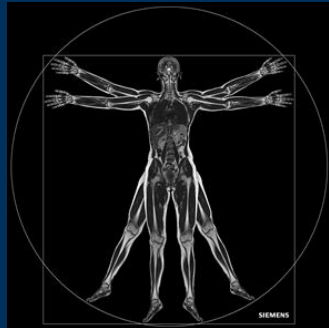


Tutorial

FLUSSO e DINAMICA

LIQUORALE

Gemelli



apr. '23

Fondazione Policlinico Universitario Agostino Gemelli IRCCS
Università Cattolica del Sacro Cuore





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apr. '23

Fondazione Policlinico Universitario Agostino Gemelli IRCCS
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Gemelli



Ver 1.1

apr. '23

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Università Cattolica del Sacro Cuore



Apparecchiature utilizzate



SIGNA™ Voyager - 70 cm

Optima MR450w
1.5T GEM Suite

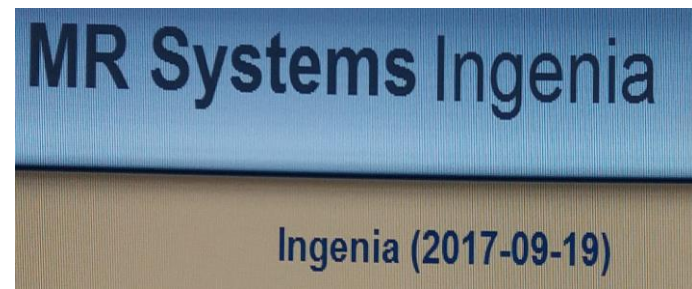


SIGNA™ Premier - 70 cm





PHILIPS
sense and simplicity



FLUSSO LIQUORALE

Service Desktop Manager

Error Log

Gating, Fan, Light

Gating Control

Waveform Display

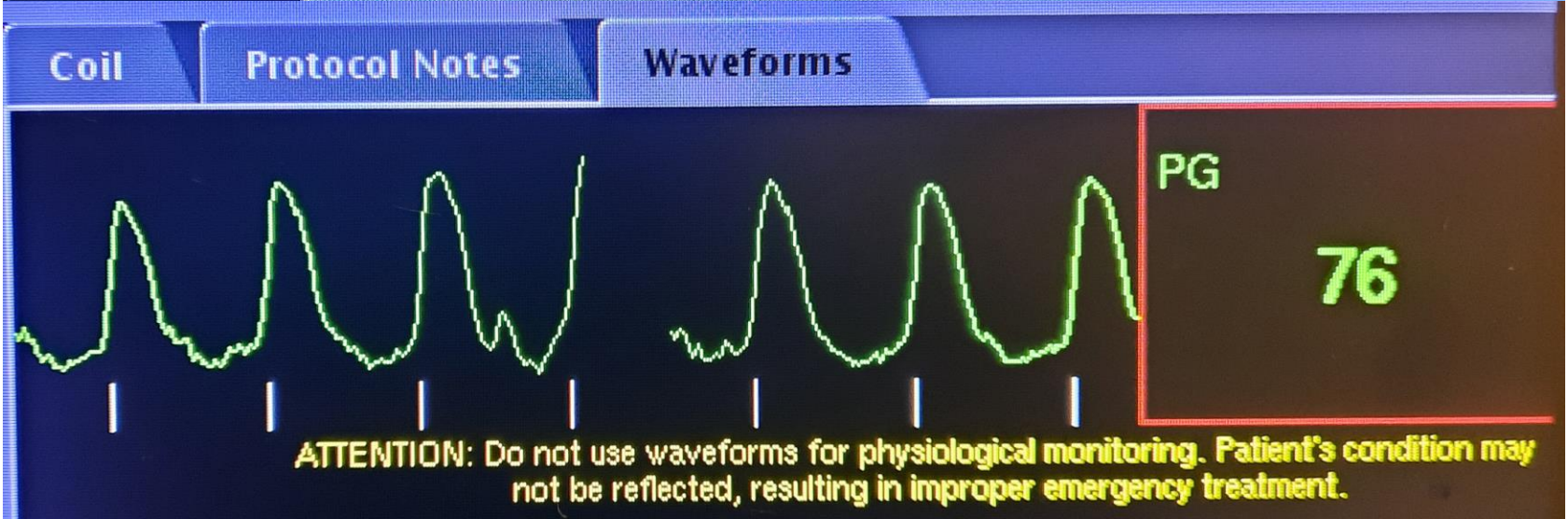
- Cardiac Gating
- Respiratory
- PG Display

Cardiac Gating Selection

- Independent Vector Gating
- Standard Gating (ECG)
- ECG Noise Filter
- 3rd party Patient Monitoring with Gating

Trigger Lead

- ECG-I Inverted
- ECG-II Inverted
- ECG-III Inverted
- PG



FLUSSO LIQUORALE

Details **Vascular** **CINE** **Advanced**

Trigger Type: PG

Locations Per Acquisition: 1

#Phases to Reconstruct: 16

Heart Rate: 76 BPM

Projected HR: BPM

Effective TR: 25 msec

FLUSSO LIQUORALE

Details **Vascular** **CINE** **Advanced**

Phase Contrast

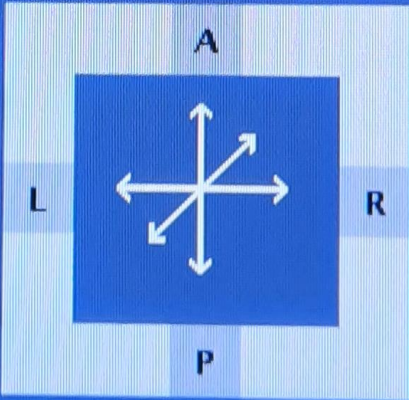
Flow Recon Type: Phase Diff. ▼

Flow Analysis: On Off

Velocity Encoding: 10.0 0.5 Min. 550.0 Max.

Acquisition Flow Direction Images: ALL ▼

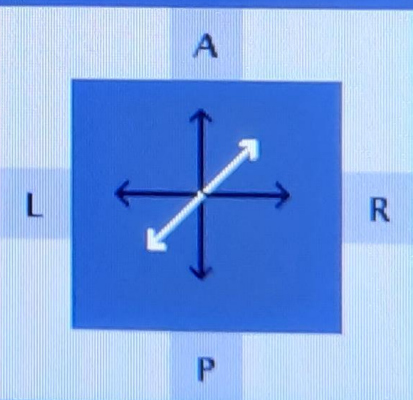
A



L R

P

A



L R

P

Additional Flow Images:

- Oblique R/L Flow
- Oblique A/P Flow
- Oblique S/I Flow
- MAG

FLUSSO LIQUORALE

Sag Phase Contrast

GRx



3:01

Details

Vascular

CINE

Advanced

Scan Plane: Oblique

Freq. FOV: 24.0

Phase FOV: 1.00

No Phase Wrap: 1.00

Slice Thickness: 6.00

Spacing: 0.0

R/L A/P S/I

Start L3.7 P2.9 S13.9

End L3.7 P2.9 S13.9

Chem SAT: None

Freq. Dir: S/I

TR: 25.0

Slices: 1

Total # Slices: 1

Max # Slices: 1

of Acqs: 1

Rel. SNR: 100

Acq Voxel Size: 0.6x1.1x6.0

BW/Pixel: 66.8

Trigger Type: PG

Locations Per Acquisition: 1

#Phases to Reconstruct: 16

Heart Rate: 76 BPM

Projected HR: BPM

Effective TR: 25 msec

Details

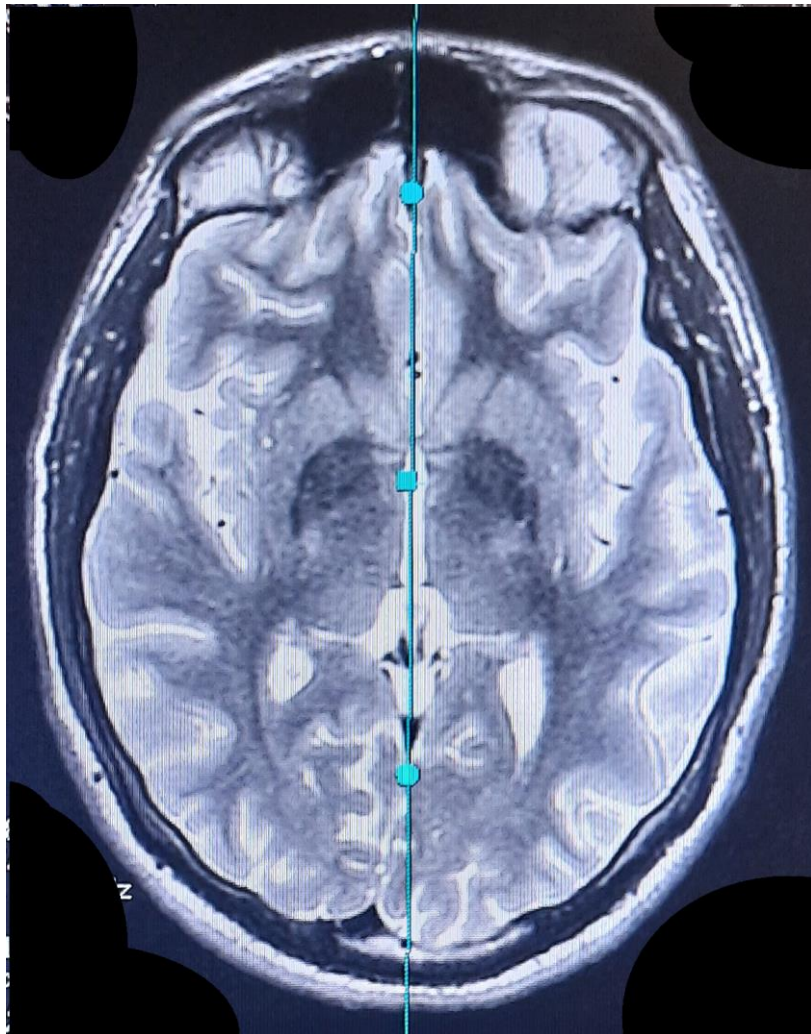
Vascular

CINE

Advanced

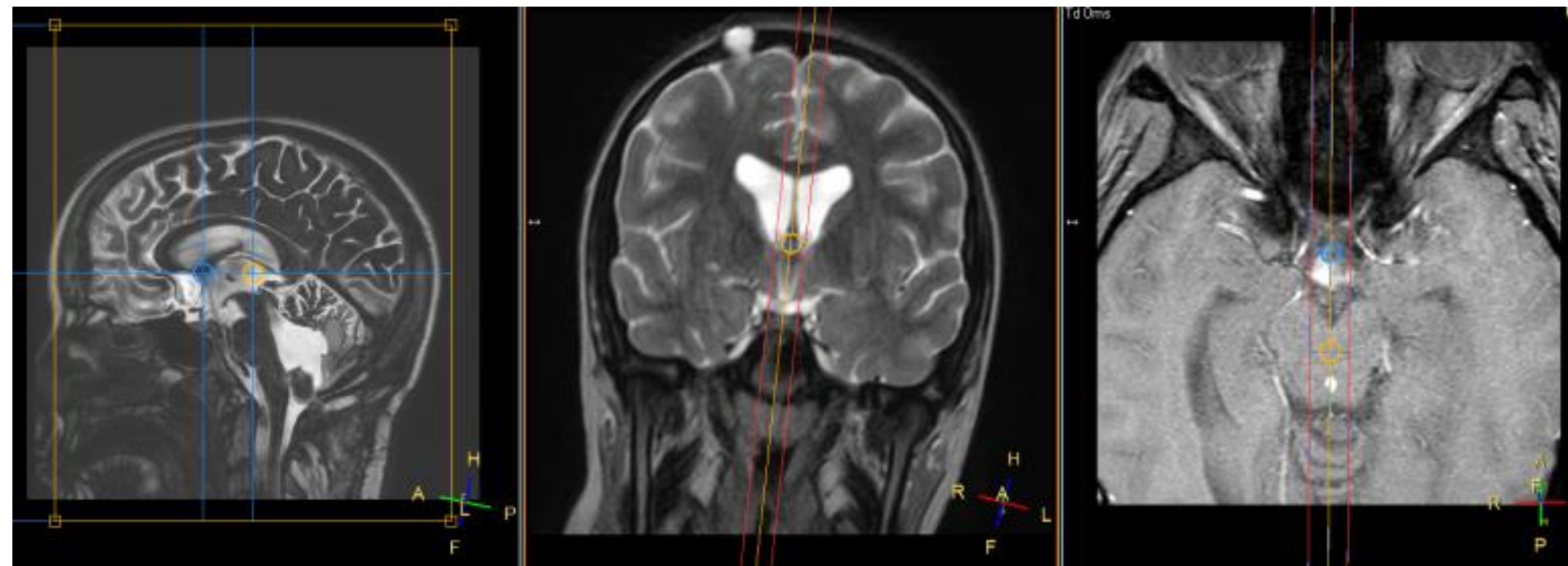
User Control Variables

			Min	Max
CV1	SPGR mode (0 = OFF, 1 = ON):	<input type="text" value="1.00"/>	0.0	1.0

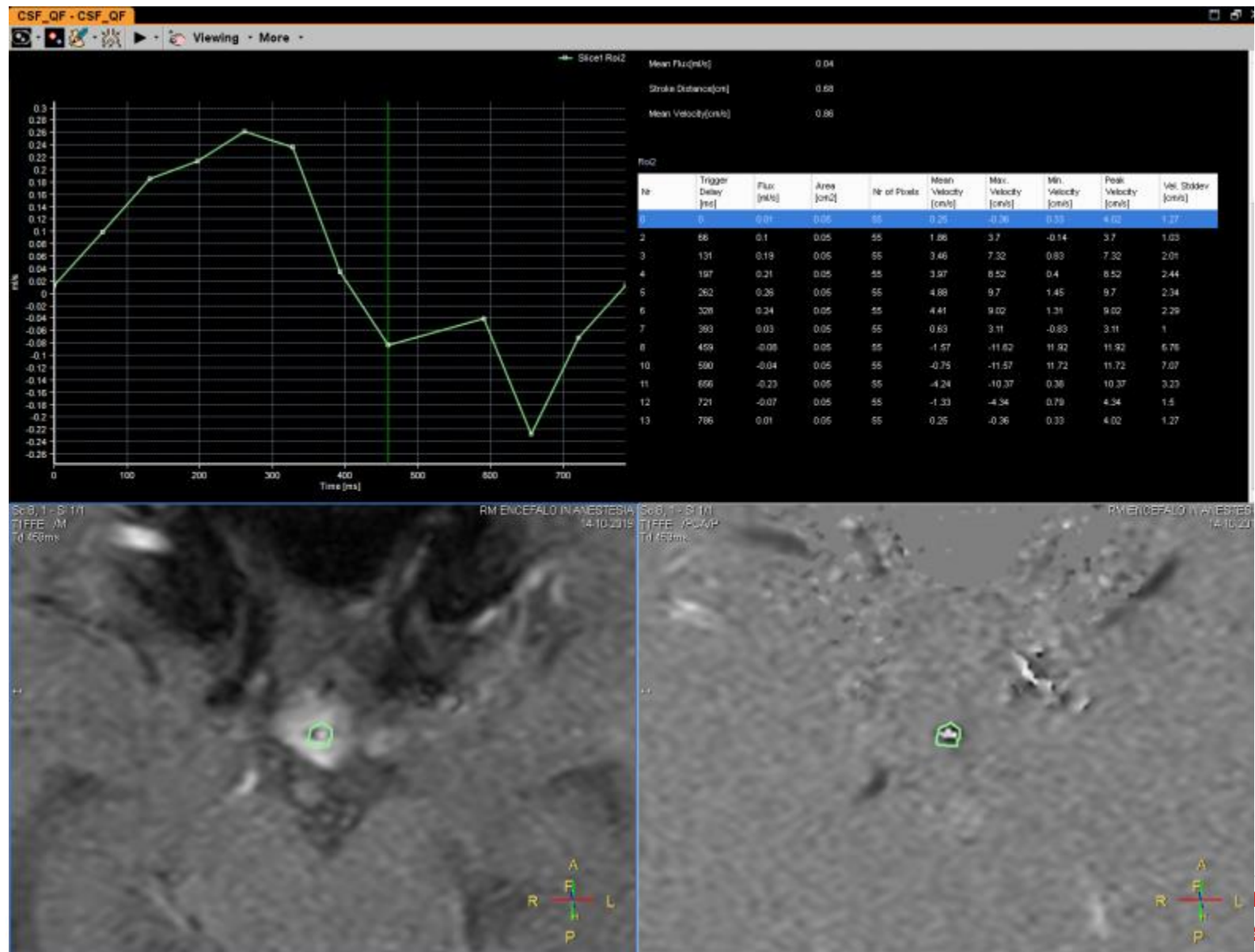


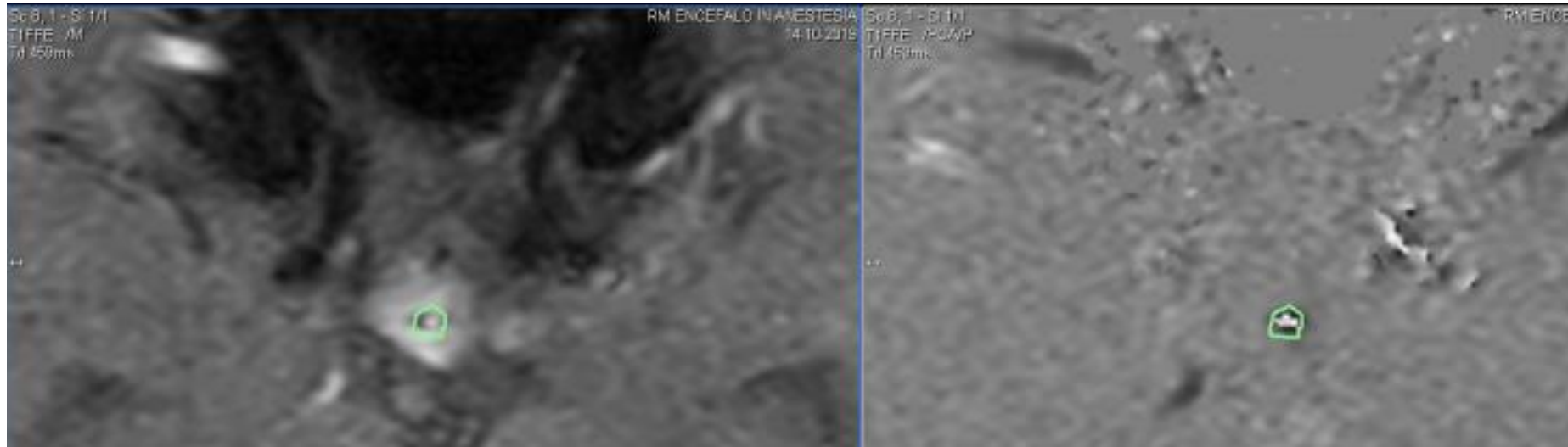


Esempio di impostazione



DINAMICA LIQUORALE



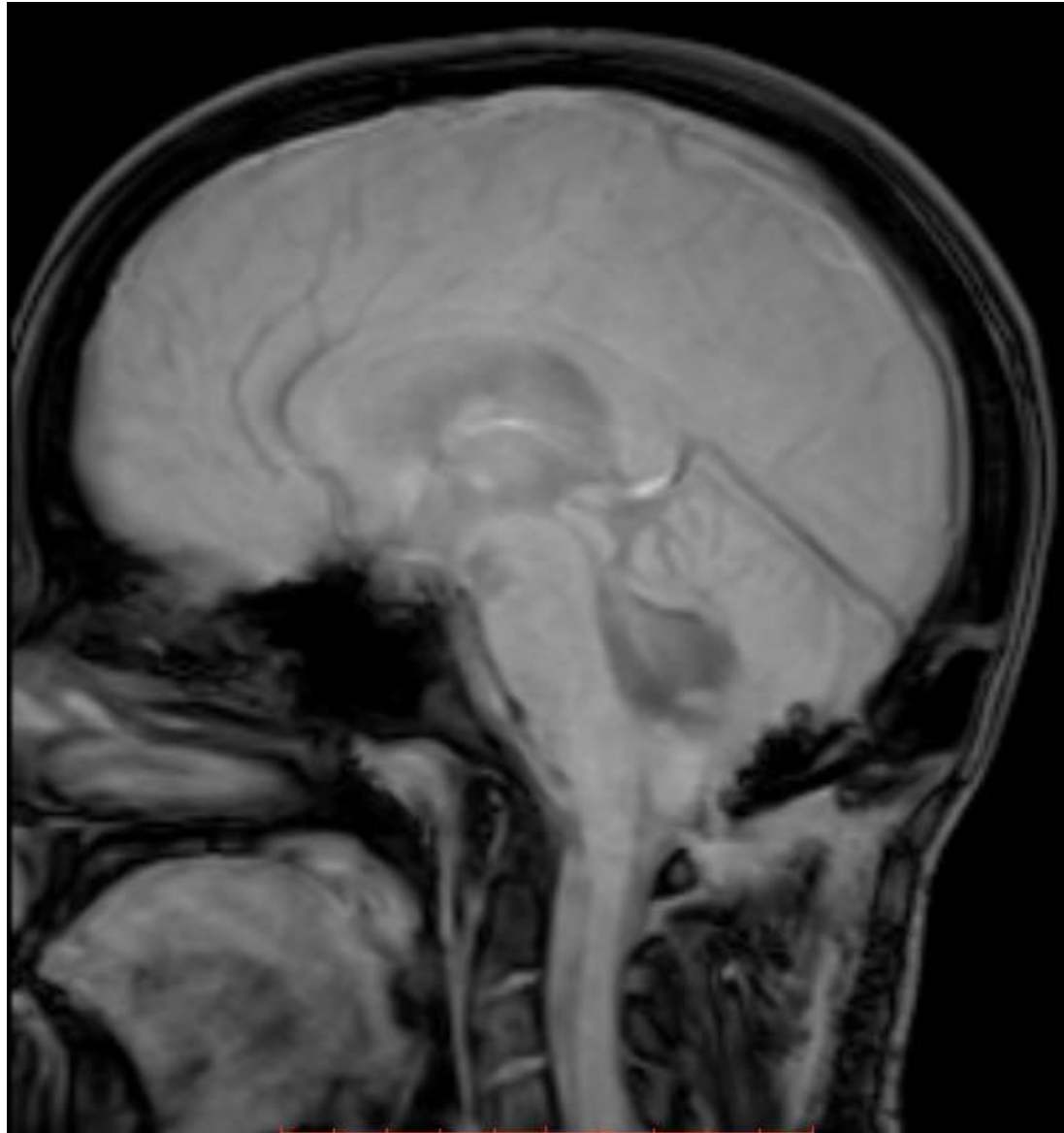


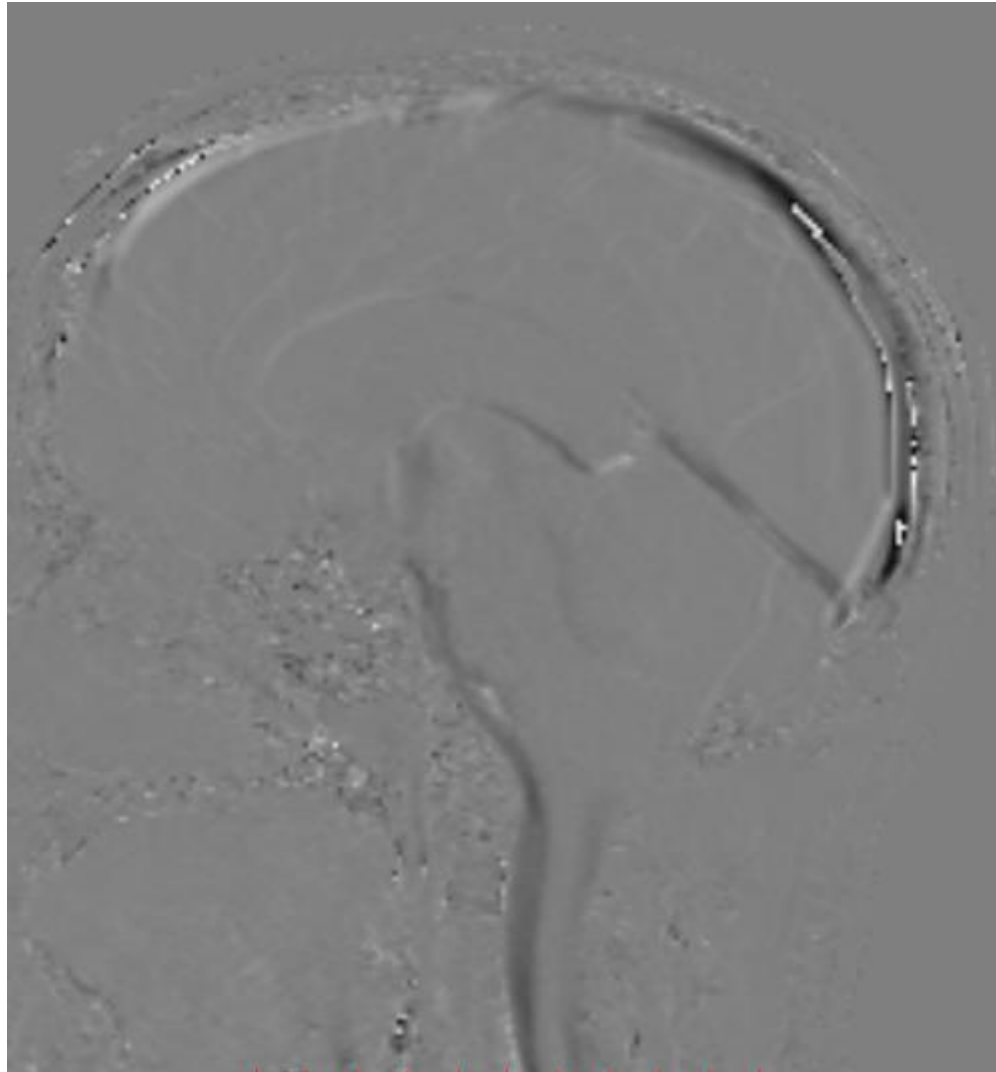
Disegnare una ROI nella zona di passaggio del flusso e copiarla a tutte le immagini

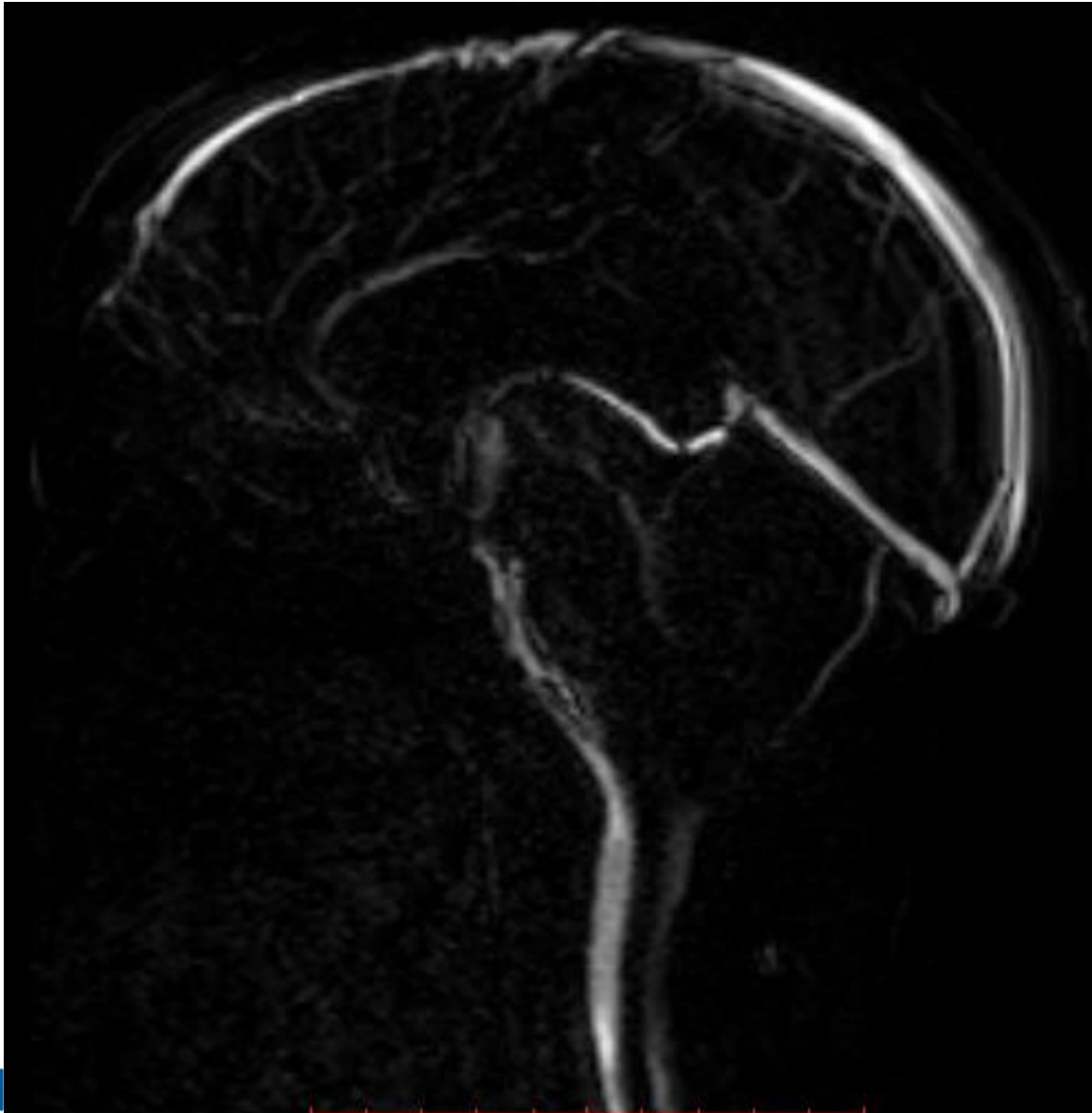
DINAMICA LIQUORALE

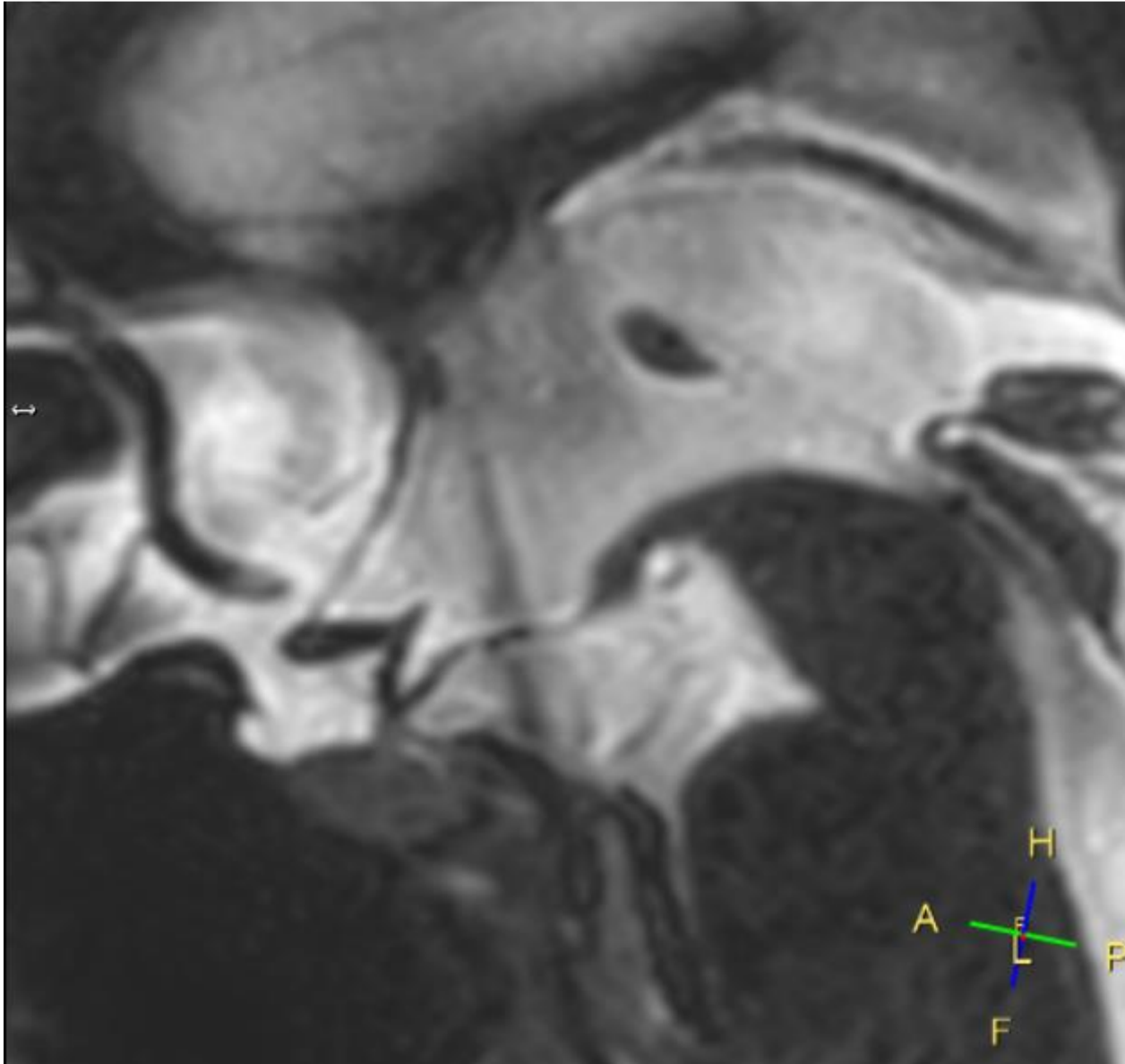
Nr	Trigger Delay [ms]	Flux [ml/s]	Area [cm ²]	Nr of Pixels	Mean Velocity [cm/s]	Max. Velocity [cm/s]	Min. Velocity [cm/s]	Peak Velocity [cm/s]	Vel. Stdev [cm/s]
0	0	0.01	0.05	55	0.25	-0.36	0.33	4.02	1.27
2	56	0.1	0.05	55	1.88	3.7	-0.14	3.7	1.03
3	131	0.19	0.05	55	3.46	7.32	0.83	7.32	2.01
4	187	0.21	0.05	55	3.97	8.52	0.4	8.52	2.44
5	262	0.26	0.05	55	4.89	9.7	1.45	9.7	2.34
6	328	0.24	0.05	55	4.41	9.02	1.31	9.02	2.39
7	383	0.03	0.05	55	0.83	3.11	-0.83	3.11	1
8	459	-0.08	0.05	55	-1.57	-11.82	11.82	11.82	6.76
10	500	-0.04	0.05	55	-0.75	-11.57	11.72	11.72	7.07
11	656	-0.23	0.05	55	-4.24	-10.37	0.38	10.37	3.23
12	721	-0.07	0.05	55	-1.33	-4.34	0.79	4.34	1.5
13	786	0.01	0.05	55	0.25	-0.36	0.33	4.02	1.27

Guardare l'elenco delle velocità e scegliere il valore maggiore ...









Impostare la
dinamica
parallela al
flusso... (vedi
immagine...)

