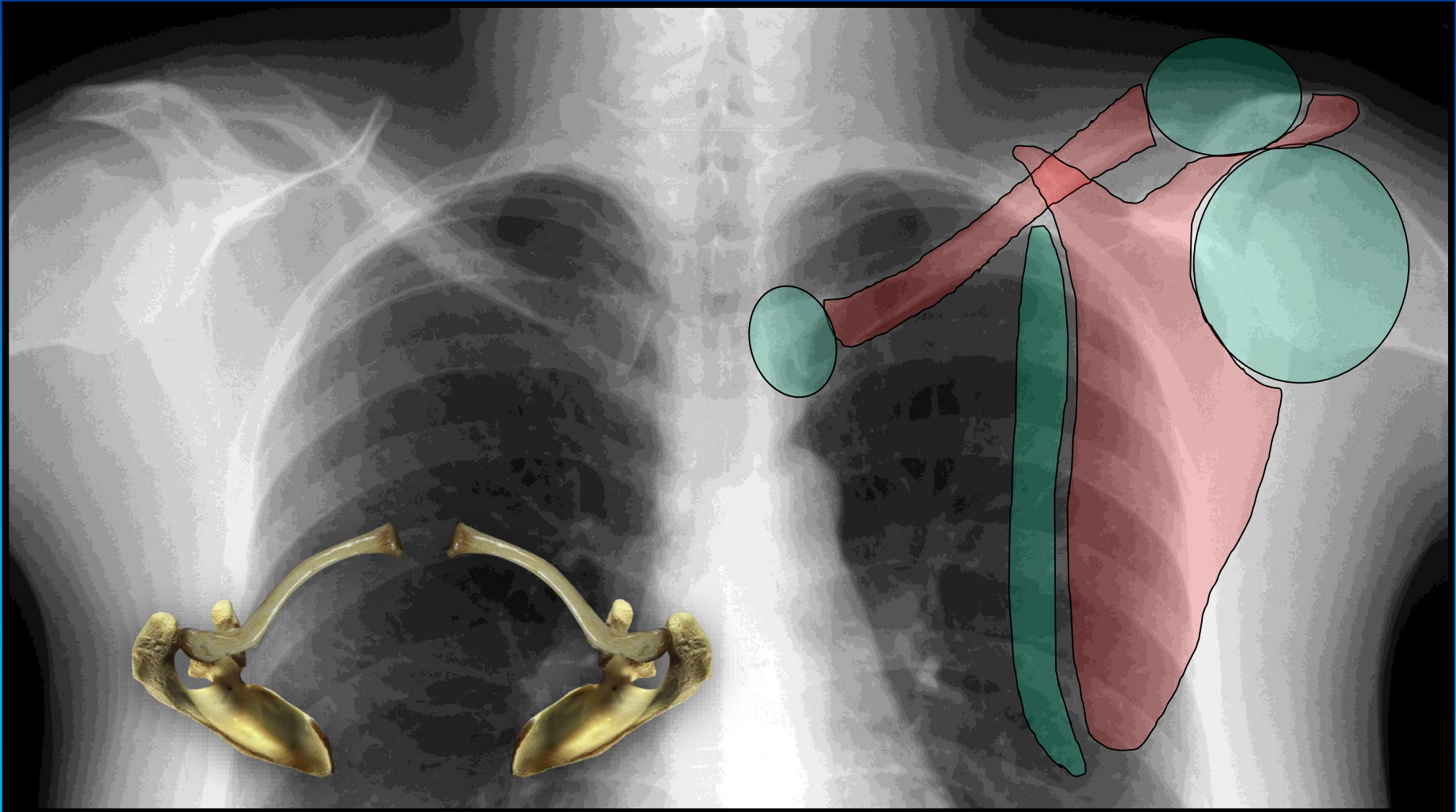


Overekstremiteten

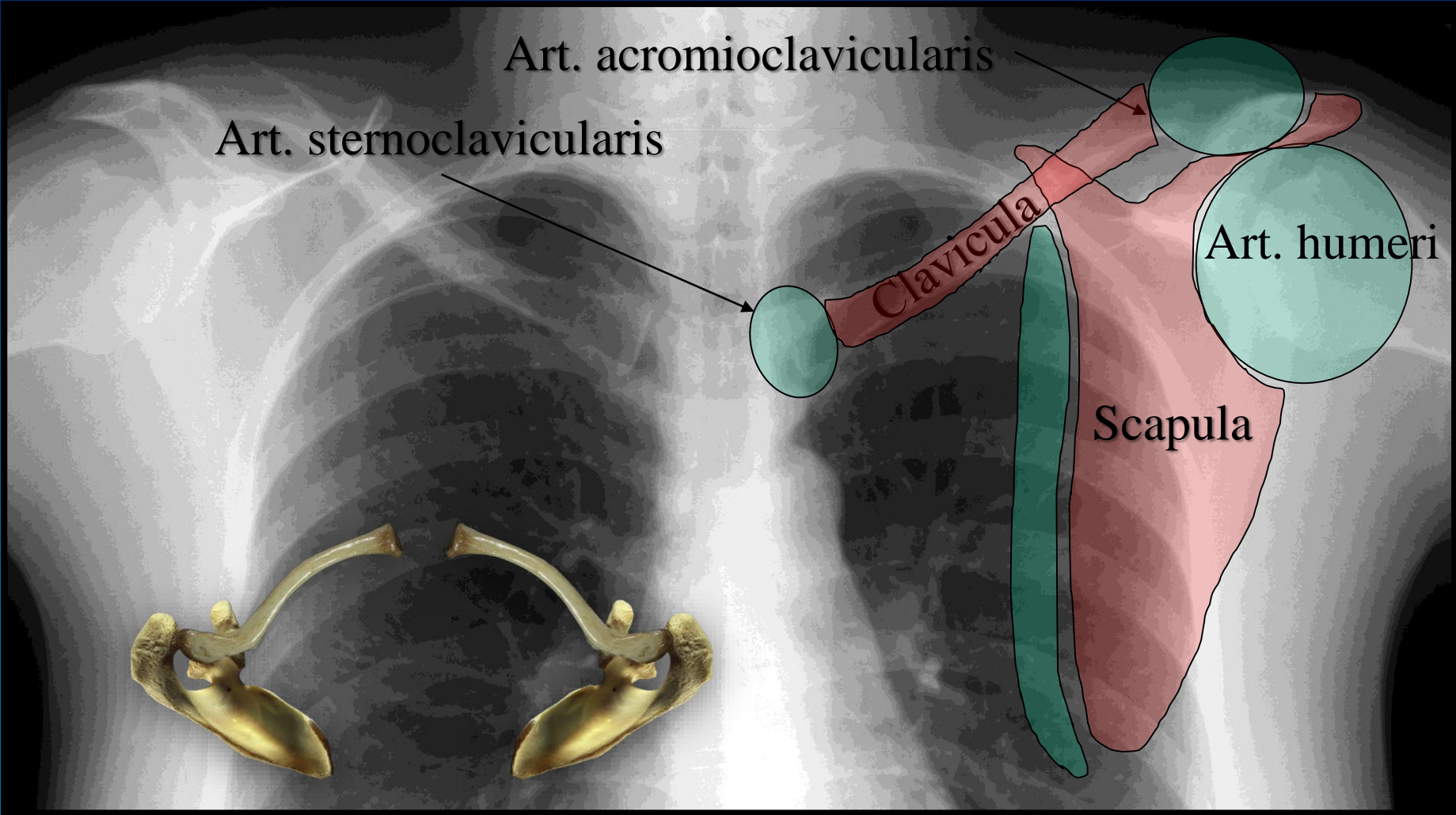
Michel Bach Hellfritsch

Skulderbæltet



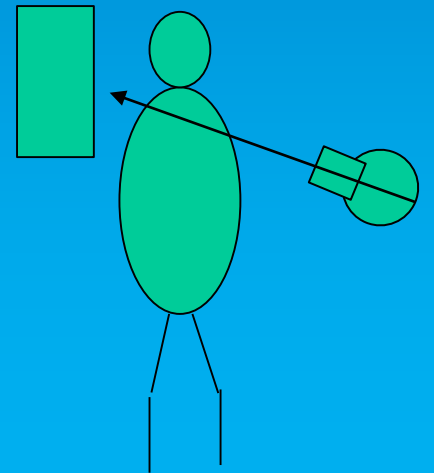
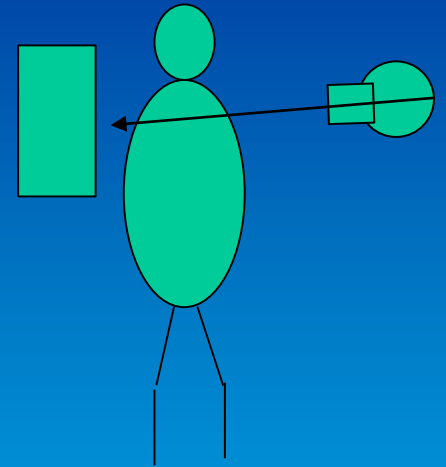
Indsat billede fra "Bevægeapparatets anatomi"

Skulderbæltet

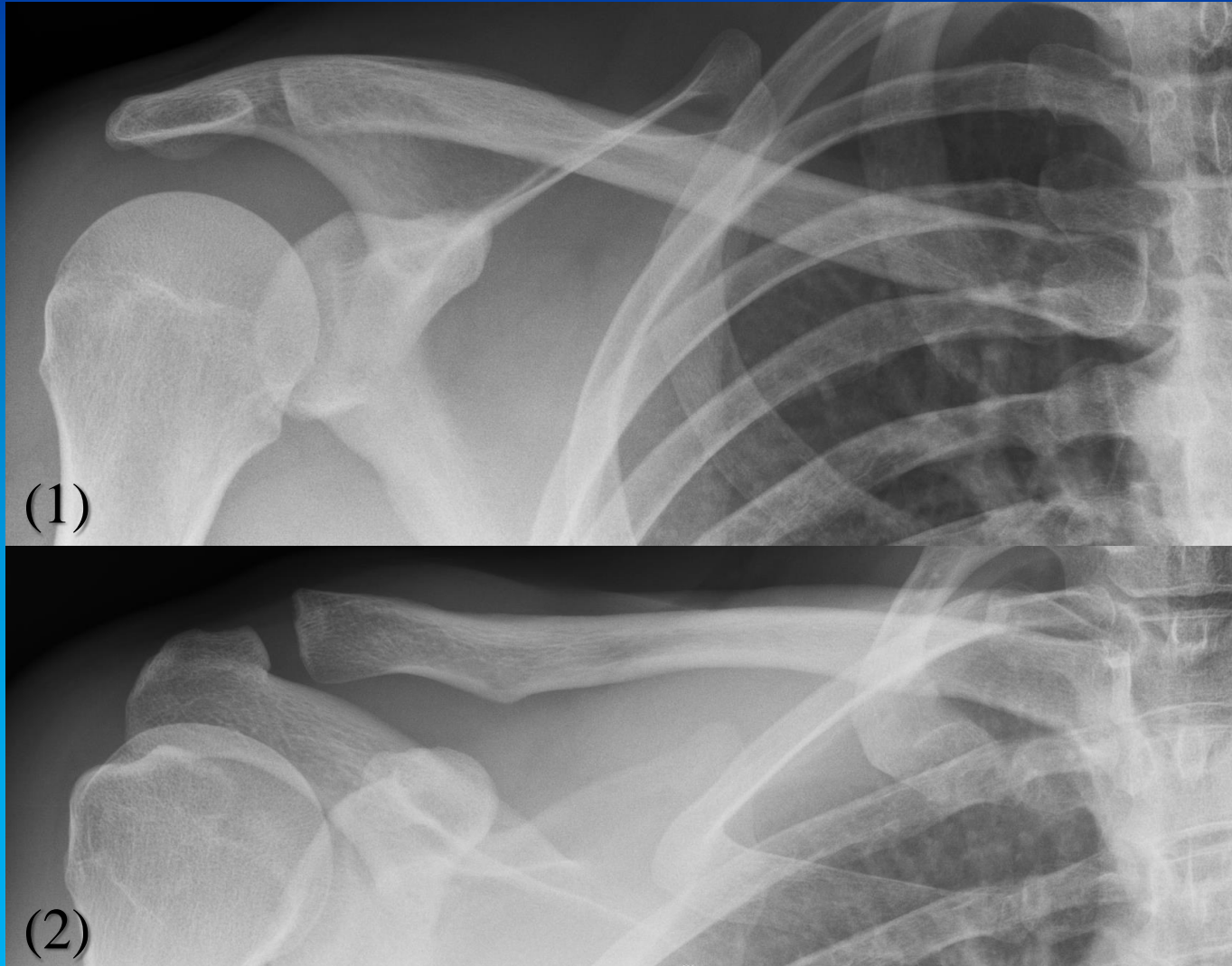


Indsat billede fra "Bevægeapparatets anatomi"

Clavicula



Clavicula

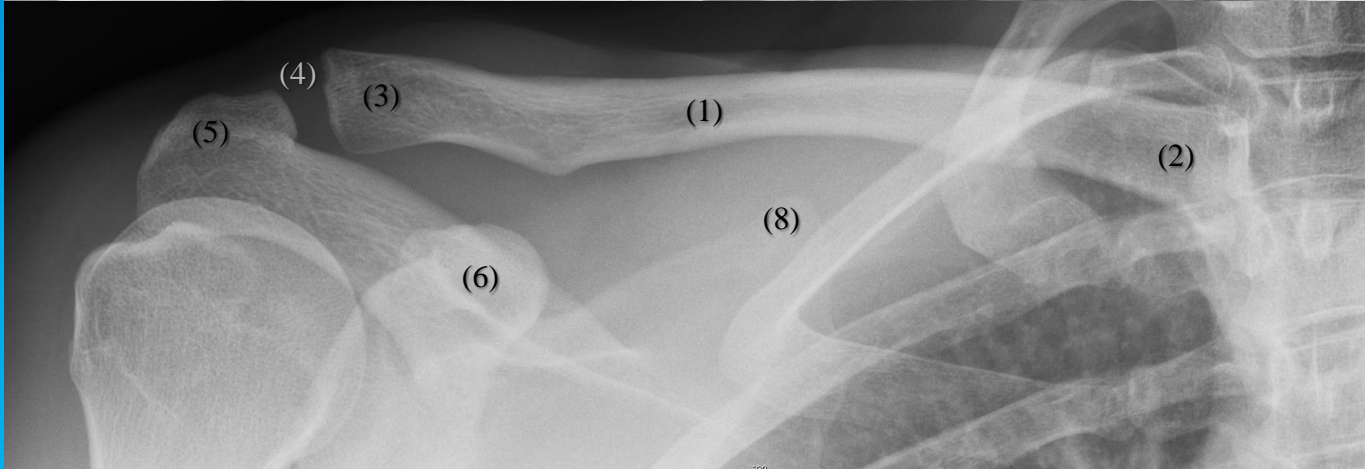
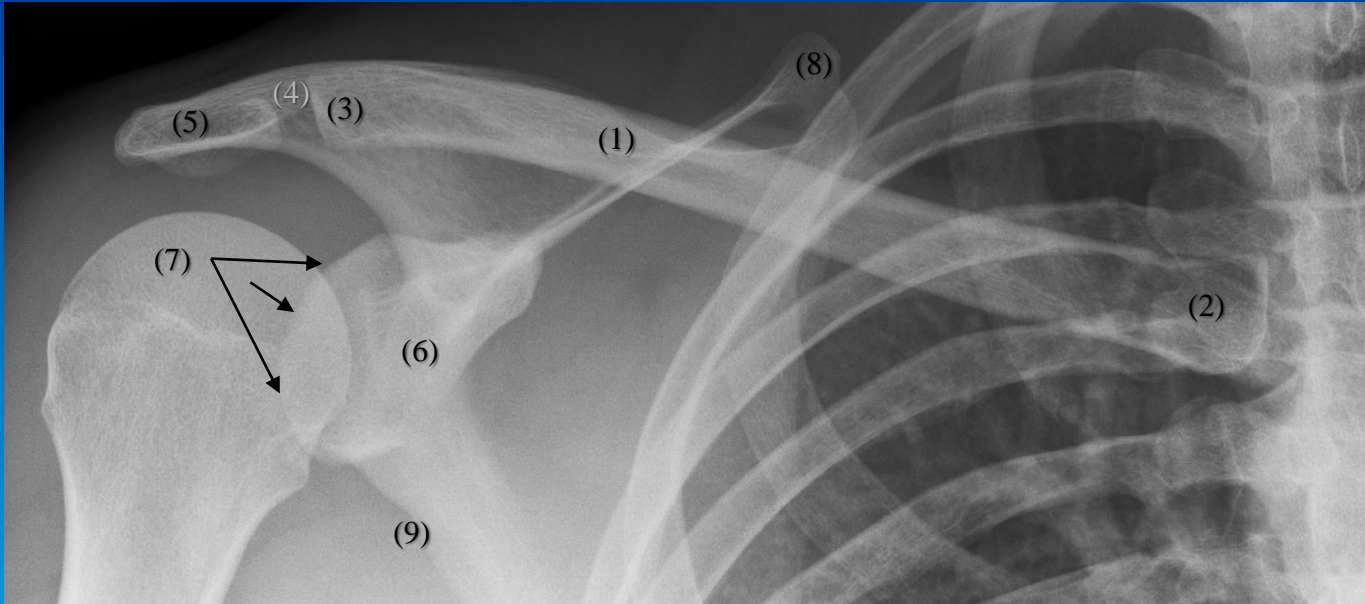


Optagelse (1) er foretaget kranio-kaudalt og (2) kaudokranielt (AP, ellers omvendt).

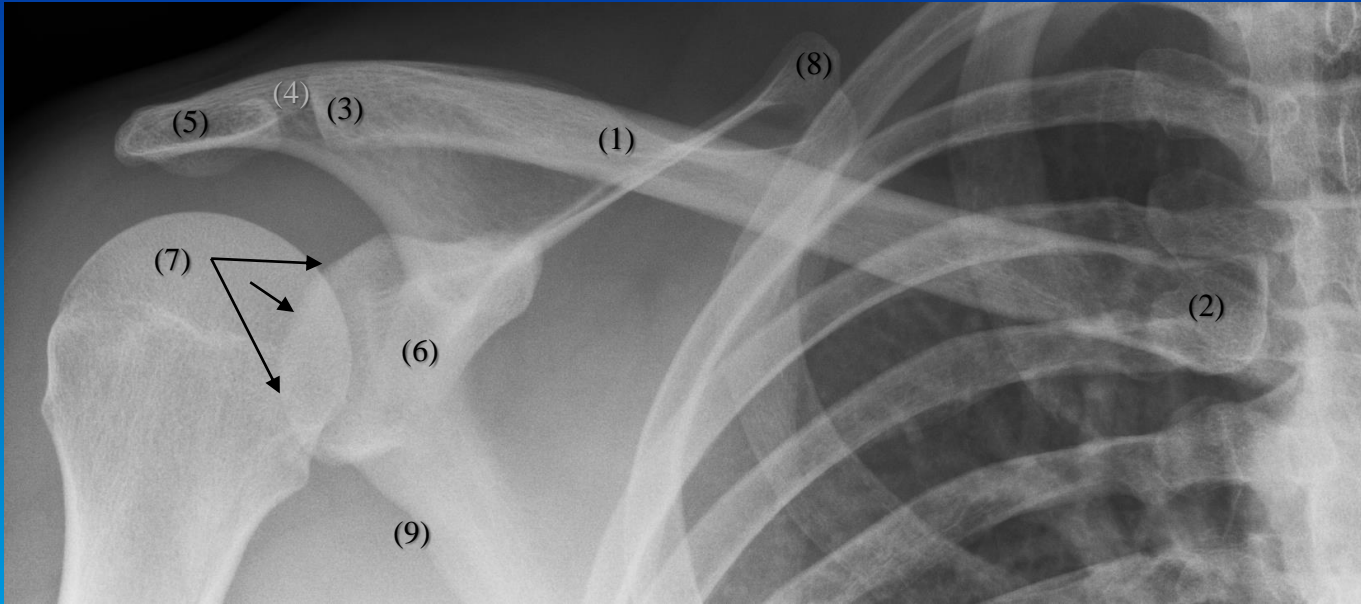
Det er altid en fordel at se på et helt skelet, når man vurderer projektioner.

Som det bemærkes på begge projektioner, ses sternoclaviculærlæddet ikke godt. Til undersøgelse af dette benyttes CT-skanning (eller evt. MR).

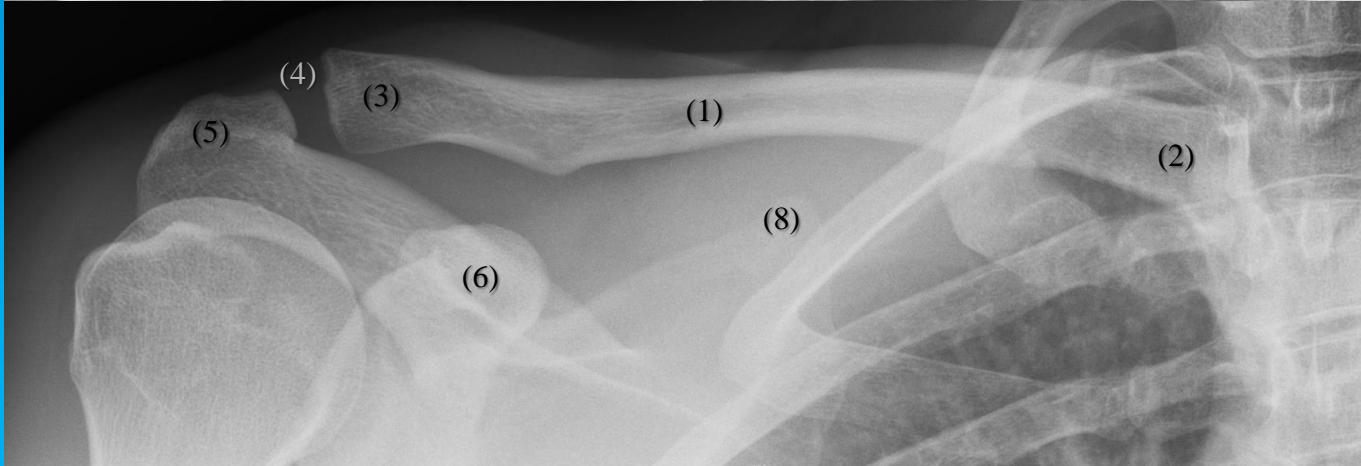
Clavicula



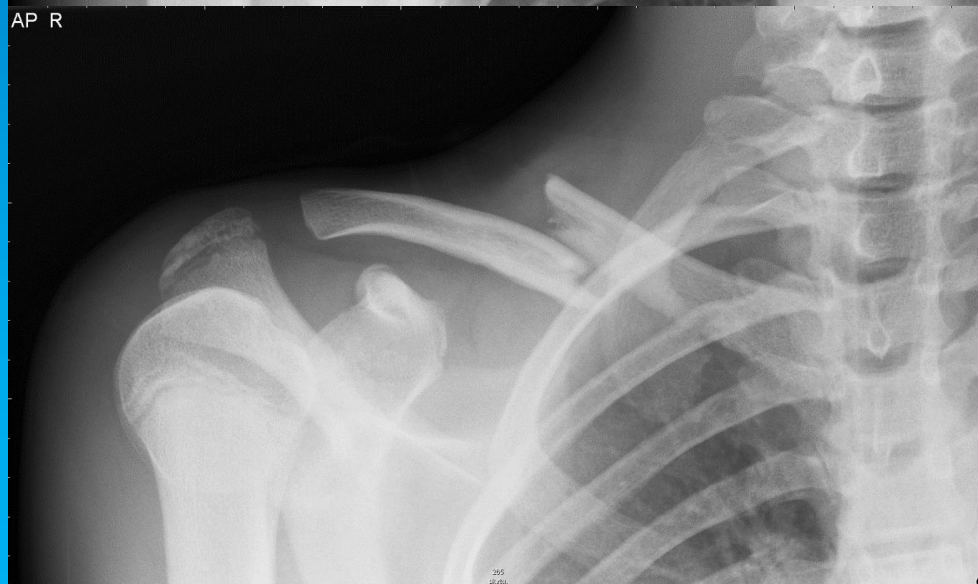
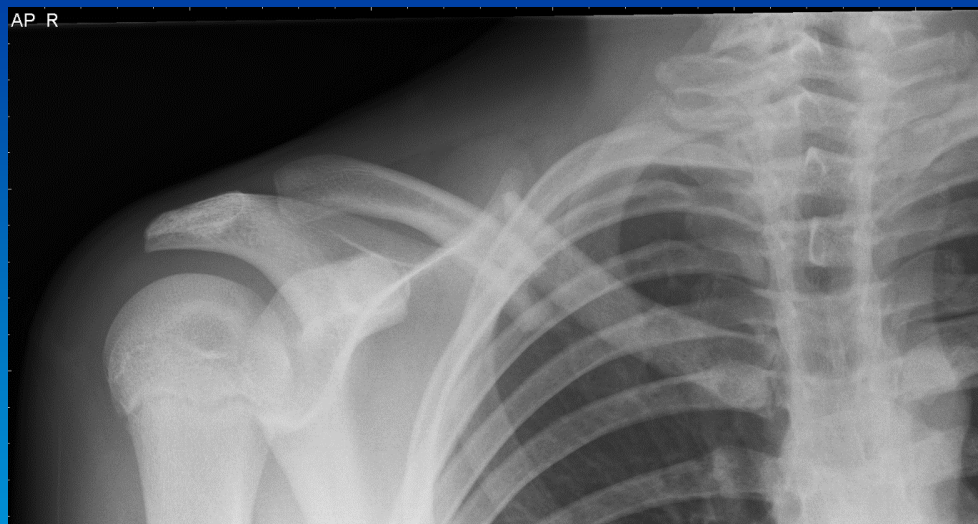
Clavicula



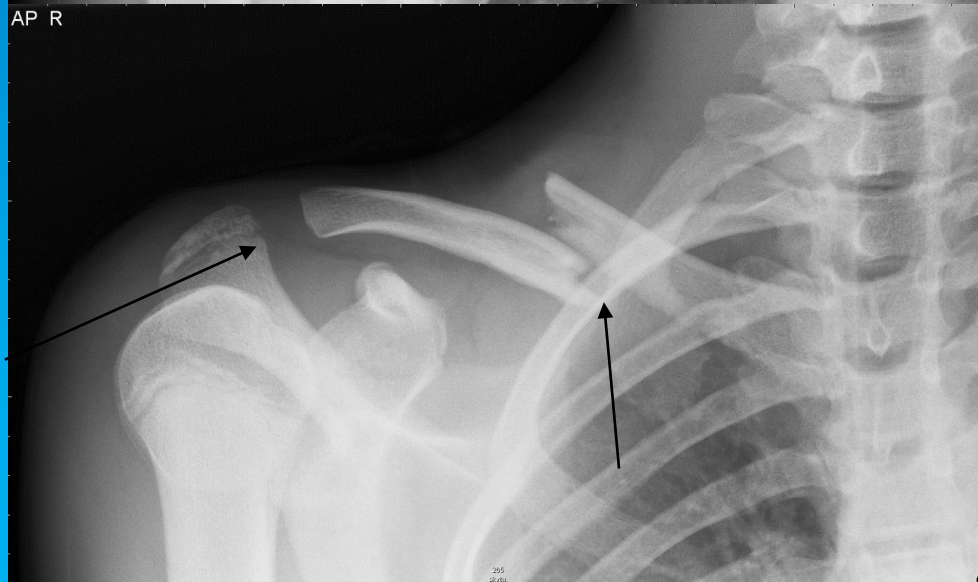
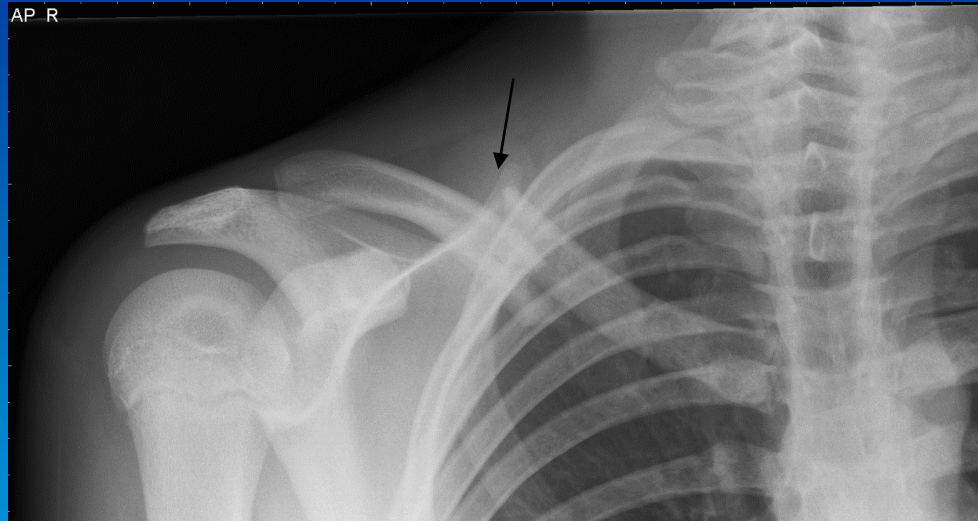
- (1): Clavicula
- (2): Extremitas sternalis
- (3): Extremitas acromialis
- (4): Articulatio acromio-claviculare
- (5) Acromion
- (6) Processus coracoideus
- (7) Cavitas glenoidale
- (8) Angulus superior scapulae
- (9) Margo lateralis scapulae



Clavikel fraktur

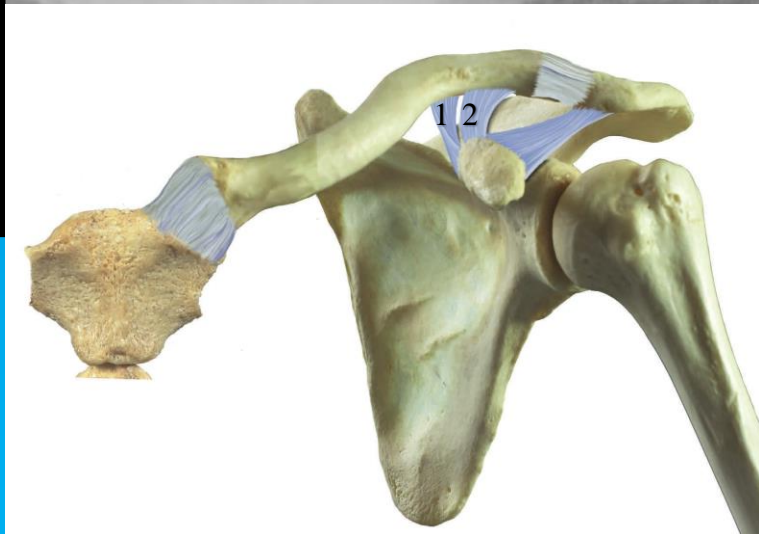
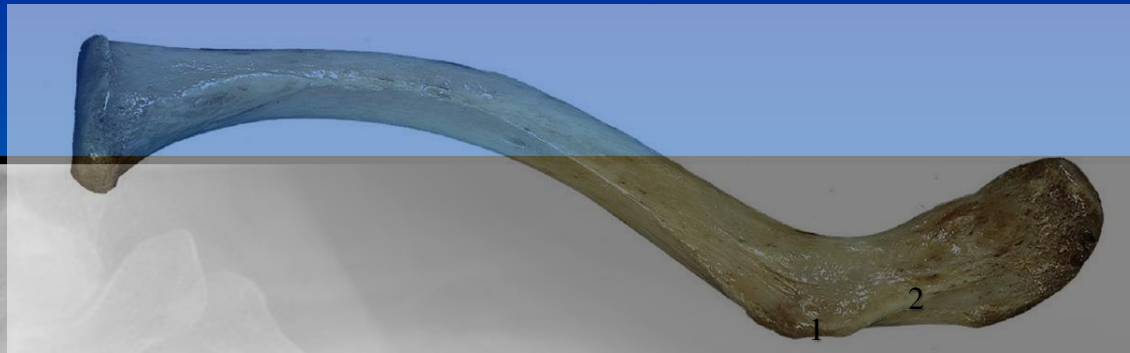


Clavikel fraktur



Bemærk den store afstand mellem acromion og laterale clavikel ende. Der er tale om et barn hvor områderne endnu ikke er ossificerede.

Articulatio acromioclavicularis (AC-leddet)

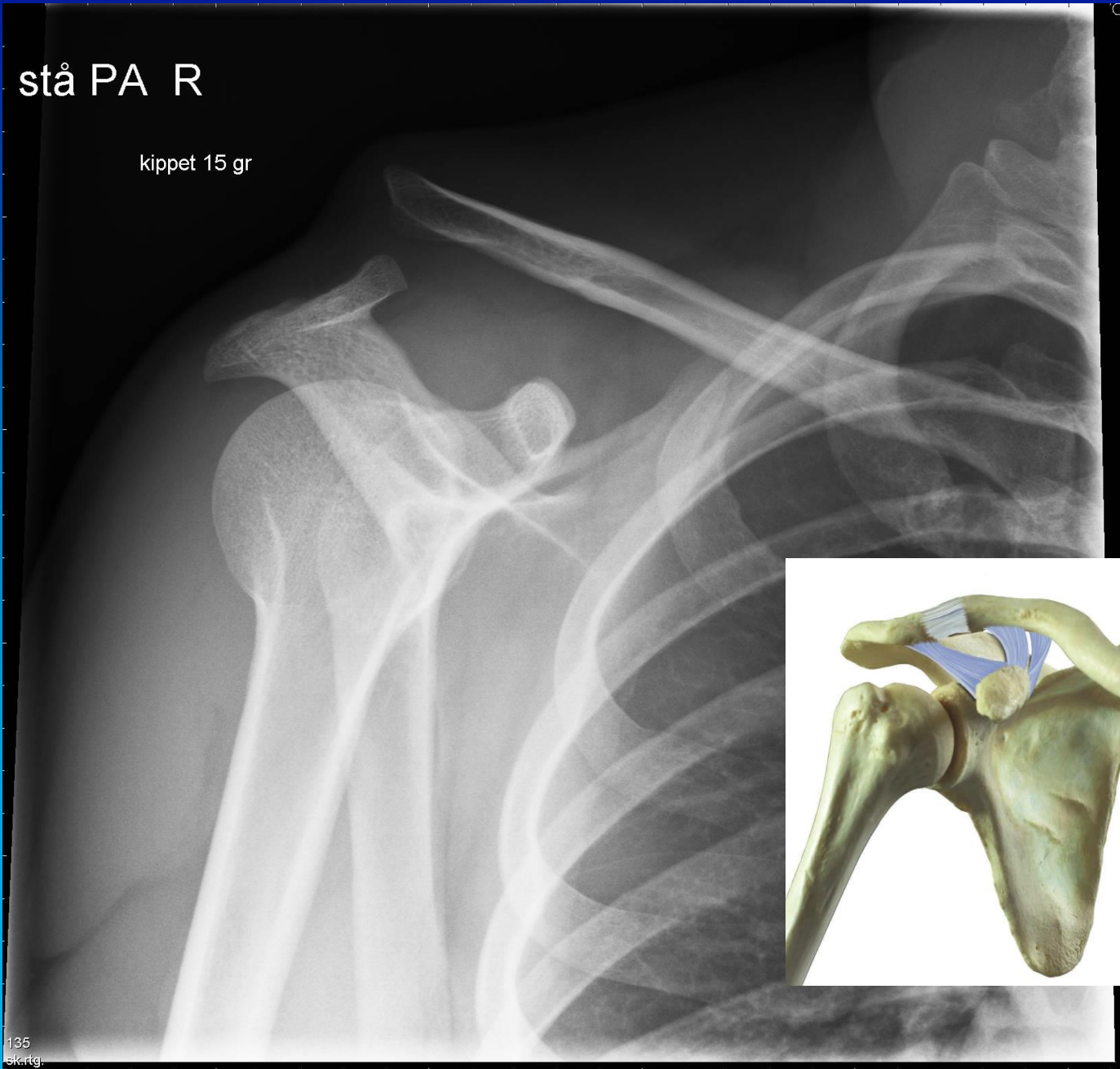


Lig. Coracoclaviculare

- Lig. Conoideum (1) (Tuberculum conoideum).
- Lig. Trapezoideum (2) (Linea trapezoidea – ses ej tydeligt på røntgenbilledet).

stå PA R

kippet 15 gr



stå PA R

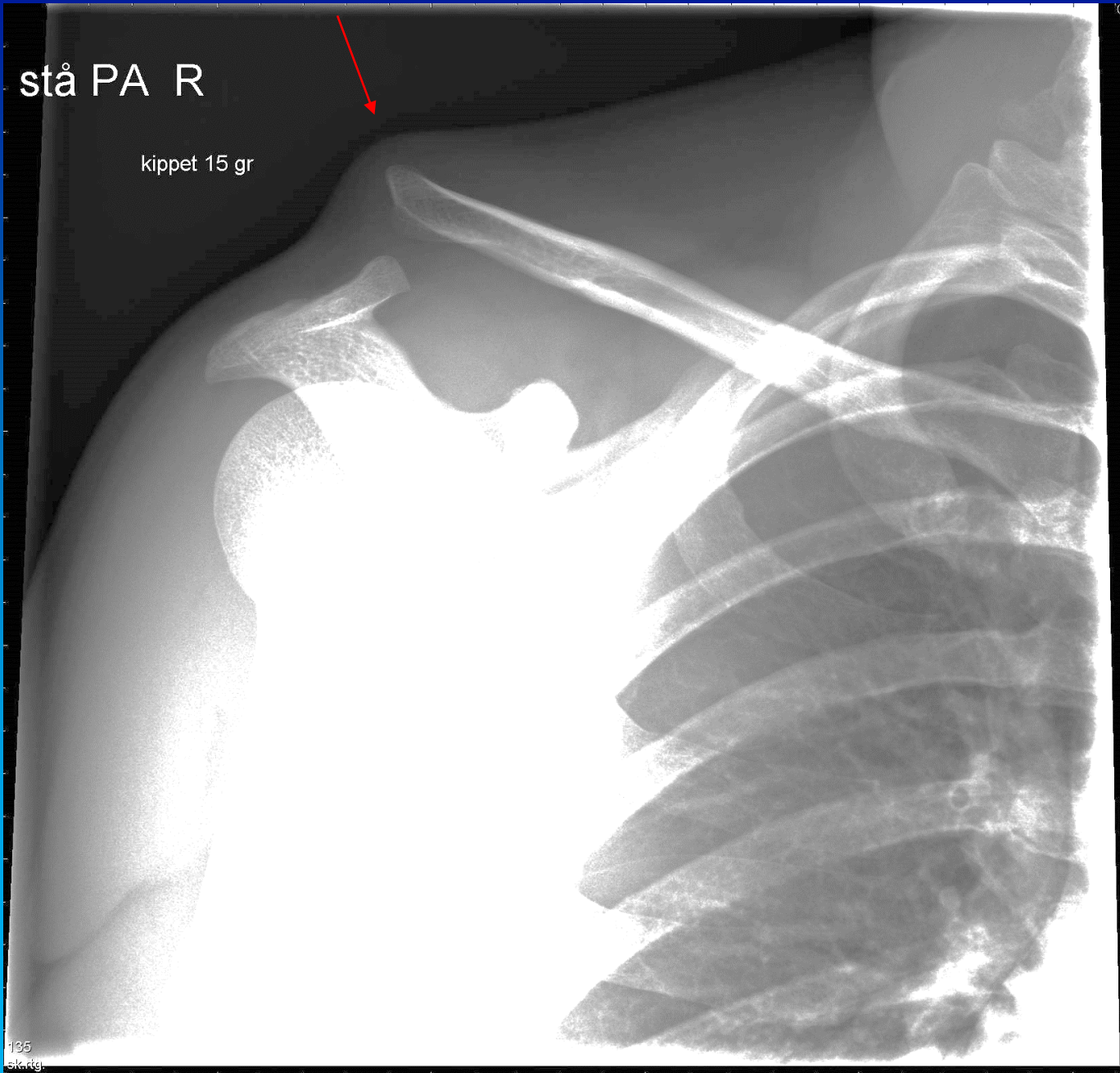
kippet 15 gr



Ved skader i AC leddet, kan der være tale om alt fra de letteste skader, med mindre læsioner i ledkapslen, til overrivning af denne og i værste tilfælde også overrivning af de coracoclaviculære ligamenter, som i aktuelle tilfælde. Herved kommer clavica til at stritte opad lateralt. Klinisk er det let, at palpere leddet, da det ligger ganske overfladisk.

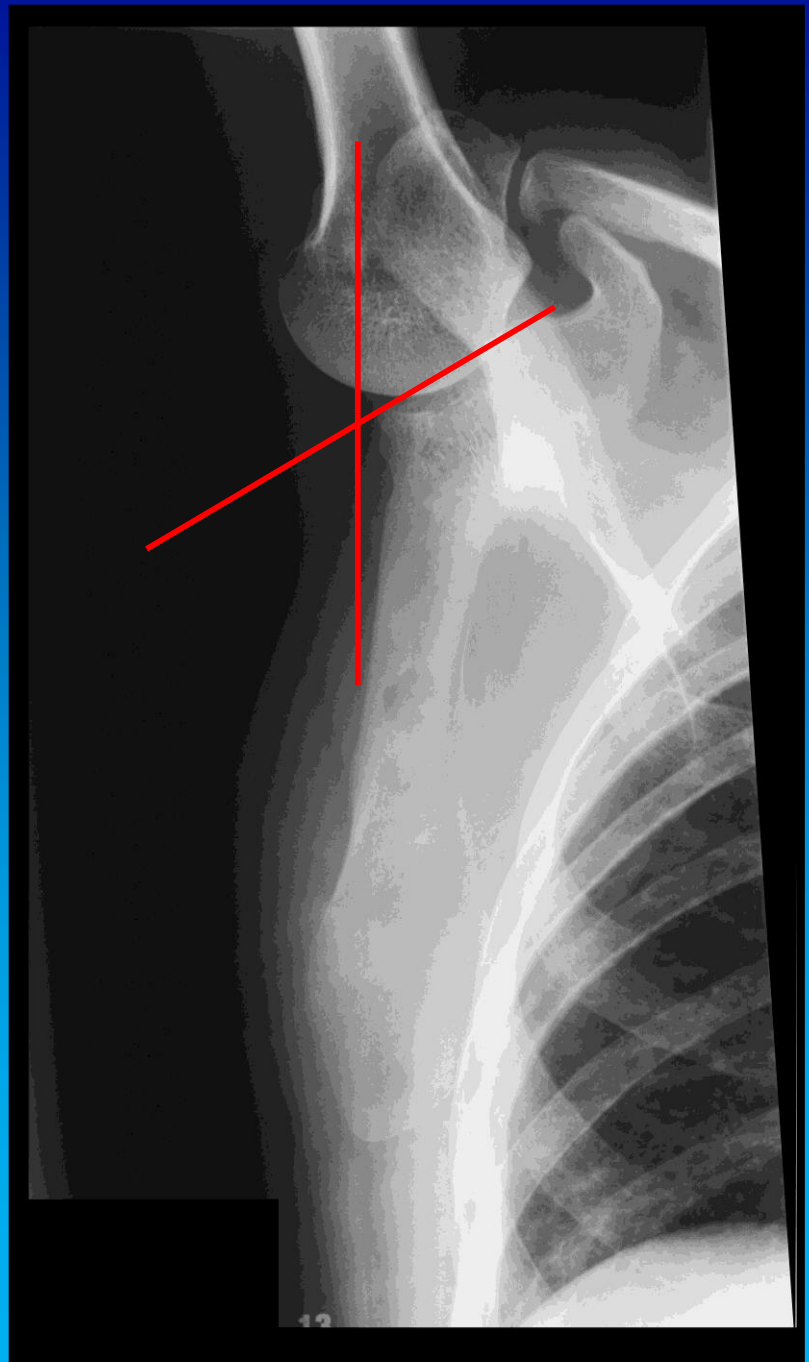
stå PA R

kippet 15 gr

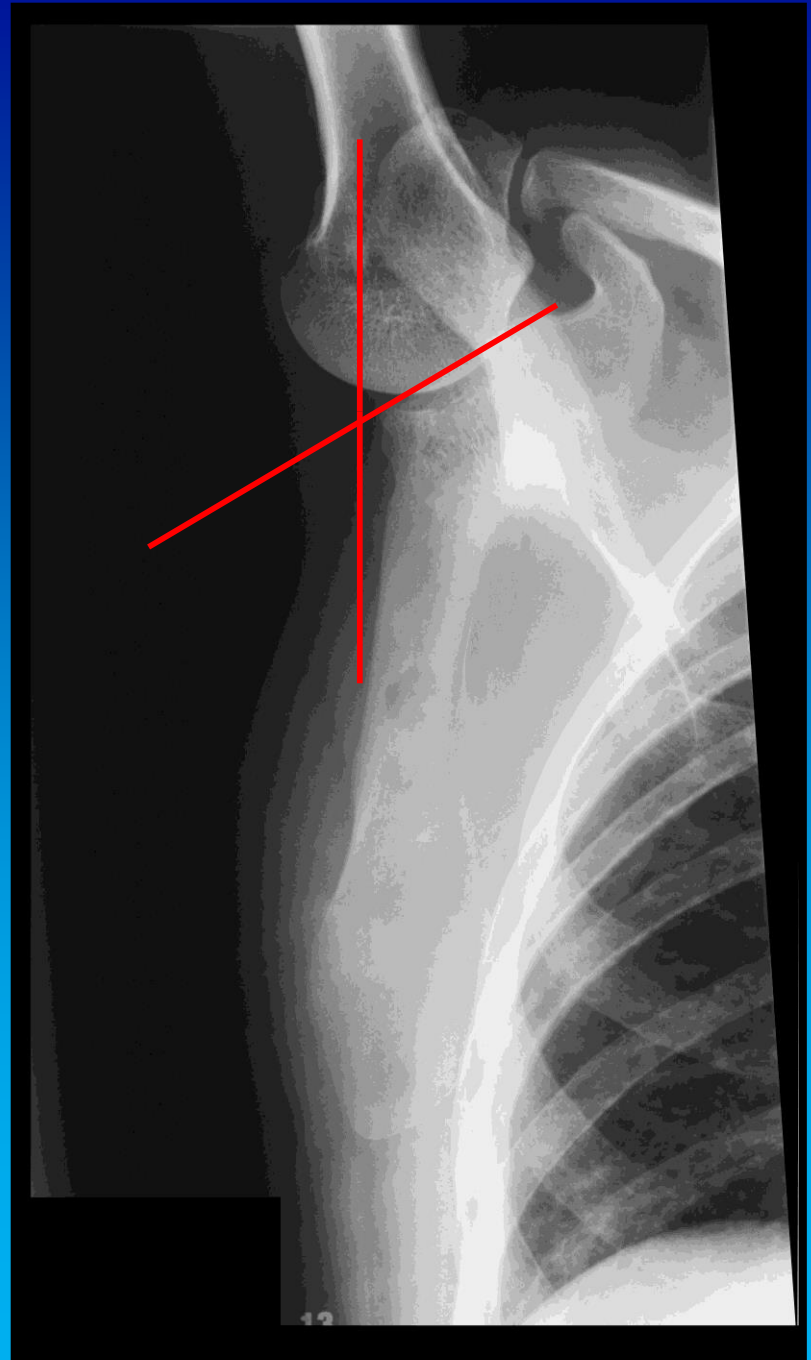


På dette billede er der manipuleret med gråtonerne, således man kan se huden tydeligt. Bemærk hvordan den laterale clavikelende ligger lige under huden. Dette vil kunne ses tydeligt ved inspektion.

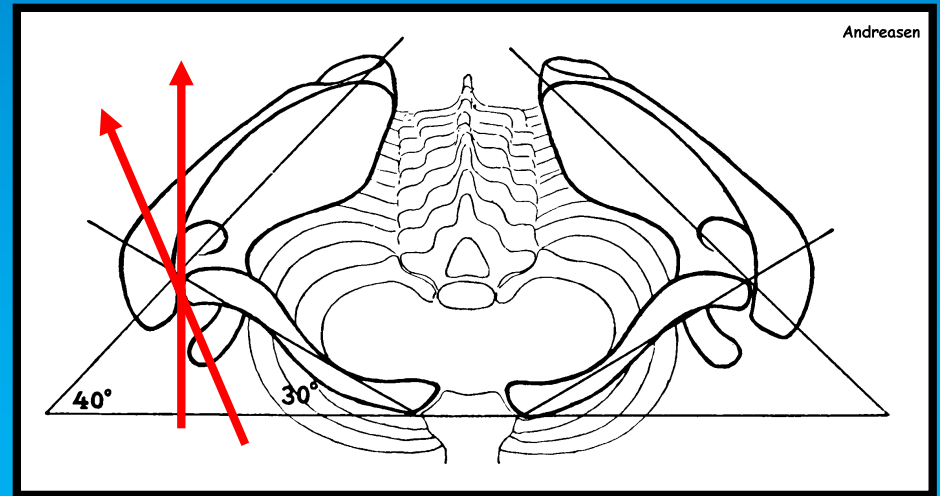
Articulatio humeri og proximale humerus



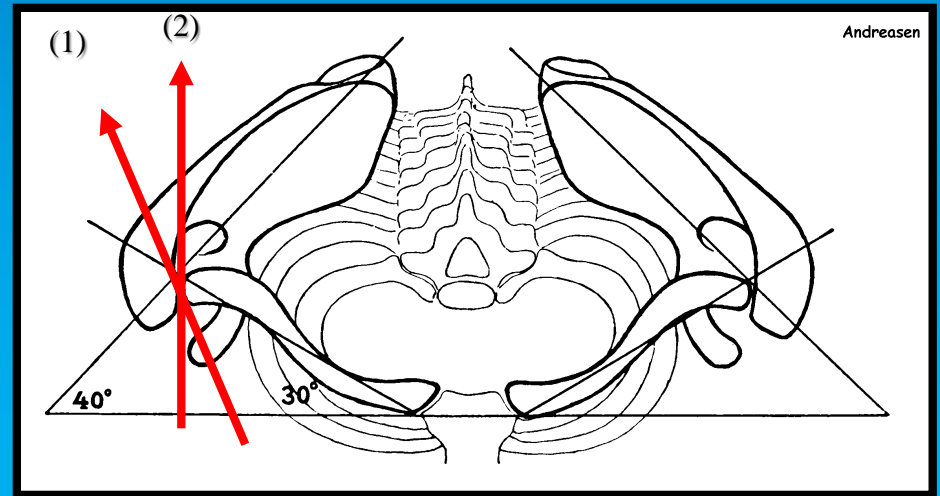
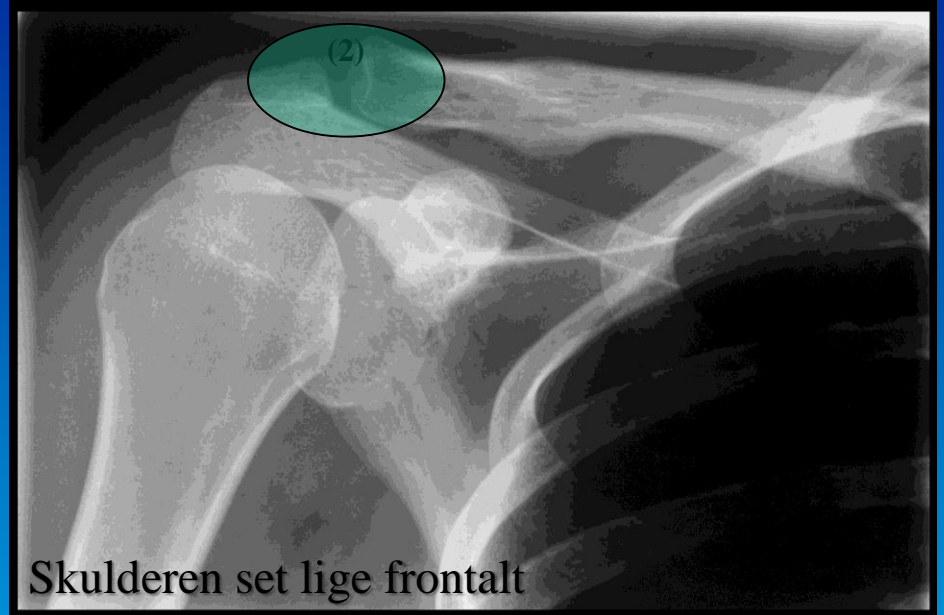
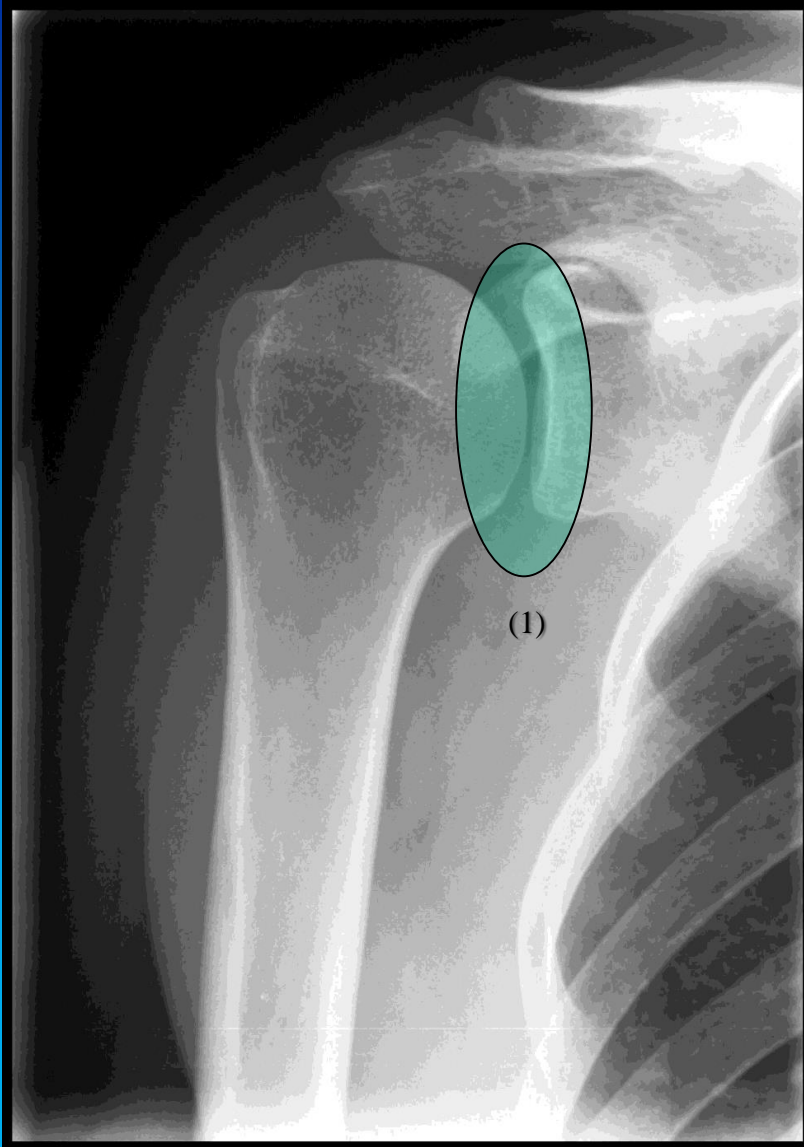
Når armen eleveres 180° , er der en tvungen medbevægelse af scapula, således cavitas kommer til at vende cirka 60° kranielt i stedet for lateralt. De øvrige 120° af bevægelsen foregår i articulatio humeri



Yngre kvinde



Yngre kvinde



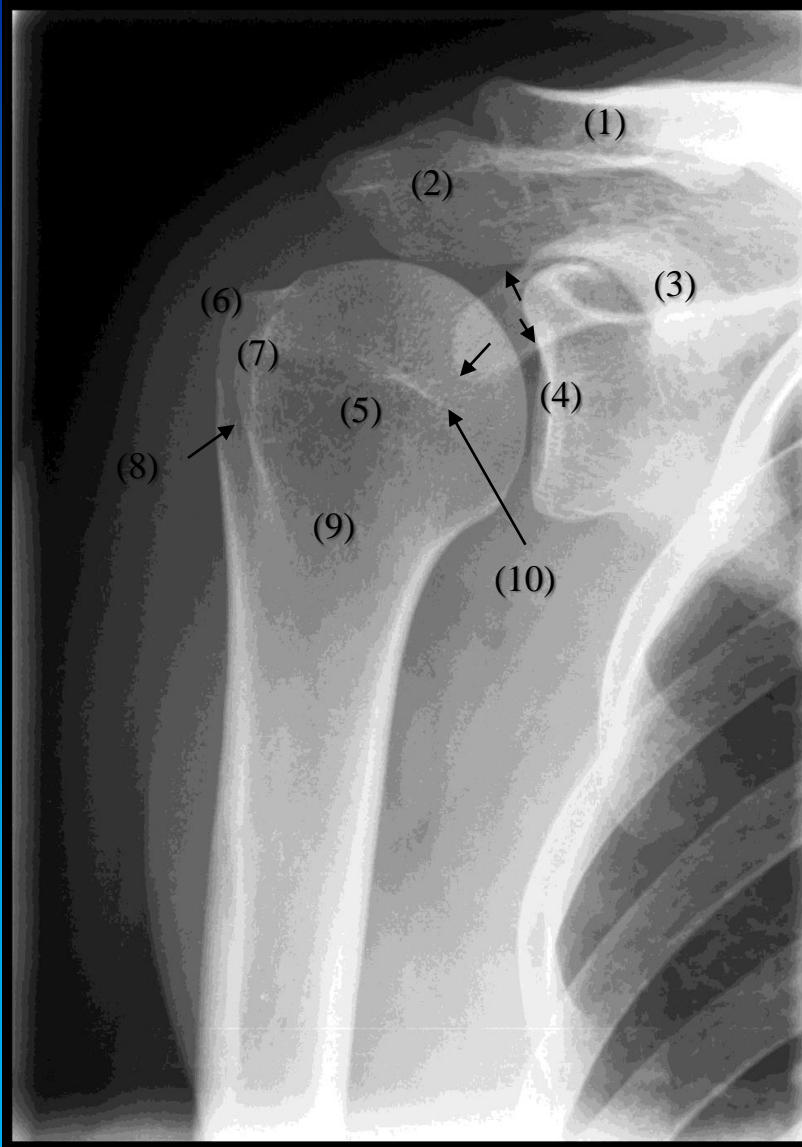
Yngre kvinde



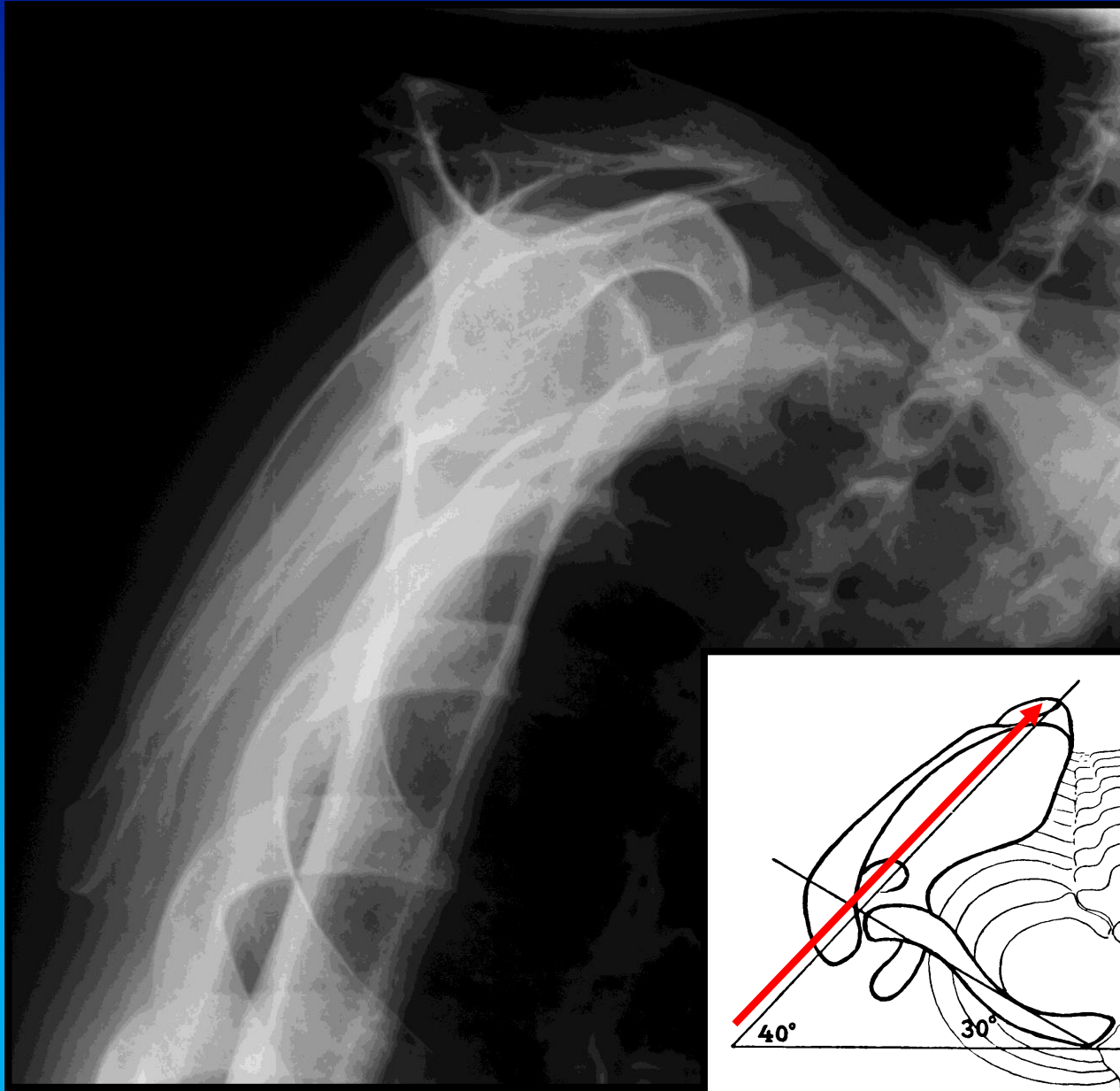
Yngre kvinde



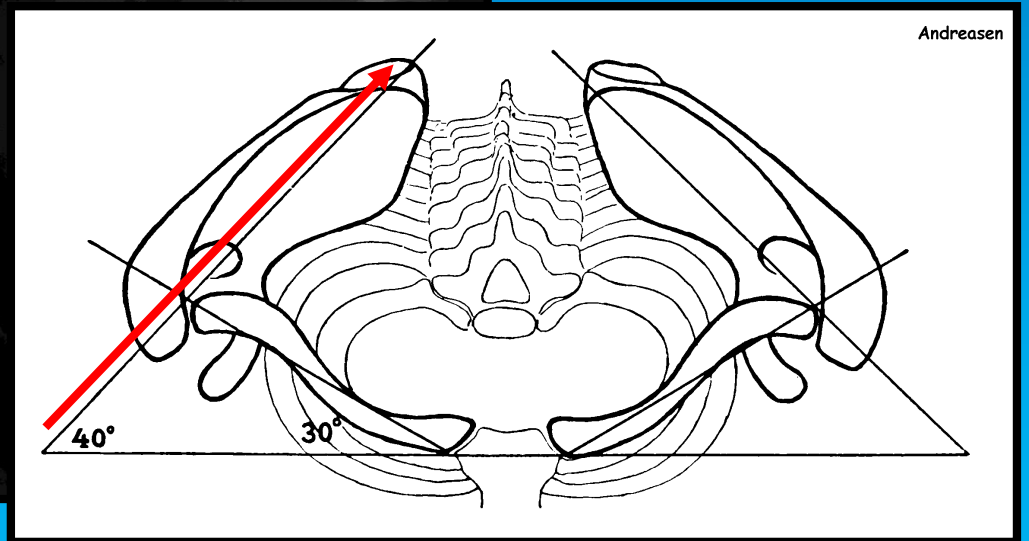
Yngre kvinde

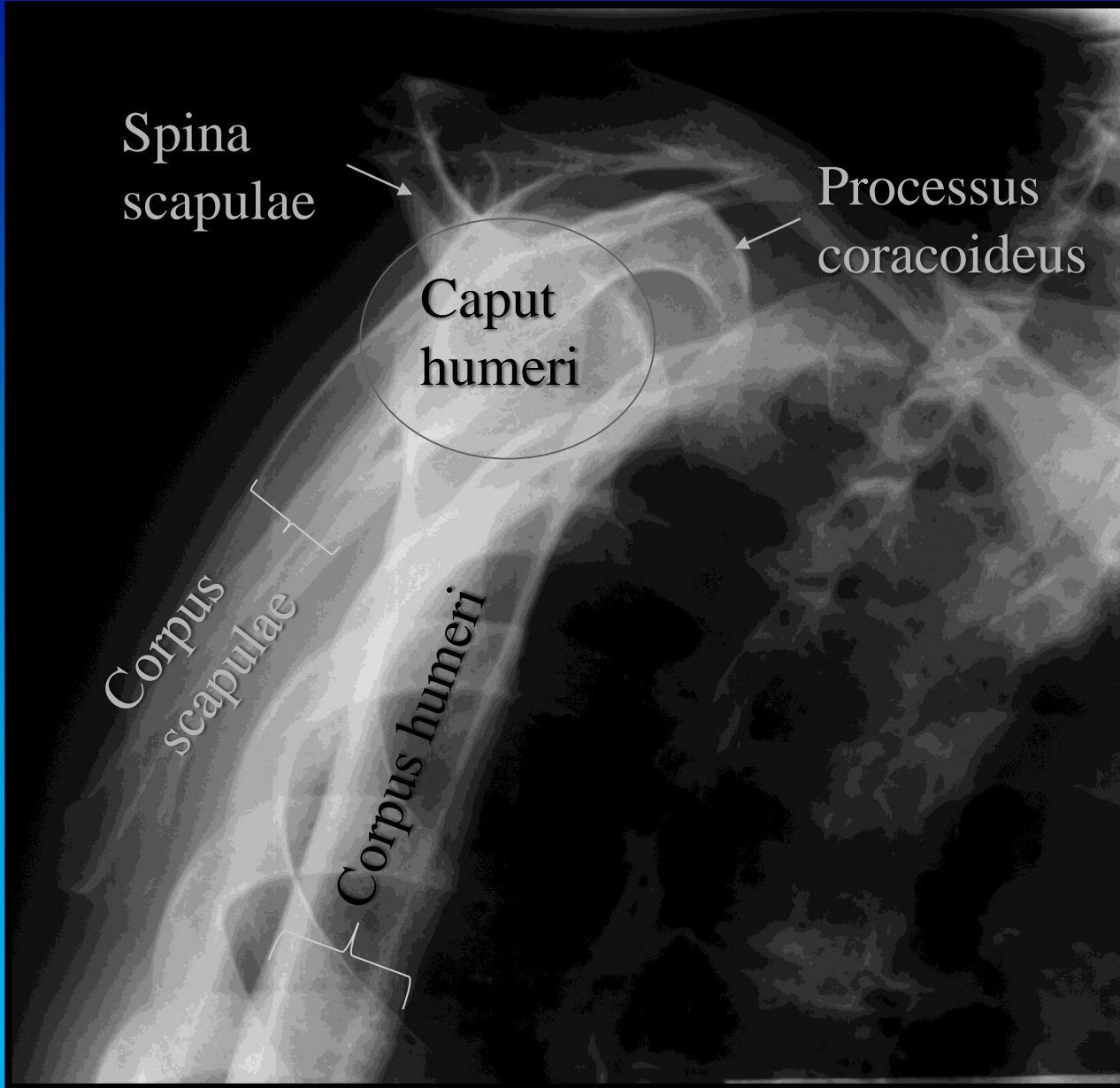


- (1) Clavicula
- (2) Acromion
- (3) Processus coracoideus (basis er markeret, processen fortsætter lateralt og overprojicerer caput humeri (pile)
- (4) Angulus lateralis med cavitas glenoidale
- (5) Caput humeri
- (6) Tuberculum majus
- (7) Tuberculum minus
- (8) Sulcus intertubercularis
- (9) Collum chirurgicum
- (10) Epifysearret ved collum anatomicum



Y



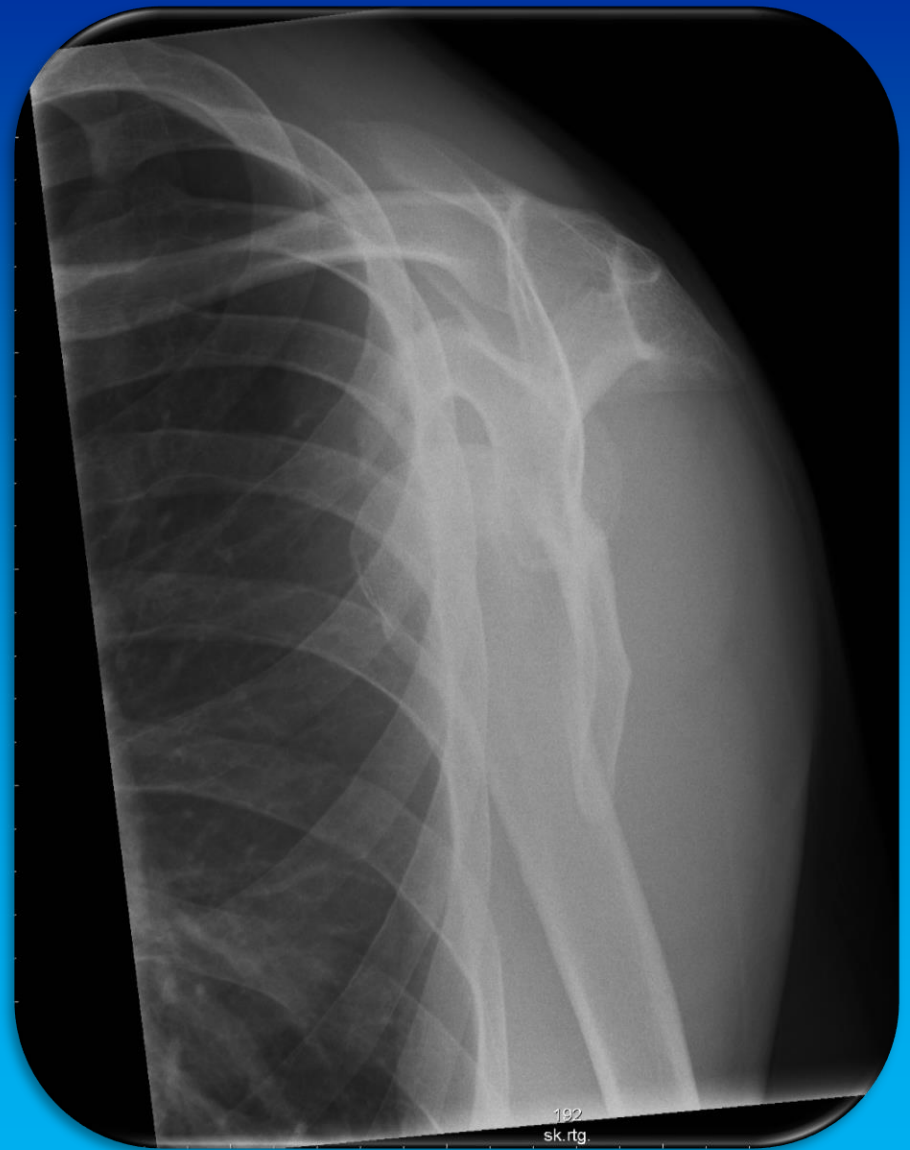


Spina
scapulae

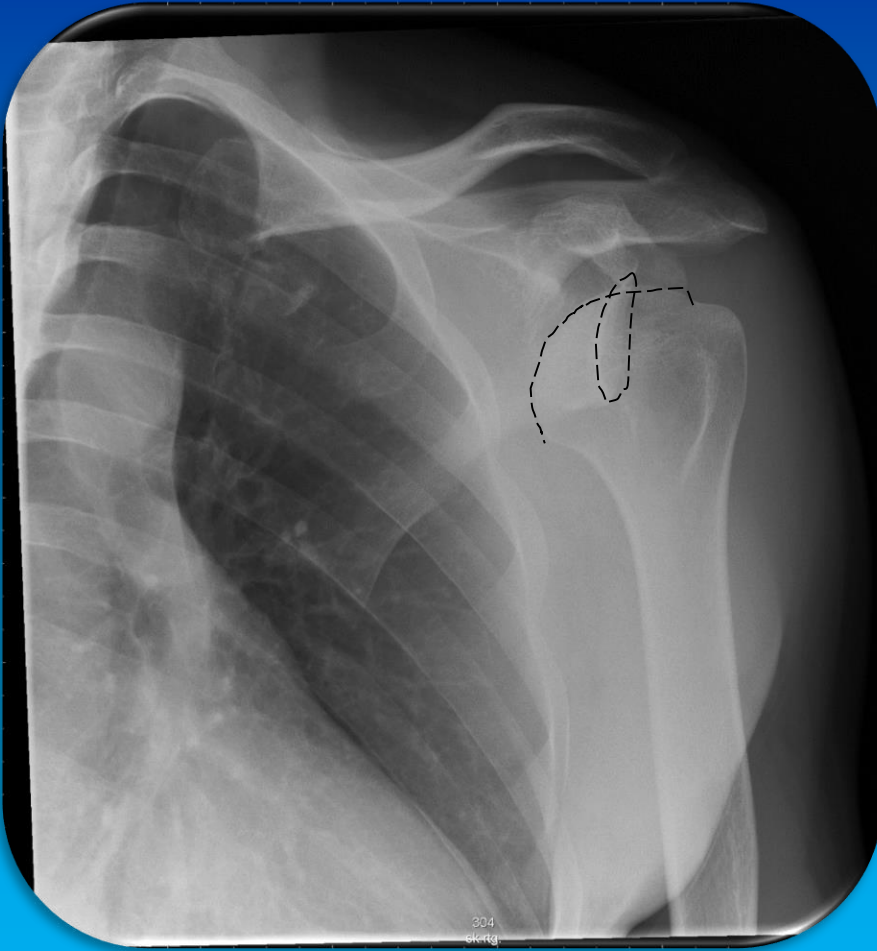


Corpus
scapulae

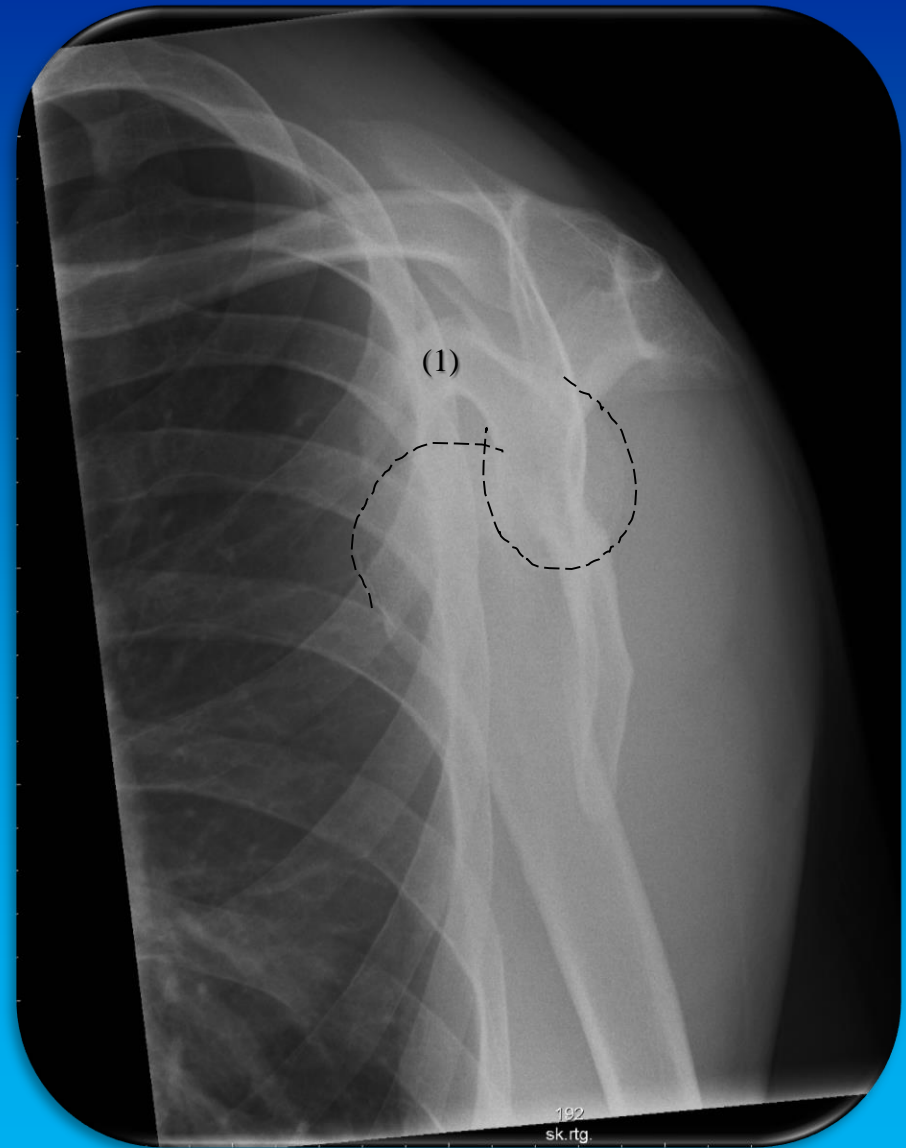
31-årig mand, faldet og stødt skulderen



31-årig mand, faldet og stødt skulderen

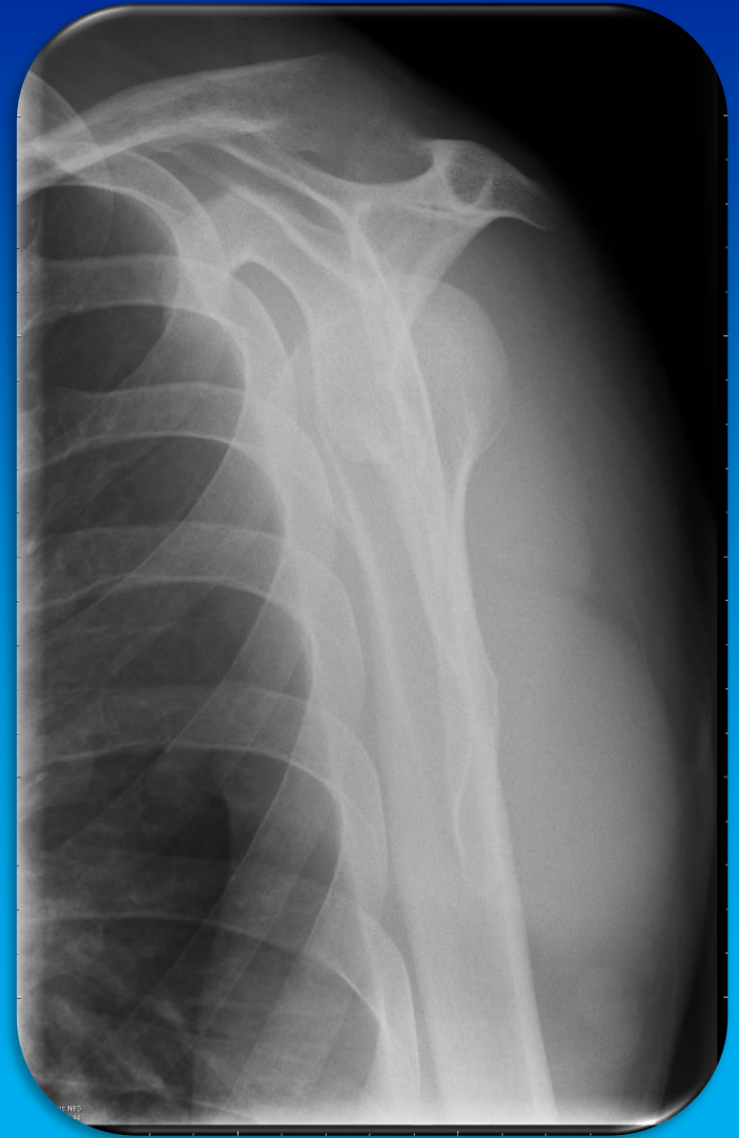


Inkongruens mellem cavitas glenoidale og caput humeri.
AP- og Y-optagelse.



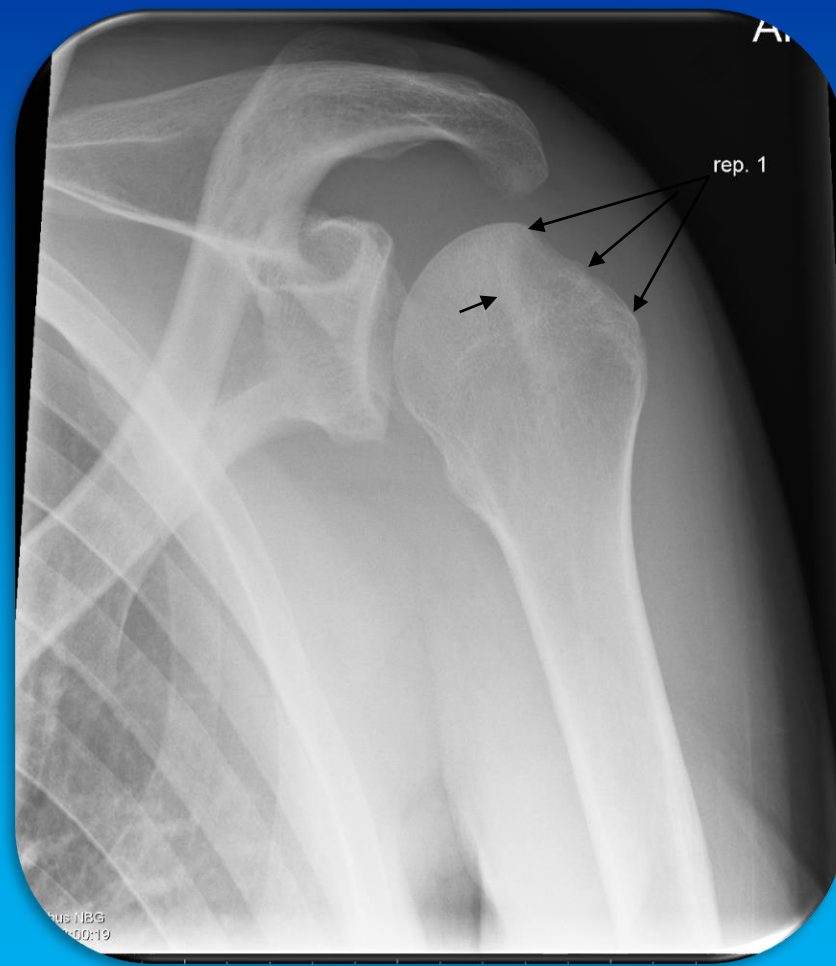
(1) Processus coracoideus

31-årig mand, faldet og stødt skulderen



Kontrol undersøgelse efter reponering





På optagelsen til venstre er skulderen af led (luxeret) og til højre på plads (reponeret) Bemærk den store Hill-Sachs læsion der er kommet i caput humeri (pile), hvor dette var komprimeret mod cavitas forkant. Denne betyder klinisk ikke det store, hvorimod der kan opstå knogle afrivning fra cavitas forkant (ossøs Bankart læsion) eller labral skade.

AP



506
sk.rtg

Stå
VE
AP



AP

Nerver med relation til humerus

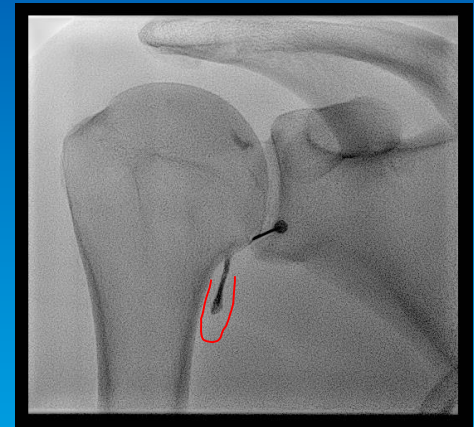
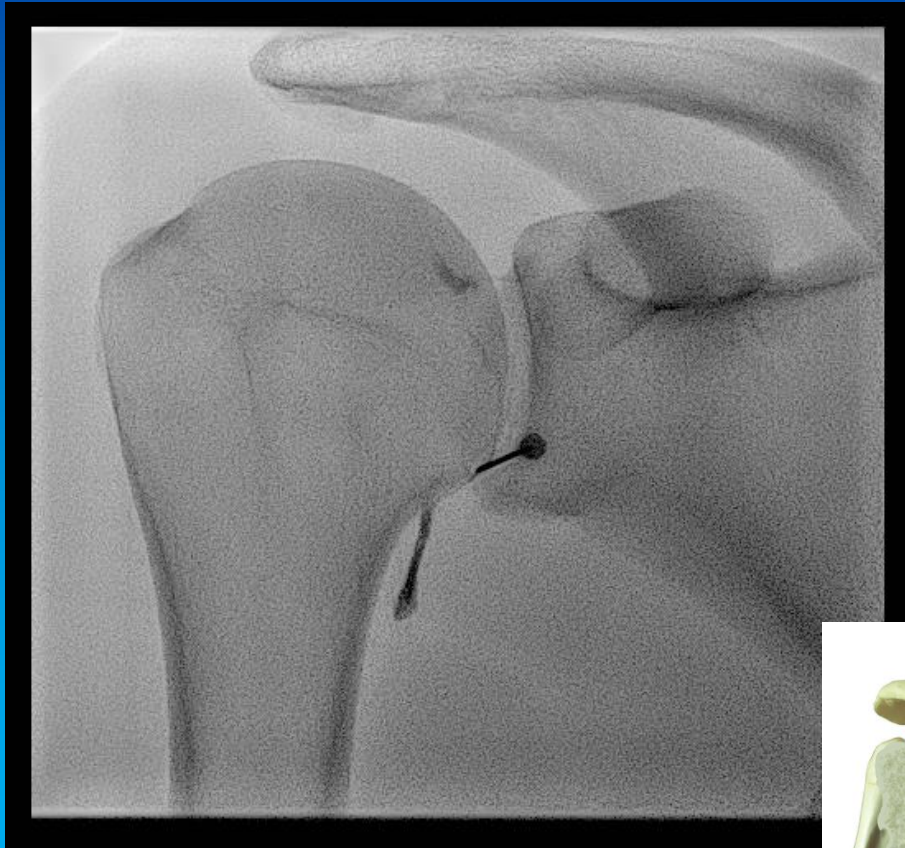




Collum chirurgicum fraktur er en hyppig fraktur, collum anatomicum frakturer ganske sjældent.

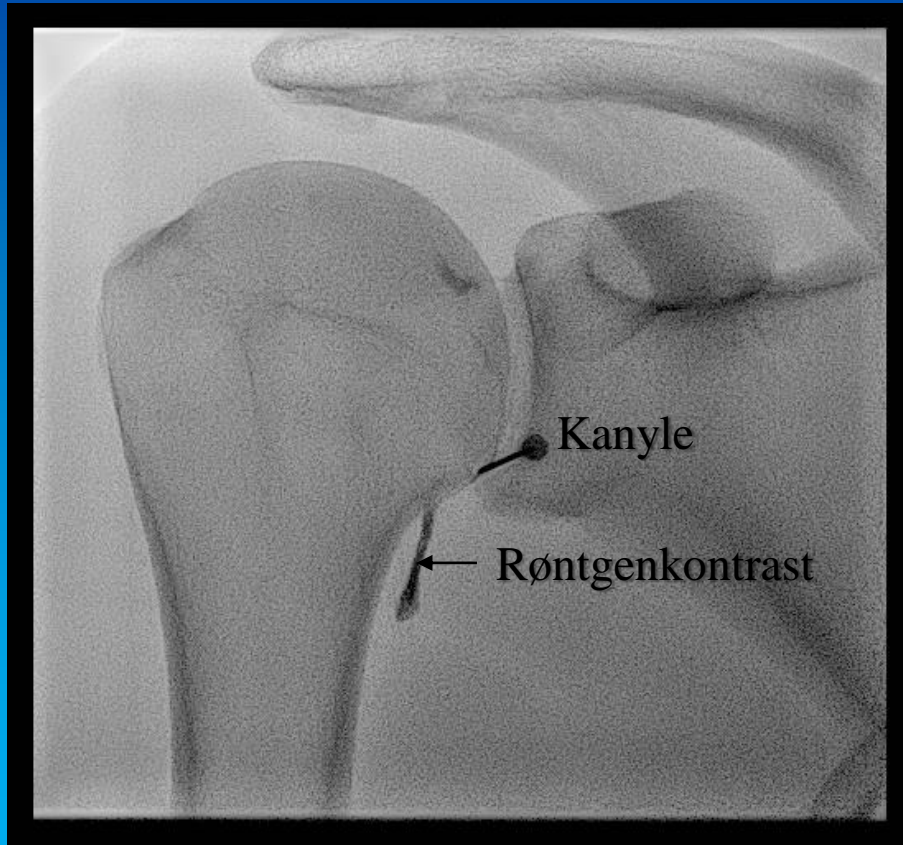
Labrum glenoidale og skulderens muskulatur

Gennemlysningsvejledt artrografi



Den synoviale omslagsfold

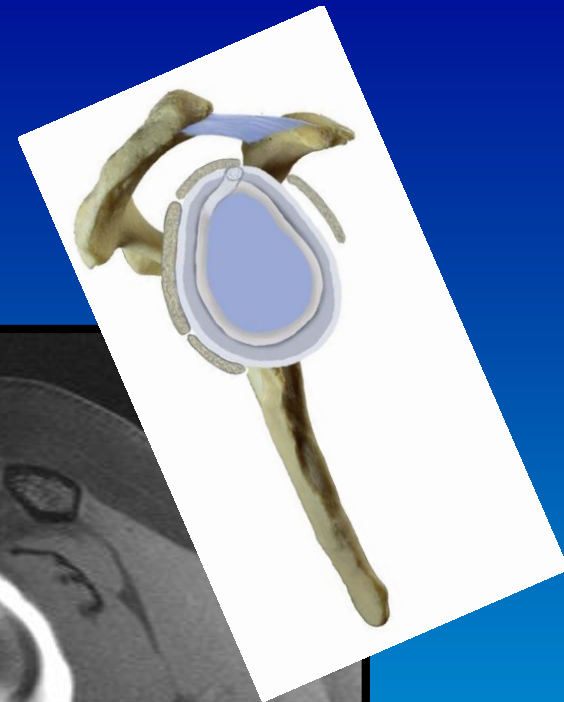
Gennemlysningsvejledt artrografi



Ved artrografi sprøjtes kontraststof ind i en ledhule, her skulderleddet. Placering af kanylen kan foregå med røntgen gennemlysning eller ultralydvejledt. Når nålen føles at ligge korrekt, injiceres lidt kontrast for at sikre korrekt placering. I dette tilfælde løber den ned og lægger sig i omslagsfolden.

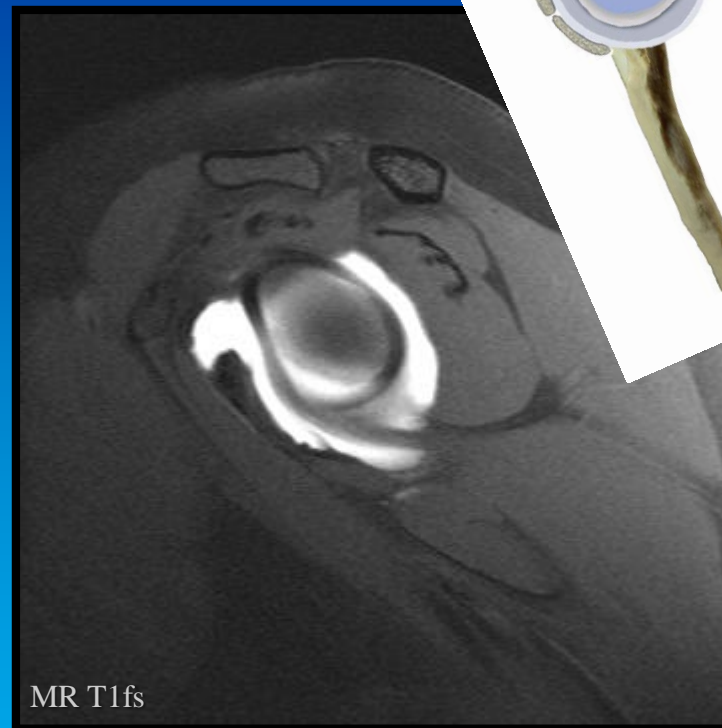
Bemærk at der her er tale om et gennemlysningsbillede, hvorfor det fremtræder som et negativ i forhold til de vanlige billeder.

MR-artrografi



MR T1fs

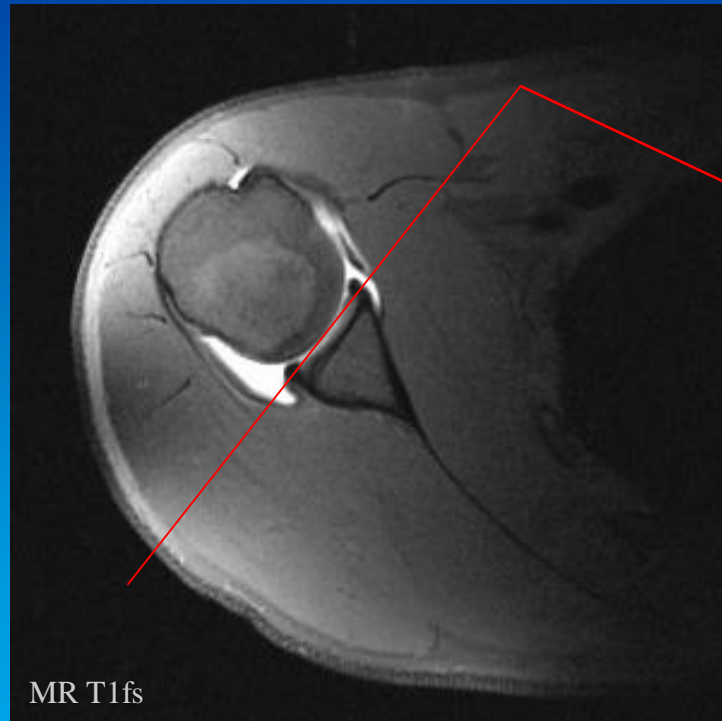
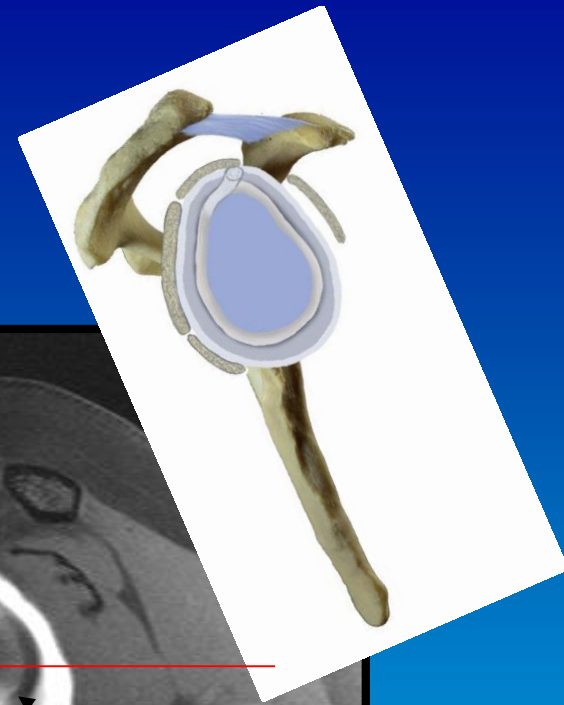
Transvers snit



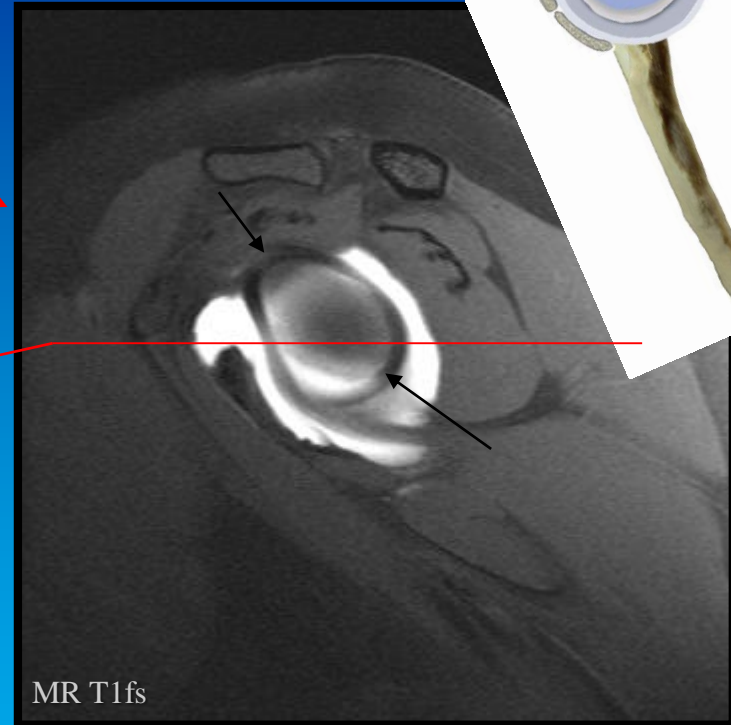
MR T1fs

Skrå sagital snit

MR-artrografi



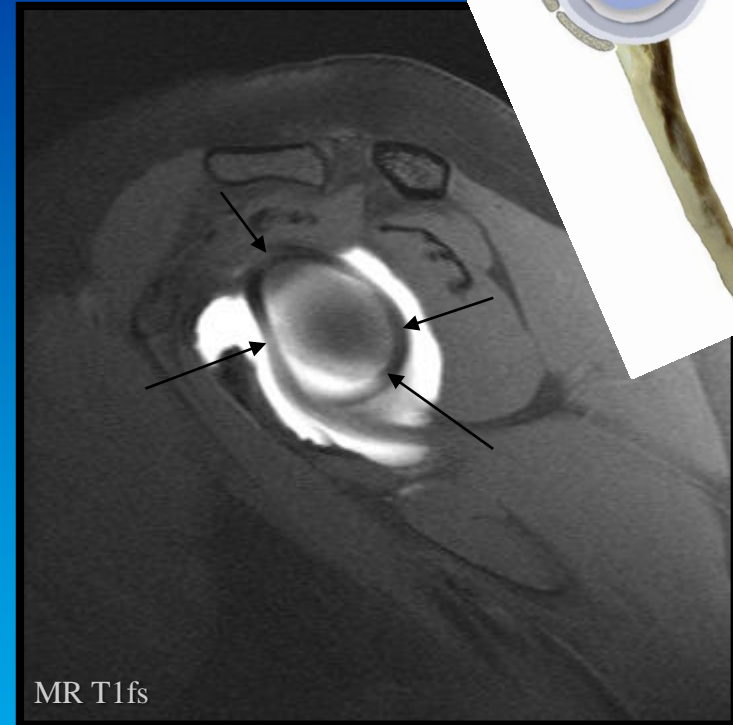
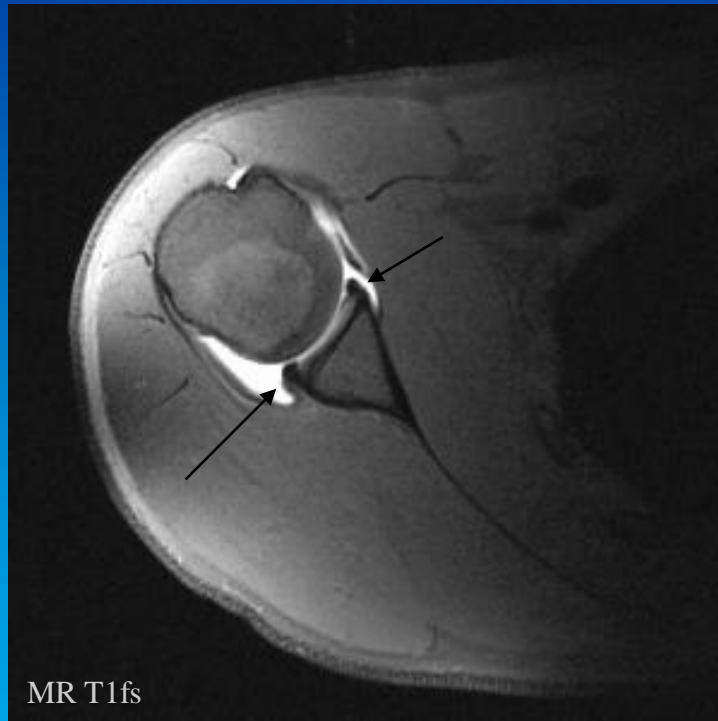
MR T1fs



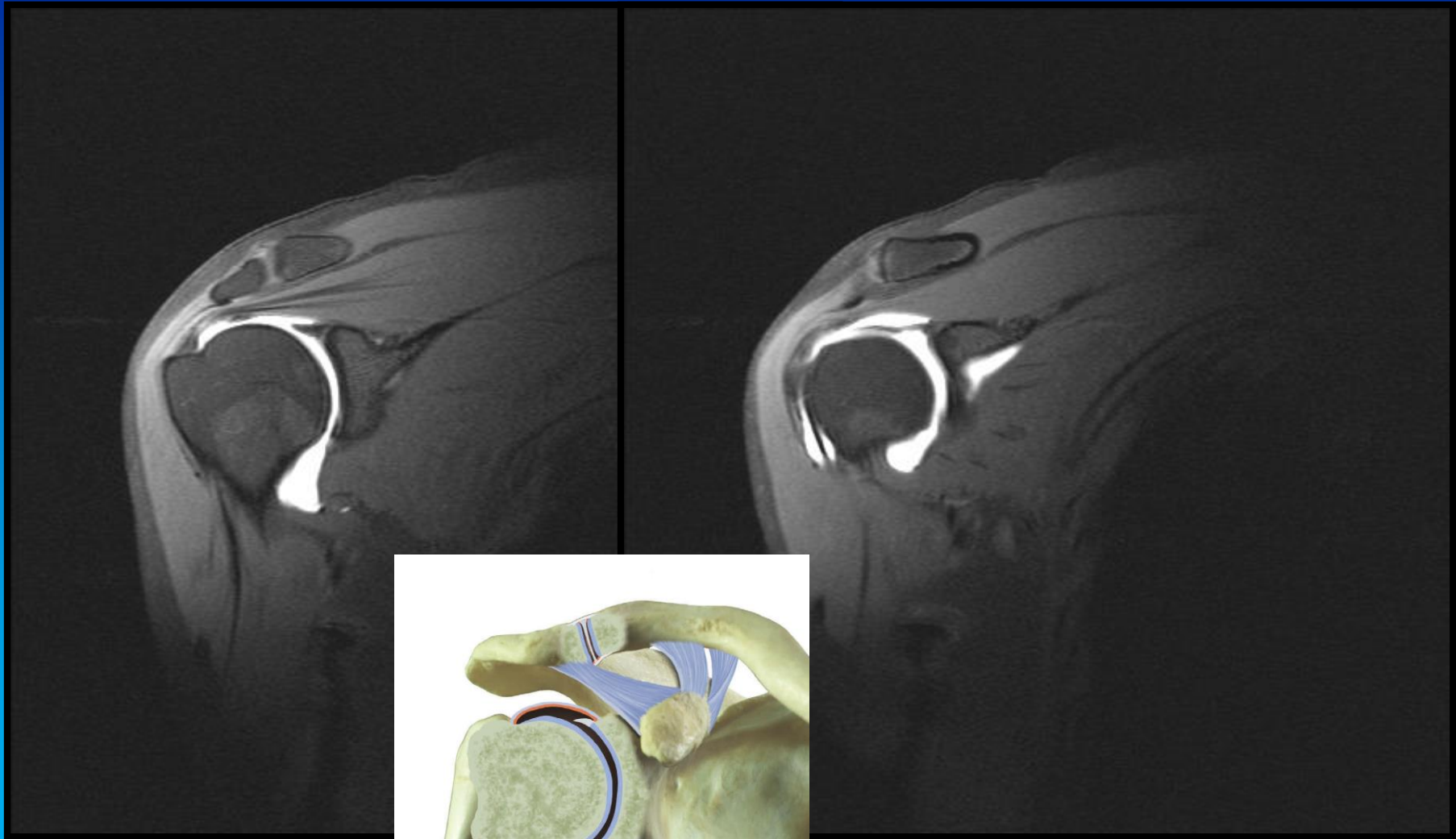
MR T1fs

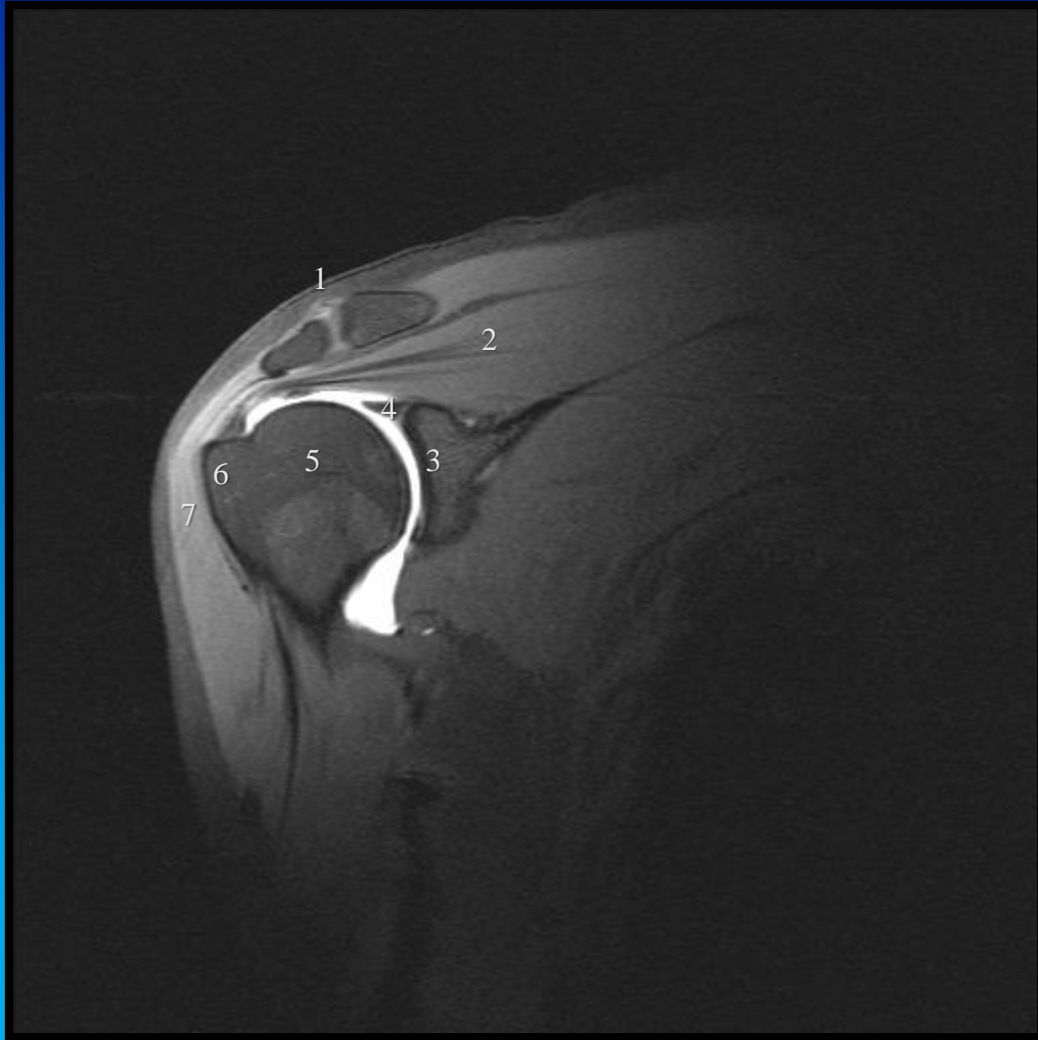
Snitretningen for de to billeder.

MR-artrografi



Labrum markeret med pile. Bemærk cavitas glenoidales facon på billedet til højre (pæreform).

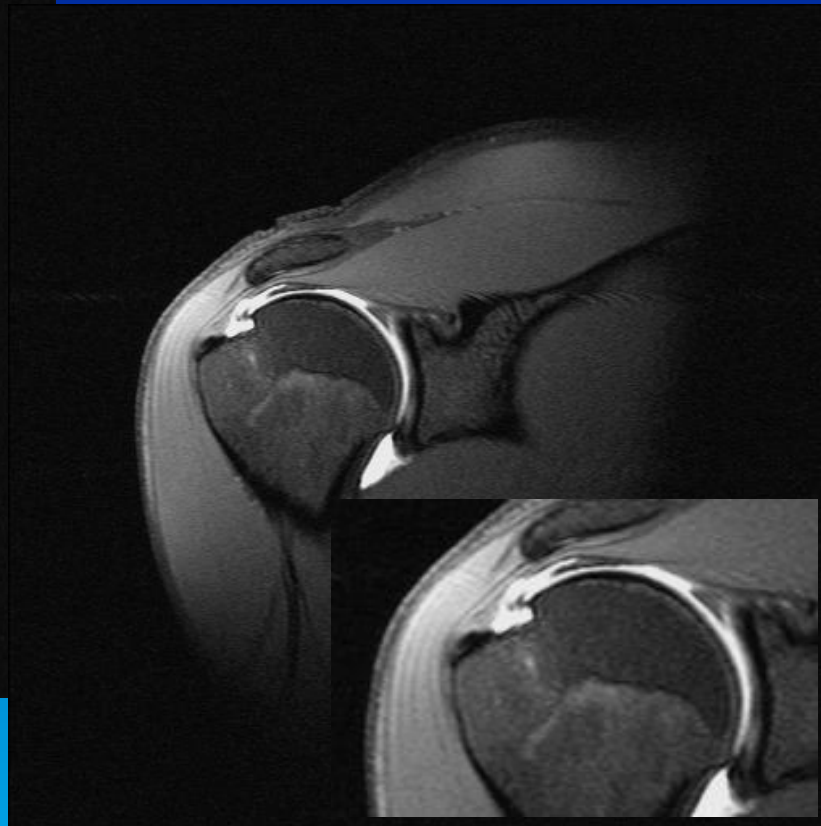
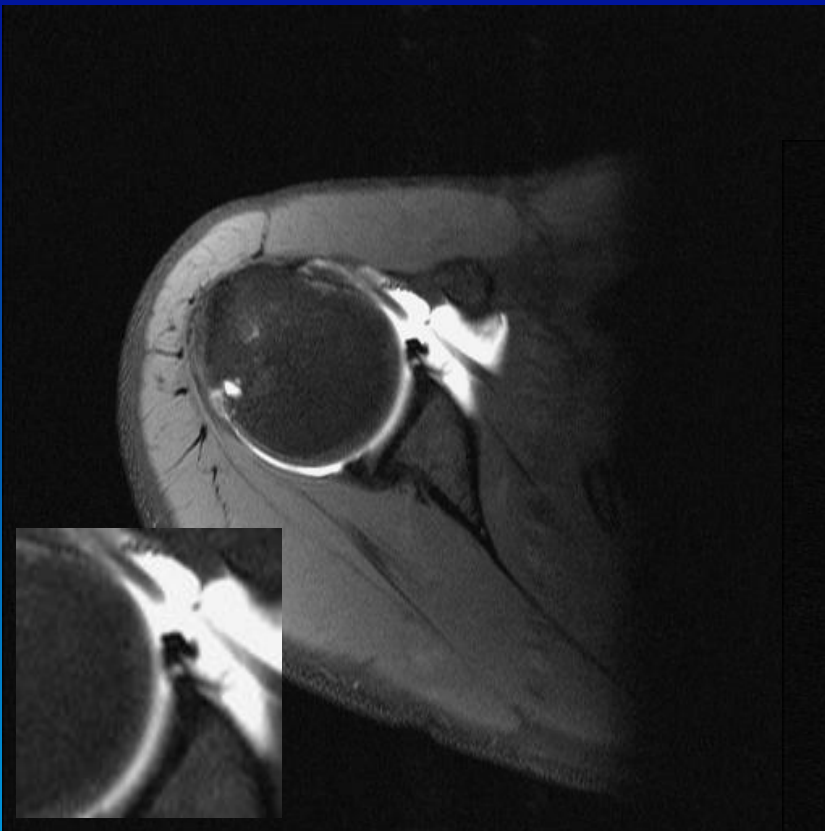






- 1) Articulatio acromioclavicularis
- 2) M. supraspinatus
- 3) Cavitas glenodalis
- 4) Labrum glenodale
- 5) Caput humeri
- 6) Tuberculum majus
- 7) M. deltoideus

Labrumlæsion og supraspinatus senelæsion

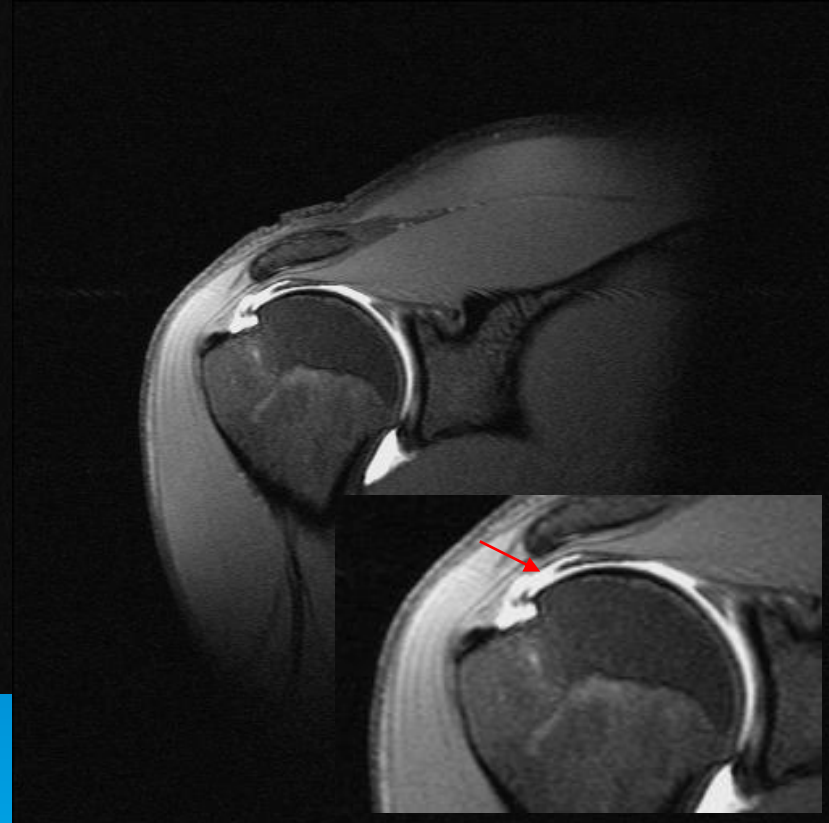


Yngre mand:
Forreste labrum læsion
og supraspinatuslæsion

Supraspinatuslæsion



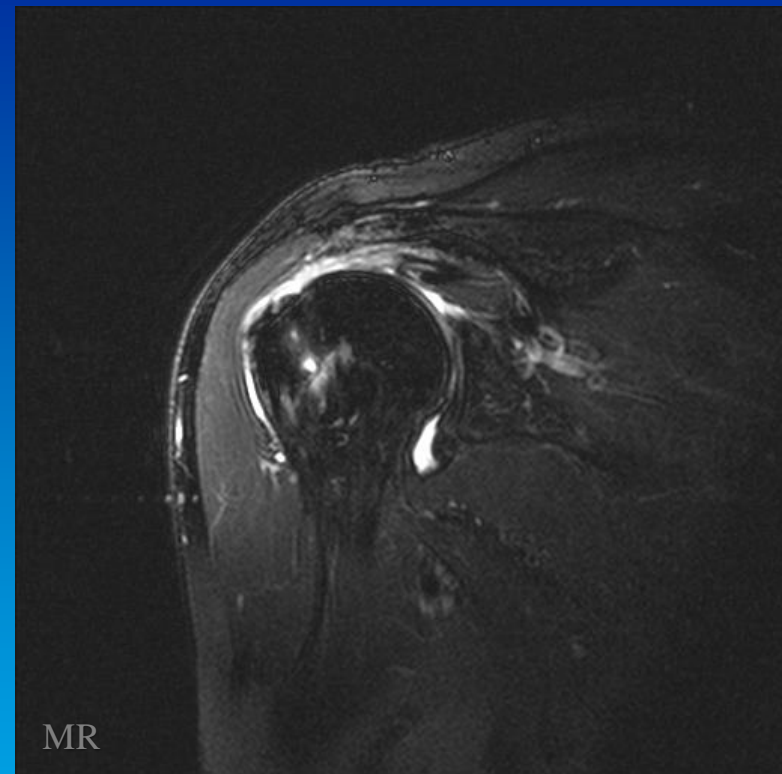
Forreste labrum læsion



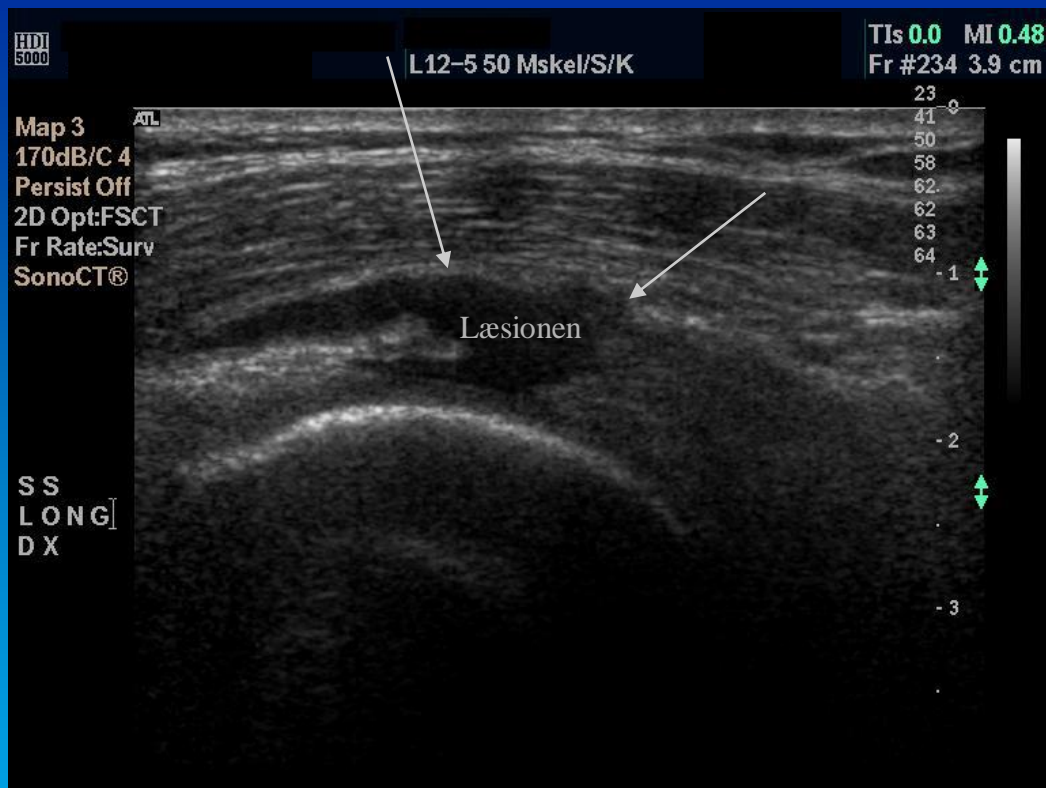
Yngre mand:
Forreste labrum læsion
og supraspinatuslæsion



58-årig kvinde med
supraspinatussænkelæsion



55-årig mand med
supraspinatussænkelæsion

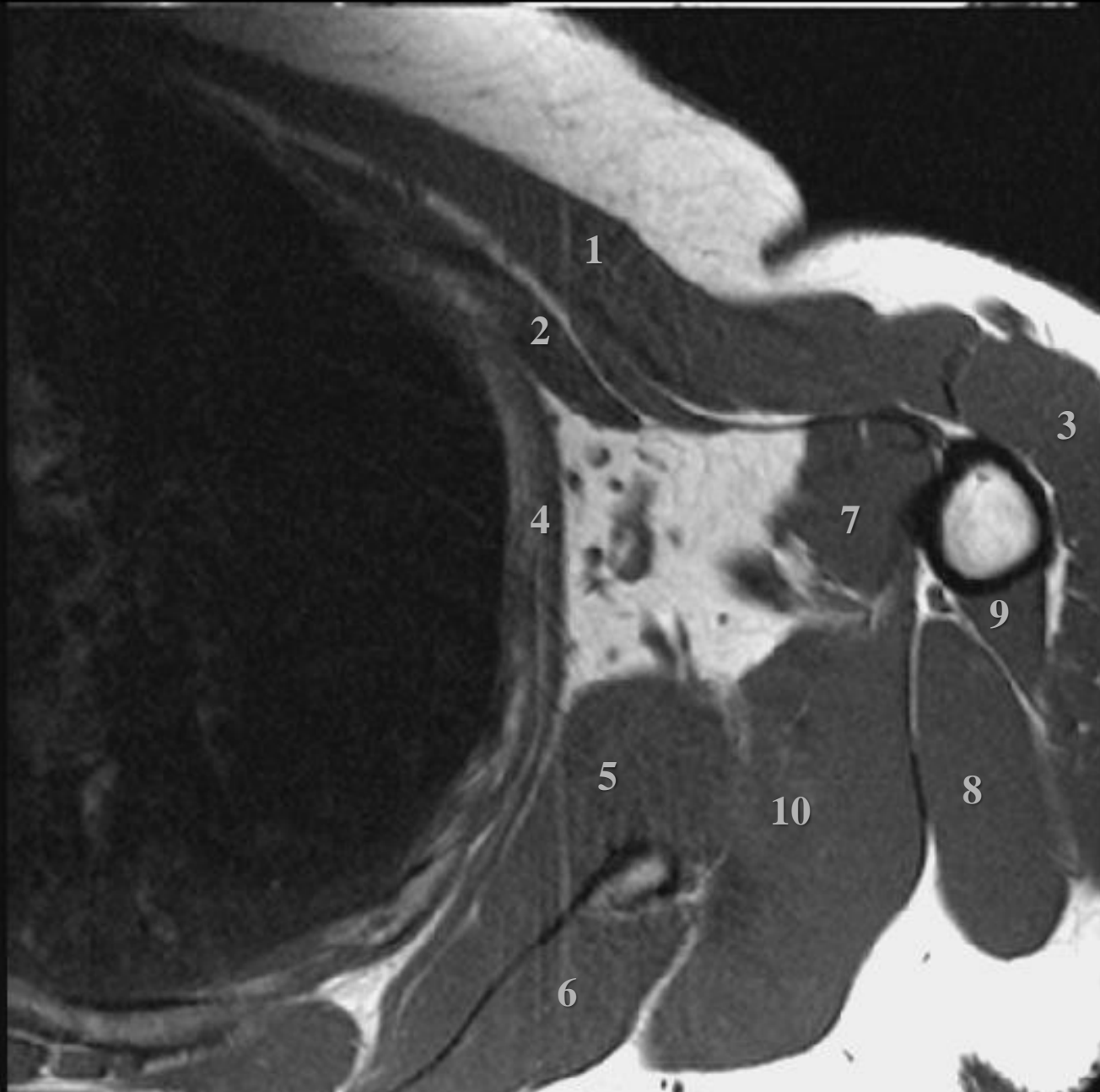


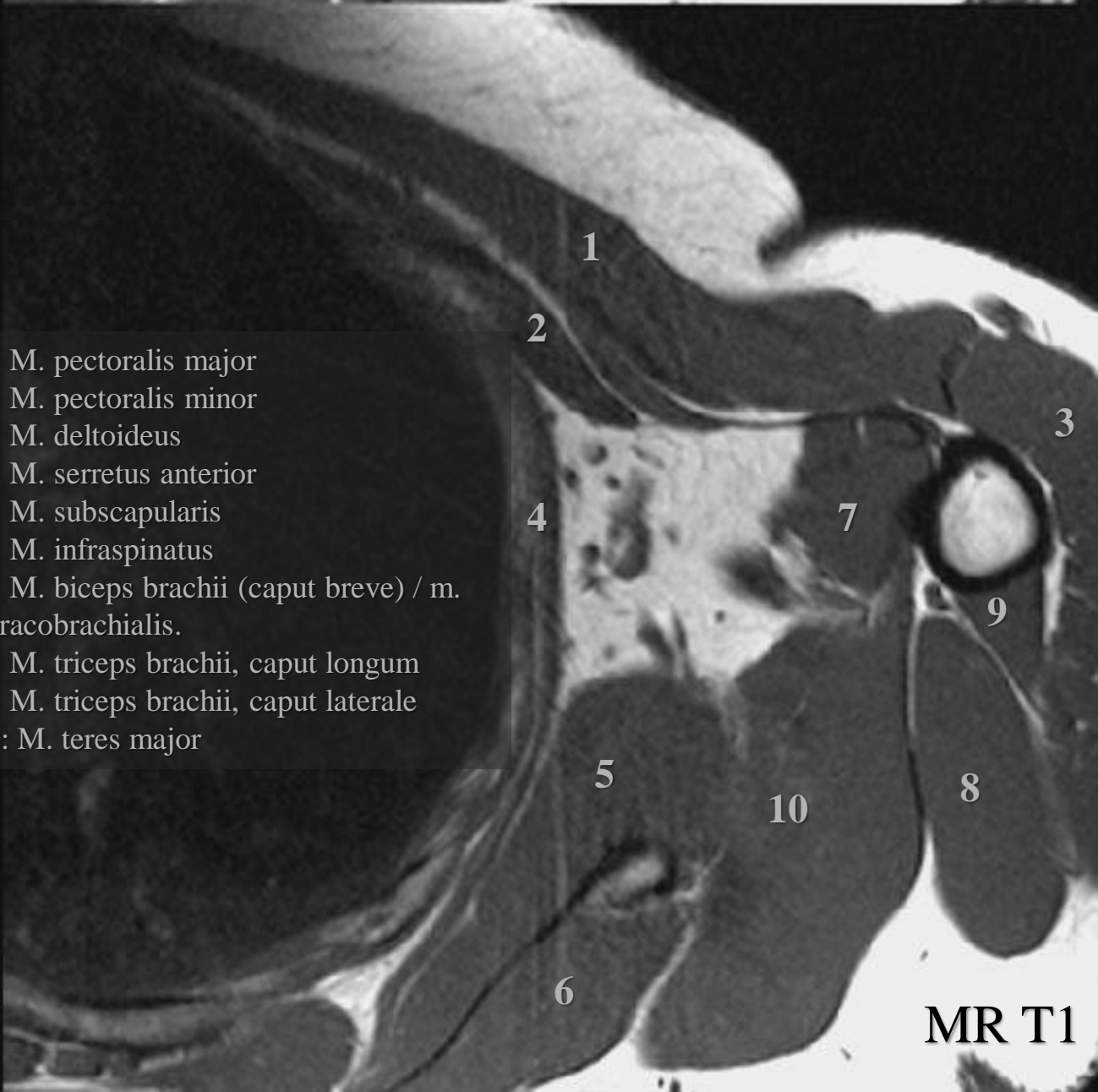
58-årig kvinde med
supraspinatussenelæsion



55-årig mand med
supraspinatussenelæsion

Axillen



- 
- 1: M. pectoralis major
2: M. pectoralis minor
3: M. deltoideus
4: M. serratus anterior
5: M. subscapularis
6: M. infraspinatus
7: M. biceps brachii (caput breve) / m. coracobrachialis.
8: M. triceps brachii, caput longum
9: M. triceps brachii, caput laterale
10: M. teres major

MR T1

Albuen og antebrachium

Højre albue, yngre kvinde



Højre albue, yngre kvinde

1. Condylus humeri
2. Epicondylus medialis
(sulcus nervi ulnaris)
3. Epicondylus lateralis
4. Trochlea humeri
5. Capitulum humeri
6. Fossa coronoidea
7. Fossa olecrani



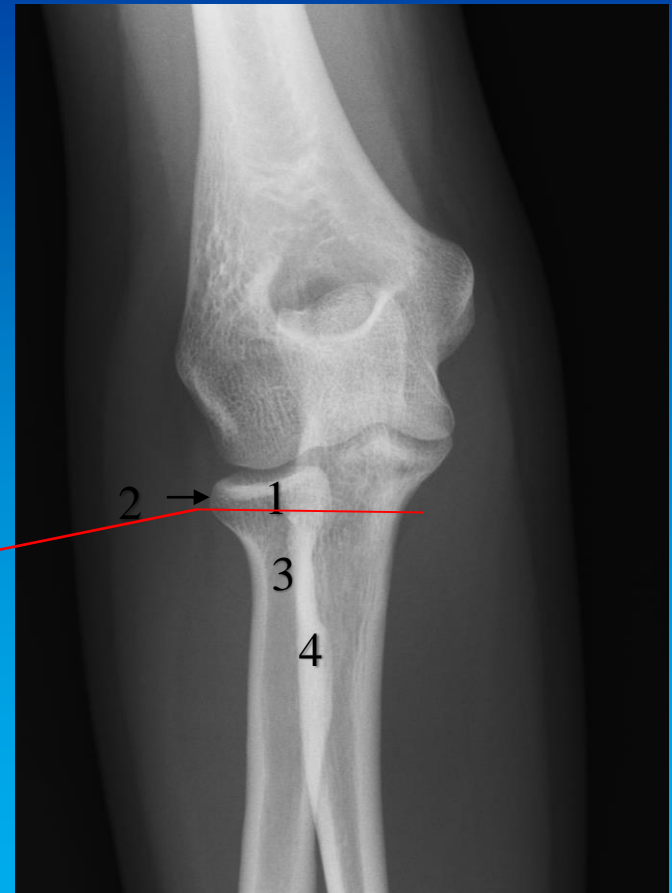
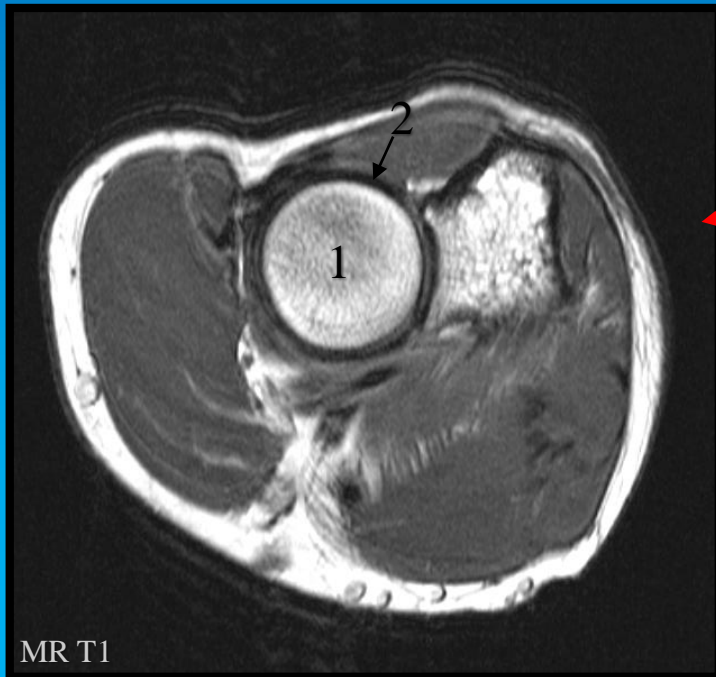
Højre albue, 20-årig kvinde



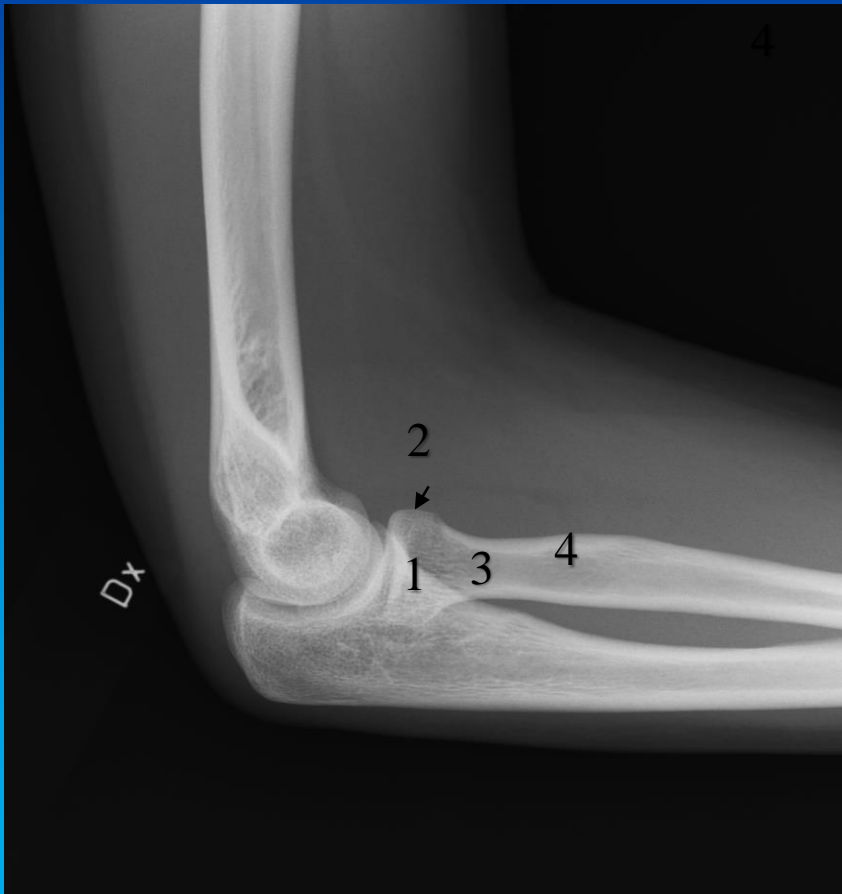
1. Condylus humeri
2. Epicondylus medialis
(sulcus nervi ulnaris)
3. Epicondylus lateralis
4. Trochlea humeri
5. Capitulum humeri
6. Fossa coronoidea
7. Fossa olecrani

Højre albue, 20-årig kvinde

1. Caput radii
2. Circumferentia articularis
3. Collum radii
4. Tuberositas radii



Højre albue, 20-årig kvinde



1. Caput radii
2. Circumferentia articularis
3. Collum radii
4. Tuberositas radii

Højre albue, yngre kvinde

1. Olecranon
2. Incisura trochlearis
3. Processus coronoideus
4. Incisura radialis

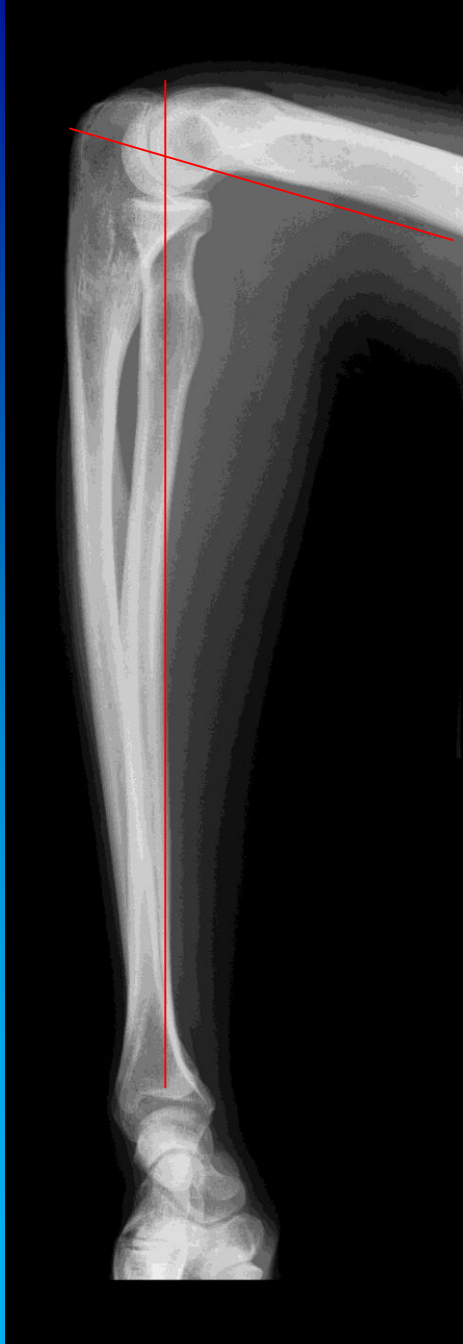


Roteret optagelse med bedre indblik til incisura radialis

Højre albue, yngre kvinde



1. Olecranon
2. Incisura trochlearis
3. Processus coronoideus
4. Incisura radialis



8-årig pige med tidligere fraktur

DXT



SIN

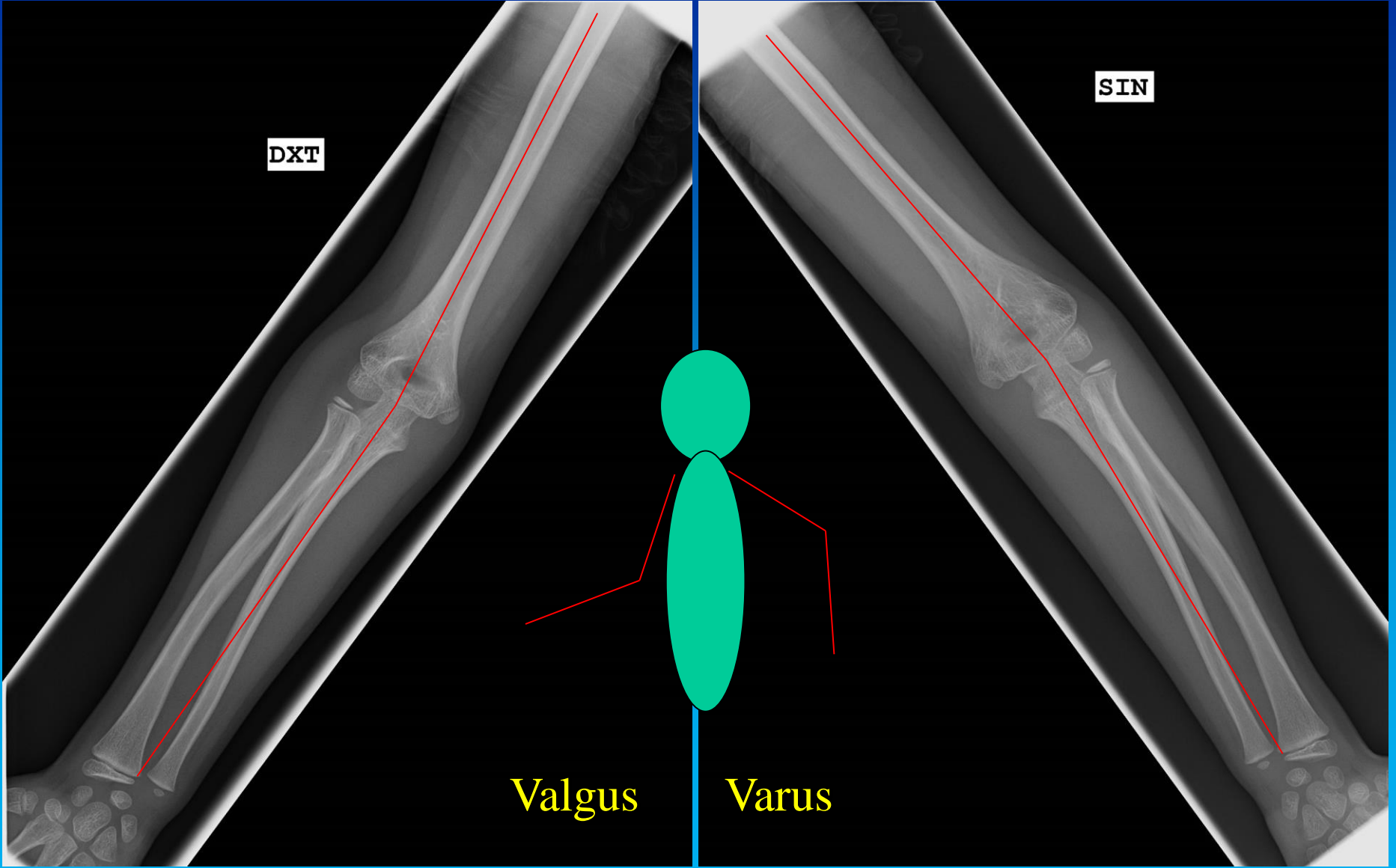


DXT

SIN

Valgus

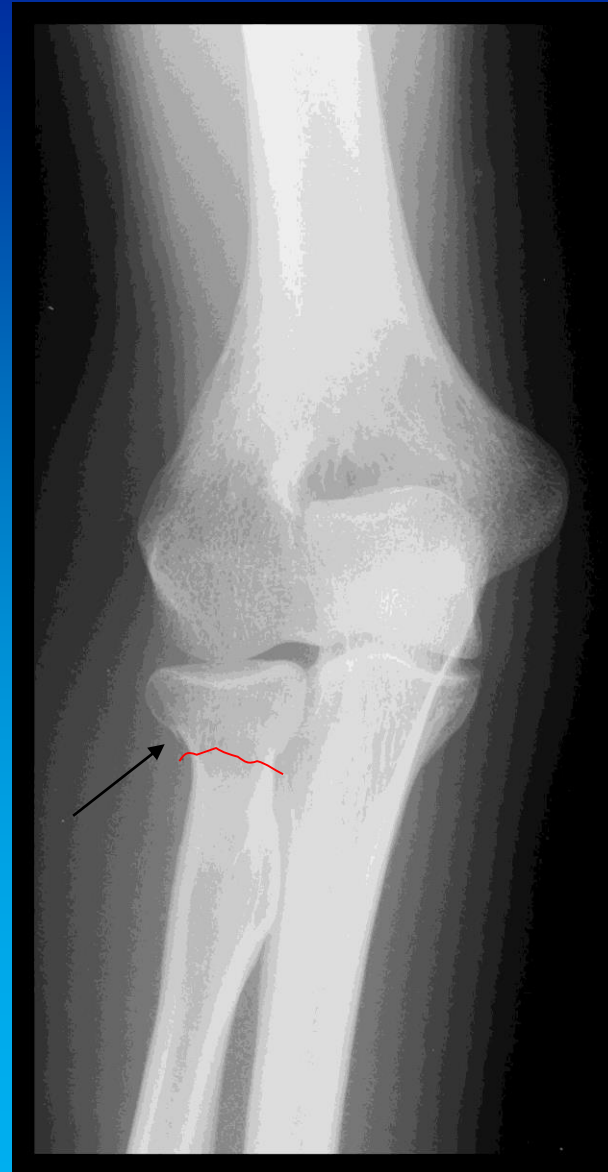
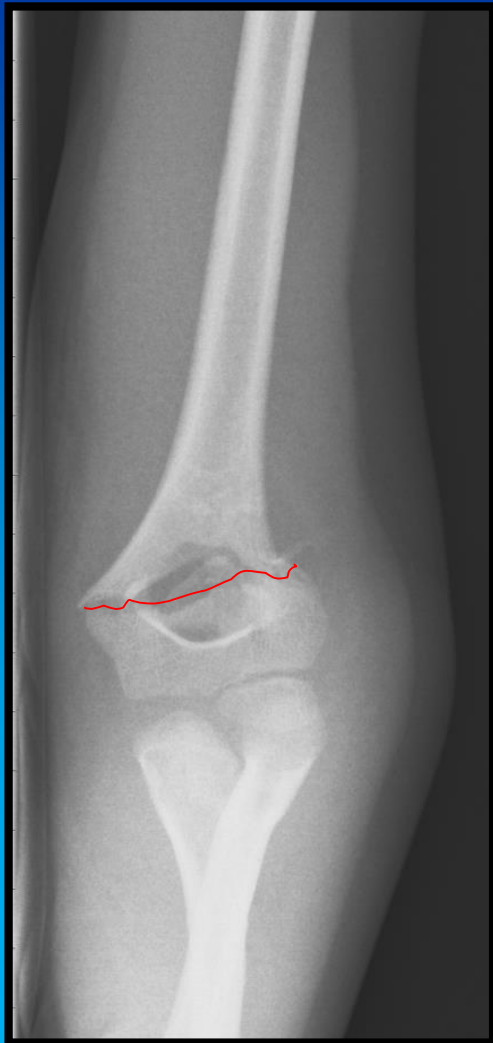
Varus



Børn: Frakturer supracondylært. Voksne: collum radii.



Børn: Frakturer supracondylært. Voksne: collum radii.



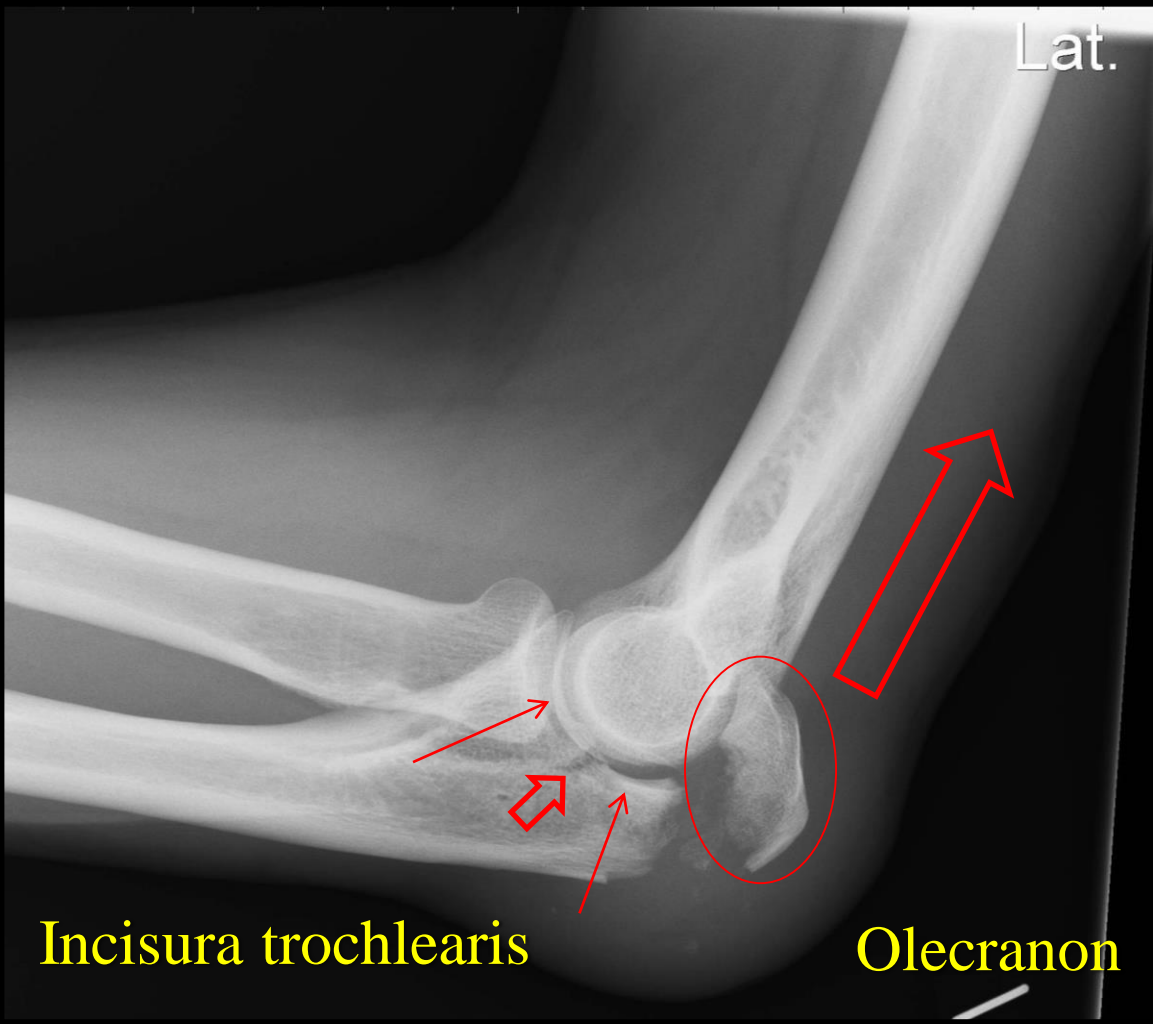
Lat.



A



Lat.



Incisura trochlearis

Olecranon

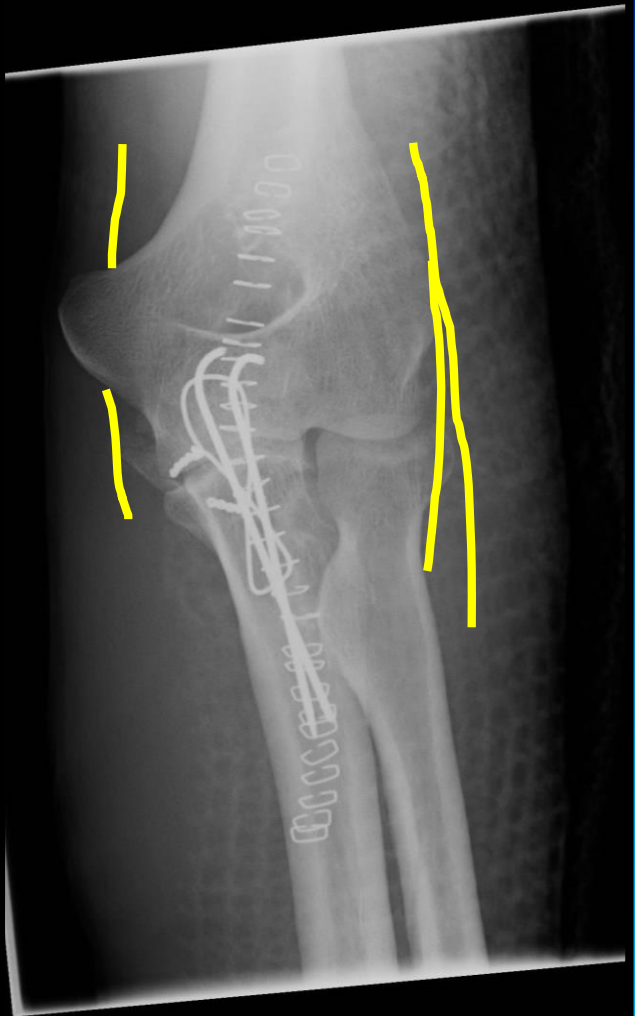
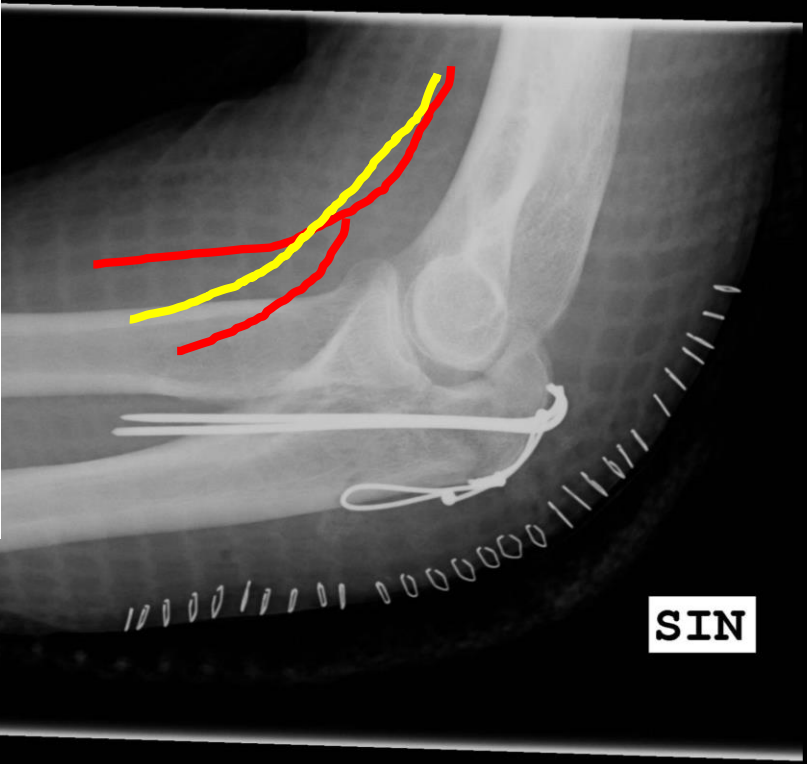
A



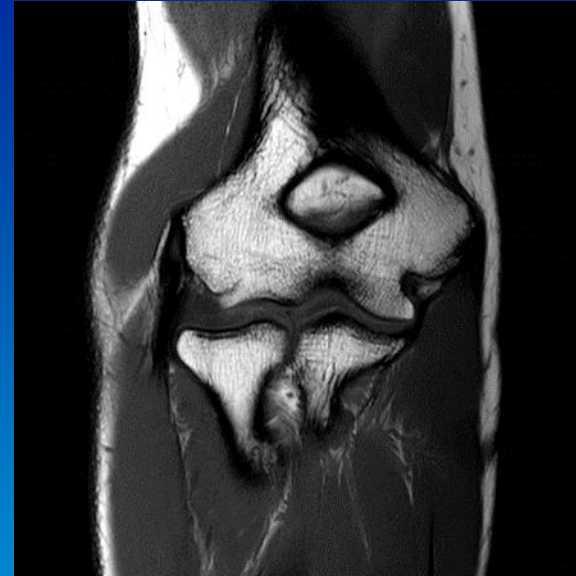
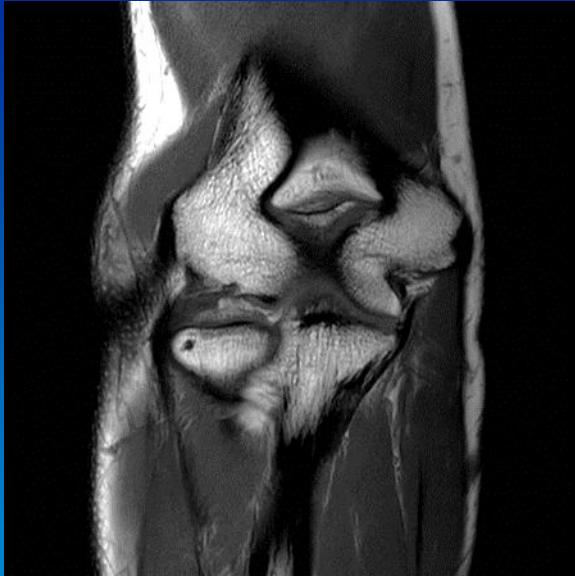


SIN





Caput commune extensorum et flexorum samt bicepsenen distalt



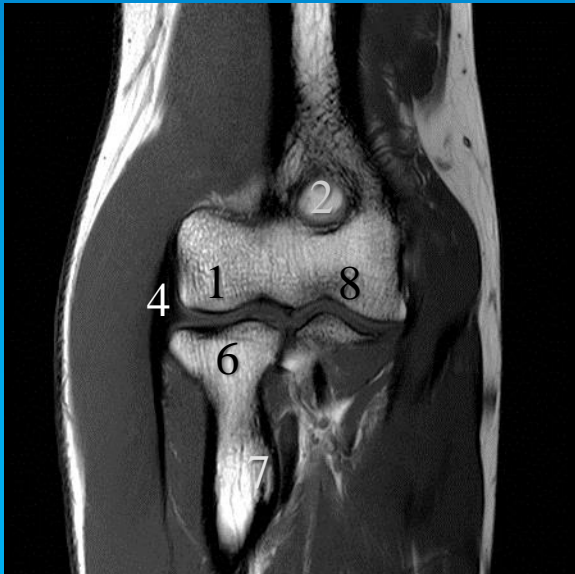
MR, T1



Caput commune extensorum et flexorum samt bicepsenen distalt



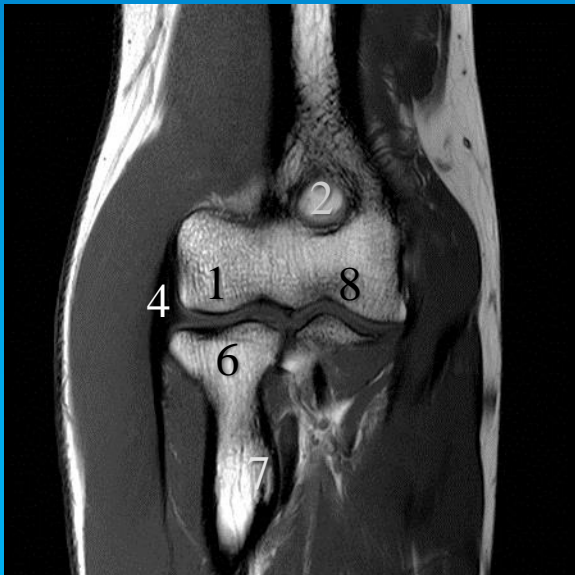
MR, T1



Caput commune extensorum et flexorum samt bicepssenen distalt



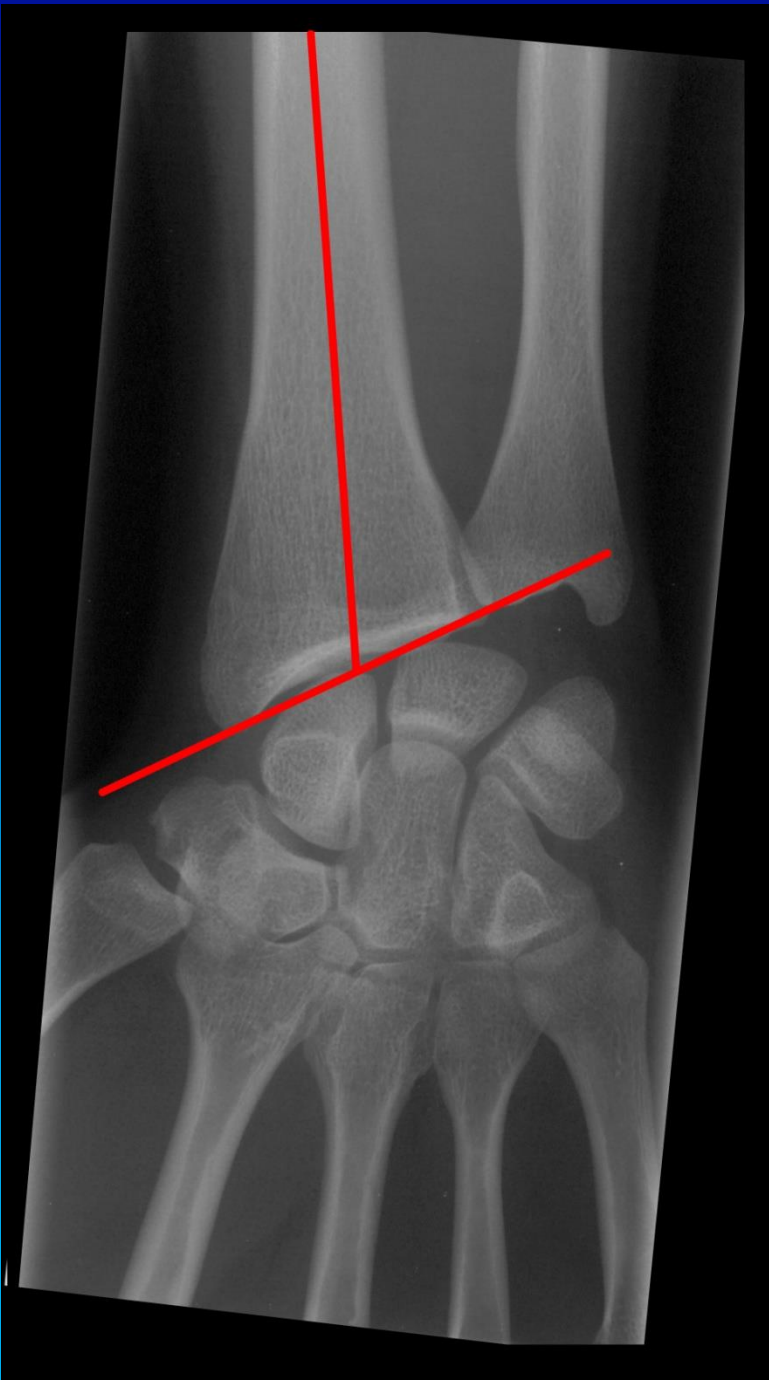
MR, T1

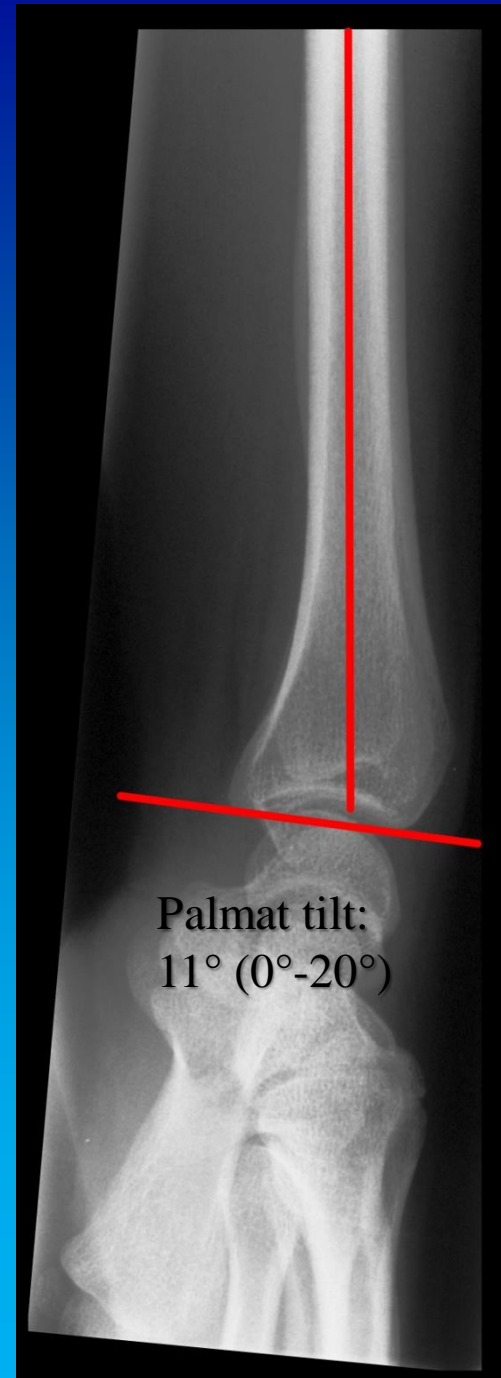
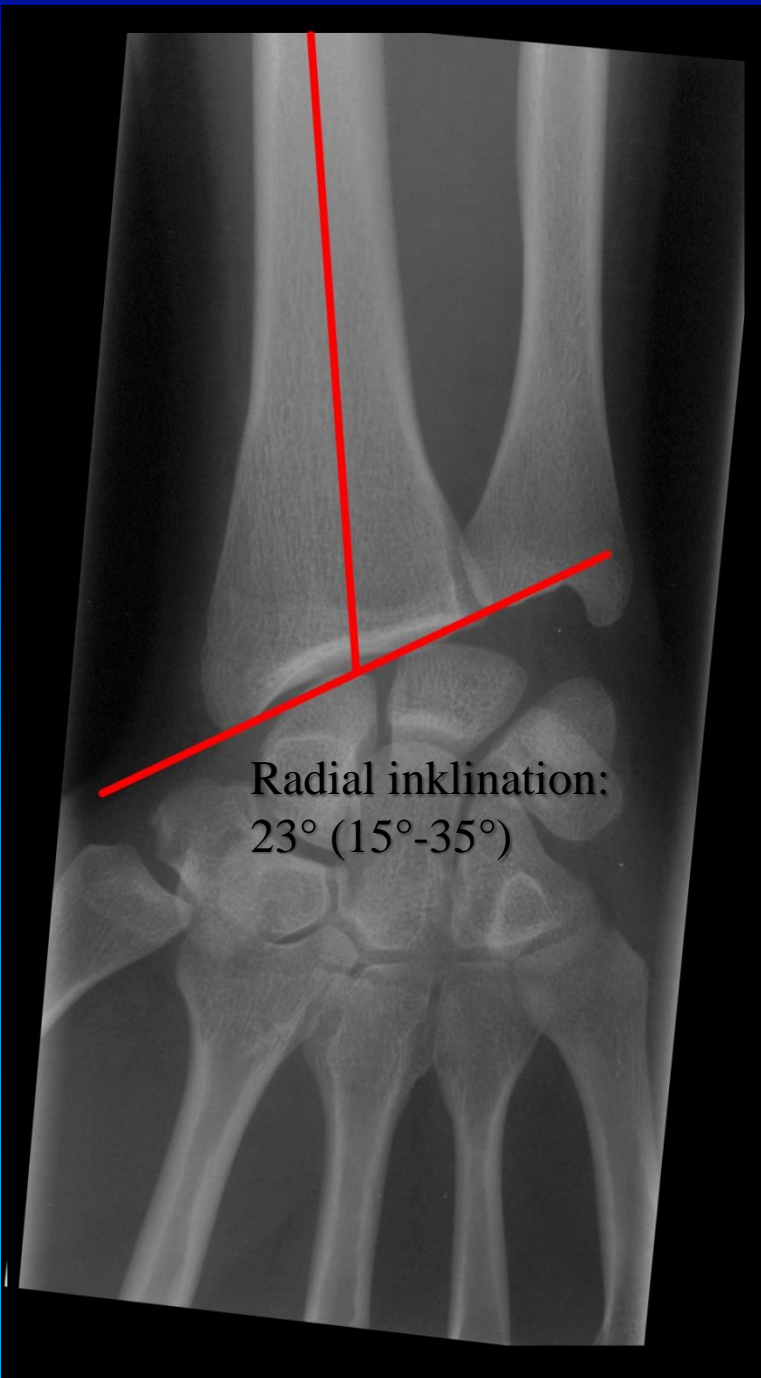


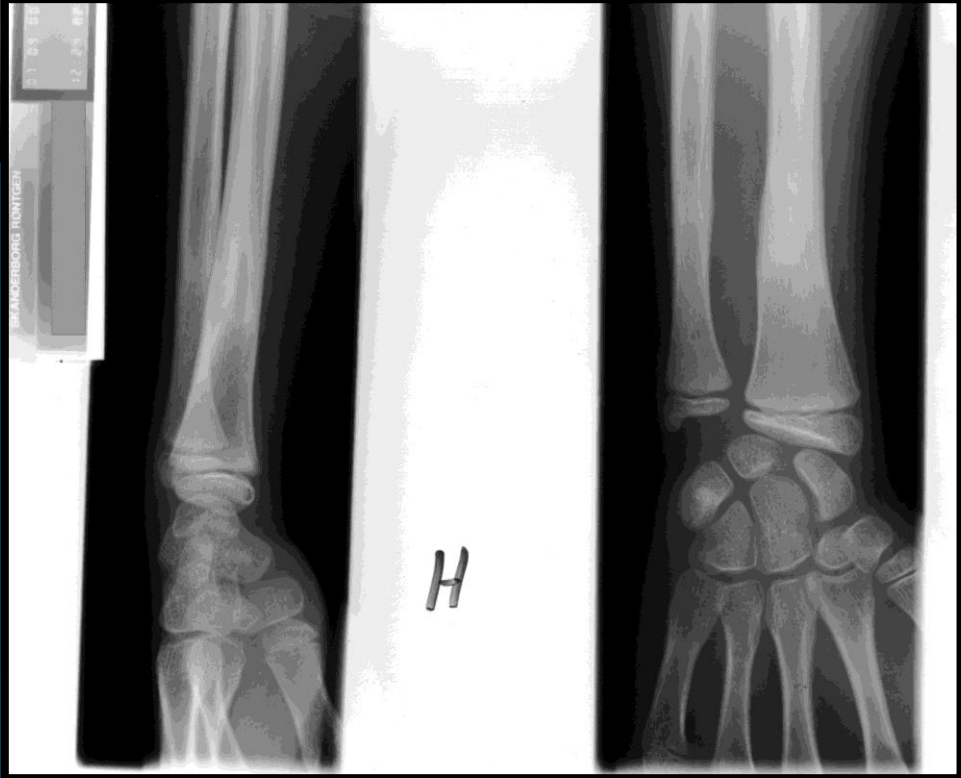
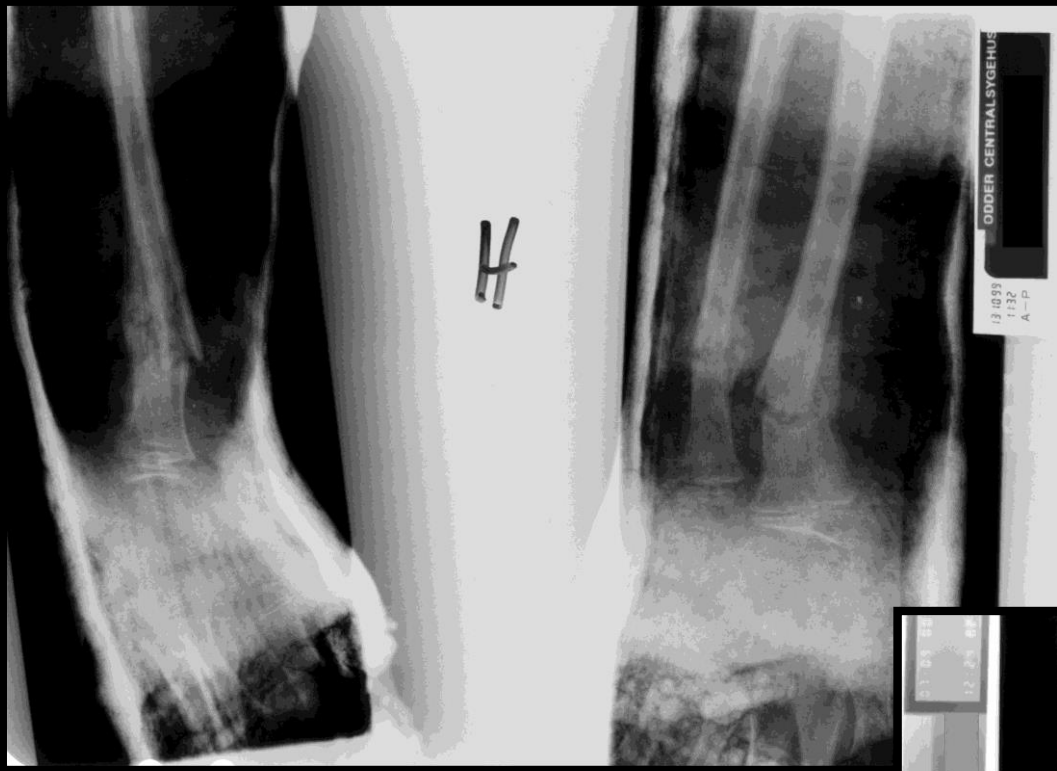
- 1) Capitulum humeri
- 2) Fossa olecrani
- 3) Epicondylus medialis humeri
- 4) Caput commune extensorum
- 5) Caput commune flexorum
- 6) Caput radii
- 7) Tuberositas radii
- 8) Trochlea humeri

Håndledsregionen og regio carpi









Knoglemodning

9 år 1 mdr.

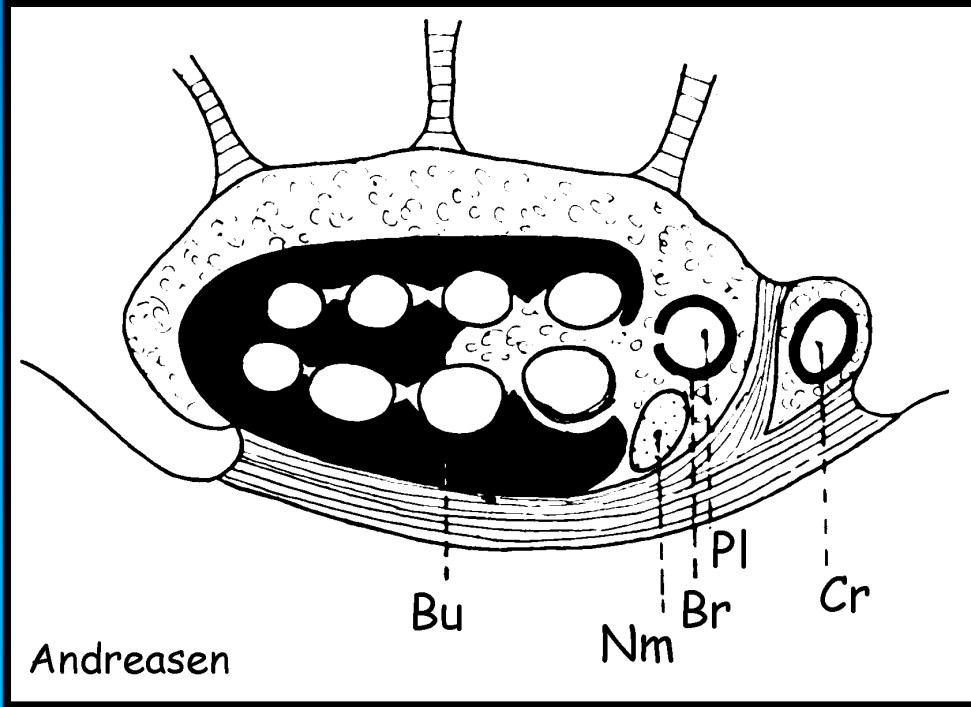
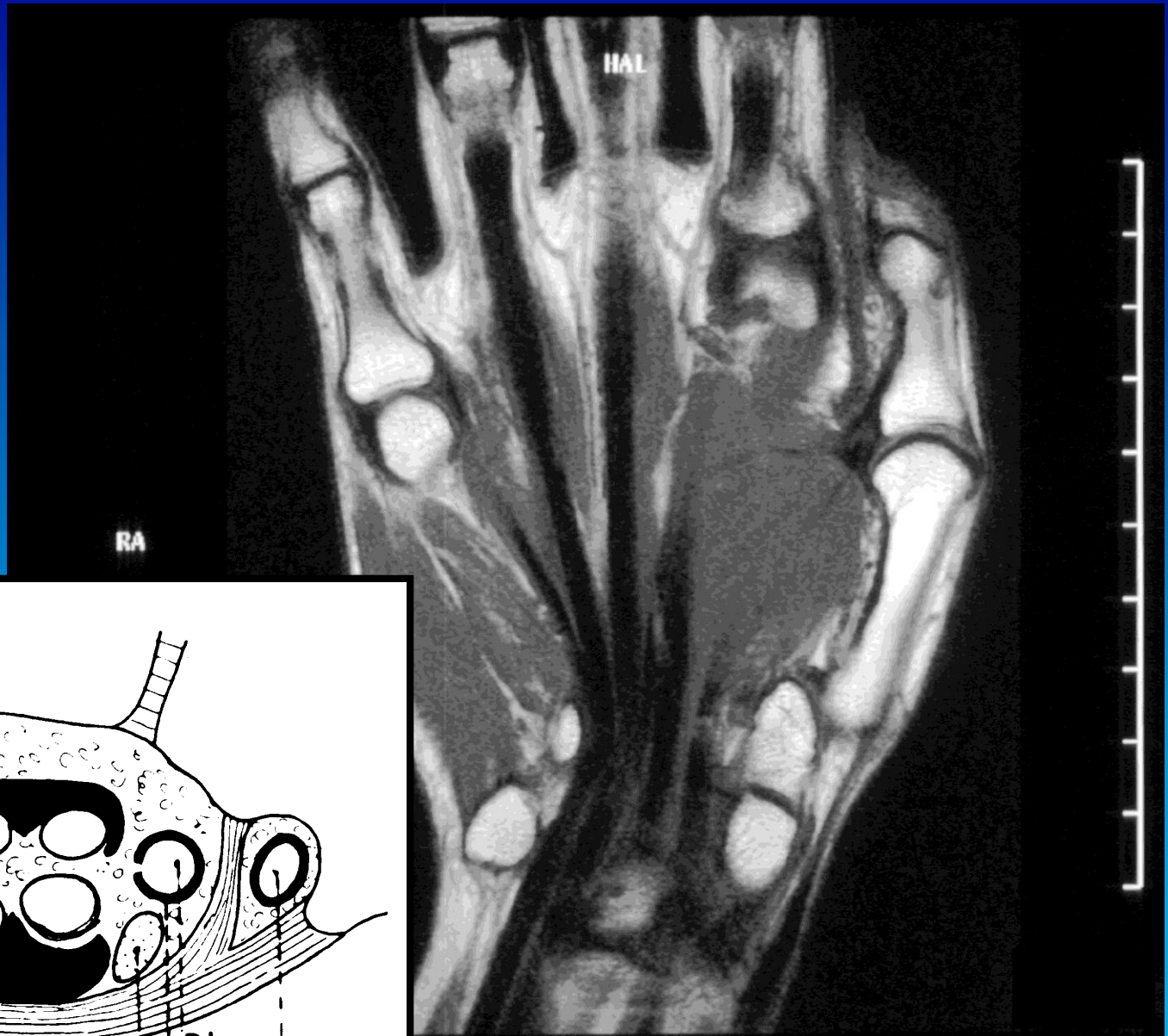


10 år 9 mdr.



Canalis carpi

Br: Bursa radialis
Bu: Bursa ulnaris
Cr: Tendo m. flexoris carpi radialis
Nm: N. medianus
Pl: Tendon m. flexoris pollicis longi



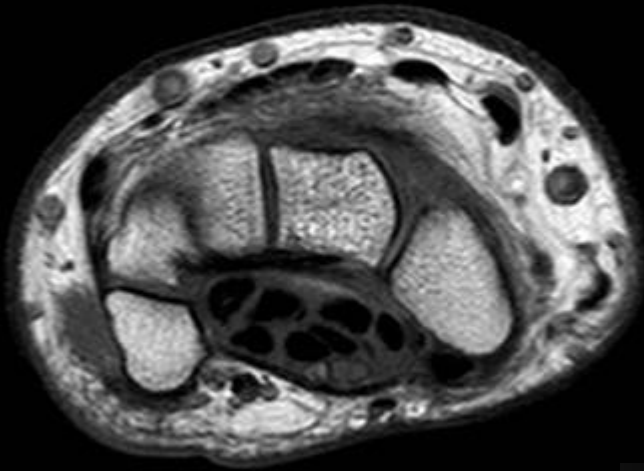


- 1 Os pisiforme
- 2 Hamulus ossis hamati
- 3 Os scaphoideum
- 4 Os trapezium
- 5 Os metacarpale I
- 6 Mm. lumbricales

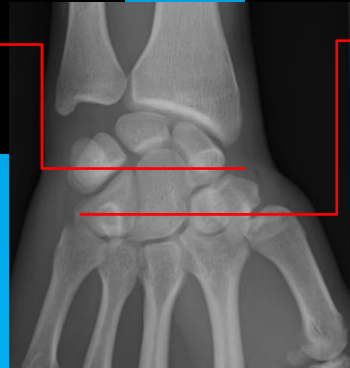
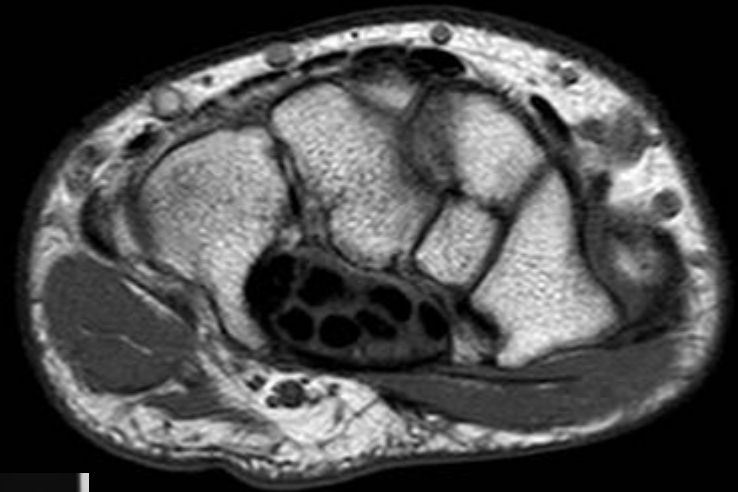


Canalis carpi

MR T1

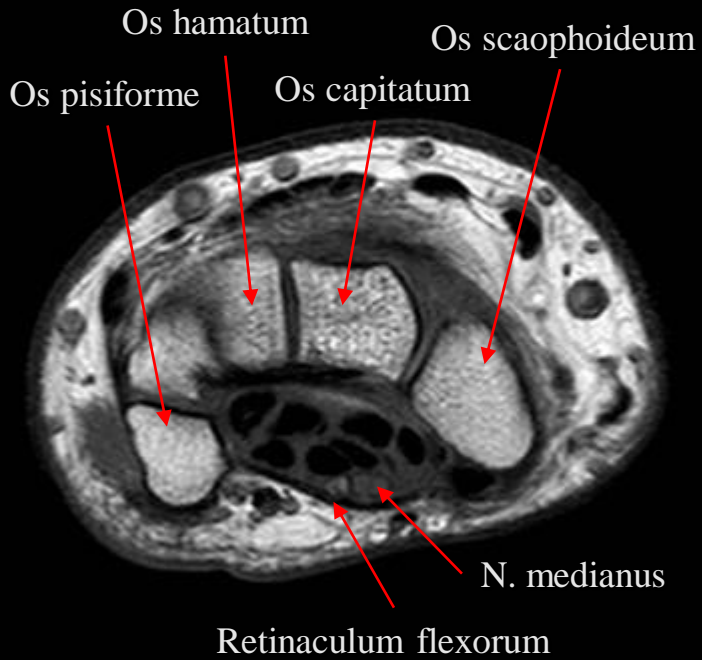


MR T1

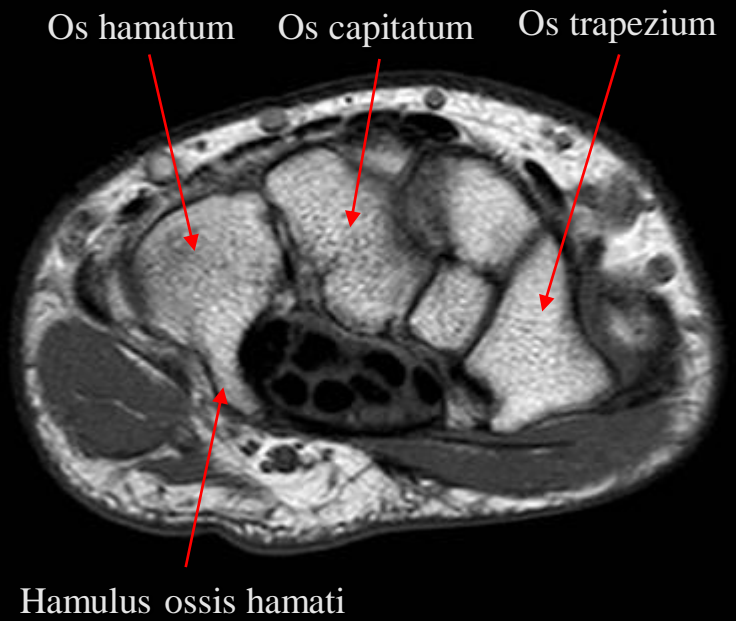


Canalis carpi

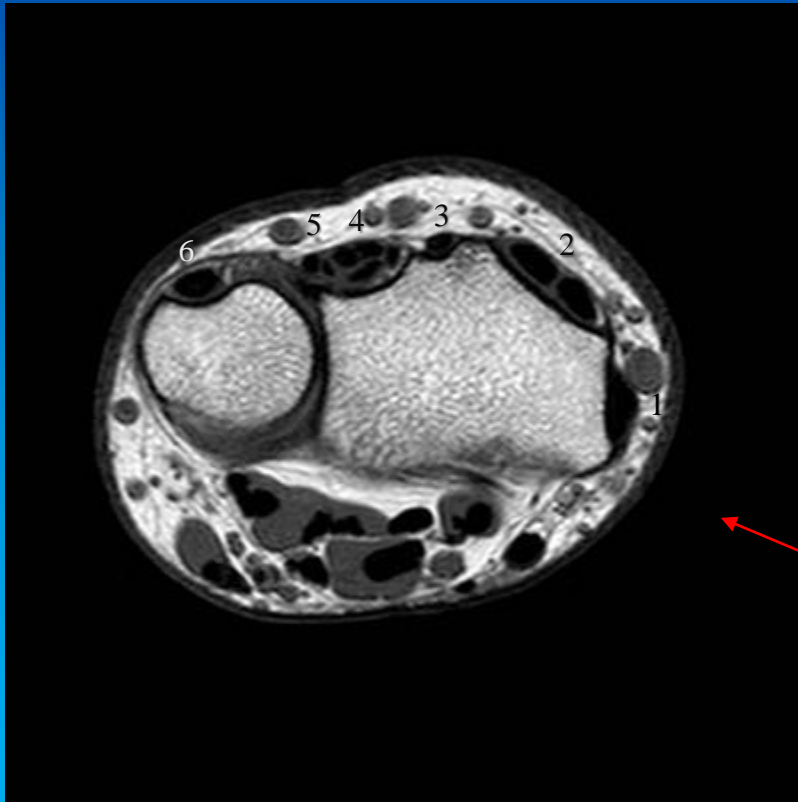
MR T1



MR T1



Extensor kulisserne



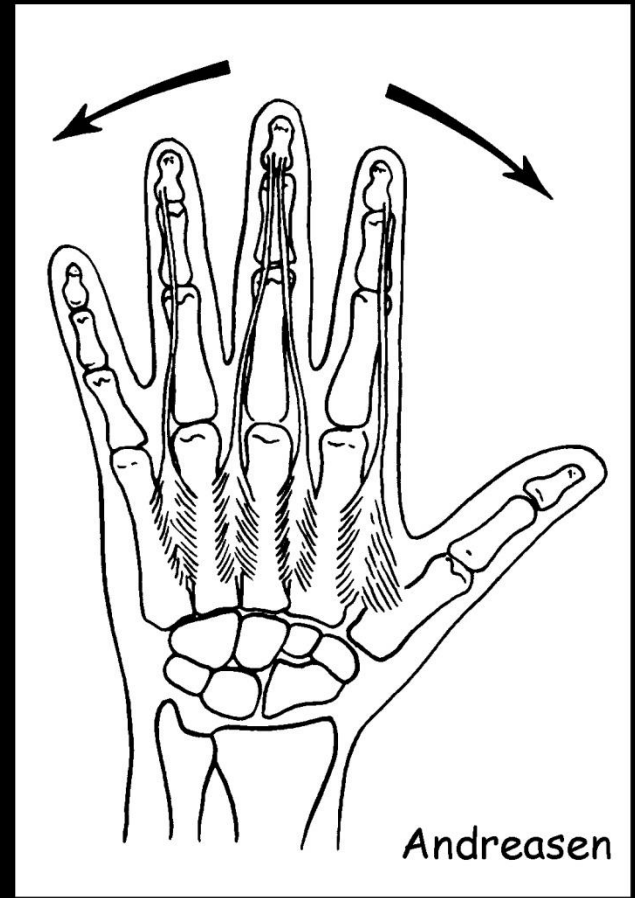
Kulisse

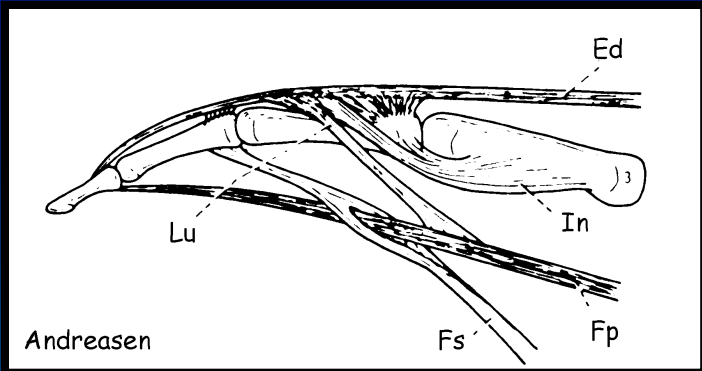
1. M. abductor pollicis longus et extensor pollicis brevis
2. M. extensor carpi radialis longus et brevis
3. M. extensor pollicis longus
4. M. extensor digitorum et extensor indicis
5. M. extensor digiti minimi
6. M. extensor carpi ulnaris



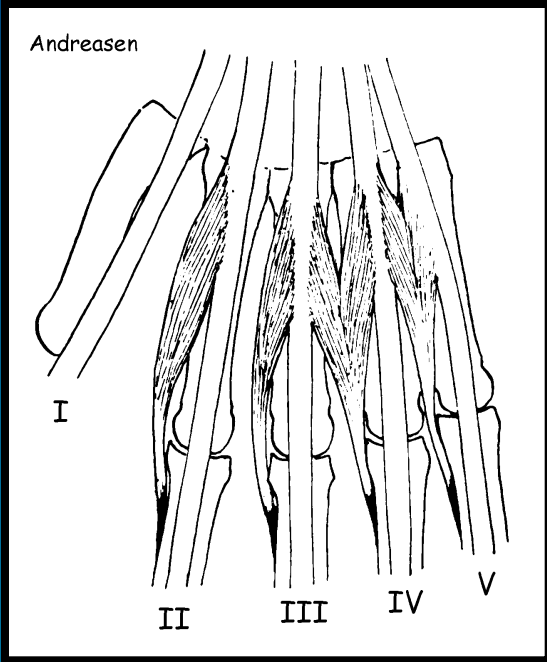
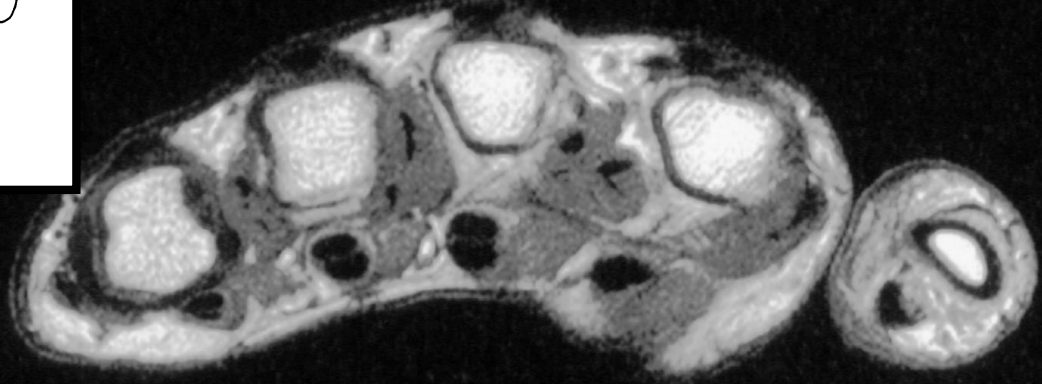


M. interossei dorsales

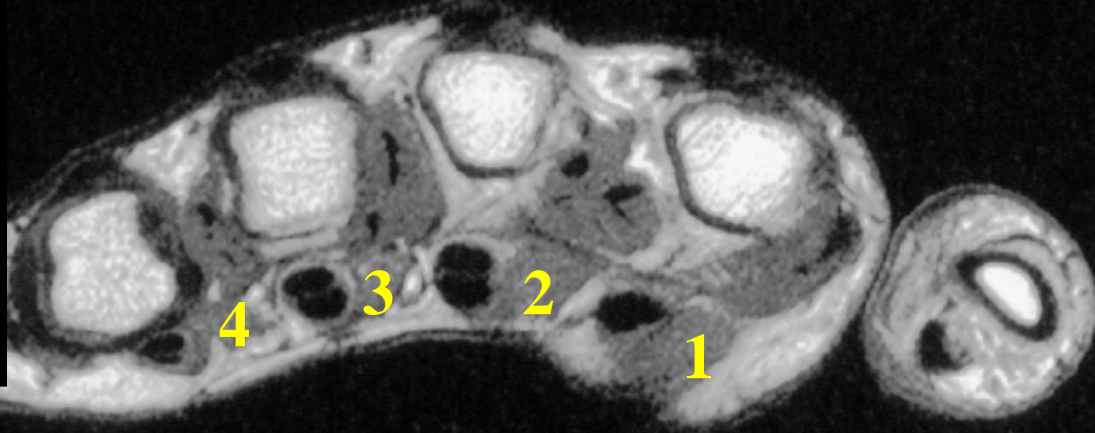


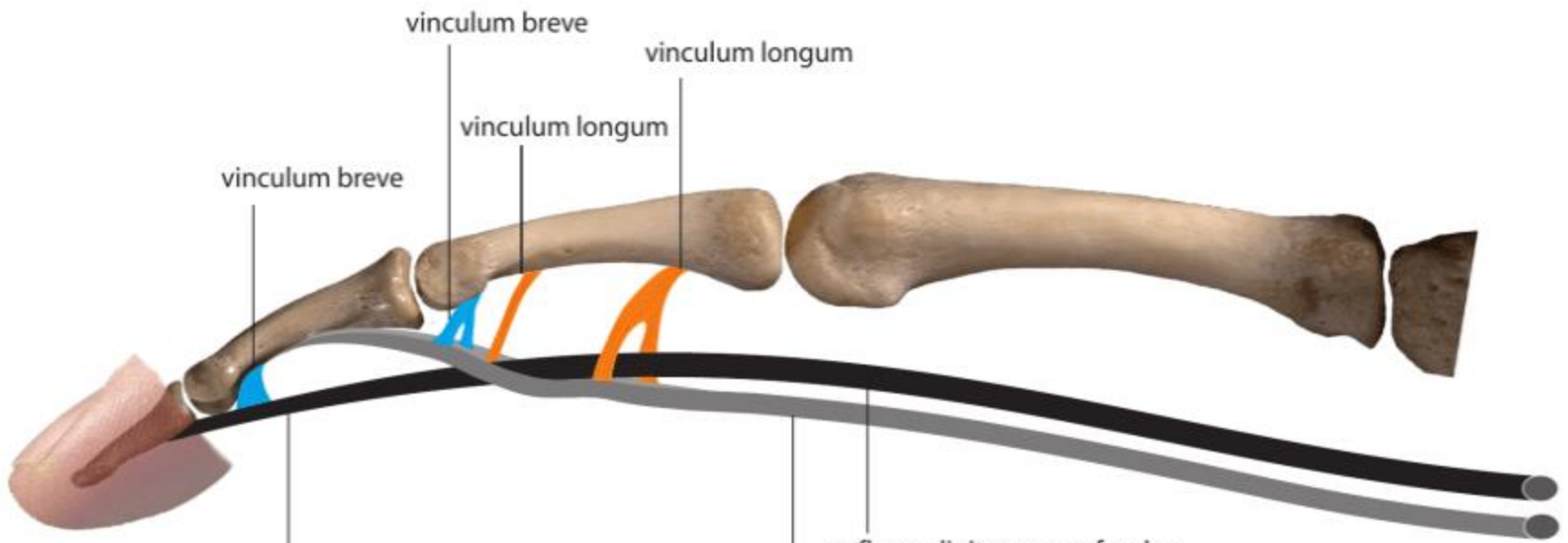


Mm. interossei



Mm. lumbricales



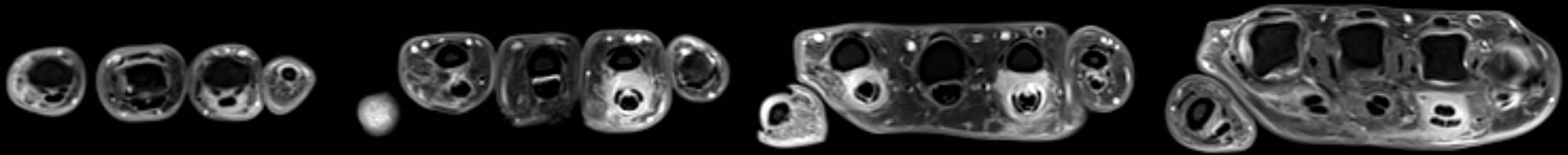
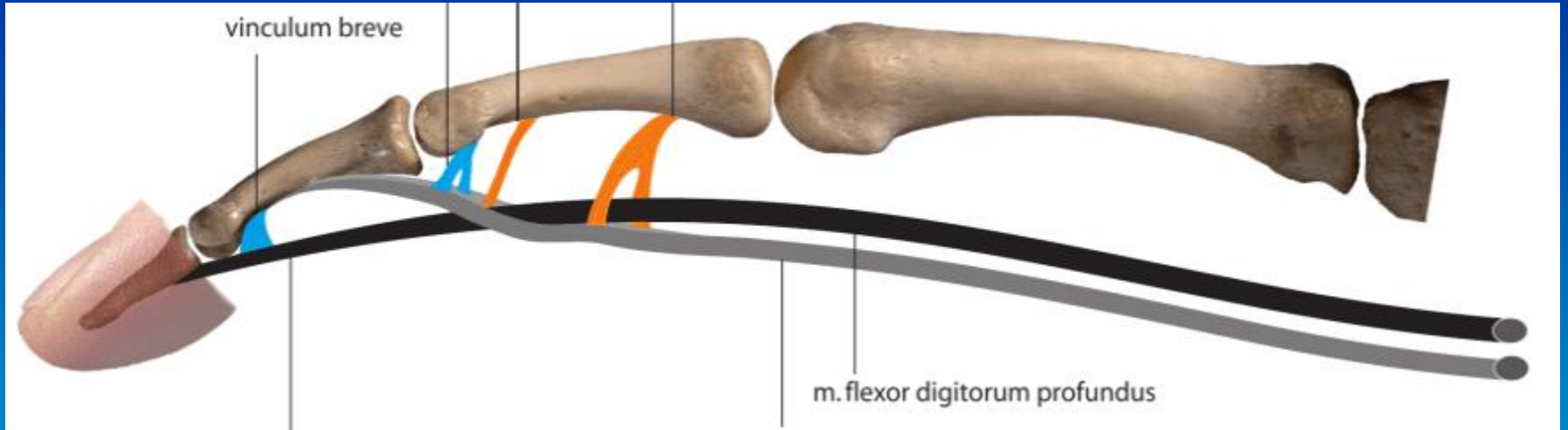


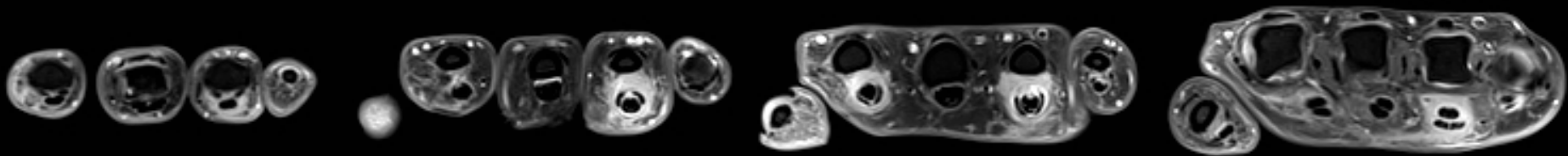
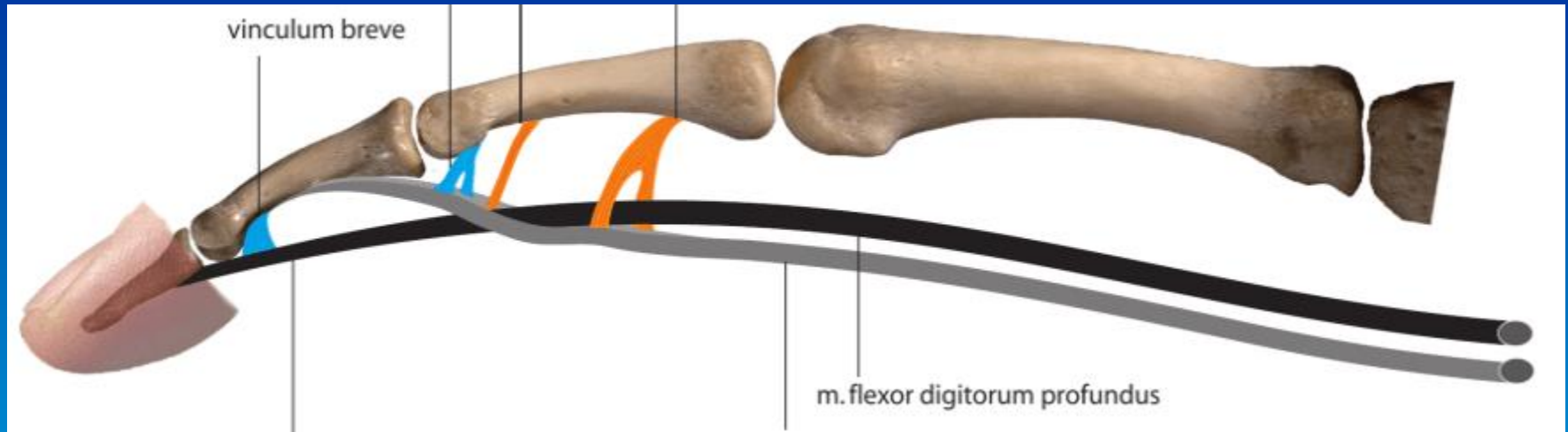
Senerelationer - finger - lateralt



chiasma tendinum

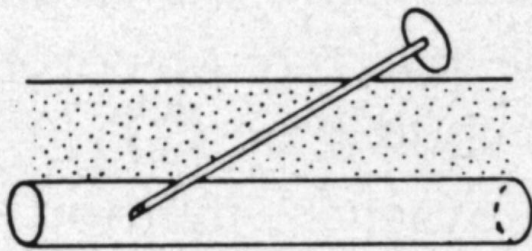
Senerelationer - finger - palmart



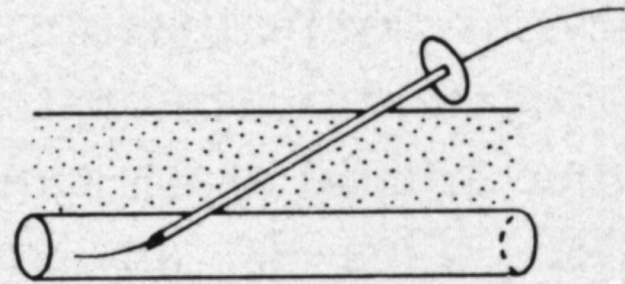


Person med tendovaginit, MR skannet efter kontrastindgift. Det kontrastopladede synovium (hvidt) giver en god kontrast til de signalfattige sener (sort), specielt i 4. stråle, hvor superficialis senen kan følges til insertion på mellempalanx.

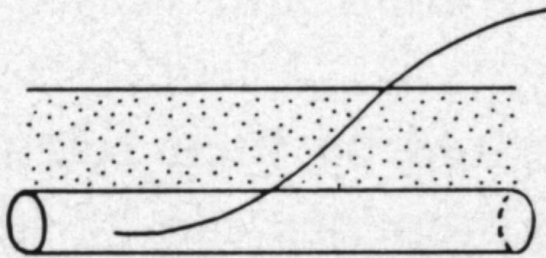
Angiografi og Seldinger teknik



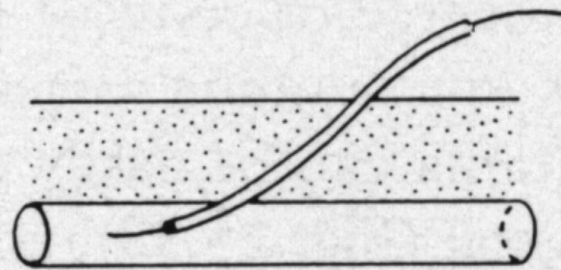
a



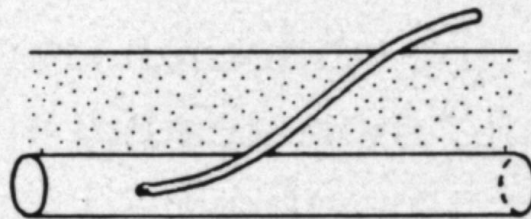
b



c



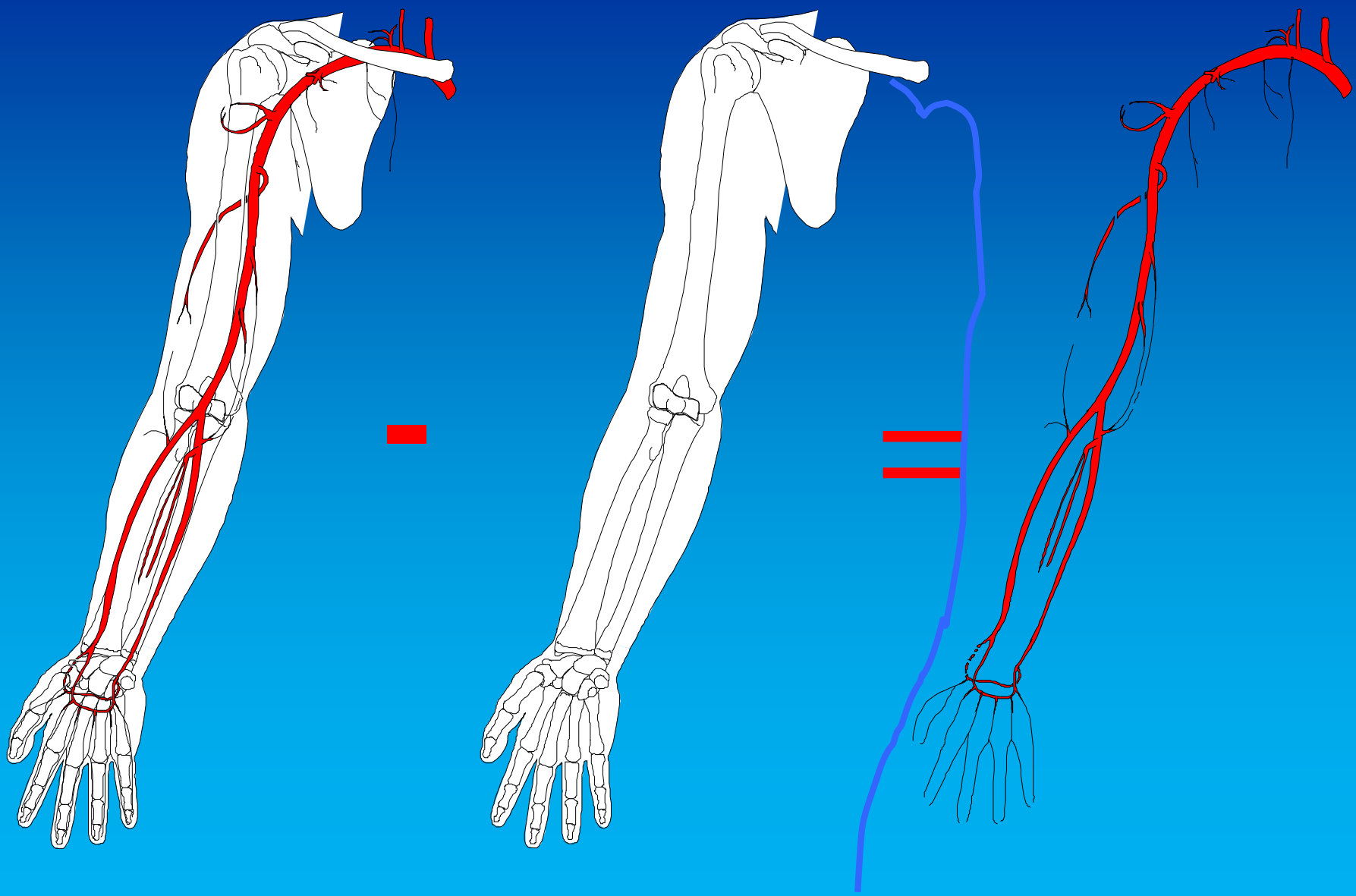
d



e

Sutton

DSA: Digital subtraktions angiografi





T-run: 15:35:24
T-mask: 0.32
T-image: 1.92

RUN
4
12
MASK IMAGE
2 7

A axillaris

A sub-
scapularis

A profunda brachii

A brachialis

A thoracodorsalis

T-run: 15:37:47
T-mask: 1.04
T-image: 4.16

RUN
5
6
MASK IMAGE
2 5



A brachialis

A radialis

A ulnaris

T-run: 15:39:25
T-mask: 5.00
T-image: 8.12

RUN
7
6
MASK IMAGE
1 4



T-run: 15:39:25
T-mask: 5.00
T-image: 8.12

RUN
7
6
MASK IMAGE
1 4