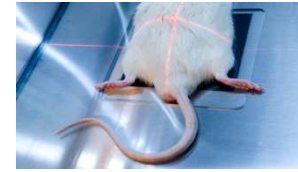


STUDY TITLE :

BONE METASTASES FROM PROSTATE CANCER EXPERIMENTAL MODEL



Protocol study



Animals:

Rats

Age :

5 weeks old (upon delivery)

Sex :

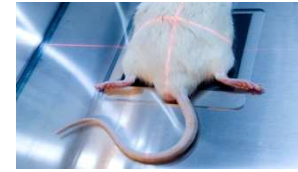
Male

Strain :

Sprague Dawley

Supplier :

Charles River Laboratories or Elevage Janvier



Induction of the pathology:

- ✓ Injection of rat prostatic carcinoma cells (AT6-1 cells) in the medullary cavity of long bones (femora right)



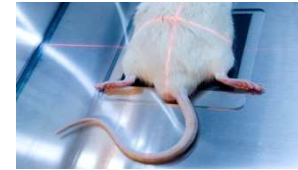
Arthrotomy



Preparation of the medullary cavity



Injection intra-osseous of AT6-1 cells

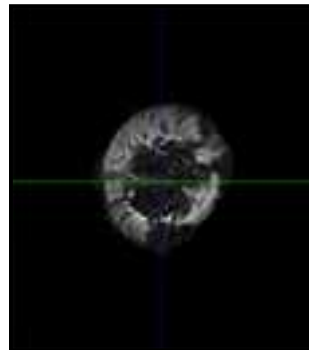


Development of the pathology:

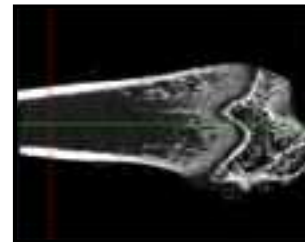
- ✓ The tumor is detectable 3 weeks after the cell injection (by radiography)
- ✓ **The tumor development** is mainly **intra-osseous**, and, some times **para-osseous** by the invasion of the neighbouring muscular tissues
- ✓ Similar lesions to cells observed in the human prostatic carcinoma pathology
→ **Osteolytic and osteoblastic lesions**



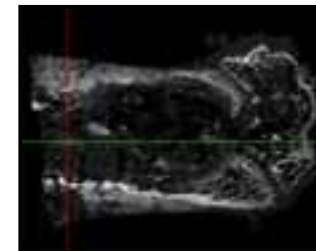
CT



AT6-1 cells



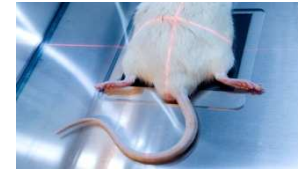
CT



AT6-1 cells



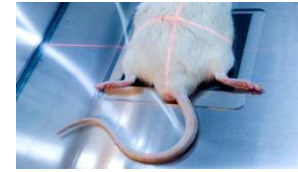
Treatment



- ✓ Any administration route
- ✓ Treatment can be defined in accordance with the sponsor (start and frequency)



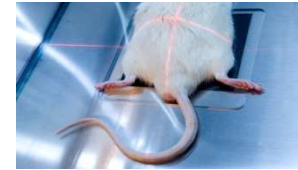
Clinical follow-up



- ✓ Weight evolution
- ✓ General clinical state
- ✓ Detailed clinical examinations
- ✓ Reactions after surgery and reaction to compound administration
- ✓ Tumor volume measurement (in case of para-osseous development)



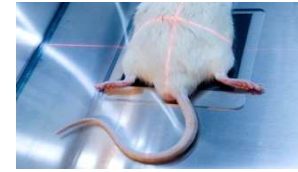
Biological follow-up



- ✓ Dosage of serum samples by immunoenzymatic method (ELISA) in 96-well plates in duplicate
- ✓ Serum markers of bone resorption : CTX, TRAP 5b,...
- ✓ Serum markers of bone formation : PAL, Osteocalcin,...



Radiological follow-up



✓ Kinetic of radiographical analyses



✓ Scoring of radiographs:

Scoring	Degree of bone deformity
0	No bone metastases
1	Slight bone metastases
2	Medium bone metastases
3	High bone metastases
4	Strong bone metastases

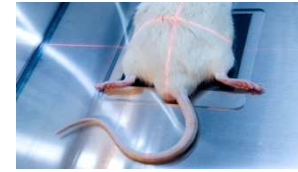


Bone metastases induced femur deformation (yellow arrow)

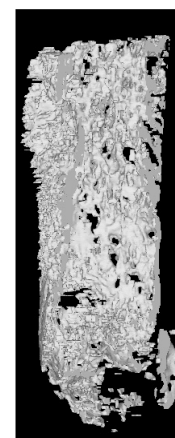
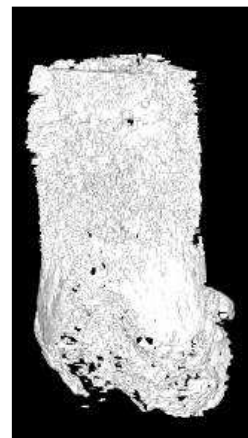
Experimental model of bone metastases from prostate cancer - ABS



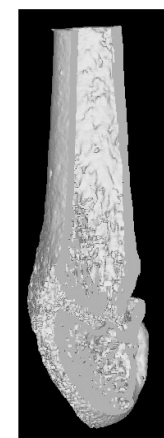
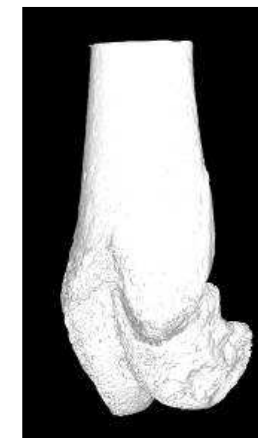
Microscanner analysis



- ✓ Qualitative and quantitative analysis by microtomography (Skyscan 1076)
- ✓ 3 dimension analysis of the sample
- ✓ Study of the trabecular architecture
- ✓ Non destructive technique (sample usable for other tests)



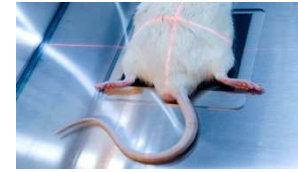
AT6-1 cells



Control

Experimental model of bone metastases from prostate cancer - ABS

Histological study



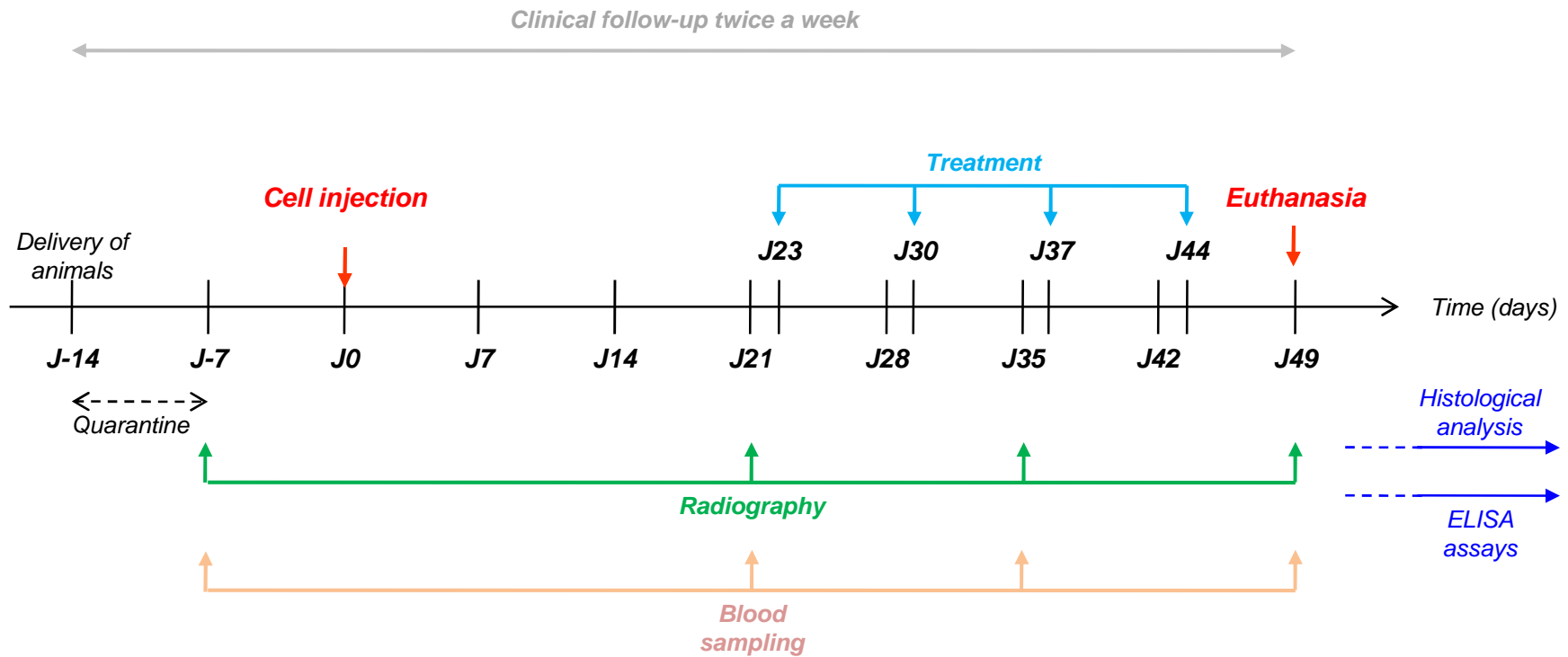
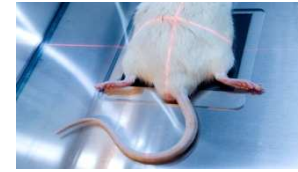
- ✓ Animals euthanasia at the end of the study
- ✓ Histological studies performed on left posterior legs (femora) of each animal
- ✓ Per rat: Femora are embedded in paraffin after decalcification or in resin

→ Stainings proposed:

- Von Kossa staining / RESIN
- Goldner's Trichrome staining / Staining
- TRAP staining / PARAFFIN
- Masson's Trichrome staining/ PARAFFIN
- Hematoxilin / Eosin / PARAFFIN

Other stainings are available

SYNOPSIS





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Contact us...

... And we will send you a tailor-made protocol study