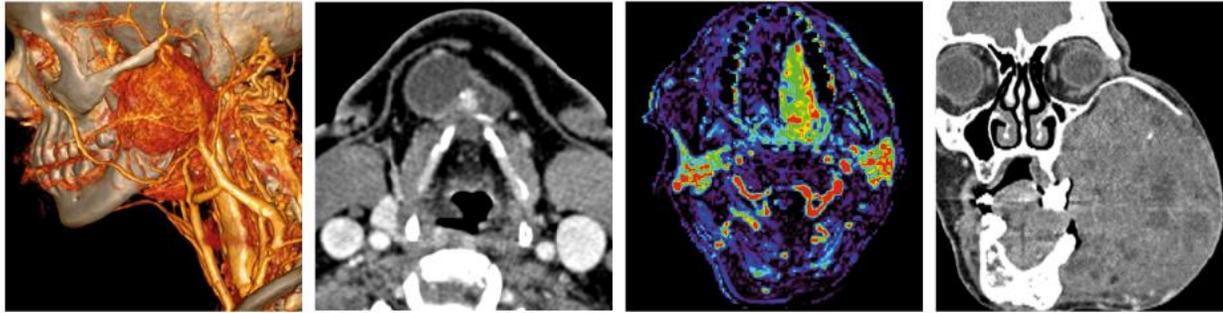


XVIII CURSO NACIONAL DE NEURORRADIOLOGÍA

RADIOLOGÍA DE CABEZA Y CUELLO



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Plexo braquial: ¿Cómo estudiarlo y qué buscar?

Víctor M Suárez Vega

Clínica Universidad de Navarra, Madrid



Clínica
Universidad
de Navarra



Lo que compras en Wallapop...



Lo que te llega...

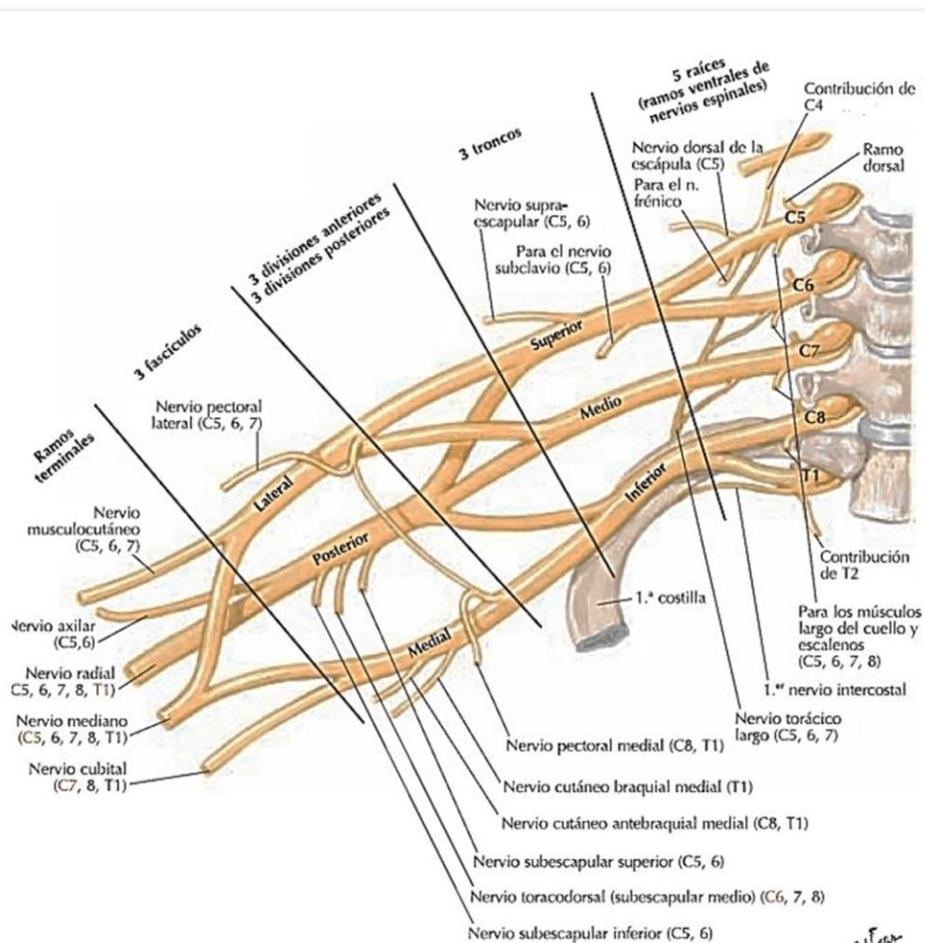


Esquema general charla

- Anatomía
- Secuencias de RM
- Anatomía radiológica
- Casos clínicos
 - Neuropatías inflamatorias
 - Patología tumoral
 - Trauma



Anatomía

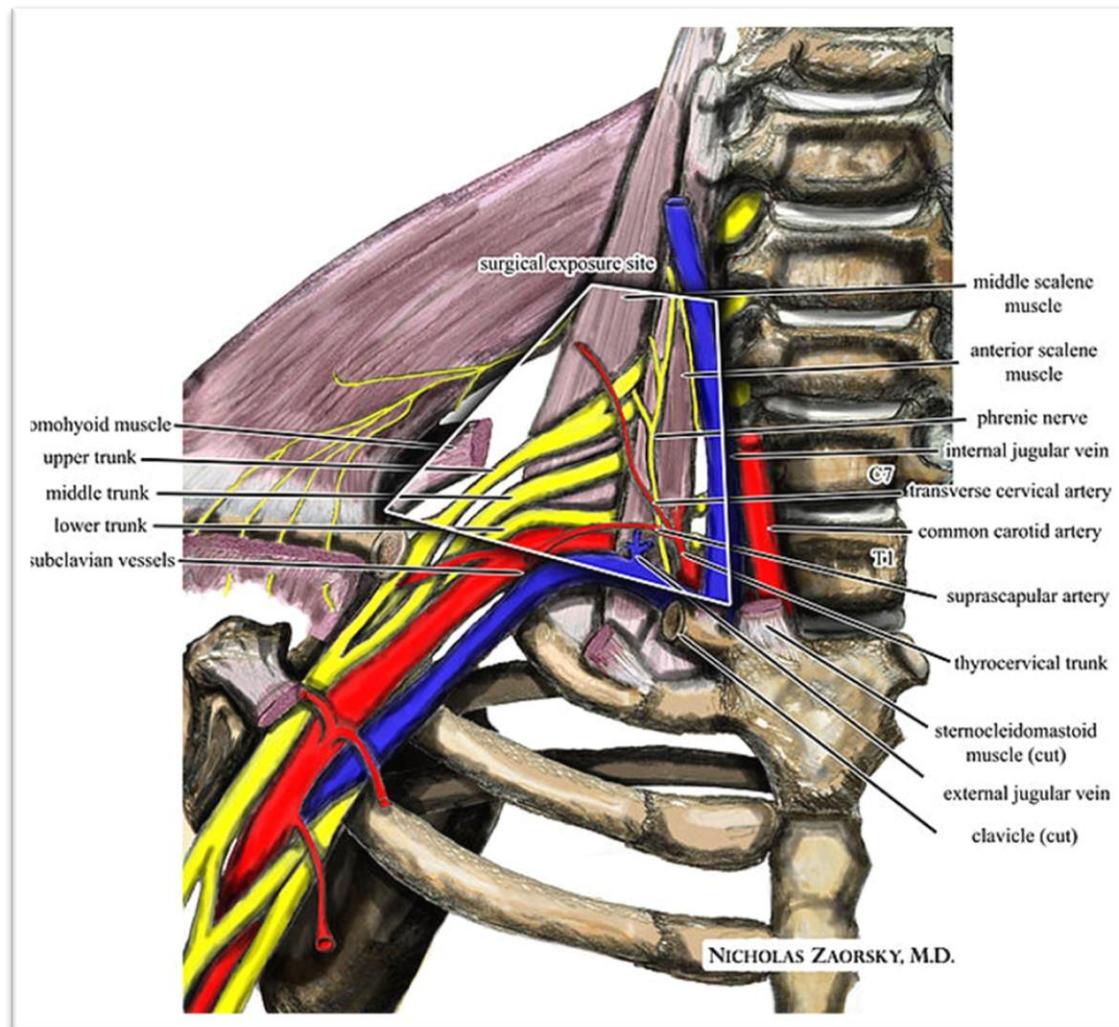
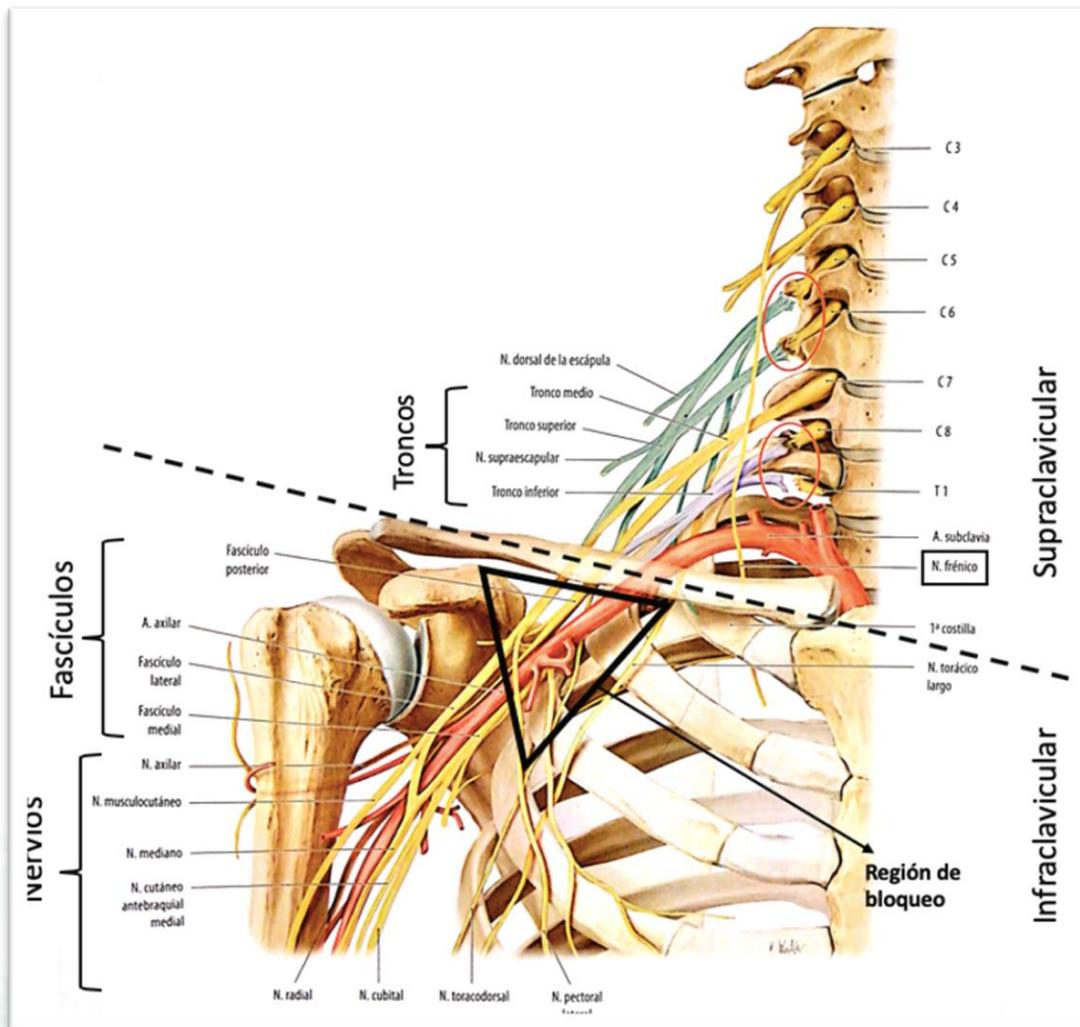


FESC ENMH-IPN 2018

Raíces	C5-T1	5
Troncos	Sup, Med, Inf	3
Divisiones	Ant, Post	2
Cuerdas o Fascículos	Post, Med, Lat	3
Ramas	Radial, cubital...	++



Anatomía



Antenas de RM

- Antena de body - **pobre SNR**
- Antenas flexibles - **pequeñas y poca cobertura**
- Antenas superficie tórax-abdomen - **bien**
- Antenas neurovasculares - **muy bien** (elementos de cuello).



Protocolo RM plexo braquial

Table 1: Sample Protocol for MRI of the Brachial Plexus

MRI Sequence	Section Thickness (mm)	Intersection Gap (mm)	TR/TE	Echo Train Length	Flip Angle	Matrix
Scout imaging						
Sagittal T1-weighted TSE (affected side)	4	5	700/10	3	180	320 × 240
Sagittal T2-weighted fat-suppressed TSE (affected side)	4	5	3000/50	15	180	320 × 224
Coronal T1-weighted TSE (midclavicle to midclavicle)	2	2.5	790/10	4	150	320 × 376
Coronal STIR (shoulder-to-shoulder FOV)	2	2.5	4700/55	15	150	320 × 315
Coronal T1-weighted fat-suppressed Dixon FSE (shoulder-to-shoulder FOV)	2	2.5	670/10	3	150	320 × 315
Sagittal T1-weighted fat-suppressed Dixon FSE (affected side)	4	5	700/10	3	180	320 × 240
Contrast-enhanced imaging						
Axial T1-weighted fat-suppressed Dixon FSE (affected side)	4	5	900/10	3	150	320 × 224
Coronal T1-weighted fat-suppressed FSE (shoulder-to-shoulder FOV)	2	2.5	670/10	3	150	320 × 315
Sagittal T1-weighted fat-suppressed Dixon FSE (affected side)	4	5	700/10	3	180	320 × 244
Coronal 3D STIR (shoulder-to-shoulder FOV)	1.2	NA	2600/250	145	120	448 × 120
Three-plane thin MIP*	5–8	NA	NA	NA	NA	NA

Note.—FOV = field of view, FSE = fast spin echo, NA = not applicable, TR/TE = repetition time (msec)/echo time (msec), TSE = turbo spin echo.

*For three-plane thin maximum intensity projection (MIP) MRI, 1–3-mm intersection spacing was used.

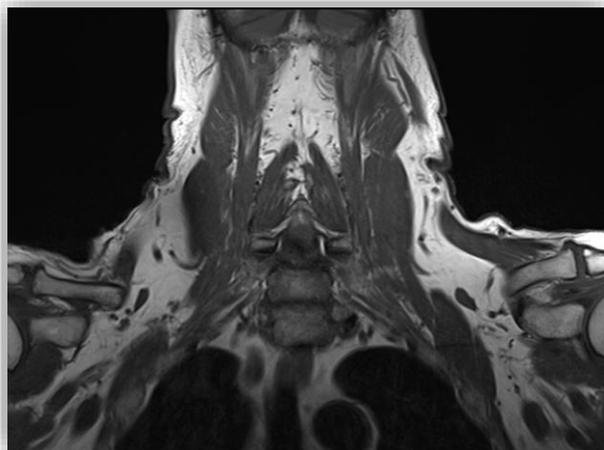
Gilcrease-Garcia, Radiographics, 2020



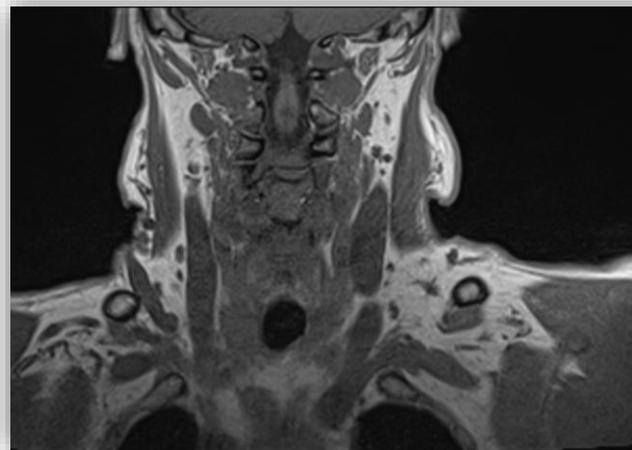
Nuestro protocolo RM



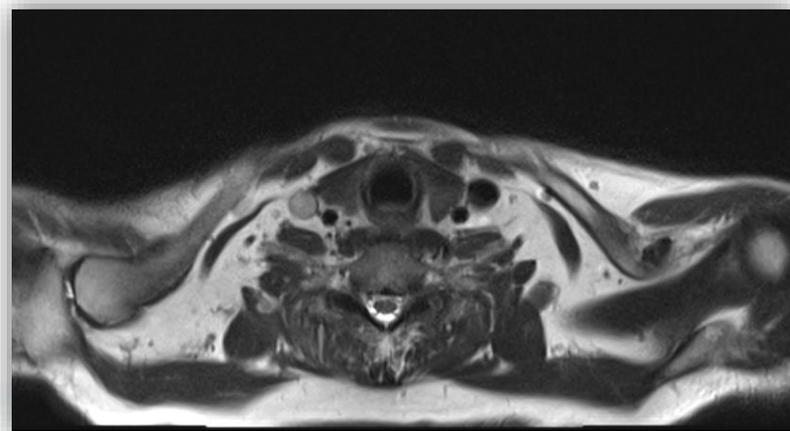
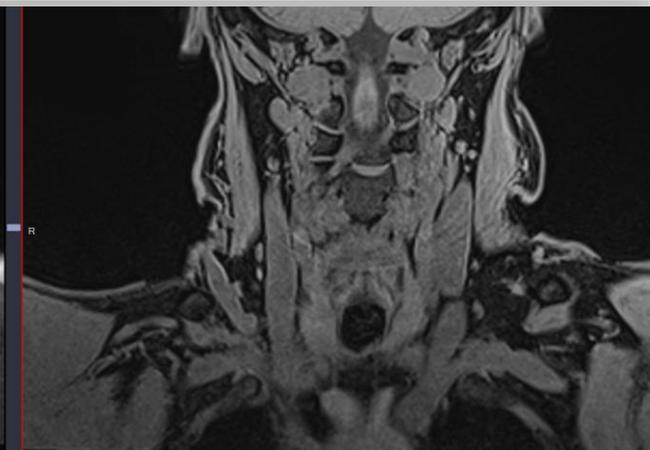
T1 SAG



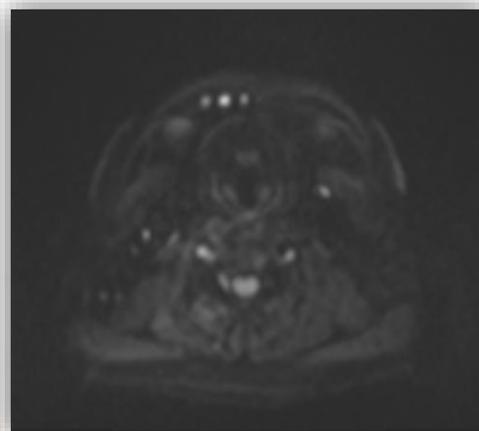
T1 COR



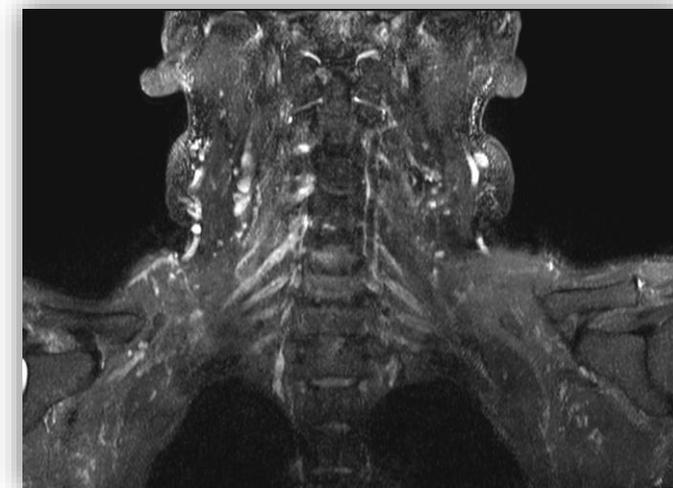
3D T1 COR VIBE DIXON



T2 HASTE AXIAL



DWI AXIAL

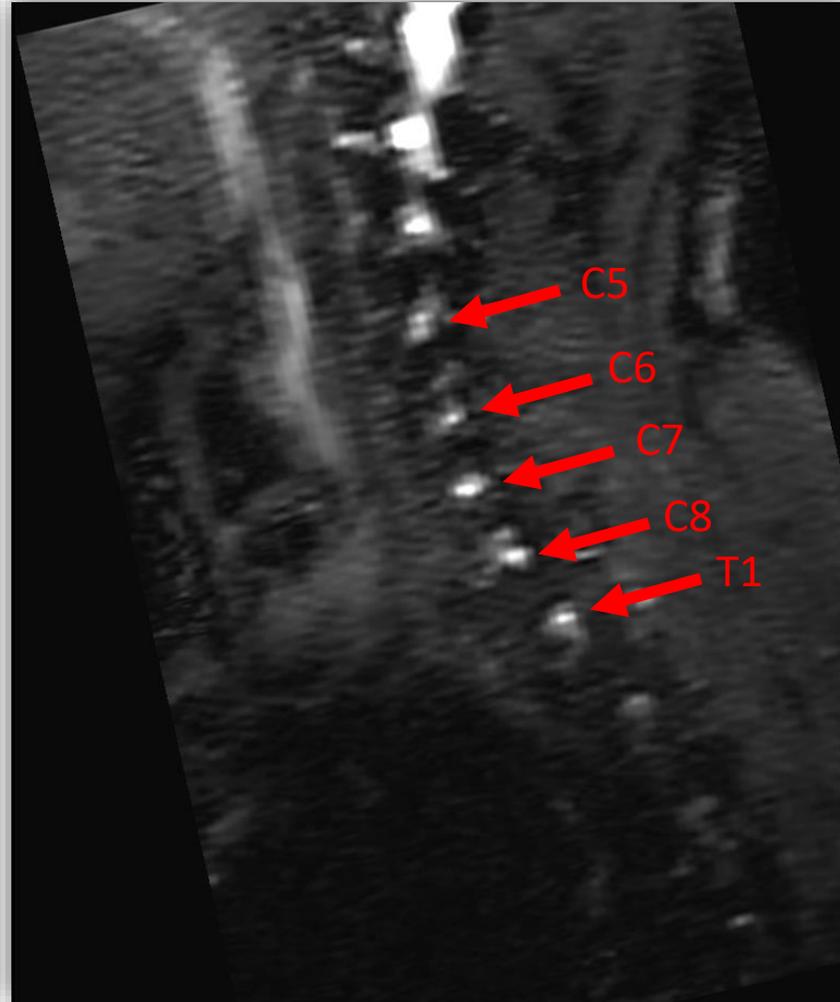


3D STIR SPACE

Puntos Clave

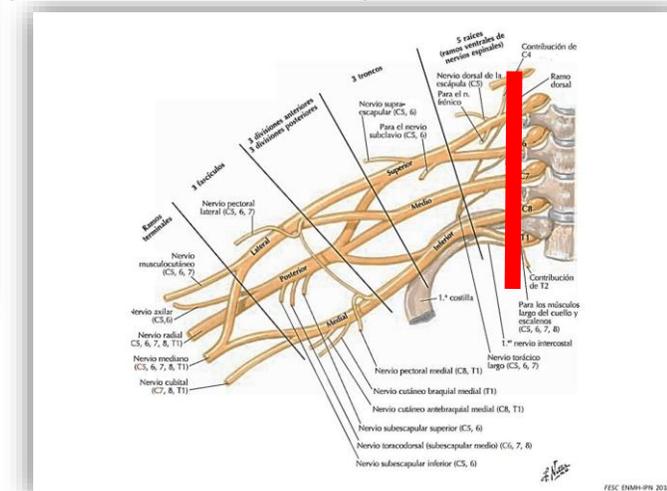
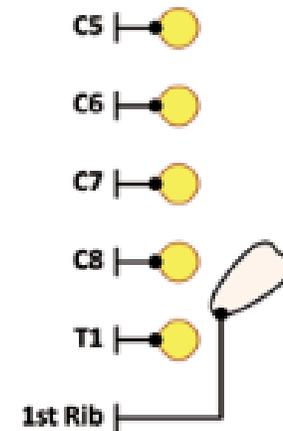
- T1 SAG sin sat grasa muy importante para la anatomía (incluyendo columna cervical)
- DIXON o STIR preferibles a una saturación espectral de la grasa
- Contraste no siempre necesario (patología tumoral)
- Planos coronales oblicuos siguiendo la dirección de la columna
- “Encuentra la arteria y encontrarás el plexo”

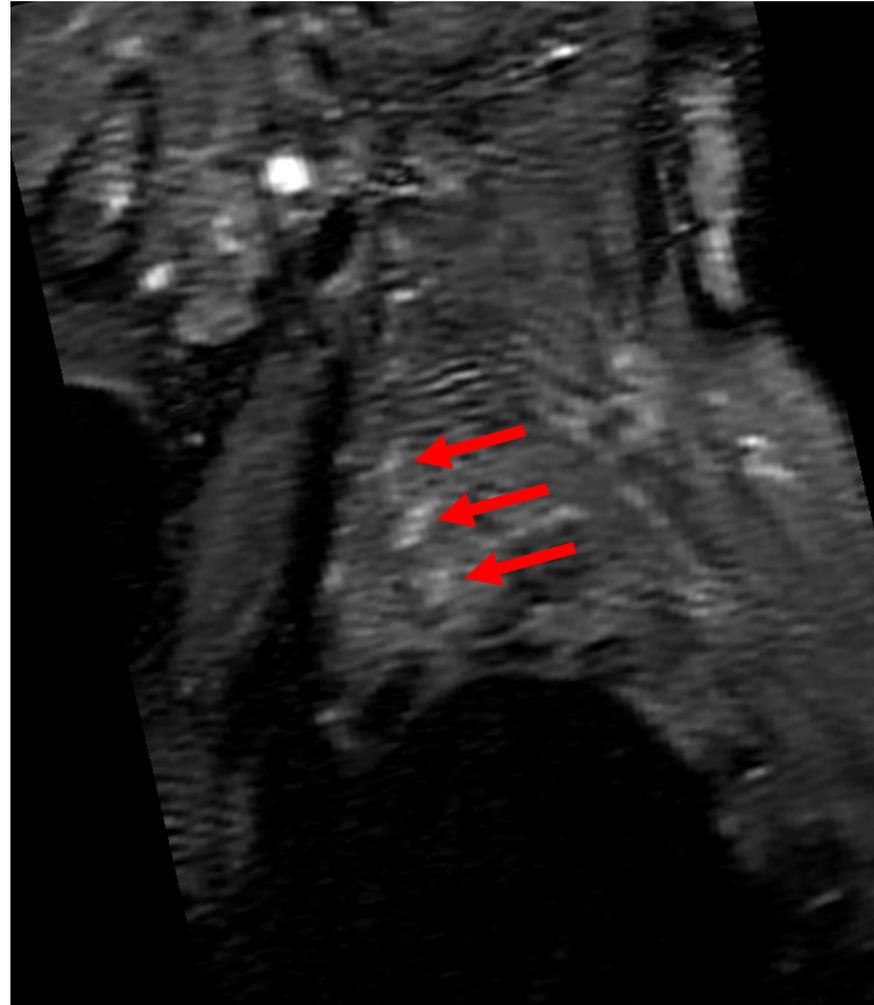




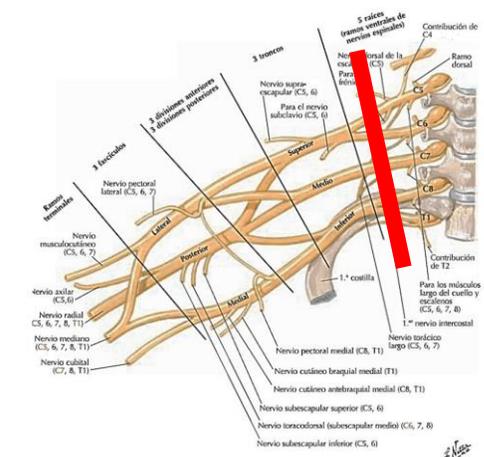
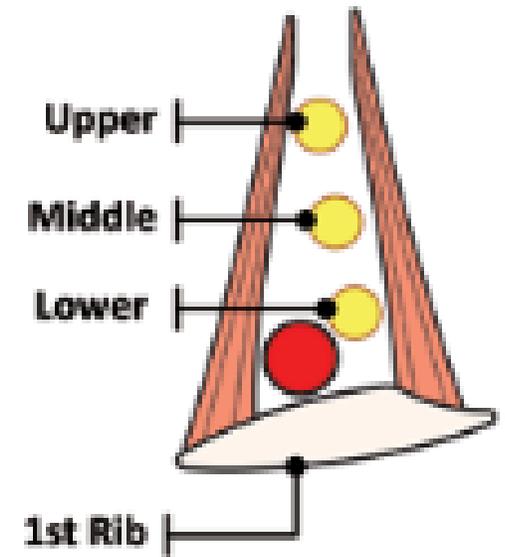
Raíces **C5-T1** **5**

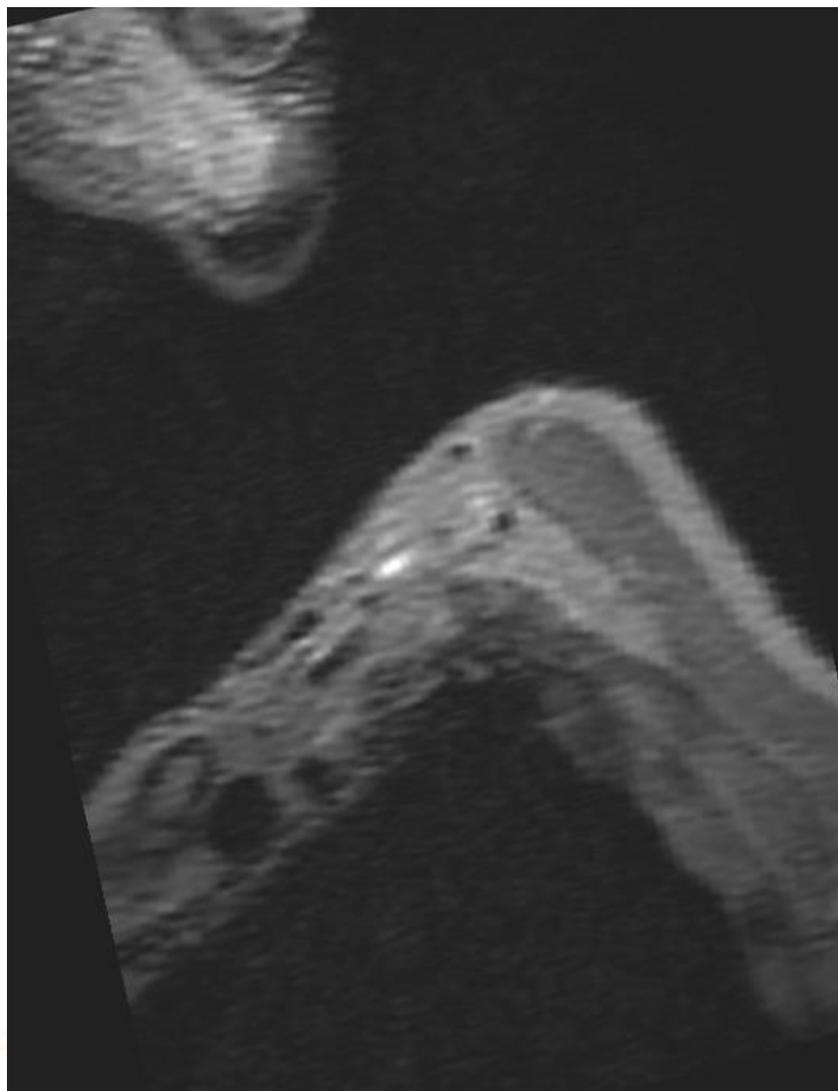
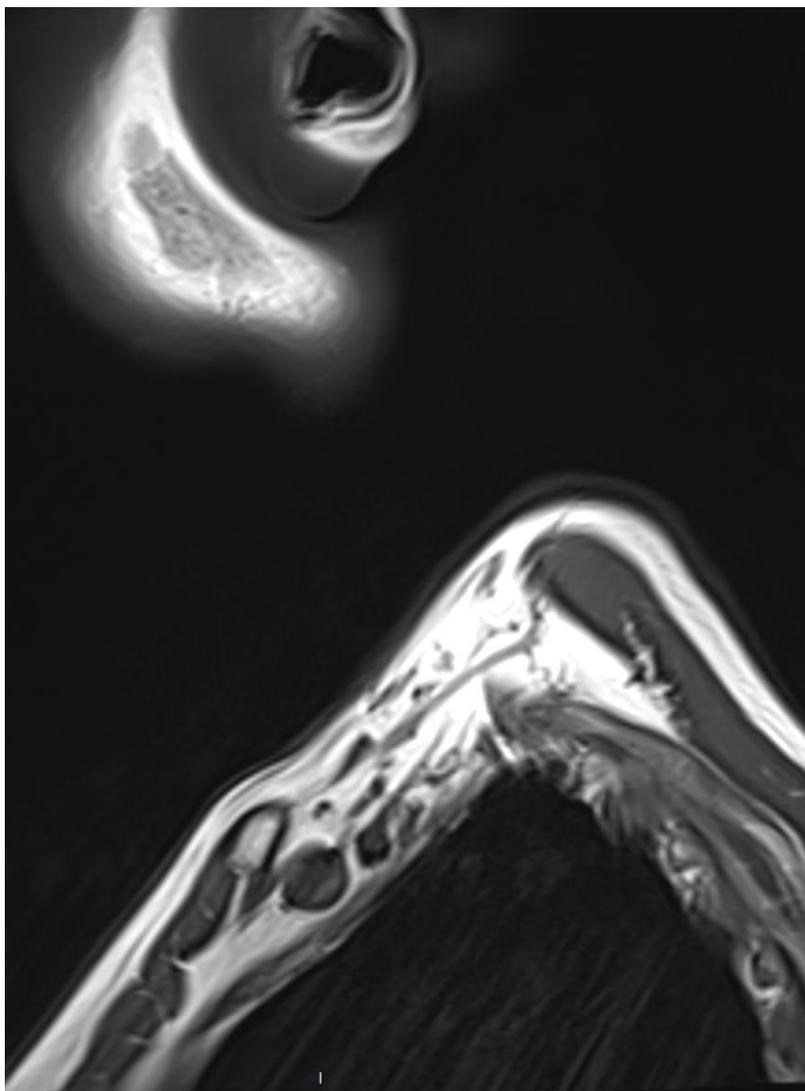
Sólo de raíces ventrales



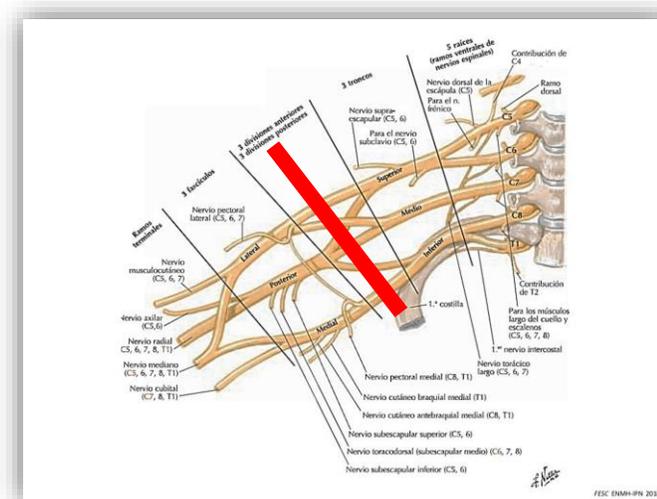
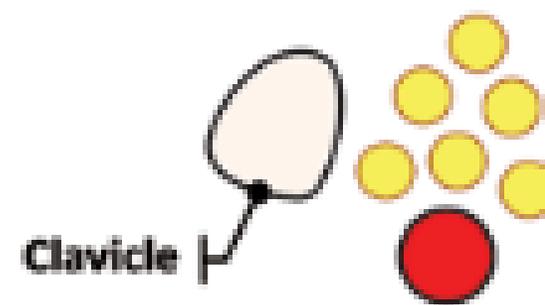


Troncos **Sup, Med, Inf** **3**

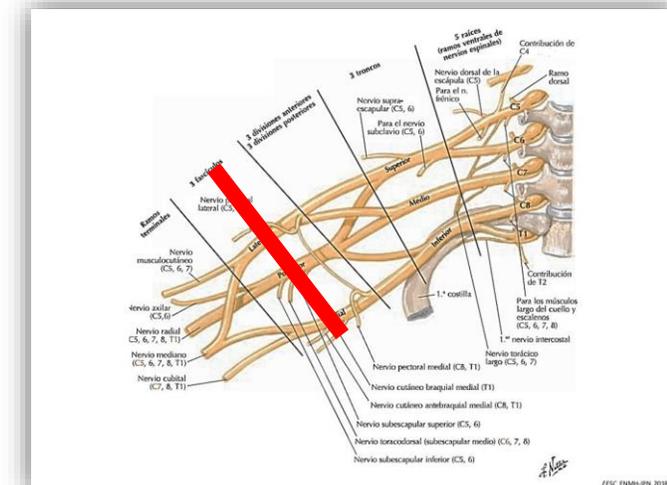
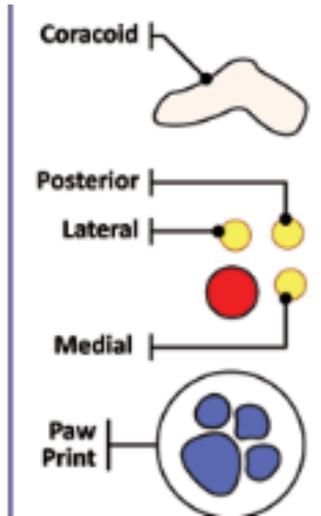




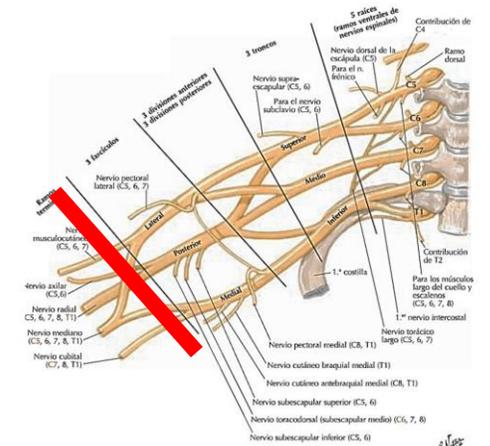
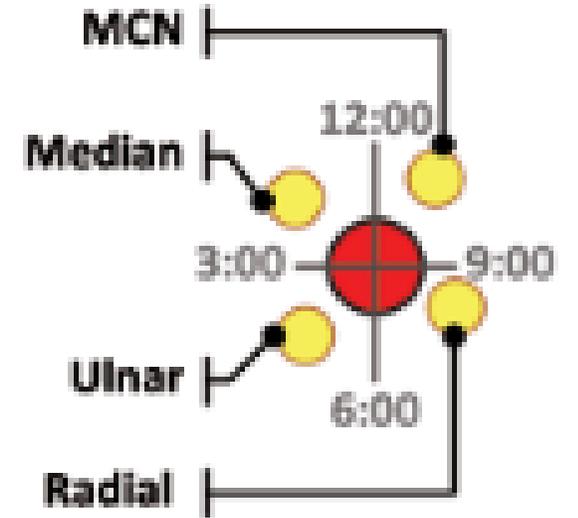
Divisiones **Ant, Post** **2**

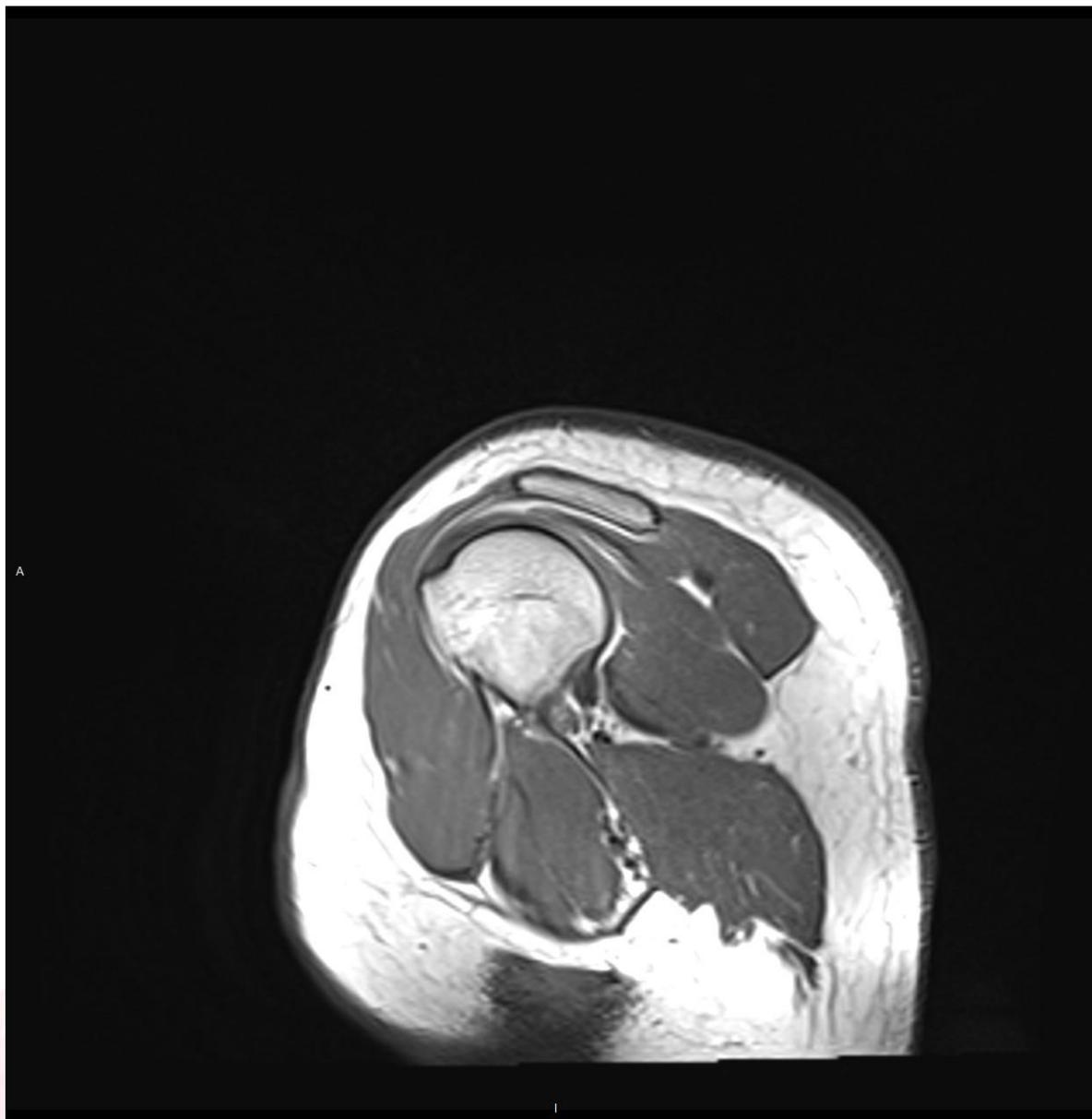


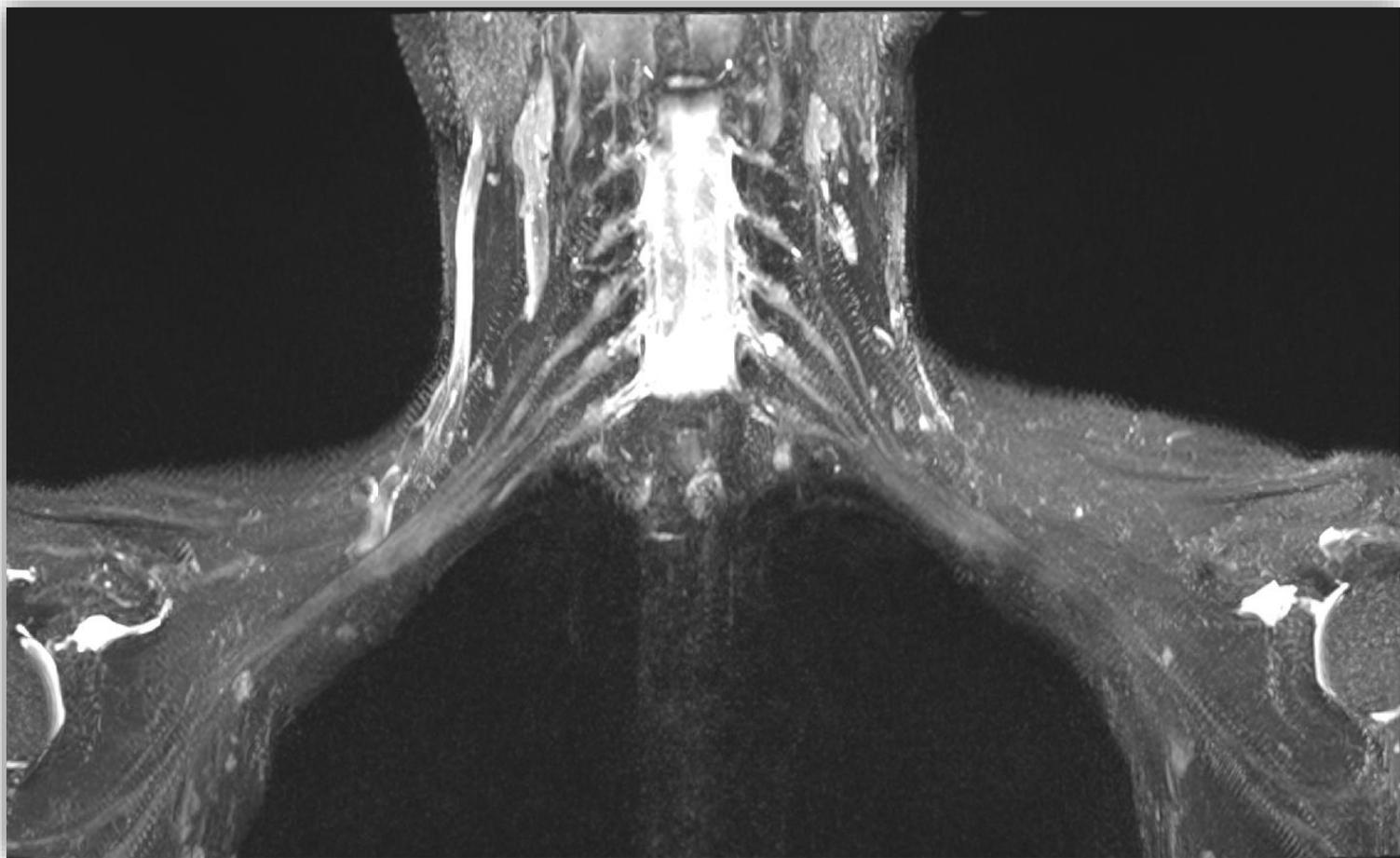
Fasciculos Post, Med, Lat 3



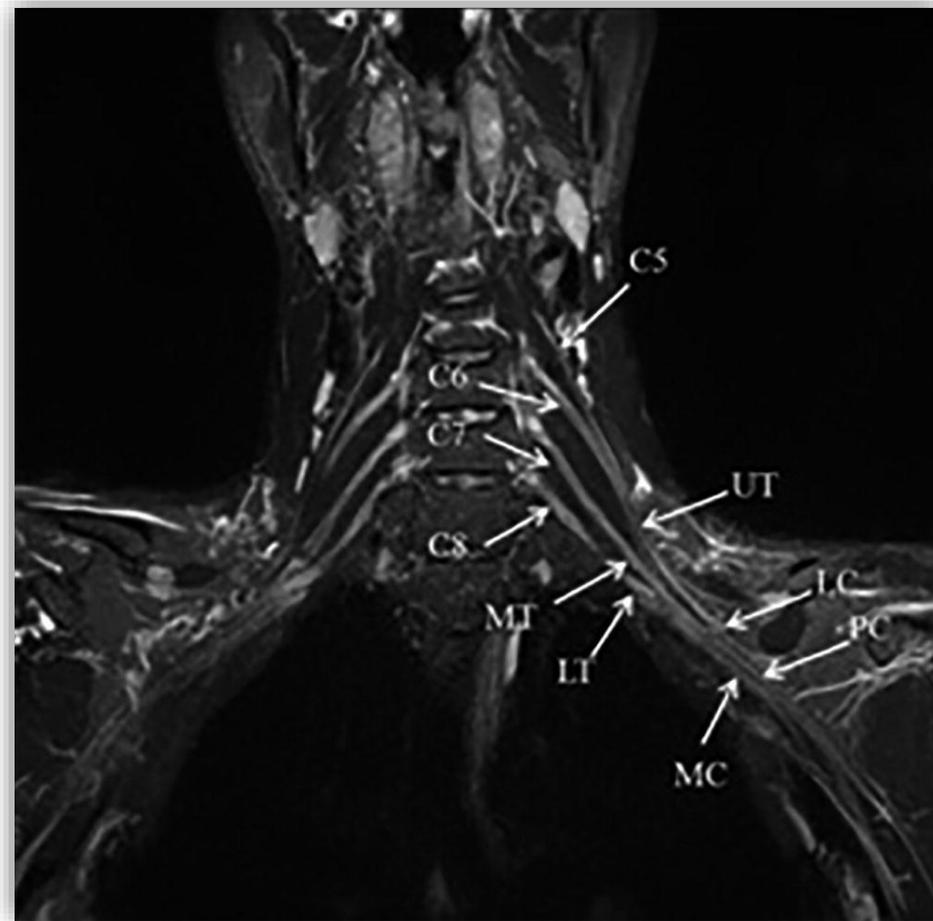
Ramas **Radial, cubital...**

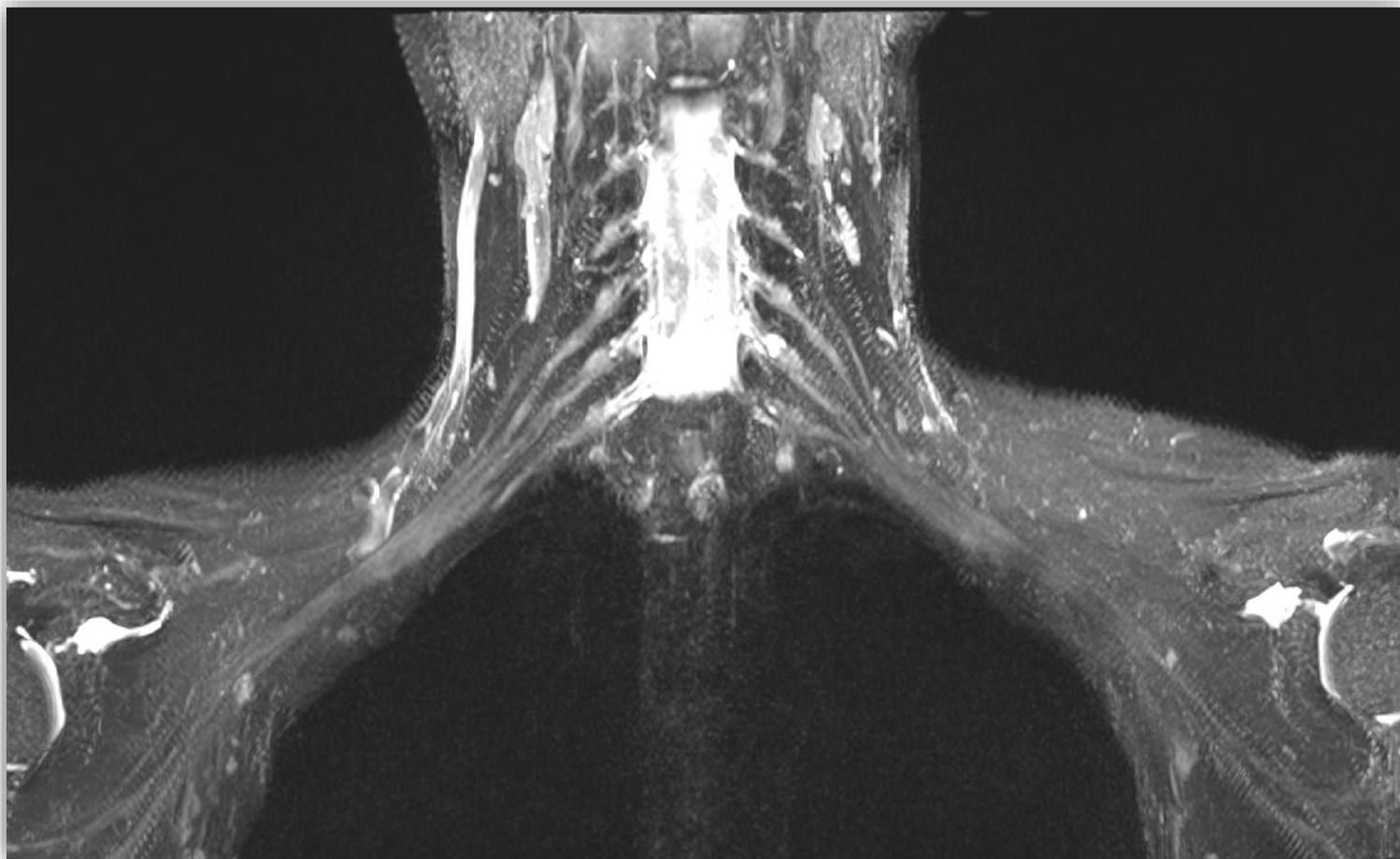




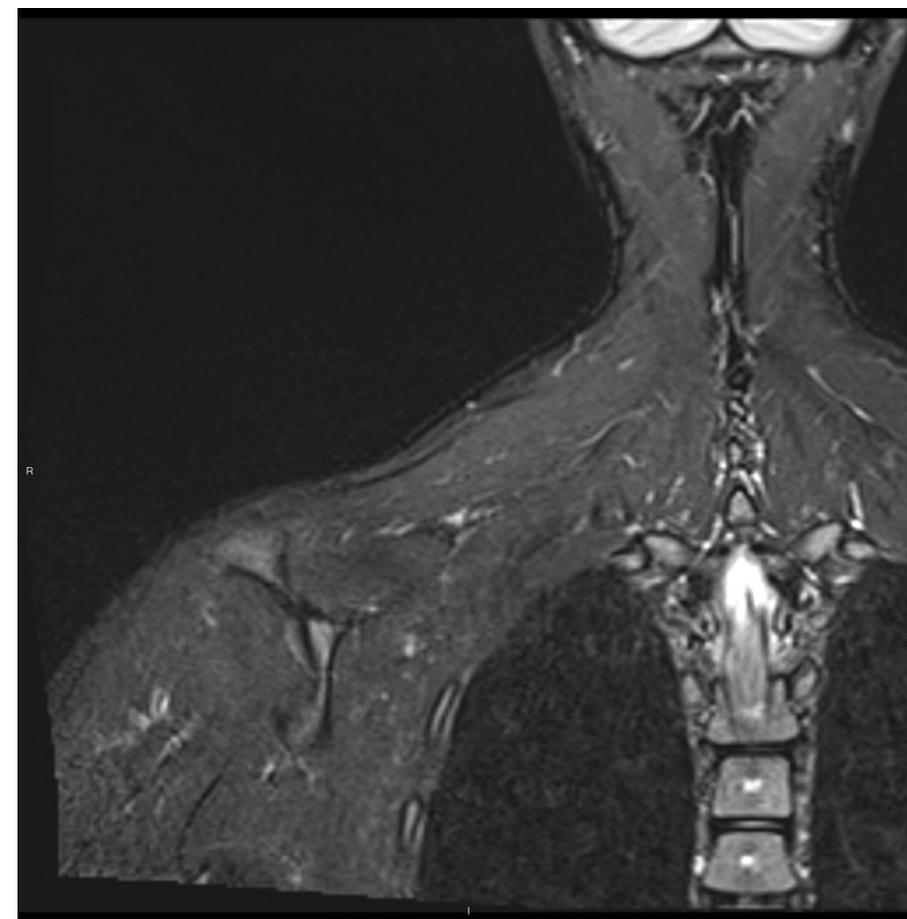


MIP 3D STIR SPACE





MIP 3D STIR SPACE



¿Qué buscar?



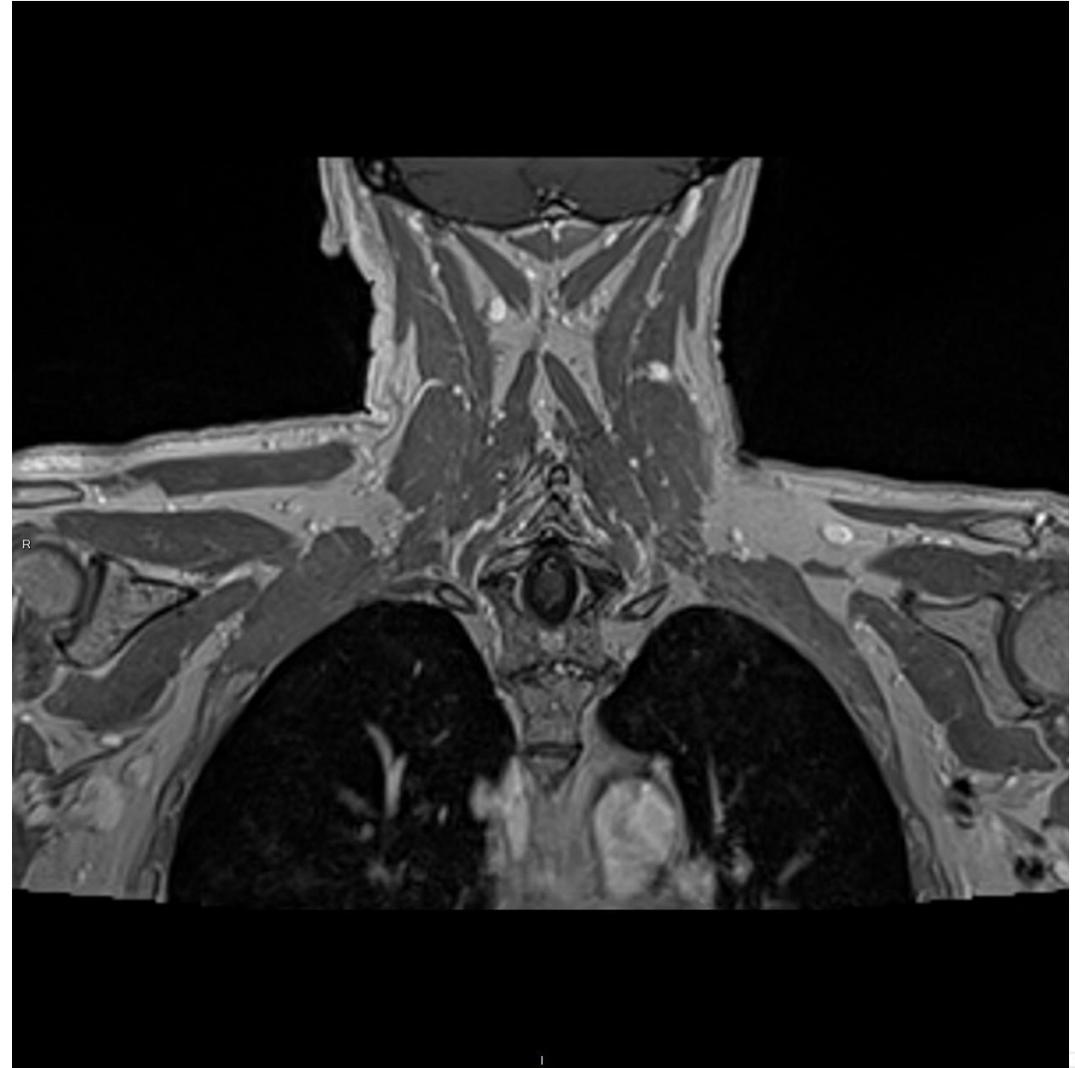
- Masas a lo largo recorrido
- Calibre de nervios
- Simetría de la señal
- No agrupamiento
- Edema estructuras musculares adyacentes



Dificultades

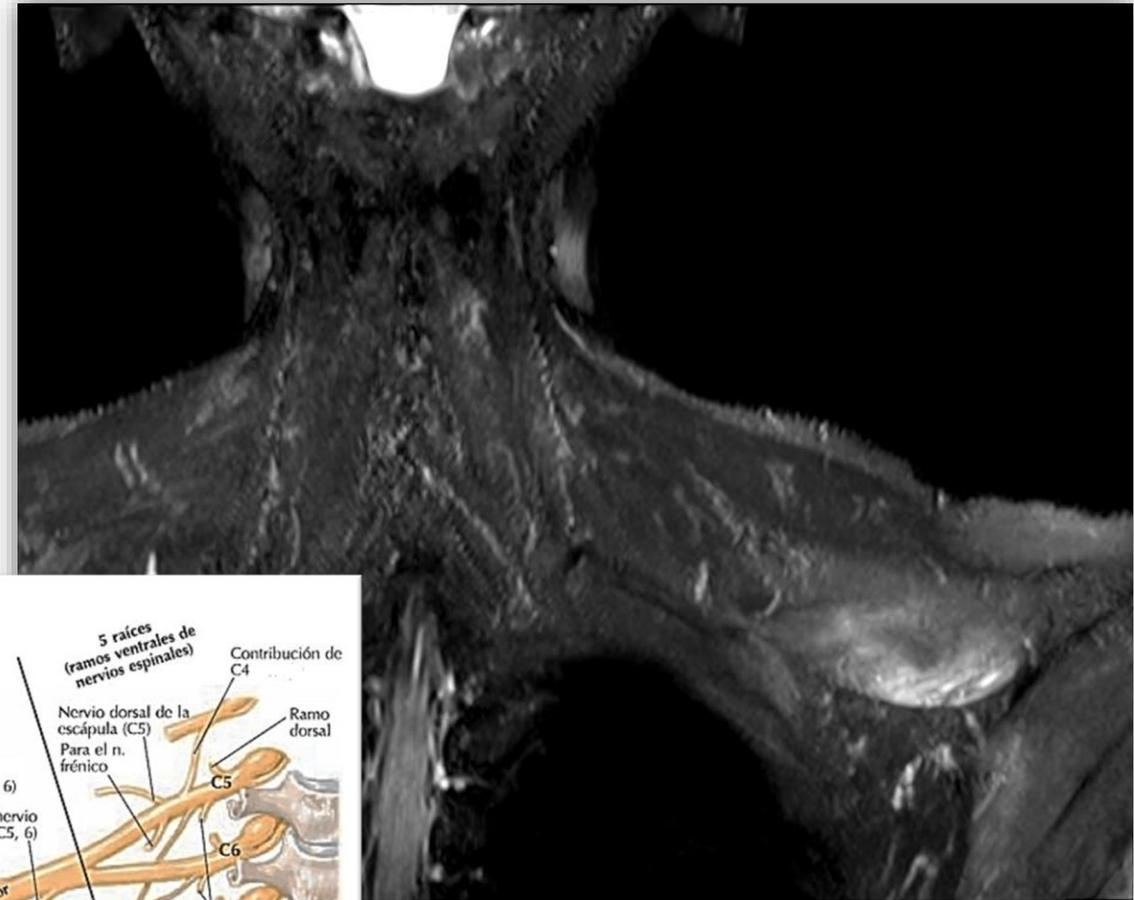
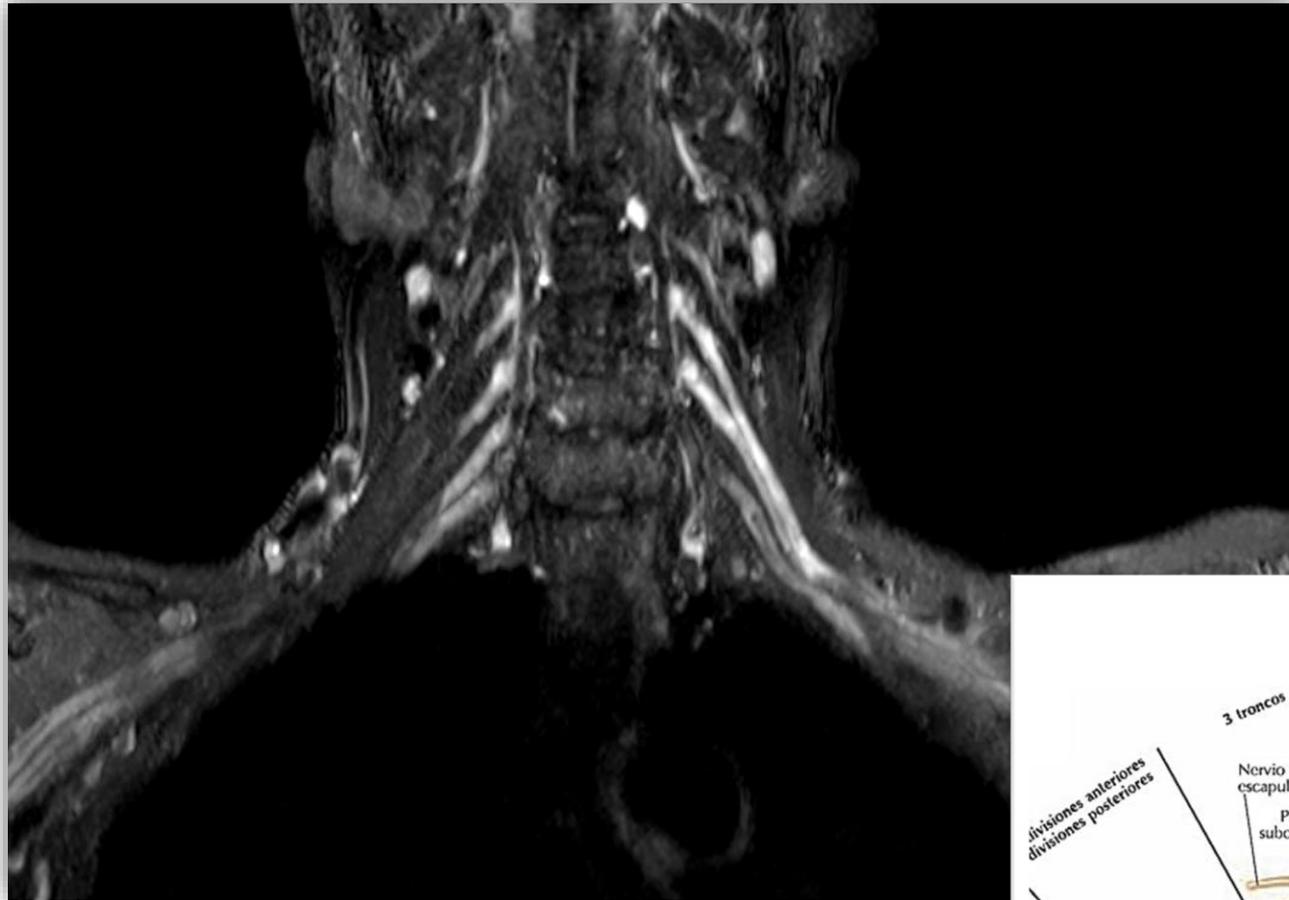
- Adenopatías
- Flujo venoso lento
- Costillas cervicales
- Bandas fibrosas (outlet)



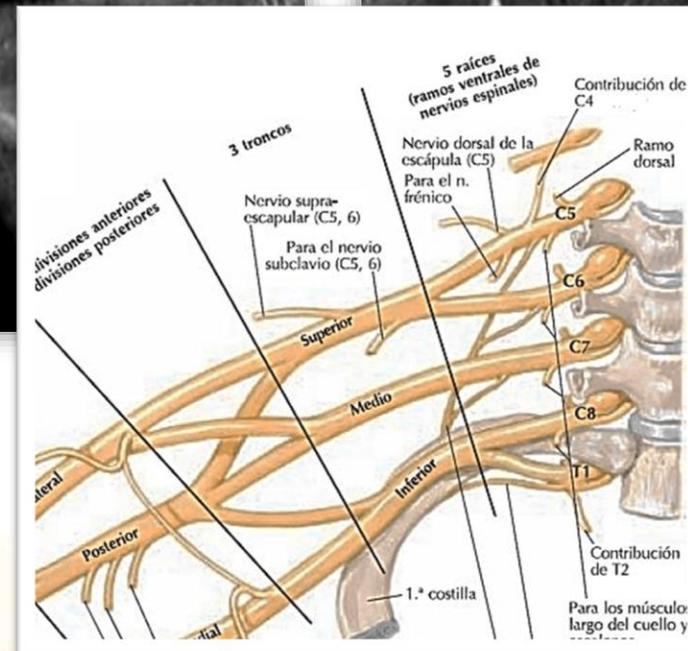


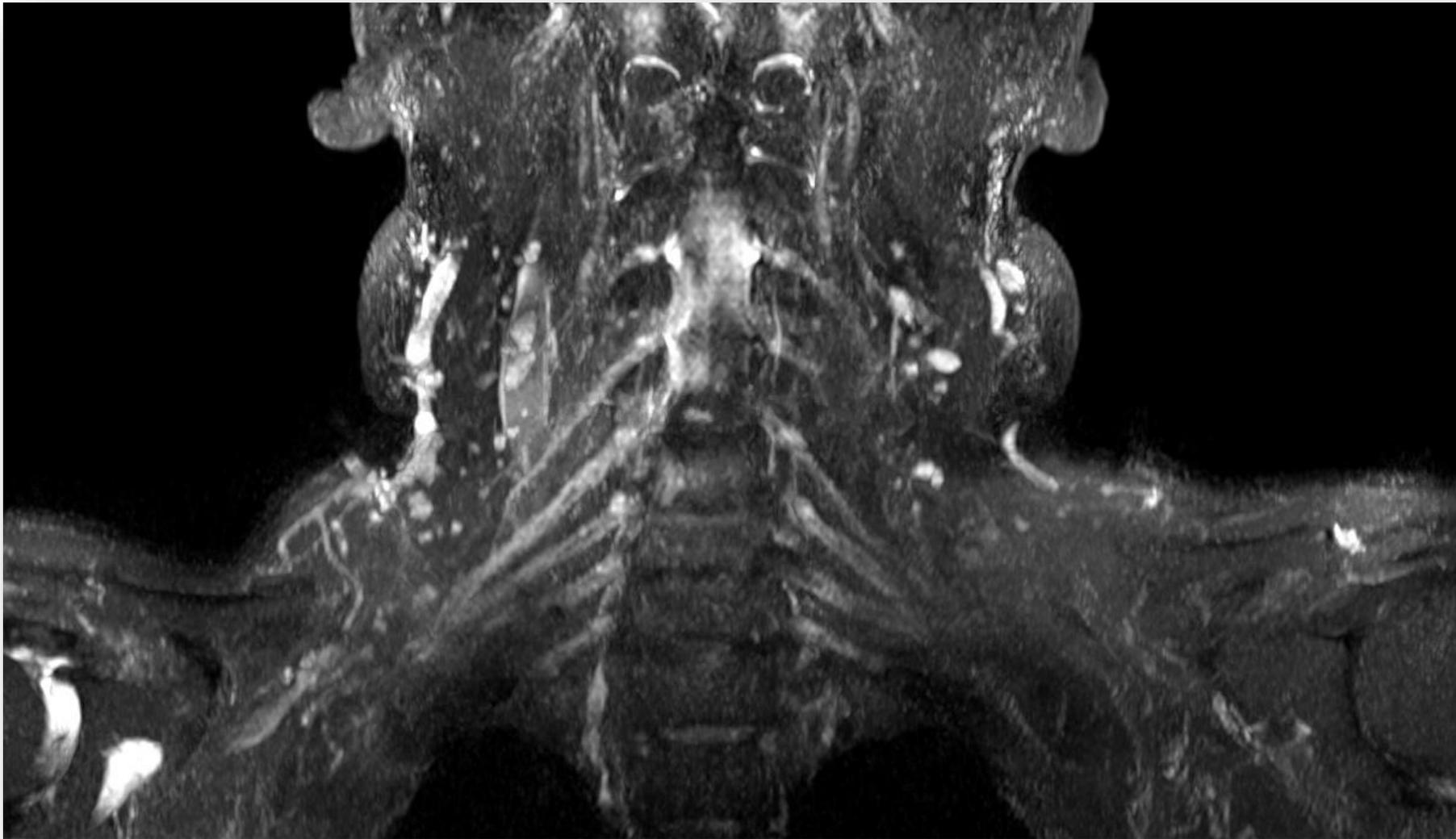
Neuropatías inflamatorias





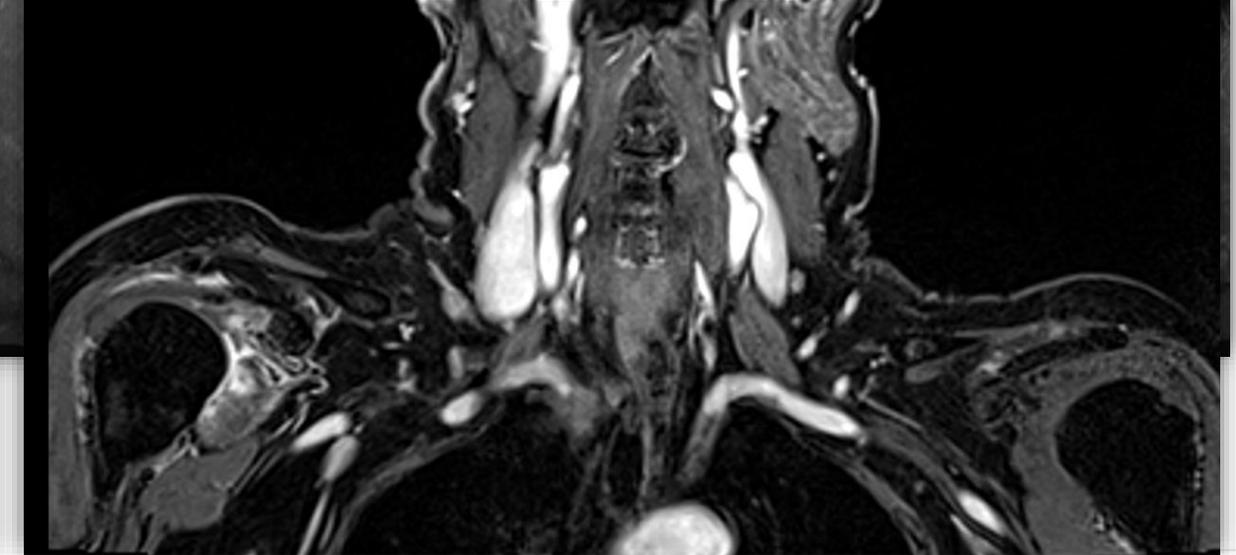
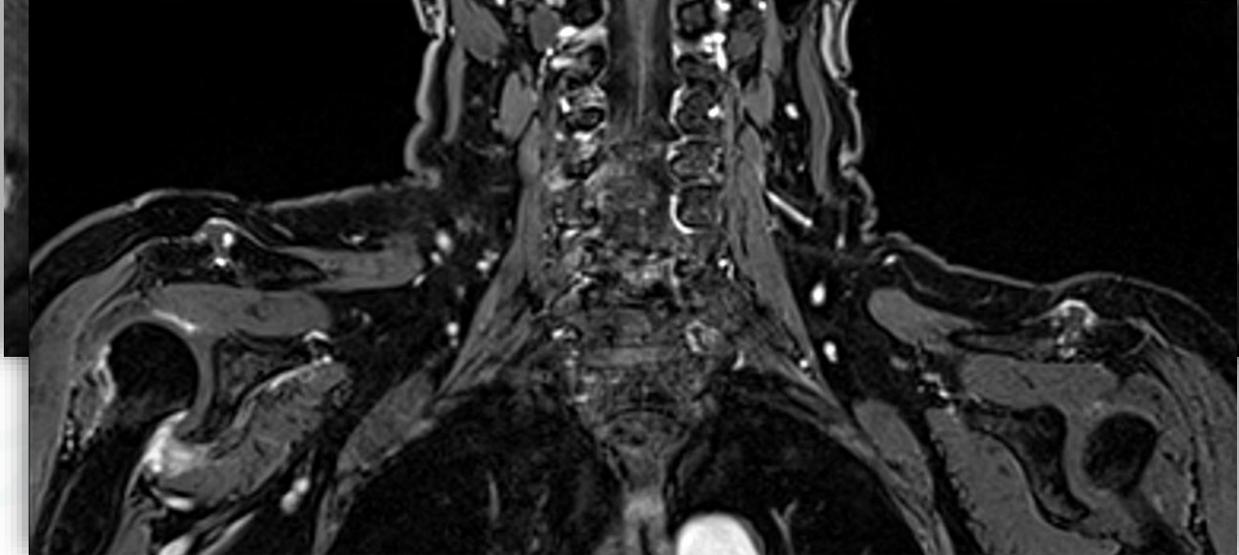
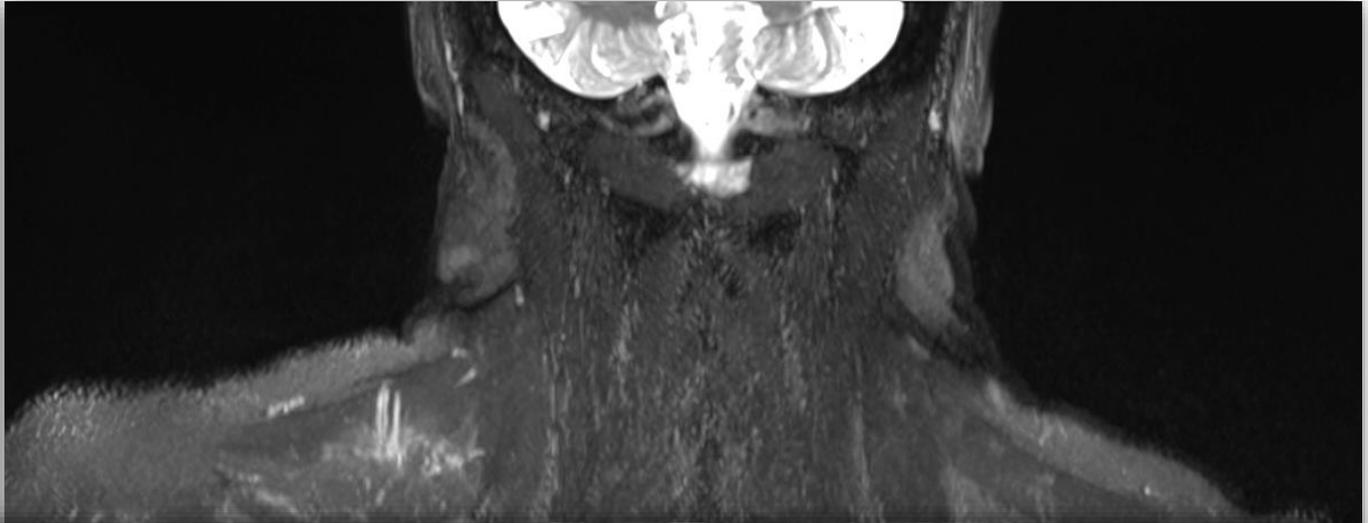
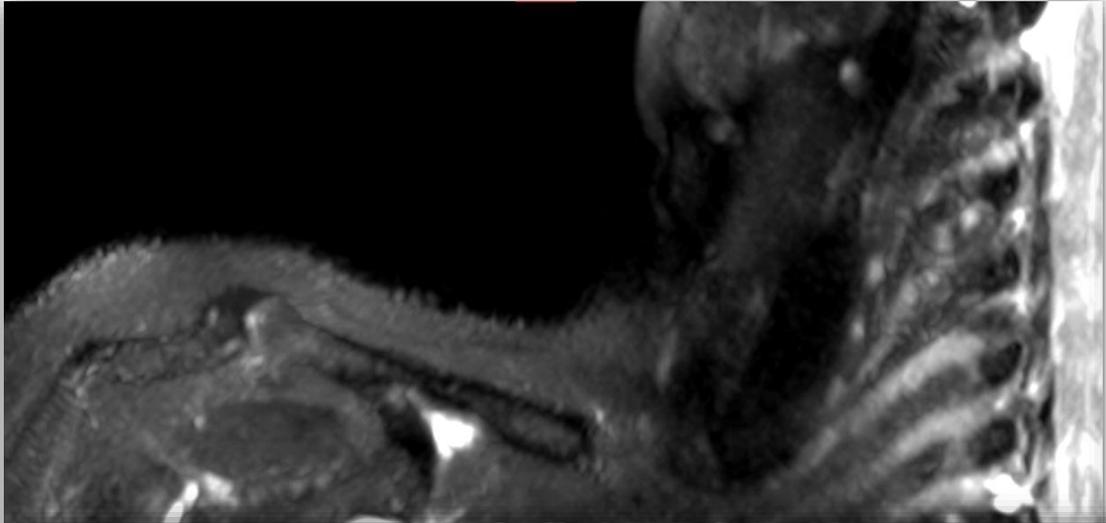
**Plexopatía inflamatoria
aguda idiopática
Sd. Parsonage-Turner**





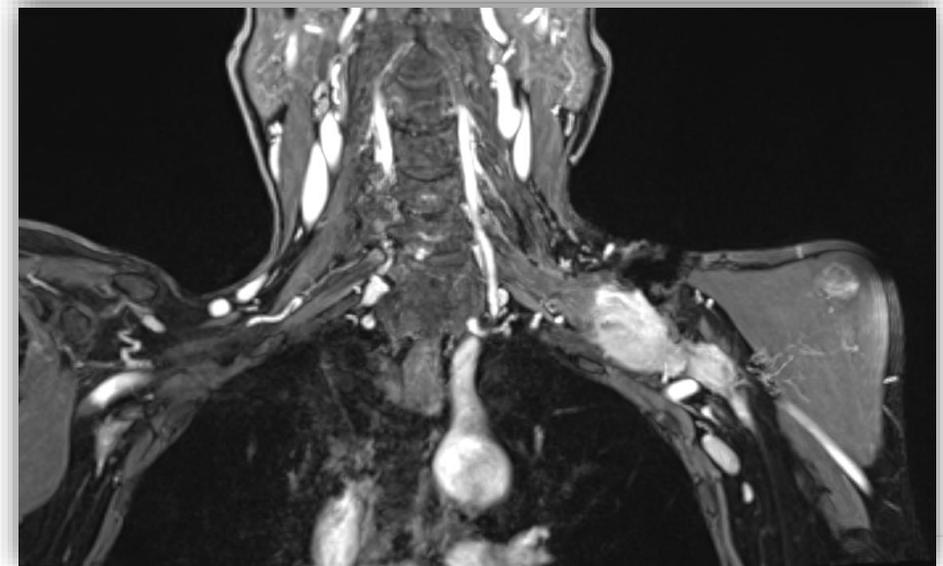
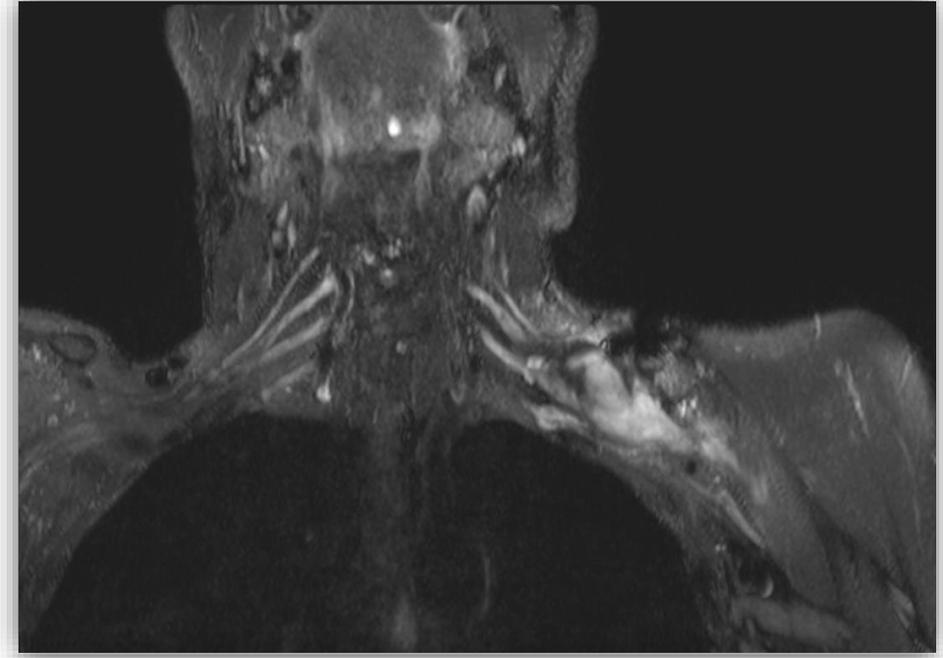
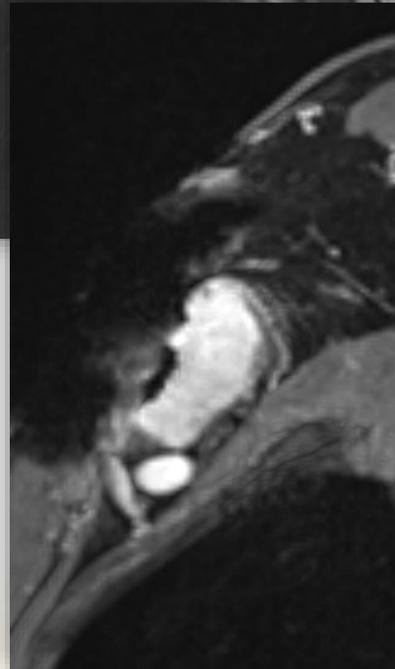
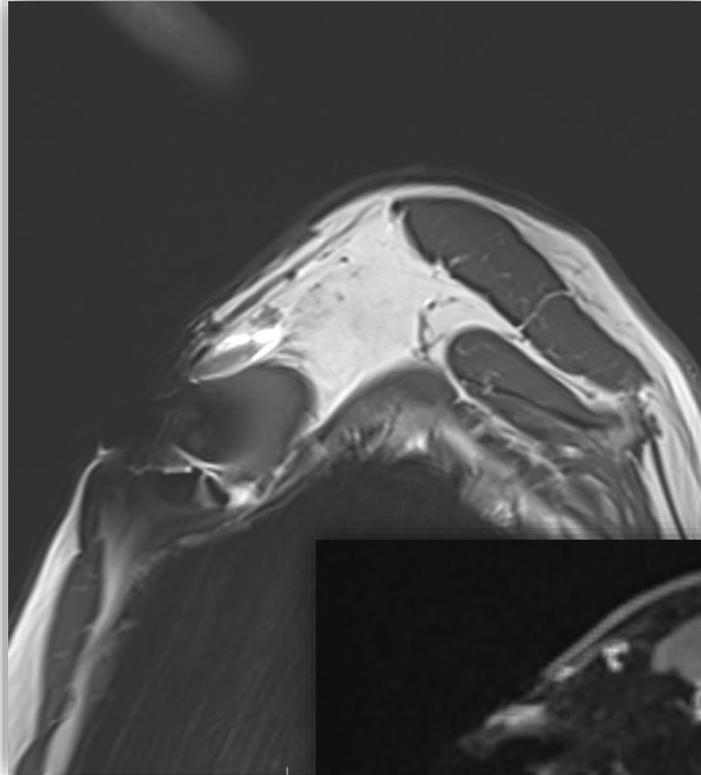
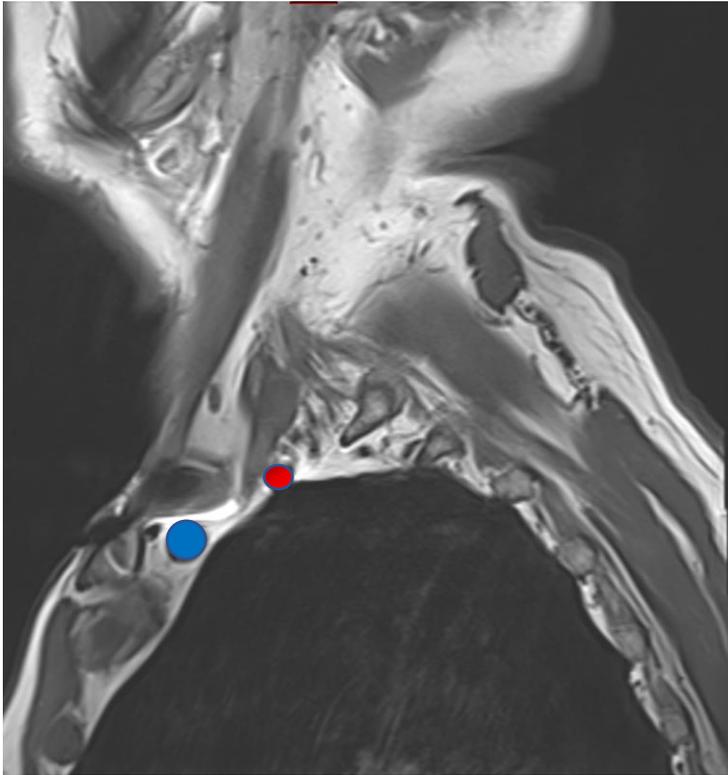
**Plexopatía inflamatoria
virus H. Zoster**



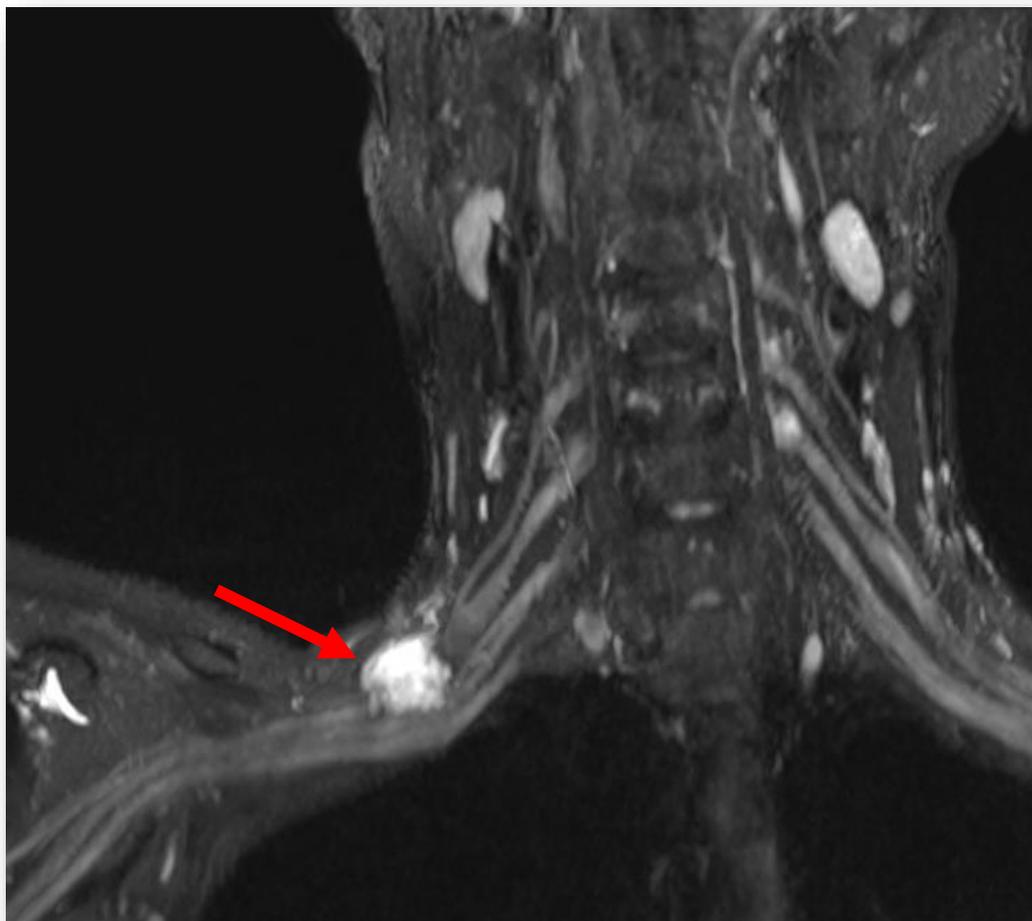


Tumores primarios



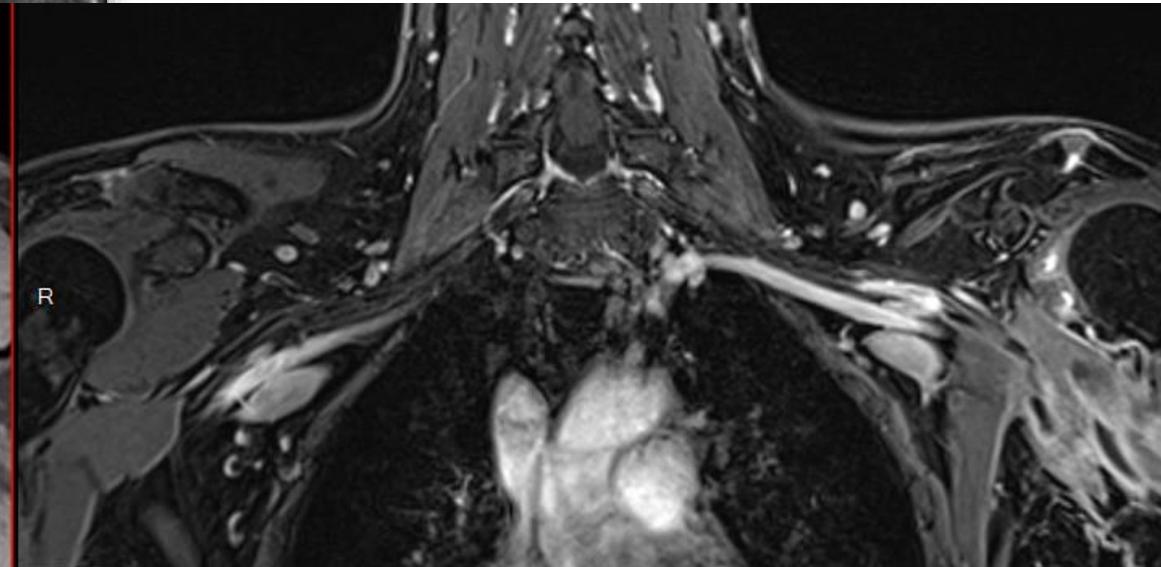
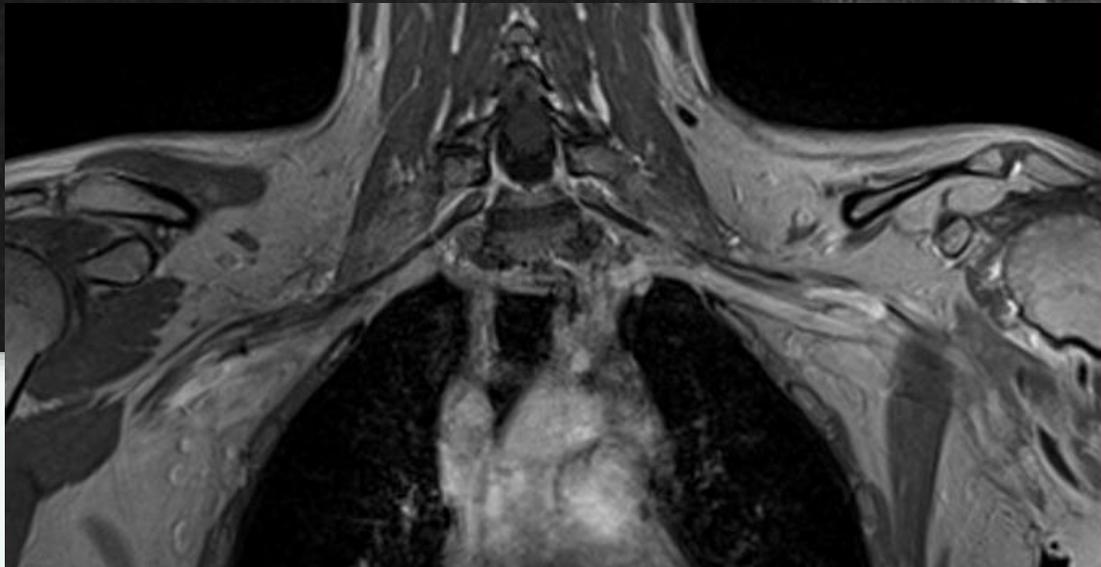
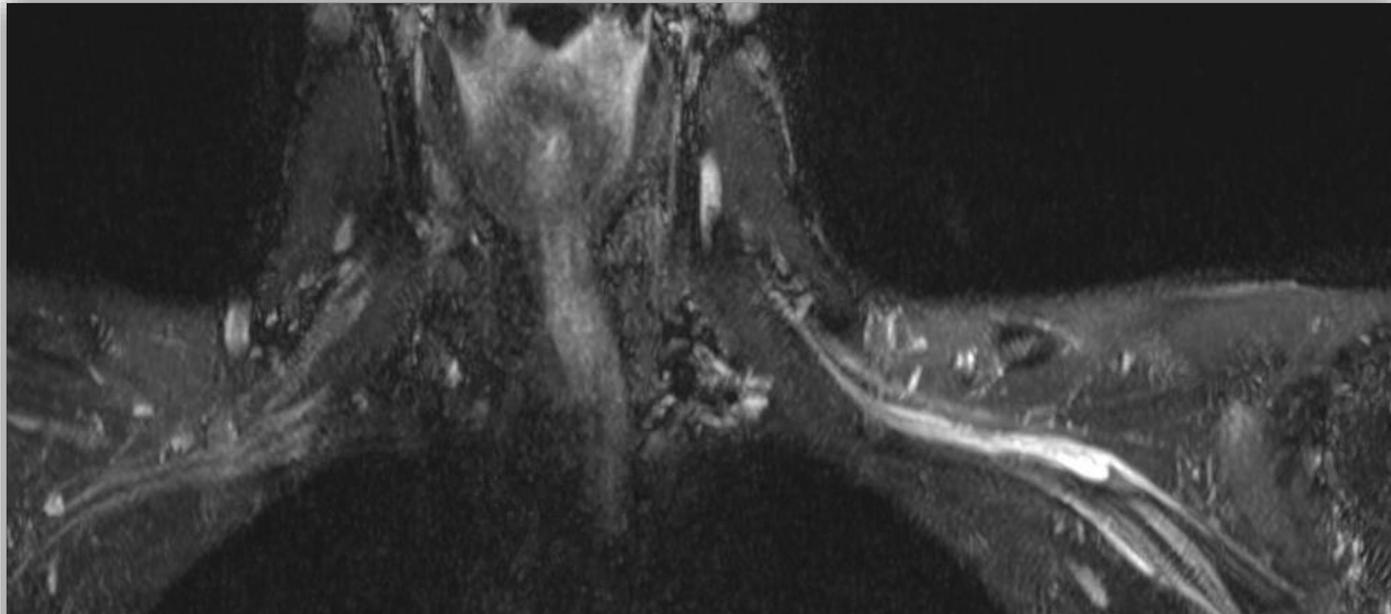


**Schwannoma del
plexo braquial**



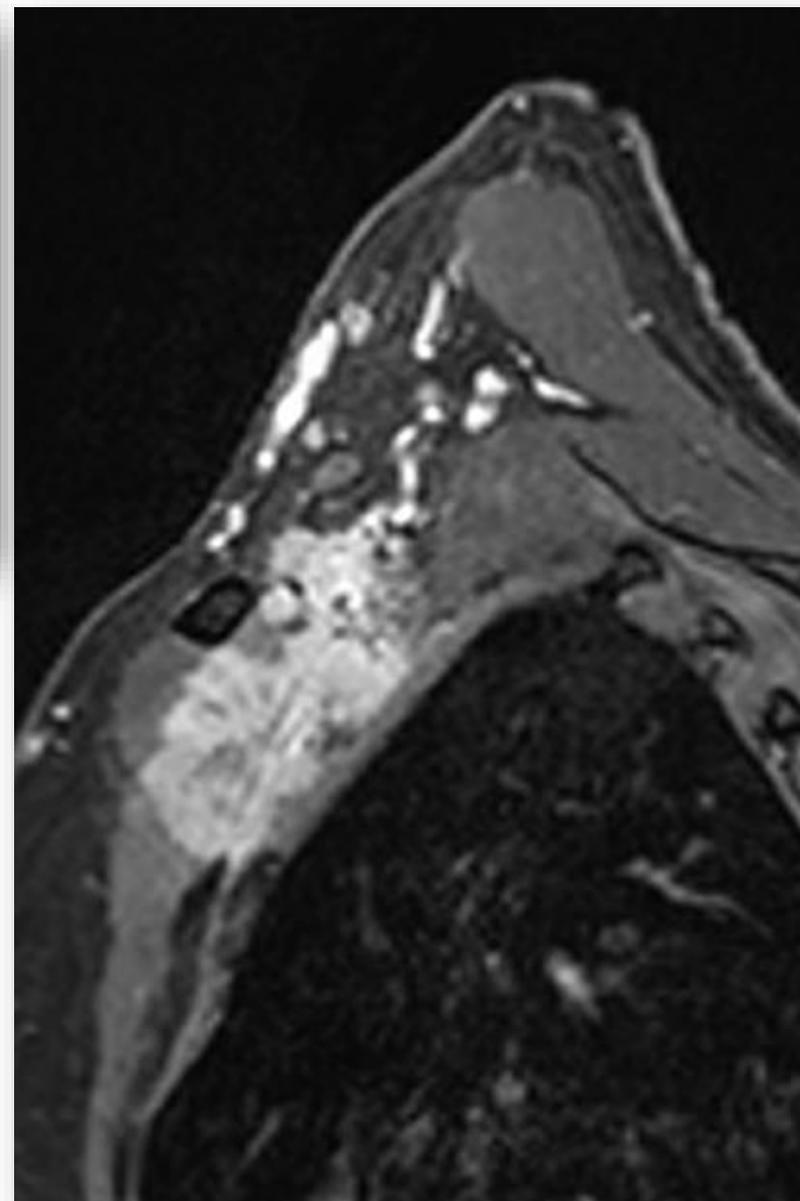
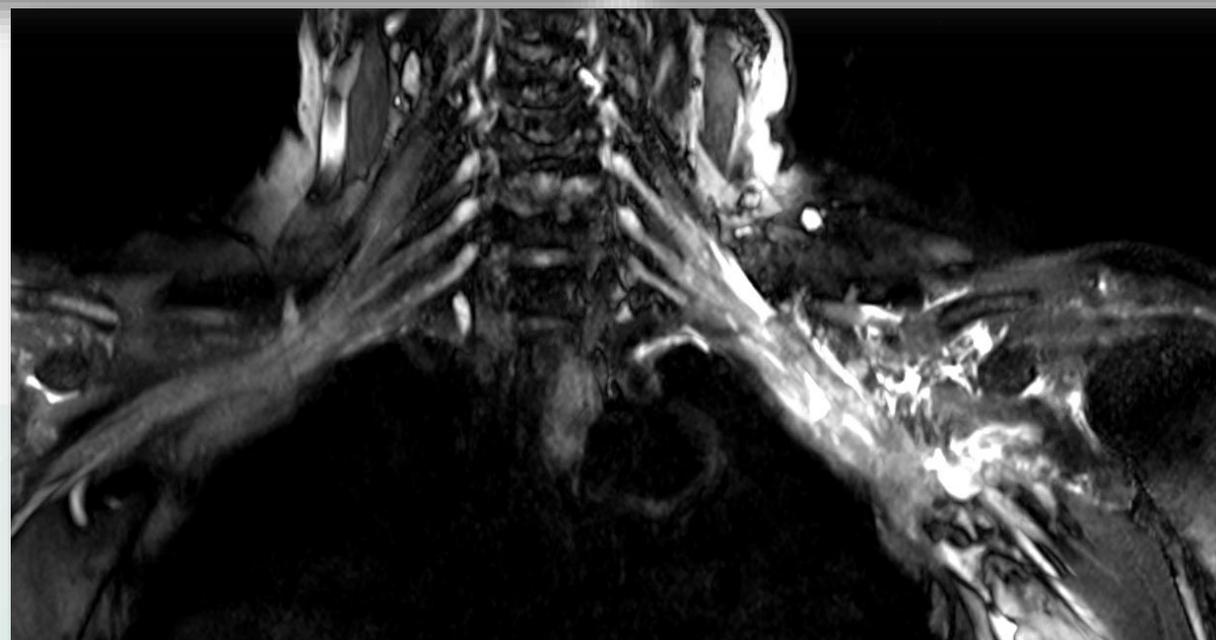
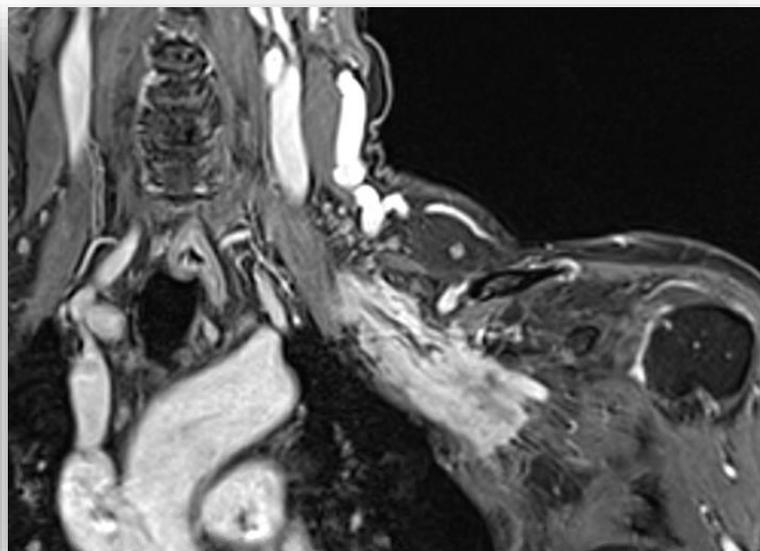
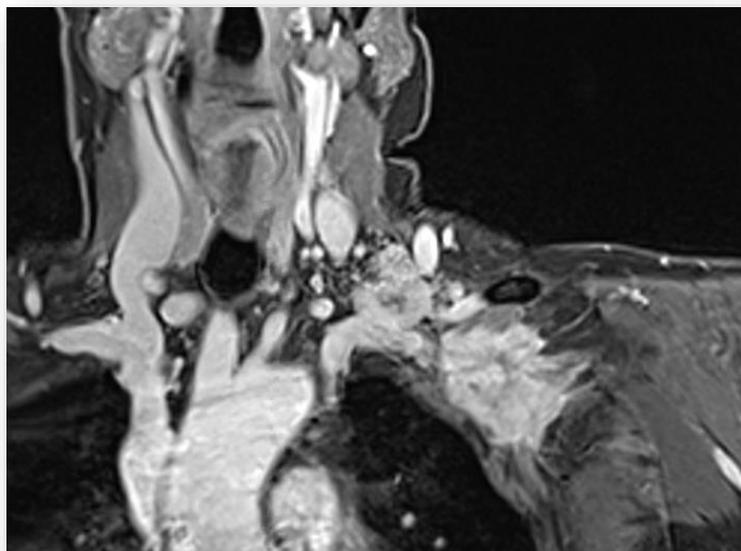
T maligno de la vaina nerviosa del n mediano

- Neuromas en continuidad
- Neuromas bulbo terminal

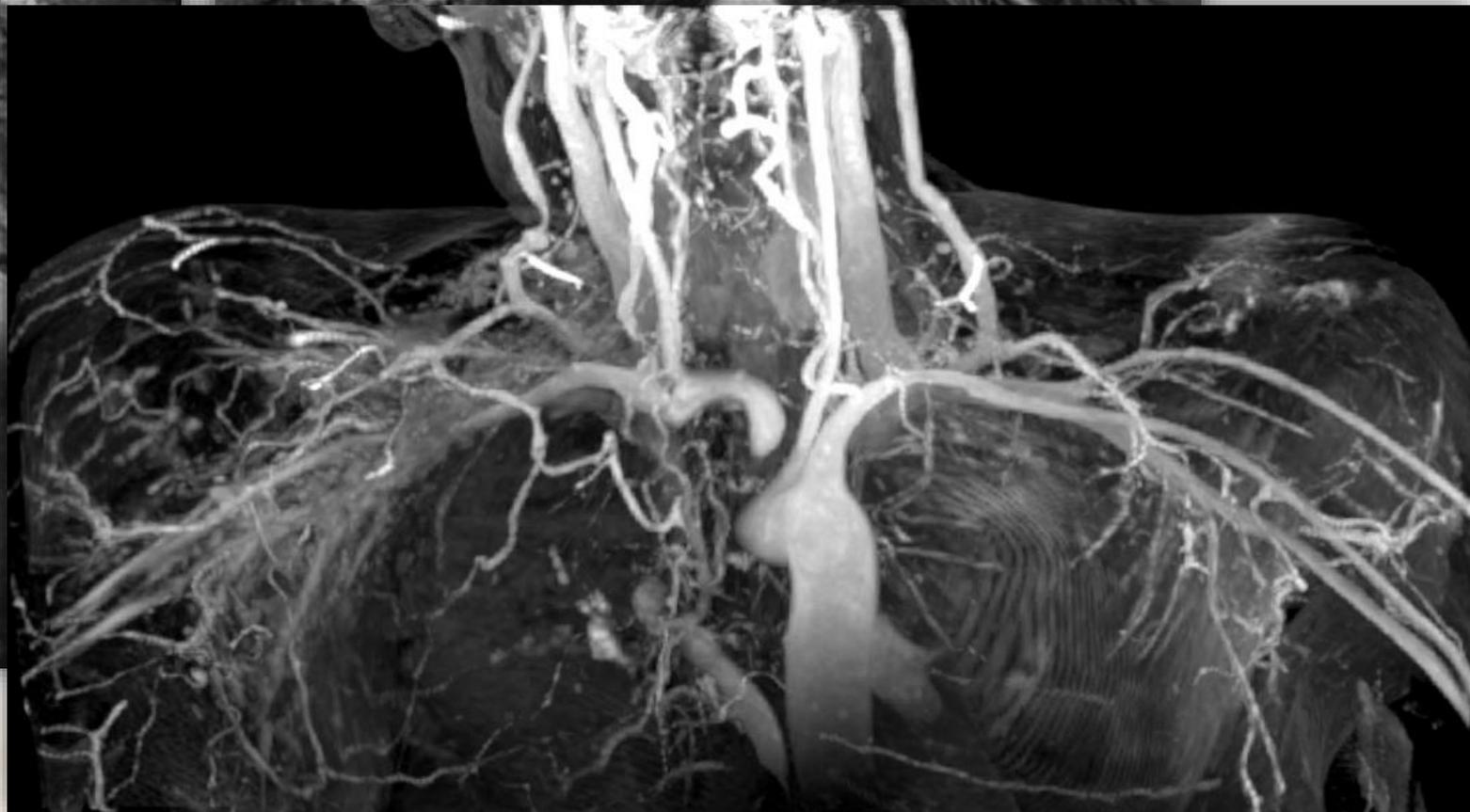
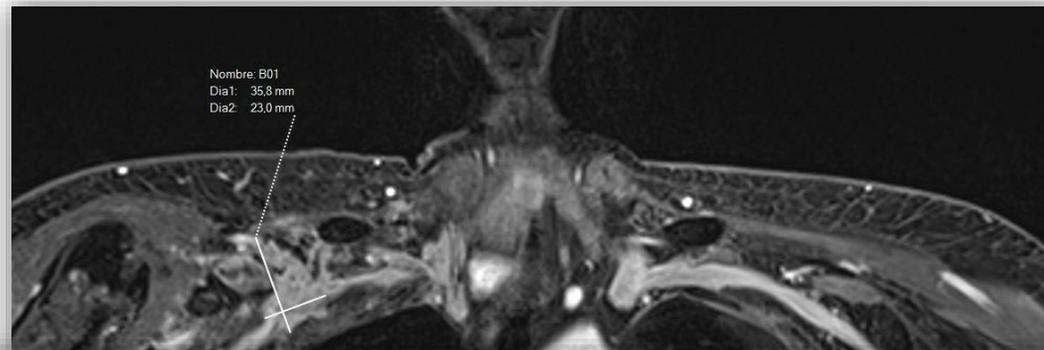
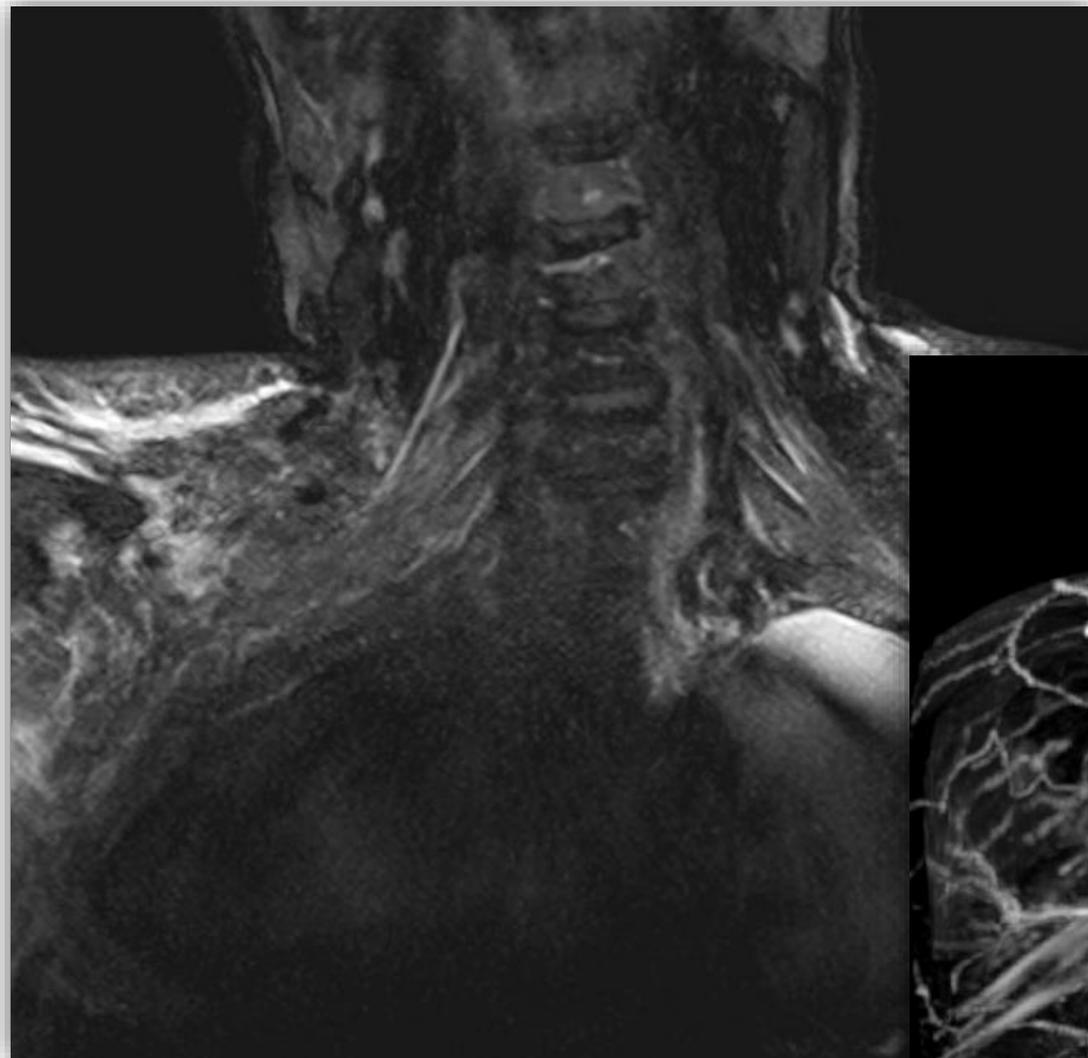


Afectación tumoral secundaria





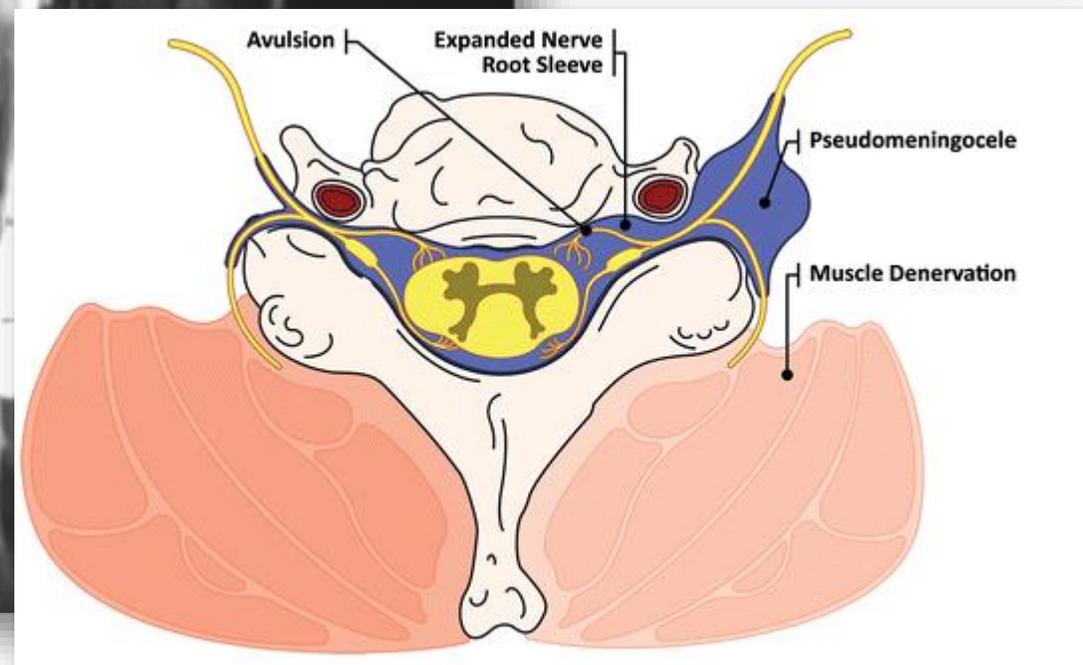
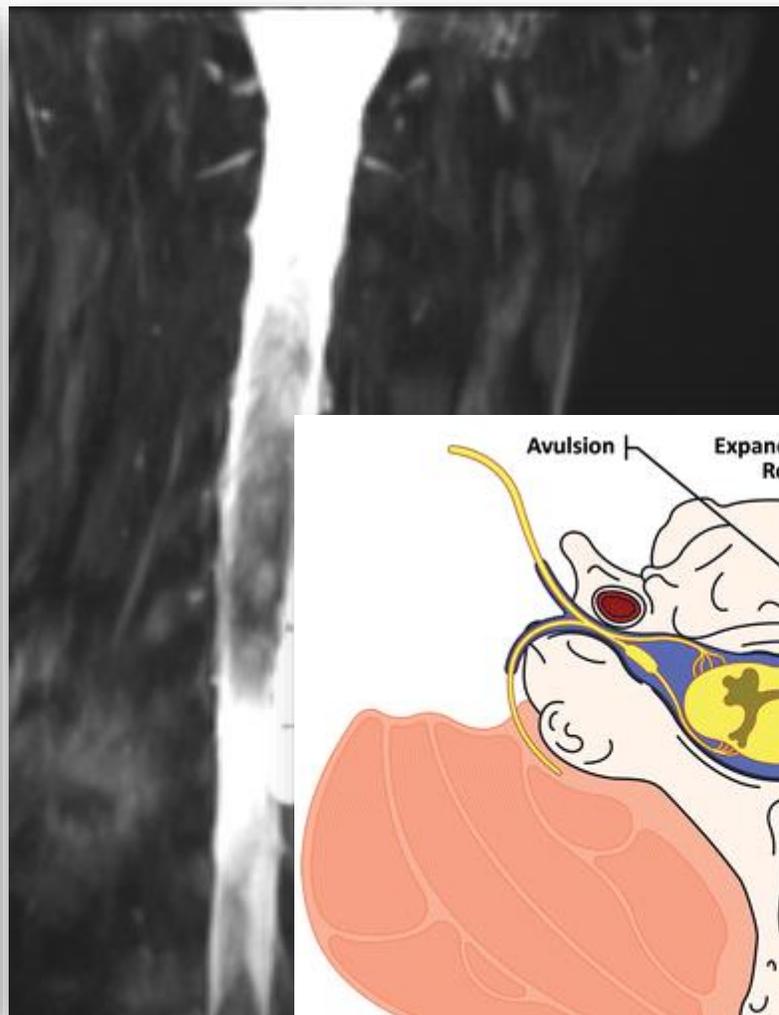
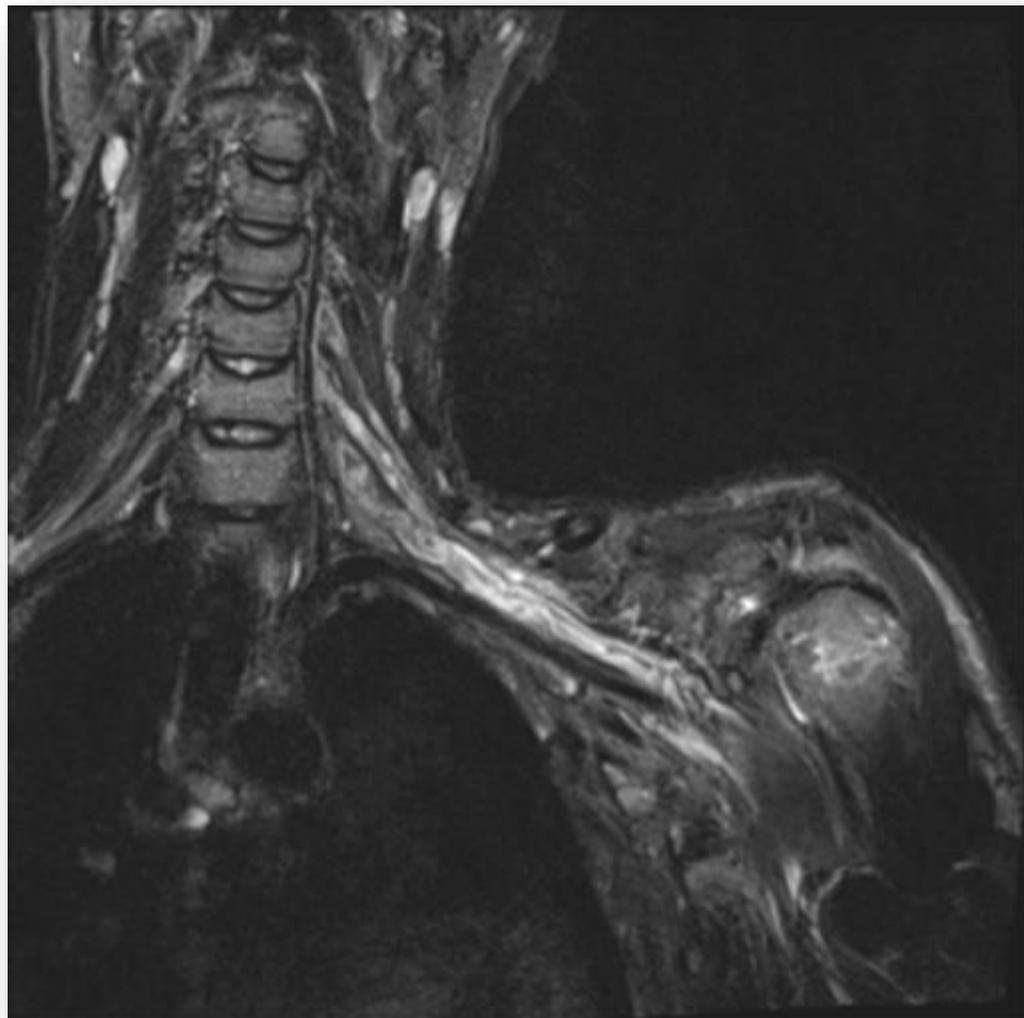






Patología traumática





Resumen

- Encuentra la arteria y encontrarás el plexo
- “Pierde” un rato estudiando la secuencia T1 SAG sin sat grasa
- Incluir columna cervical
- STIR o DIXON para saturar la grasa
- Contraste para tumores
- EMG si es posible





MUCHAS GRACIAS

