SIGNA™ Premier

Brachial Plexus

Exam ID: 3265

Courtesy of Hospital Universitario quirónsalud Madrid

October 2019

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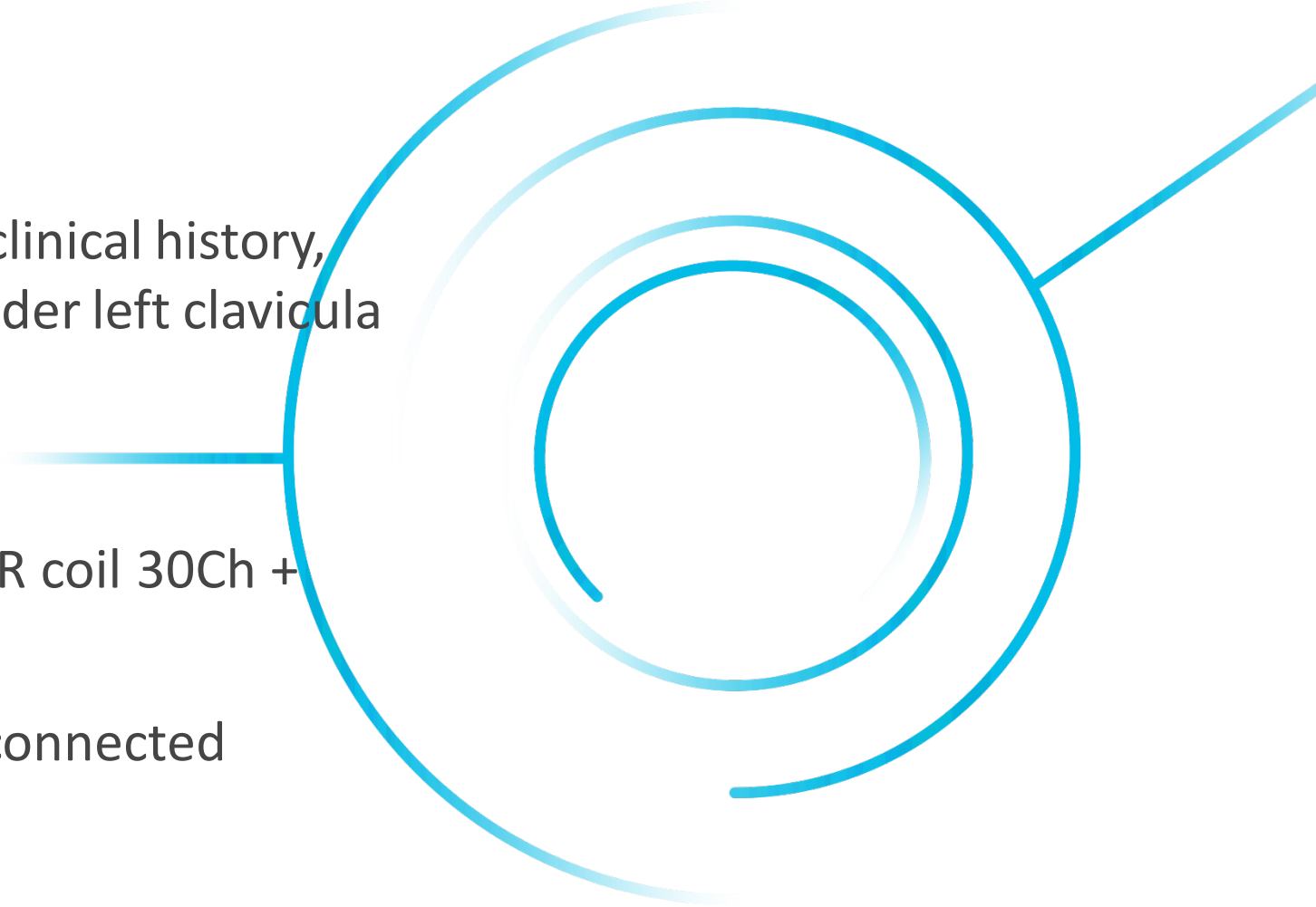
Overview

- 69 yr/old male, without a particular clinical history, paresthesia left arm, mass palped under left clavicula
- SIGNA Premier
- Head first / Supine
- Posterior AIR coil 60Ch + Anterior AIR coil 30Ch +

Head Neck Unit 21Ch :

111 elements simultaneously connected



Protocol

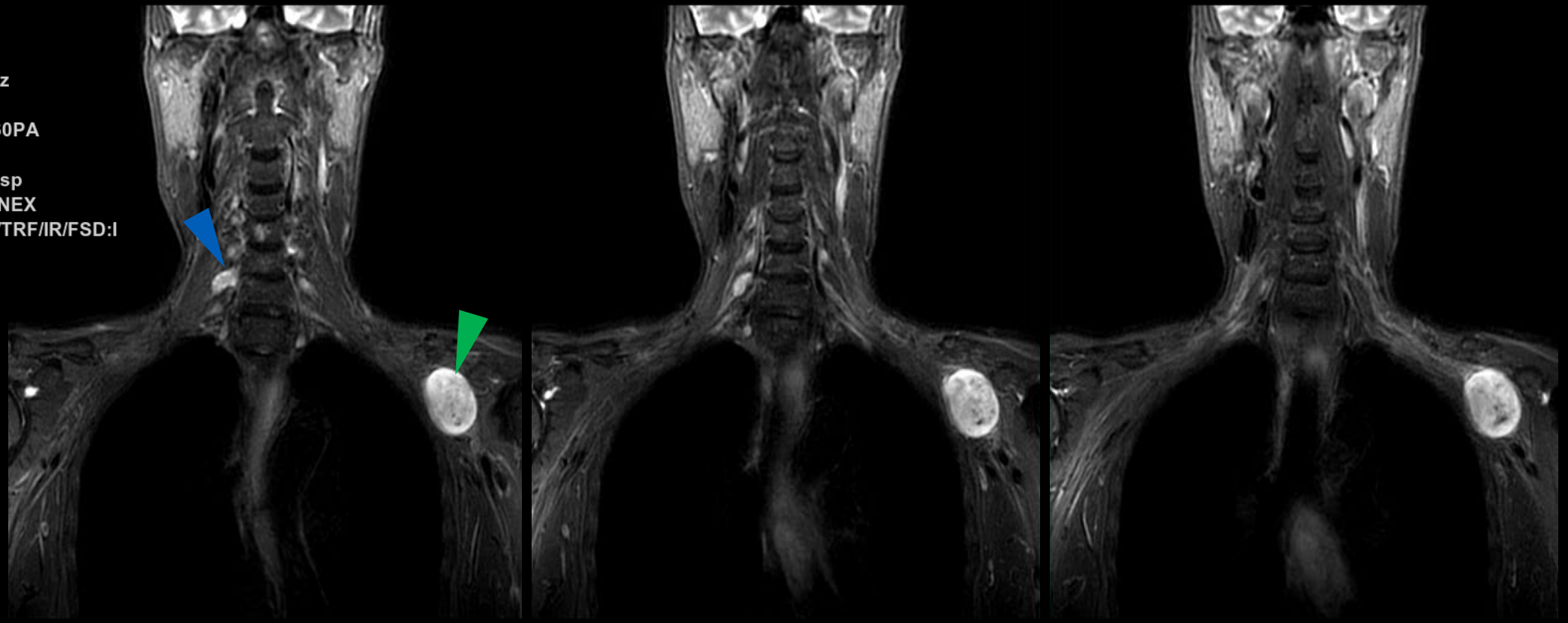
- Localizer
- Cor T2 Stir propeller
- Cor DWI Focus b800
- Ax Lava
- Cor Dynamic Disco Lava
- Cor STIR Peripheral Nerve
- Cor Lava Fat Sat post Contrast
- Sag Lava Fat Sat post Contrast
- Ax Lava Fat Sat post Contrast

Tissular mass under left clavicula with good limit and hypersignal T2

Small mass from the right root C6-C7 with an hypersignal T2

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

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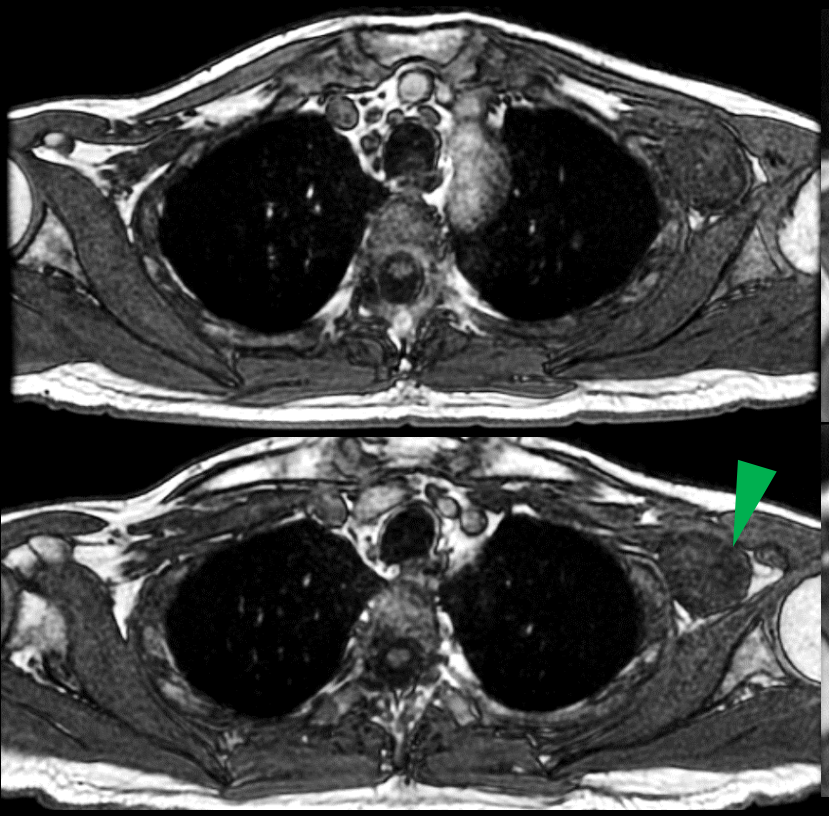
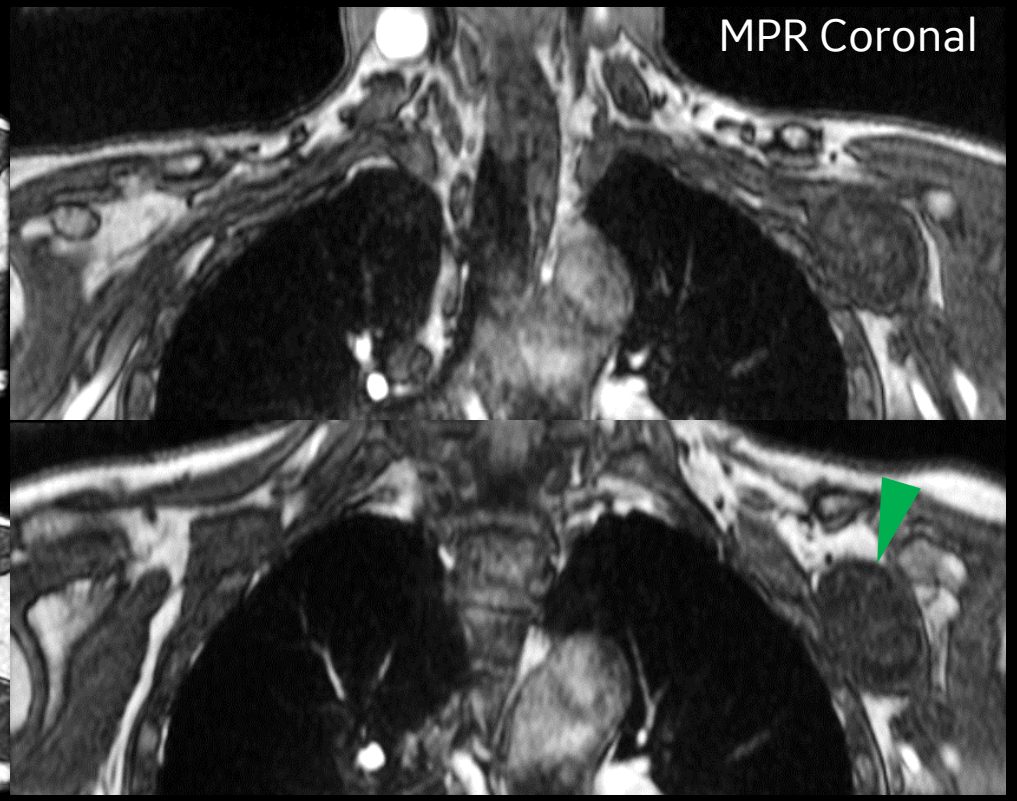
Axial T1 LAVA

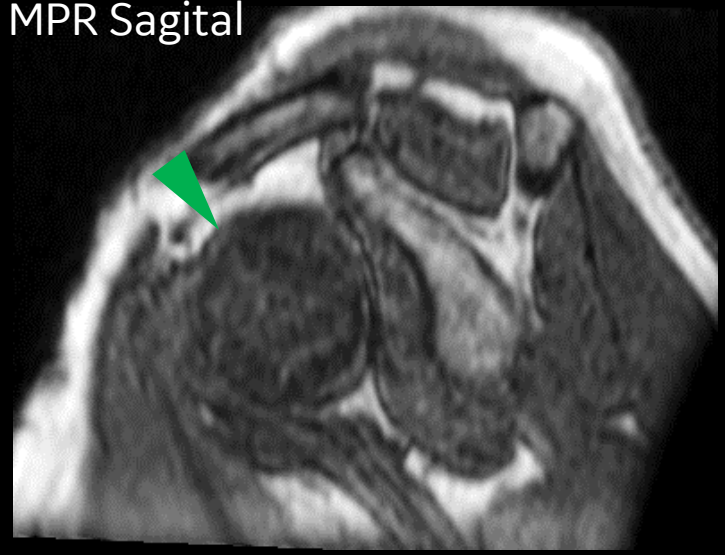




MPR Coronal

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

MPR Sagital



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

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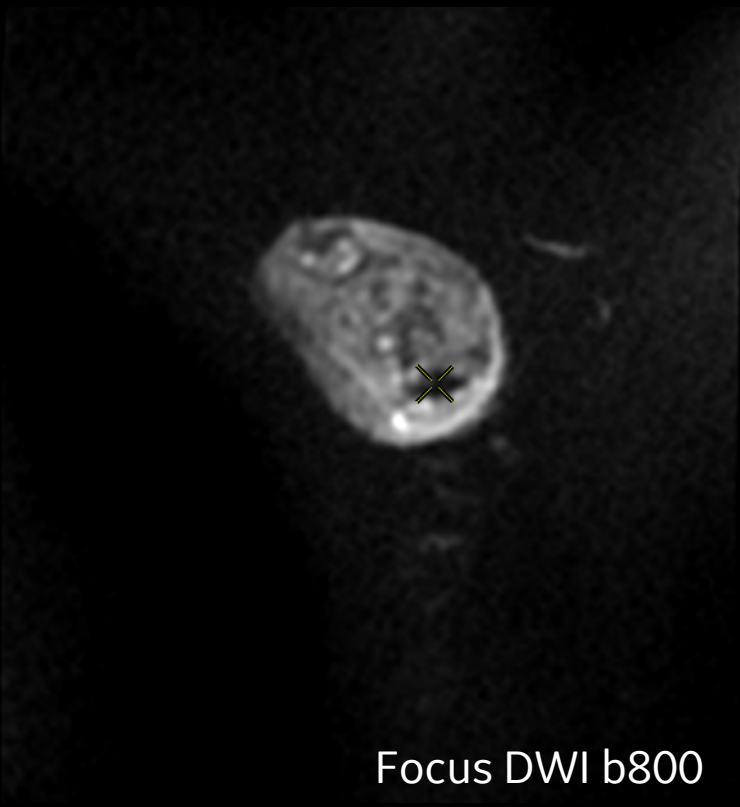
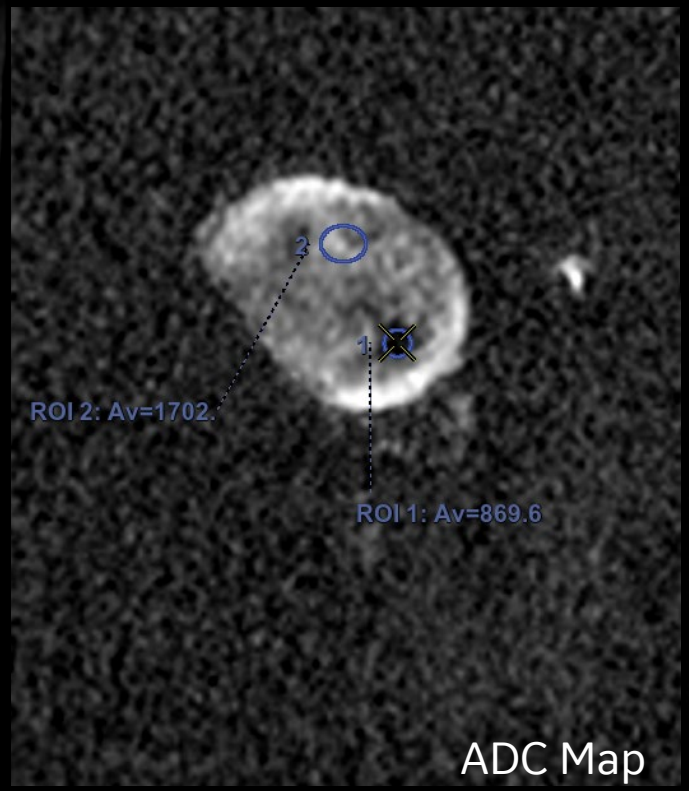
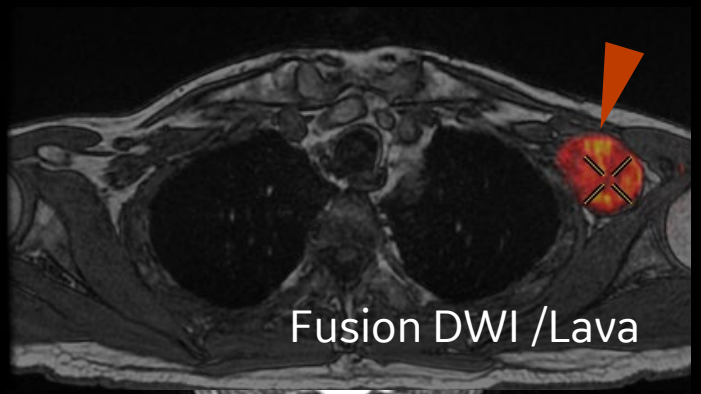
Cor Focus DWI b800



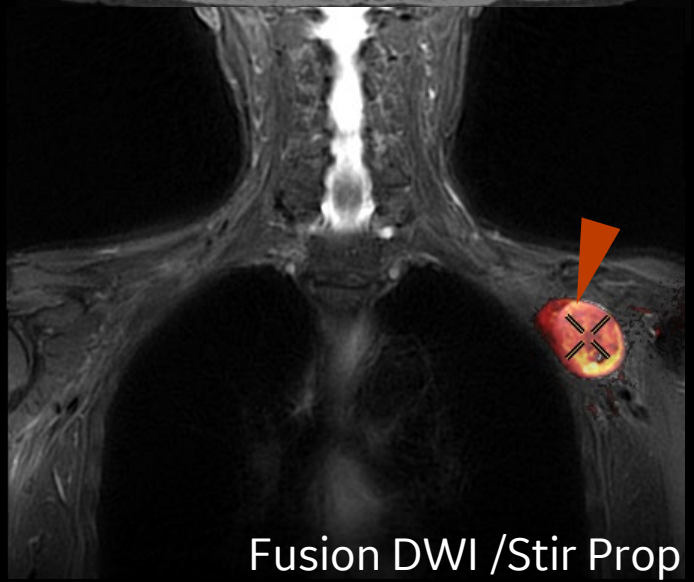
Focus DWI b800



ADC Map



Fusion DWI /Lava



Fusion DWI /Stir Prop

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

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

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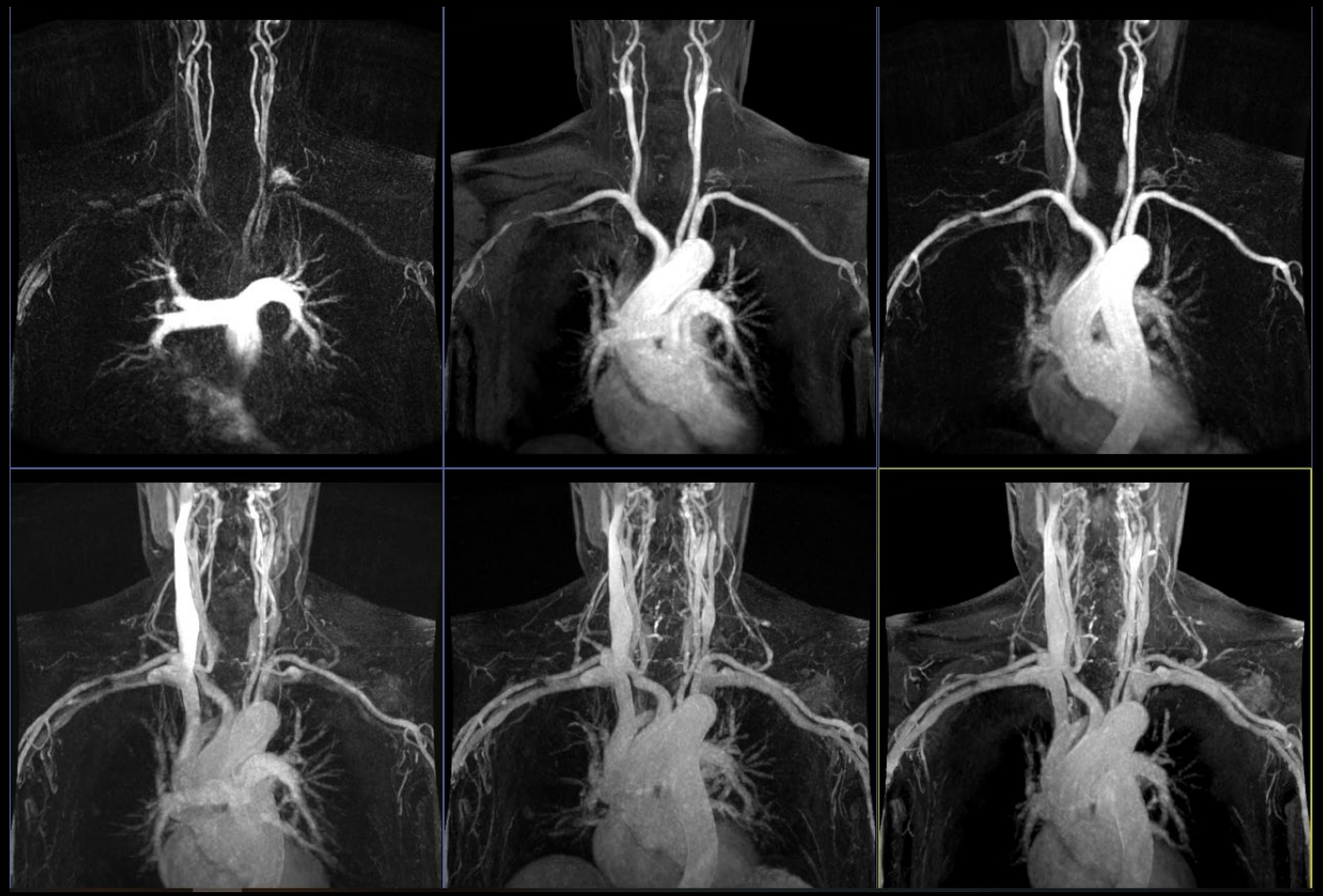
Cor Disco Lava Flex

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/Flx



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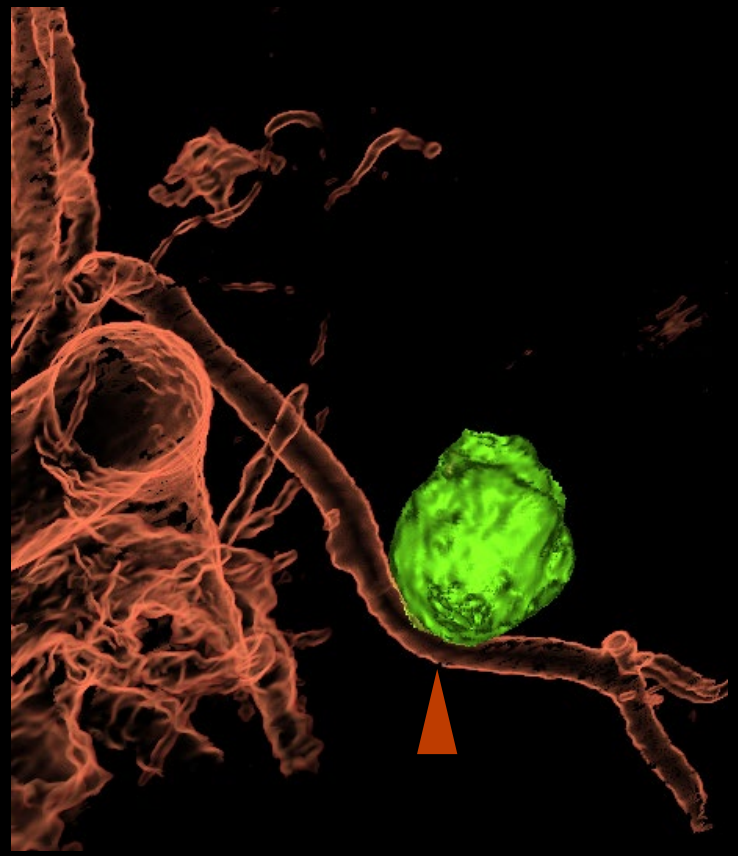
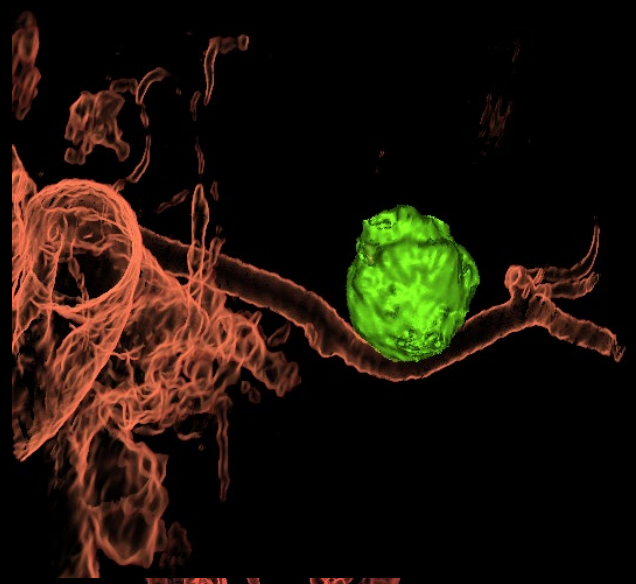
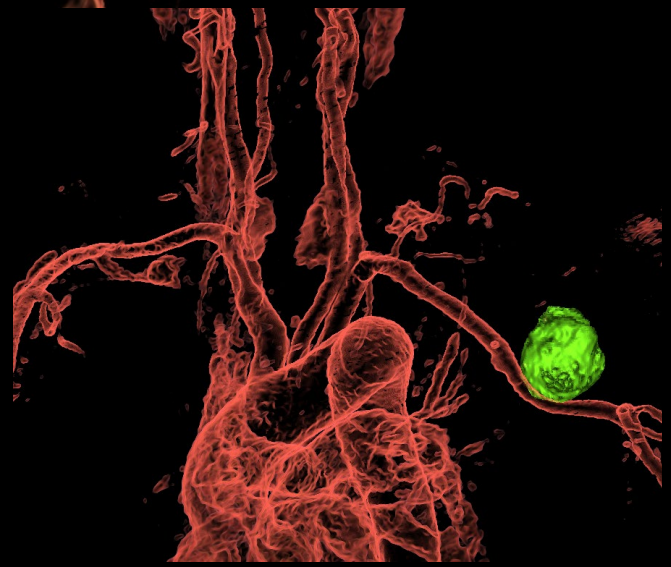
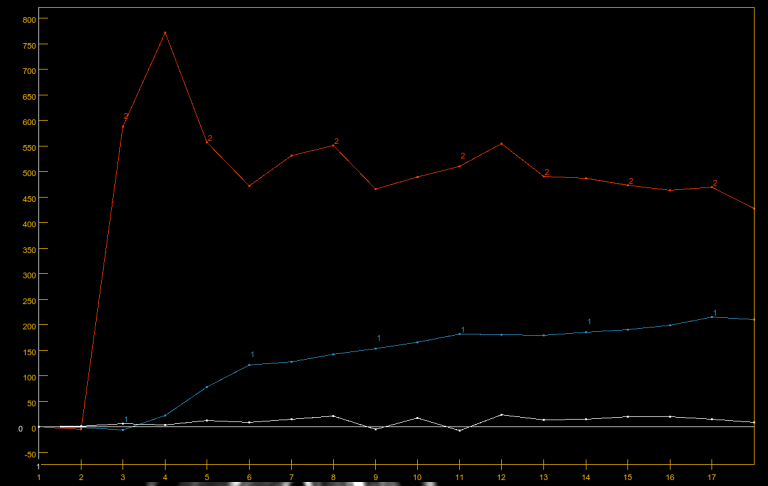
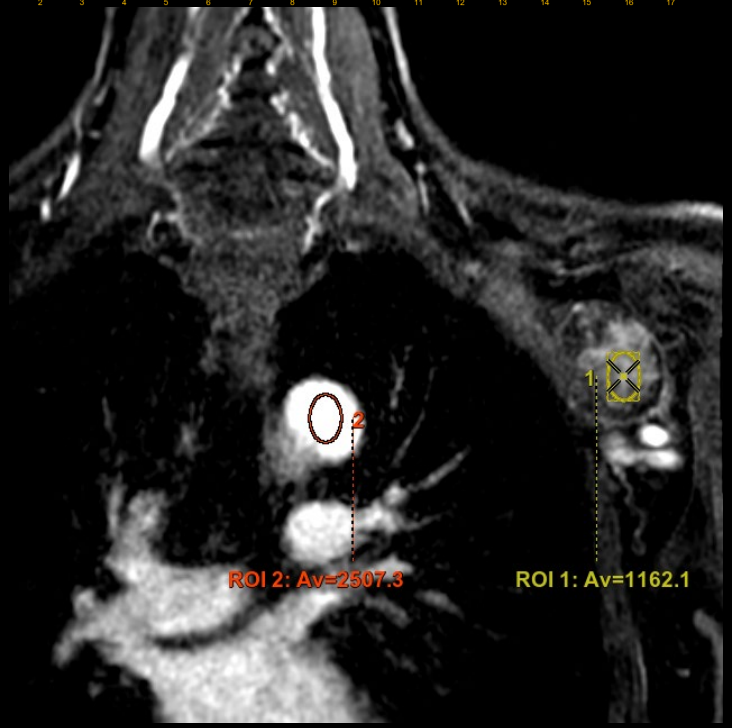
Cor Disco Lava Flex











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

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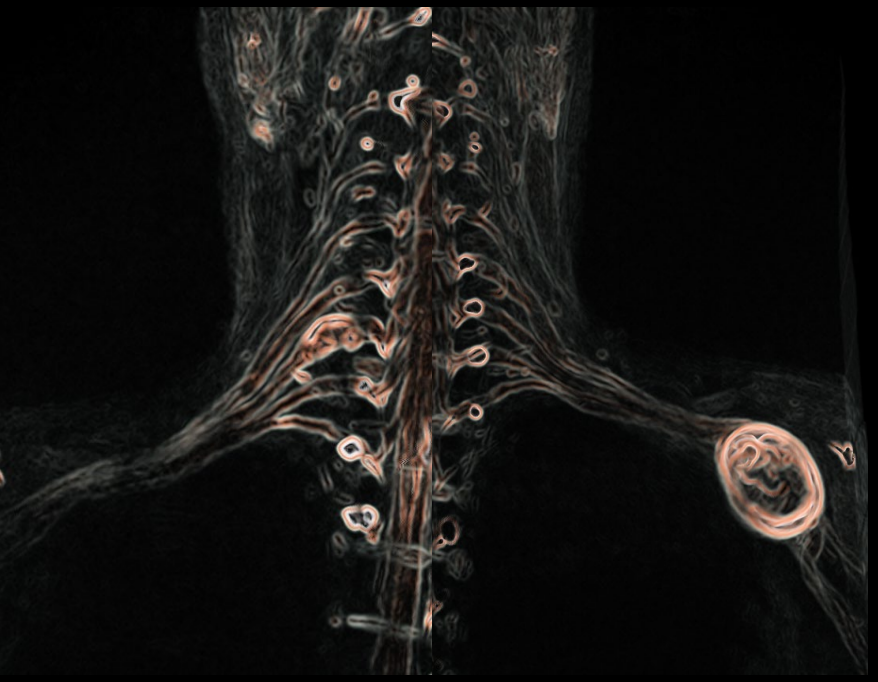
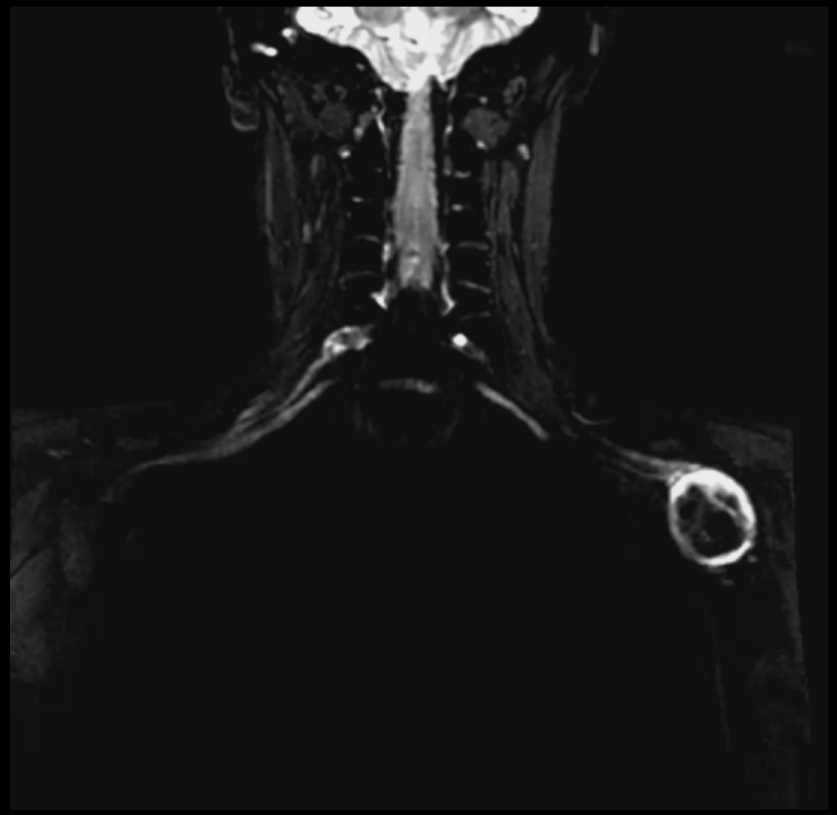
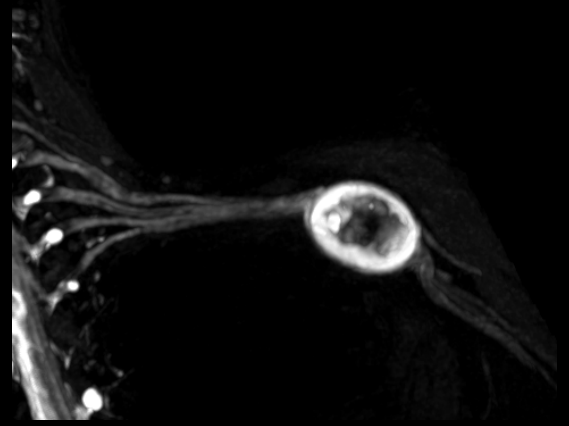
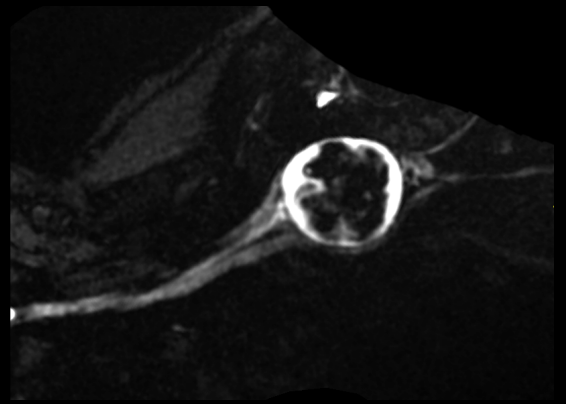
Cor HyperCube Stir HyperSense peripheral nerves









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:AP/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

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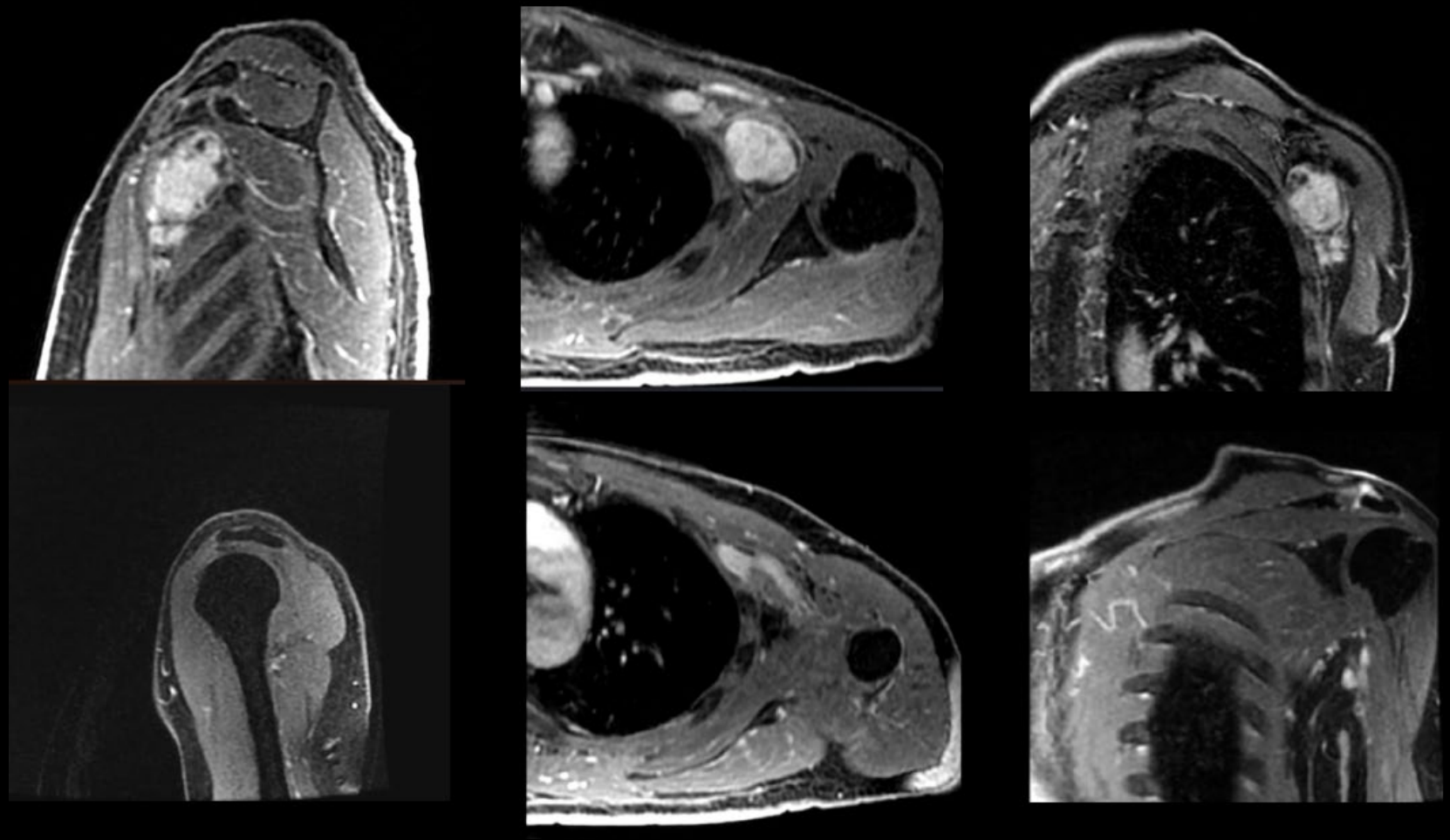
LAVA Fat Sat post contrast



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

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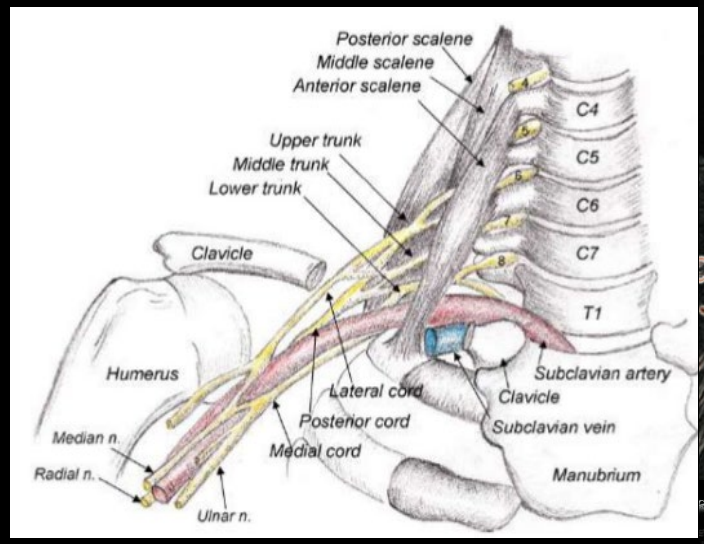
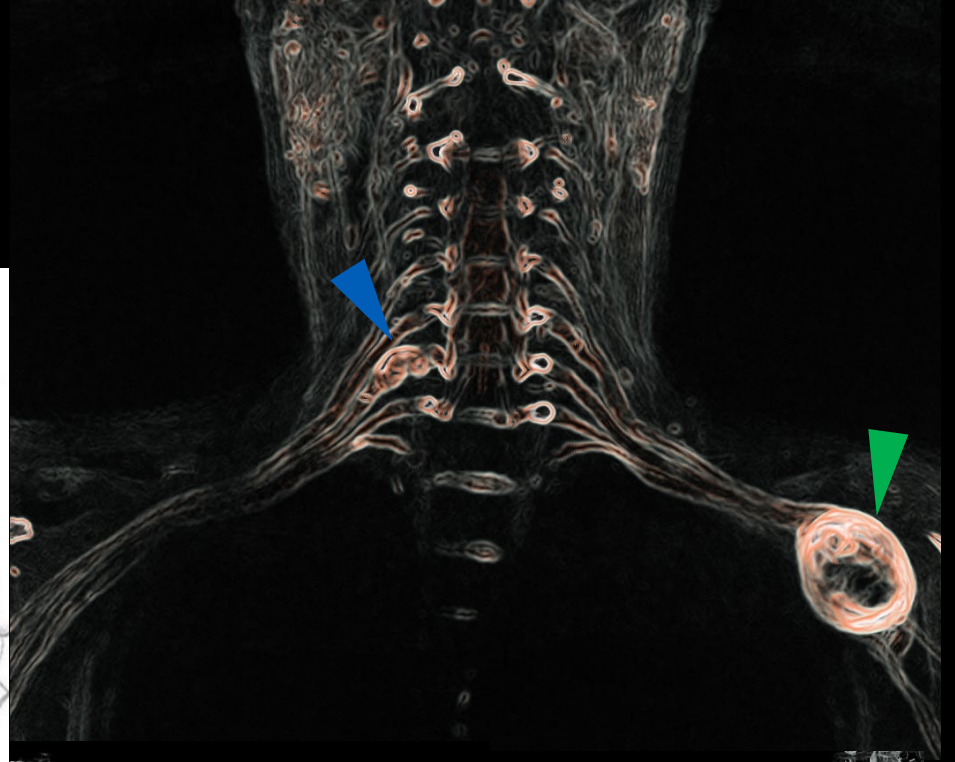
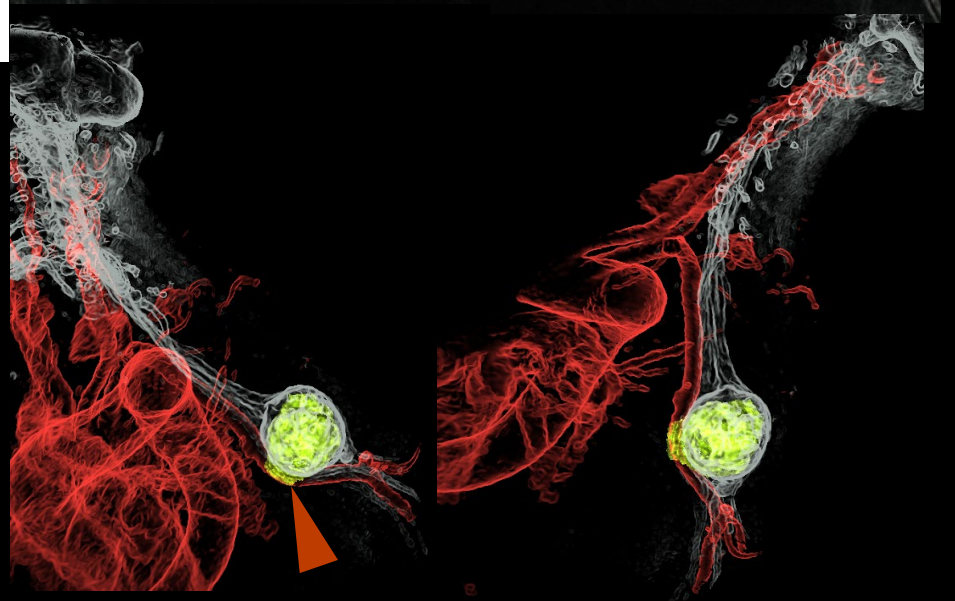
Conclusion

Large Schwannoma in the left brachial plexus size 22cm^3 and 38mm max diameter under the left clavicula , 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.ncbi.nlm.nih.gov/pmc/articles/PMC6532008/

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

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