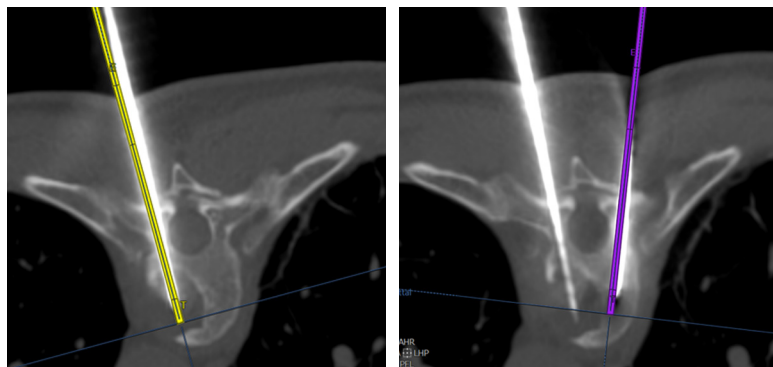




Epione® robotic vertebroplasty and pelvis cementoplasty

- Consolidation of both vertebrae and pelvis
- Trajectories right on target with mean lateral accuracy of 1.4mm
- One single intermediate control scan at the cortical entry point per insertion



Bilateral pedicle insertion of 13G trocars into the vertebral body of T8 (yellow and purple superimposed planar trajectories)

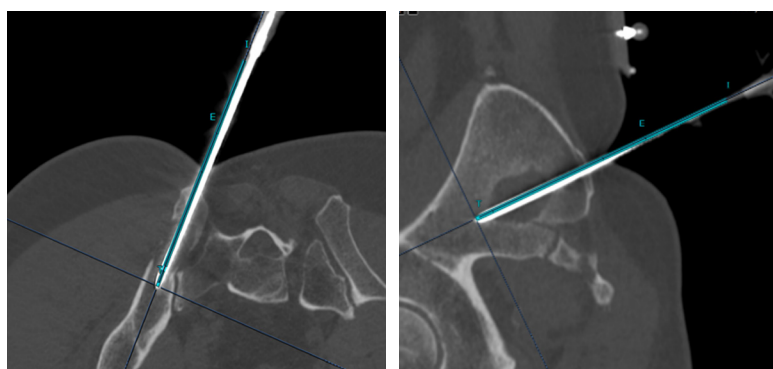
Physician: Dr. Bonnet, Interventional Radiologist
Institution: Gustave Roussy
Location: Villejuif, France

Background:

Consolidation of two lytic locations at risk of fracture in a metastatic renal tumor. The patient presented metastasis in T8 and left iliac bone.

Approach:

The patient was treated in the prone position (head first), under general anesthesia. Using the **Epione® System**, three introducers were placed, with two inserted in T8 and one in the pelvis for cementoplasty.



Posterior iliac insertion for osteosynthesis of the left iliac wing lesion (blue superimposed trajectory)

1 Plan / Target

Three trajectories were planned with **Epione® Software**. The **Epione® Robotic Arm** positioned automatically to the desired depth and location.

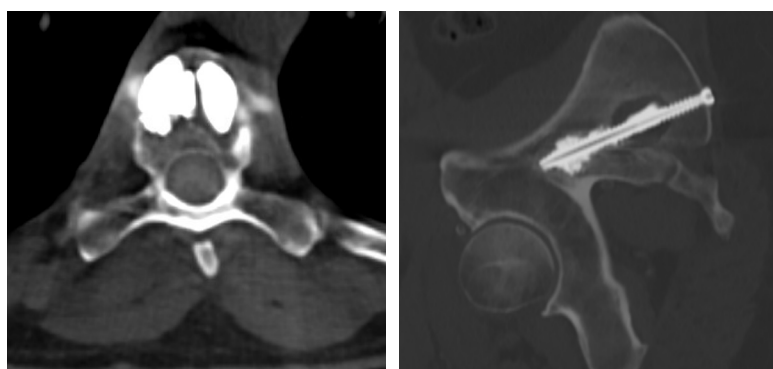
The **Introducer Guide** secured the guiding axis despite strong mechanical forces due to hammering. One single intermediate control scan at the cortical entry point per insertion was required.

2 Deliver

The physician inserted three introducers. The three trajectories were achieved with a mean lateral accuracy of 1.4mm. No robotic nor manual correction was required after intermediate control CT scan.

- **Trajectory 1:** 0.9mm lateral accuracy (Thiebaud t'BM II 15cm 13G inserted in T8)
- **Trajectory 2:** 2.4mm lateral accuracy (Thiebaud t'BM II 15cm 13G inserted in T8)
- **Trajectory 3:** 1.0mm lateral accuracy (Thiebaud t'BM II 15cm 8G inserted in the pelvis)

The physician then performed cementoplasty.



Cementoplasty of the T8 vertebral body

Pelvis osteosynthesis

3 Outcomes

No adverse events had occurred during the procedure.