



Patient Specific Templates: Knee CT Scan Protocol

This document outlines the optimal CT scan protocol to enable us to produce high-quality patient specific templates for knees. Please note that all scans must be collected no sooner than 6 months prior to surgery.

1) Position the patient supine, taking into consideration that all axial sections must have the same field of view, whilst maintaining the same reconstruction centre and the same table height. Ensure that the region of interest (i.e. the knee) is fully extended and manipulate the other knee into 90°s of flexion.

2) Scout from hip to ankle antero-posteriorly and medio-laterally using the parameters listed below or the closest possible depending on available options. The patient should not move on the bed during the entire scan period. Example images are provided below in Figures 1 and 2.

Slice thickness	1.0 mm
Total number of slices	200
CT-Scan Range	20 cm (10 cm proximal and distal to the joint line)
Slice increment reconstructed	1.0 mm
Matrix	512 x 512
Gantry Tilt	0°
Reconstruction Algorithm	No 3D reconstruction needed
Special Requirements	No filter or image intensification required

3) Save the two Scanogram images and the CT data in DICOM format and in the same folder.

4) Upload the data to the [SurgiNovi Portal](#) or, alternatively, email it to info@surginovi.co.uk.

5) For bilateral cases repeat all the instructions above whilst saving each knee to a different folder.

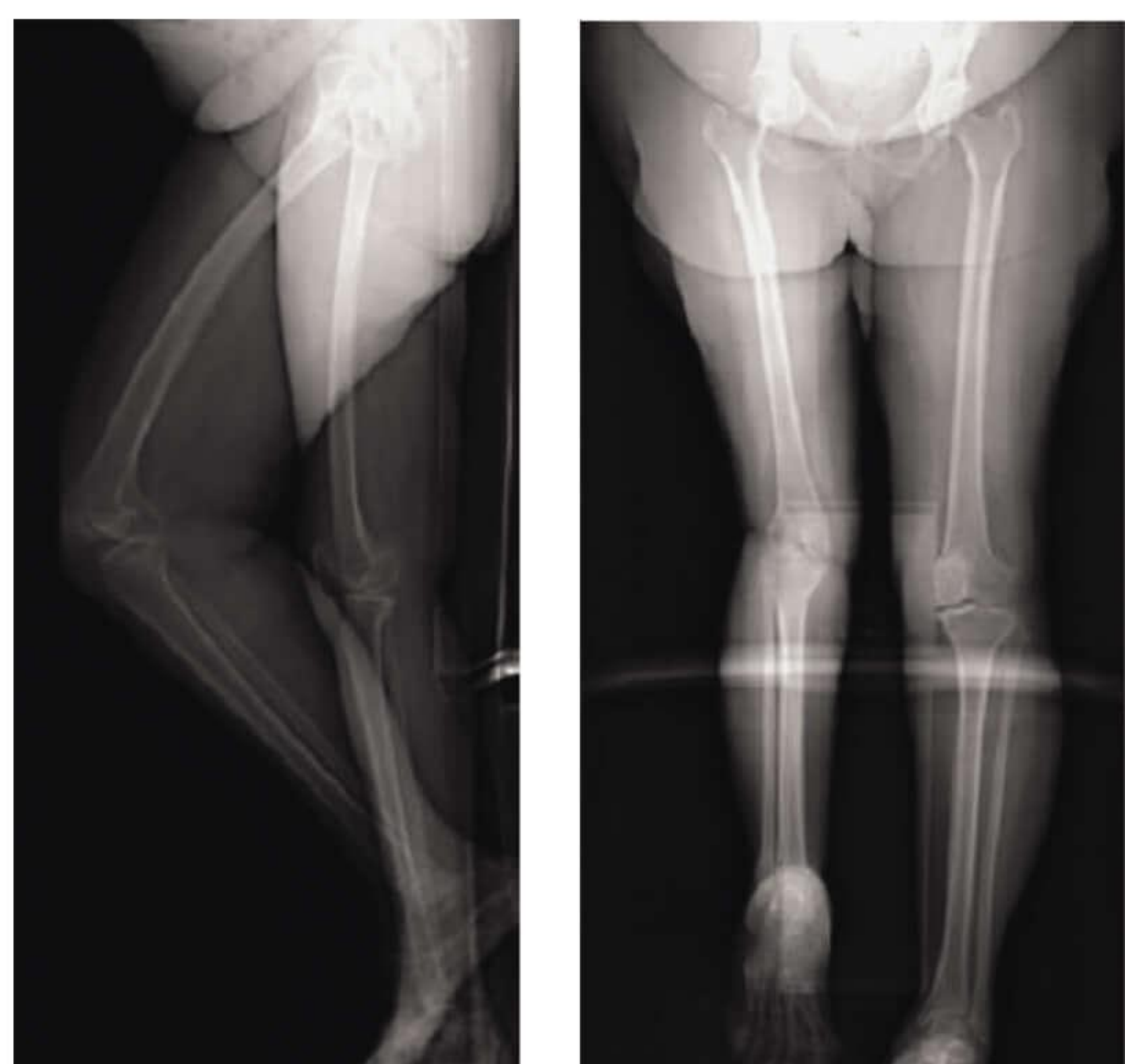


Figure 1: Exemplar Scanogram images in (a) antero-posterior and (b) medio-lateral position.

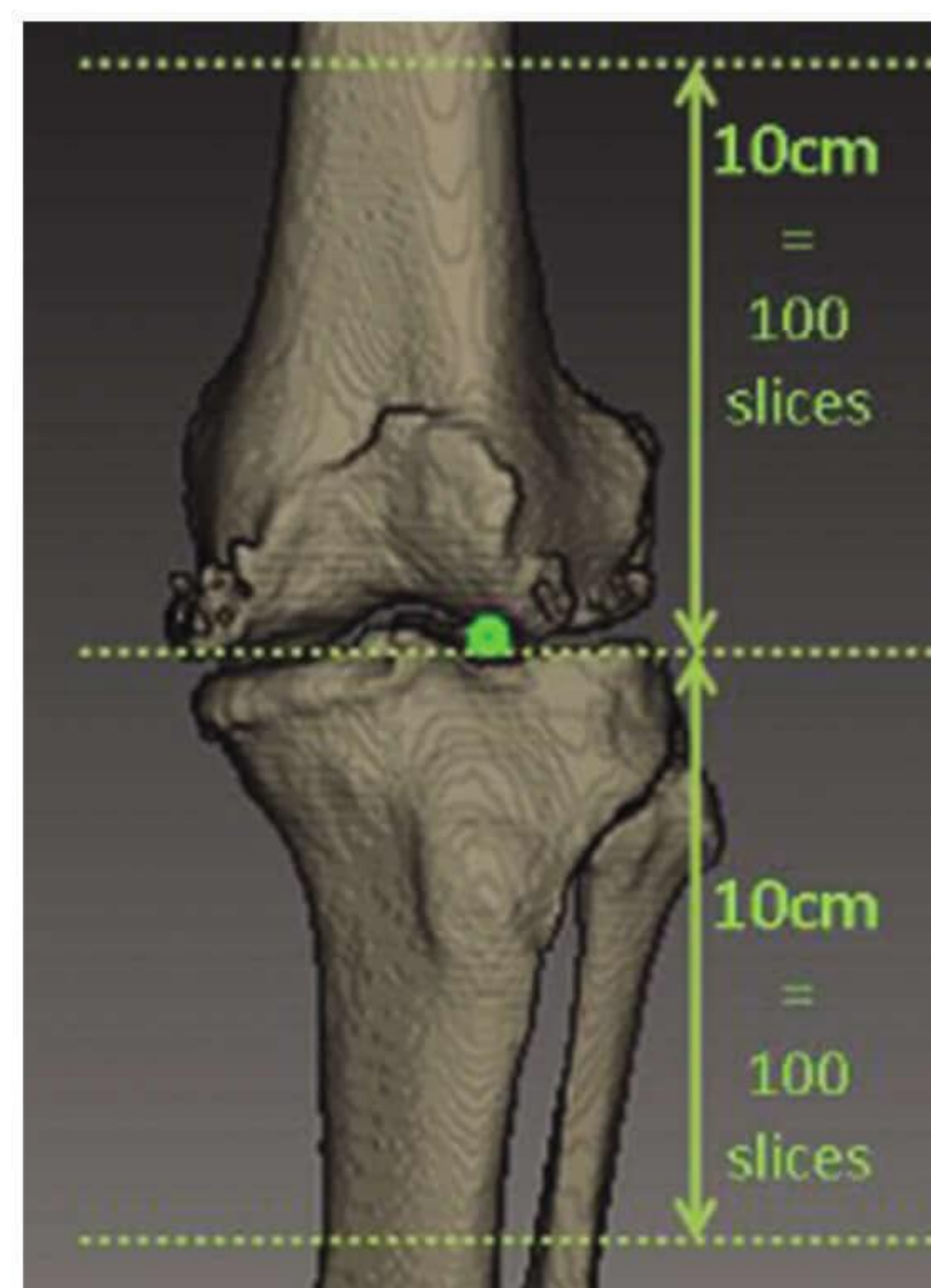


Figure 2: Full CT scan demonstrating 10 cm distal and proximal to the joint line.