

MRA COW WO

Magnet Vendor/Field	Approved By	Published/Rev
Siemens MAGNETOM 3.0T XQ Numaris/X VA60A-0CN3	Dr Alvarez	8.11.26 / 2

Protocol	Contrast	Estimated Scan Time
MRA CIRCLE OF WILLIS (COW)	No	~10–15 min

TECHNOLOGIST WORKFLOW

#	Step	Seq	Pulse	Dim	Ori	Scan Dir	Phase Enc	FOV (mm)	Slc (mm)	Gap (mm)	TR (ms)	TE (ms)	Fat Sat	Freq	Phase	Notes
1	♥ Setup	LOCALIZER	LOCALIZE R	2D	Sag	R>>L	A>>P	300	7.0	1.4	8.6	4.00	None	256	230	
2	■ MRA LOC	VESSELS_HEAD LOC	FLASH	3D	Cor	A>>P	R>>L	280	1.50	0.8	23.0	8.00	None	256	192	Single slab; 96 slices
3	■ MRA	AXIAL SOURCE COW	TOF	3D	Ax	S>>I	R>>L	205	0.53	-0.1	22.00	3.78	None	384	384	4 slabs; 44 slices/slab Place slices against the flow of blood

TECHNOLOGIST POST-PROCESSING

- ☐ Confirm complete COW coverage and adequate arterial signal on the source images
- ☐ Verify MRA localizer and source COW planning before acquisition proceeds
- ☐ Send source images and required reconstructions to PACS

POST PROCESSING

- TOF images will be reformatted into:
 - o AX and COR thin MPR @ 1 thickness and 1 spacing
 - o AX, COR, and SAG thick MPR @ 12 thickness and 2 spacing
- TOF will also be processed to only display arteries that will be rotated in VERTICAL L-R & HORIZONTAL A-P MIP 360 degree rotations with 39 images.



ACTION ITEMS

- ♥ Complete 3-plane localization and verify head/COW positioning
- Acquire vessels_head LOC before the diagnostic COW source sequence
- Confirm the axial source COW