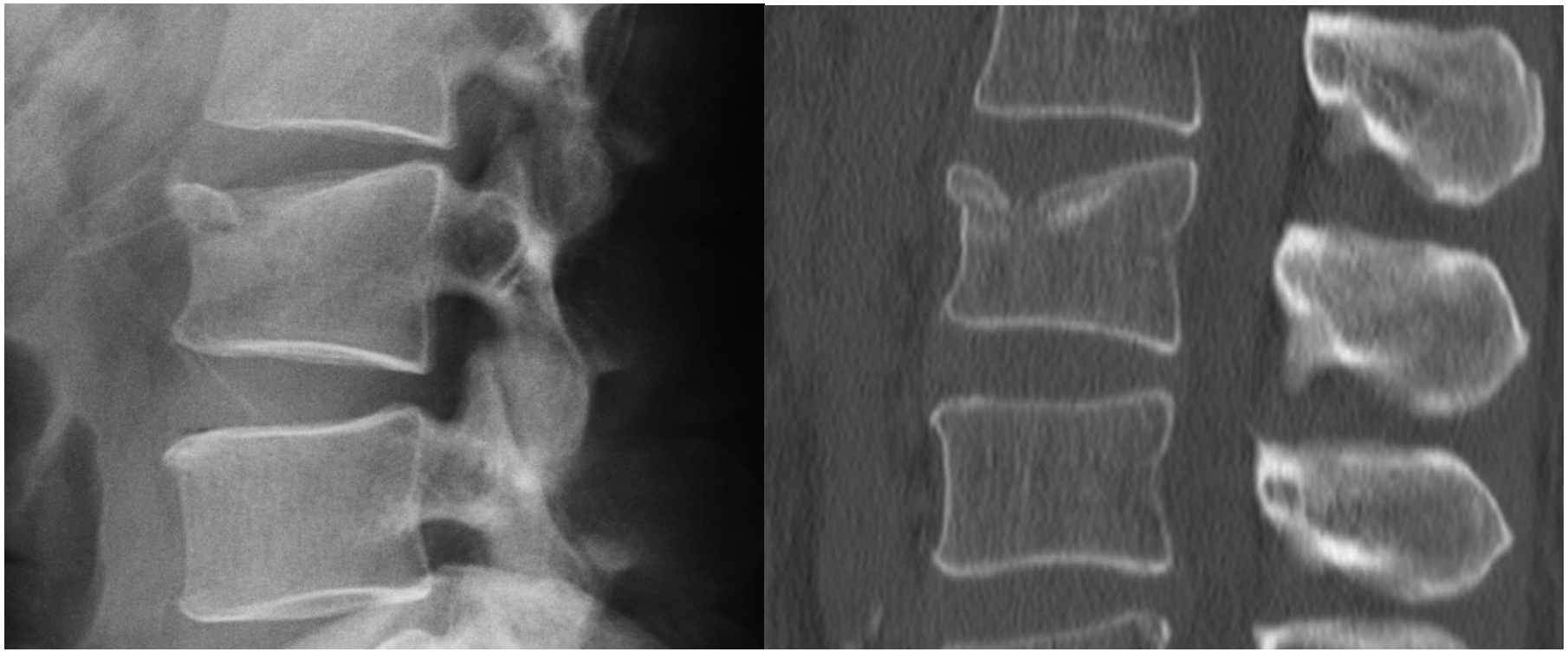
TRAUMATISME RACHIS
RX et CT

JF Nisolle

DES 1 (2020)

1. FRACTURE DU CORPS VERTEBRAL

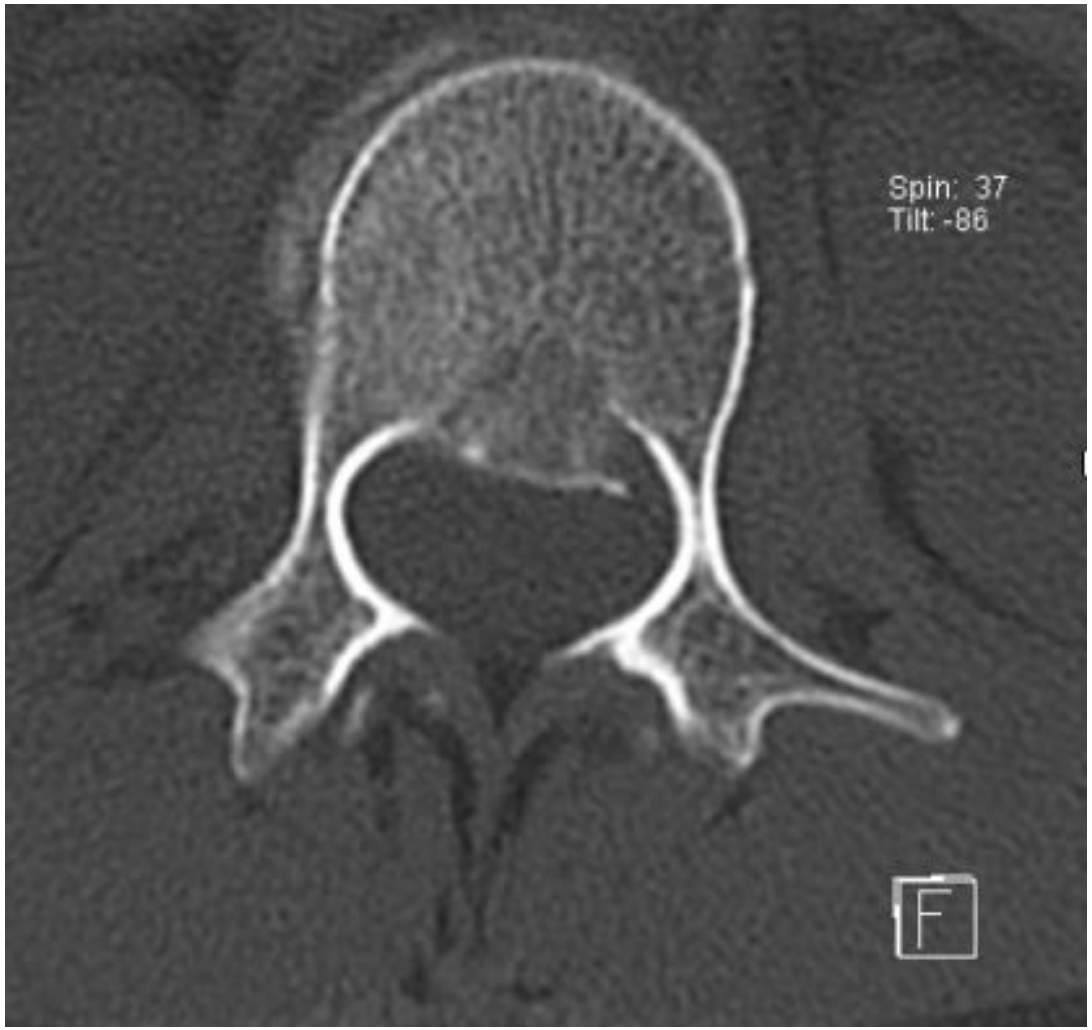
Fracture par compression



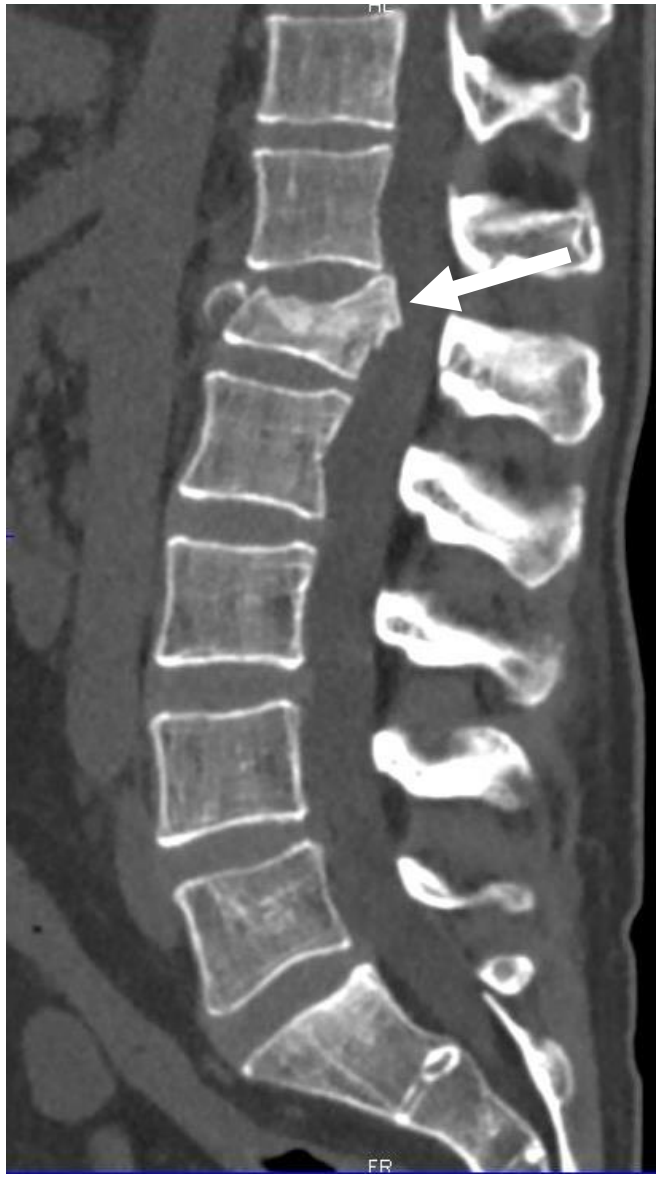
Intégrité du mur postérieur

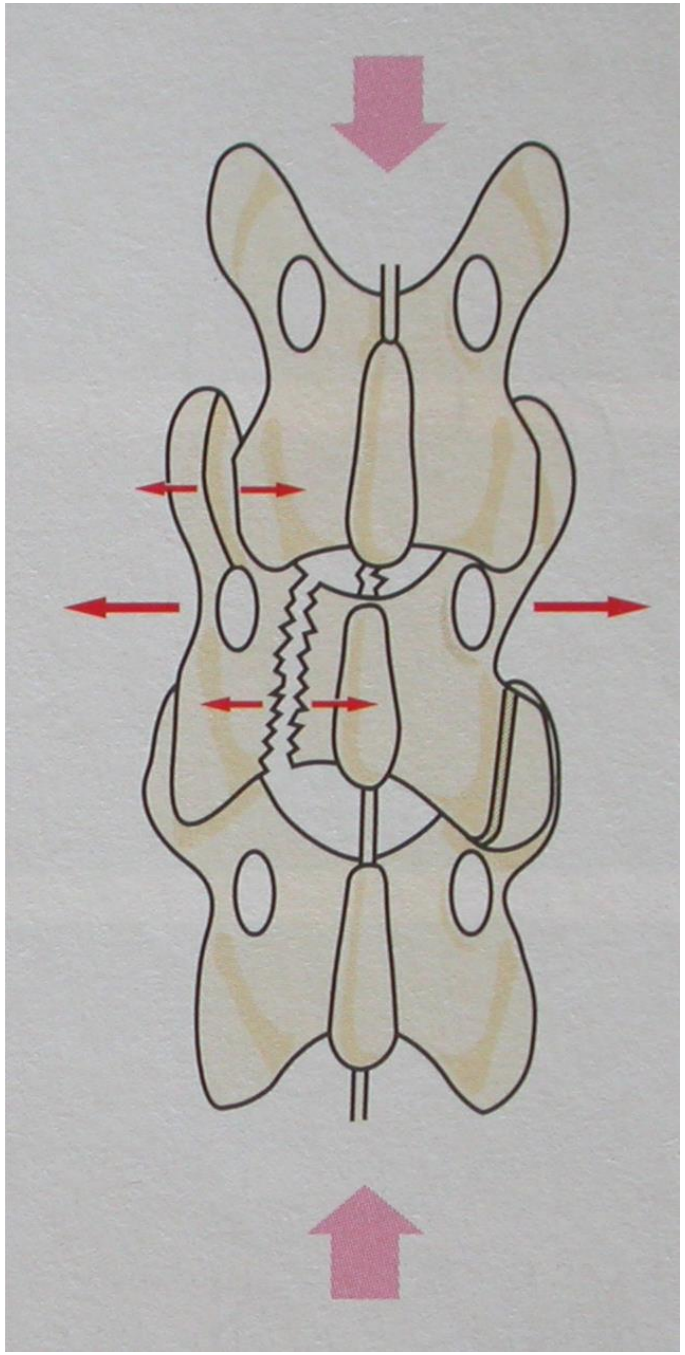
?

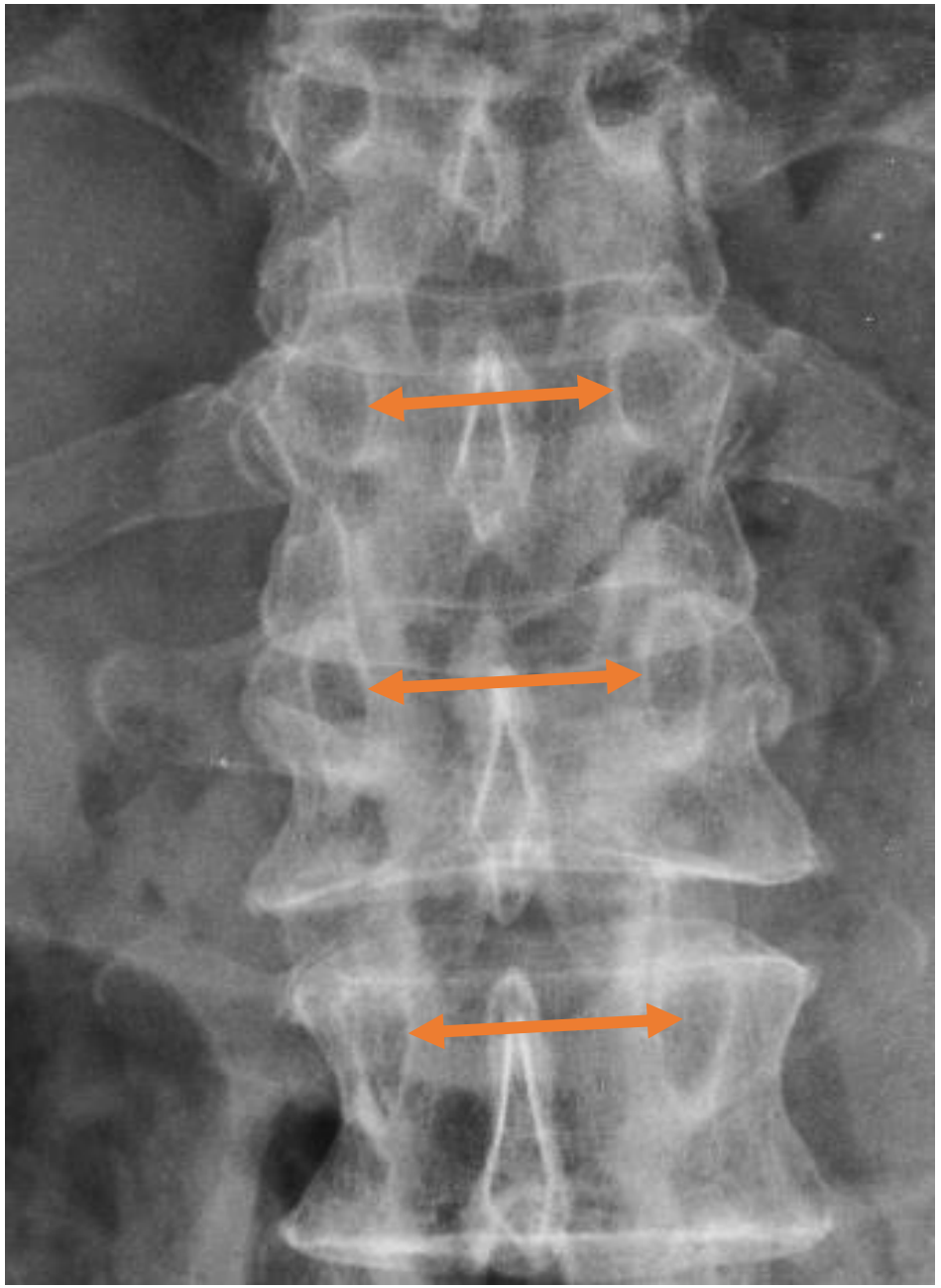

Spin: -90
Tilt: 3
L


Spin: 37
Tilt: -86
F

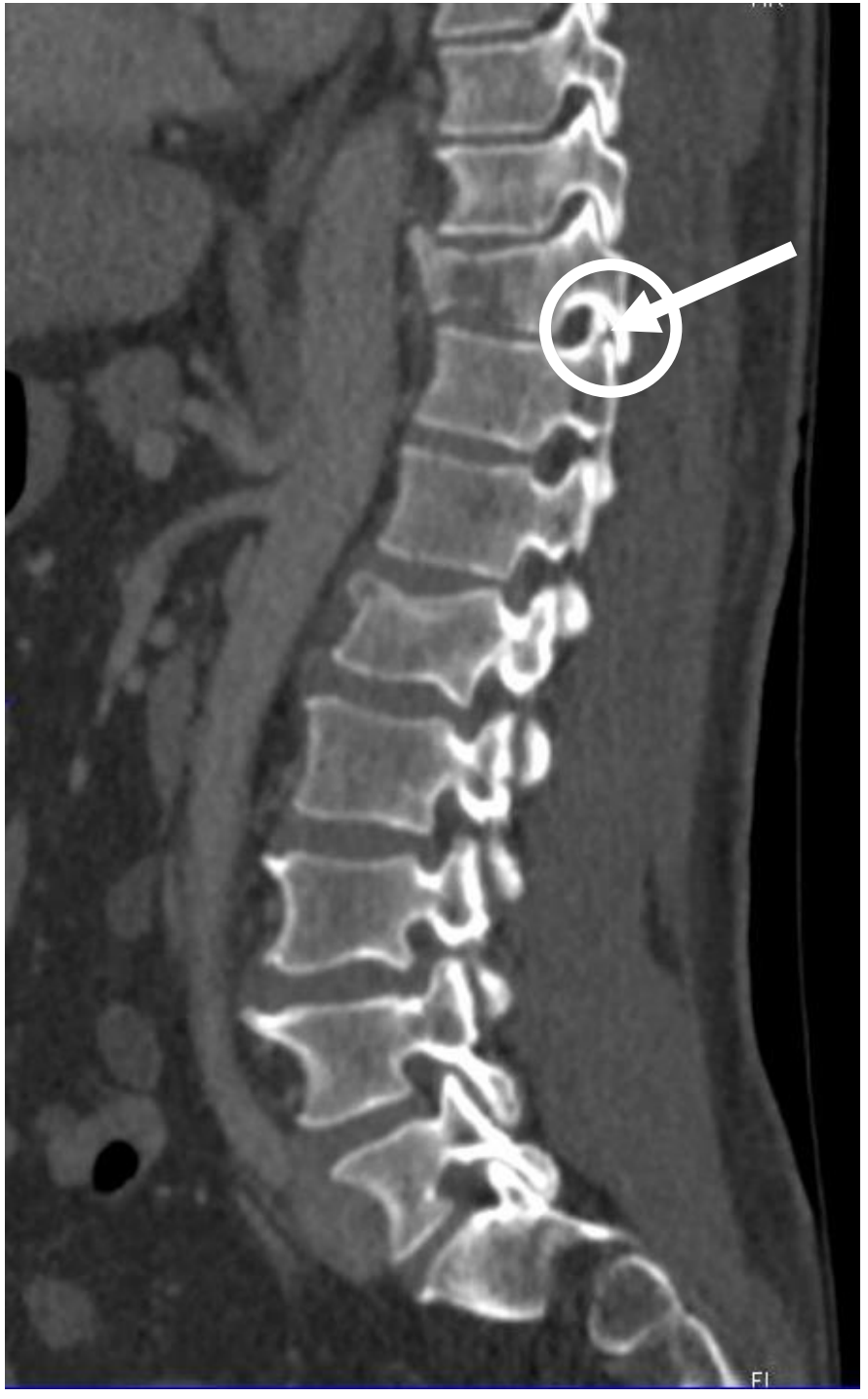
Fracture-éclatement ou burst

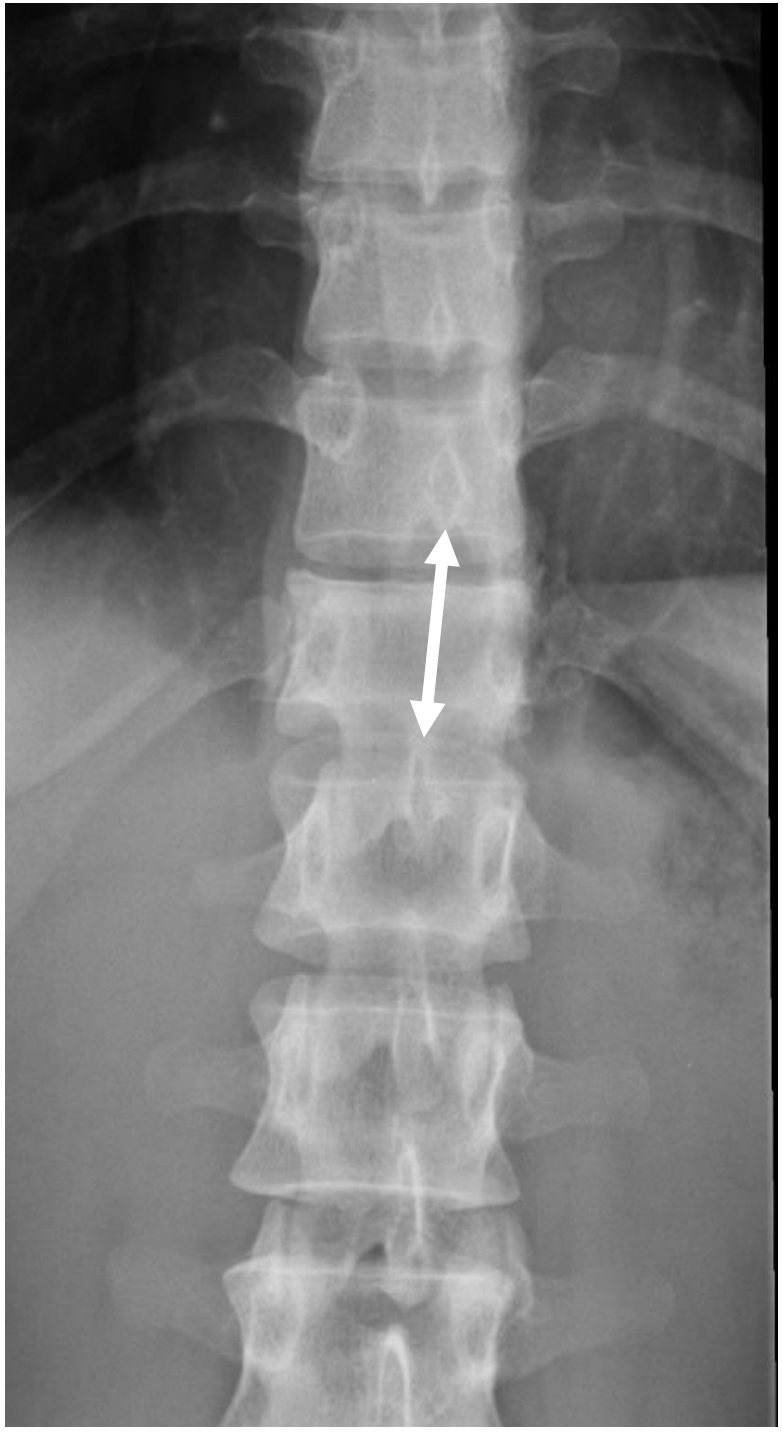






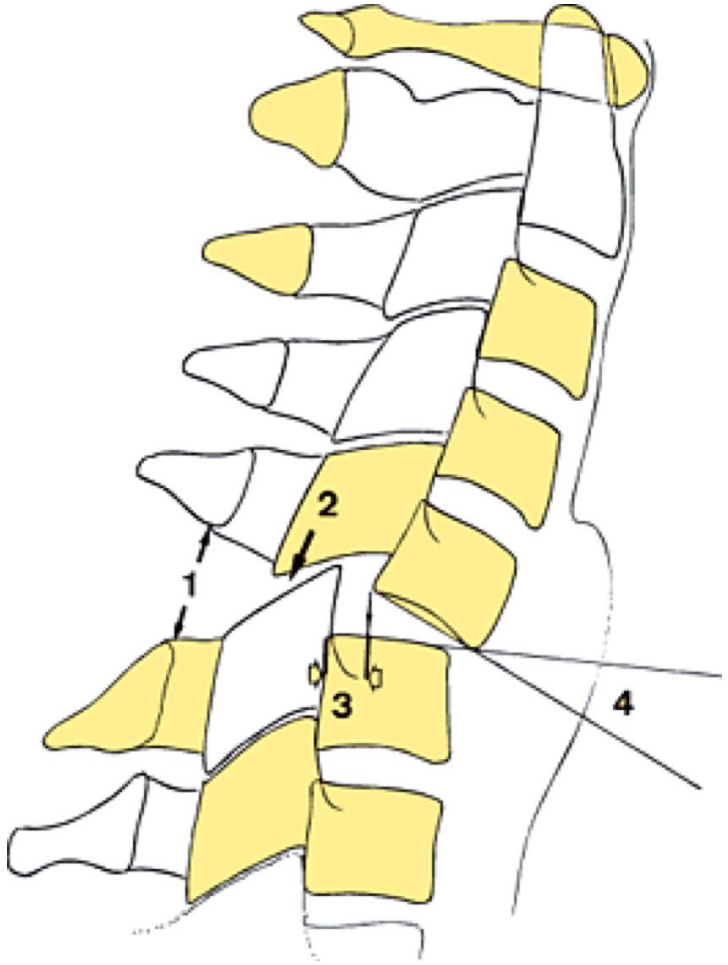
2. ATTEINTE ELEMENTS POSTERIEURS

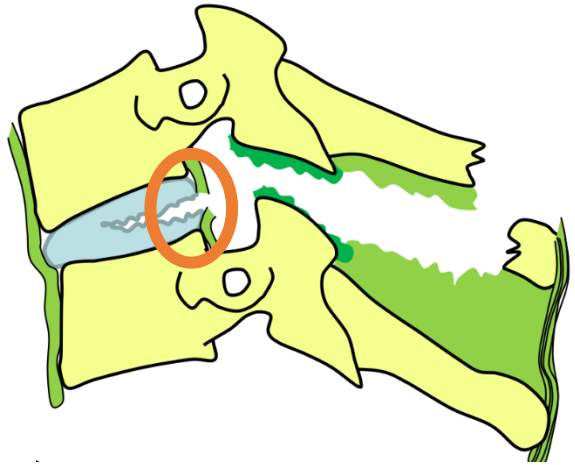





F

Entorse grave en flexion





Déplacement ventral CV > 3,5 mm
Cyphose focale > 11°
Perte de parallélisme des facettes articulaires
Découverte de plus de 50% de la facette supérieure
Bâillement interépineux

Elargissement de l’espace interépineux C5C6

Découverture des articulaires de plus de 50%
et perte de parallélisme

Déplacement ventral > 3,5mm

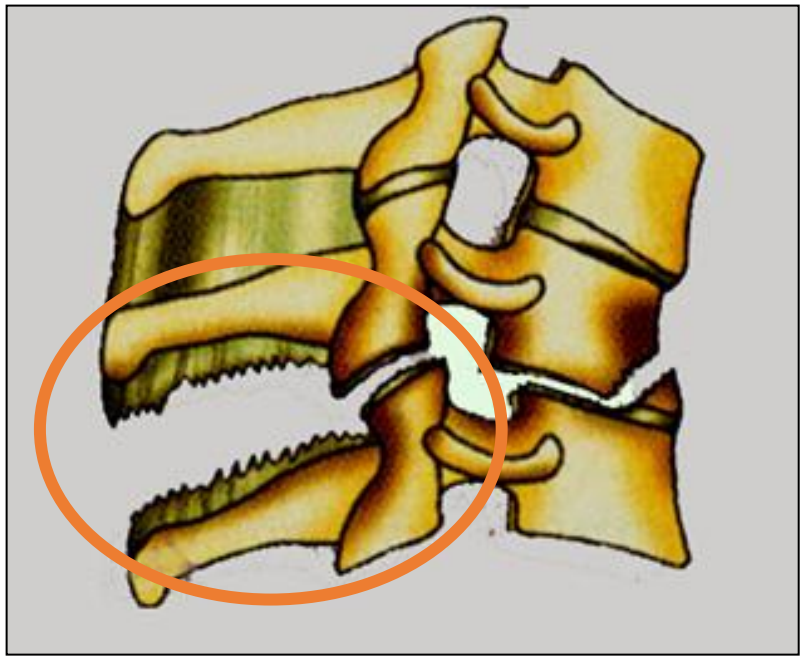
Cyphose discale > 11°

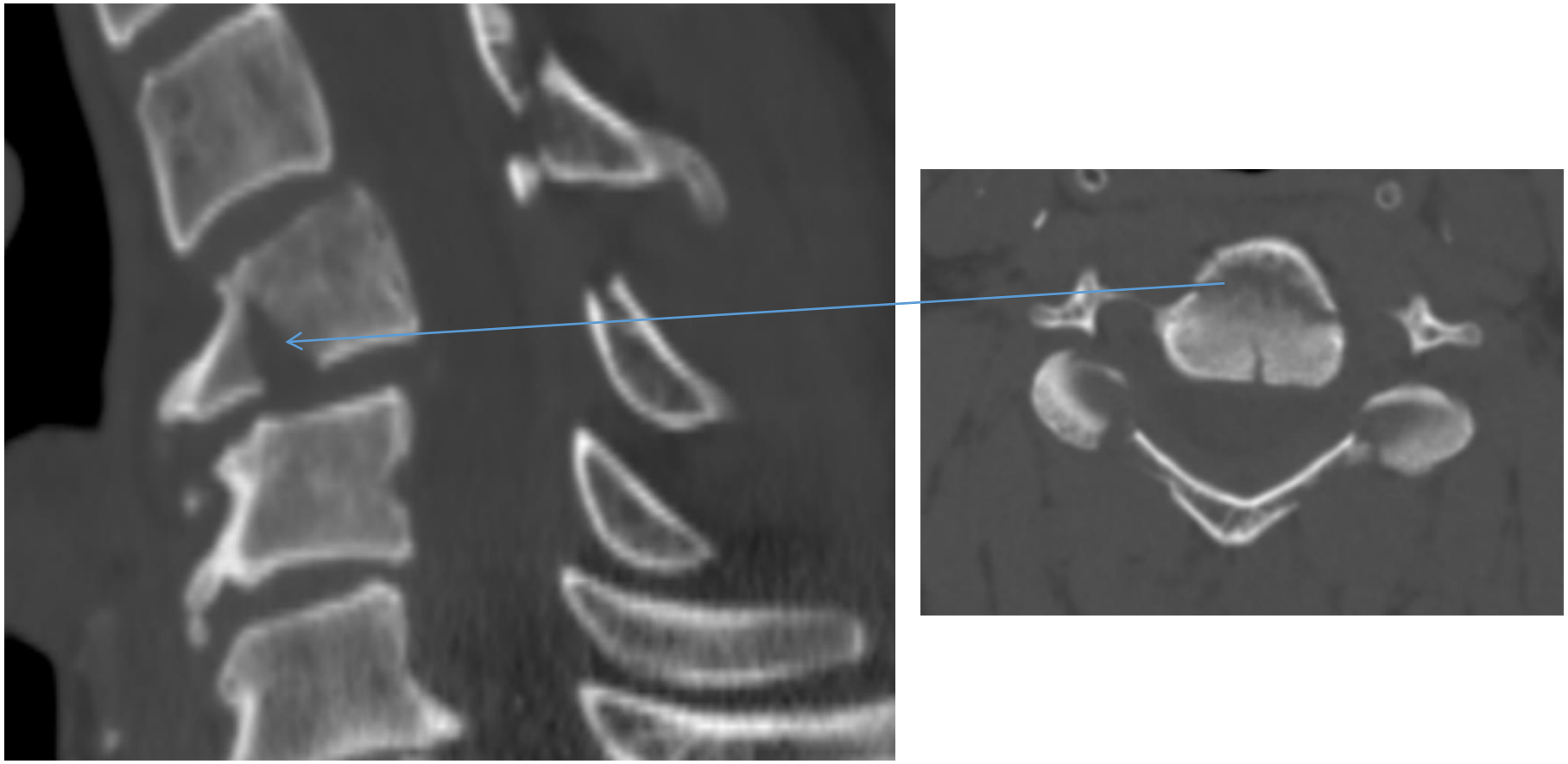
CAS 1

Fracture horizontale
des processus épineux

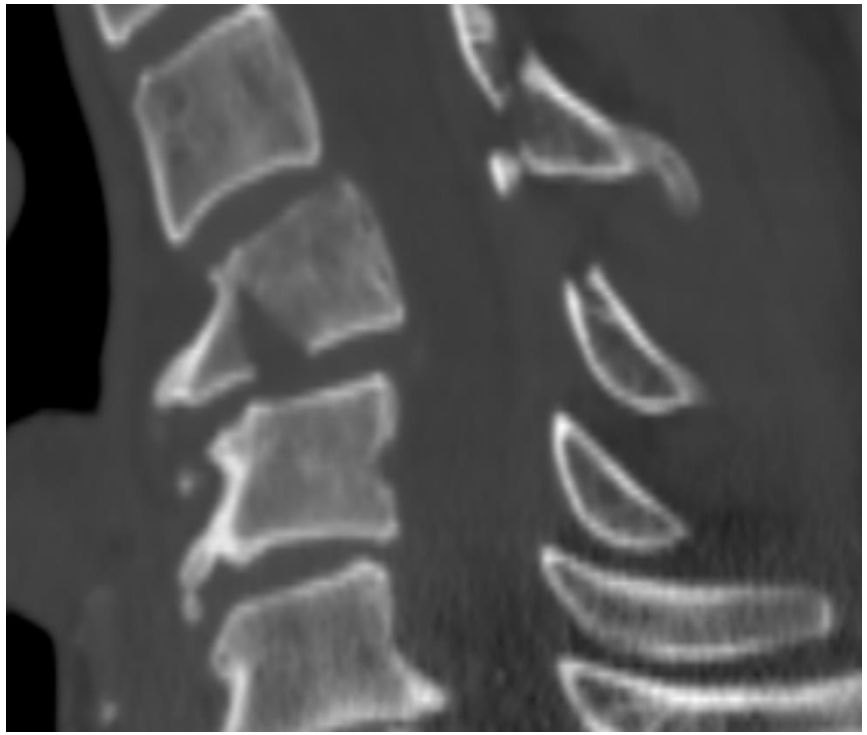
EVOLUTION RX

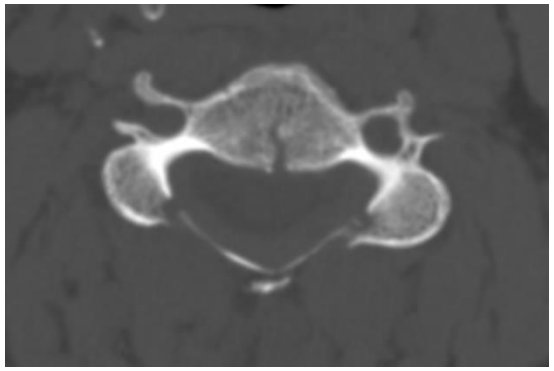
Fracture « tear drop » en flexion

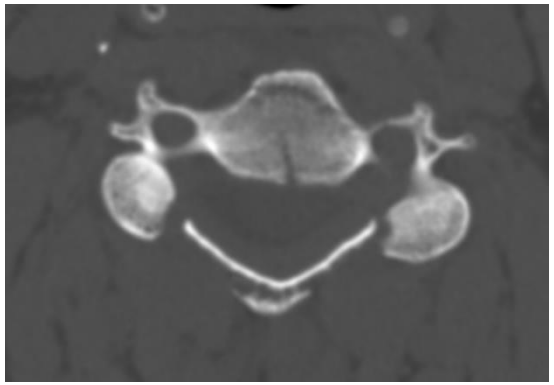


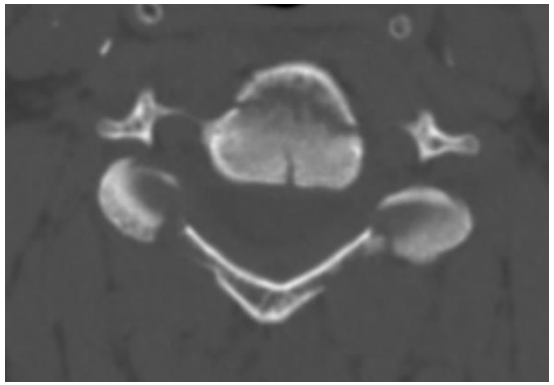


Le premier trait frontal est oblique (mécanisme de flexion) et isole un fragment triangulaire.



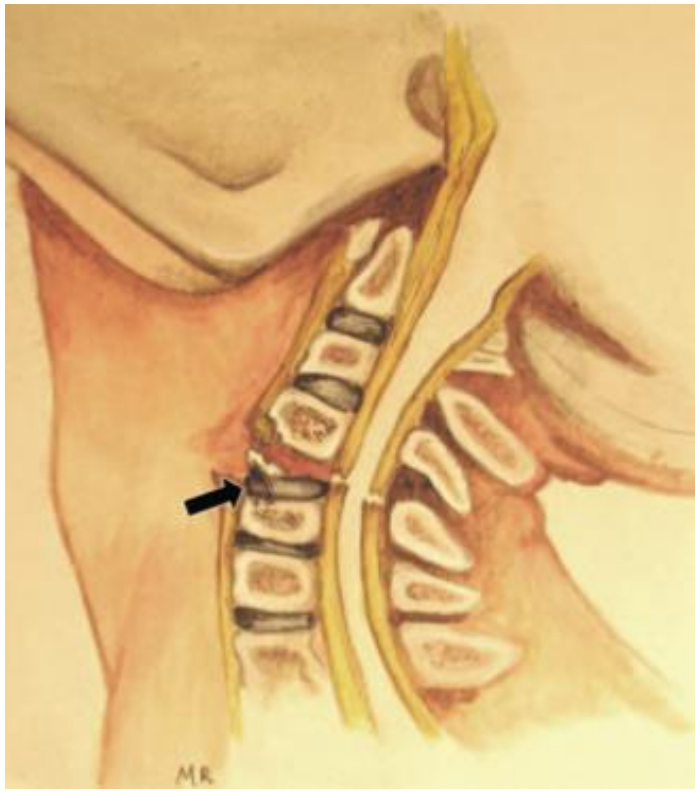






Le second trait est sagittal
(mécanisme de compression)

3. ARRACHEMENTS OSSEUX



1) Avulsion d'un fragment osseux corporéal antérieur

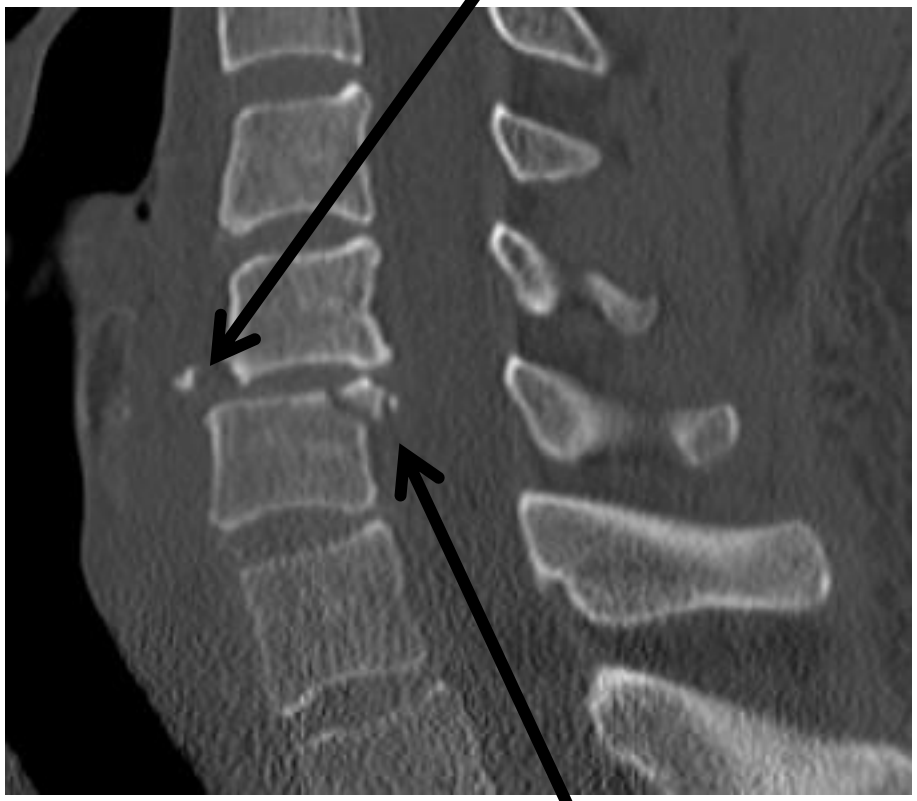
2) Hyperlordose cervicale avec bâillement discal antérieur

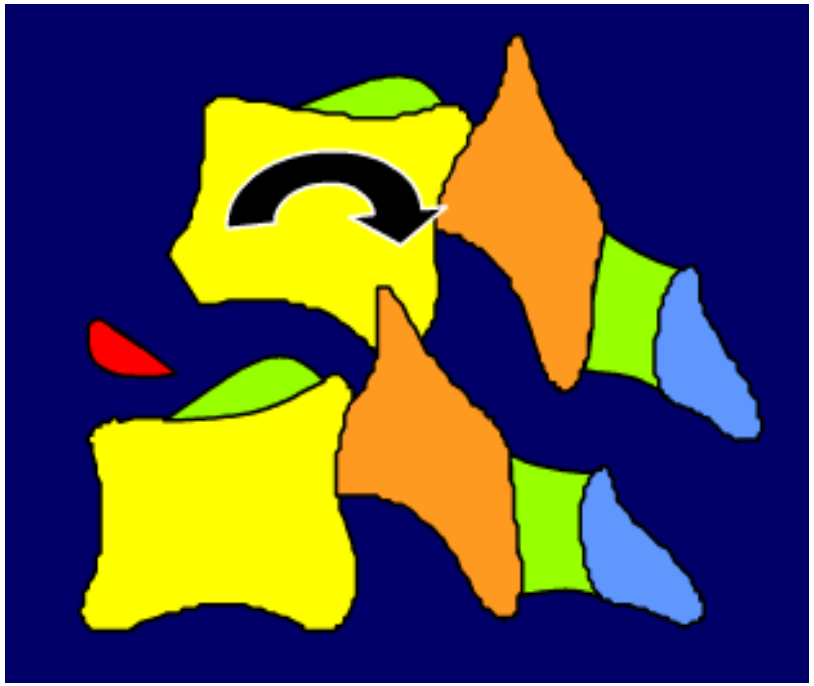
3) Rétrolisthésis

4) Recul des facettes inférieures

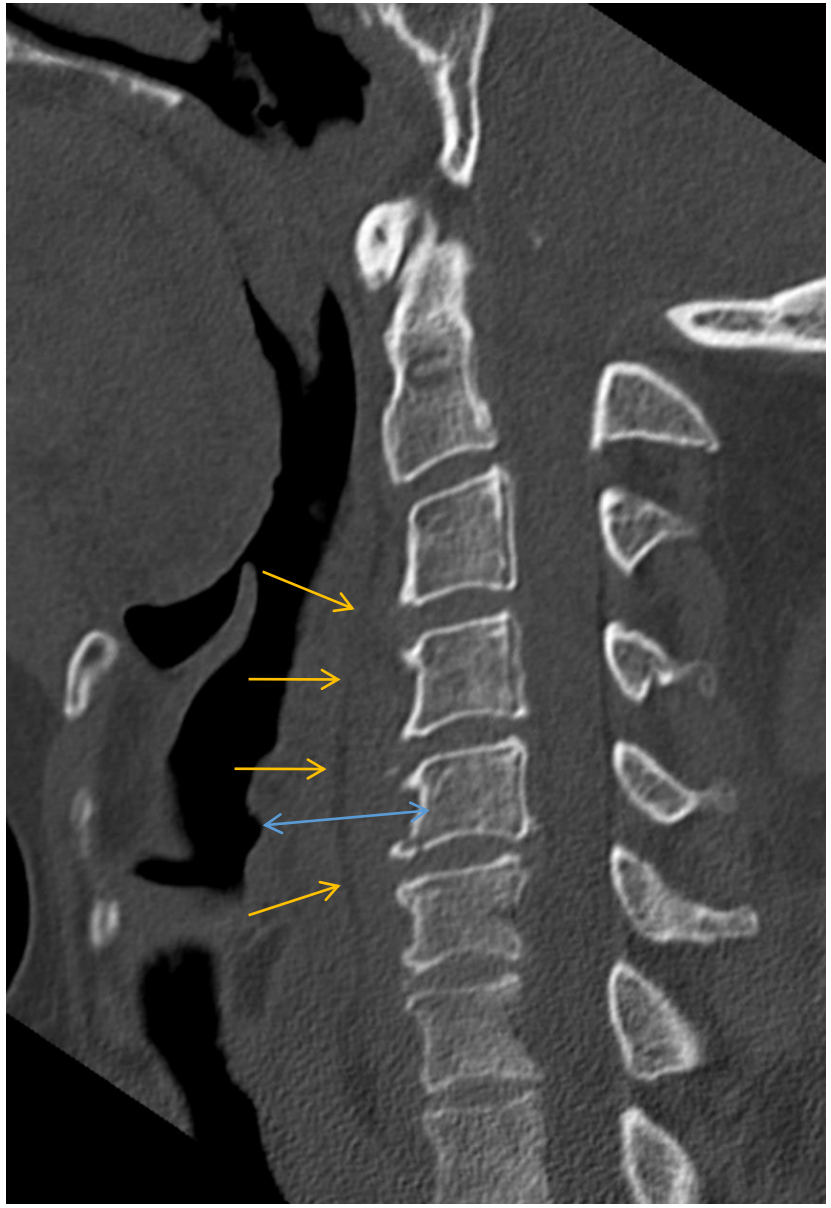
5) Fracture verticale d'un processus épineux

Fracture du coin antéroinférieur du corps vertébral



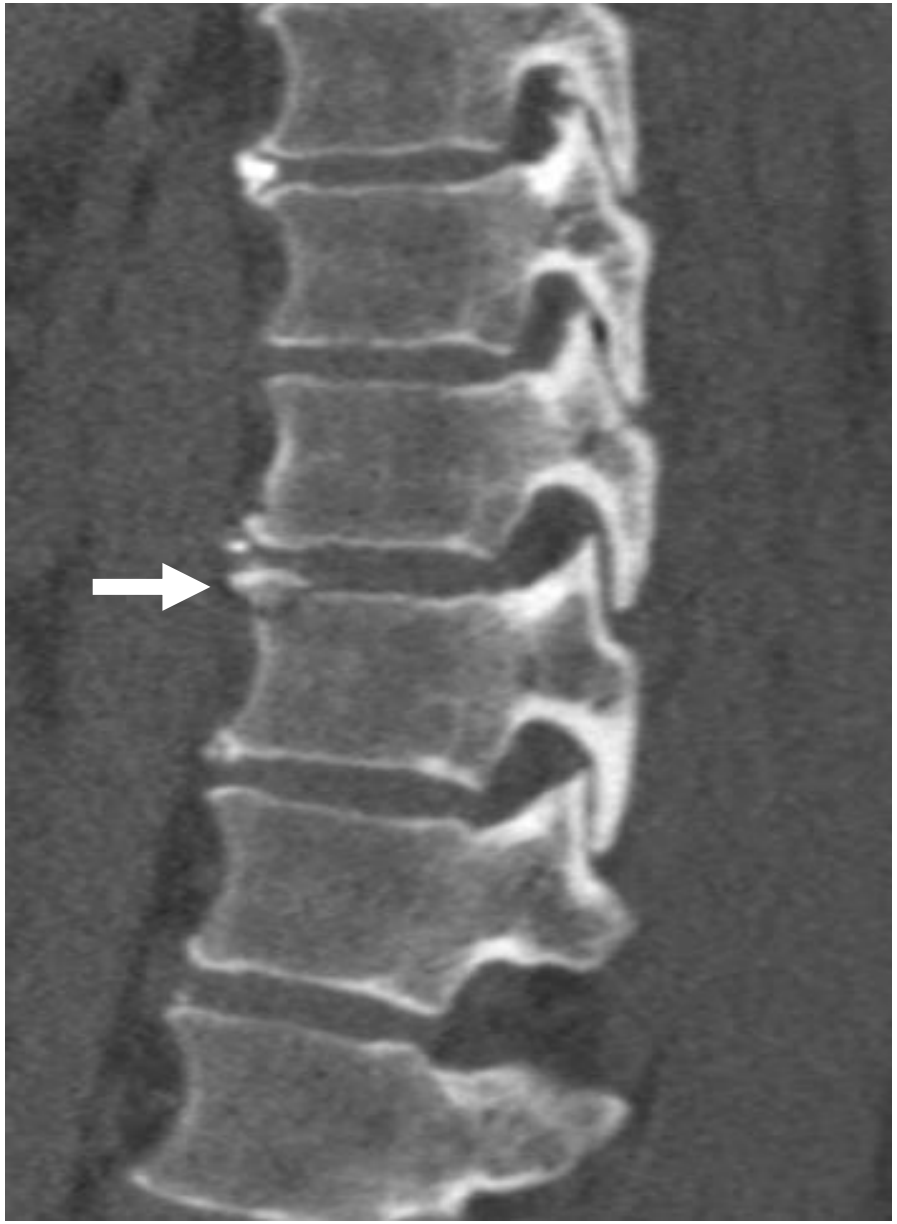


Fracture du coin postérosupérieur du corps vertébral

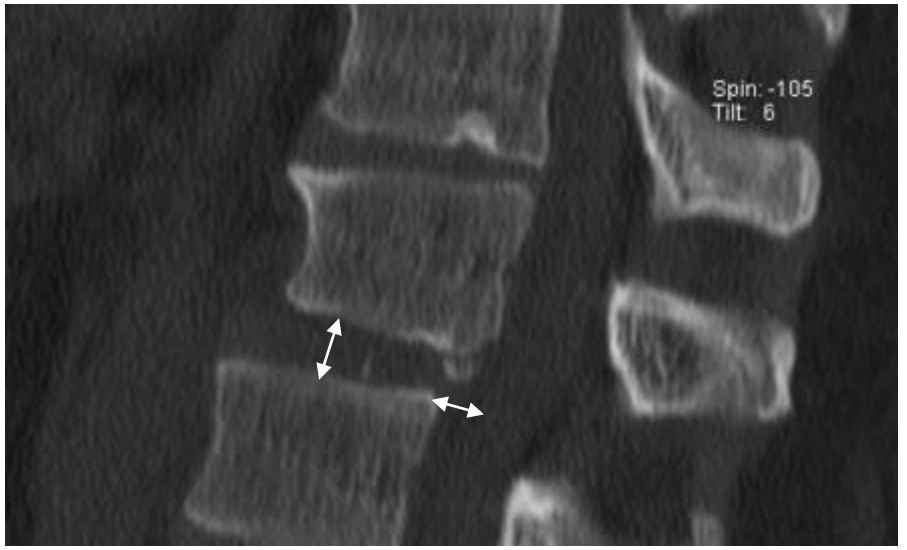


Tuméfaction tissus mous antérieurs
Déplacement espace retropharyngé

AU NIVEAU DU
RACHIS DORSAL :

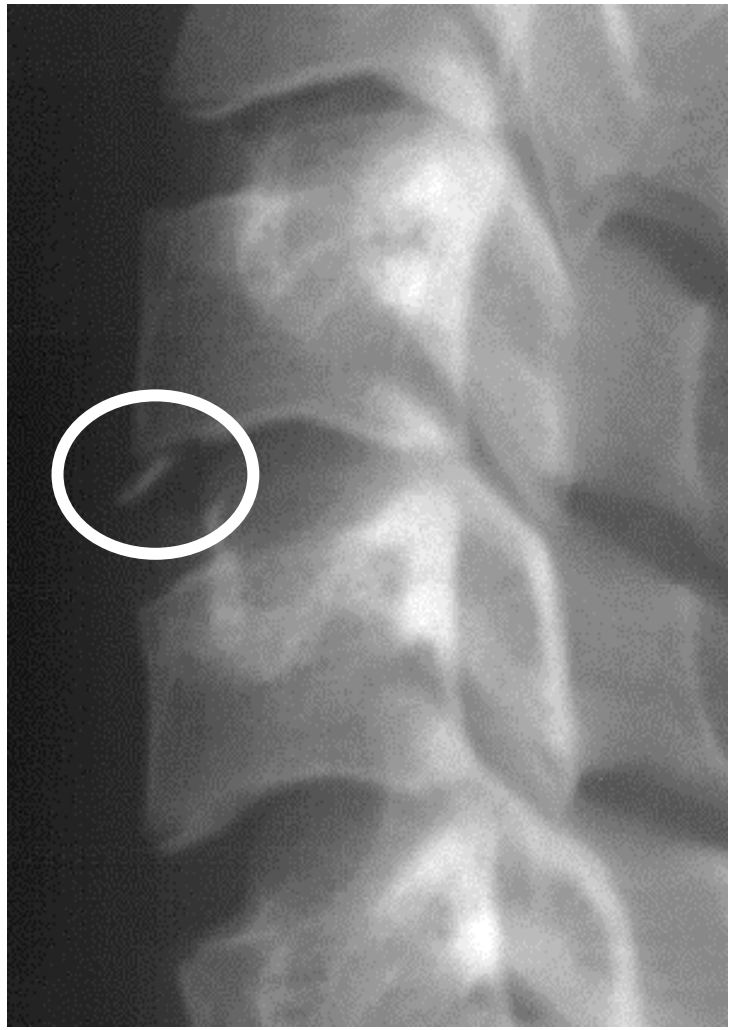


Parfois, seul l’arrachement osseux est le témoin……

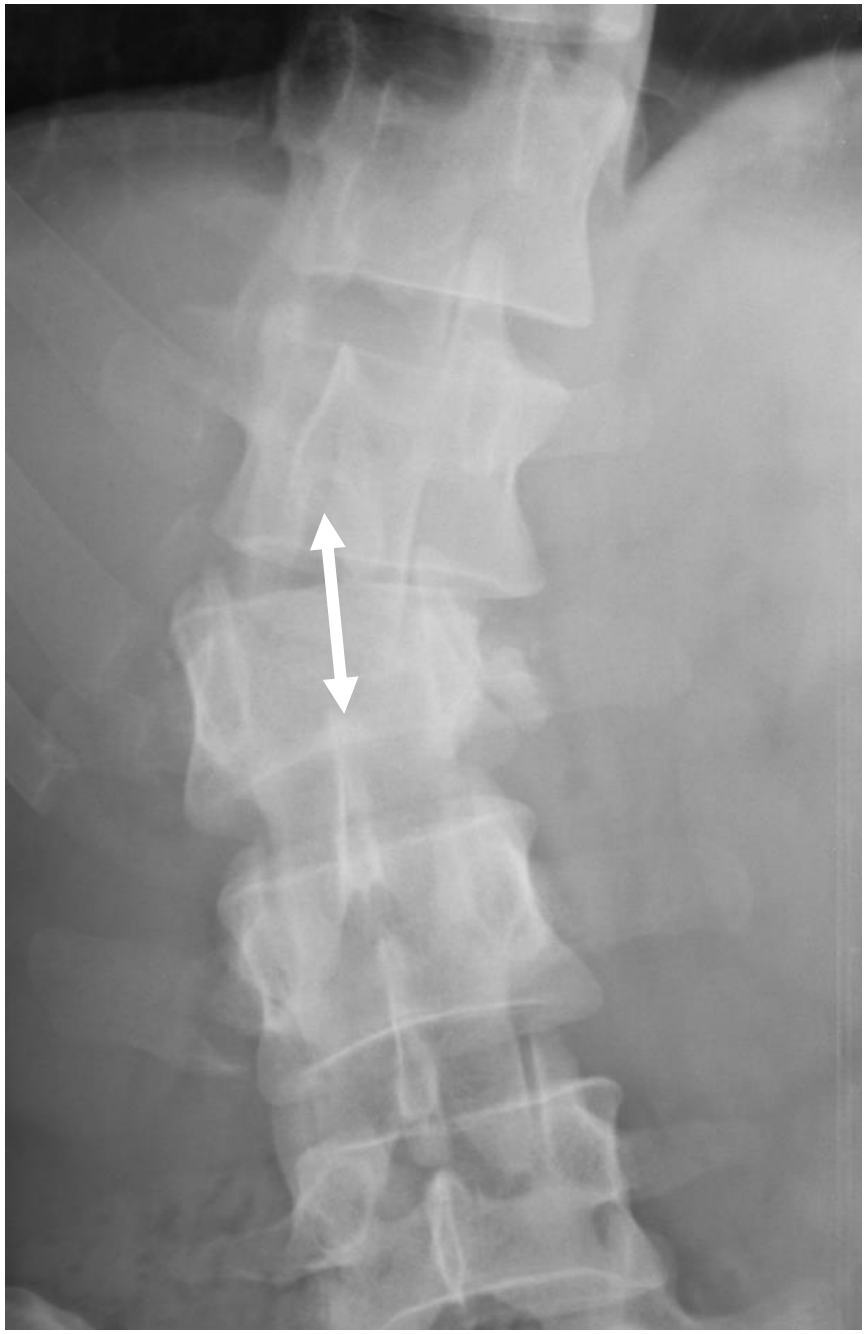


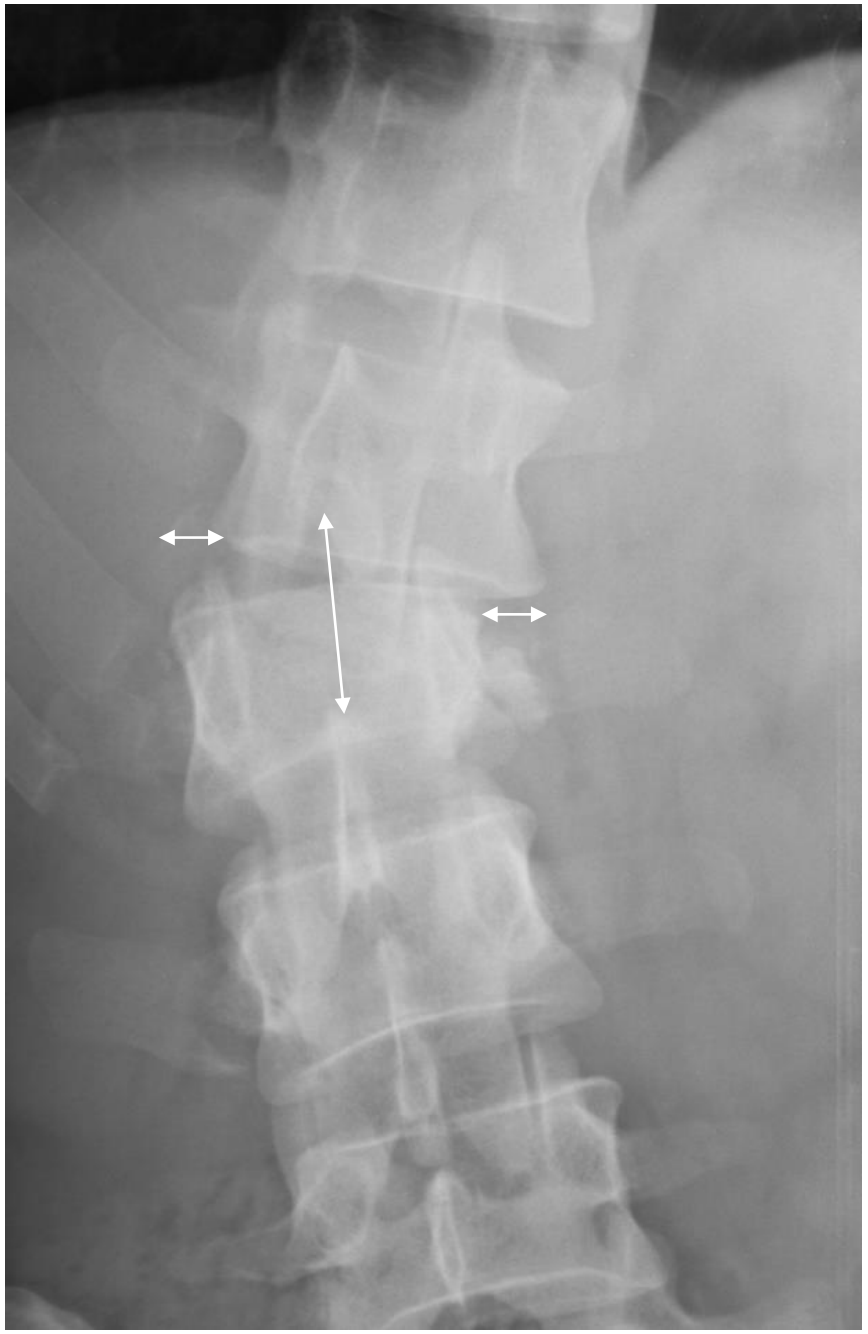
Rétrolisthésis et distraction

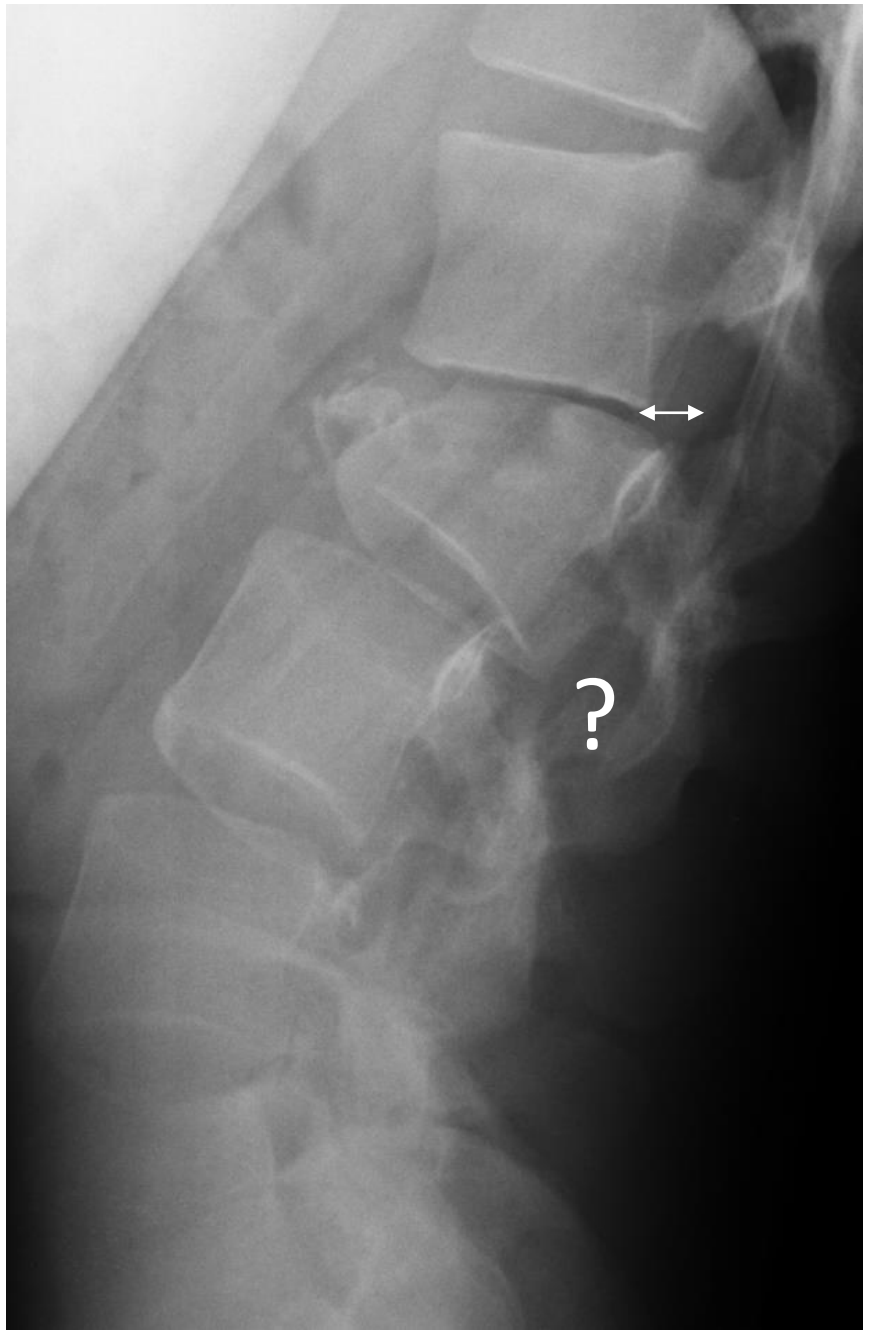
≠ AVULSION DU LISTEL MARGINAL (Adolescent)



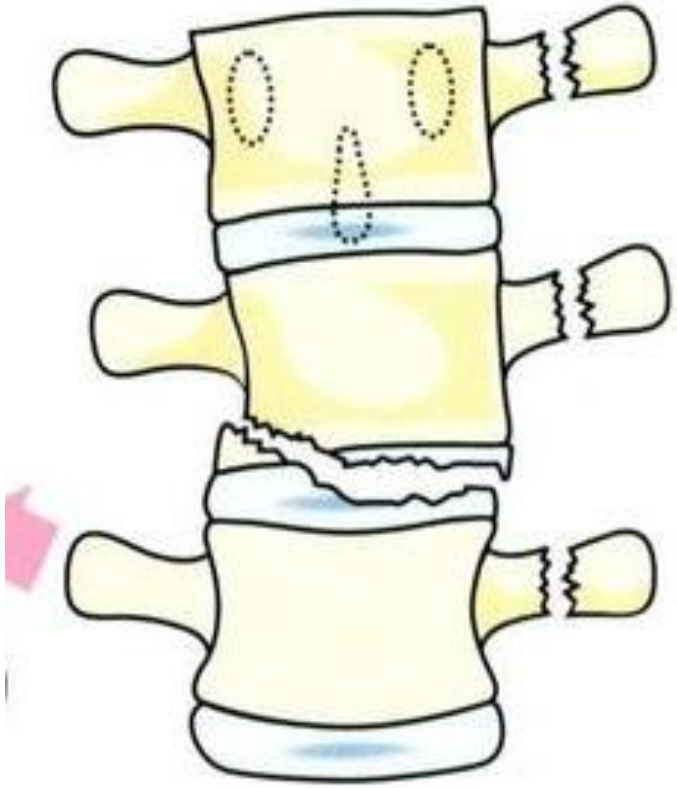
4. TRANSLATION-ROTATION

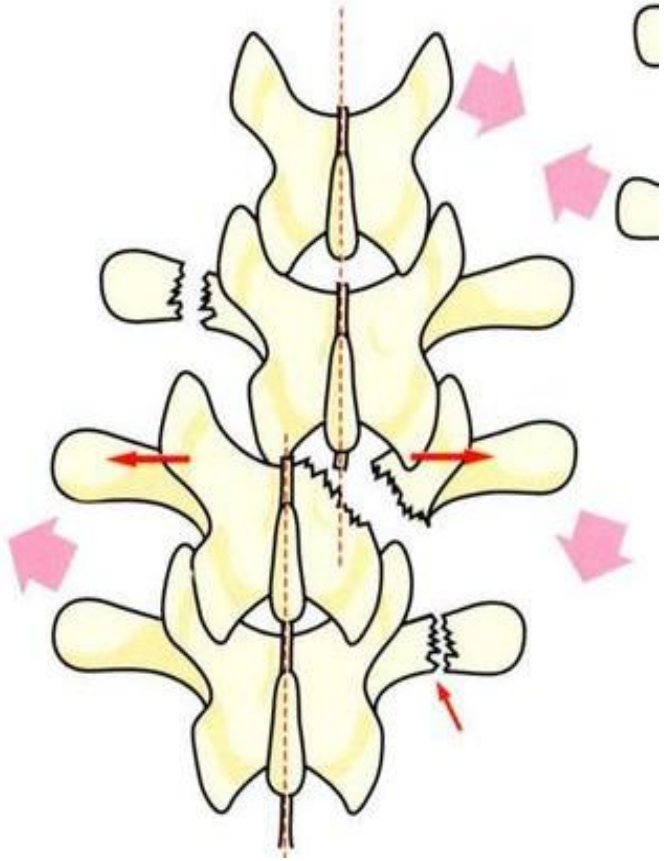






SIGNES DE ROTATION (rachis dorso-lombaire)



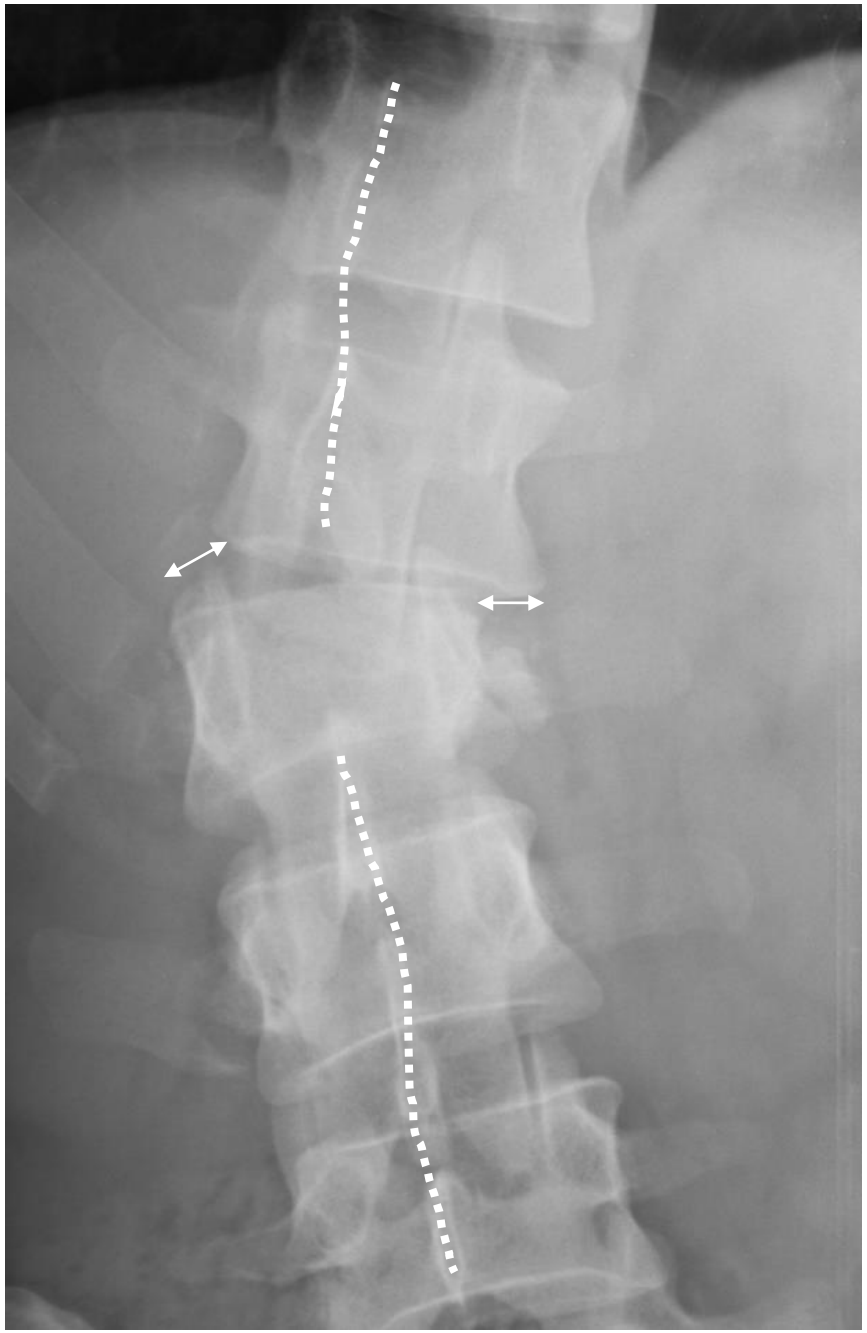


Décalage rotatoire des processus épineux

Décalage latéral corps vertébral

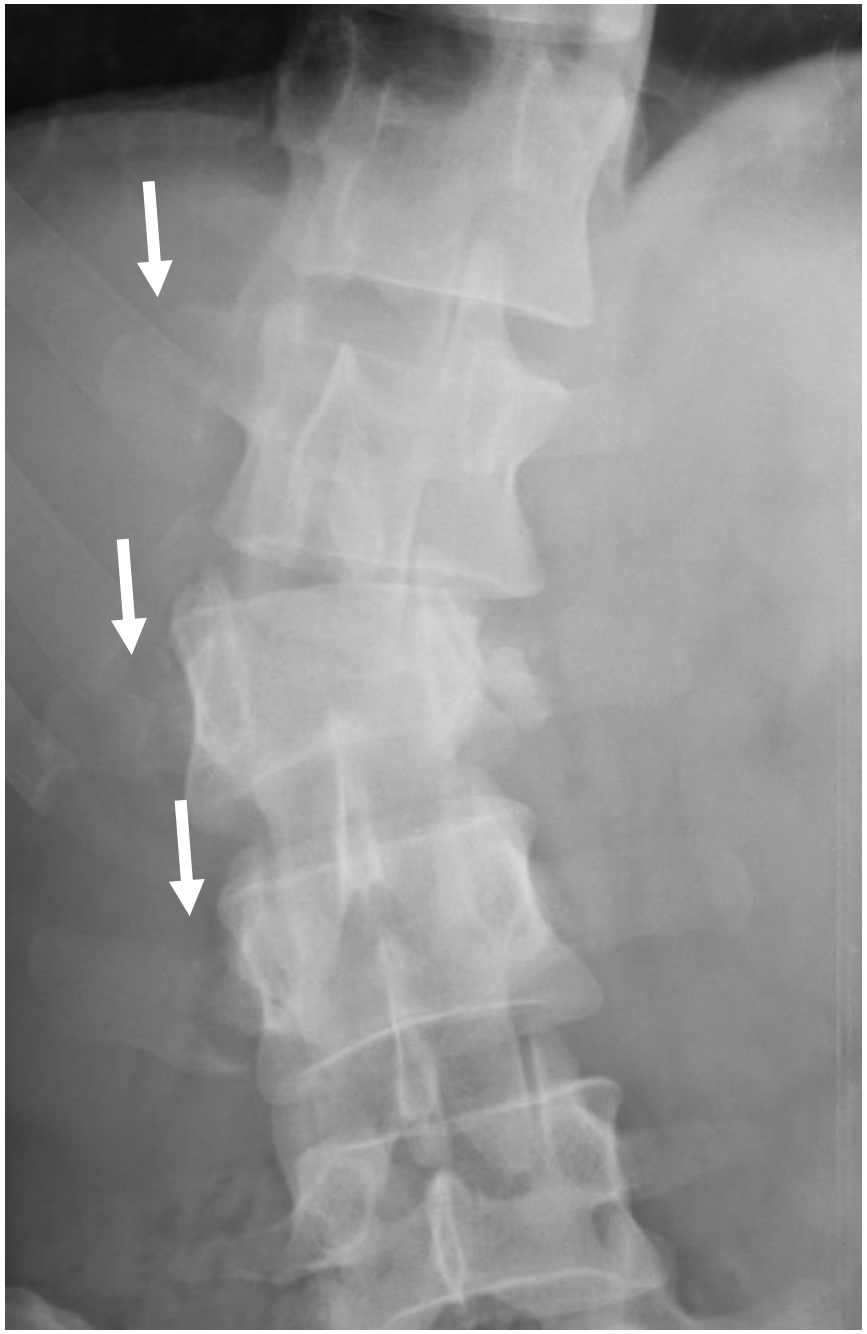
Fracture étagée des processus transverses

Luxations ou fractures costales étagées

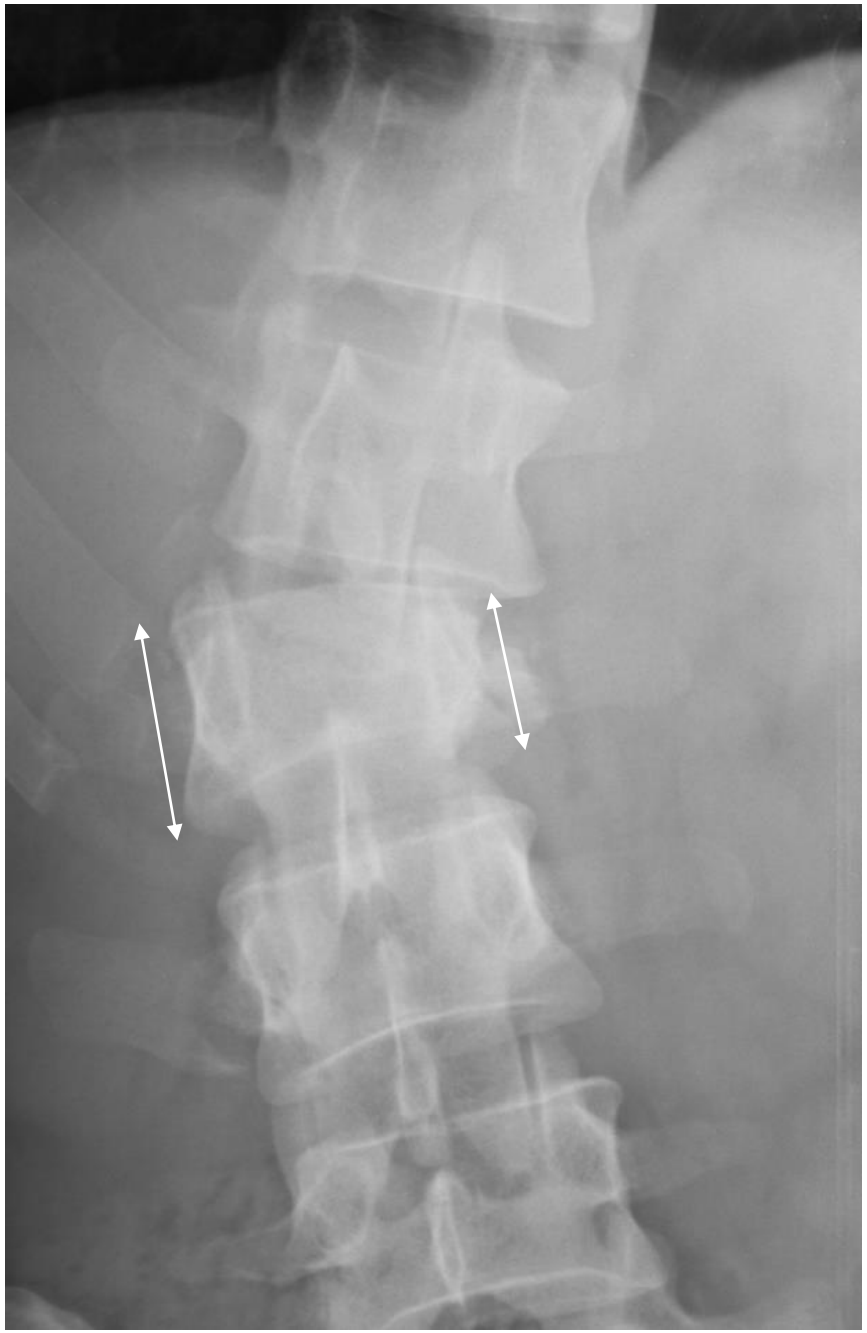


Décalage rotatoire des processus épineux

Décalage latéral corps vertébral



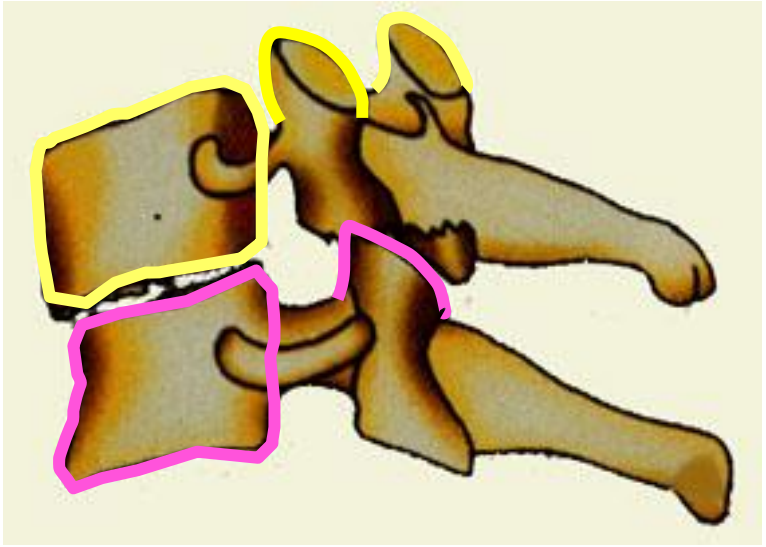
Fracture étagée des processus transverses

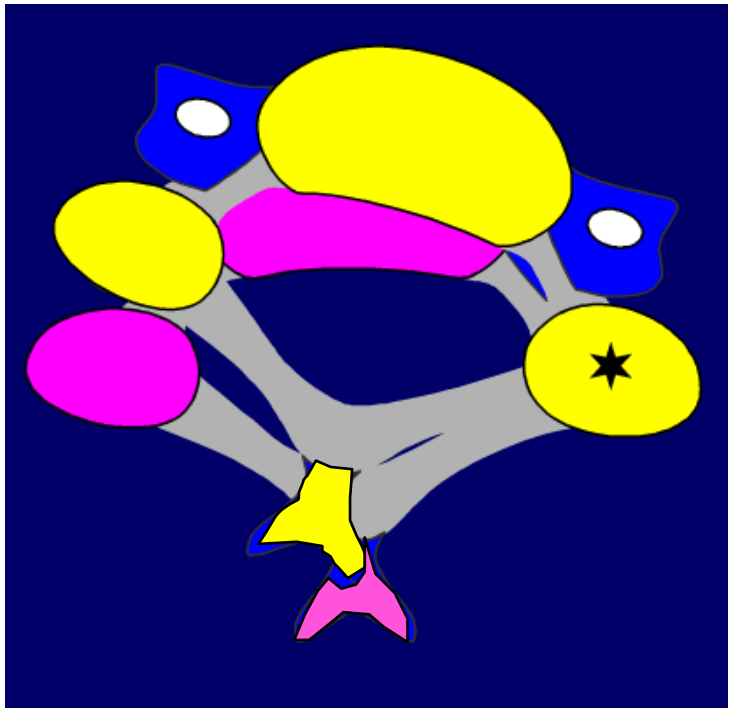


Fracture corporéale asymétrique
dans le plan frontal

Fracture massif articulaire et luxation zygapophysaire contralatérale

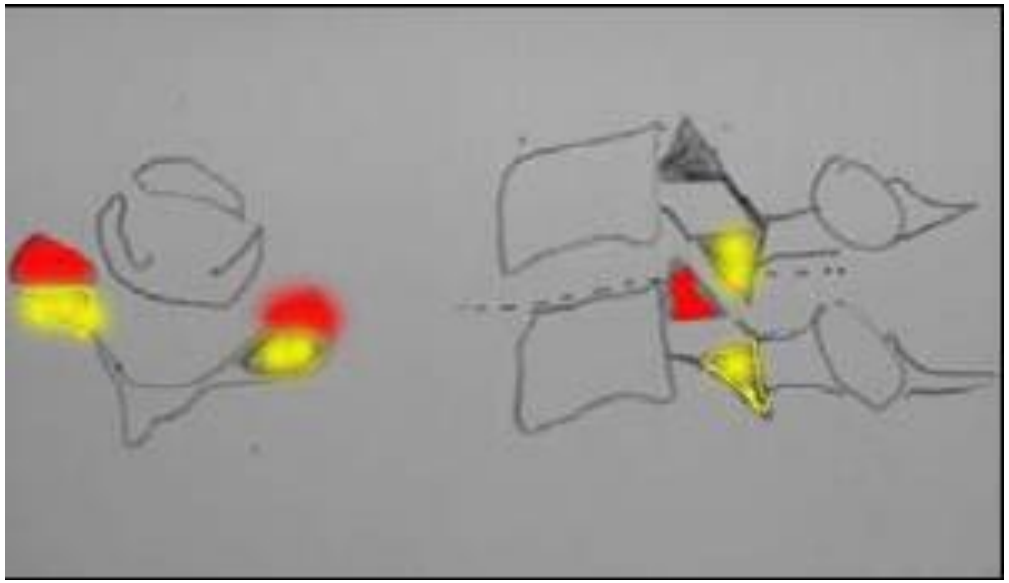
GLISSEMENT VENTRAL ROTATOIRE A PETIT DEPLACEMENT

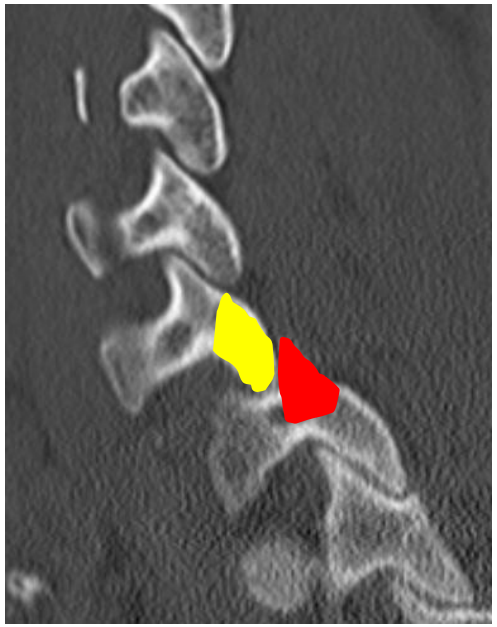




Fracture de l’apophyse articulaire inférieure droite de C4

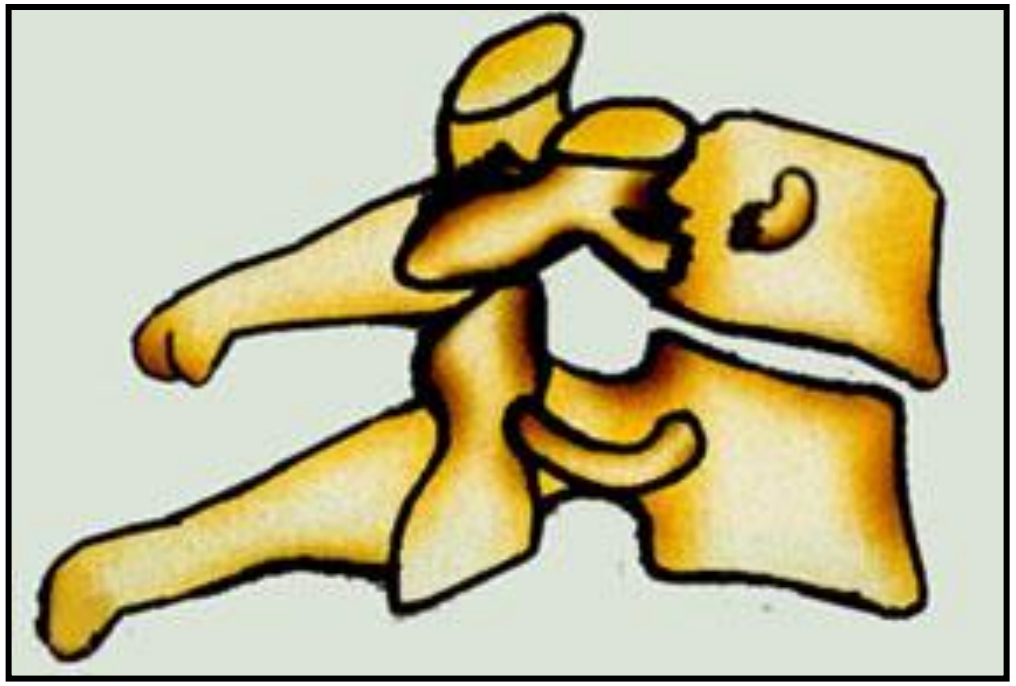
Luxation d’une articulaire

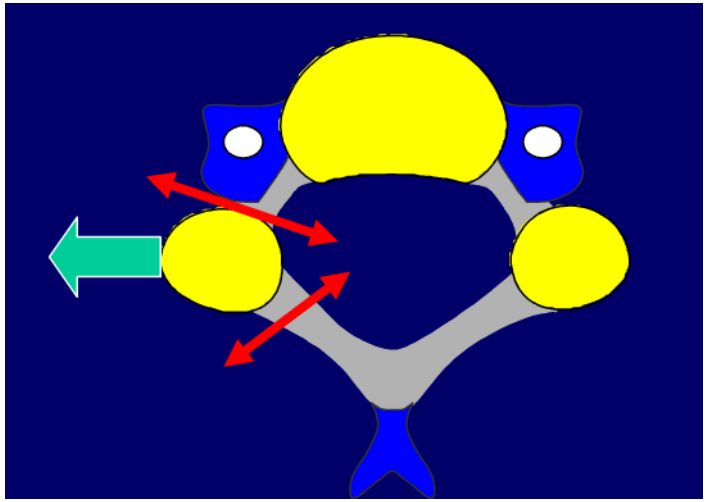




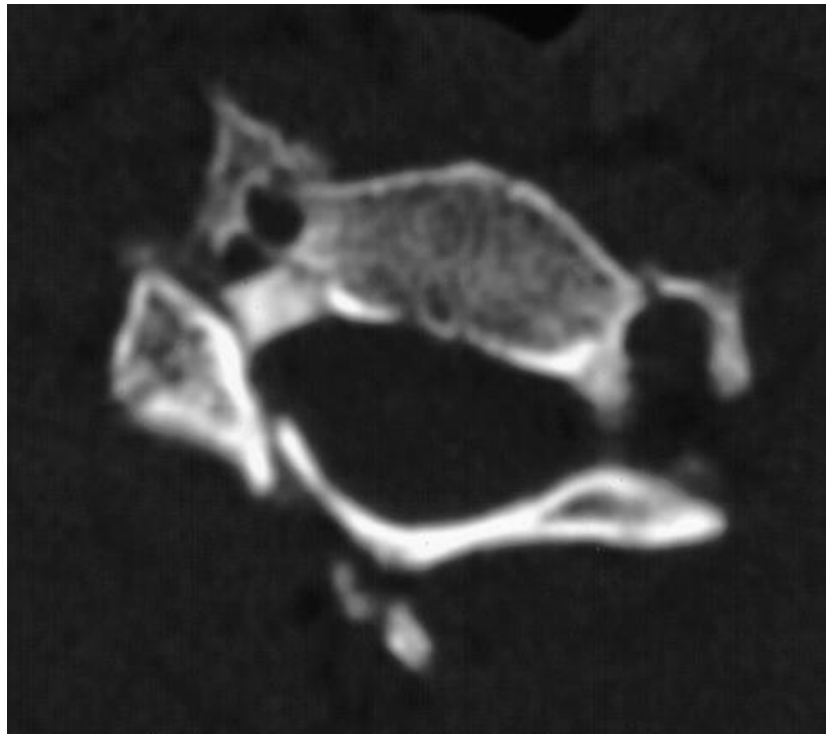
normal

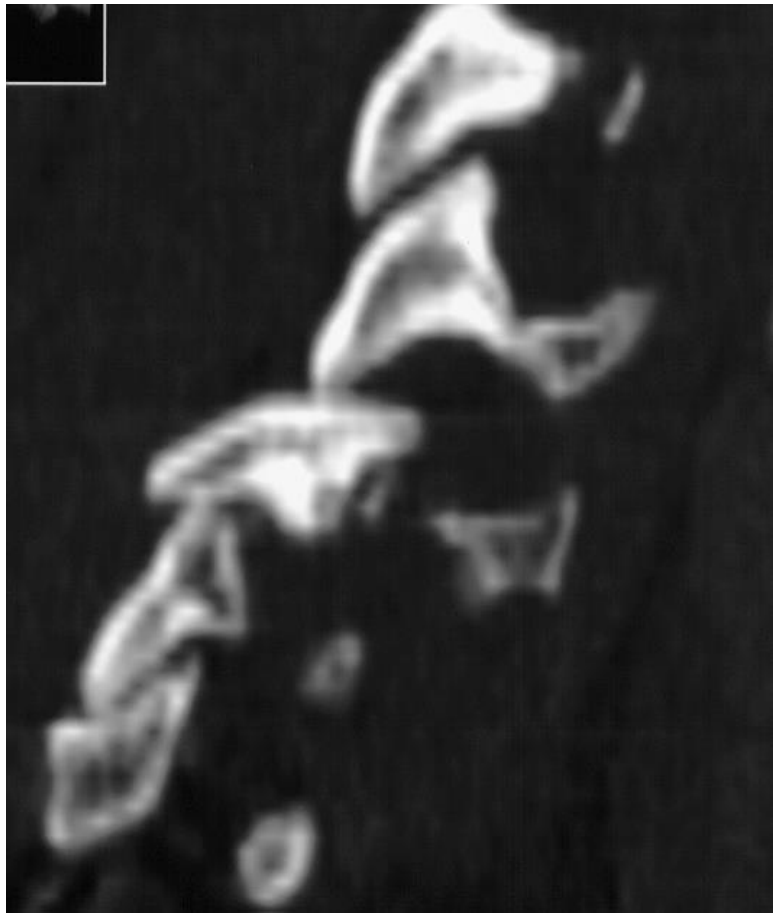
Fracture-séparation du massif articulaire (FSMA)





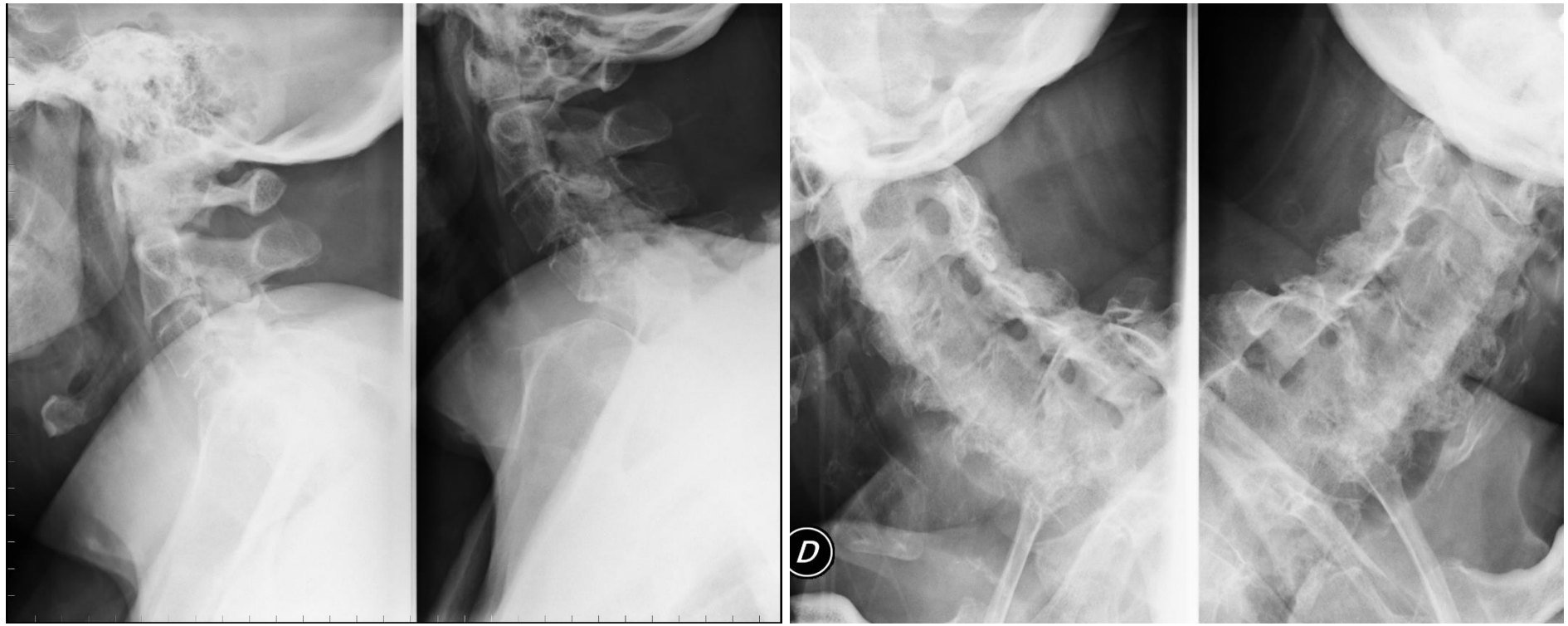
Cette fracture intéresse à la fois le pédicule et la lame, isolant ainsi le massif articulaire qui peut basculer vers l'avant.



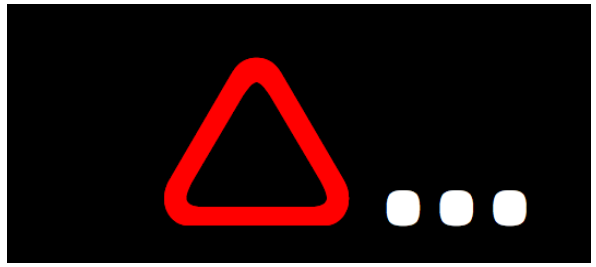


GLISSEMENT VENTRAL A GRAND DEPLACEMENT

Traumatisme violent



Patient âgé envoyé par son médecin traitant,
suite à un traumatisme mineur (chute simple)

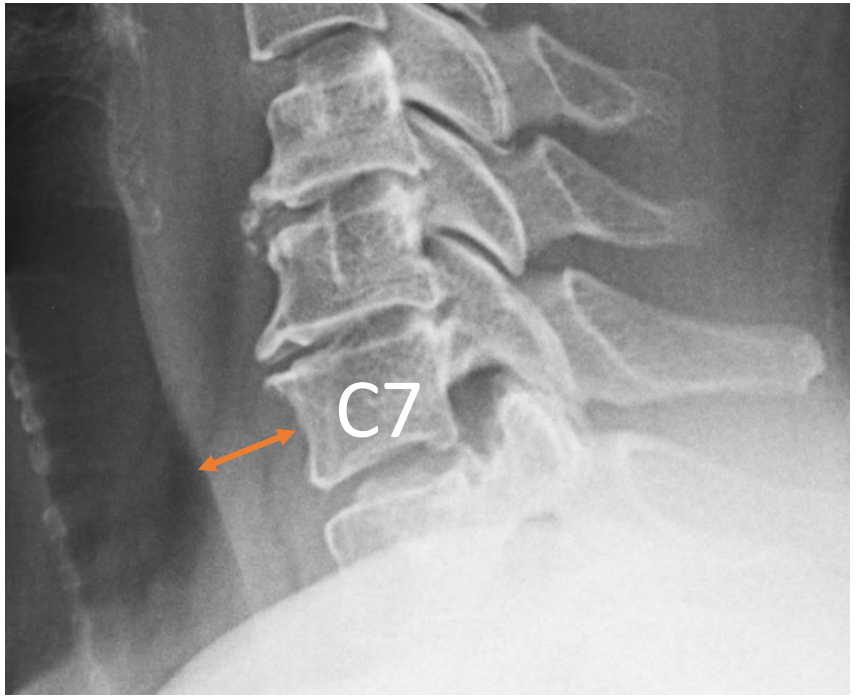


Charnière non visible

5. FRACTURES SUJET AGE



6. EPAISSEUR TISSUS MOUS PRECERVICAUX



retro pharyngé (C3):

Normal < 4 mm
Anormal
- > 7 mm
- > 1/3 axe AP CV

retro trachéal (C7):

Anormal
- > 18 mm (adultes)
- > 14 mm (enfants)
- > 90% axe AP CV

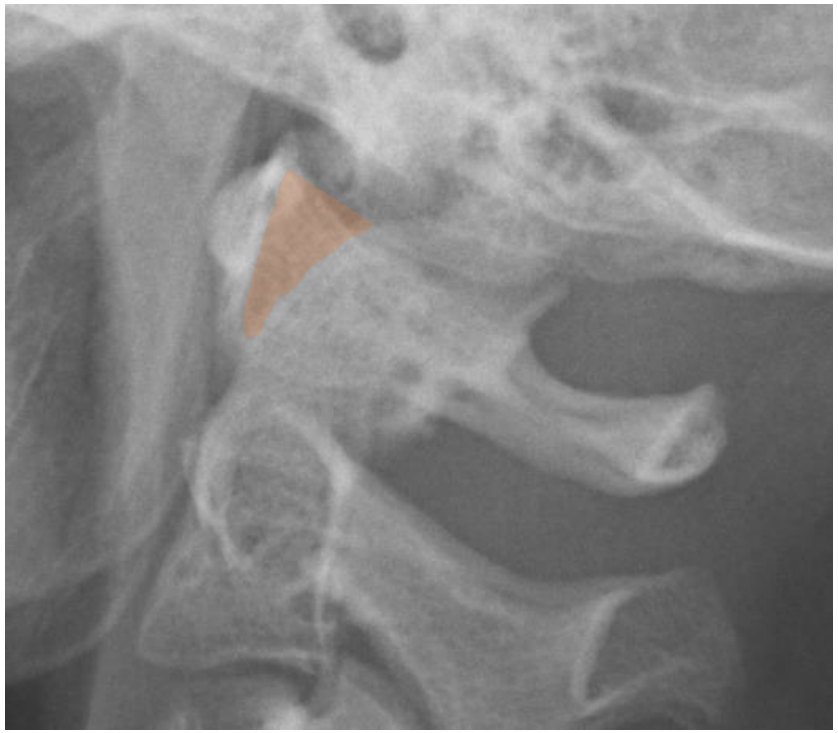
Fiabilité très relative chez le petit enfant

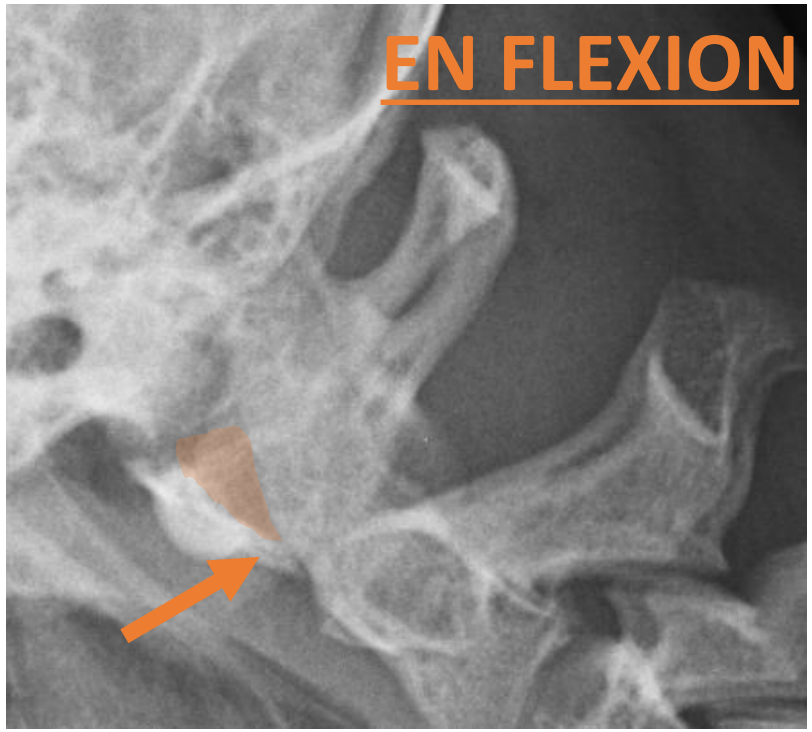
Epaisseur varie en inspiration / expiration

7. STABILITE COC1 ET C1C2

STABILITE C1C2

< 3 mm (adulte)



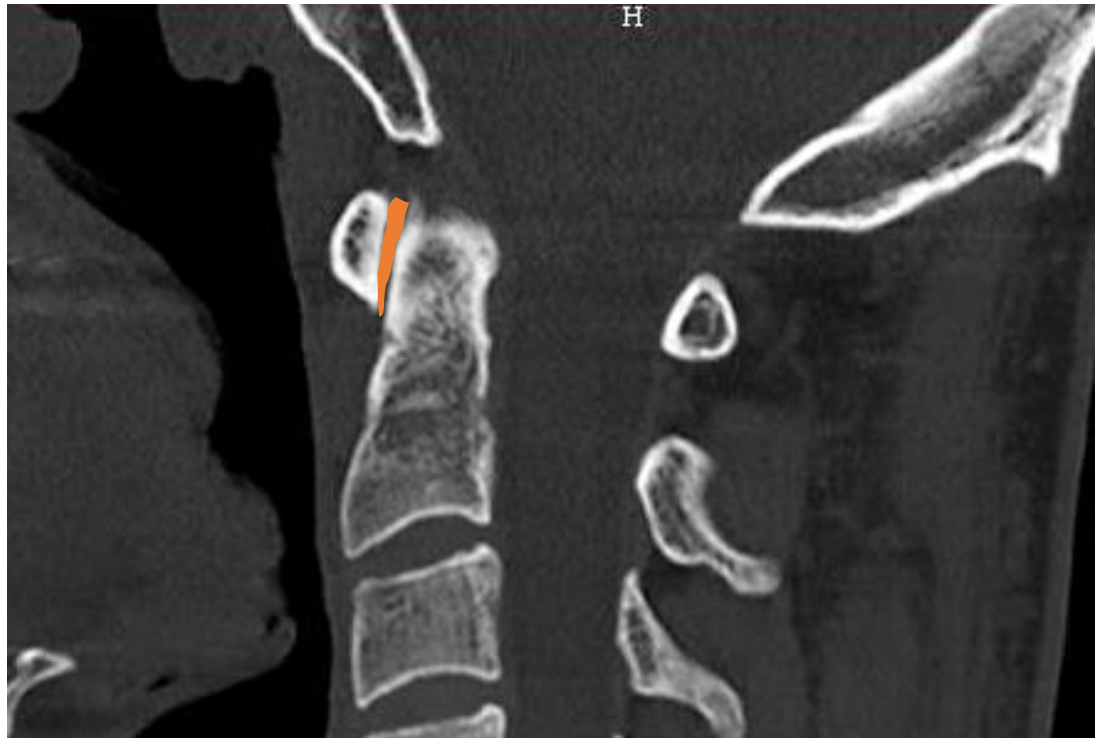


Si + : insuffisance ou rupture du ligament transverse

Chez l’enfant :

< 5 mm (jusque 1 an)
< 4 mm (jusque 8 ans)

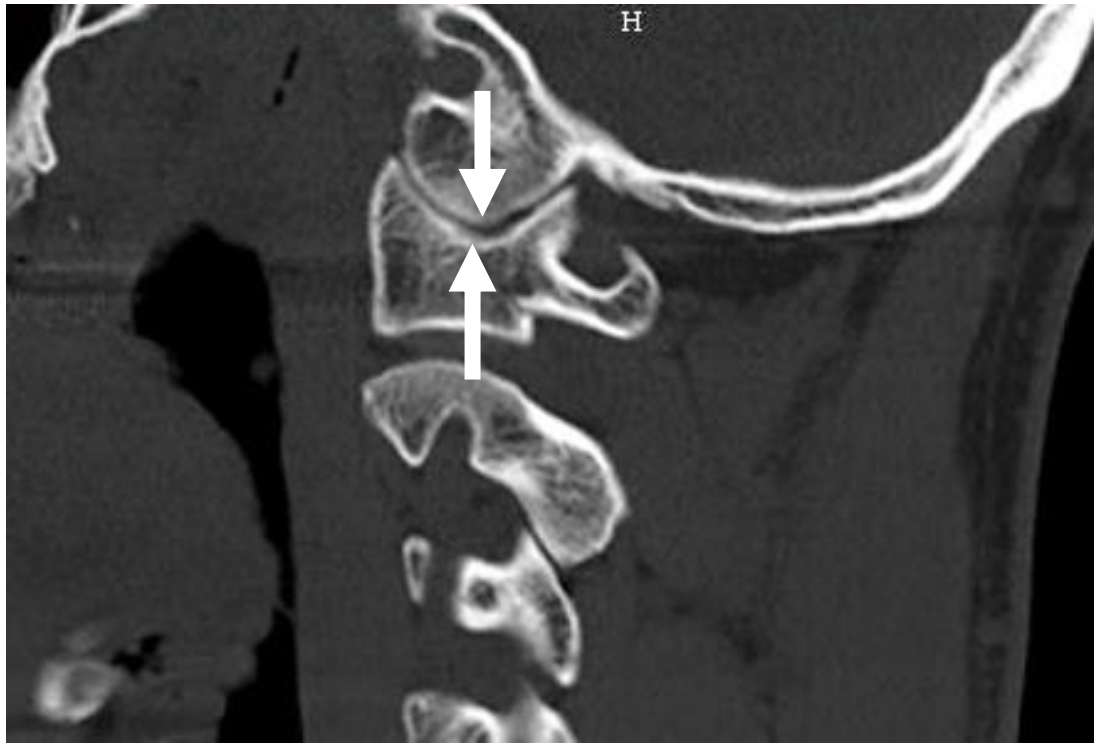
STABILITE C1C2

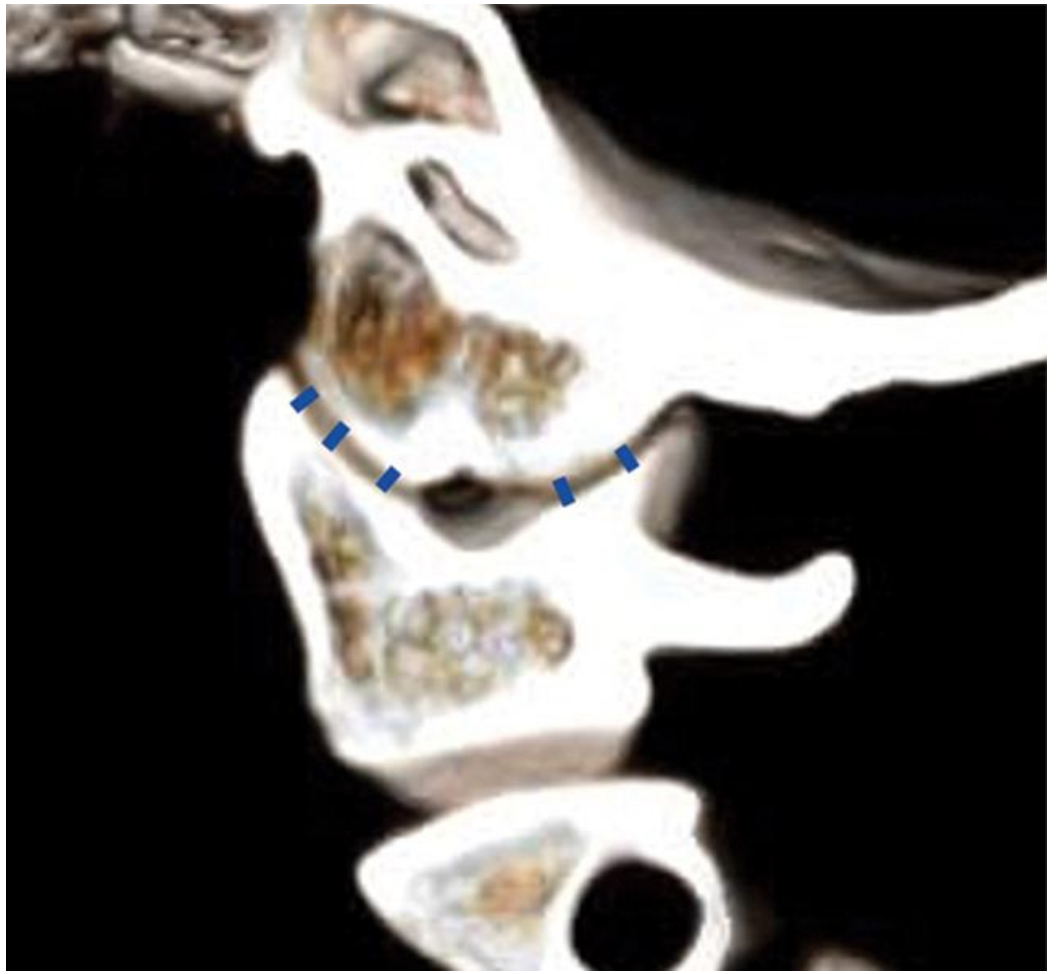


ADULTE : < 2 mm
ENFANT : < 2,6 mm

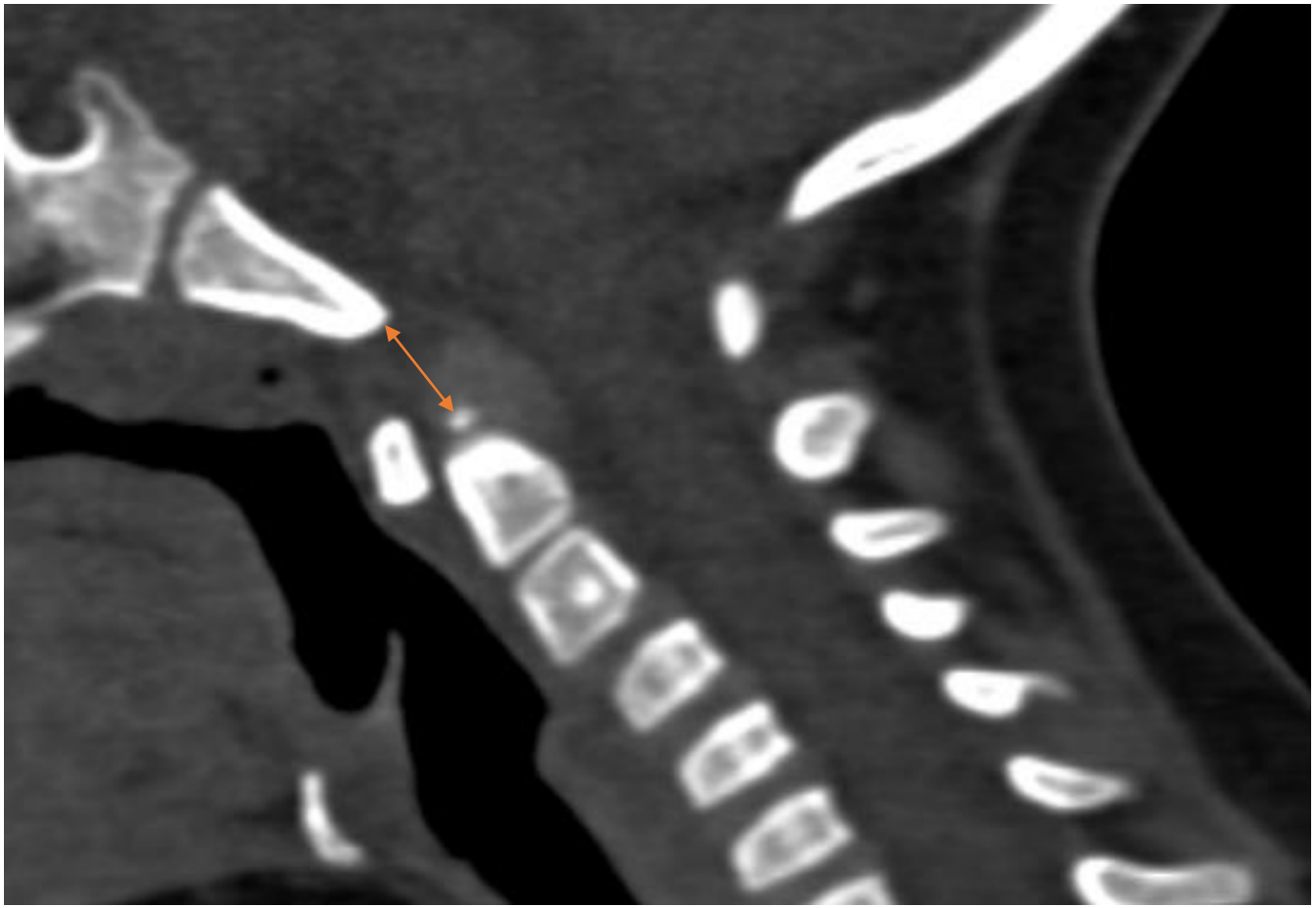
STABILITE C0C1

Somme (côté droit + côté gauche) distance condyle occipital et C1 < 4 mm





Distance basion – sommet de la dent
< 10 mm



Chez l'enfant:

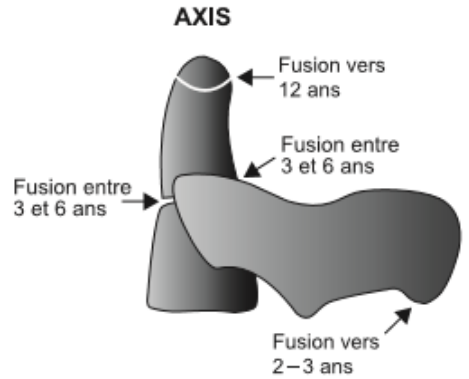
Distance basion-sommet de la dent

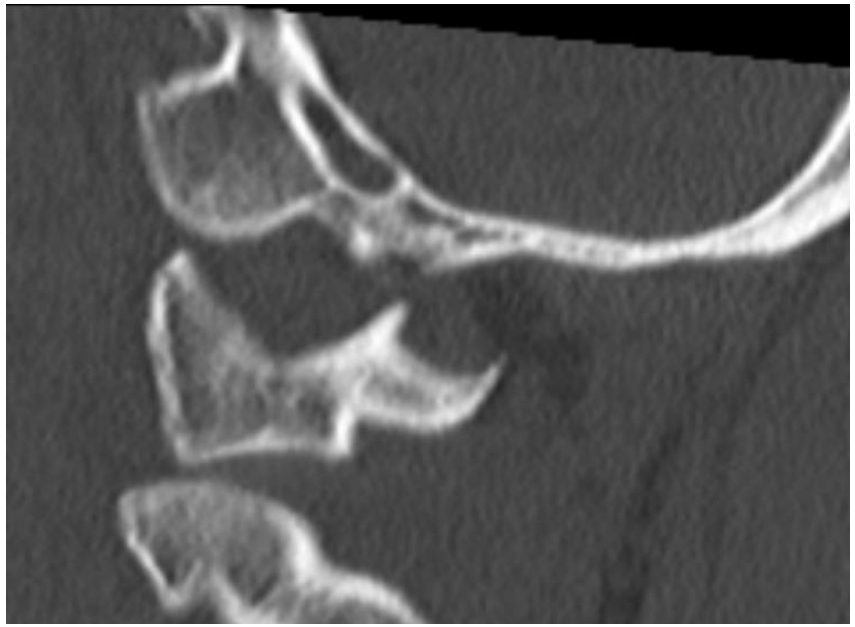
Si point d'ossification présent : < 10 mm

Si point d'ossification absent : < 12 mm

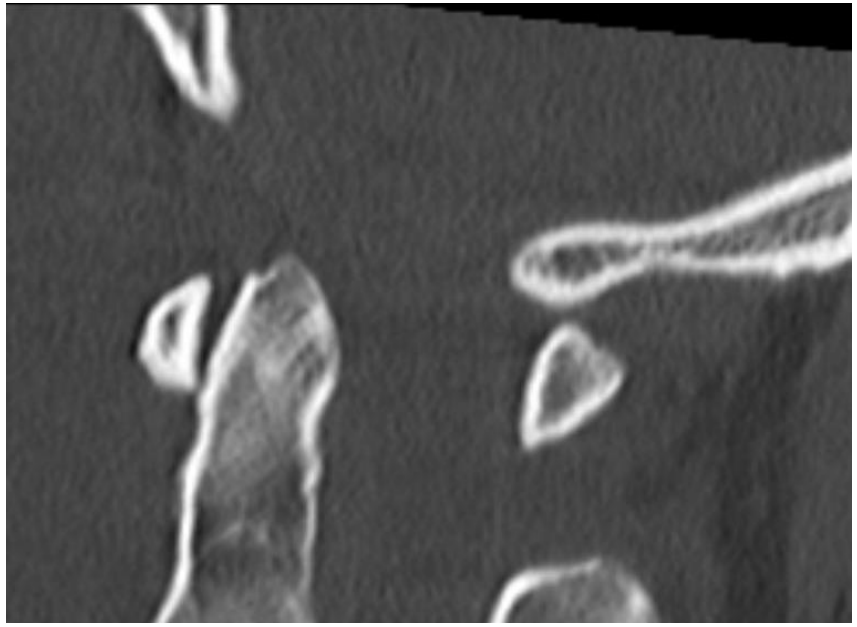
Distance C0C1 :

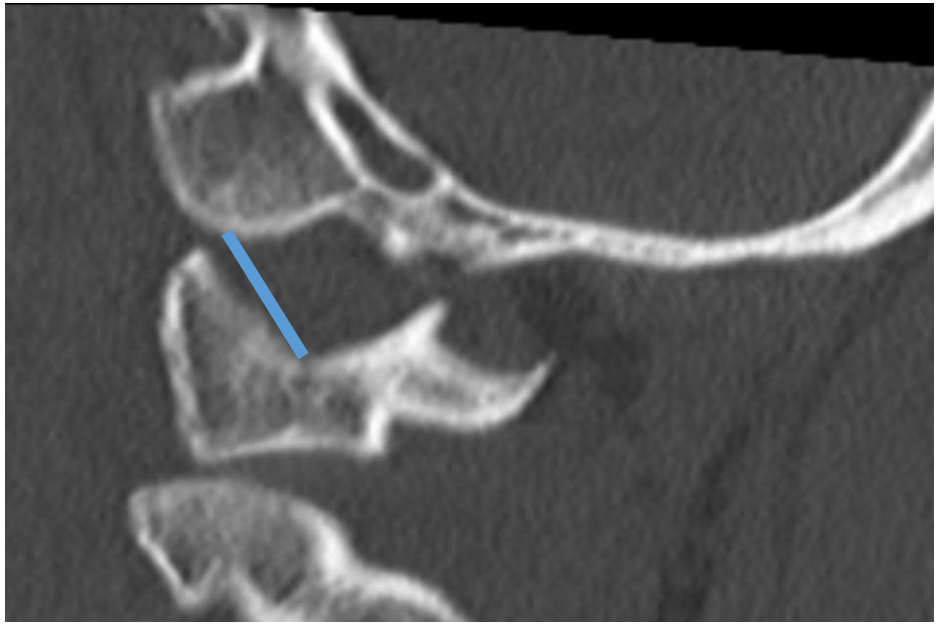
< 2,5mm (chaque articulation)

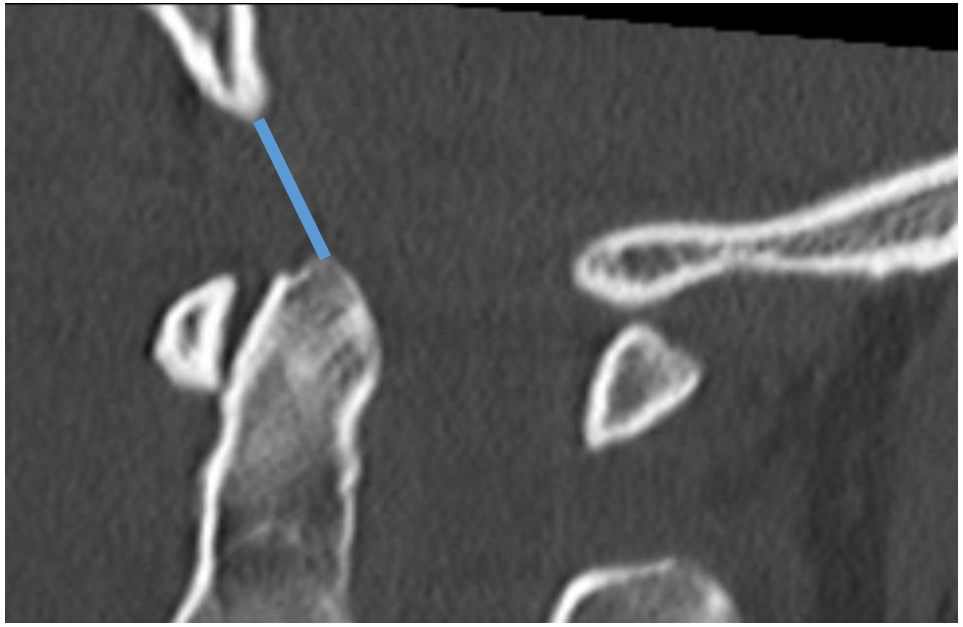




SUBLUXATION C0-C1



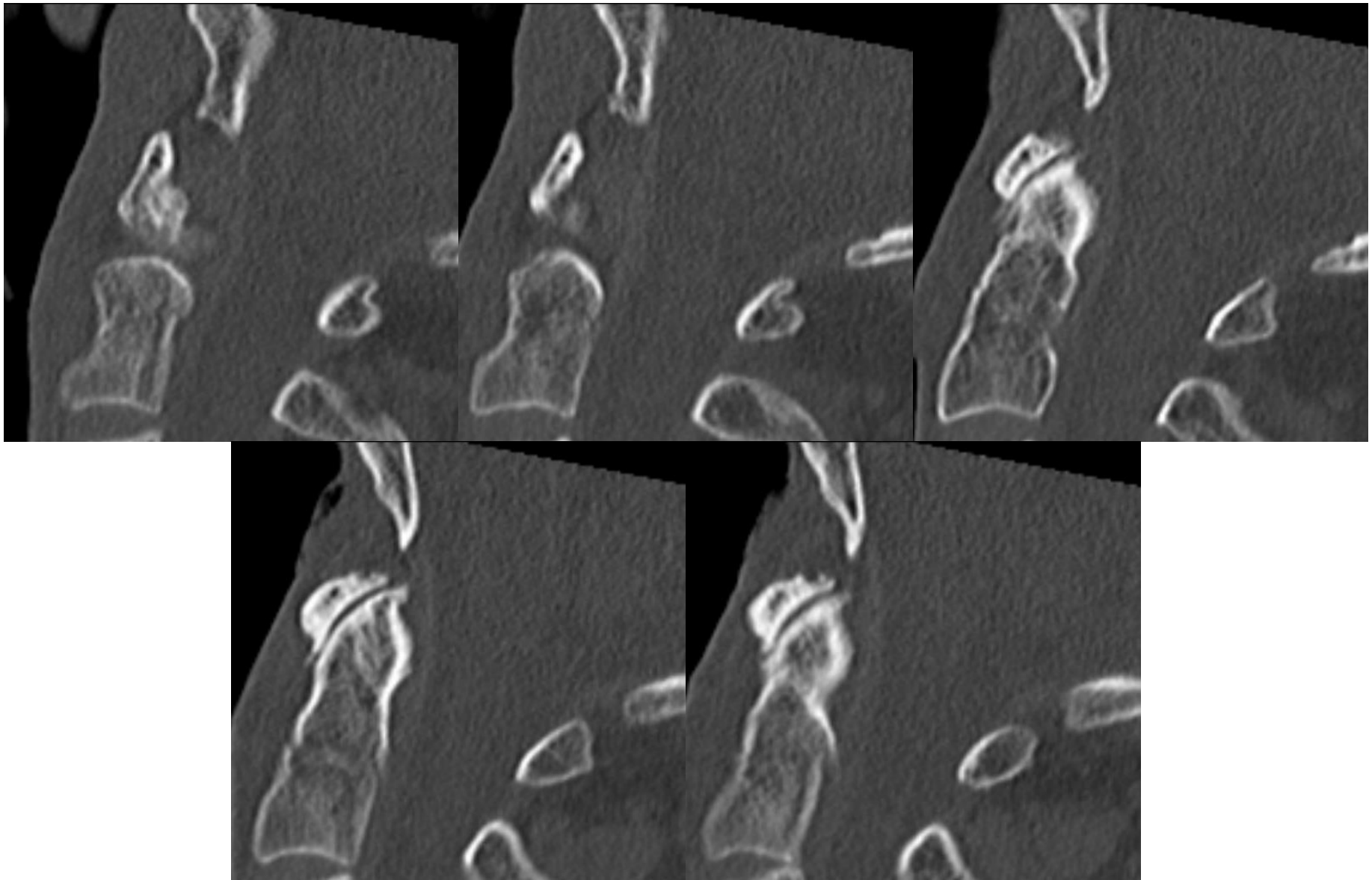


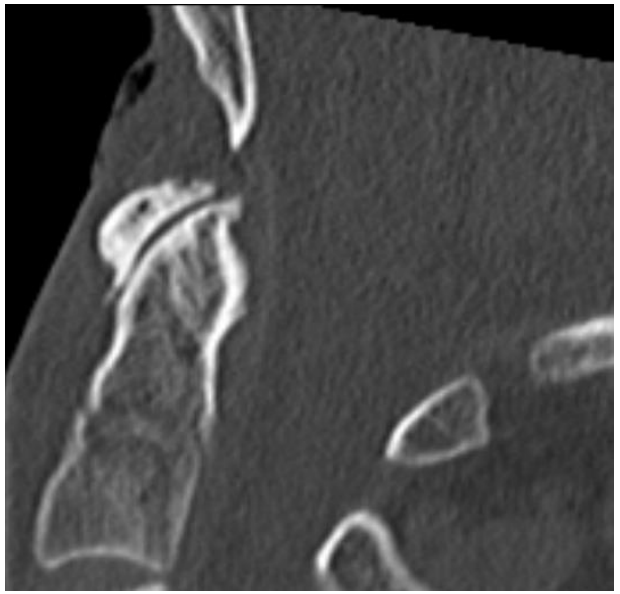


8. FRACTURES C0, C1 ET C2

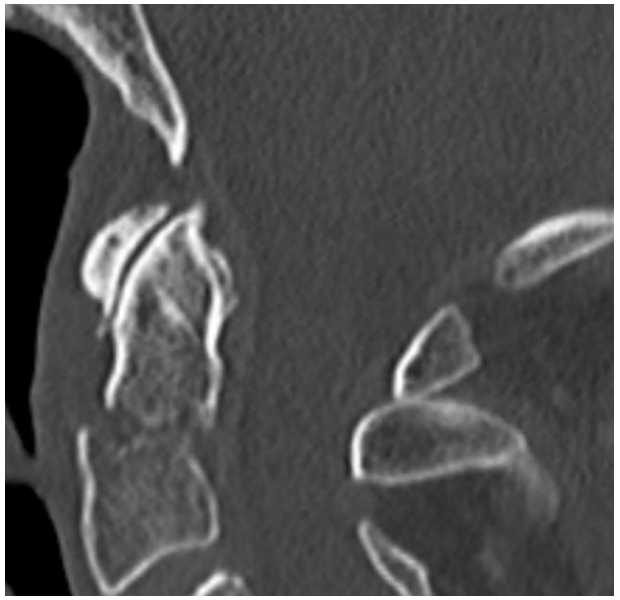
FRACTURE DES CONDYLES OCCIPITAUX

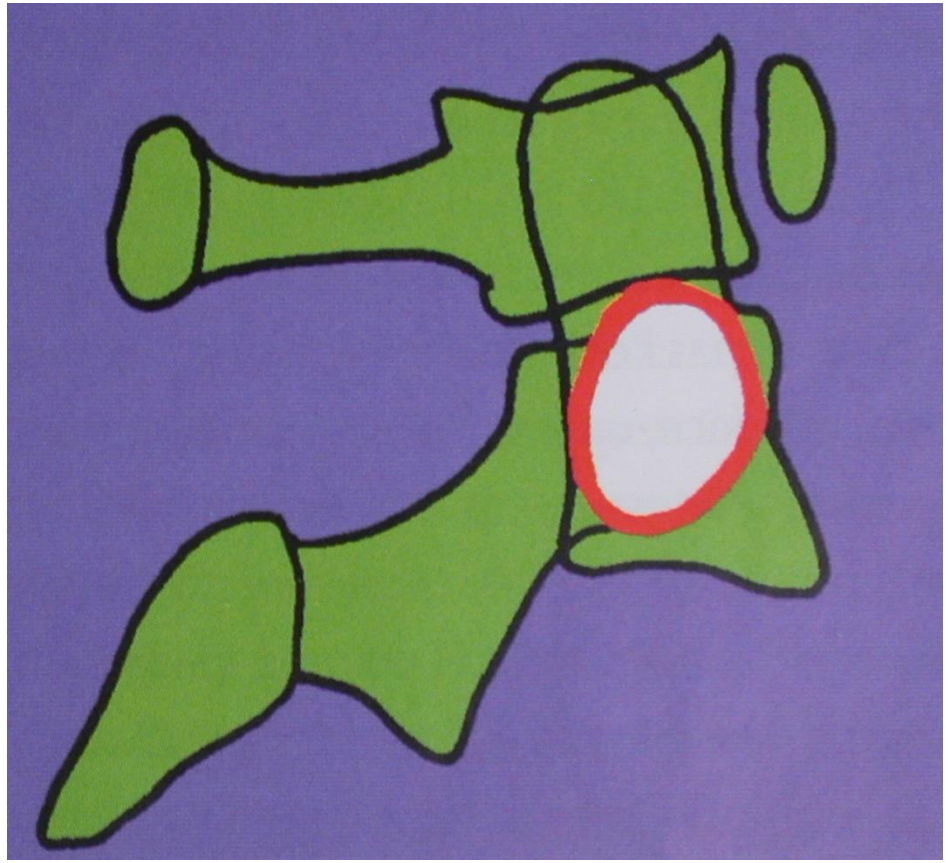
FRACTURE DU PROCESSUS ODONTOIDE

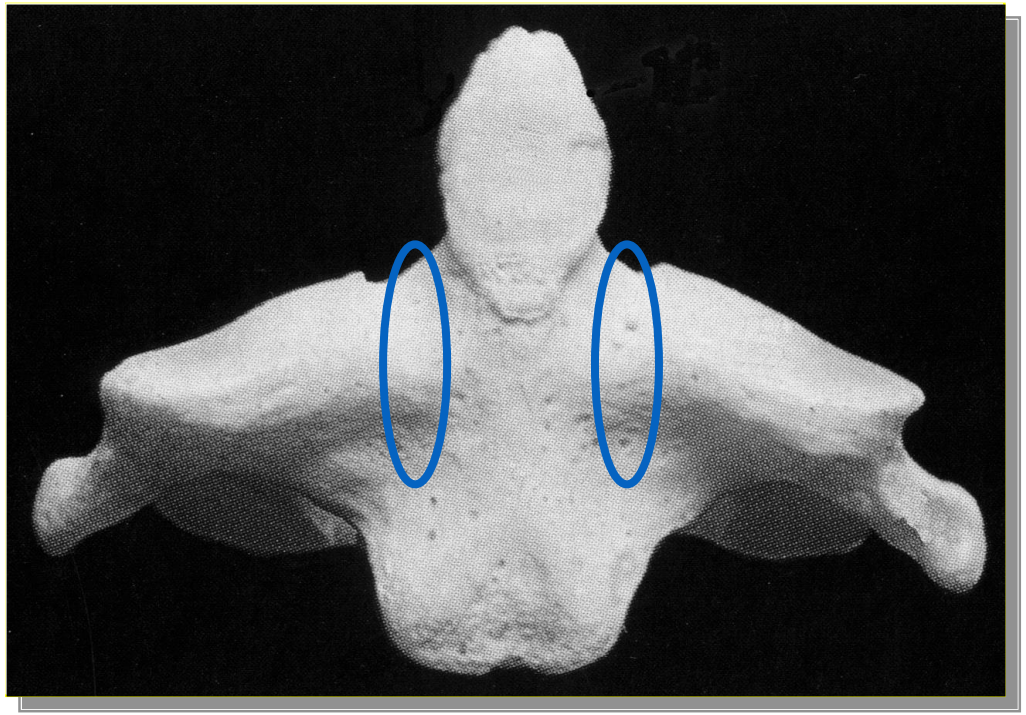




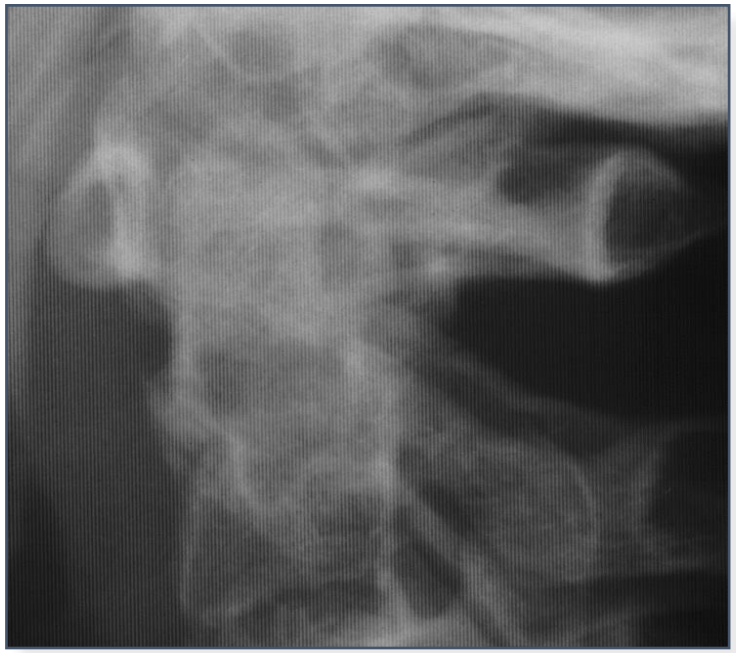
+ 2 semaines

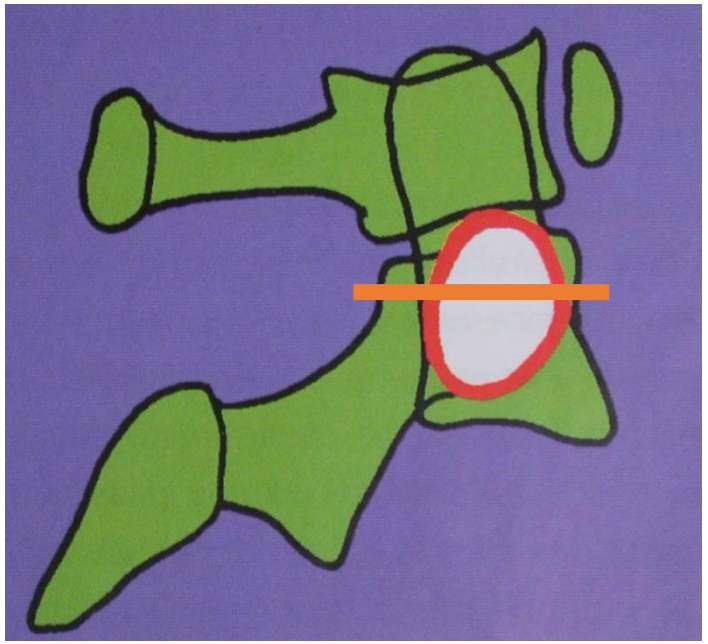




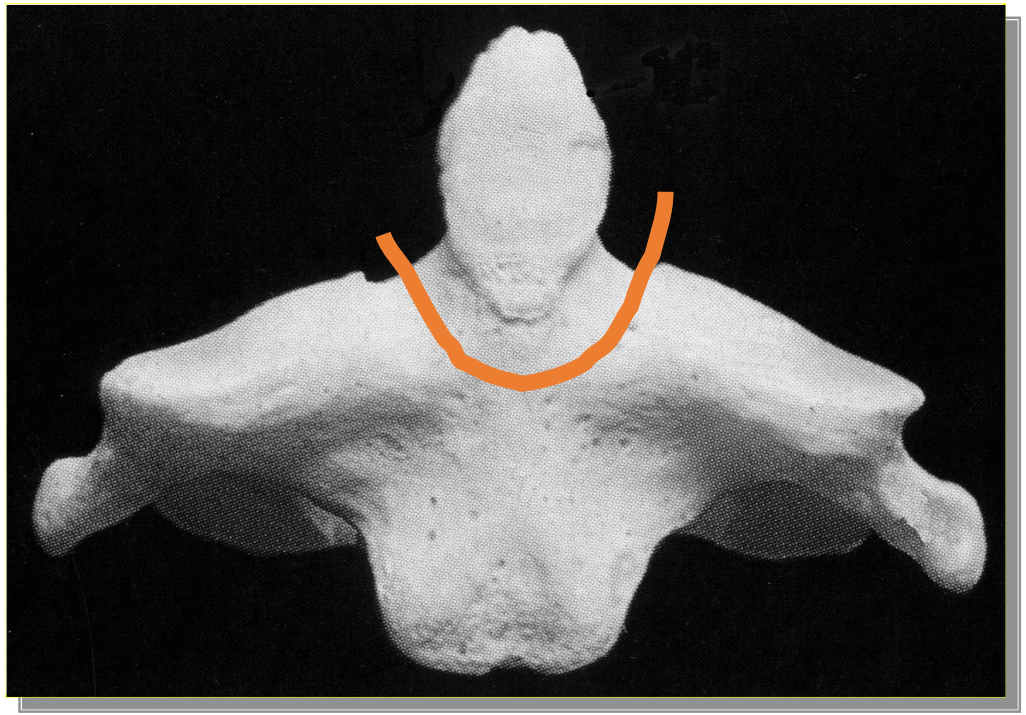


L’anneau de Harris correspond à l’insertion des masses latérales

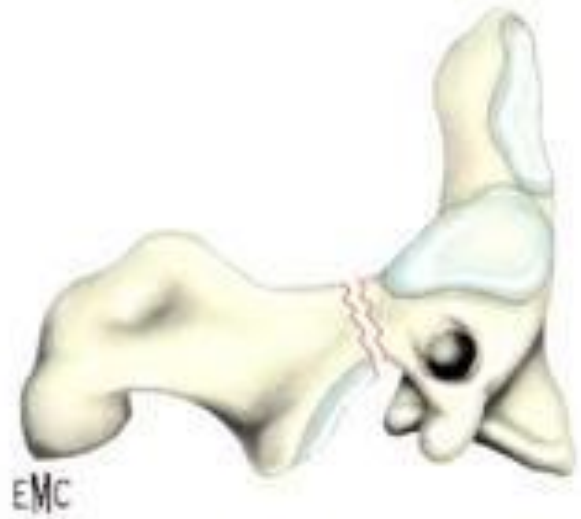


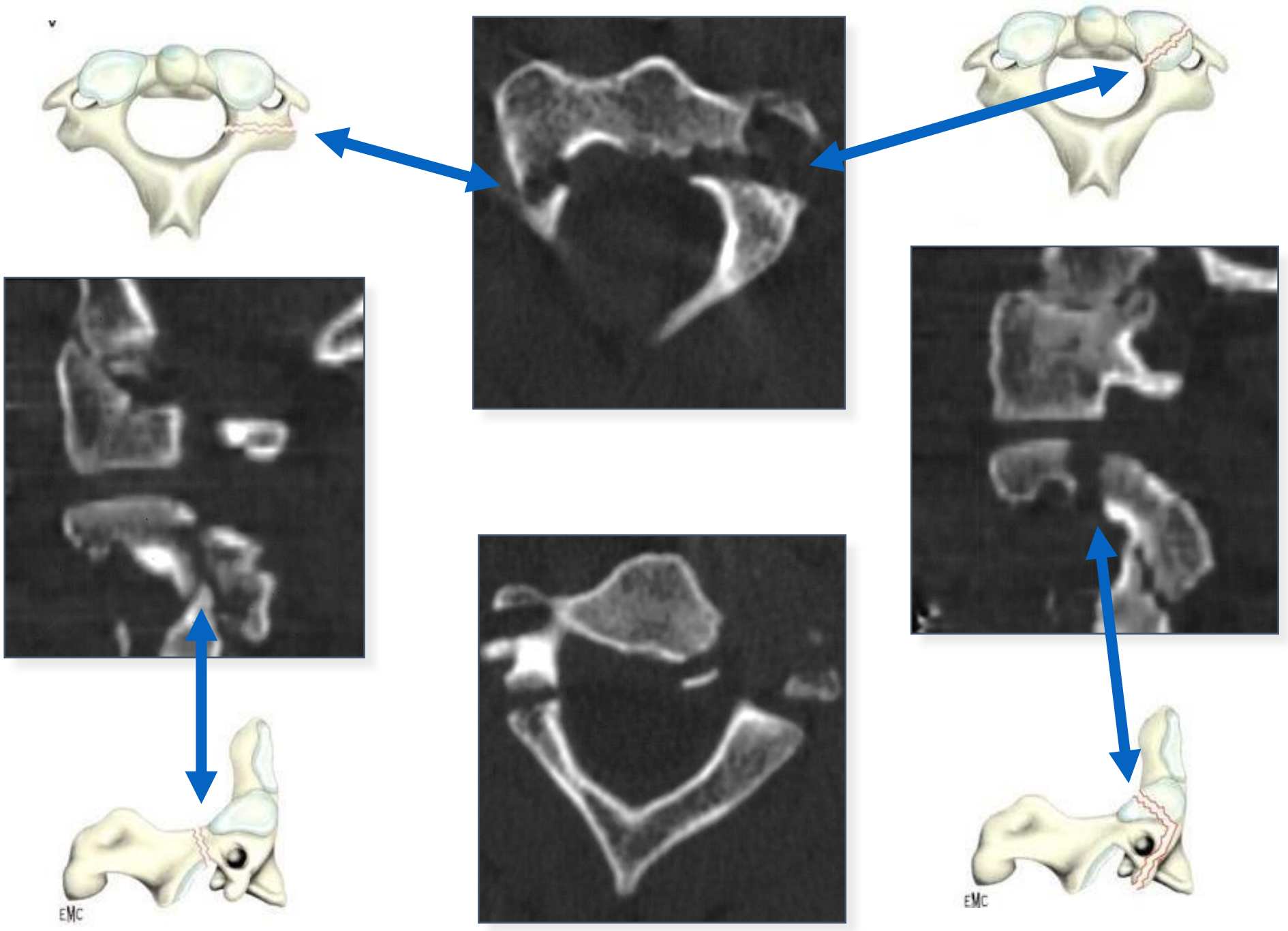


Type III

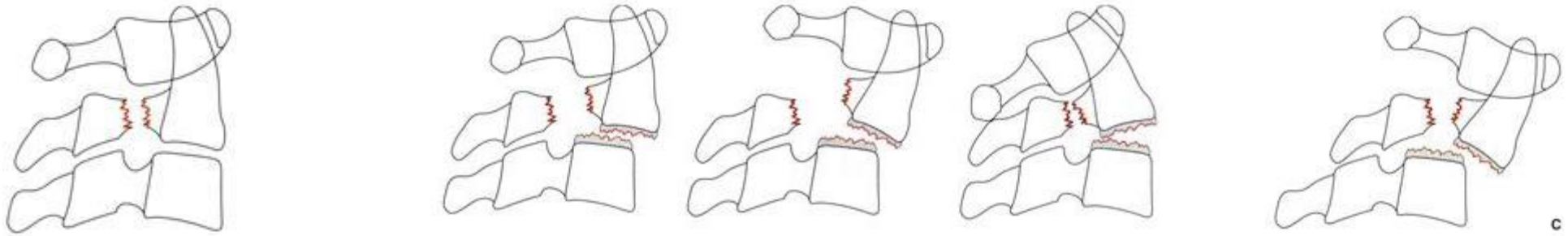


FRACTURE PARS INTERARTICULARIS C2 (« Hangman fracture »)




EMC
EMC

classification Effendi



Type I

Type II
Déplacement > 3 mm ou
angulation > 5°

Type III
Luxation zygapophysaire

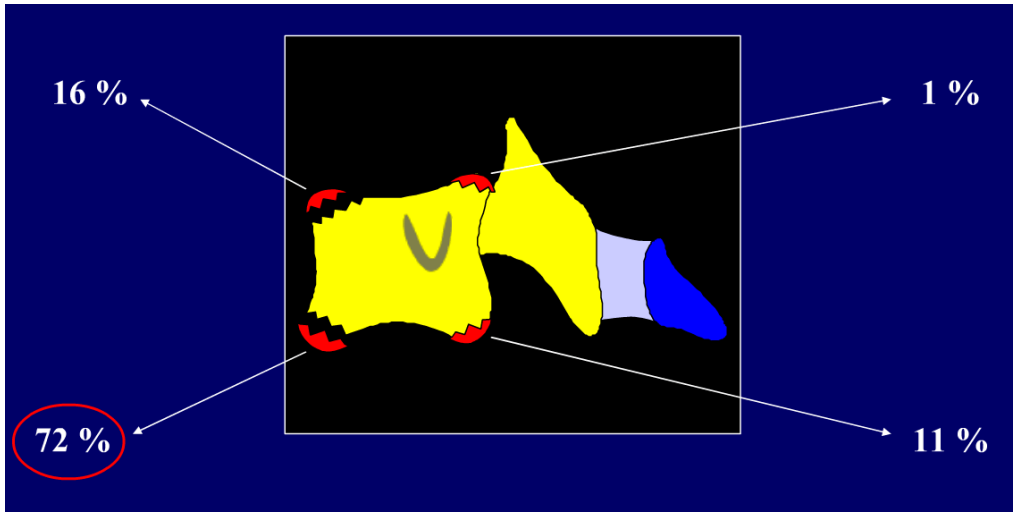
Critères d'instabilité:

1. Antélisthesis C2 > 3mm
2. Angulation C2 sur C3 > 5°
3. Luxation zygapophysaire C2-C3 associée
4. Fracture associée du processus odontoïde (type IV)

FRACTURE TEAR DROP EN EXTENSION

Il s'agit d'une fracture par avulsion du coin antero-inférieur de C2. Le fragment détaché de forme grossièrement triangulaire, n'excède pas le tiers de la longueur du plateau.

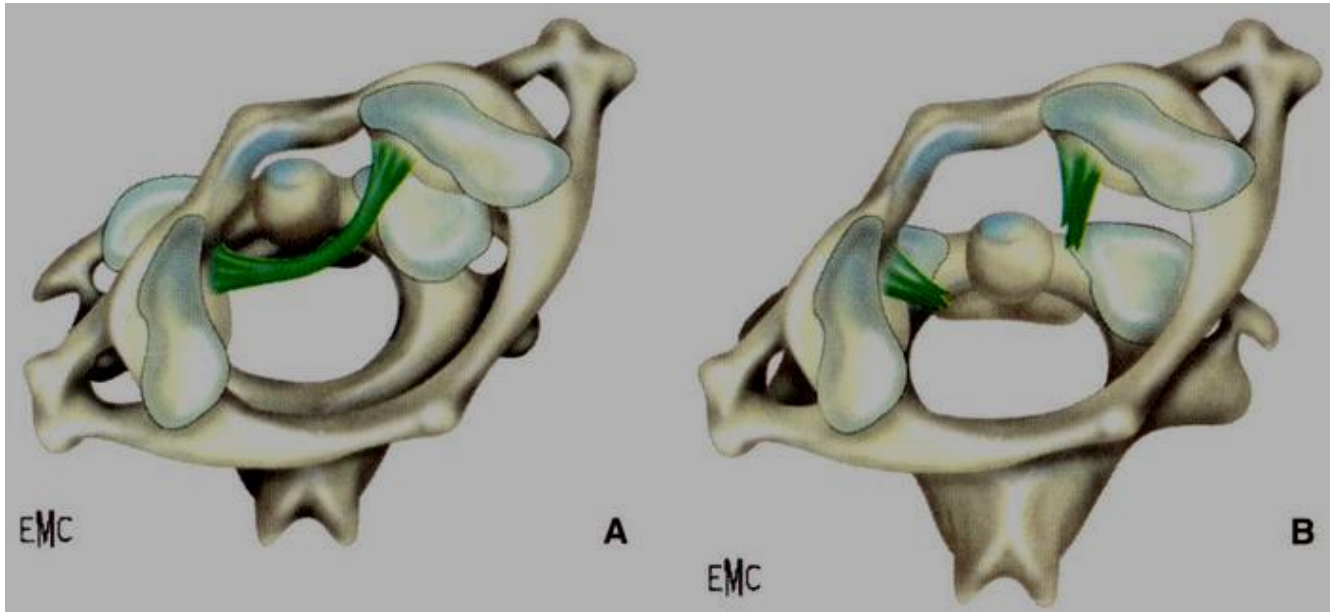
Diagnostic différentiel fracture coin antéro inférieur du corps vertébral



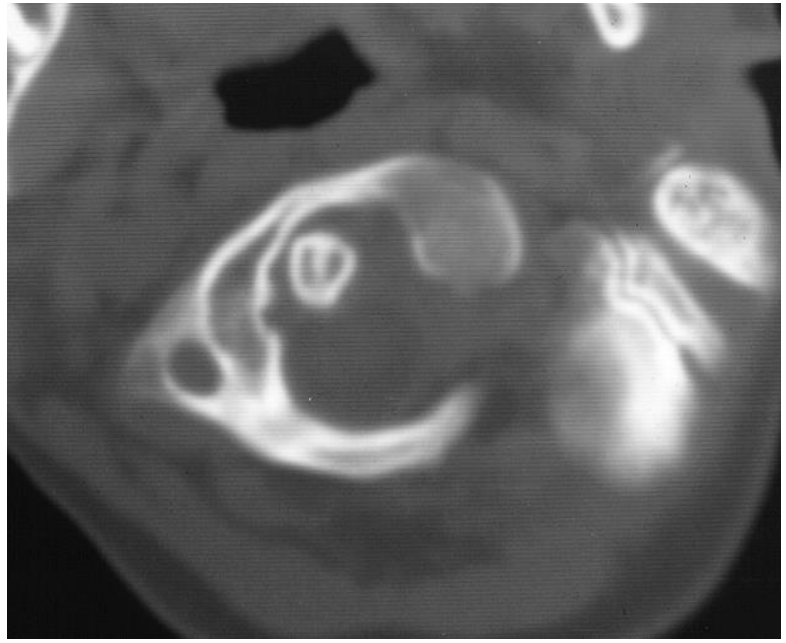
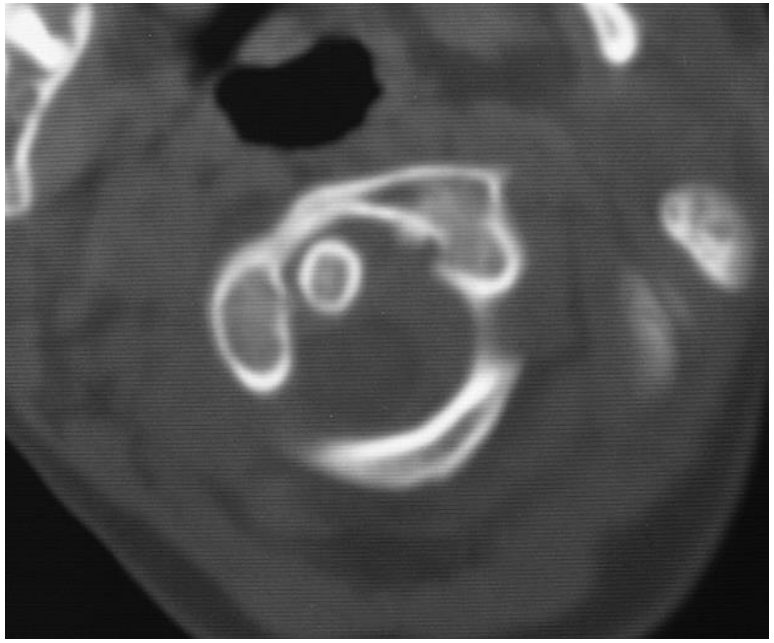
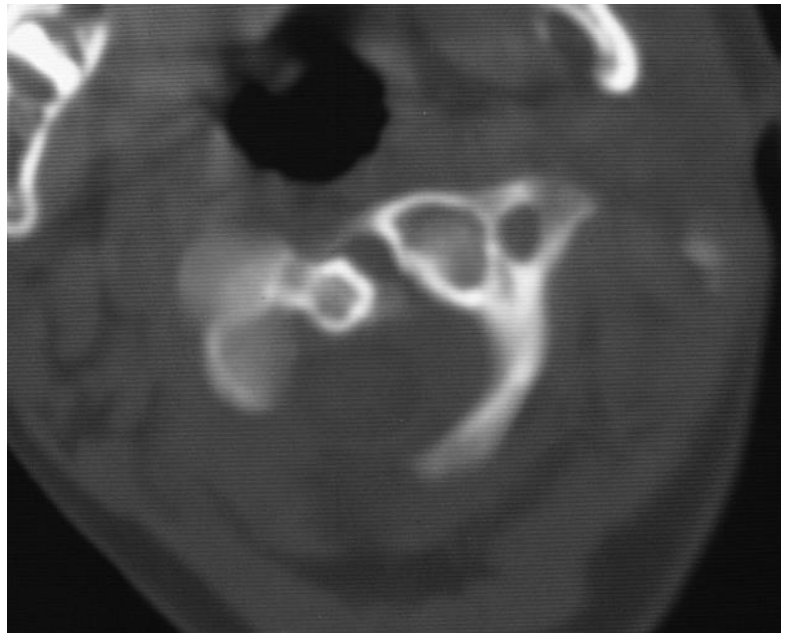
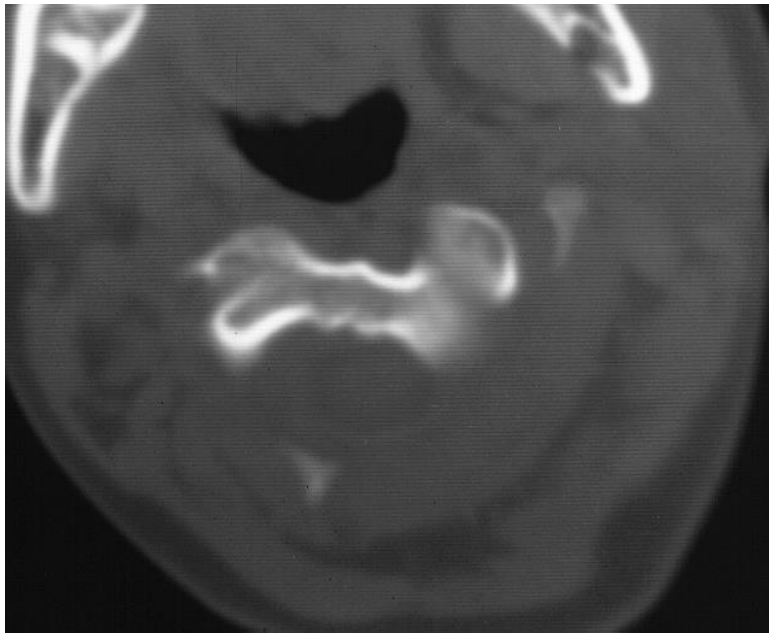
1. Entorse maligne en hyperextension
2. Tear drop en hyperextension
3. Avulsion du listel chez l'adolescent
4. Tear drop en flexion

FRACTURE DE JEFFERSON OU FRACTURE DIVERGENTE DES MASSES LATERALES C1

LUXATION-SUBLUXATION ROTATOIRE C1-C2

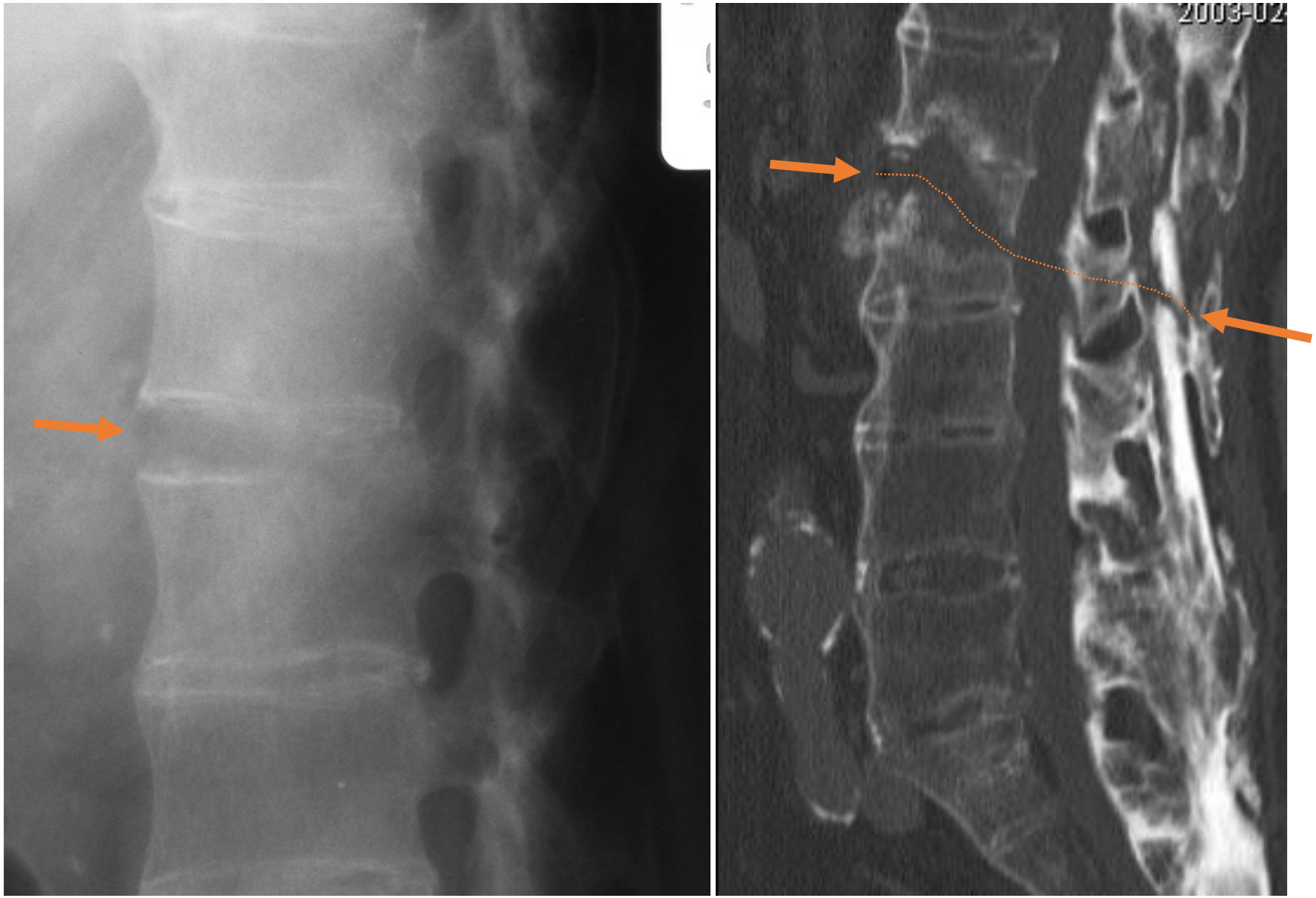


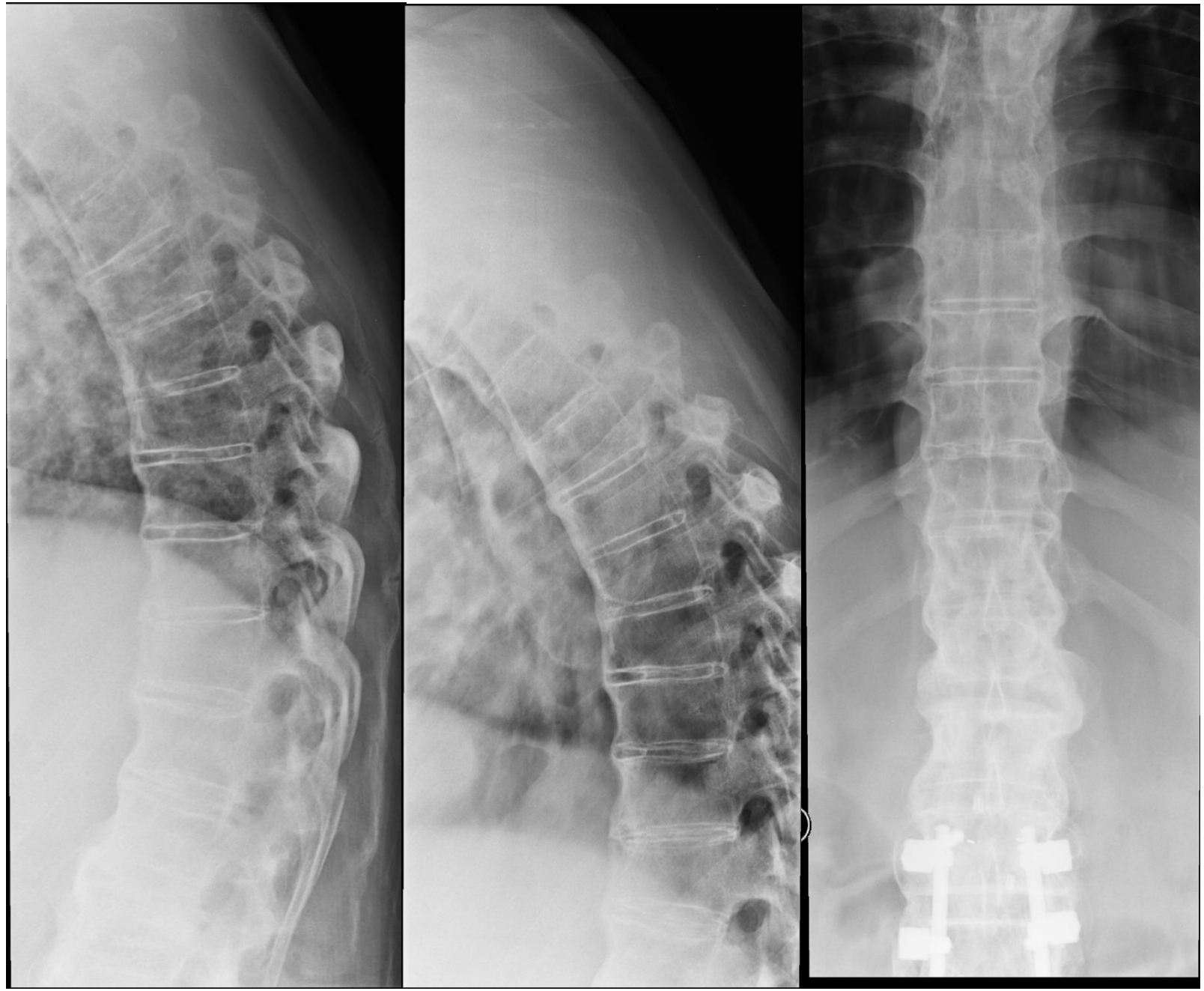
Elle touche surtout les enfants et les adolescents en raison de la laxité ligamentaire physiologique à cet âge, de l'orientation horizontale des facettes articulaires et de l'association fréquente aux infections ORL (syndrome de Grisel)

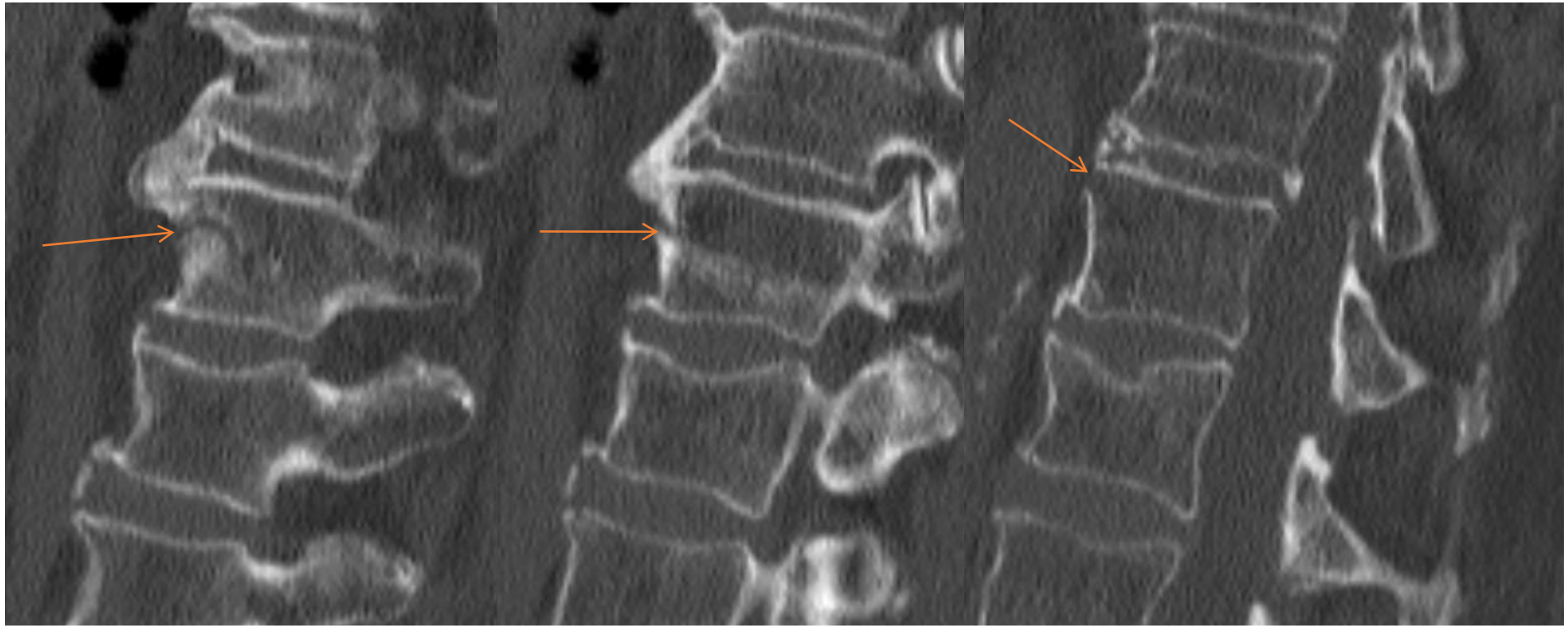
Le patient se présente avec une position dite du «rouge-gorge» associant une rotation de la tête d’un côté et une inclinaison du cou vers le côté opposé.

9. FRACTURES SUR RACHIS ANKYLOSE


2003-02



Dlr +++, RX -, DISH



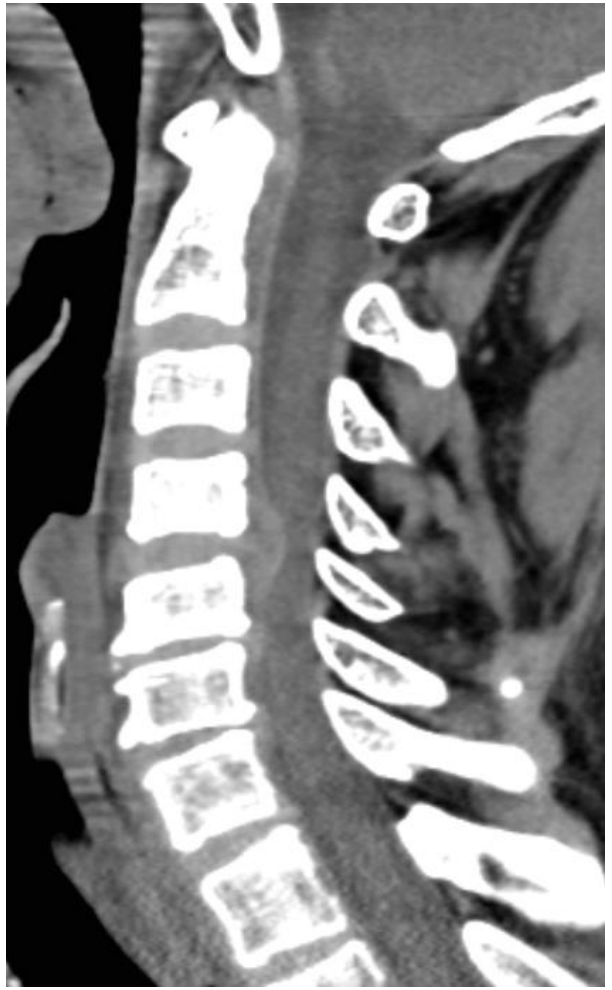
Pas toujours facile à voir sur le CT!

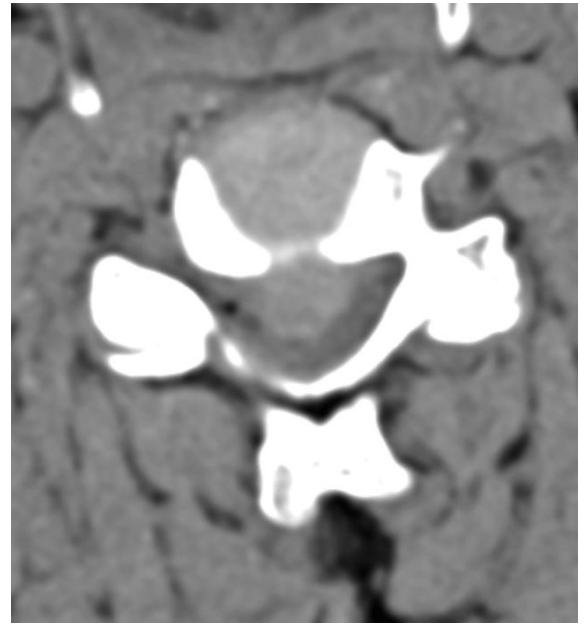
10. En réalisant un examen TDM du rachis cervical , je ne dois regarder que les fenêtres osseuses.

- VRAI
- FAUX

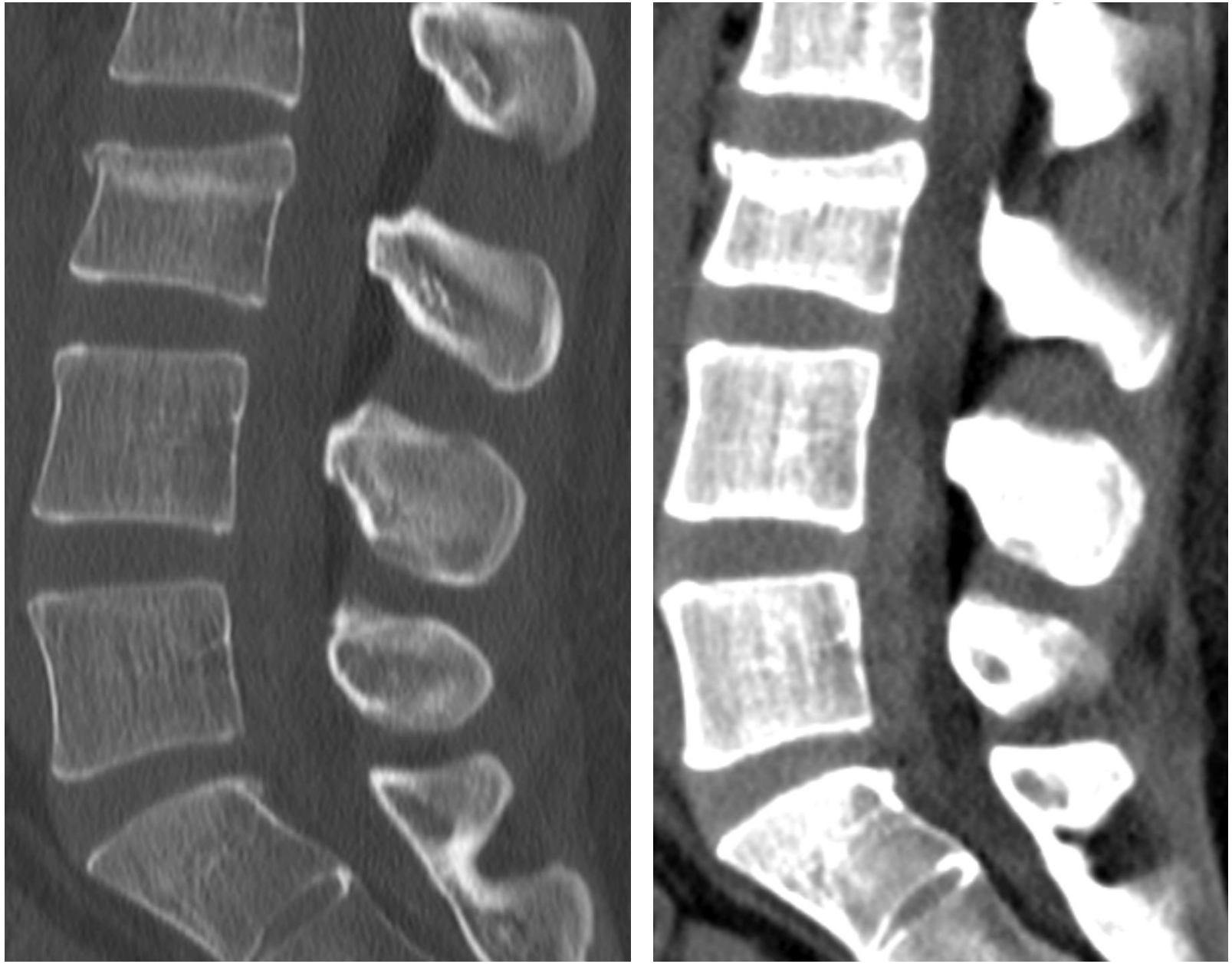
En réalisant un examen TDM du rachis cervical , je ne dois regarder que les fenêtres osseuses

- FAUX

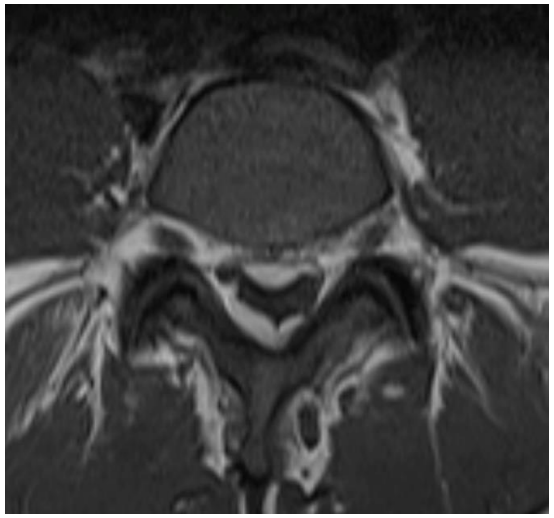


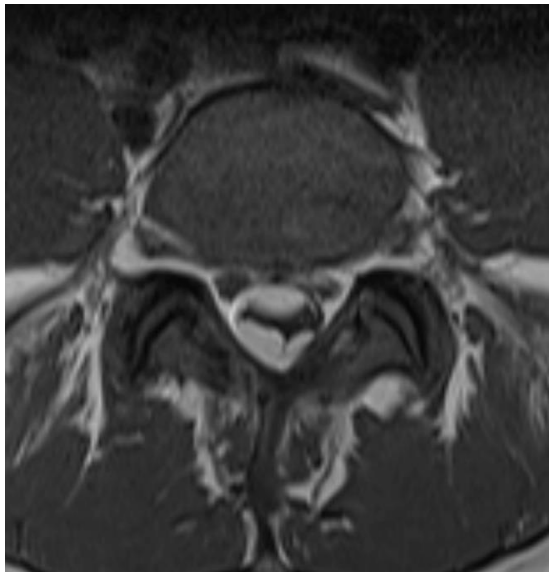


Ne pas méconnaître la protrusion ou extrusion discale!



Hématome sous-dural





« étoile mercedes »