

Patient Name:  RT#:

**USER --> MR SIM --> HEAD --> BRAIN MR-Only**

|                      |                                                                                            | Technologist |
|----------------------|--------------------------------------------------------------------------------------------|--------------|
| <b>Setup</b>         | Rad Onc Daily QA performed                                                                 |              |
|                      | Review prior images in PACS                                                                |              |
|                      | Confirm patient has no metallic implants                                                   |              |
|                      | If patient consented for research: Setup power injector (see Table 1)                      |              |
|                      | Patient changed into gown                                                                  |              |
|                      | Flat table overlay positioned on MRI couch and covered with sheet                          |              |
|                      | External lasers reset (zeroed) prior to setting up patient                                 |              |
|                      | Straighten patient using external sagittal laser                                           |              |
|                      | If patient consented for research: Place IV (left antecubital preferred)                   |              |
|                      | Ear plugs placed on patient                                                                |              |
|                      | Immobilization mask completely dry before placement for imaging                            |              |
|                      | Two large, flexible, body MATRIX coils wrapped around head and secured with straps         |              |
| <b>Localizers</b>    | External lasers turned off                                                                 |              |
| <b>Acquisition</b>   | Scan prescription includes air superiorly through cerebellum                               |              |
|                      | Confirm positioning mode set to ISO for all sequences                                      |              |
|                      | Confirm auto-coil select off, coil selection appropriate, and coils same for each sequence |              |
|                      | High order shim volume adjusted over brain and copy to each sequence                       |              |
|                      | Confirm intensity uniformity correction set to Pre-Scan Normalize                          |              |
|                      | 3D T1 Pre: Confirm patient fully contained within FOV                                      |              |
|                      | 3D T1 Pre: Confirm straight axial slices (switch to sagittal, then back to axial)          |              |
|                      | If "MR SIM with Interpretation", add missing diagnostic sequences                          |              |
|                      | If patient consented to research: Run research sequences                                   |              |
|                      | If no research consent: Hand inject contrast volume                                        |              |
|                      | If no research consent: Contrast delay                                                     | 0 sec        |
|                      | Images screened for artifacts. If necessary, resolve artifact source and re-acquire        |              |
| <b>Post-Scanning</b> | Do we have what we need? If not, resolve or repeat if necessary                            |              |
|                      | 3D distortion correction applied to all images                                             |              |
|                      | 3D distortion correction images sent to MIM_Clinical                                       |              |
|                      | Scan reference set using "FH MR Sim" MIM workflow                                          |              |
|                      | Push Dixon CAIPI images from MIM to Syngo.Via and generate Synthetic CT                    |              |
|                      | Non-distortion corrected images ( _ND or _DIS2D) deleted from PACS                         |              |
|                      | Initials/Date:                                                                             |              |

**Table 1: Power Injector Settings**

|                 |                       |
|-----------------|-----------------------|
| Contrast Media  | Gadavist              |
| Contrast Volume | 0.1 mL/kg body weight |
| Injection Rate  | 2 mL/sec              |
| Saline Flush    | 5.5 mL                |

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