Overcorrected Prosthesis for Total Shoulder Arthroplasty

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Standard

Overcorrected
Stress patients CT Data Bone segmentation Virtual Surgery

Best prosthesis

FE Model Prototype

Stress
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Objectives
• Design different overcorrection angles for overcorrected prostheses
• Create FE models for 5 patients using preoperative CT scans
• Perform virtual surgery
• Compare different designs
• Present the best overcorrected design for each patient

Tasks
• Understand problem
• Create 5 patient-specific FE models from CT data (Imaging)
• Design prototypes of overcorrected implants (CAD)
• Input the prototypes into the 5 FE Models
• Compare standard and overcorrected designs and identify limitations
• Discuss with surgeon
• Choose best overcorrected implants