

CT scan and patient-specific instrumentation (PSI) for total shoulder replacement

Information to help you understand the planning process before surgery

Before your surgery

During your consultation, your surgeon will explain the operation, its possible risks and complications, and the expected benefits. They will ask for your informed consent. Informed consent is required before surgery.

Please ask any questions you have. Your surgeon will make sure you have the information you need before you decide whether to proceed.

Your CT scan

Your surgeon will refer you for a CT scan of the shoulder being treated, including the elbow. The scan gives detailed images that help your surgeon plan the operation using specialised, AI-assisted 3D software.

Careful planning helps your surgeon choose the intended position and fixation of the shoulder replacement in the bone.

Your patient-specific instrument (PSI)

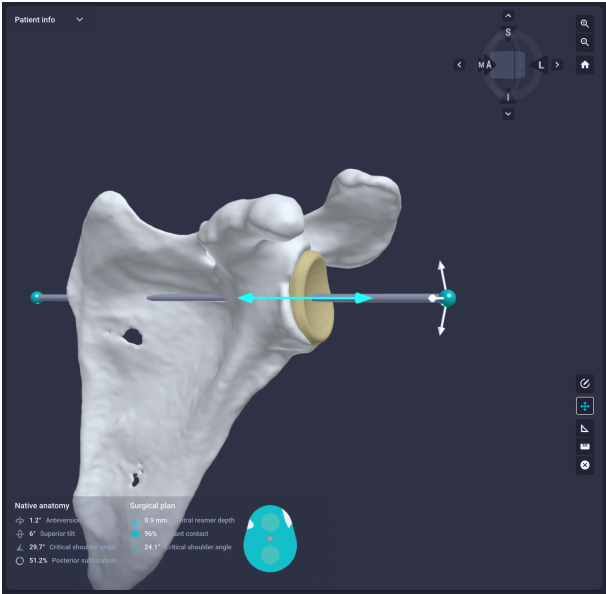
A patient-specific instrument is made for you from the CT-based surgical plan. It is produced with a specialised 3D printer, then packaged and sterilised so it is ready for your operation.

During surgery, your surgeon uses the PSI as a guide to help position the implant according to the surgical plan.

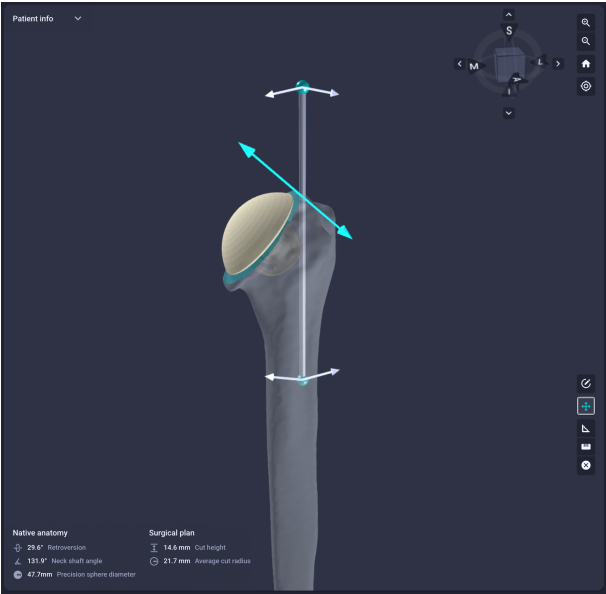
The images on the next page show the planning software and examples of the 3D-printed patient-specific guides.

From the surgical plan to patient-specific guides

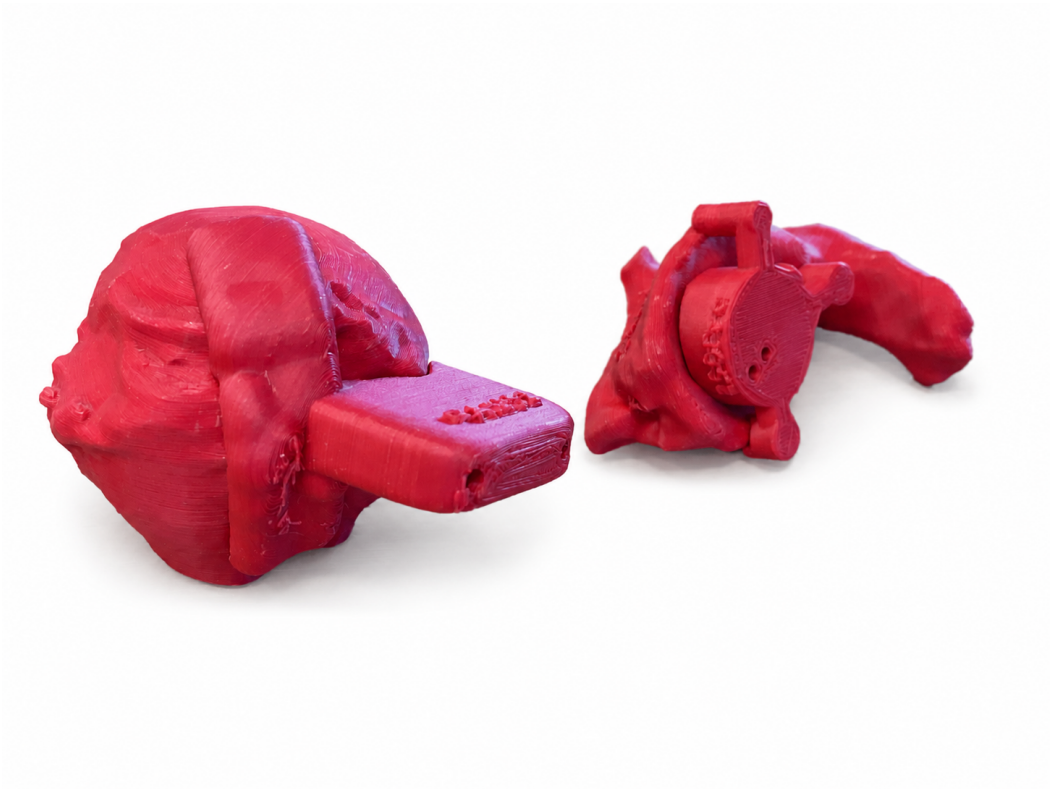
The planning images show the shoulder socket (glenoid) and upper arm bone (humerus). The photograph below shows 3D-printed models with patient-specific guides fitted to the shoulder anatomy.



Glenoid planning



Humerus planning



3D-printed models showing patient-specific shoulder guides