

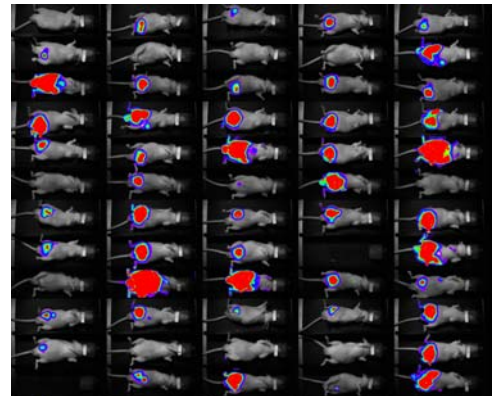
Orthotopic Tumor Models

Implantation of tumor cells into the organ of origin (“orthotopically”) allows organotypical interaction between tumor cells and surrounding stroma. It has been shown that this interaction affects growth, differentiation, and drug sensitivity of tumor cells. Applied cells do express luciferase and are detected and analyzed by bioluminescence imaging or if possible via calipering during the study period.

Our Models

| Tissue Origin | No | Tumor Cell Line | Species |
|---------------|----|------------------------|---------|
| Brain | 1 | U-87 MG (glioblastoma) | Human |
| | 2 | LN-229 (glioblastoma) | Human |
| Breast | 3 | MDA-MB-231 (Z1)* | Human |
| | 4 | 4T1 | Mouse |
| Colon | 5 | Ct26wt | Mouse |
| | 6 | HCT-116 | Human |
| Kidney | 7 | RENCA | Mouse |
| Pancreas | 8 | AsPC1 | Human |
| | 9 | Mia-PaCa2 | Human |
| Prostate | 10 | PC-3 | Human |
| | 11 | LNCaP (Z2)* | Human |
| Skin | 12 | B16-F10 | Mouse |

*) in vivo selected subpopulation of MDA-MB-231 **) in vivo selected subpopulation on of LNCaP



Bioluminescence image of mice orthotopically implanted PC-3-LN tumors

Design and Analysis of a Standard Study

Included features:

- Cell culturing and 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 sizes via bioluminescence measurement: 1x per week following randomization (model 1, 2, 5, 6, 7, 8, 9, 10 and 11) or determination of via calipering: 2x per week following randomization (model 3, 4 and 12)
 - IV. Determination of animal behavior: daily
- Final necropsy of all animals after the treatment period:
 - I. Determination of body weights and tumor sizes via bioluminescence measurement (model 1, 2, 5, 6, 7, 8, 9, 10 and 11) or via calipering (model 3, 4 and 12)
 - II. Determination of primary tumor wet weights and volumes at necropsy (not for model 1 and 2)
 - III. Cryo-conservation of primary tumors (not for model 1 and 2)
- Shipment of tumors (not for model 1 and 2) and 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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