

Supplemental Table 2: MRI simulation scanning parameters for brain group including current sequences used for anatomic segmentation (black) and additional sequences needed for s-CT generation (blue)

| Sequence | Acquisition Time | BW (Hz/Px) | TE (ms) | TR (ms) | FA (°) | Resolution (mm x mm x mm) | ST (mm) | FOV (mm) |
|---|------------------|------------|---------|---------|--------|---------------------------|---------|----------|
| SAG T1-3D | | | | | | | | |
| MPRAGE with GADOLINIUM | 4.59 | 150 | 2.87 | 2200 | 8 | 1.0 × 1.0 × 1.0 | 1 | 255 |
| SAG FLAIR 3D SPACE | 5.18 | 592 | 366 | 6000 | | 1.0 × 1.0 × 1.0 | 1 | 256 |
| T2 SPACE SAG 3D | 5.32 | 723 | 99 | 1900 | 160 | 1.0 × 1.0 × 1.0 | 1 | 256 |
| PETRA 3D (Bones) | 2.57 | 401 | 0.07 | 3.33 | 6 | 1.5 × 1.5 × 1.5 | 1.5 | 480 |
| T1 VIBE DIXON 3D (Water & fat) | 2.07 | 500 | 2.39 | 6.83 | 10 | 1.5 × 1.5 × 1.5 | 1.5 | 288 |
| FLASH Gradient Echo 2D (Vessels) | 2.55 | 320 | 3.50 | 7 | 20 | 1.5 × 1.5 × 3.0 | 3 | 288 |