

SURGICAL 3D PRINTING
INNOVATION CENTER

The 2022 Netherlands Healthcare Innovation Summit

Levin Center of Surgical Innovation and 3D Printing

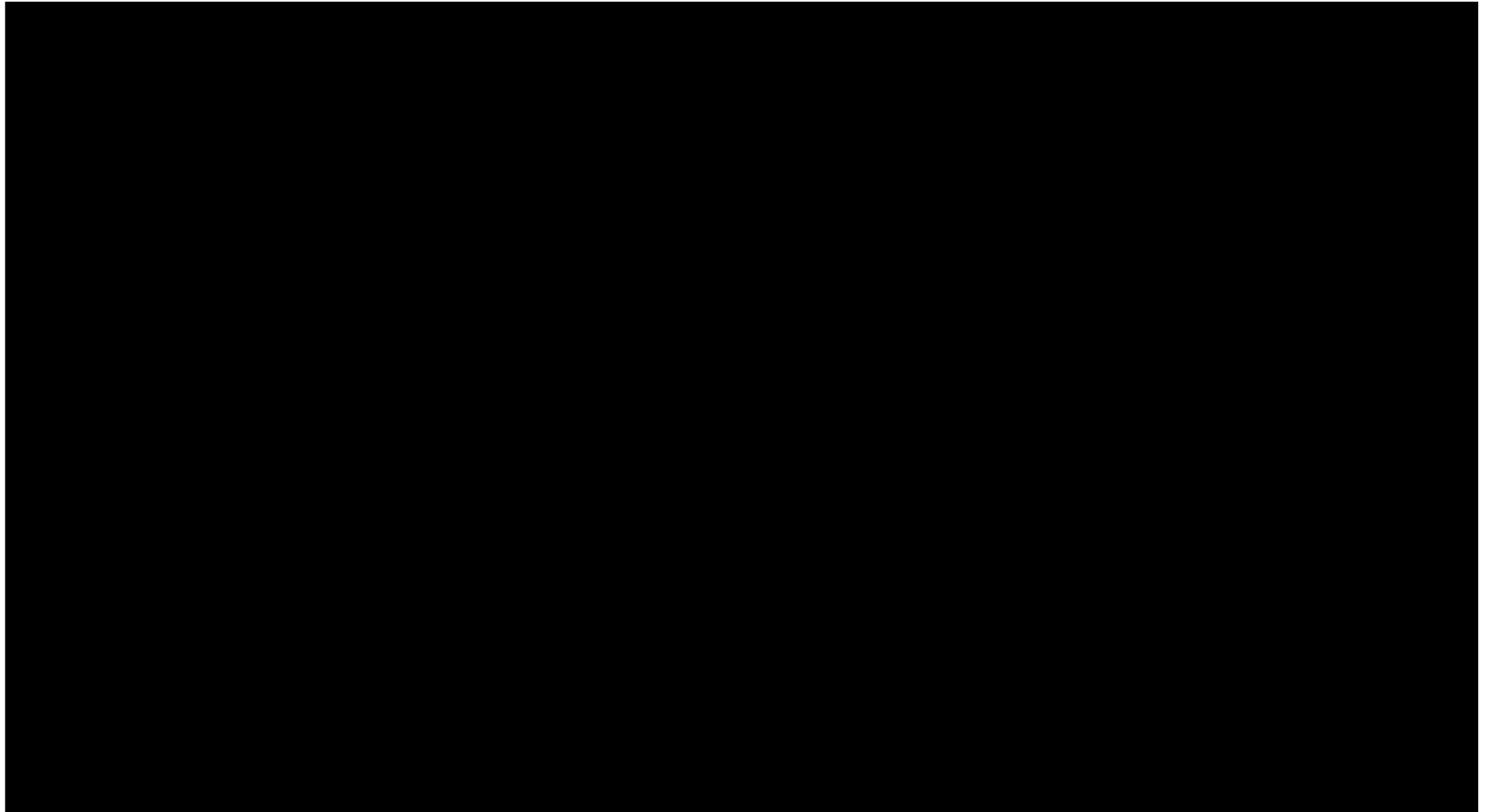
Dr. Solomon Dadia



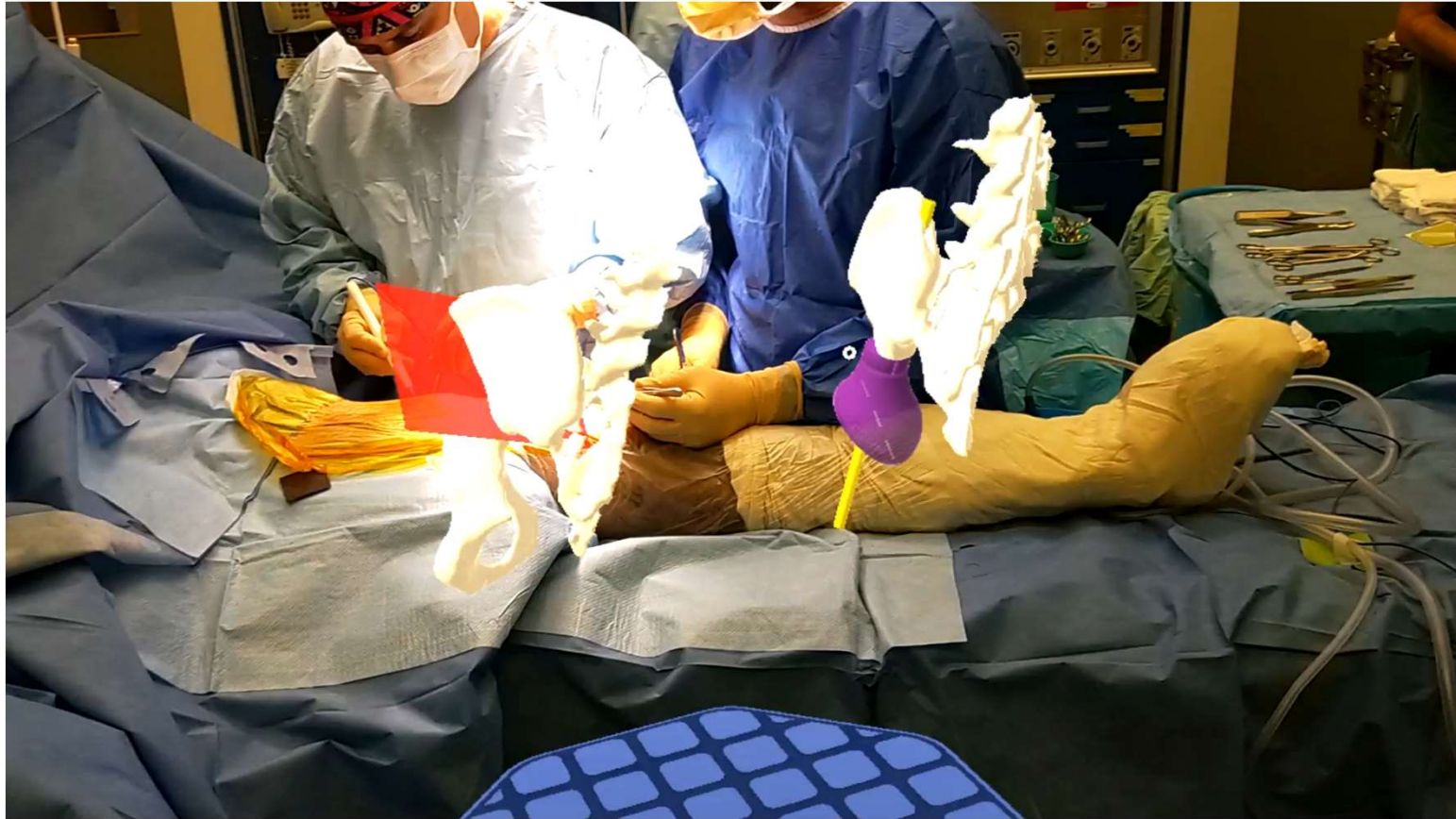
Israel - June 2022



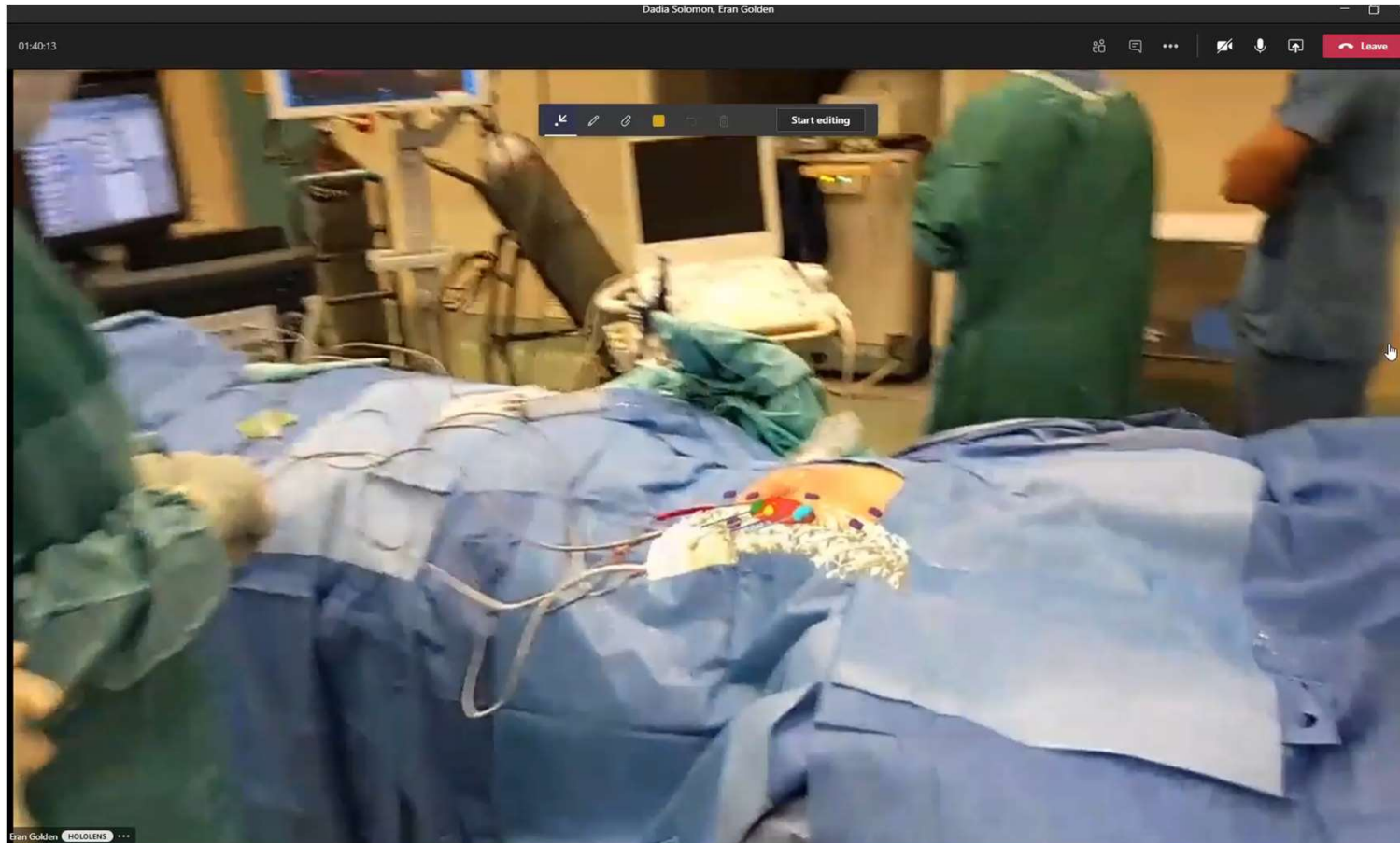
Augmented Reality for Virtual Execution



Augmented Reality for Virtual Execution

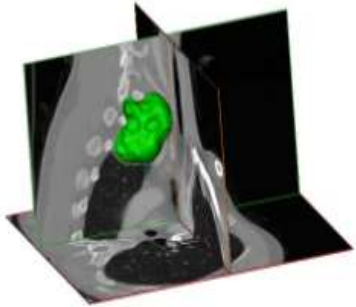


Augmented Reality for Virtual Execution



Current and Future Innovation Center Practice

Digital Visualization



3D Planning & Printing



Custom Implants



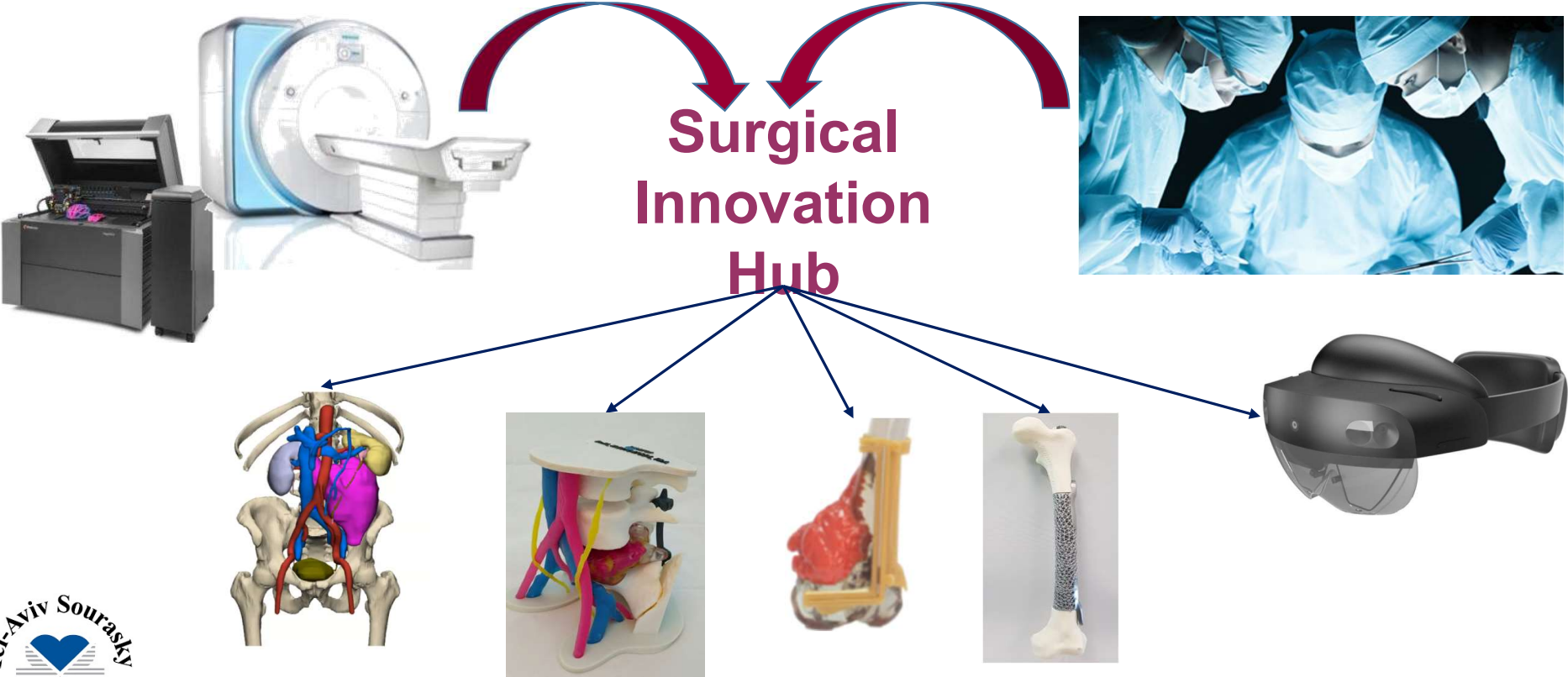
VR/AR



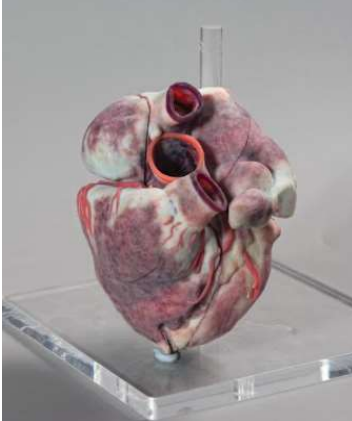
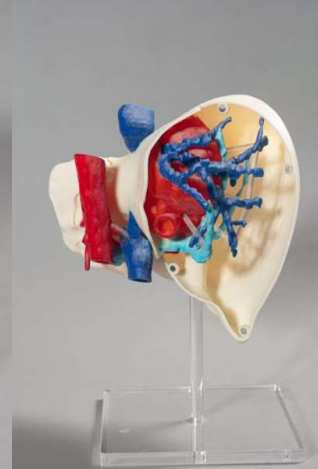
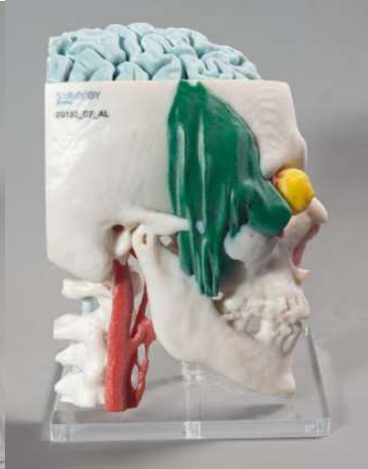
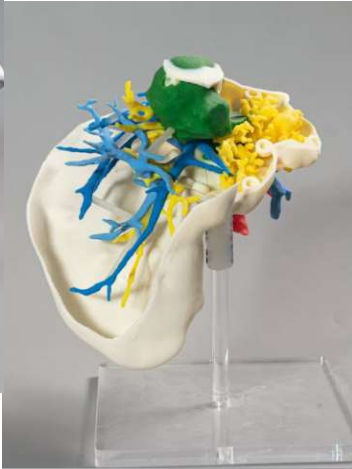
Orthotics



Bridging Medical Needs with Innovative Technologies



Customize Surgical Models



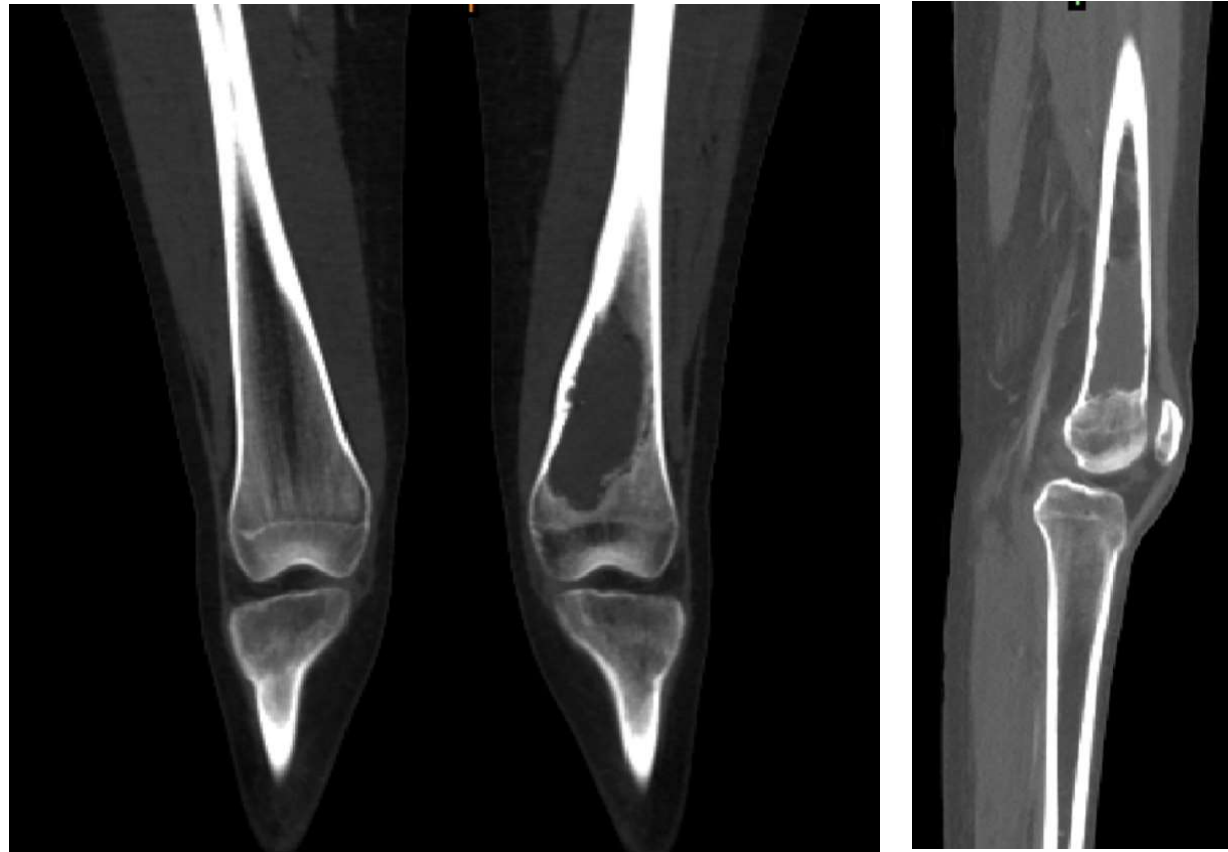
Case Study - Osteosarcoma of Femur

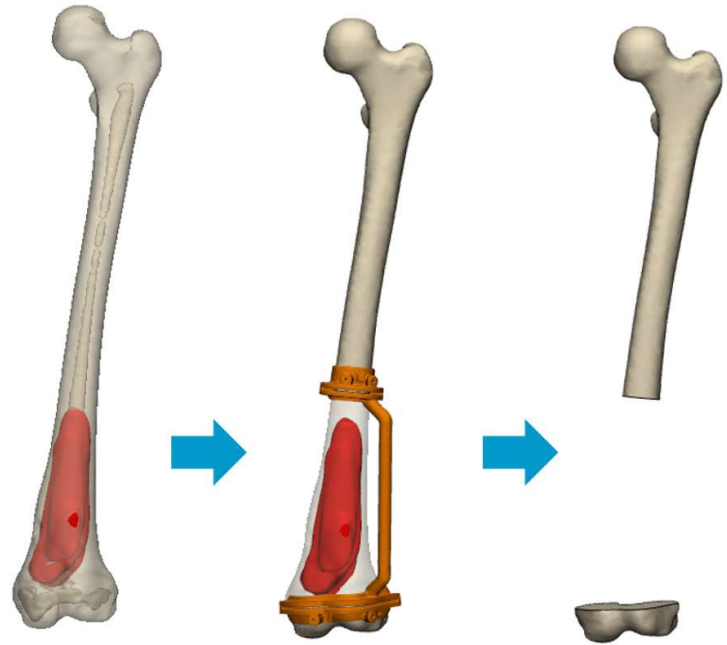
Female,
17Y

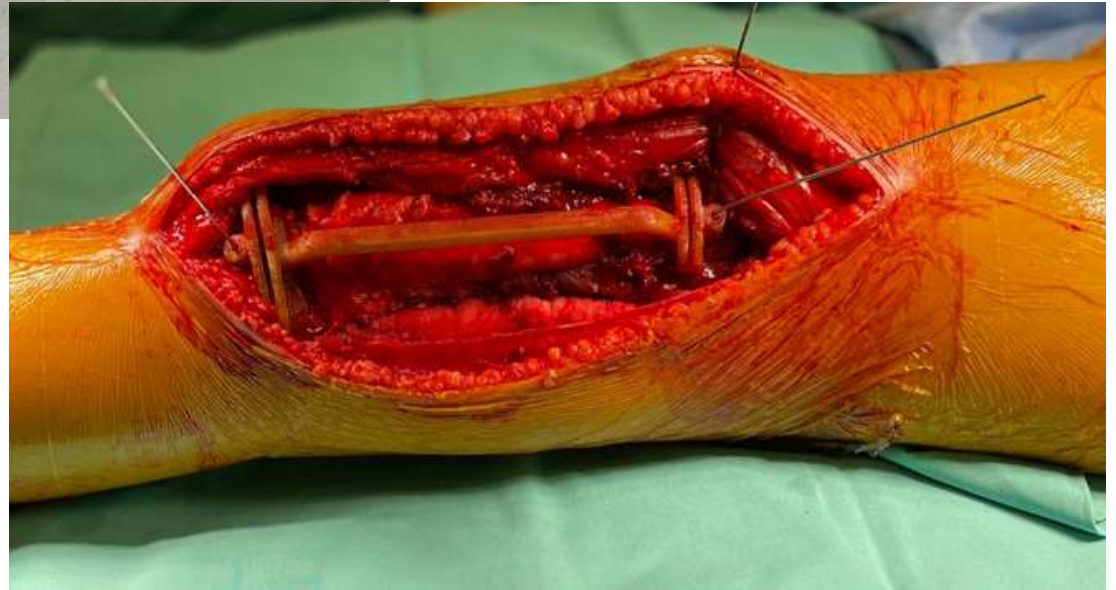
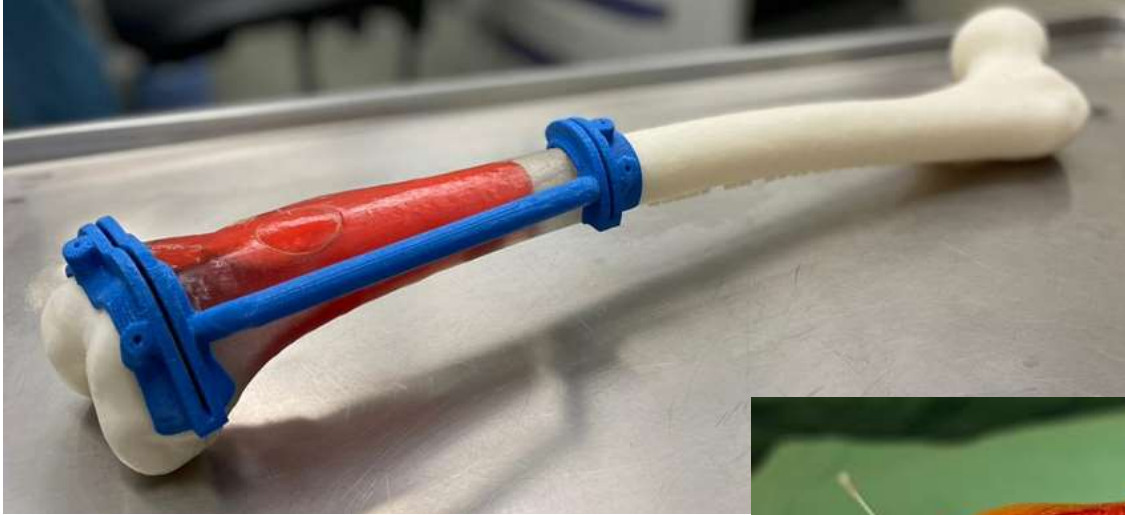
Osteosarcoma
distal femur

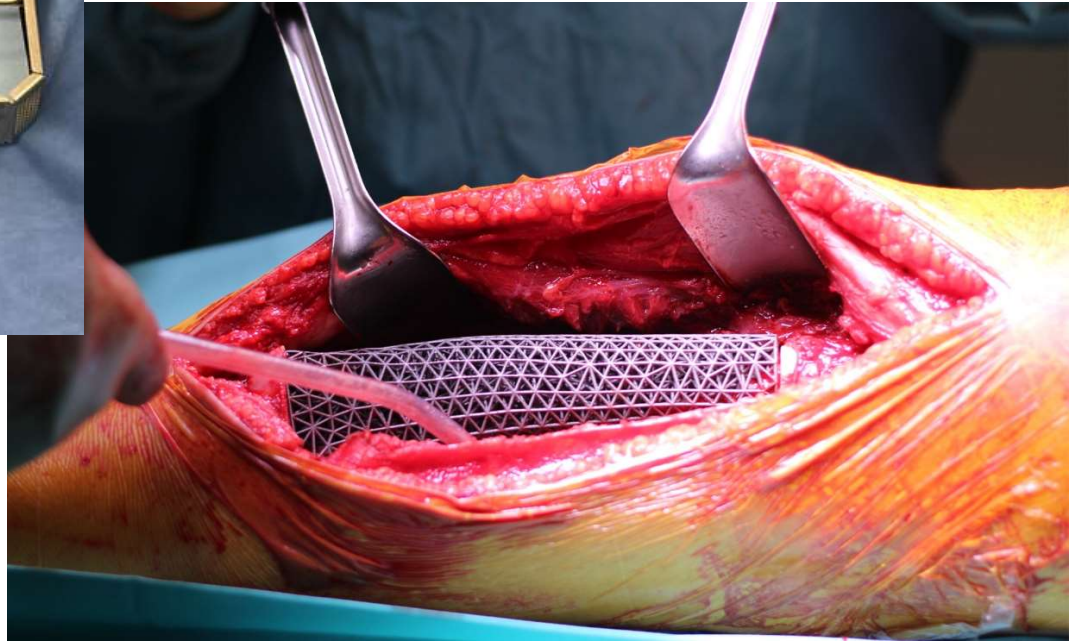
Segmental resection
knee preservation

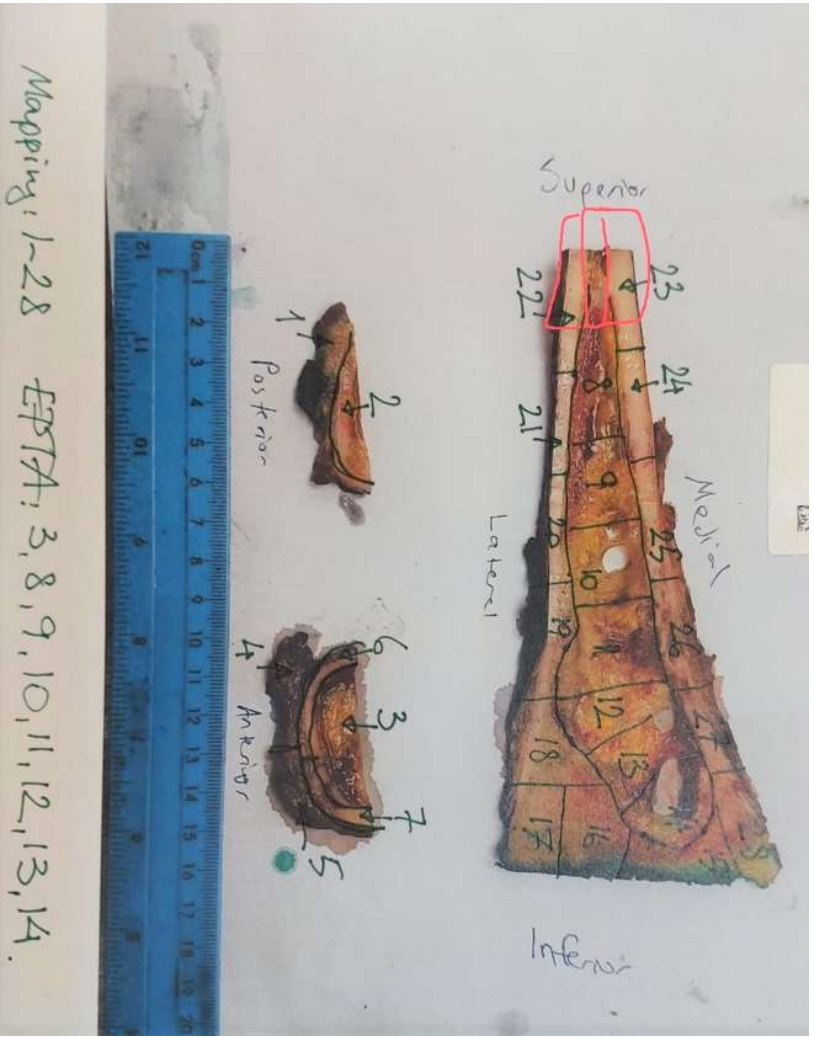
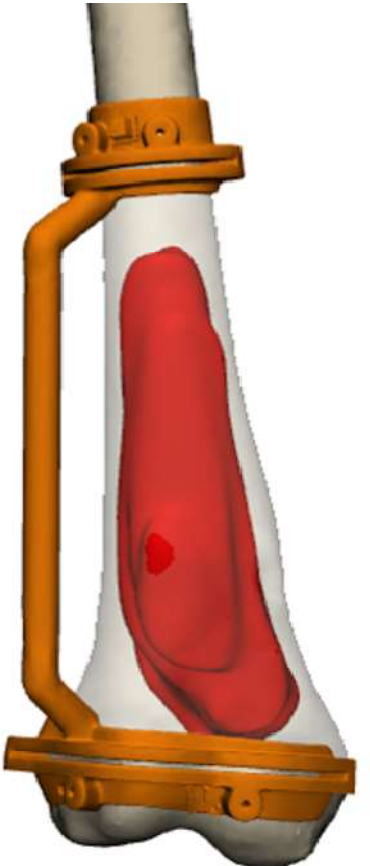
3D printed implant



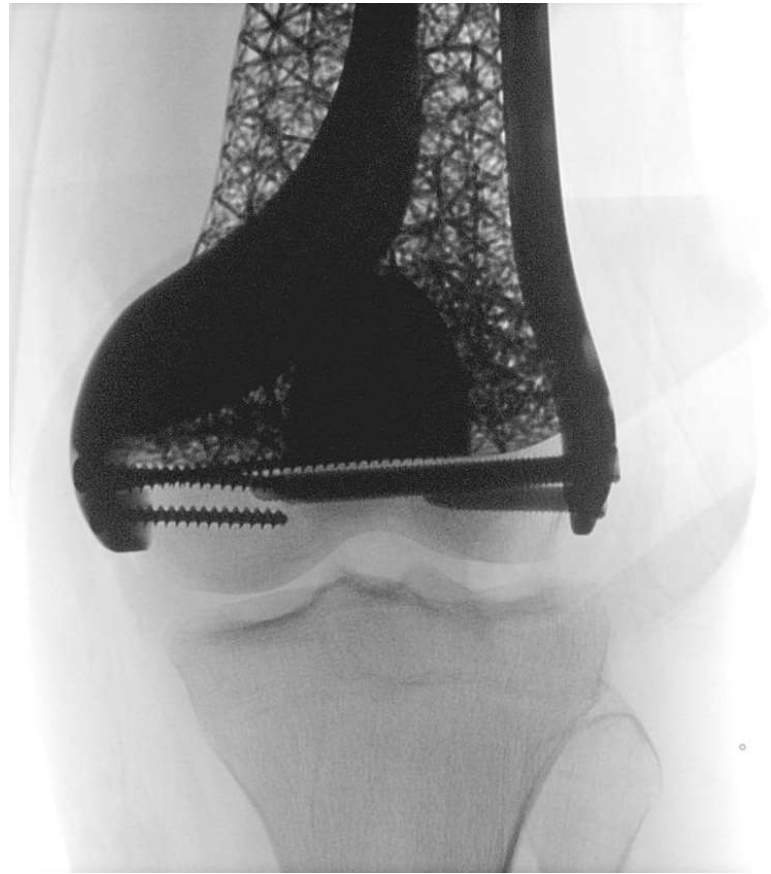
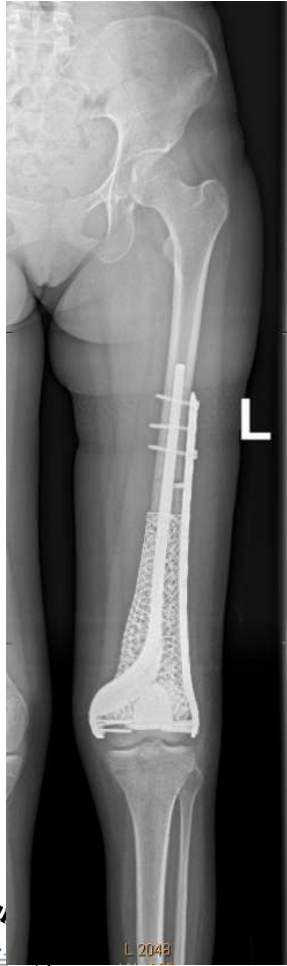




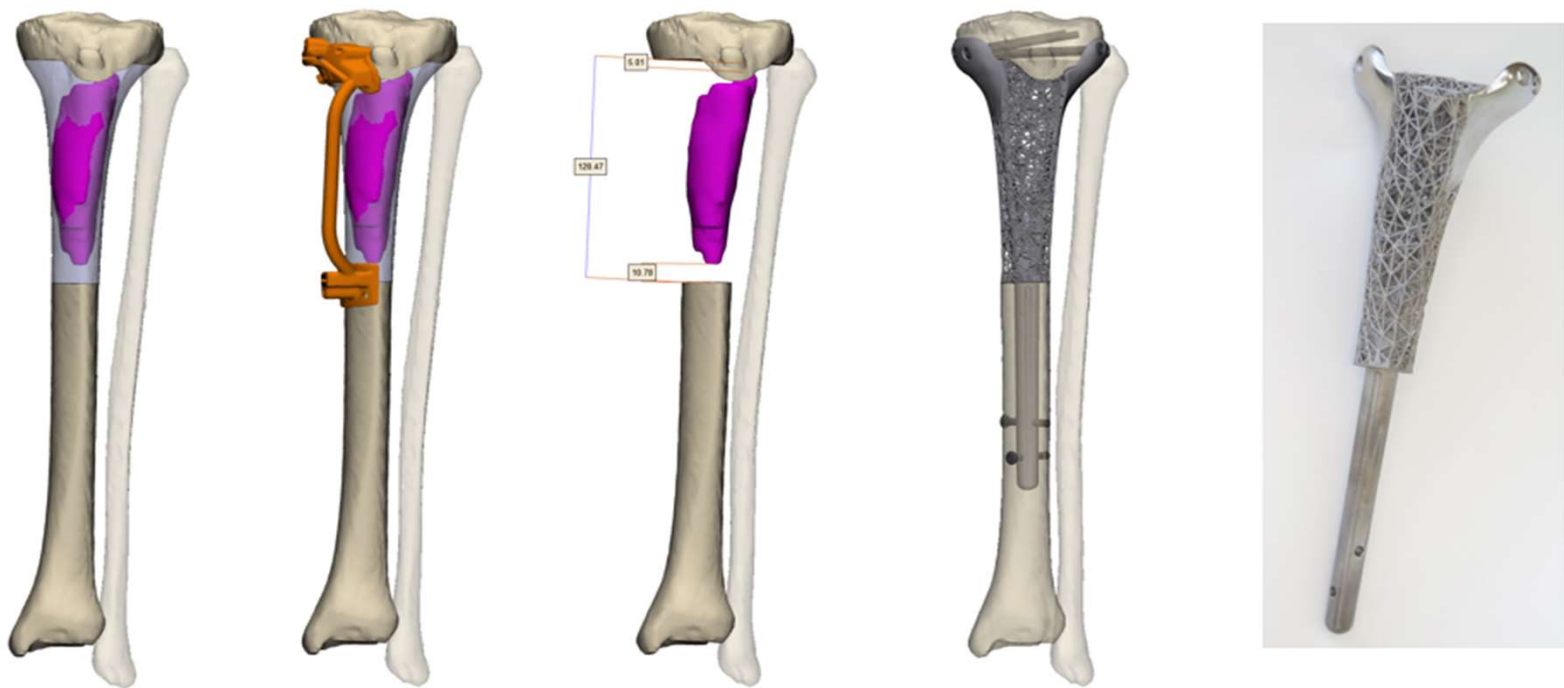




Mapping: 1-28 EPFA: 3, 8, 9, 10, 11, 12, 13, 14.

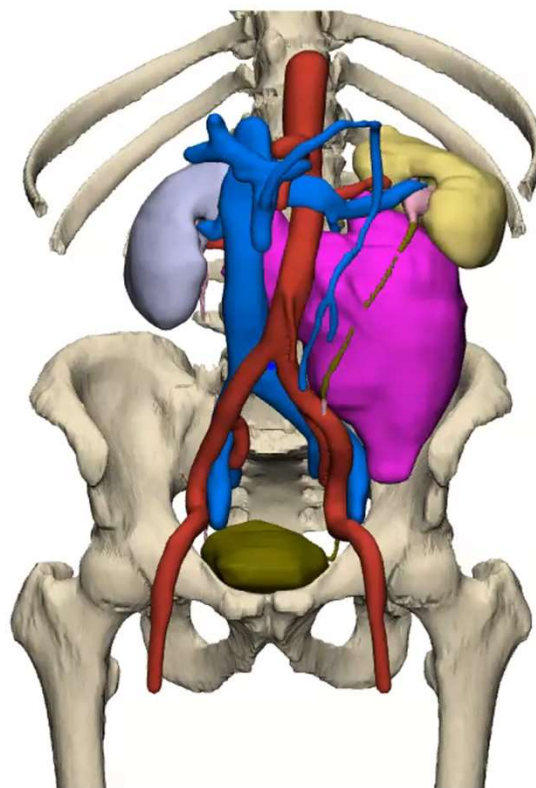


Intercalary Resection & Knee Preservation





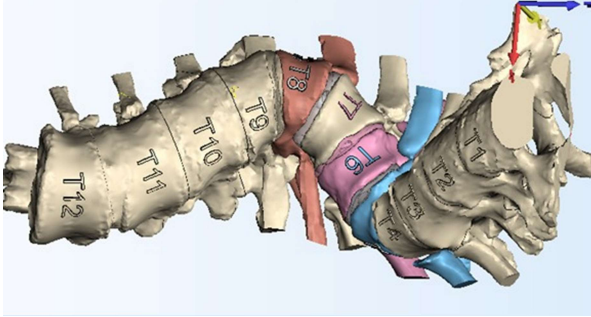
L2-3-4 Chondrosarcoma & Vertebrectomy



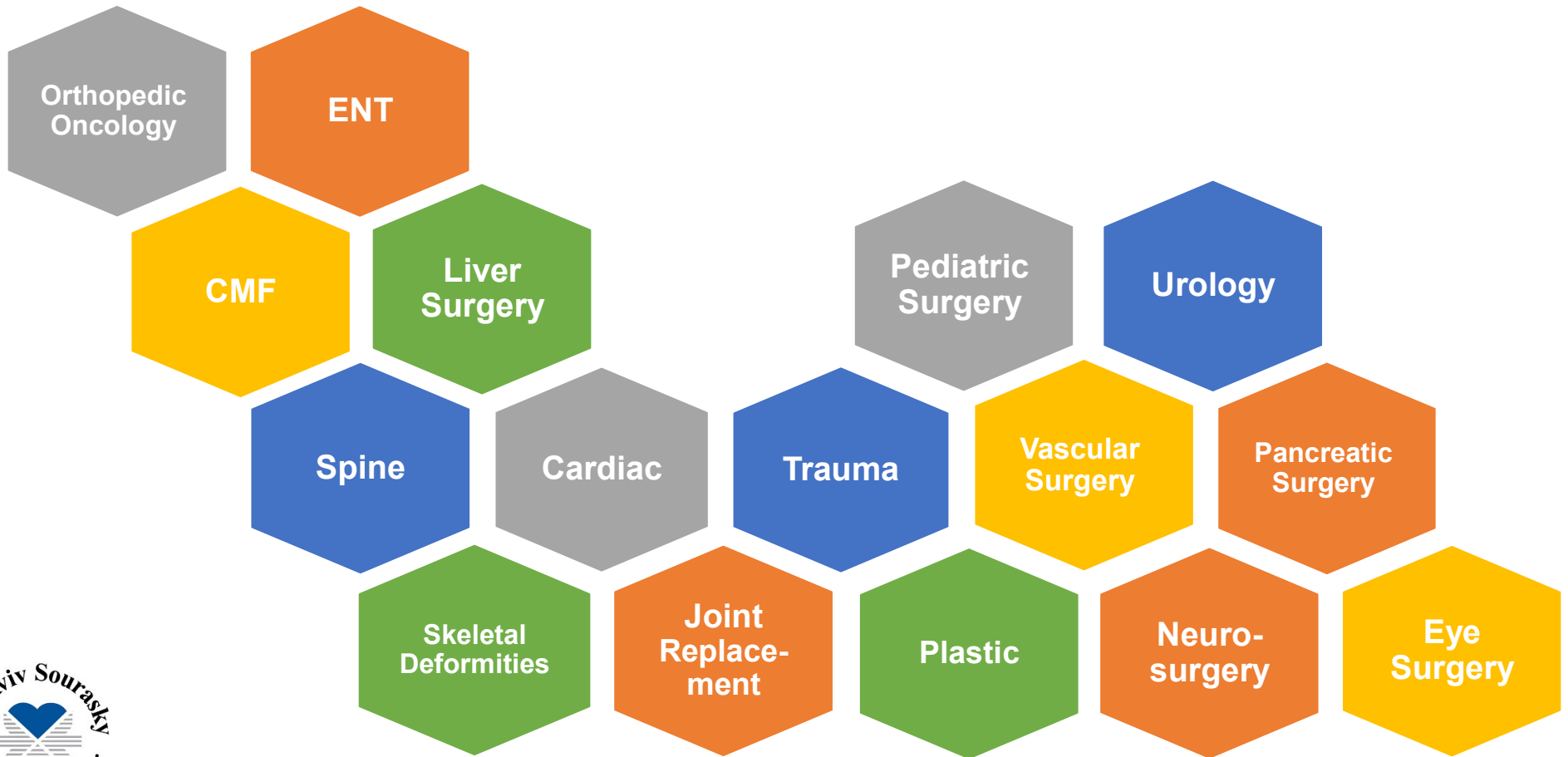
Augmented Reality – Pelvic Trauma



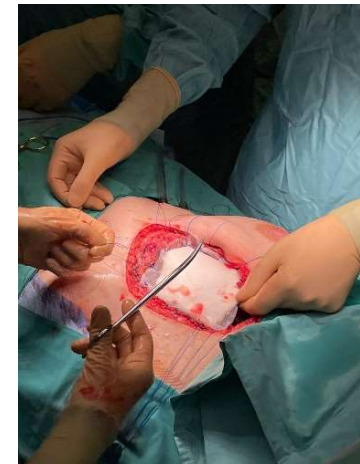
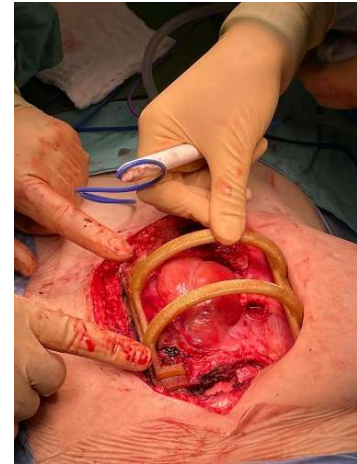
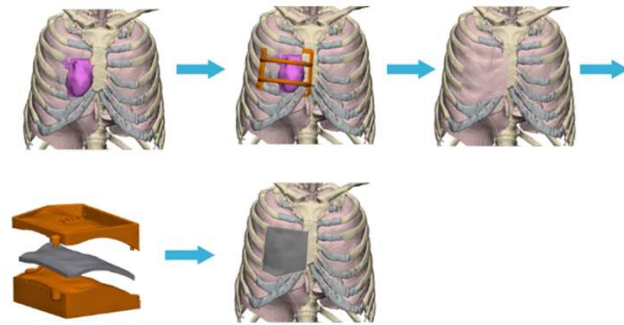
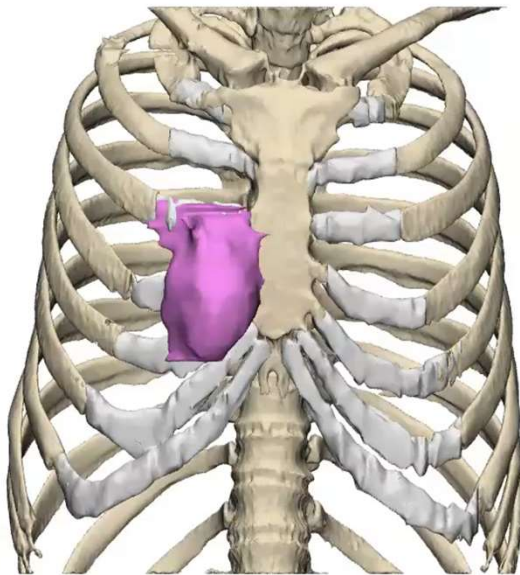
Adolescence Scoliosis



To Date – over 1000 successful Surgeries



Chest Wall Resection

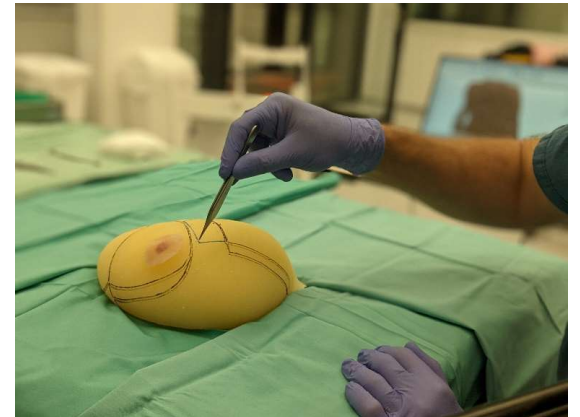
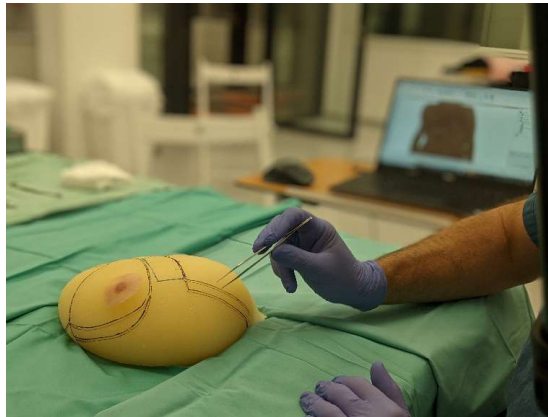


LEVIN CENTER SURGICAL
3D PRINTING INNOVATION

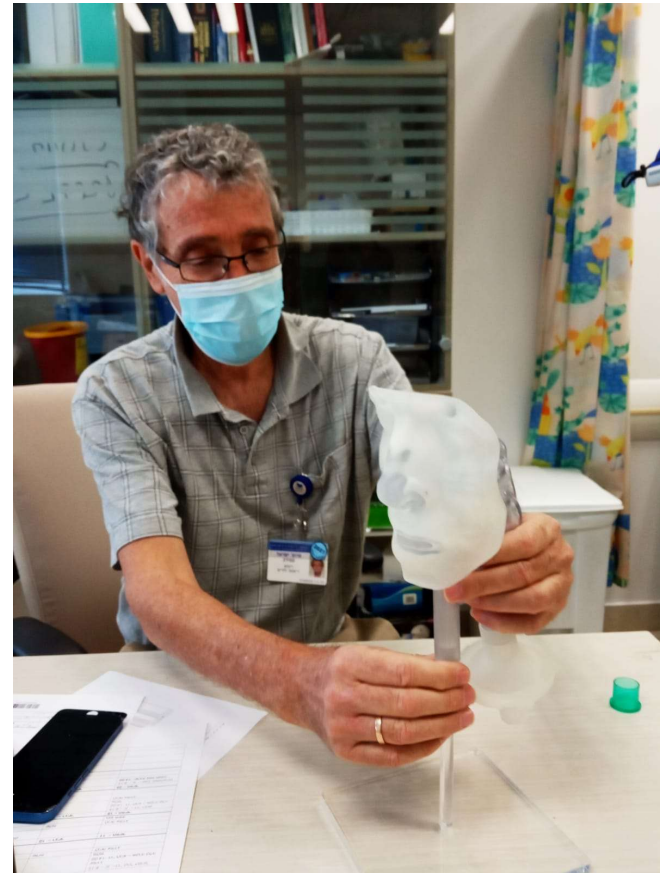
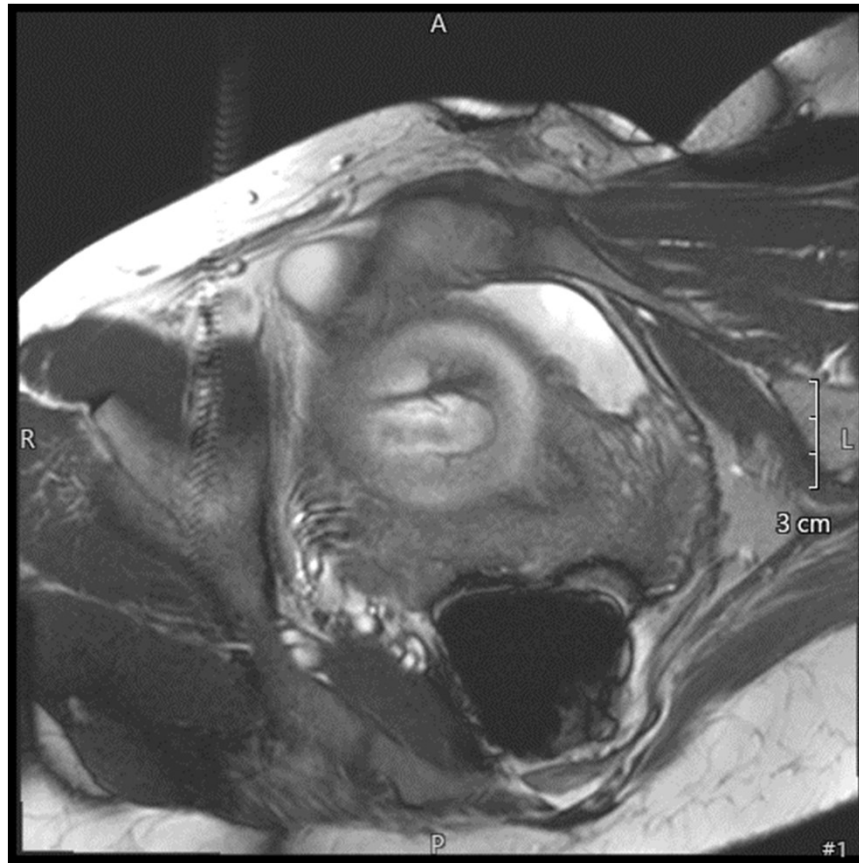


SYNERGY
3D PRINTED Customized Medical Devices

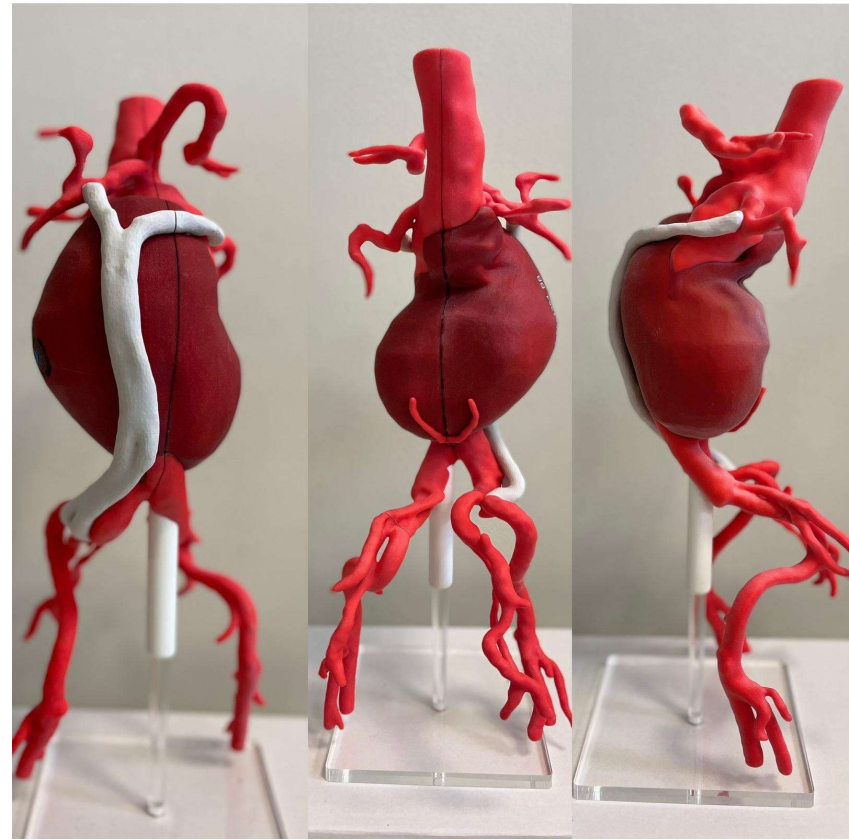
Breast Reduction



Fetus Airway Reconstruction



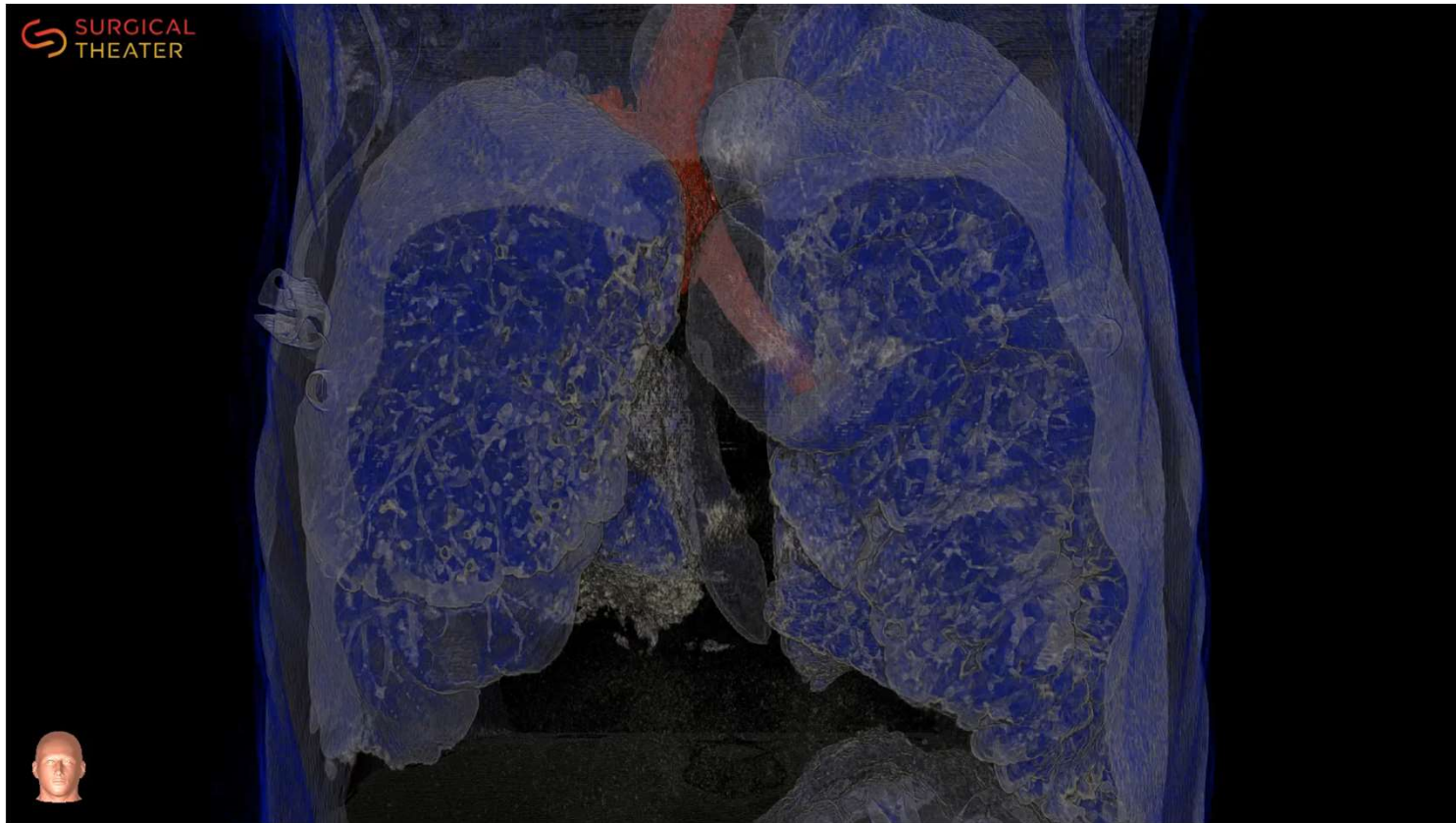
Aortic Aneurysm



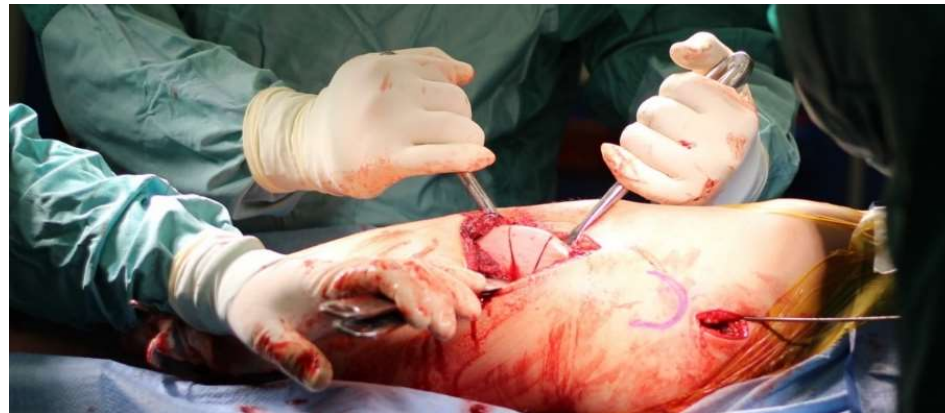
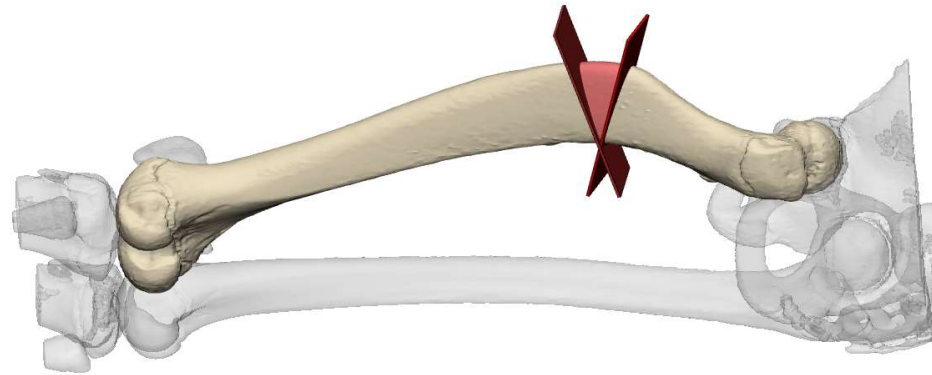
Surgical Theater – Vascular Reconstruction



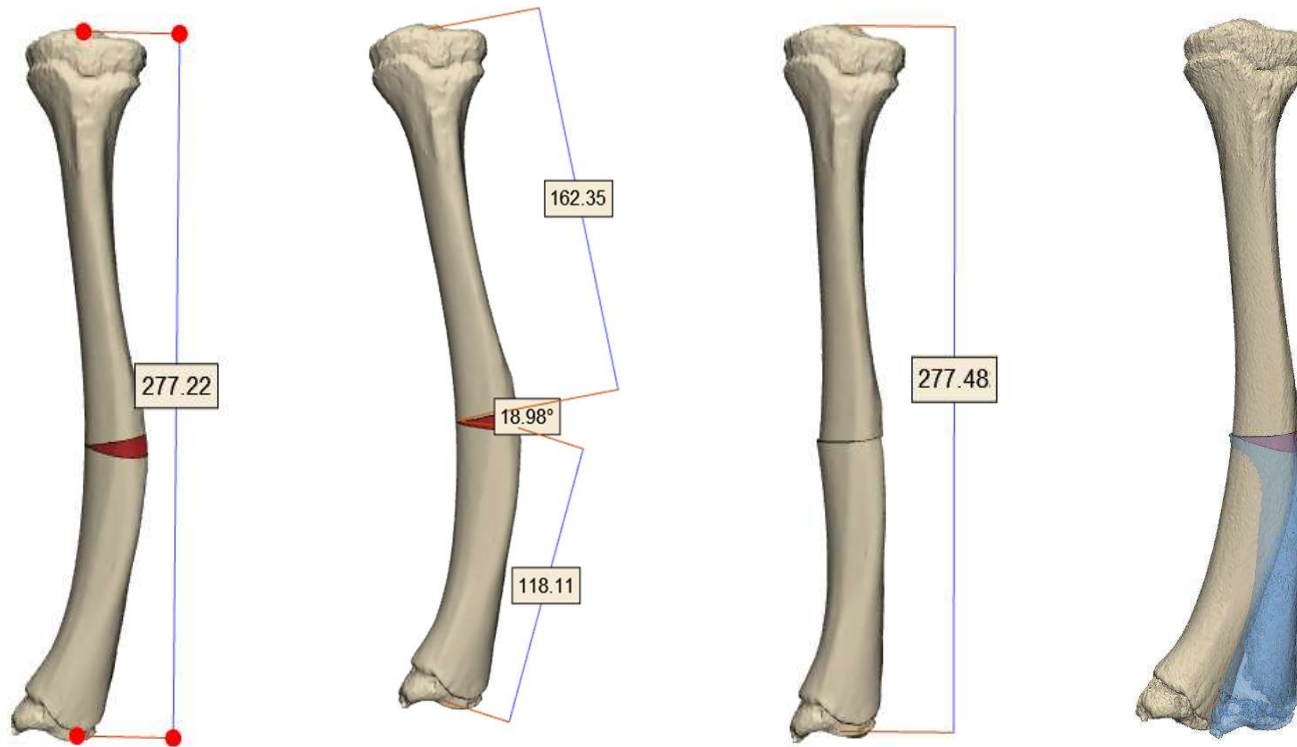
Ruptured Bronchus



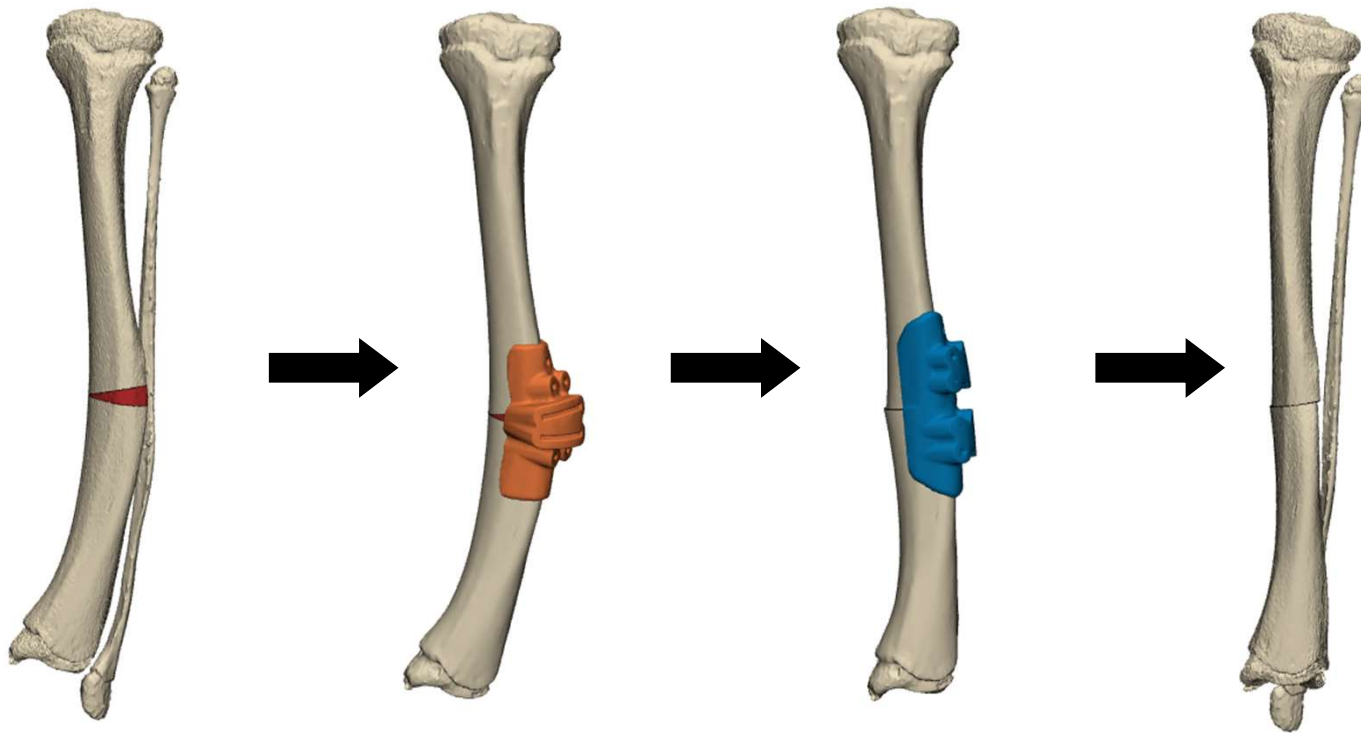
3D Printing – Pediatric Surgery



Pediatric Surgery – Deformity Correction



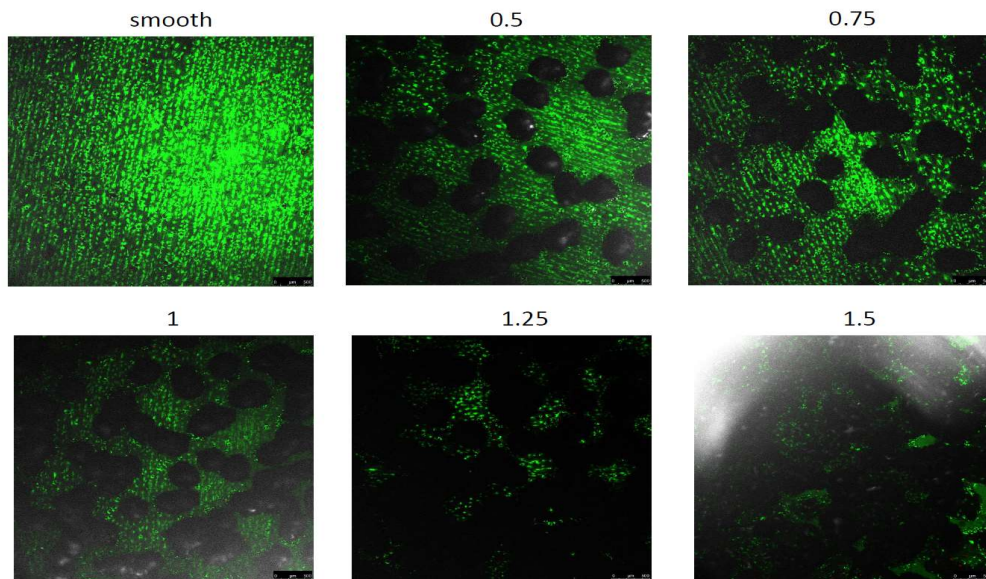
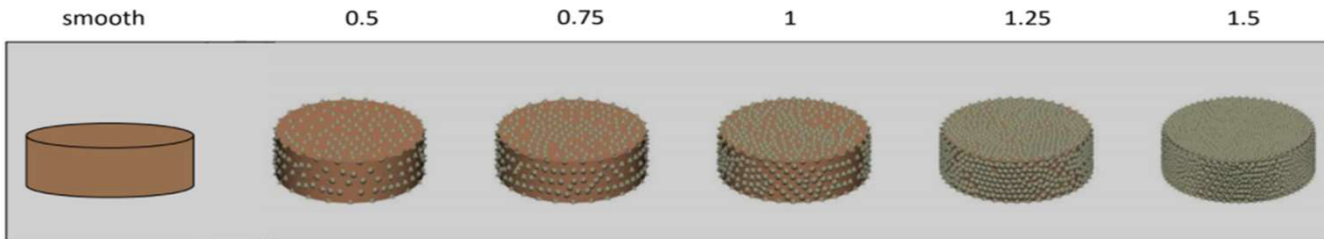
Pediatric Surgery – Deformity Correction



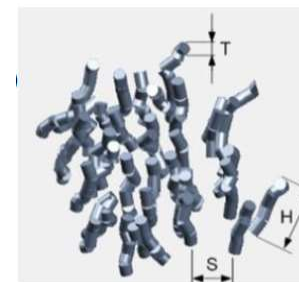
Patient-Specific Splint



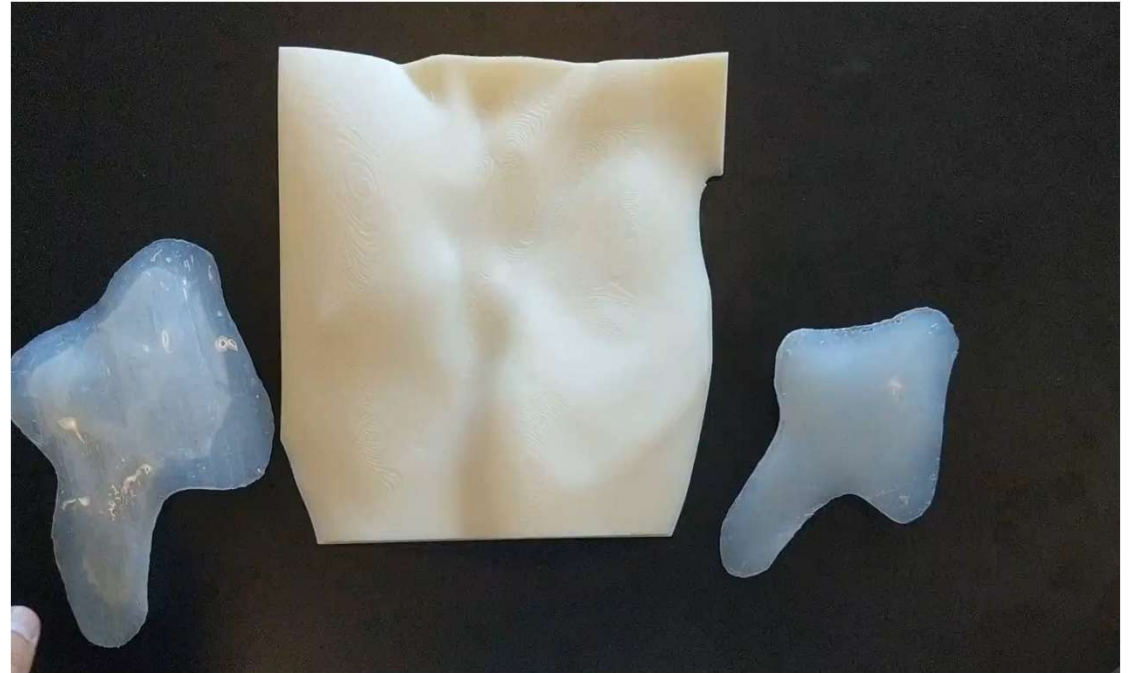
Bone Regeneration Research



Surface Area Pin/Total [%]					
smooth	1.5	1.25	1	0.75	0.5
0%	50%	61%	68%	80%	77%



Into the Future – New Materials Printed Silicon



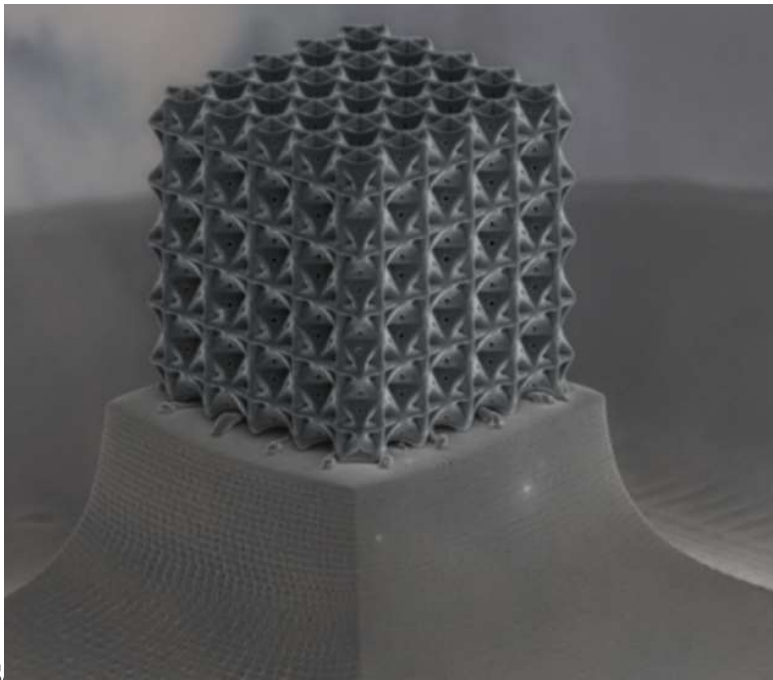
Into the Future – New Materials Advanced Polymers



▶ KUMOVIS



Into the Future – New Materials Printed Carbon

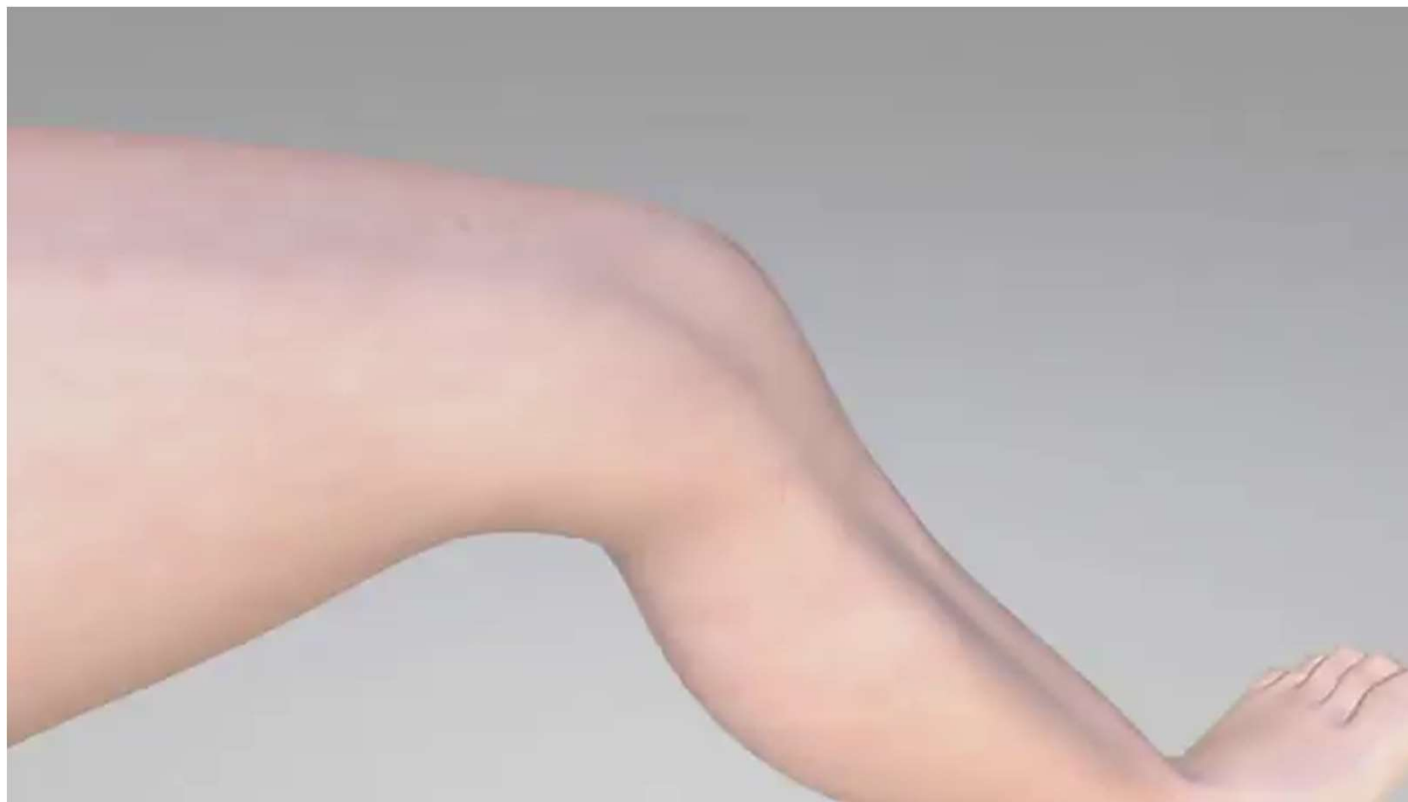


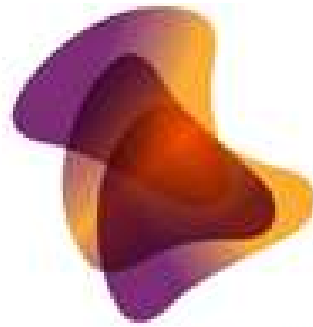
Into the Future – New Materials Printed Bio-Ceramic & Degradable



A.D.A.M. bone implants are **biodegradable**. They stimulate **osteogenesis** and are fully replaced by the bone tissue over time. Therefore, there is no need for reoperation to extract implant elements

Into the Future – Automation





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