



# SIGNA™ Premier

## Brachial Plexus

Exam ID: 3265

*Courtesy of* Hospital Universitario  
 **quirónsalud**  
Madrid

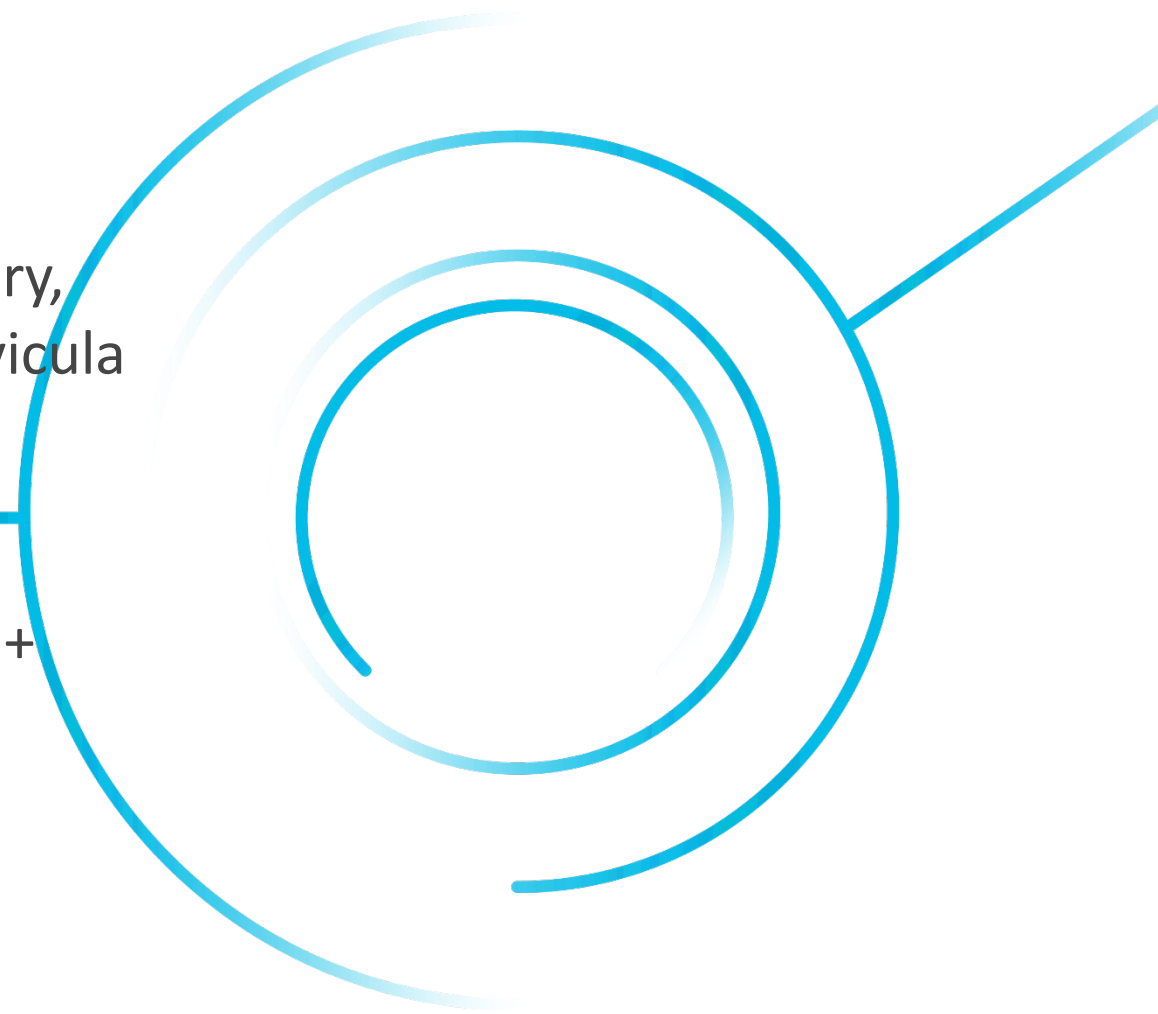
October 2019  
Icham Gouadjelia- MR Clinical Leader Cardiac





# Overview

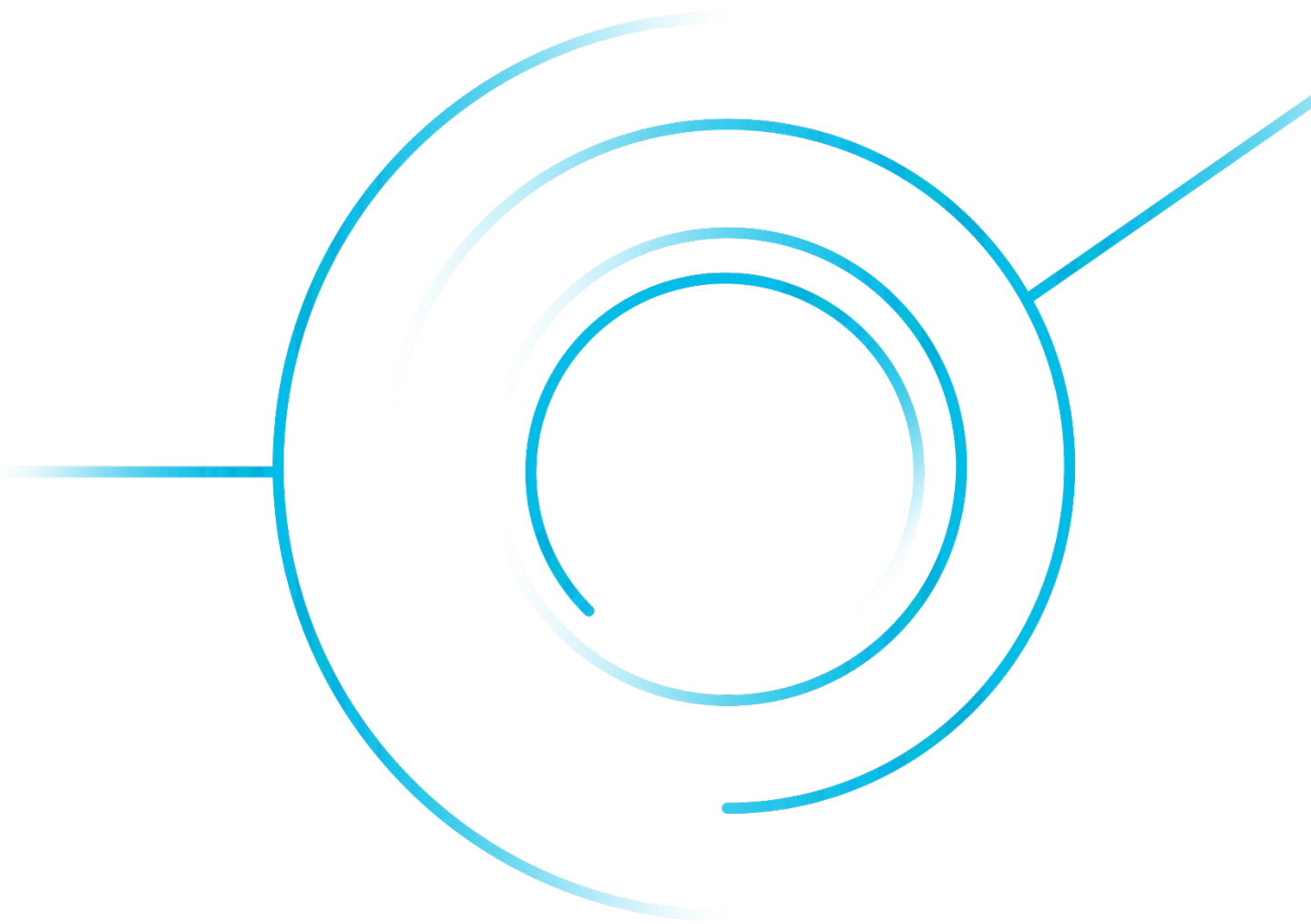
- 69 yr/old male, without a particular clinical history, paresthesia left arm, mass palpated under left clavicle
- SIGNA Premier
- Head first / Supine
- Posterior AIR coil 60Ch + Anterior AIR coil 30Ch + Head Neck Unit 21Ch :  
111 elements simultaneously connected





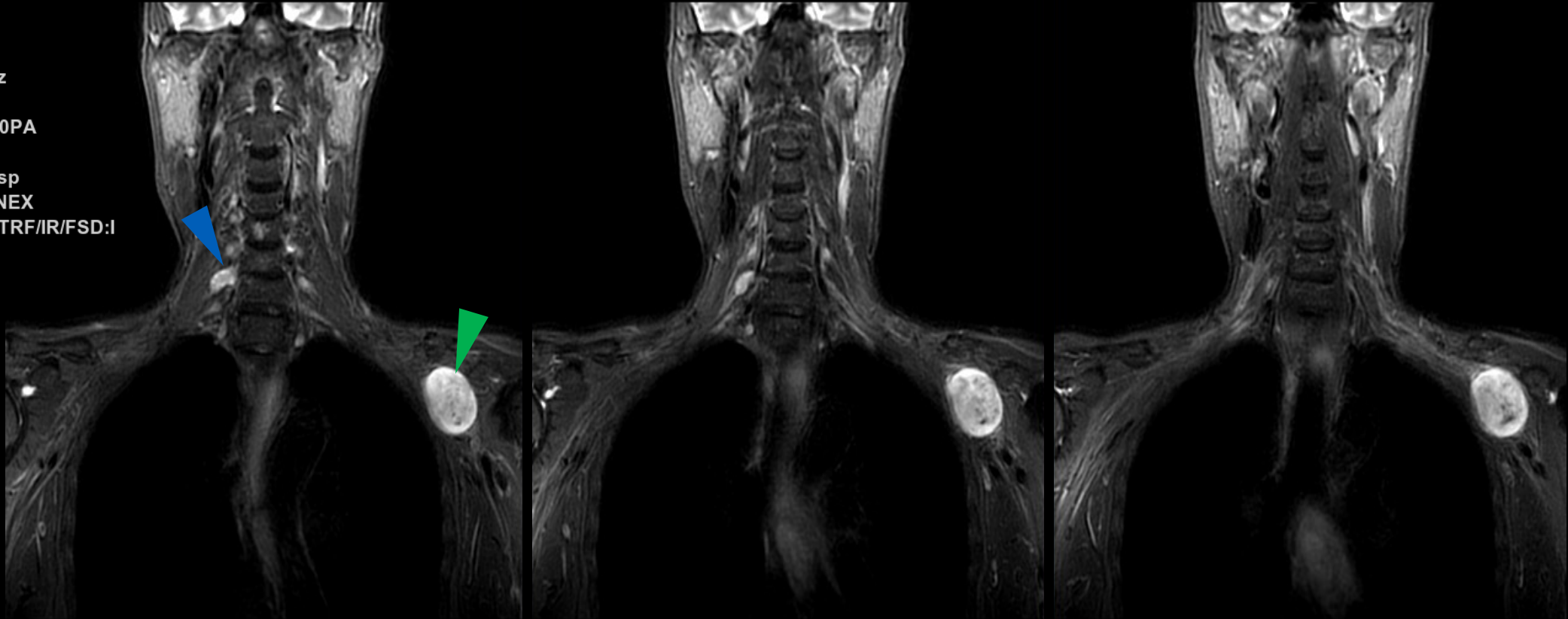
# Protocol

- Localizer
- Cor T2 Stir propeller
- Cor DWI Focus b800
- Ax Lava
- Cor Dynamic Disco Lava
- Cor STIR Peripheral Nerve
- Cor Lava Fat Sat post Contrast
- Sag Lava Fat Sat post Contrast
- Ax Lava Fat Sat post Contrast



# Cor T2 STIR Propeller

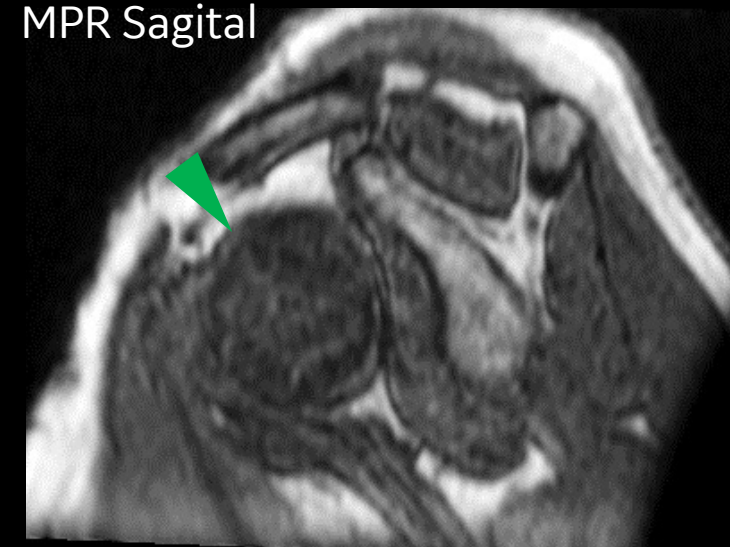
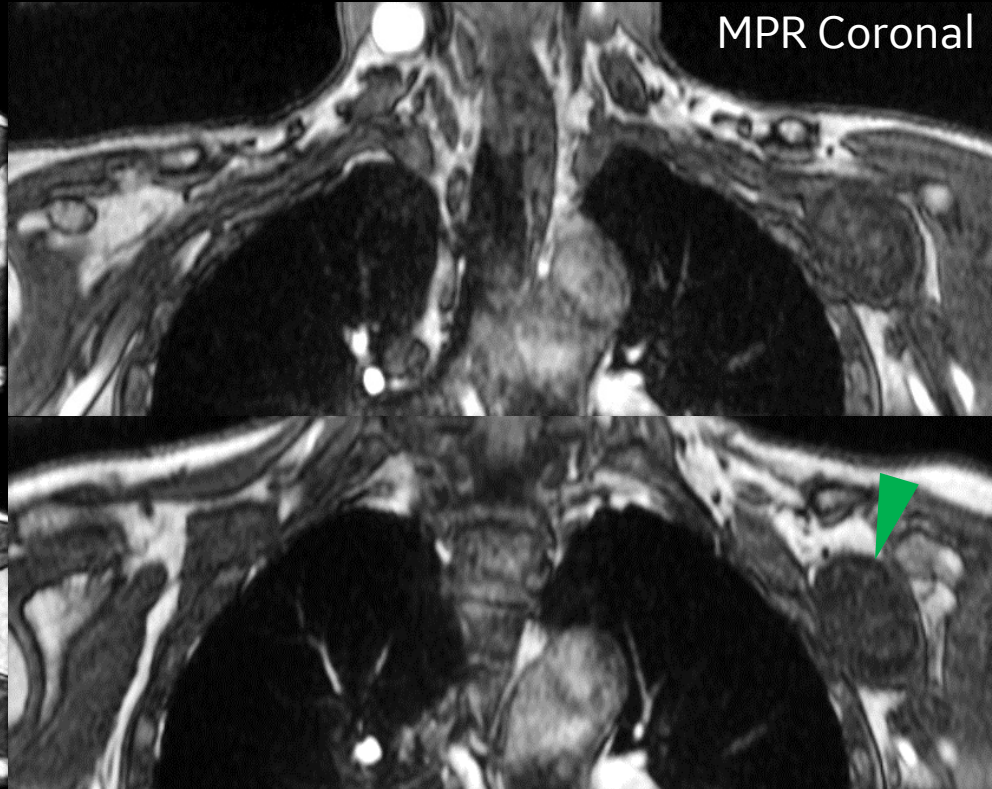
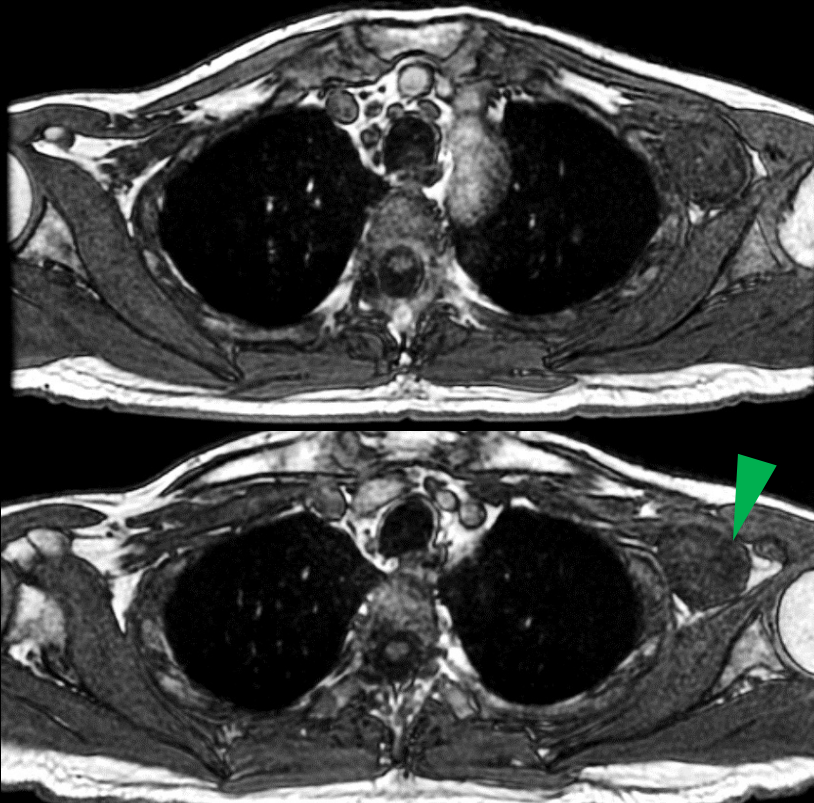
FRPROP  
TR:4053  
TE:61.3/Ef  
EC:1/1 62.5kHz  
TI:190  
21HN+30AA+60PA  
04:28  
3.3/3.0mm /3.3sp  
300X300/2.53 NEX  
NP1.6/Acc/ED/TRF/IR/FSD:I



Stir Propeller helps to avoid motion artifact in this difficult area



# Axial T1 LAVA



efgre3d\_aspir  
TR:3.5  
TE:1.6  
EC:1/1 83.3kHz  
21HN+30AA+60PA/FL:sa  
00:16  
**1.00**/2.0mm /1.00sp  
300X300/0.70 NEX  
Acc/ED/Z2

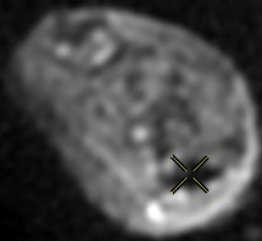
Lava done in 16 sec give a fast overview and limit the respiratory artifact

Tissular mass with good limit and isosignal T1, no infiltration of the peripheral fat

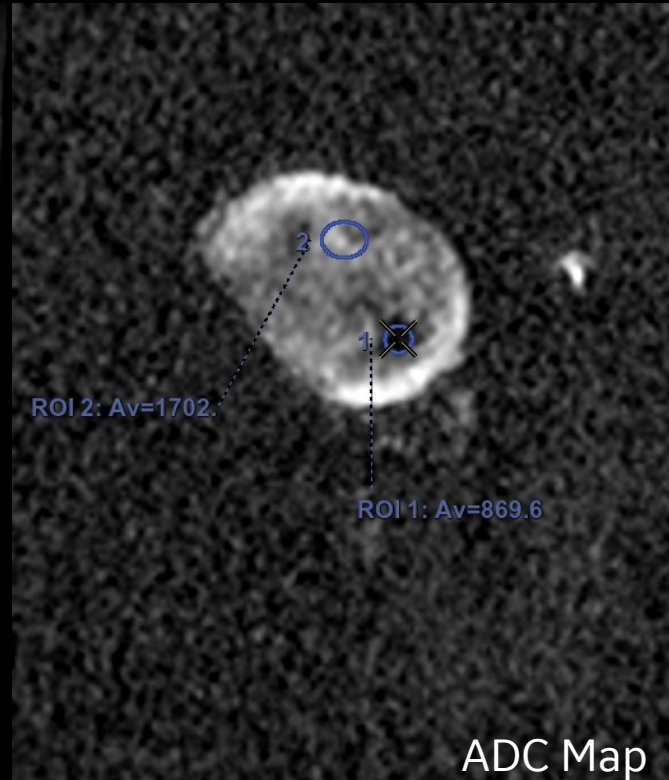


# Cor Focus DWI b800

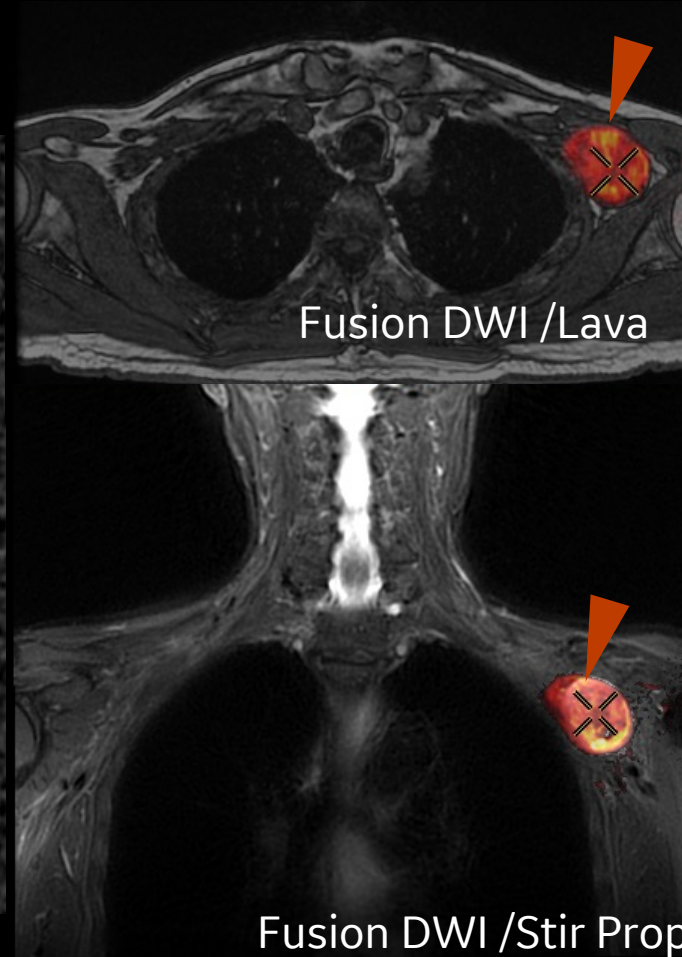
SE/EPI  
TR:6321  
TE:68/FE  
EC:1/1 250.0kHz  
TI:230  
21HN+30AA+60PA/FL:p+  
03:54  
4.5/3.5mm /4.5sp  
160X112/2.00 NEX SH:1  
StF/ED/IR/FOC



Focus DWI b800



ADC Map



DWI Focus Stir allow high resolution imaging without distortion, notice the perfect correlation on the fusion view

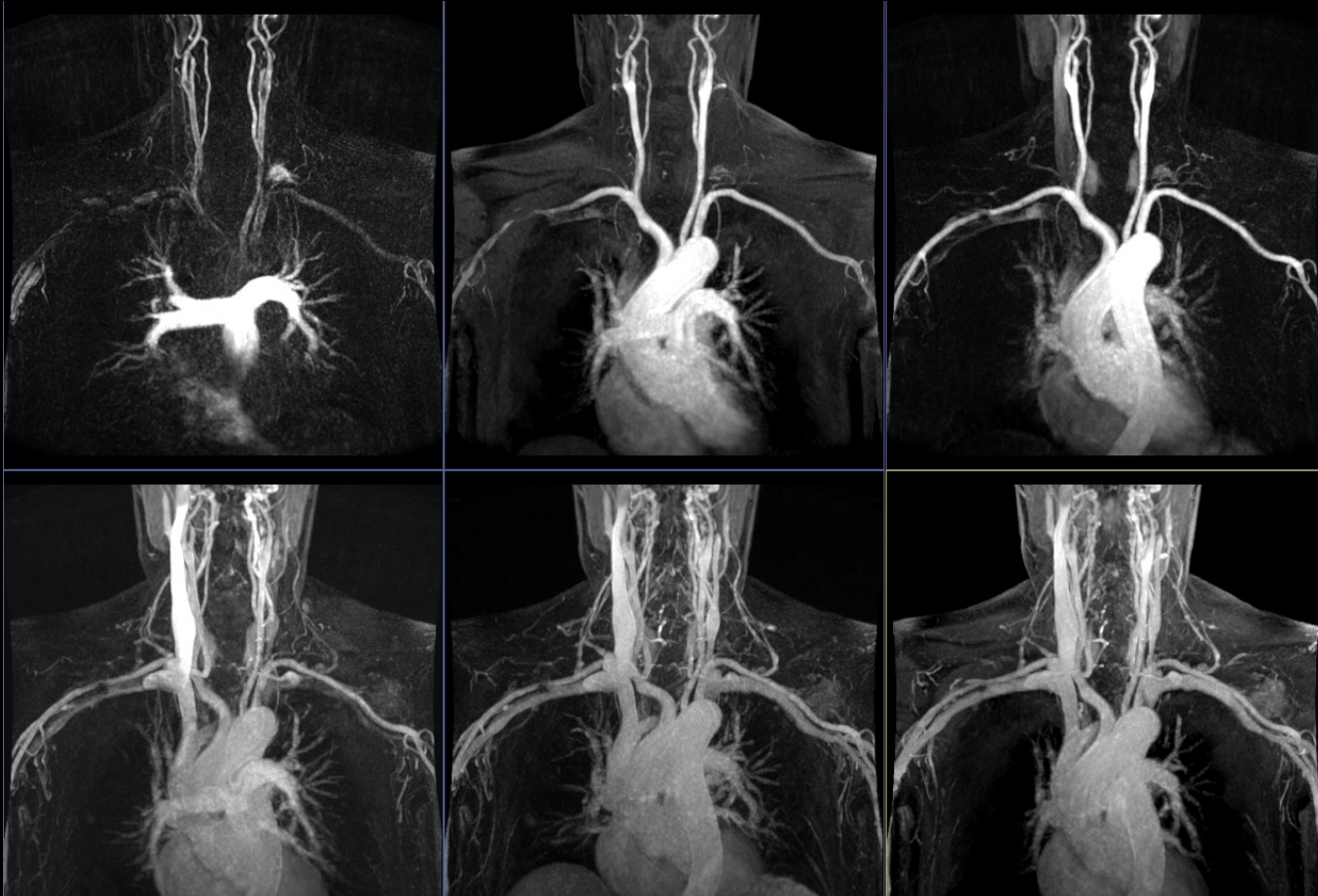
Tissular mass is hypersignal b800 with an average ADC value is high with some low values



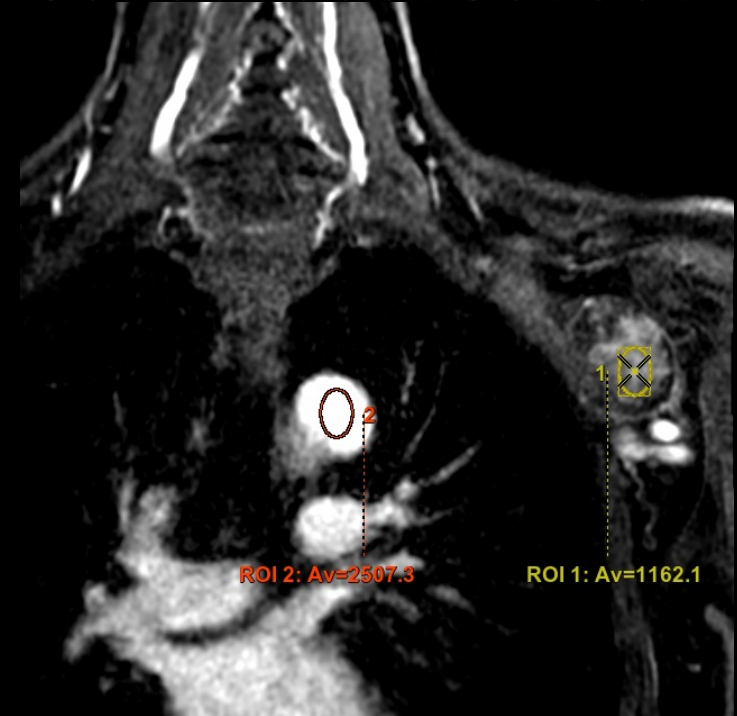
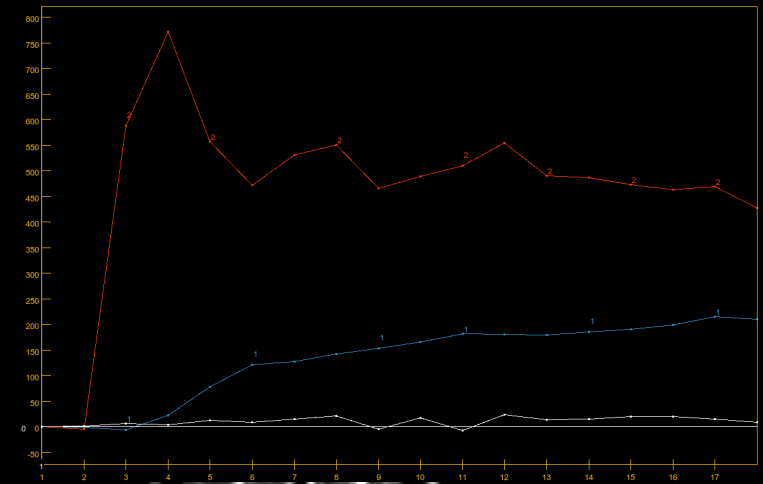
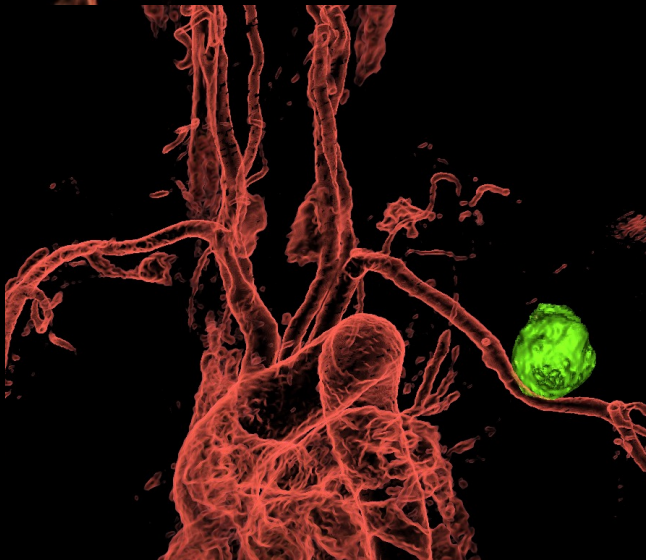
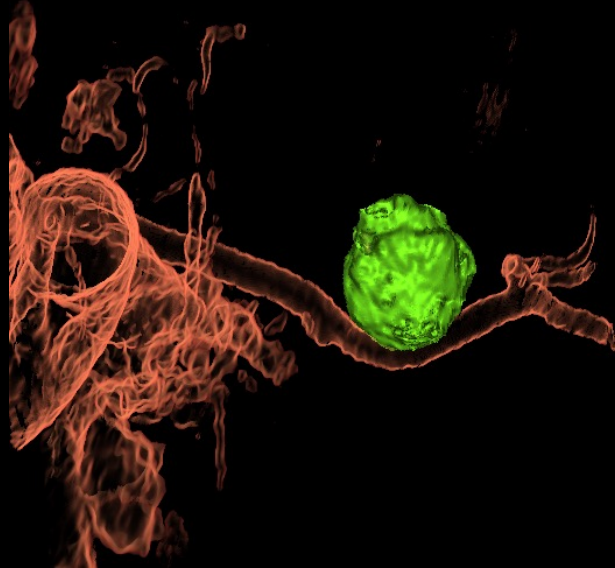
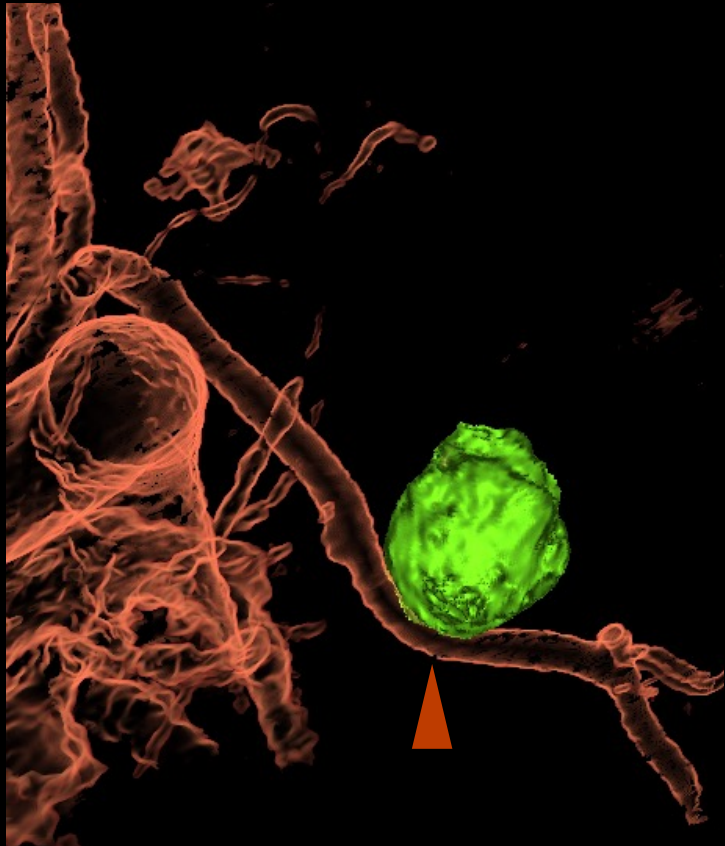
# Cor Disco Lava Flex

Temporal resolution : 6.7 sec/ phase

M3D/DISCO  
TR:3.9  
TE:1.7/Fr  
EC:1/1 142.9kHz  
21HN+30AA+60PA/FL:p+  
03:28  
0.66/2.6mm /2.60sp  
224X320/0.71 NEX  
NP1.2/Acc/ED/MP/Fix



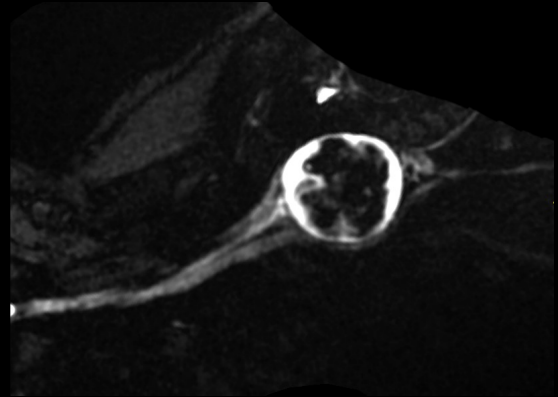
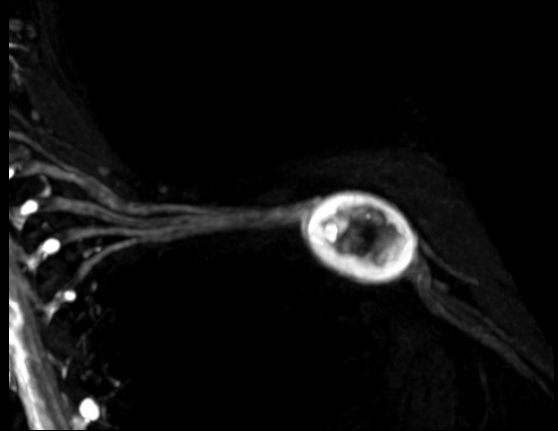
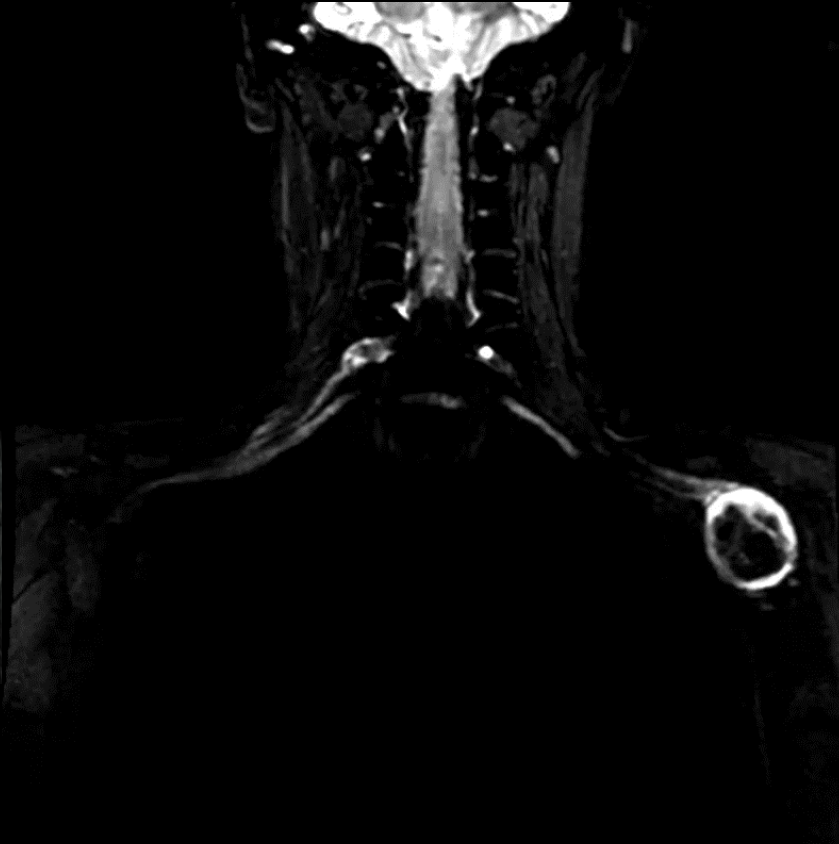
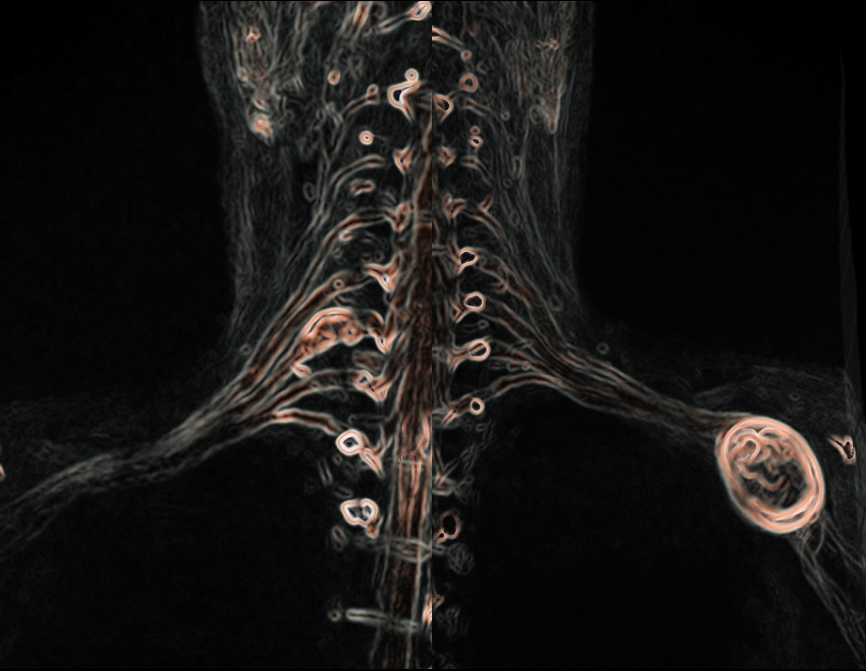
# Cor Disco Lava Flex



DISCO demonstrate the **lesion** compress the **left subclavian artery** , the **lesion** uptake the contrast gradually



# Cor HyperCube Stir HyperSense peripheral nerves



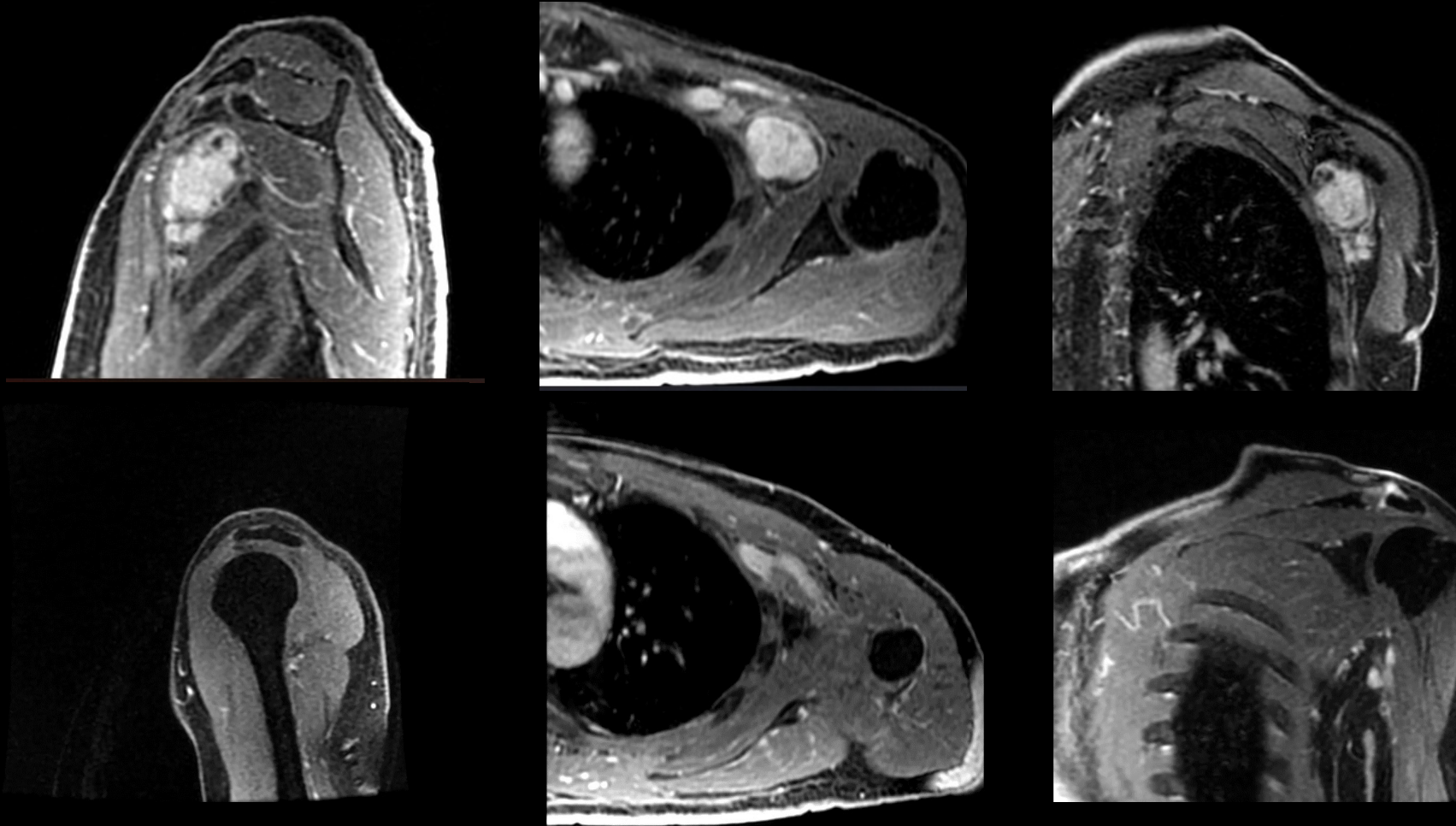
M3D/FRCube  
TR:3002  
TE:85.1/Ef  
EC:1/1 41.7kHz  
TI:280  
21HN+30AA+60PA  
04:32  
0.60/1.2mm /0.60sp  
352X352/1.00 NEX  
St:API/Acc/ED/HS/IR/Z512/Z2/FOC

Cube Stir peripheral nerves suppressed the signal of the static water , it's easy to analyze each roots

Tips : acquire post contrast in order to suppress veins and adenopathy signal



# LAVA Fat Sat post contrast



efgre3d\_aspir  
TR:3.6  
TE:1.6  
EC:1/1 50.0kHz  
TI:23  
21HN+30AA+60PA  
00:16  
**0.80**/1.6mm /0.80sp  
192X160/0.72 NEX  
StFsp/Acc/ED/Z512/Z2

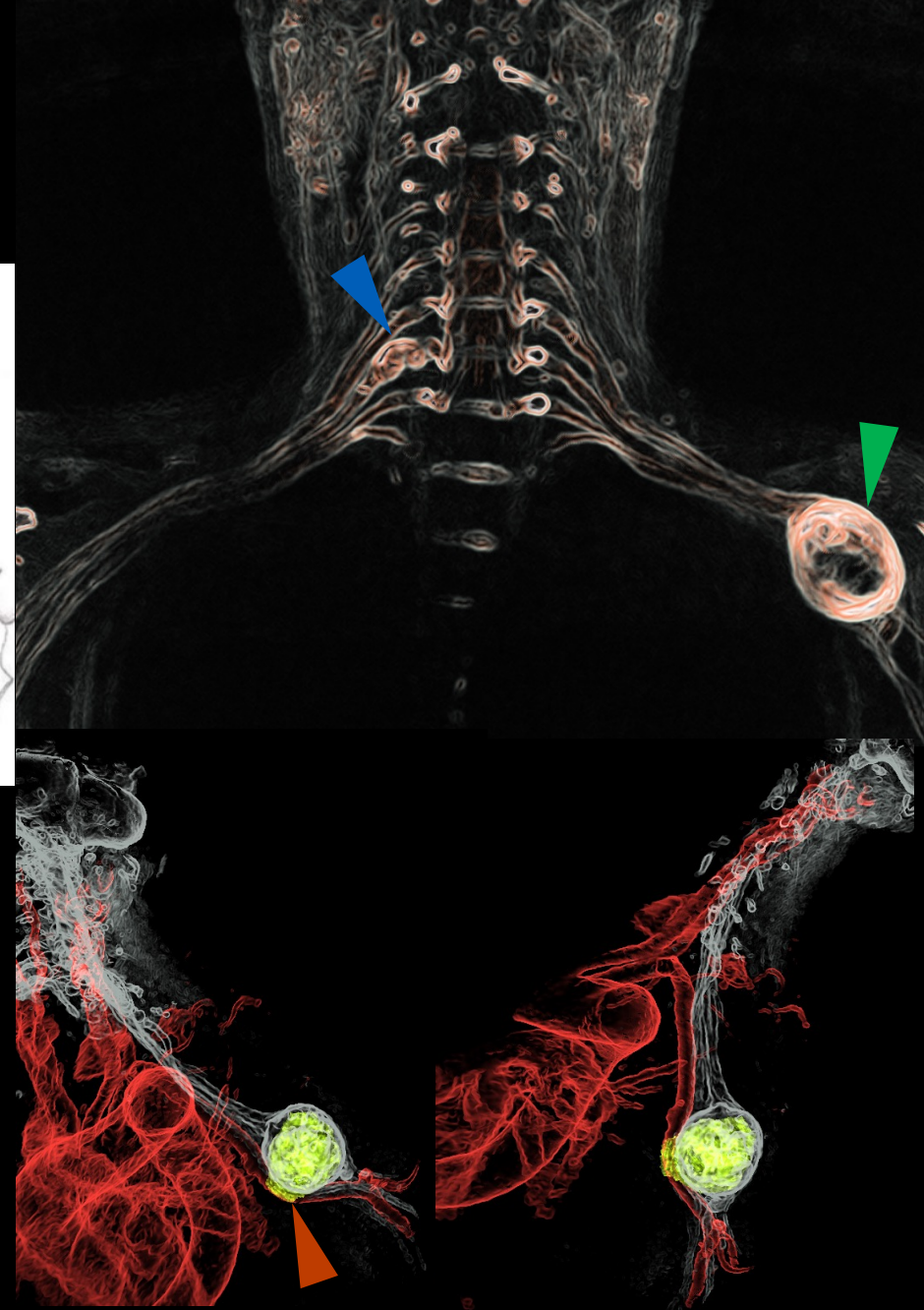
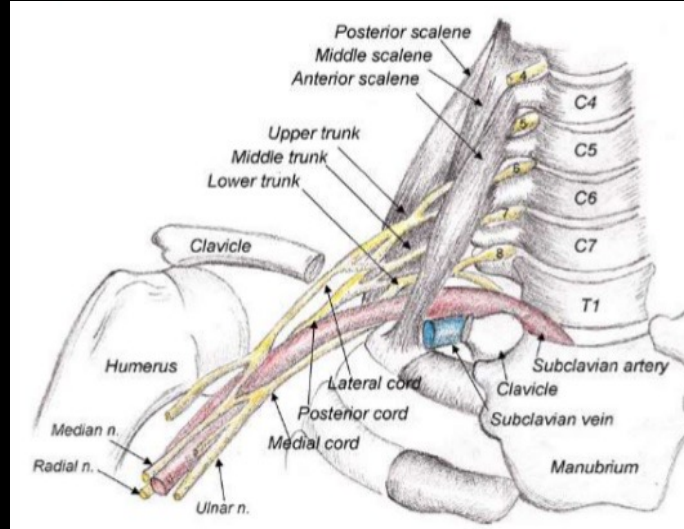
LAVA fat sat is a very good sequence to assess the contrast uptake in a shot scan time minimizing the motion artifact



# Conclusion

Large Schwannoma in the left brachial plexus size 22cm<sup>3</sup> and 38mm max diameter under the left clavicle, this lesion embedded the axillary and radial nerve and create a compression on the left subclavian artery, a conservative surgery is indicated.

Another small schwannoma localized on the right cervical nerve C6-C7



AIR touch and AIR Coil provide an exceptional IQ in this difficult exploration

Learn more :

[https://www.researchgate.net/journal/1749-7221\\_Journal\\_of\\_Brachial\\_Plexus\\_and\\_Peripheral](https://www.researchgate.net/journal/1749-7221_Journal_of_Brachial_Plexus_and_Peripheral)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6532008/>

<https://www.slideshare.net/NeurologyKota/brachial-plexus-imaging>



