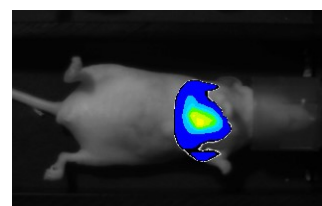


➤ Metastasis Tumor Models

The metastasis tumor models are performed either by i.v. injection of tumor cells or by orthotopic implantation of tumor cells. The models do reflect essential steps in the metastatic process and in case of orthotopic implantation organotypical stromal interactions do occur. Applied cells do express luciferase and are detected and analyzed by bioluminescence imaging or if possible via calipering during the study period. At necropsy the potentially metastatic organs, are homogenized, and the luciferase activity is assayed as a surrogate for spread tumor cells. The pattern of metastatic spread is cell type specific for the different models.

➤ Our Models

Tissue Origin	No	Tumor Cell Line	Route of application	Species
Blood / Leukemia	1	MOLM-13	i.v.	Human
	2	MV4-11	i.v.	Human
Breast	3	MDA-MB 231 (Z1)*	i.v.	Human
	4	4T1 (M3)*	orthotopic	Mouse
Skin	5	B16-F10	i.v.	Mouse



Bioluminescence image of MDA-MB 231-luc, implanted i.v.

*) : *in vivo* selected subpopulation of the corresponding parental cell line

➤ Design and Analysis of a Standard Study

Included features:

- Cell culturing and intravenous or orthotopic implantation of any type of tumor cell line as listed in the upper table
- Additional mice required due to model-dependent take rates
- Randomization according to the bioluminescence signaling
- **Tumor monitoring and treatment schedule:**
 - I. Treatment period: 1x per day at 5 business days for up to 3 weeks (depending on the model)
 - II. Determination of animal weights: 3x per week following randomization
 - III. Determination of tumor metastasis via bioluminescence measurement: 1x per week following randomization (model 1, 2, 3 and 5) or determination of tumor sizes via calipering: 2x per week following randomization (model 4)
 - IV. Determination of animal behavior: daily
- **Final necropsy of all animals after the treatment period:**
 - I. Determination of body weights and tumor metastasis via bioluminescence measurement (model 1, 2, 3 and 5) or tumor sizes via calipering (model 4)
 - II. Determination of primary tumor wet weights and volumes at necropsy (only model 4)
 - III. Cryo-conservation of primary tumors (only model 4)
 - IV. Analysis of luciferase activity (LU/mg organ weight) from smashed selected organs (depending on the model, up to 4 organs)
- Shipment of remaining compounds (1x shipment within Europe included)
- **Report (one round of correction by customer included):**
 - I. Data analysis and statistics
 - II. Signed hardcopy of report including attachment of raw data
 - III. CD containing the PDF-files of both documents
- Weekly update on study progress (graphical presentation)

Optionally, many more features are available

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