CT Scan Requisition for 3D Printing

Specify the following when requesting a CT scan for 3D printing:
1. Standard axial soft tissue slices.
2. 1mm slice thickness with no overlap:
    a. 0.5mm slices provide more accuracy but significantly larger file sizes.
    b. 2mm slices can provide satisfactory results but in a banded appearance.
3. Reconstruction kernel set to standard or smooth (not sharp).

Specify this volume to be sent / archived to PACS:

> The other volumes such as bone windows and orthogonal reconstructions that are used for diagnosis do not need to be sent at the same level of resolution. Radiology departments typically do not archive all CT scans at this resolution to save on memory space.

Depending on the tissue to be printed specify the following:

> Bones (non-contrast scan)
> Contrast-enhanced scan:
> > Blood vessels (arterial phase timing)
> > Tumours or organs (delayed phase timing)
> Oral contrast:
> > Intestines

Artifact can be removed by our mesh editing software. Or use bone windows but check HU on viewer which will be different (higher).

Pulling DICOM from your PACS Server

DICOM can be pulled and anonymized using DICOM cleaner (widely accepted in the radiology community)

DICOM Cleaner Steps:

> Query – use accession number
> Retrieve
> Clean – set anonymization parameters
> Export – set to export as .zip
> Purge or clear temp file
> Blackout is to view once in clean column