

## PROTOCOL NOTES FOR GE SCANNER

**SUBJECTS:**

8 travelling Healthy Volunteers

**RESEARCHER NAME:**

**SUMMARY:** This UKRI funded, nationwide initiative aims to study 800 already identified COVID patients who have been hospitalised with complications that include encephalitis, stroke and Parkinsonism. This protocol is aligned with the UK Biobank project.

**Archive:**

•Send all relevant scans to PACS

**Timing:**

1 hr



**DO NOT SELECT SUBJECT FROM PACS WORKLIST PLEASE ENTER MANUALLY**

<u>Coil</u>	
<u>32</u>	
<u>System Preferences</u>	
<b>Research Mode</b>	
<u>Exam dB/dt and SAR limits</u>	
<b>dB/dt</b>	<b>SAR</b>
<b>First Level</b>	<b>First Level</b>

Position subject in scanner with:

- Earplugs & Pads
- Respiratory Bellows
- GE Pulse Oximeter
- Emergency Buzzer
- Screen end of bed
- Place pillow under subject's knees
- Provide blanket if needed

- 1) SAR Scout
- 2) Standard **3 plane localiser**. (0:35sec)
- 3) Prescribe **Axial Asset Cal**. Make sure there is sufficient coverage outside of the head in Anterior, Posterior & Superior directions. Run scan (0:04sec)
- 4) Prescribe **Sagittal T1 MPRAGE PROMO** straight and orthogonal covering the entire brain. Run scan (4:42min)
- 5) Prescribe **Axial Oblique FMRI Resting** scan **64 slices** parallel to AC/PC Line to cover whole brain **BOTTOM TO TOP** (Top more important). (7:21min)

**Eyes Open looking at the cross on the screen**

- Please run AUTO Prescan
  - Run MANUAL prescan ONCE and **write down the values of the X, Y and Z shims** (*found under the Gradient Shimming Heading at the bottom part of the page*)
  - Press SCAN
- 6) Prescribe **Axial Single Vol EPI**. This is ALREADY LINKED to the FMR Resting scan above. (0:10sec)
    - Run AUTO prescan ONCE first
    - Then run MANUAL Prescan ONCE and change the shim values to match those the FMRI Resting scan (if they have changed)
    - **WARNING:** There might be a 45sec delay (approximately) after you press 'scan'
  - 7) Prescribe **DWI\_UKBB** *first 72 slices (slices should appear as 77 this needs to be **explicitly** changed by changing the number of slices to 72 slices in the #slices box) – please do not modify the prescribed position of the scan as it is matched to the resting state.*

**PLEASE DOUBLE CHECK THERE ARE 72 SLICES ONLY**

- Change **pepolar = 0** using 'Display CVs' after 'download' i.e.:  
(download, display CVs, change value, accept, download again)
  - Run AUTO Prescan ONCE first
  - Then run MANUAL Prescan ONCE and change the shim values to match those the FMRI Resting scan (IF they have changed)
- 8) Prescribe **DWI\_UKBB\_second**. This sequence is linked to the first DWI.
    - Change **pepolar = 1** Using 'display CVs' option after 'download'  
(download, display CVs, change value, accept, download again)
    - Run AUTO Prescan ONCE first
    - ● Then run MANUAL Prescan ONCE and change the shim values to match those the FMRI Resting scan (if they have changed)

- 9) Prescribe **Sagittal 3D CUBE FLAIR T2**. Position straight and orthogonal. Run scan. (5:58min)
- 10) Prescribe **Axial SWI 3 echo** parallel to AC/PC Line to cover whole brain (2:04min)
- 11) Prescribe **Axial 3D ASL** (non-contrast) 36 slices. **Eyes open looking at the screen**. (5:53min).
- Position lower border of box **LEVEL WITH** the base of the cerebellum.
  - Save series,
  - scan.