Leukemia tumor model: MOLM-13
Metastasizing – intravenous

IN VIVO TESTING SERVICES

➢ Metastasizing mouse tumor models

In metastatic tumor models, tumor spreading originates either from a primary tumor or is artificially induced by intravenous or intracardial 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 MOLM-13

Origin: blood / human
Description: acute myeloid leukemia

➢ Study example

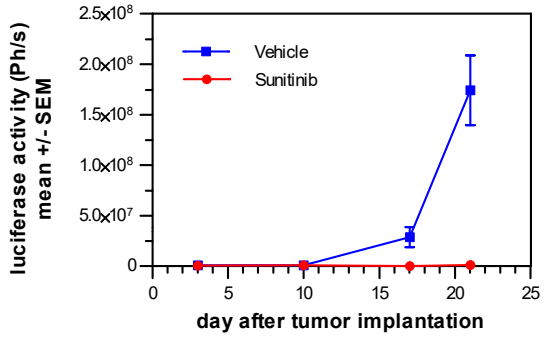
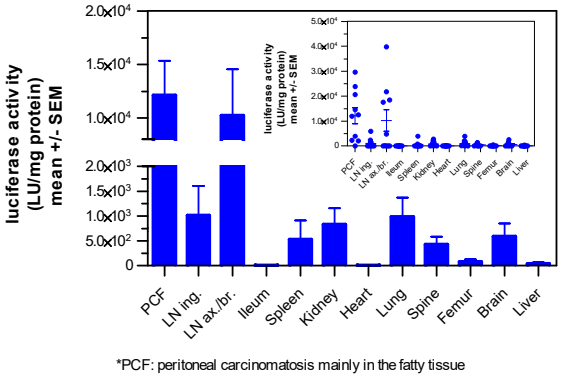


Figure 1:

MOLM-13 metastases growth after treatment with Sunitinib monitored by in vivo bioluminescence imaging



*PCF: peritoneal carcinomatosis mainly in the fatty tissue

Figure 2:

Detection of MOLM-13 metastases in different organs monitored by ex vivo luciferase measurement

➢ Reference items tested

Sunitinib: strong antitumoral response (positive control)
Saracatinib: no/low antitumoral response
Ruxolitinib: no/low antitumoral response
Midostaurin: strong antitumoral response (positive control)

➢ 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.