



Surgical Technique and Videos

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Proximal Femur Prosthesis

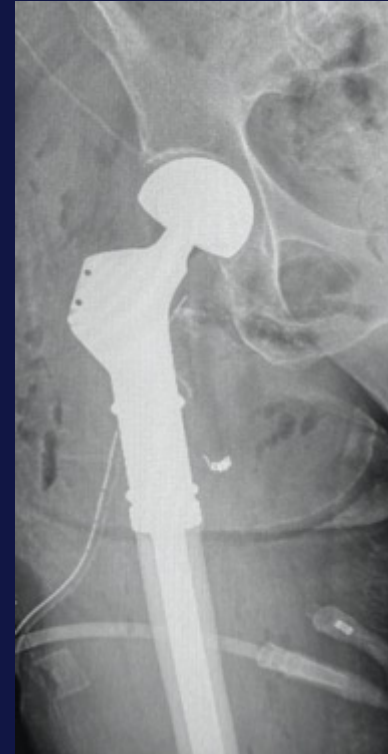
- Primary bone tumors
- Pathologic fractures
- Complex revision THA





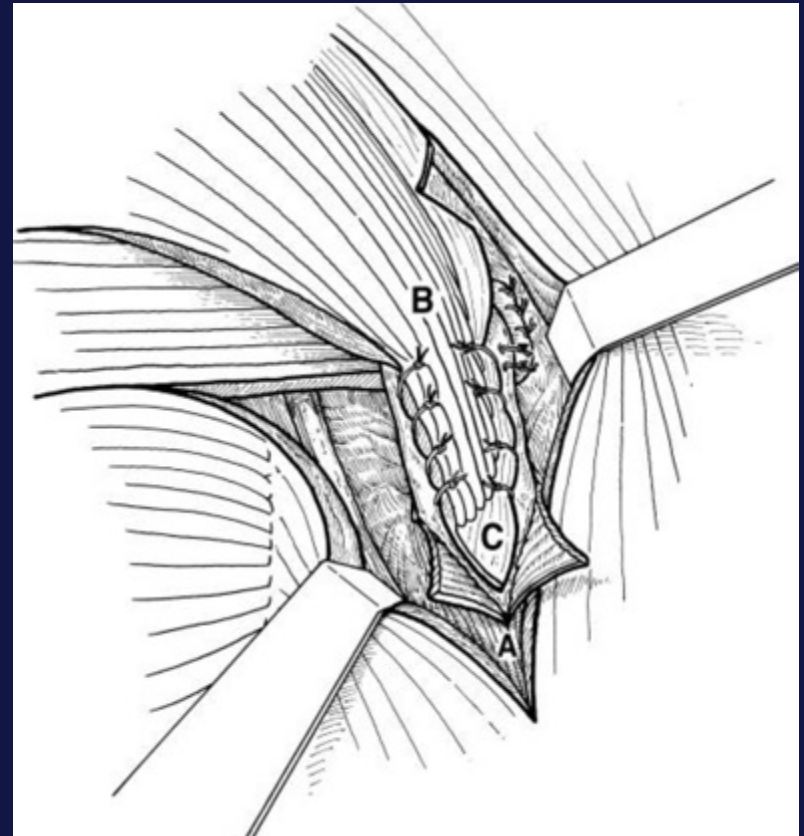
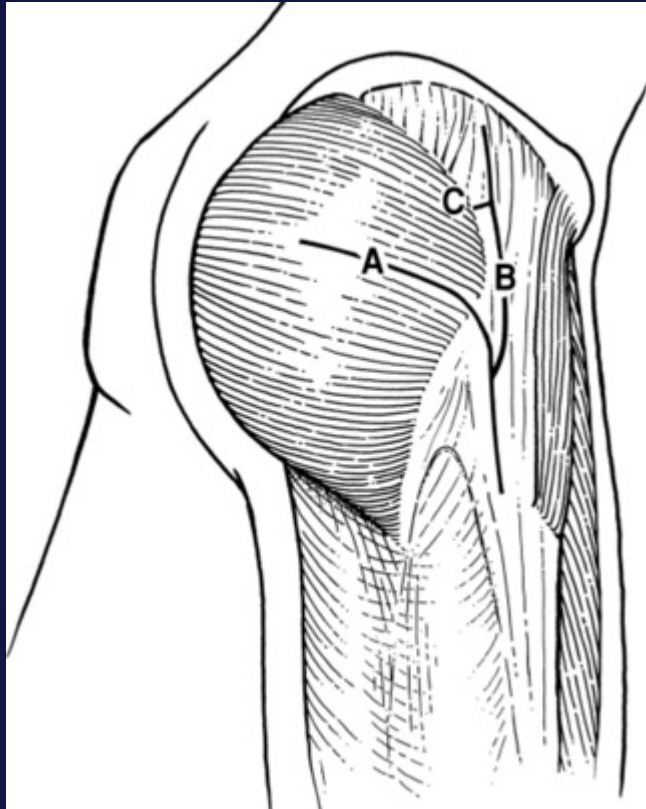
Proximal Femur Prosthesis

- Resection to negative margins
- Resection of tumor soft tissue extension
- Gluteous Medious resection may be needed



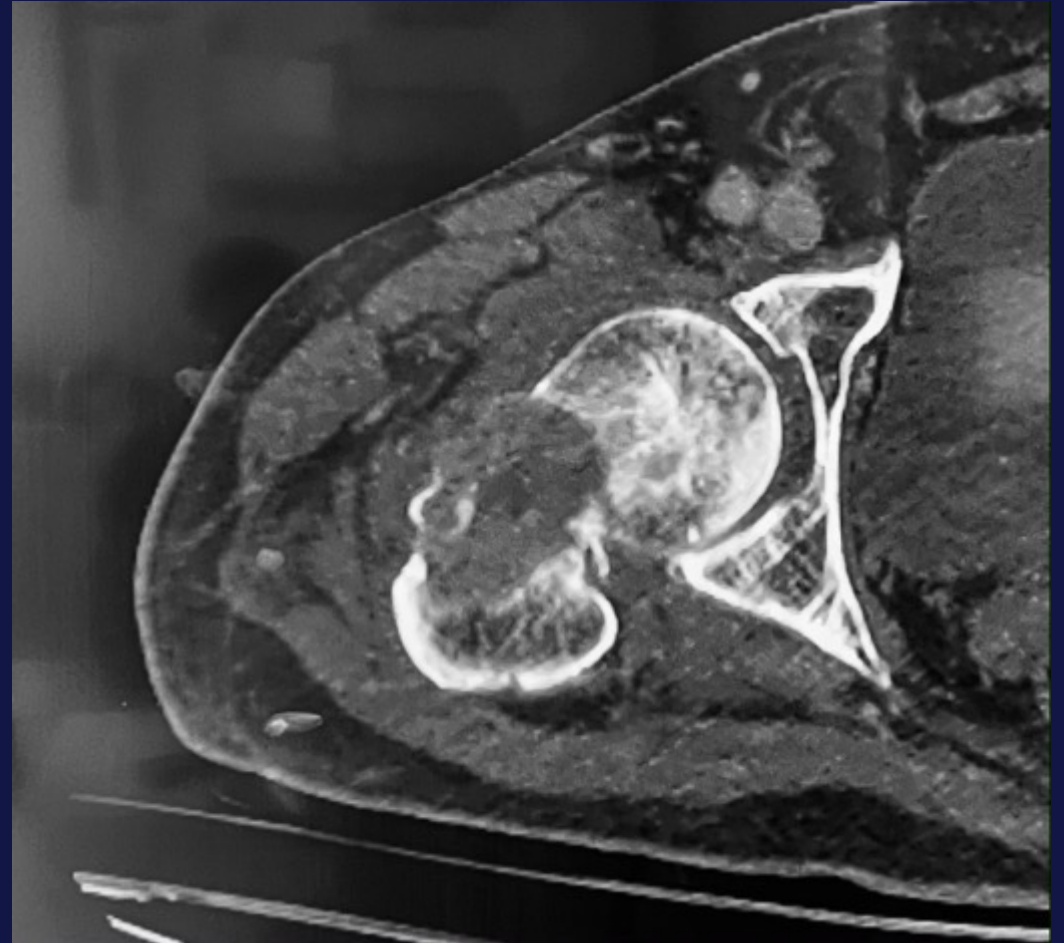


Surgical Technique: Transfer of the Anterior Portion of the Gluteus Maximus Muscle for Abductor Deficiency of the Hip



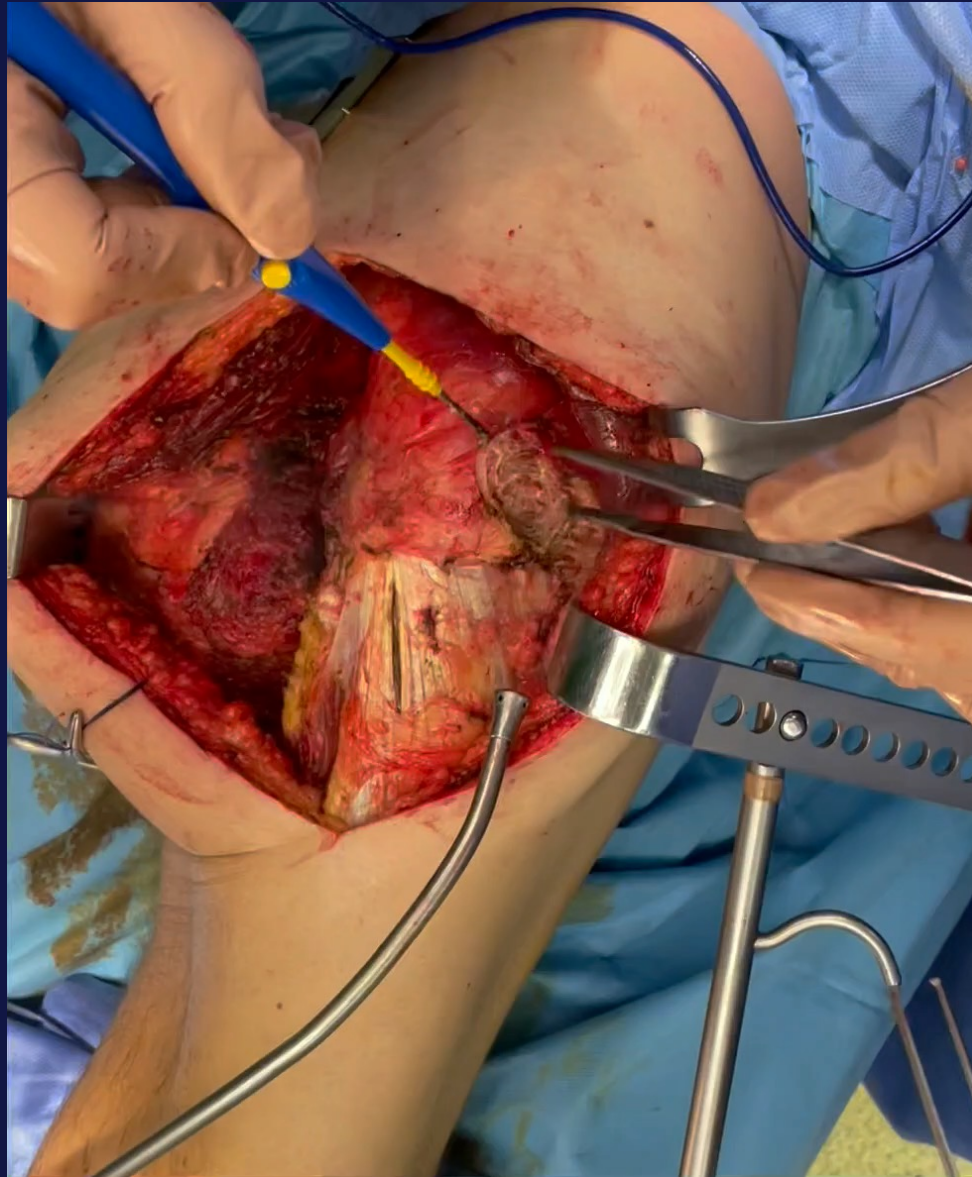


52 y old M. Primary Bone Sarcoma Pathologic Fracture



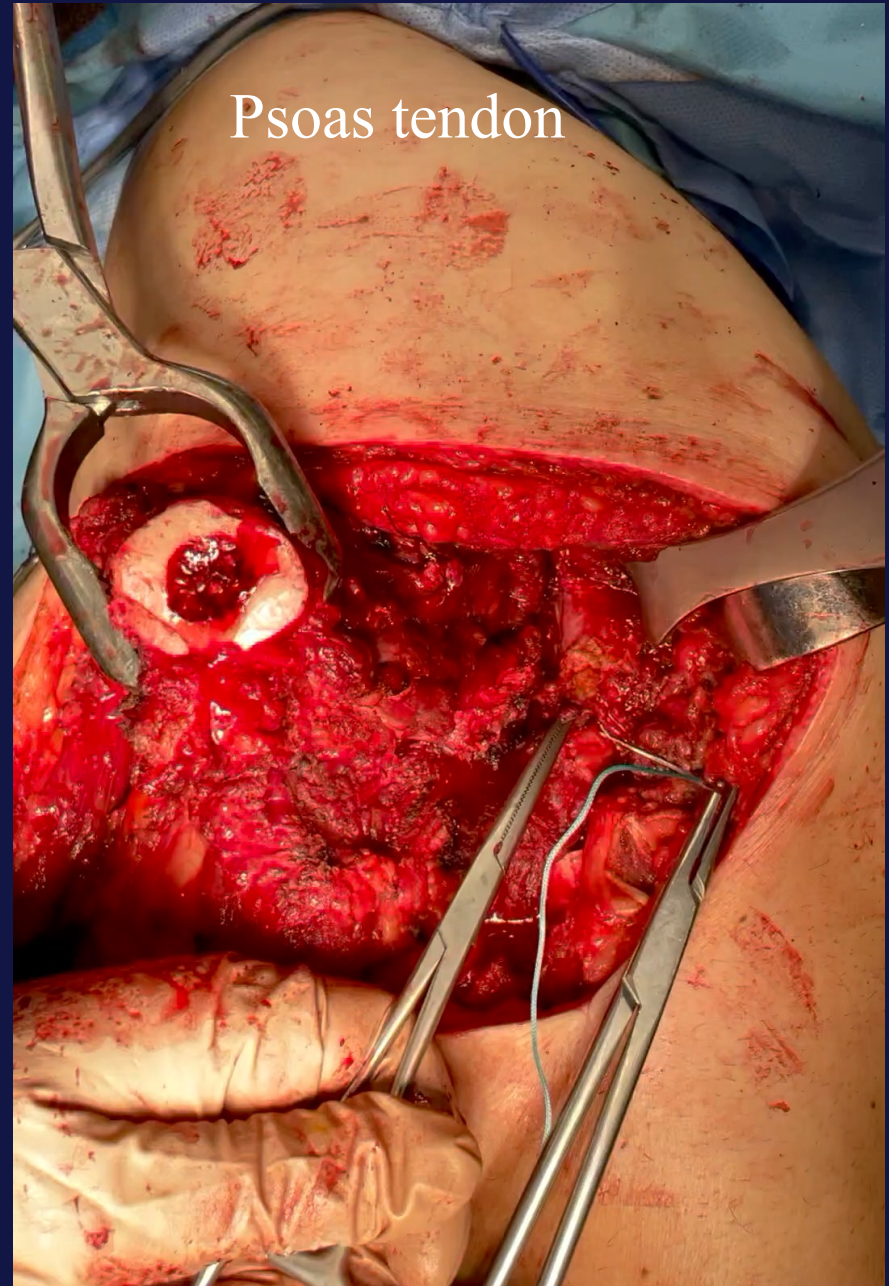
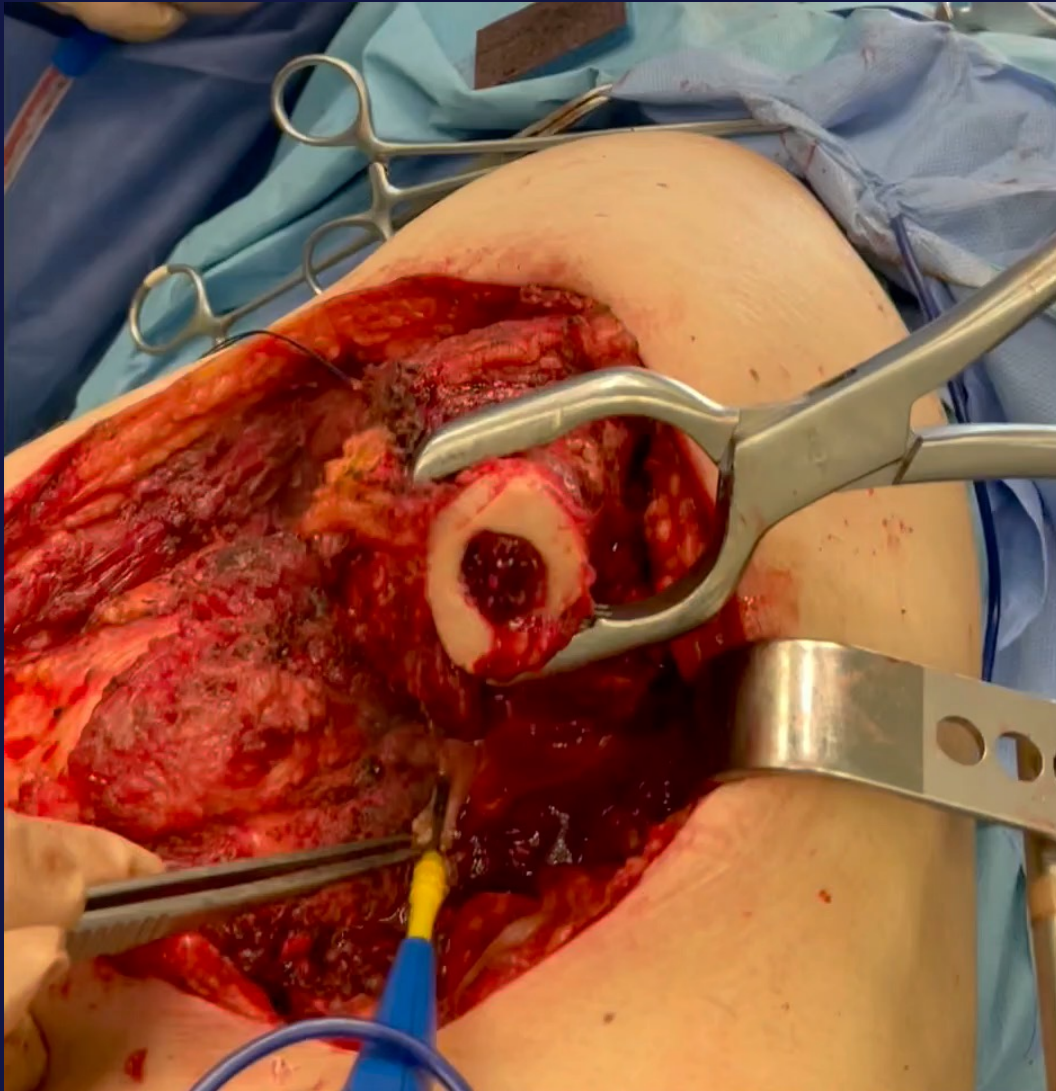


Gluteus Medius deivision



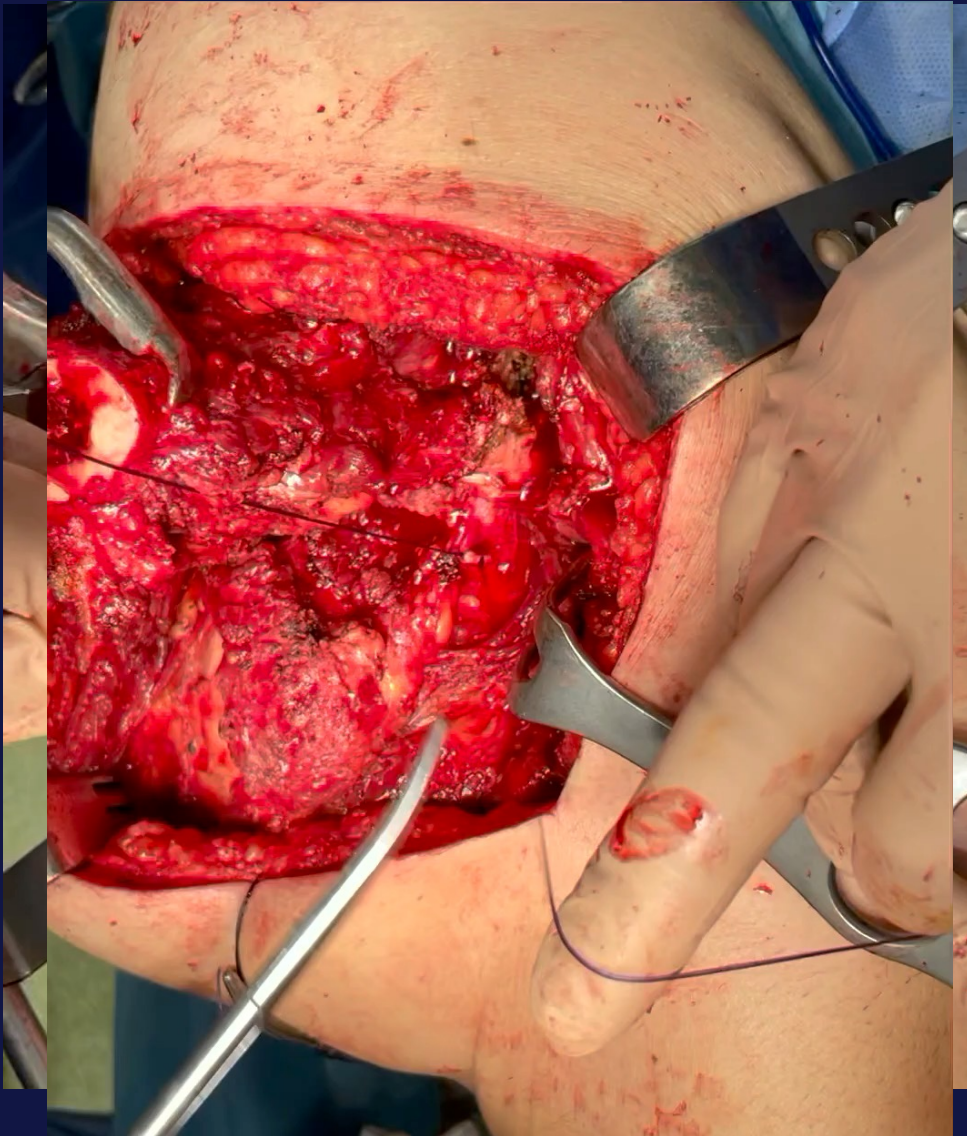


D femur Osteotomy and Adductors Released from Femur

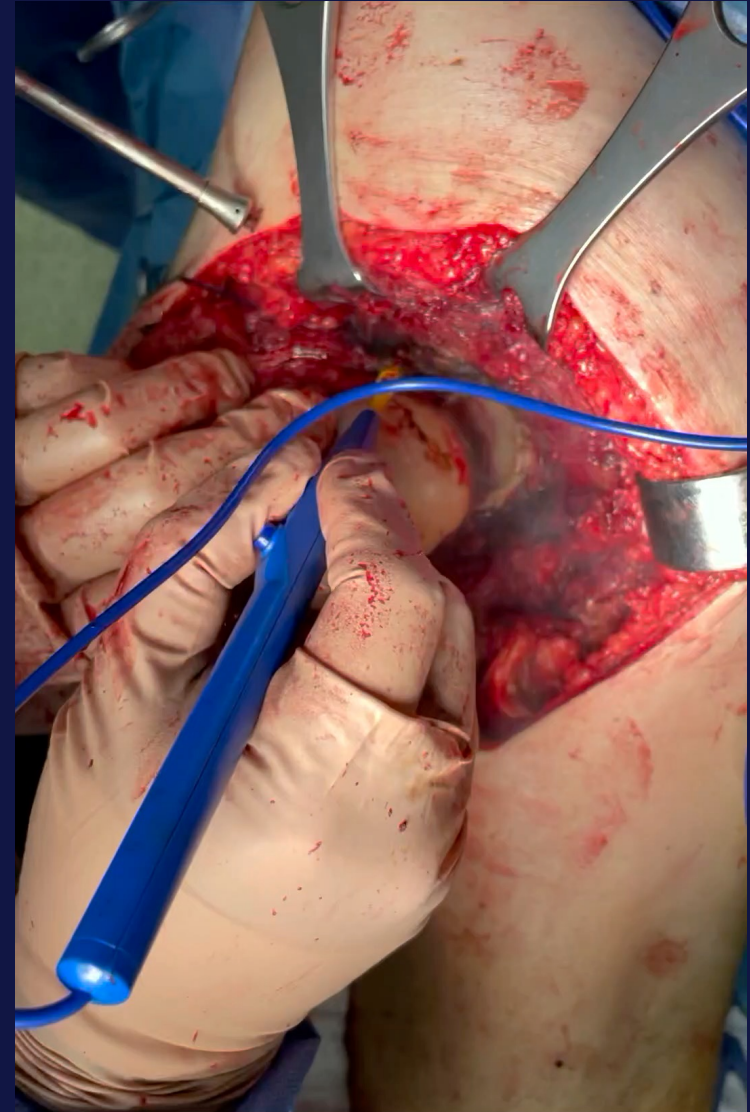




Deep Femoral Artery & Feeding Vessels Ligation

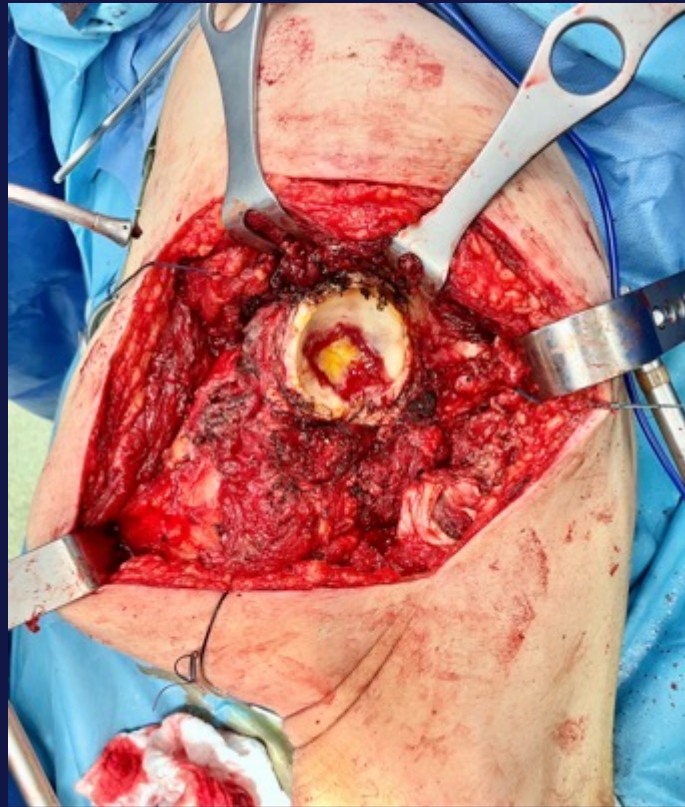
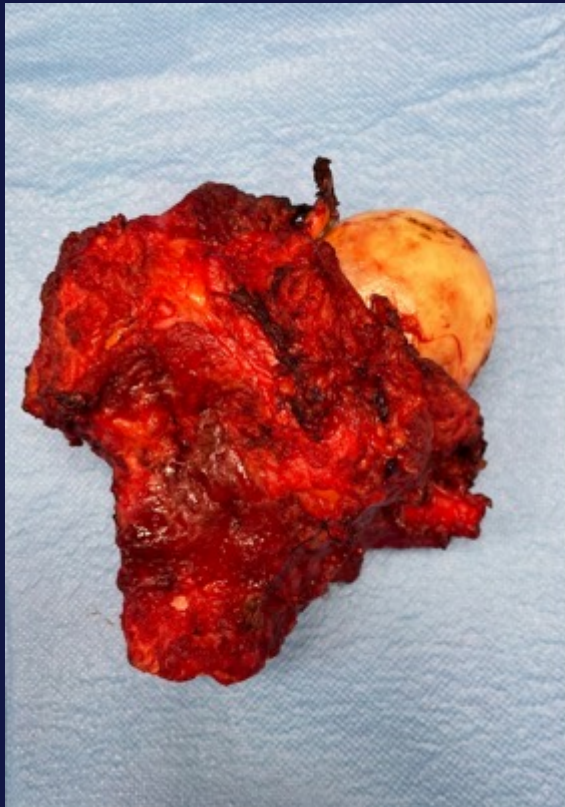


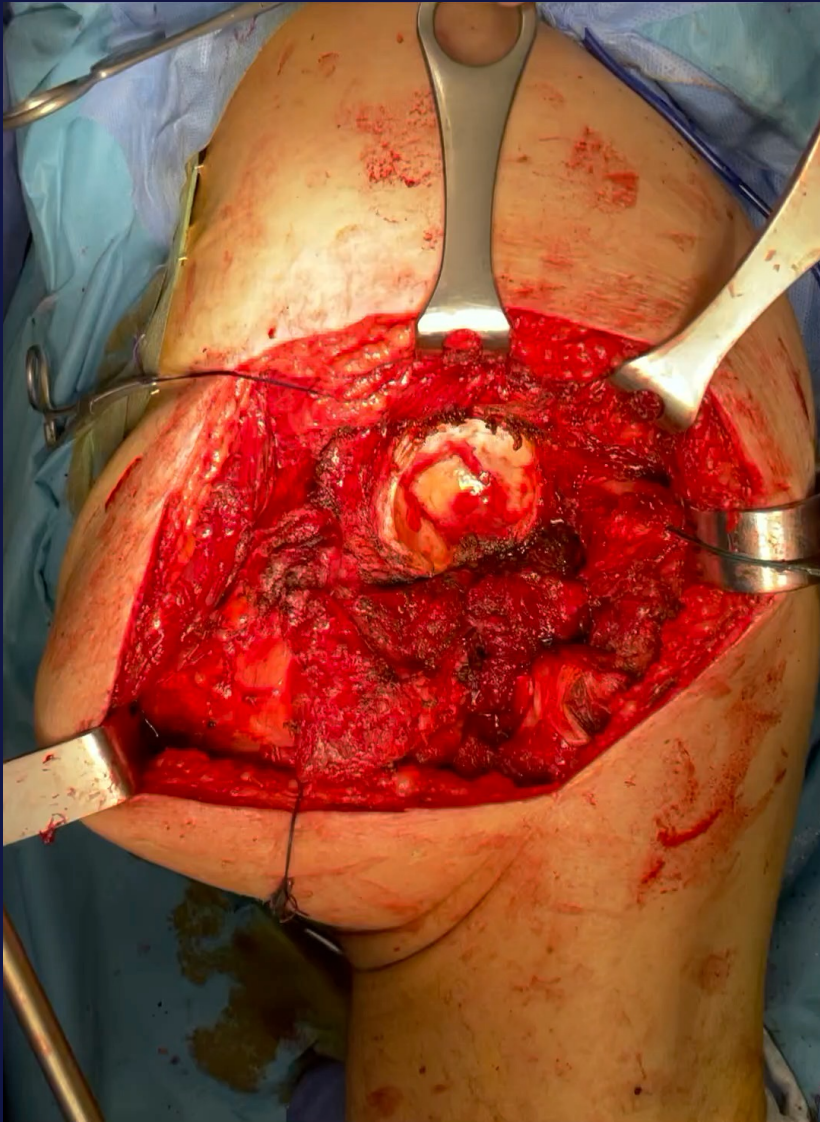
Hip Capcule Incision from Labrum

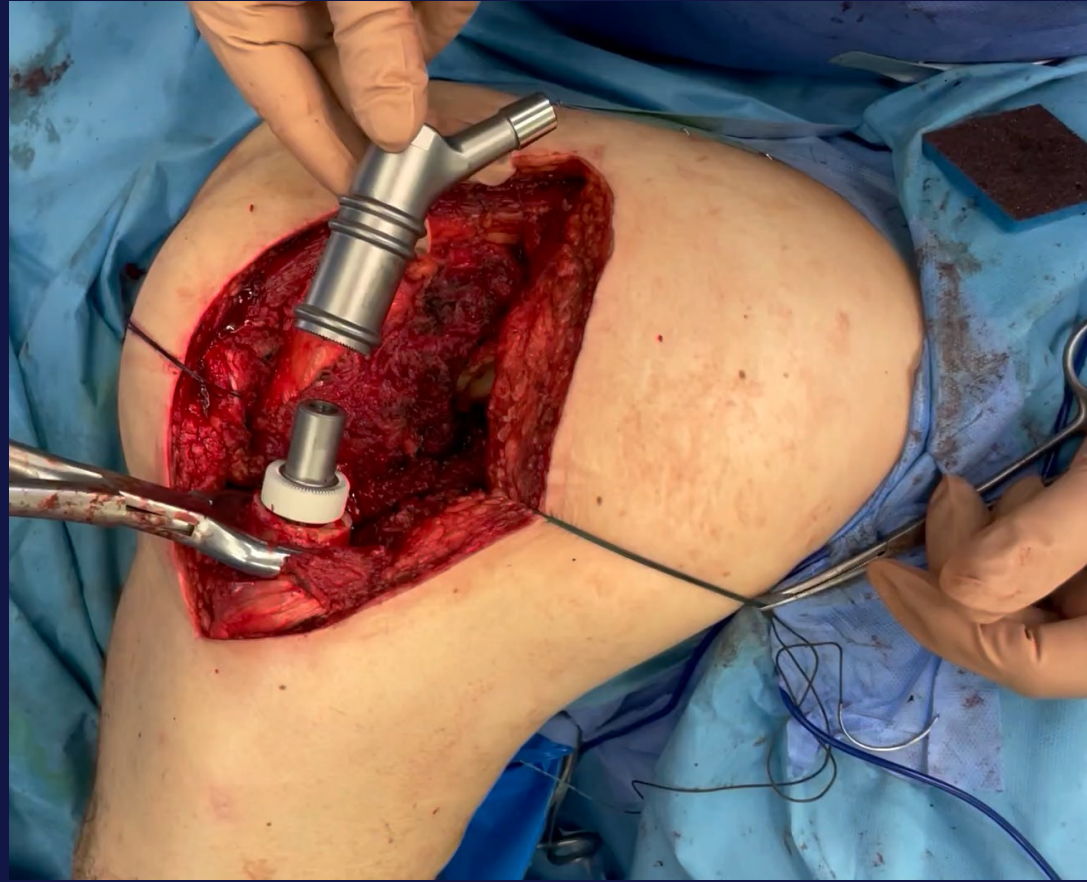




Prox Femur Resection with Hip Capsule and Gluteous Medious & Minor Excised

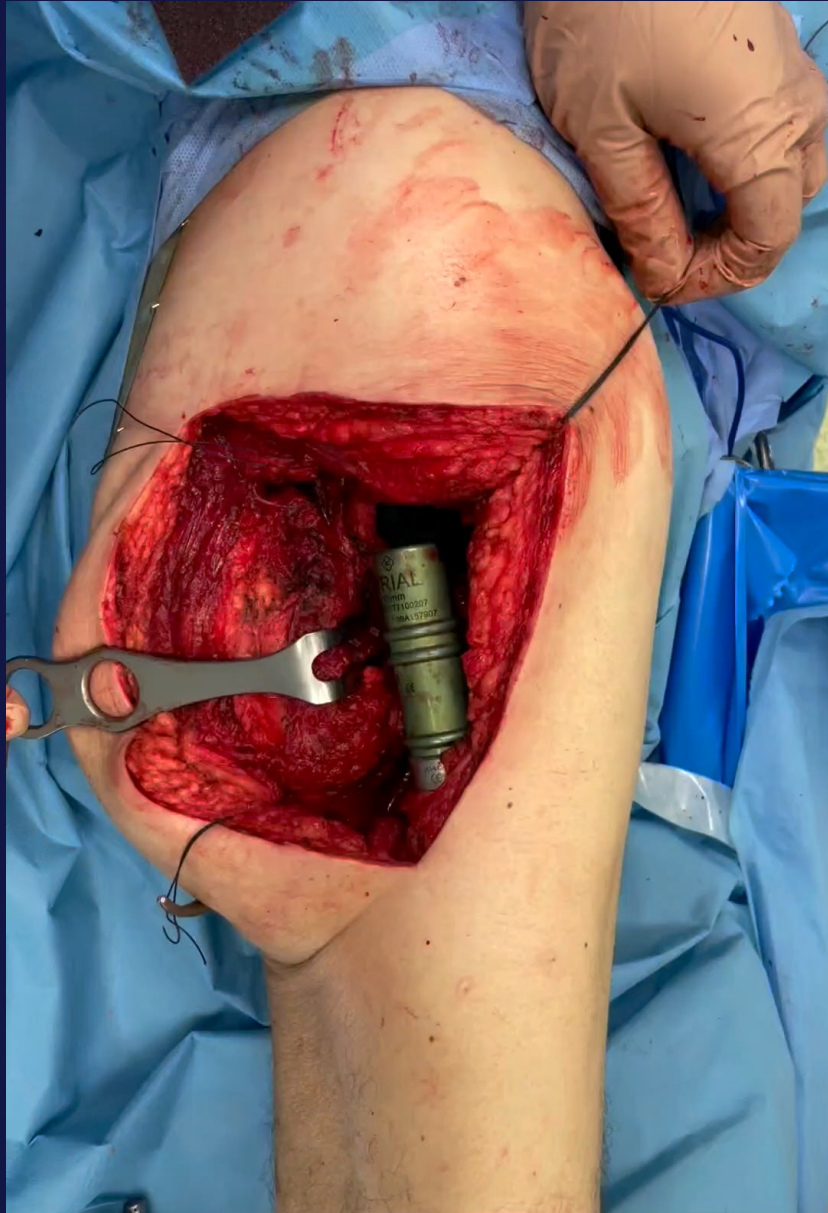








Transfer of Gluteous Maximus



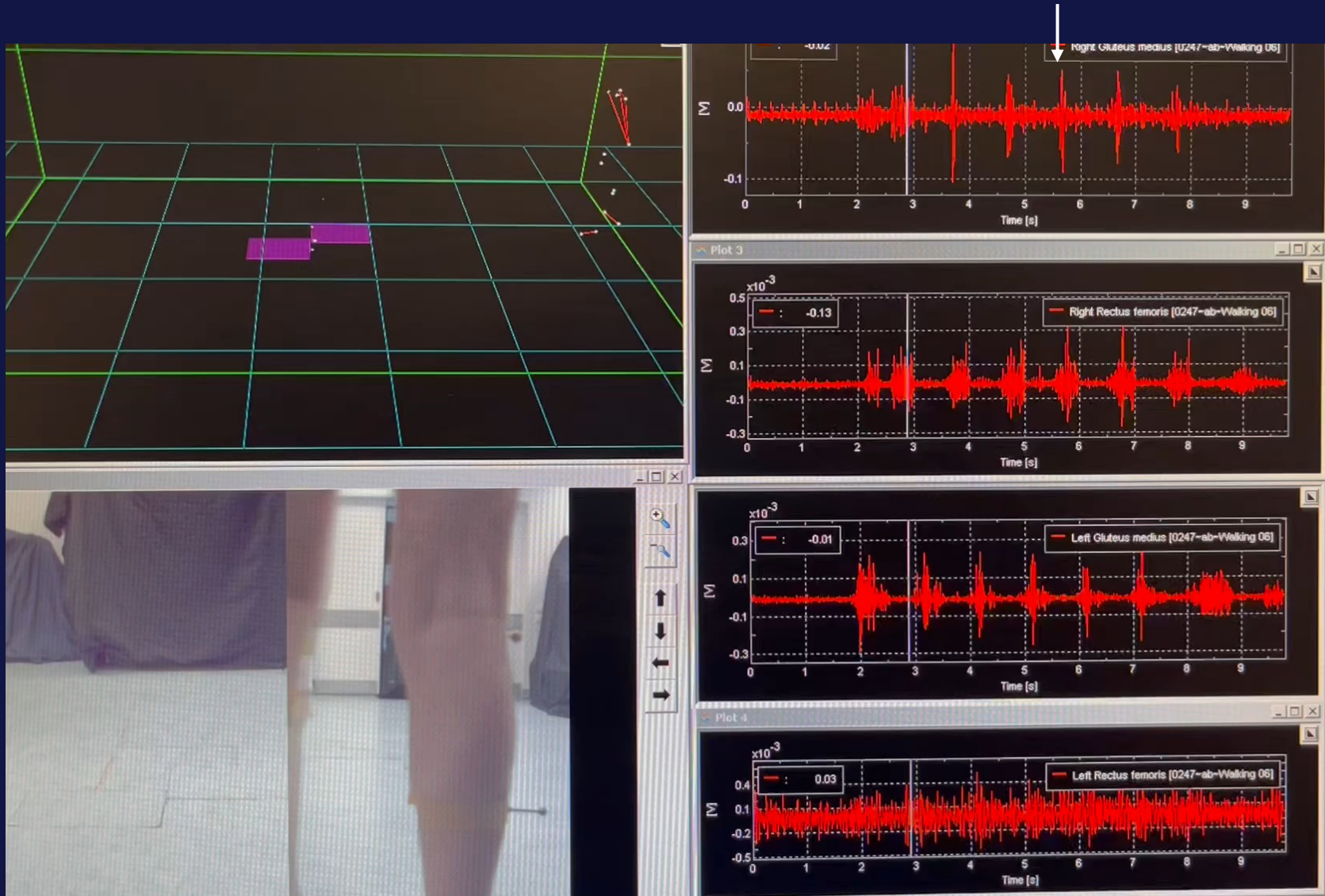


Prox. Femur Hemiarthroplasty and Trevira Tube for soft tissue attachment



GAIT EMG

Firing of Gluteous Max



Walking Parameters

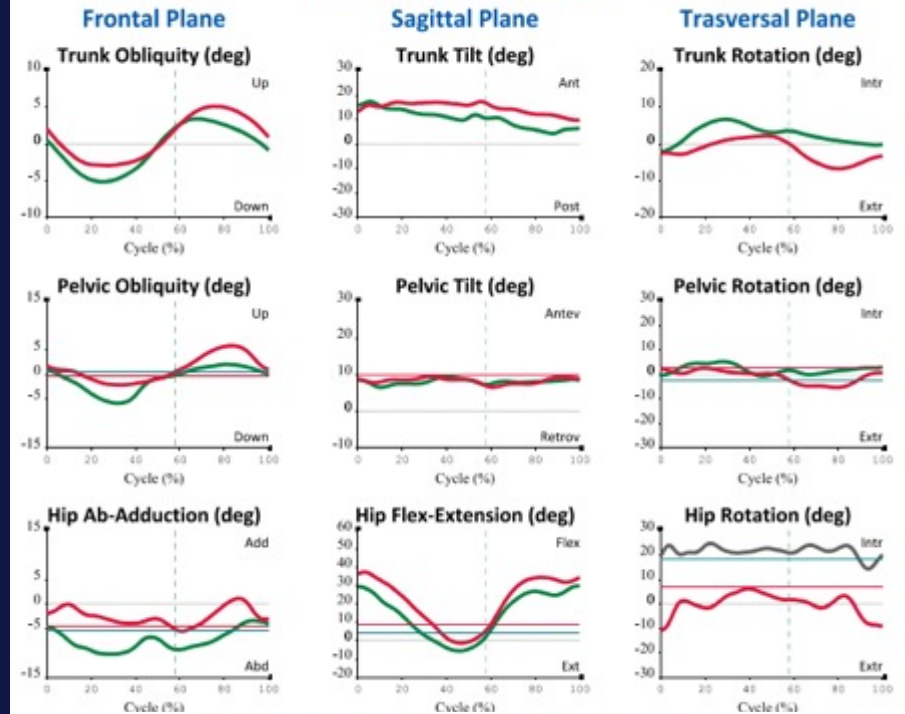
BTS MOTION ANALYSIS LAB
Integrated solutions for multifactorial clinical movement evaluation



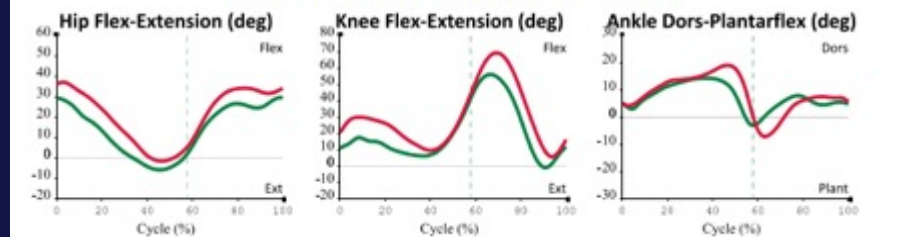
Temporal Parameters	RIGHT LIMB	LEFT LIMB	NORMAL VALUES
Stride Time (s):	0.99 ± .02	0.95 ± .01	1.1 ± .09
Stance Time (s):	0.57 ± .02	0.59 ± .01	0.65 ± .07
Swing Time (s):	0.42 ± .03		0.44 ± .05
Stance Phase (%):	57.74 ± 2.08	62.31 ± 1.34	58.98 ± 1.97
Swing Phase (%):	42.26 ± 2.08		40.03 ± 3.56
Double Support Phase (%):	7.78 ± 3.09	10.06 ± 1.43	10.27 ± 3.09
Mean Velocity (m/s):		1 ± .2	1.2 ± .2
Mean Velocity (%height):		56.43 ± 12.61	80 ± 5
Cadence (steps/min):		123.9 ± .9	114 ± 4.2

Spatial Parameters	RIGHT LIMB	LEFT LIMB	NORMAL VALUES
Stride Length (m):	1.29 ± .03	1.23 ± .03	1.36 ± .11
Stride Length (%height):	71.3 ± 1.51	67.98 ± 1.5	
Step Length (m):	0.53 ± .01	0.64 ± .01	0.62 ± .05
Step Width (m):		0.22 ± .01	0.08 ± .05

Kinematic Analysis



Kinetic Analysis (Sagittal Plane)



Transfer of Gluteous Maximus Hip Abduction Strength



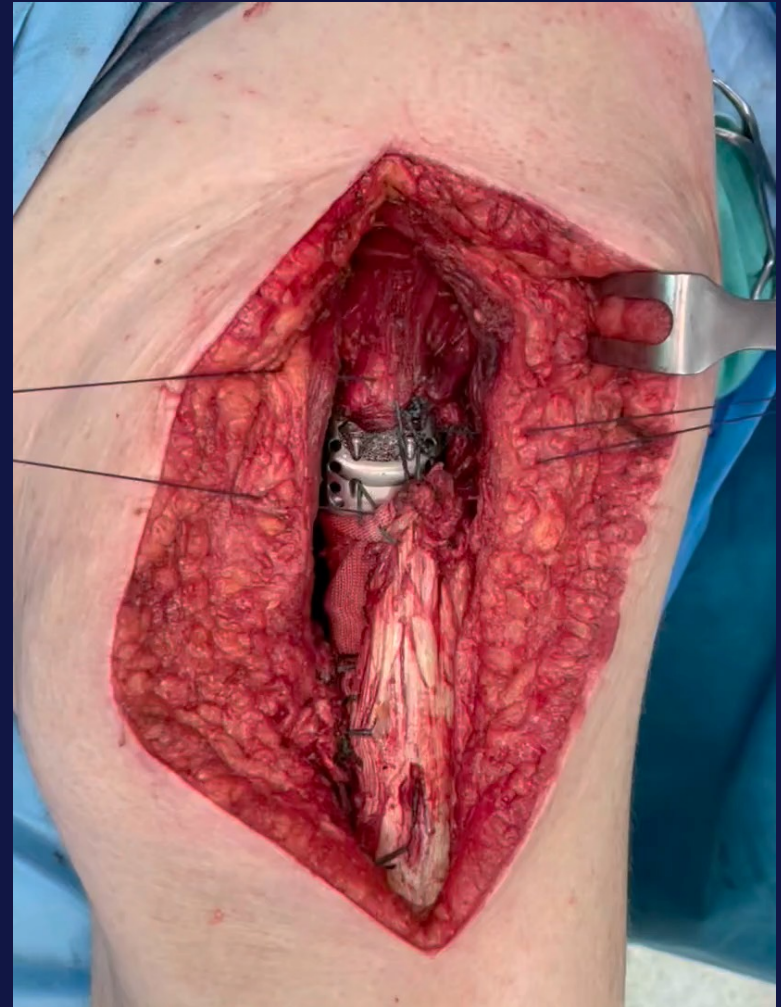
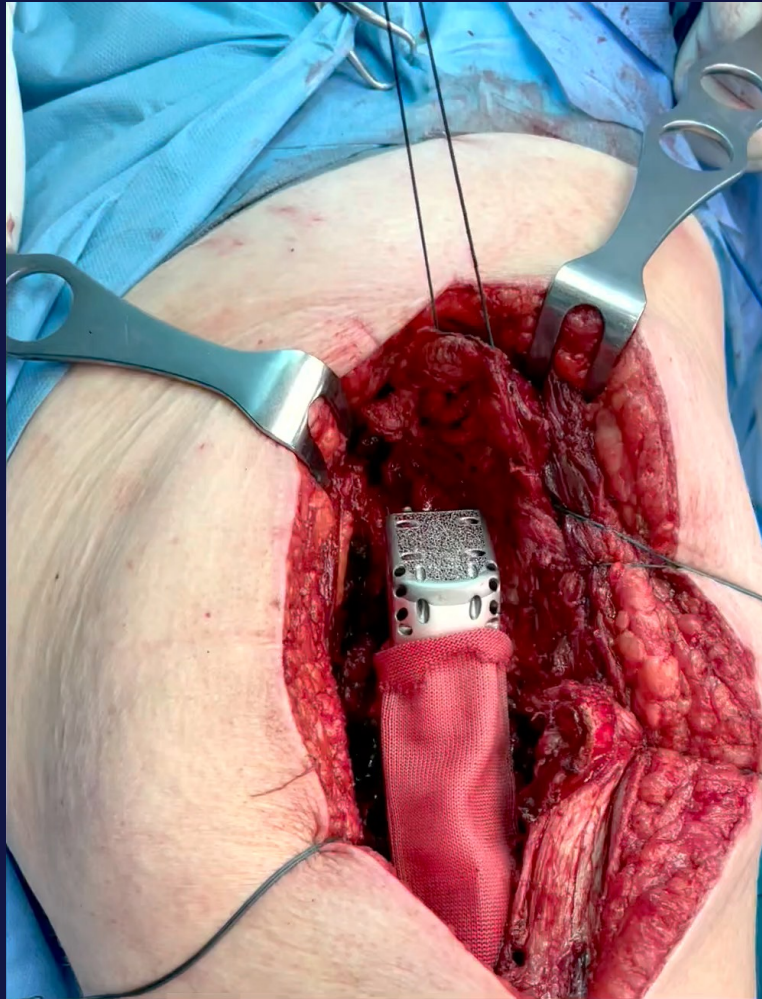


62 y old. Breast Ca. Path Fracture. Single MD lesion

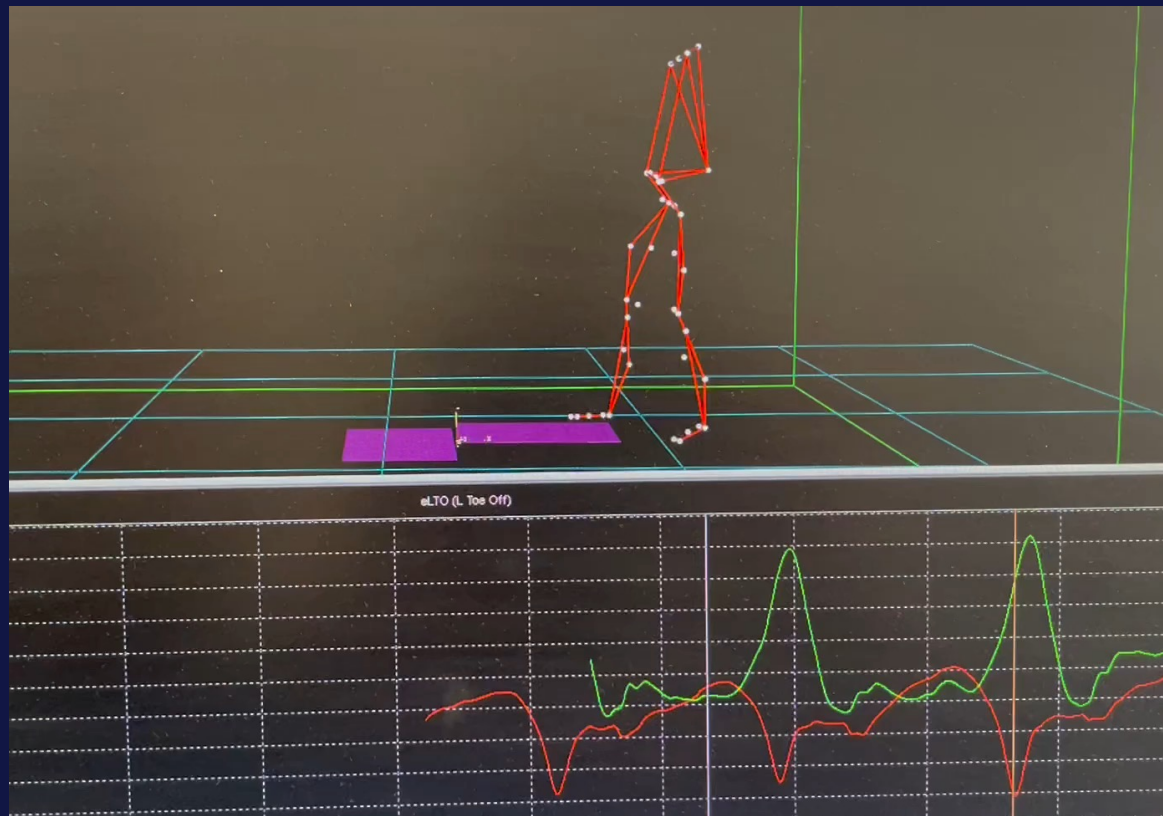
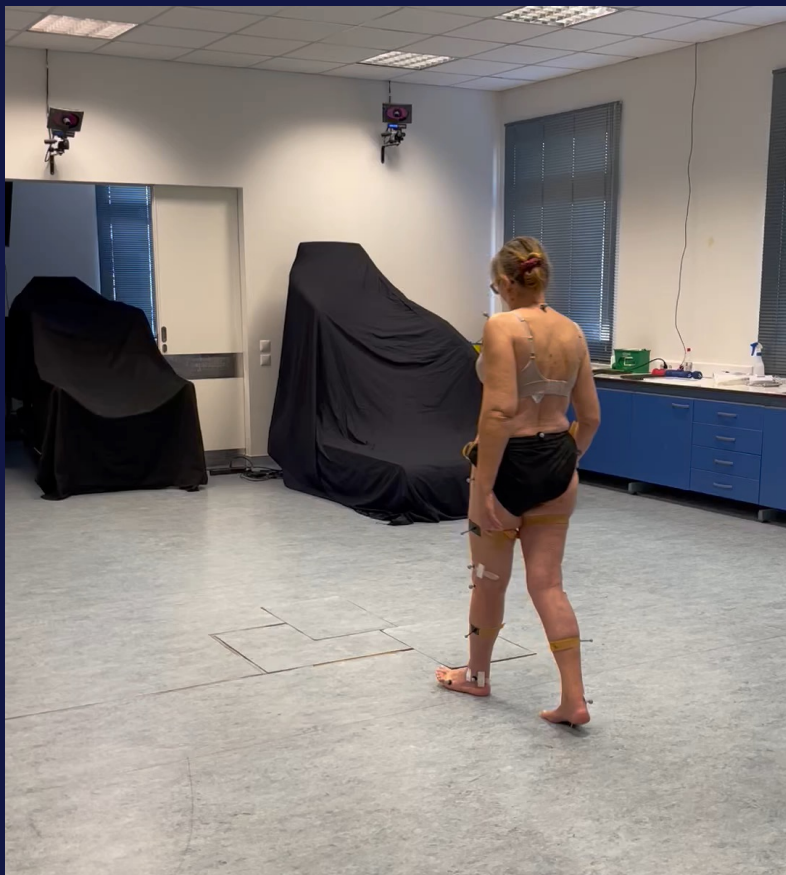




Gluteous Medious pulled down



GAIT analysis



Walking Parameters

BTS MOTION ANALYSIS LAB
Integrated solutions for multifactorial clinical movement evaluation



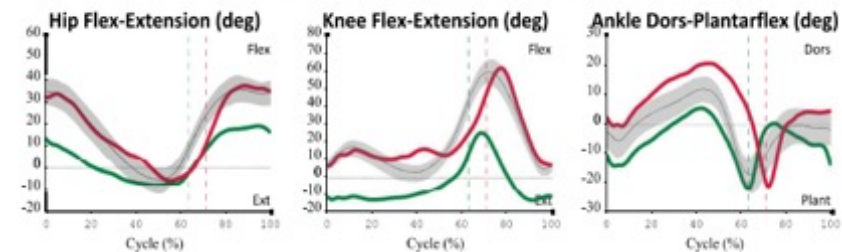
Temporal Parameters

	RIGHT LIMB	LEFT LIMB	NORMAL VALUES
Stride Time (s):	1.83 ± 0	1.8 ± 0	1.1 ± .09
Stance Time (s):	1.16 ± 0	1.28 ± 0	0.65 ± .07
Swing Time (s):	0.67 ± 0	0.52 ± 0	0.44 ± .05
Stance Phase (%):	63.32 ± 0	71.16 ± 0	58.98 ± 1.97
Swing Phase (%):	36.68 ± 0	28.84 ± 0	40.05 ± 3.36
Double Support Phase (%):	17.03 ± 0	16.37 ± 0	10.27 ± 3.09
Mean Velocity (m/s):	0.5 ± 0		1.2 ± .2
Mean Velocity (%height):	31.37 ± 0		80 ± 5
Cadence (steps/min):	66 ± 0		114 ± 4.2

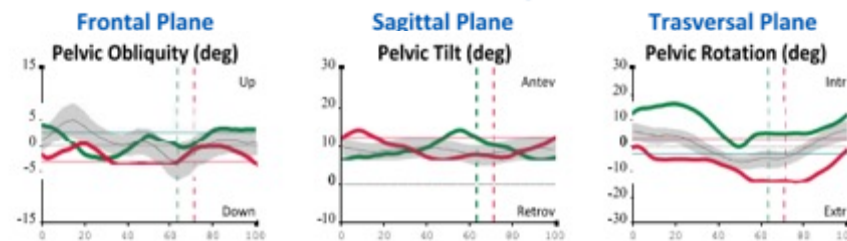
Spatial Parameters

	RIGHT LIMB	LEFT LIMB	NORMAL VALUES
Stride Length (m):	1.08 ± 0	1.06 ± 0	1.36 ± .11
Stride Length (%height):	65.11 ± 0	63.9 ± 0	
Step Length (m):	0.47 ± 0	0.48 ± 0	0.62 ± .05
Step Width (m):	0.17 ± 0		0.08 ± .05

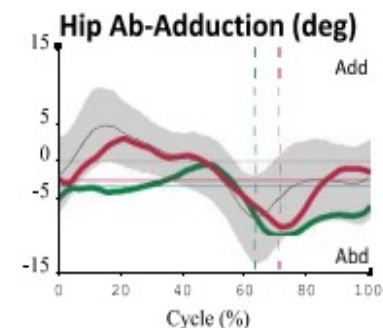
Kinetic Analysis (Sagittal Plane)



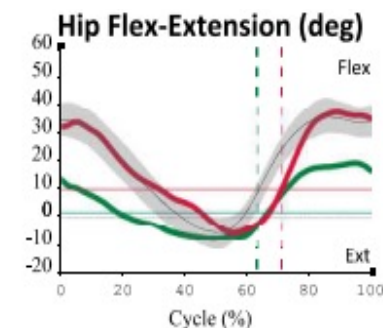
Kinematic Analysis



Frontal Plane



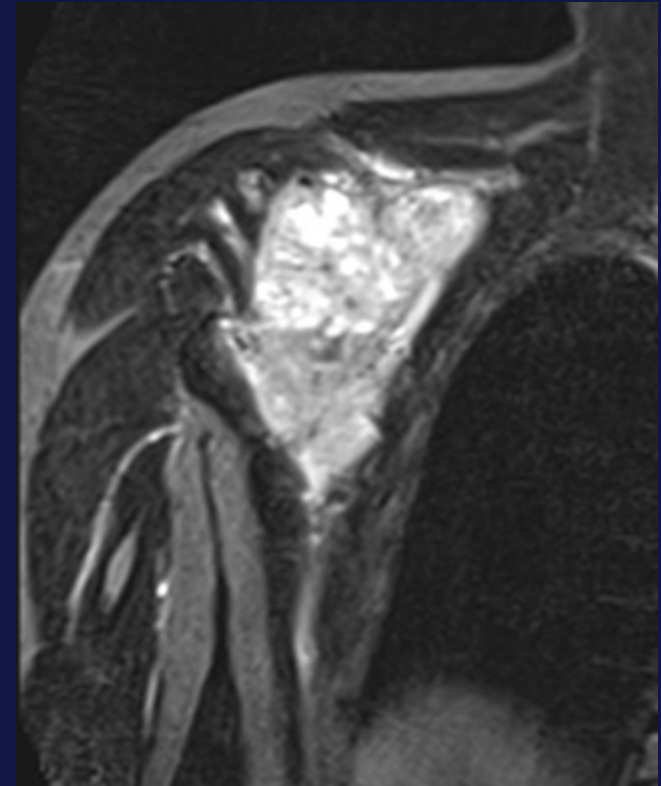
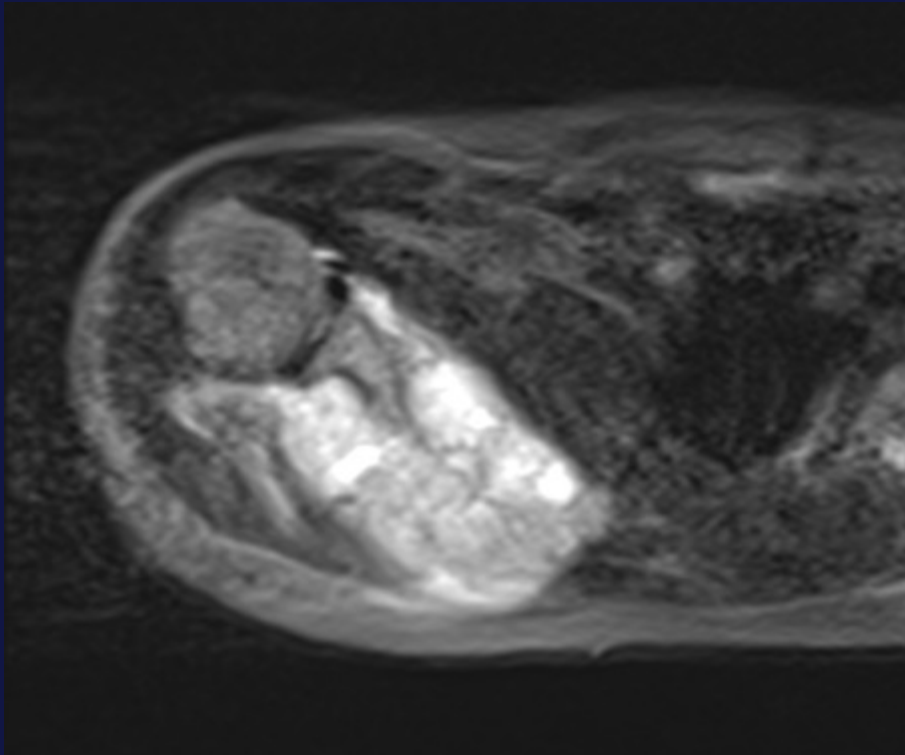
Sagittal Plane





15 year old M- Ewing sarcoma – Scapula

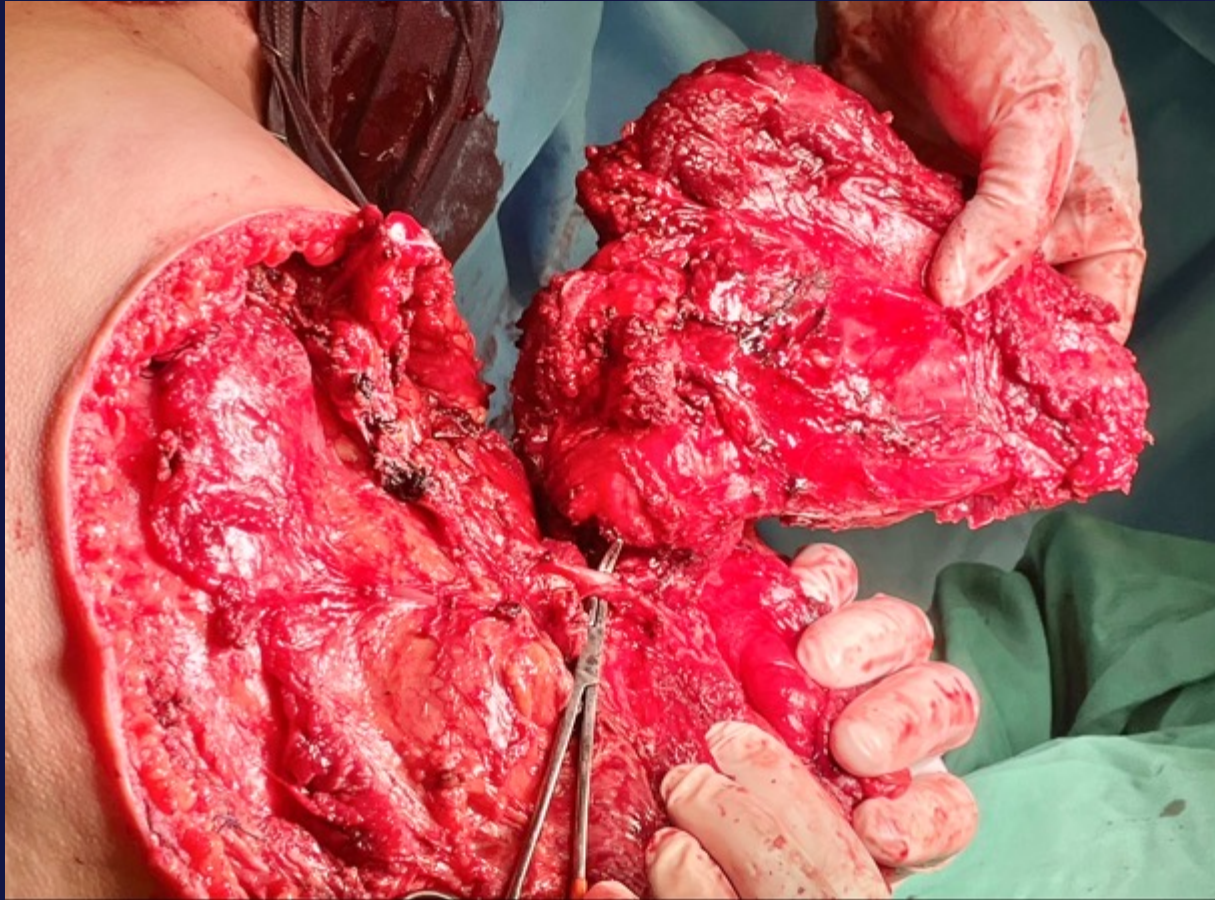
Pr-op Chemotherapy





Surgical Approach





Axillary nerve



3D Custom made prosthesis





3D Custom made prosthesis





Lattisimus Dorsi Flap

