

BONE TUMOR

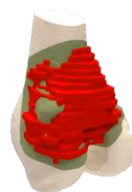
- Surgeon: Dr. Chotel
- Hospital: Hospices Civils de Lyon (France)
- Challenge: Resection of a distal, posterior, femoral parosteal osteosarcoma with preservation of the anterior cortex, followed by an allograft reconstruction.

COMPLEX DISTAL FEMORAL TUMOR RESECTION + ALLOGRAFT RECONSTRUCTION

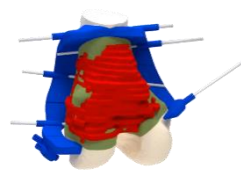
Planning

The bone tumor resection was planned based on a collateral surgical approach, to preserve a significant portion of the medial condyle.

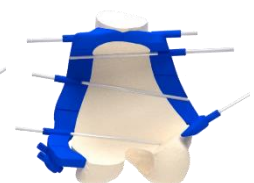
Two surgical resection guides were designed for this resection, one for each side. A common use of the upper K-wire enhanced the stability of both guides.



Resection Planning



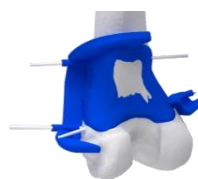
Design of resection guides with fixation by K-wires



Result after resection

Production

3D-Side planned the reconstruction by allograft and created the adequate guide.



Design of surgical guide for the allograft



Result after resection



Result of the reconstruction

Result

By means of high-tech 3D-Printing the anatomical models of the patient and the allograft and the resection guides were produced.

Resection guide



Resection guide

Anatomical models