the same color

➤ Reference items tested

Trastuzumab: moderate antitumoral response
Docetaxel: strong antitumoral response (positive control, non-randomized)

➤ Quality assurance

- Routine authentication of tumor cell lines by STR profiling
- Mycoplasma testing of tumor cells by PCR prior to implantation
- Routine health monitoring of sentinel animals (according to FELASA guide lines)
- Adherence to the 5R rules (reduce, refine, replace, responsible, remember)

Note: Graphs depicted are derived from study examples. Each study is a biological system of its own and subject to intrinsic variation.