

# Virtual planning and personalized surgical instruments (guides) in tumor cases.

## Results of clinical practice

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### Objective

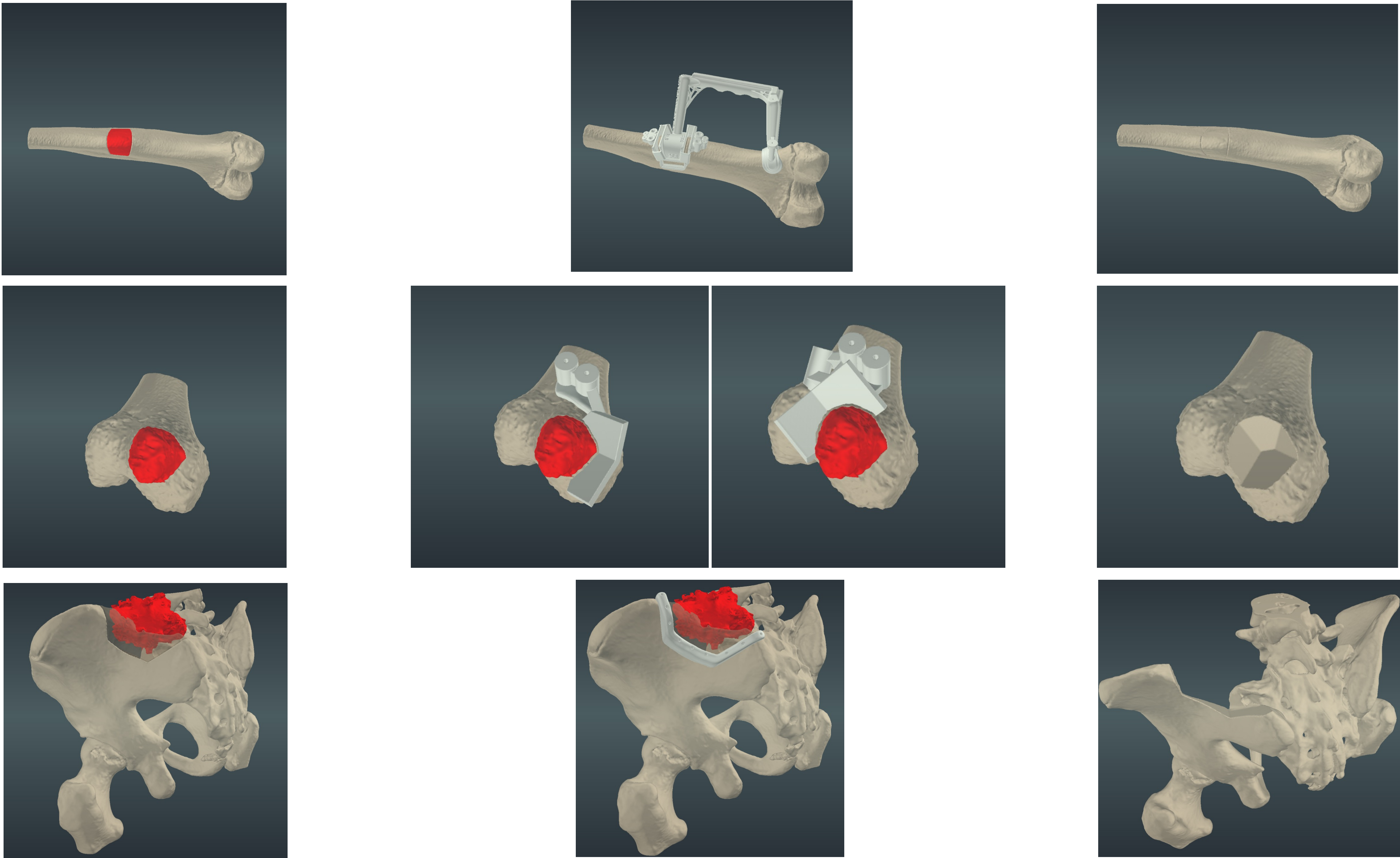
Bone tumors excisions in complex geometry, poor visibility, and restricted workspace with patient-specific surgical guide

### Methods

Workflow:

- CT scanning
- 3D anatomical reconstruction
- Virtual design and FEA testing in the 3D environment (MICE)
- Manufacturing of patient-specific surgical guide and anatomical models
- Quality control
- Sterilization
- Surgery

### Results



3D reconstruction of anatomical model showing tumour (MICE view)

3D patient-specific surgical guide model for tumour resection (MICE view)

Virtual view after surgery (MICE view)

### Conclusions

3D-virtual-model-based technology, set as a surgeon-manufacturer communication tool for PSI order and configurator, ensures correct data interpretation, product safety, and functionality. This will accelerate the transition towards personalised approach and undoubtedly help achieve better clinical outcomes, shorter delivery times, and lower costs related to this procedure.