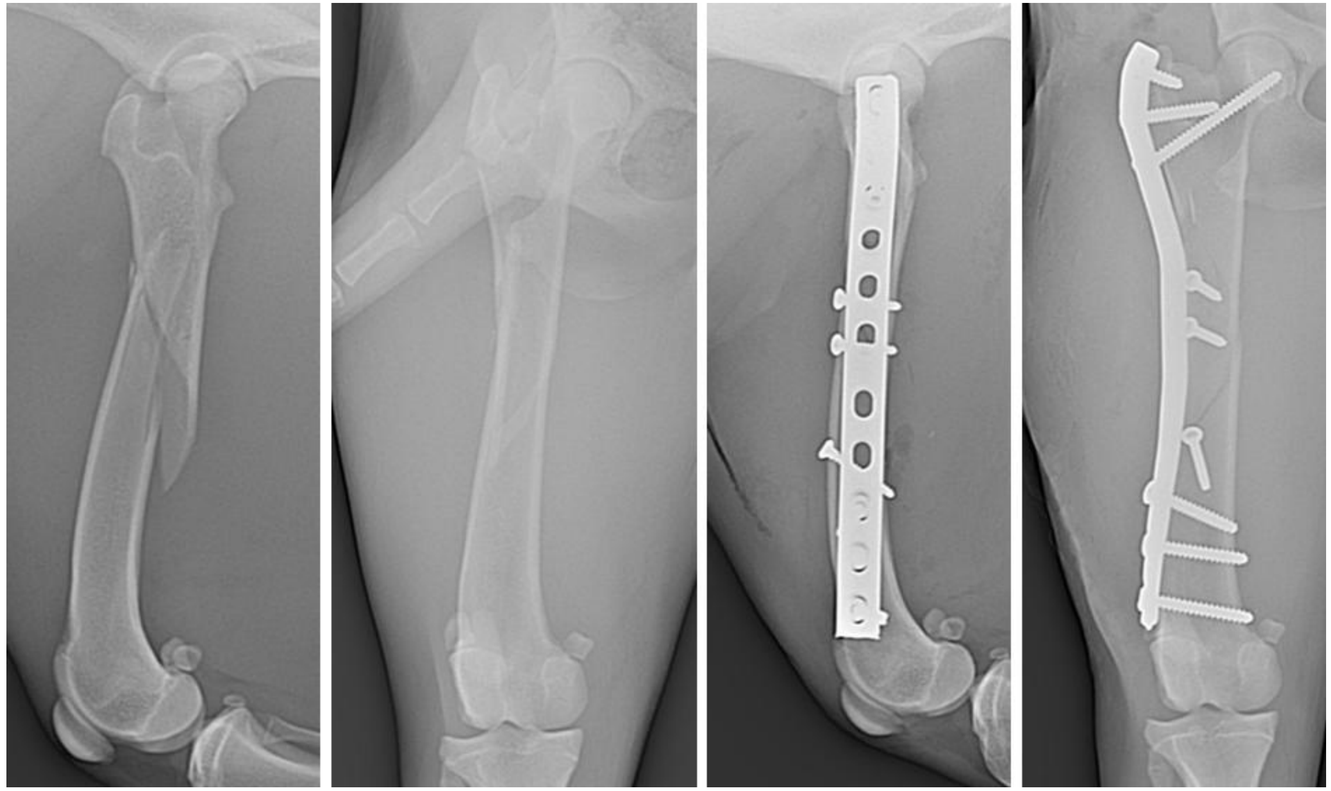
Фрактури на бедрена кост

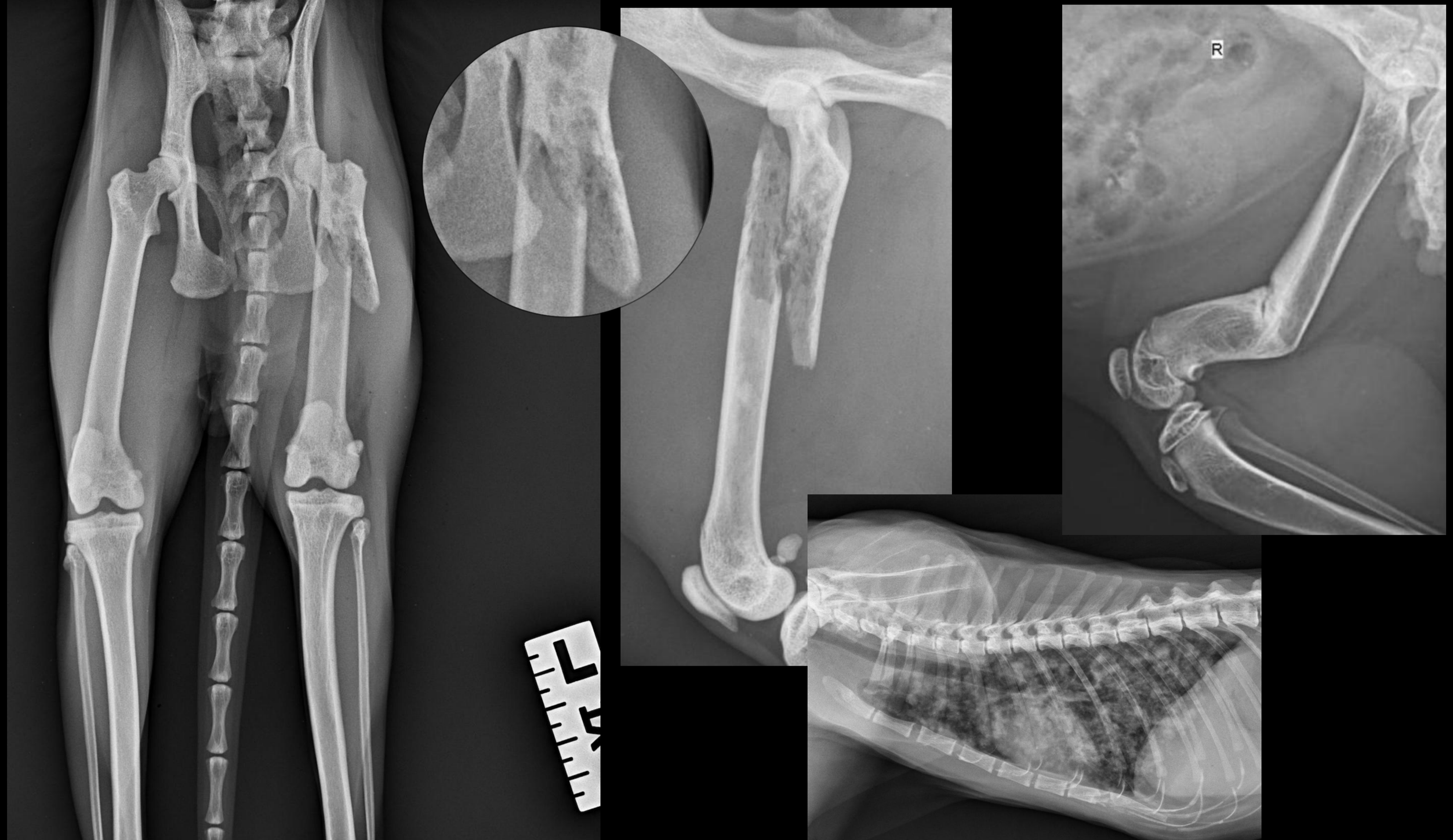


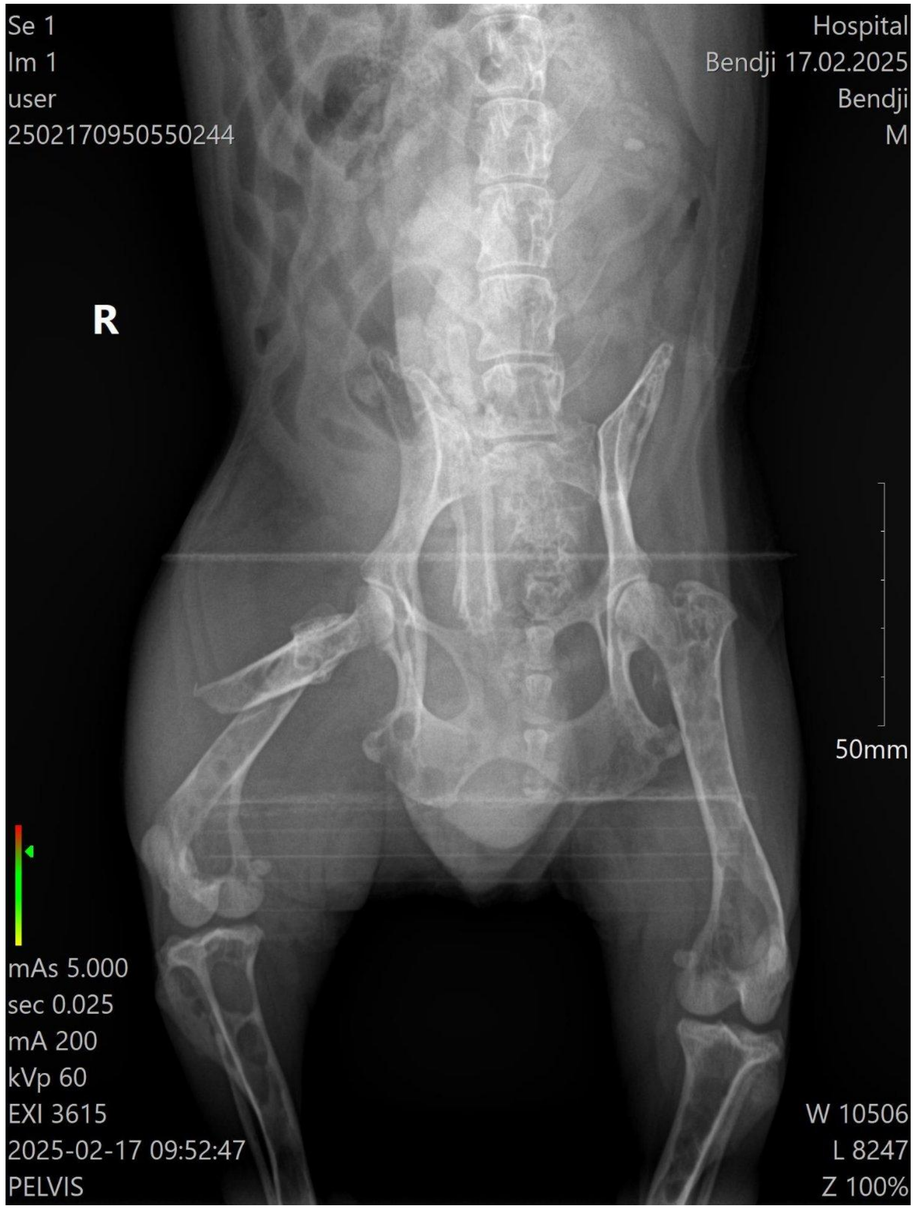
Цели на презентацията

- Характерни морфологични особености и биомеханична характеристика на диафизарните бедрени фрактури
- Класифициране на фрактурите на бедрената кост и често наблюдавани фрактурни конфигурации
- Описание на достъпите до бедрената кост
- Принципи на фиксация, в зависимост от типа и локализация на фрактурната линия при диафизарни фрактури

Инцидентност

- Най-висока честота сред всички дълги кости - 45% (Unger et al.,1990)
- 40% фрагментирани (T. Braden et al., 1995)
- Високо-енергиен тип травма
- Съпътстващи увреждания
- Открити фрактури - 9-10% (Ralph P. Millard)


R


Se 1
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user
2502170950550244
Hospital
Bendji 17.02.2025
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M
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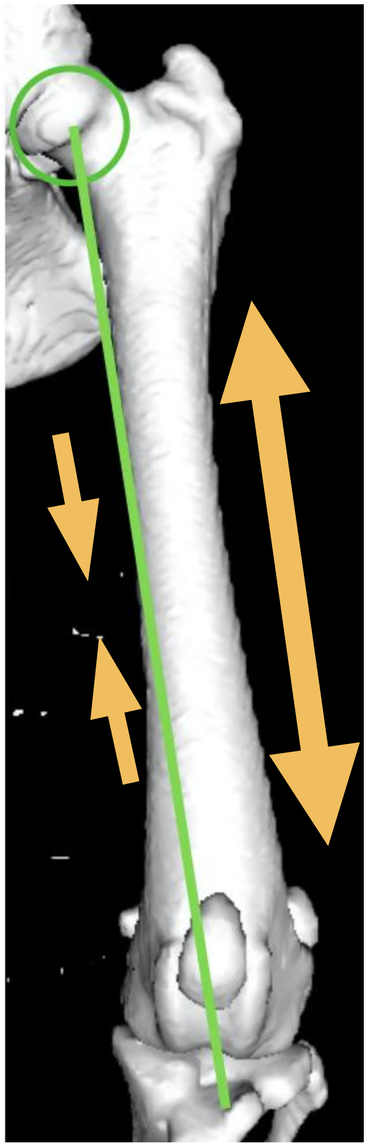
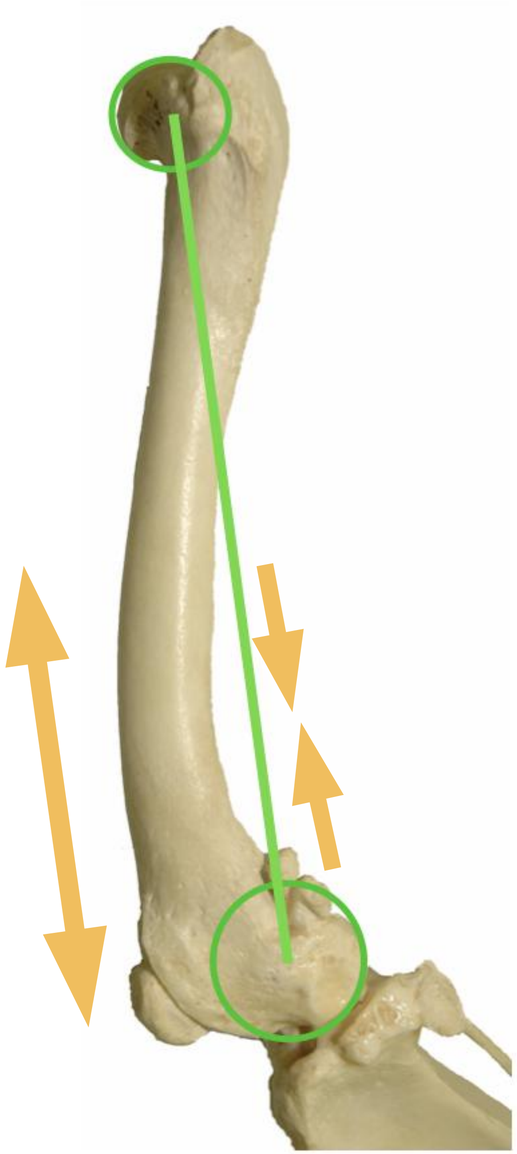
50mm
mAs 5.000
sec 0.025
mA 200
kVp 60
EXI 3615
2025-02-17 09:52:47
PELVIS
W 10506
L 8247
Z 100%

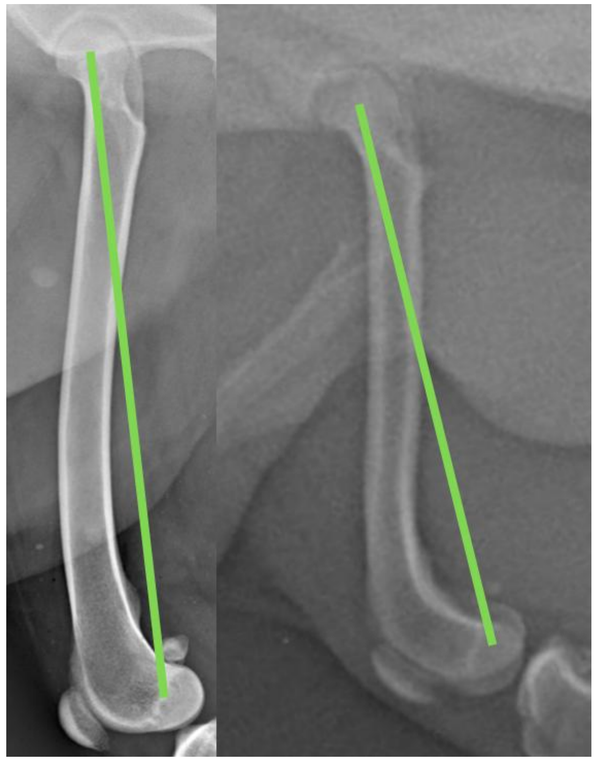

R

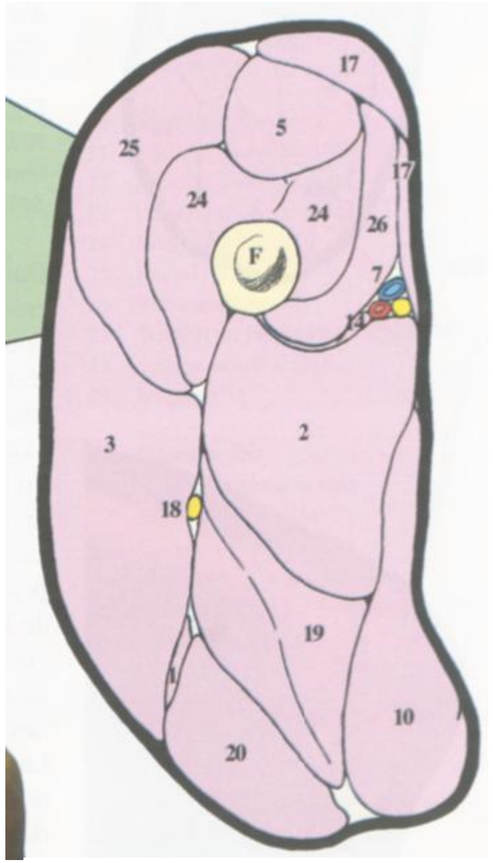
Анатомия

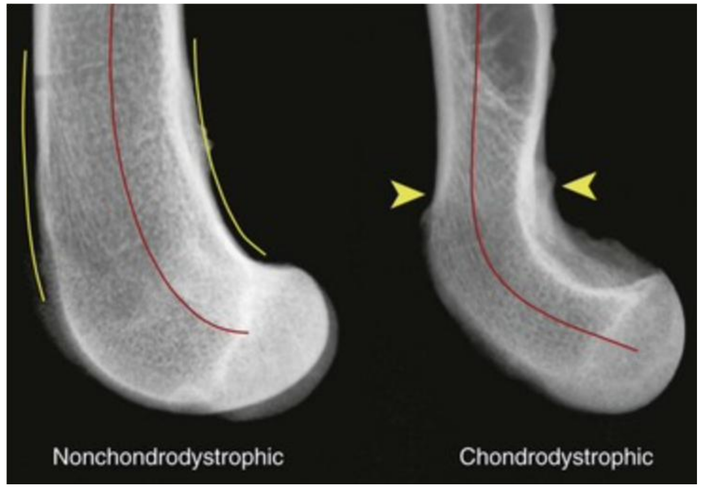
- Ексцентрично натоварване - тензионна/компресивна страна

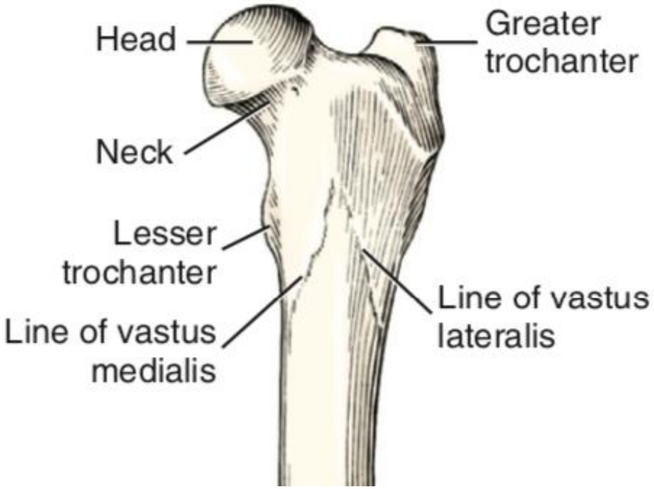


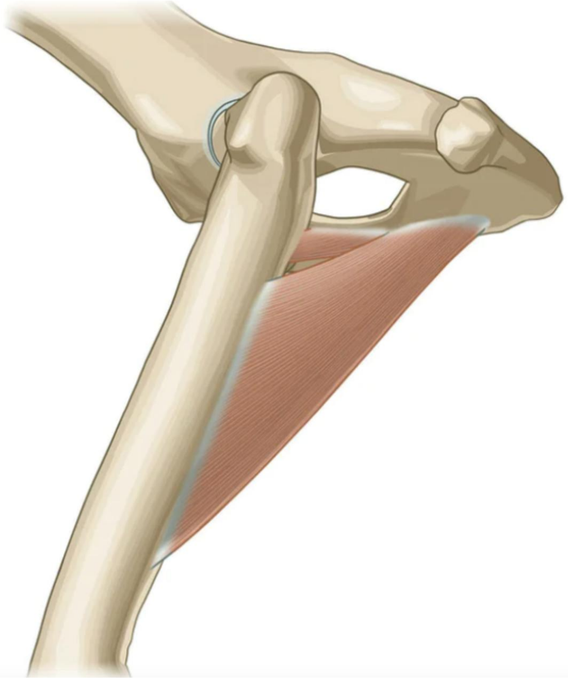




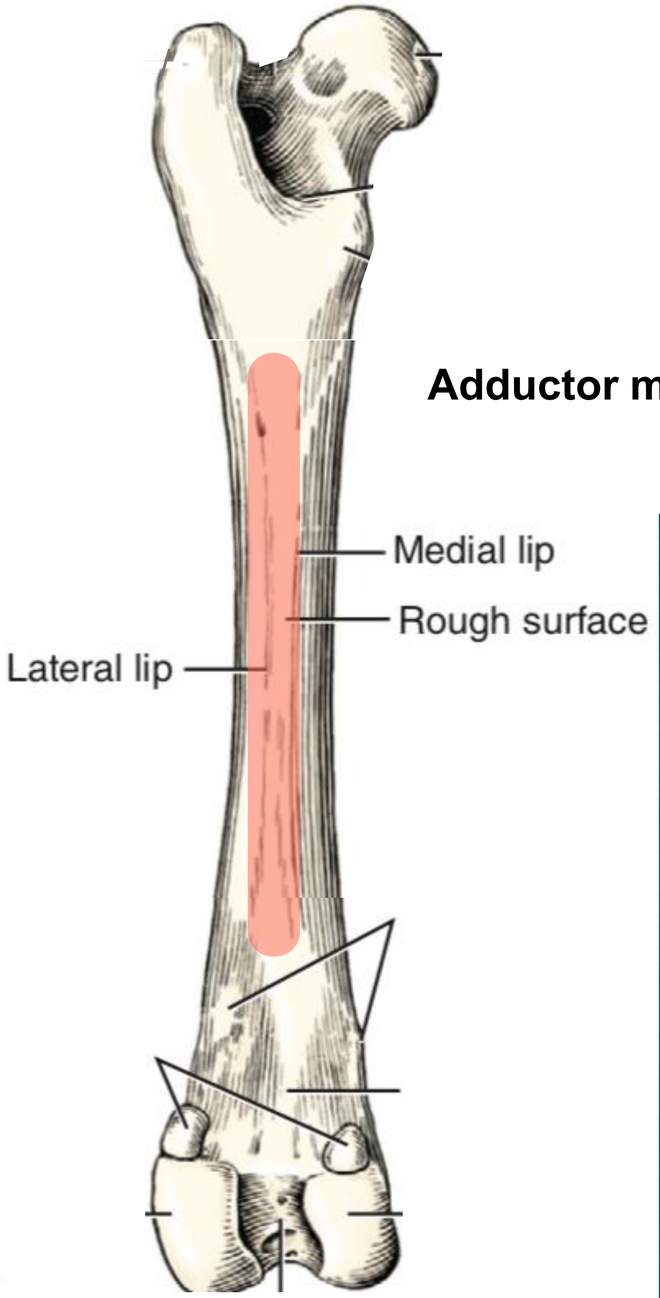


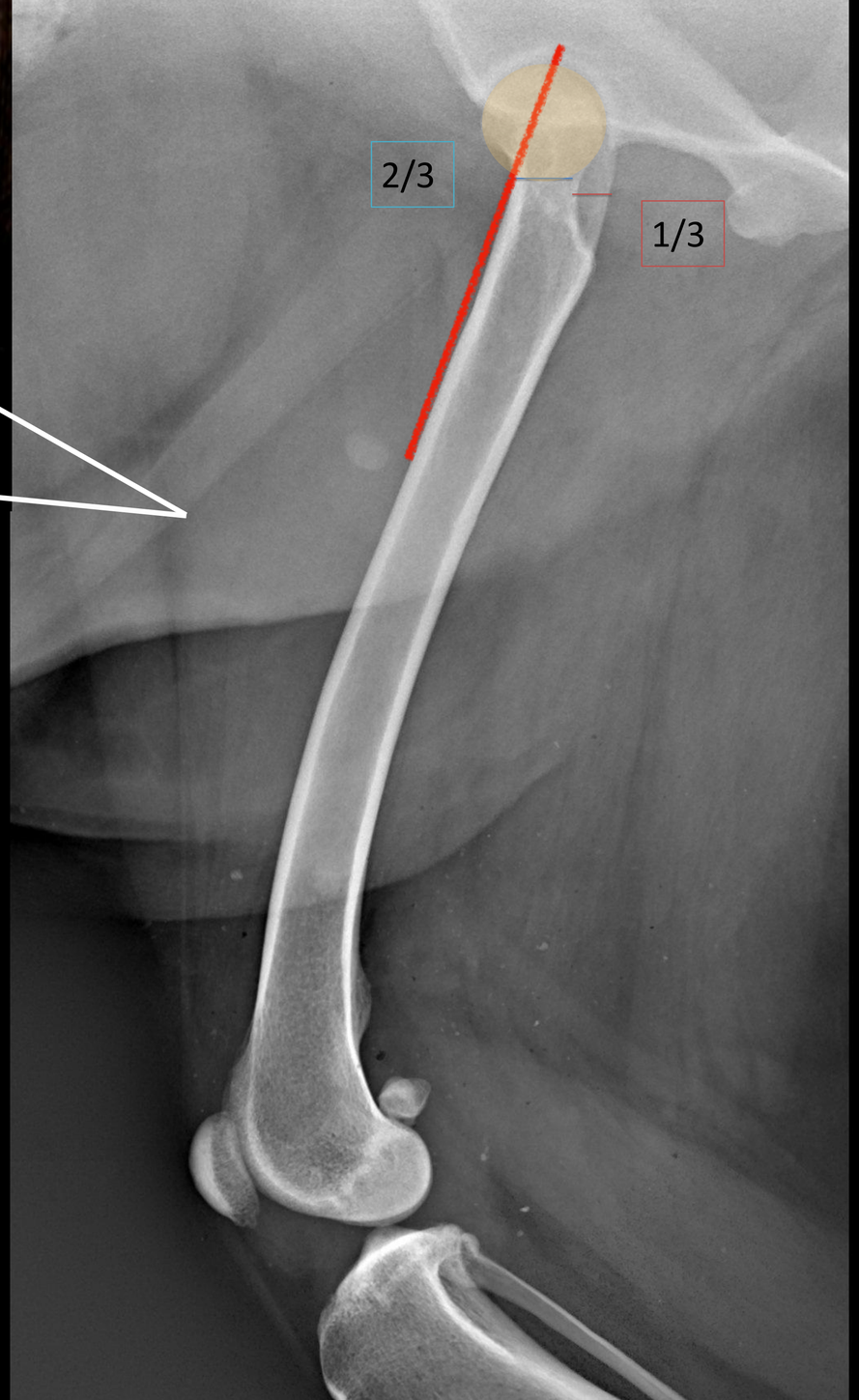






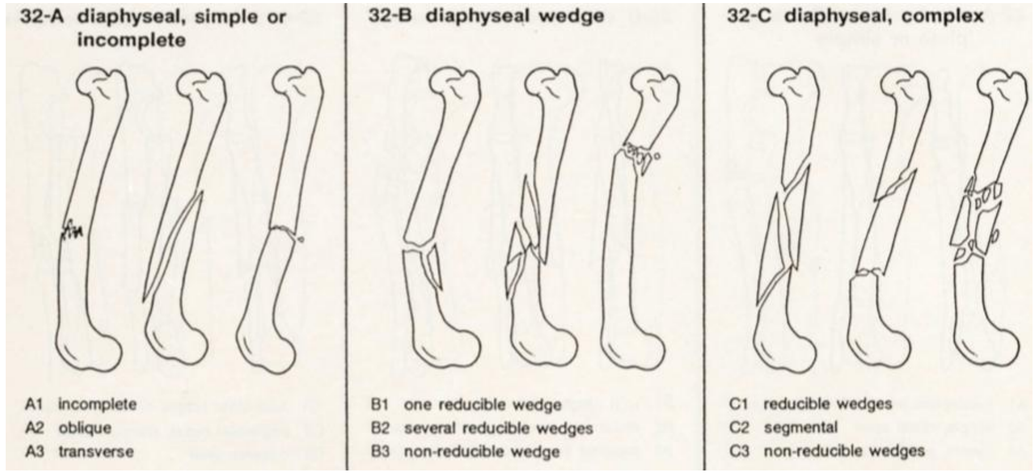
Adductor magnus



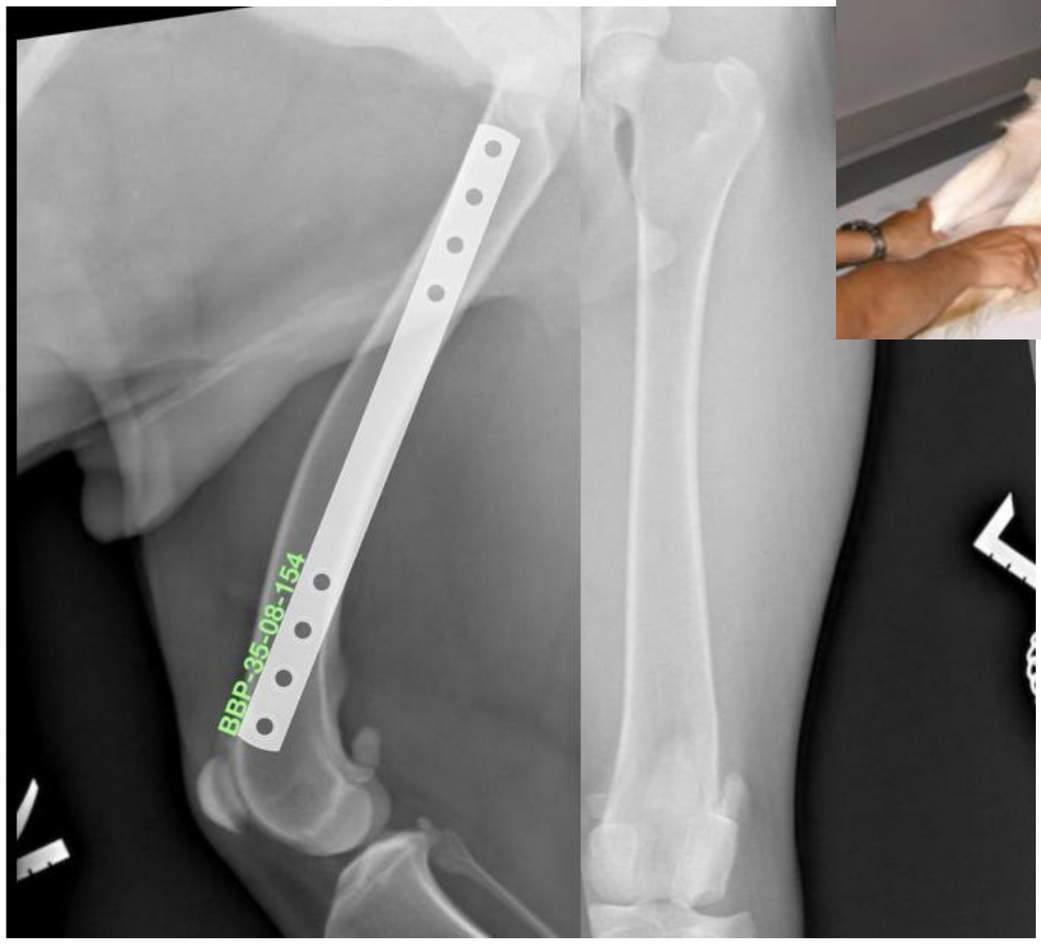

2/3
1/3

Класификация

- Тип фрактурна линия - напречна, късо-наклонена, дълго-наклонена, спирална, сегментална, бътерфлай фрагмент, фрагментирана
- Femur - 3
- Позиция на фрактурната линия - 1 = проксимална, 2 = диафиза, 3 = дистална
- Фрактурна линия - A = единична , B = клин или бътерфлай, C = множествена
- Сложност и прогноза - 1 = добра, 2 = умерена, 3 = лоша



Clasification of fractures in long bones in the dog and cat: Introduction and clinical application, M. Unger et all, VCOT, 1990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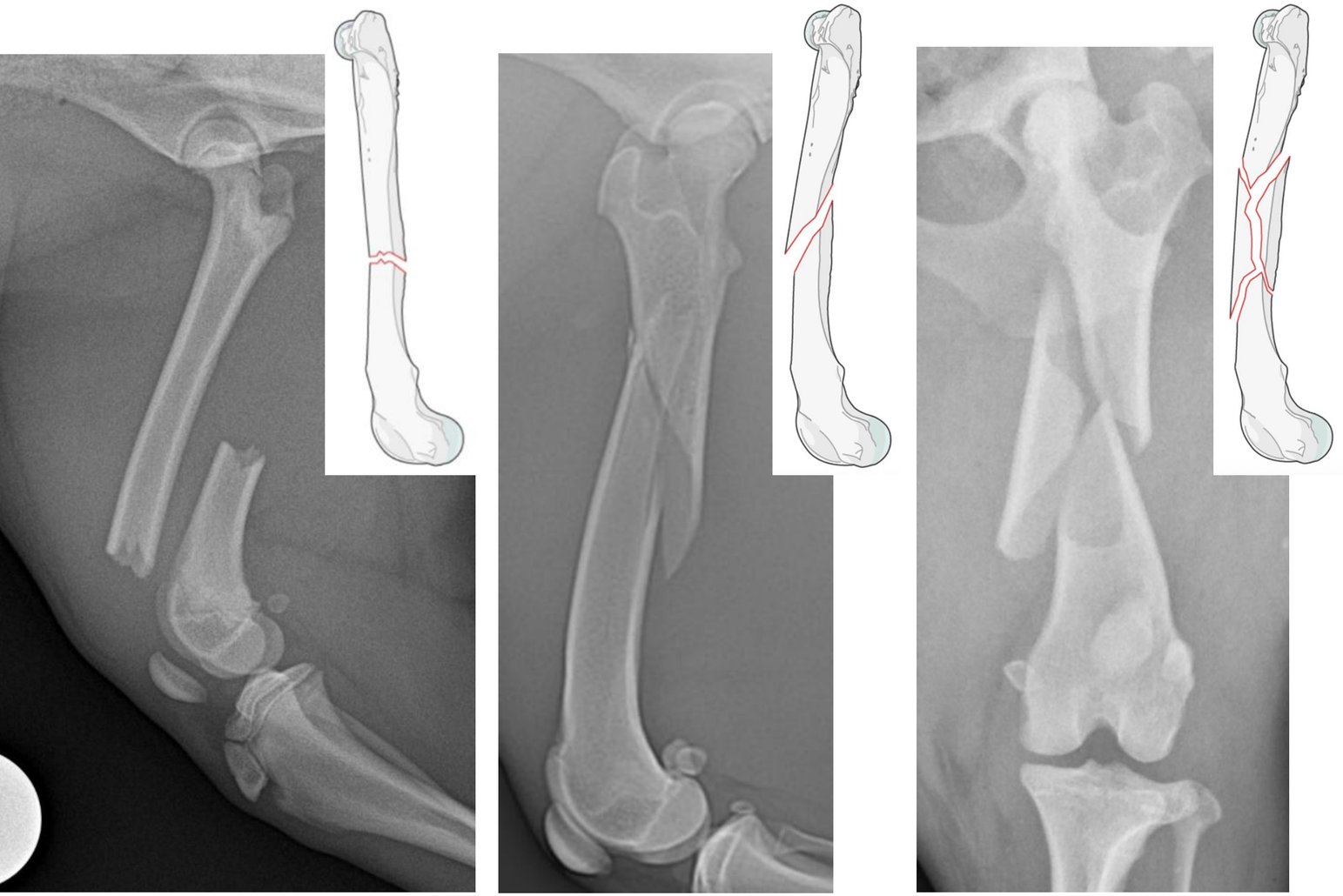
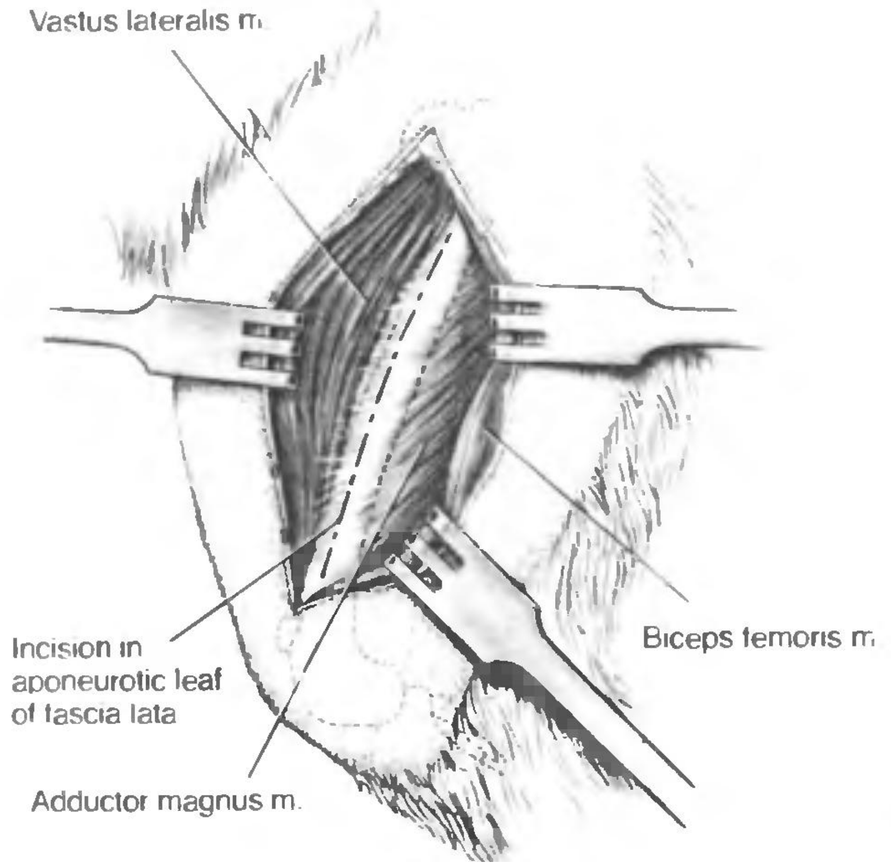
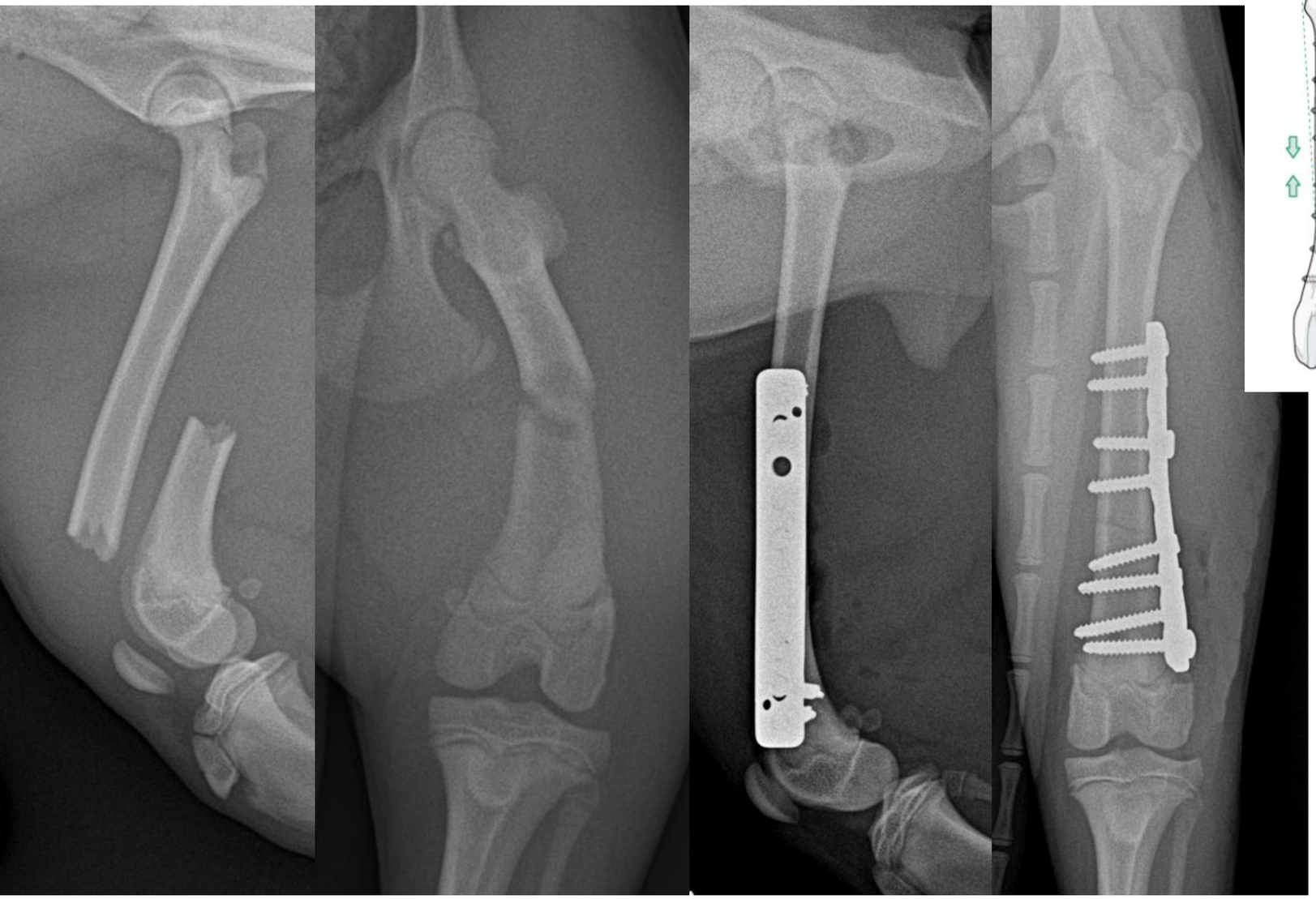
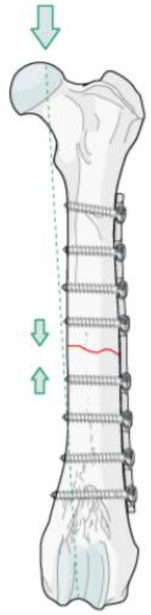


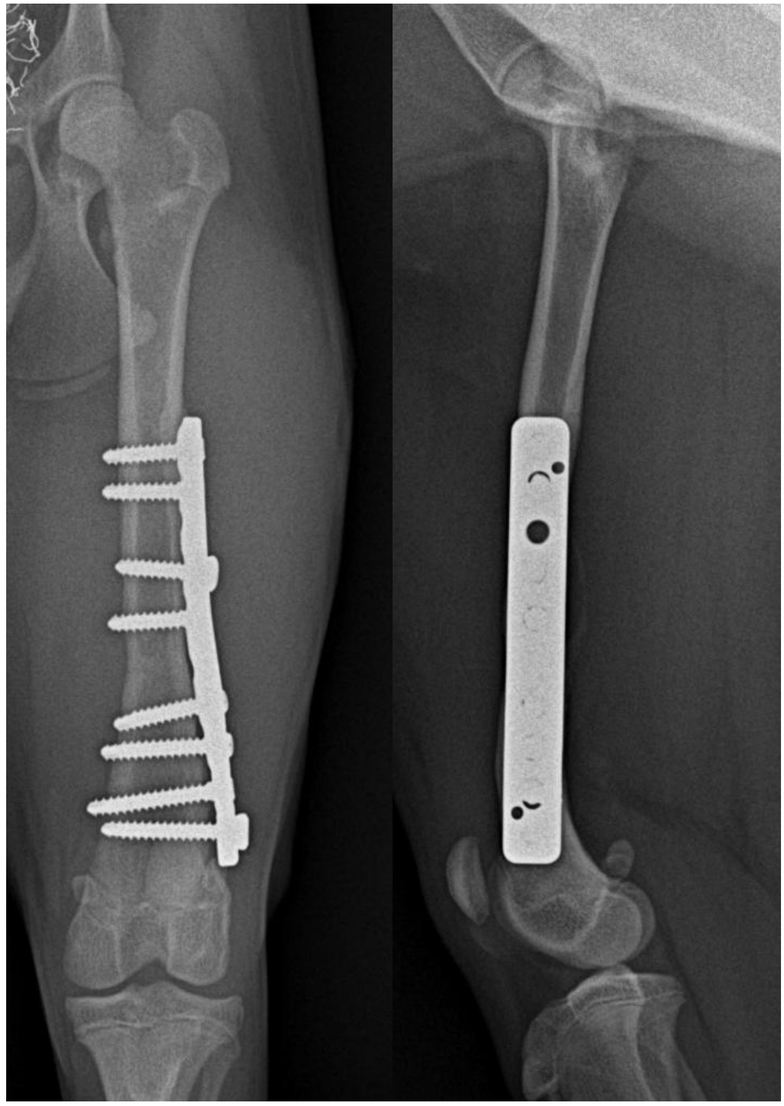
Фрактурна линия, която може анатомично да се реконструира



- Открит латерален достъп
- Директна репозиция на фрагментите
- Абсолютна стабилност във фрактурата линия

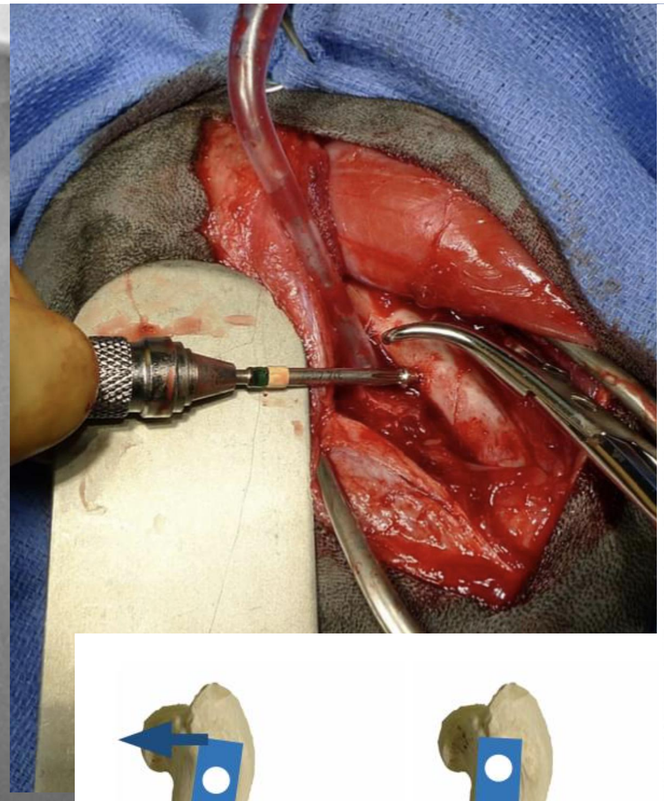






2.7mm LC DCP

+30d

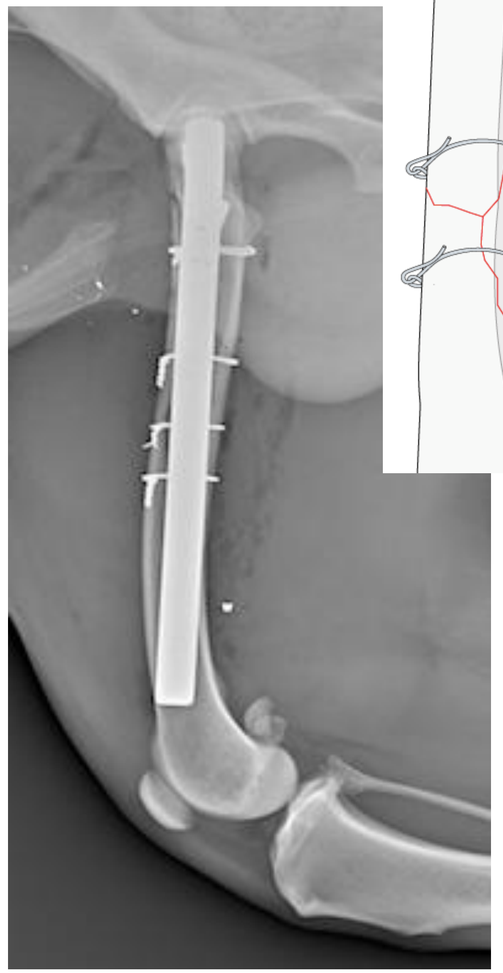
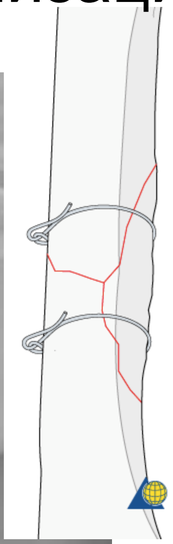


Courtesy Frédéric Sanspoux

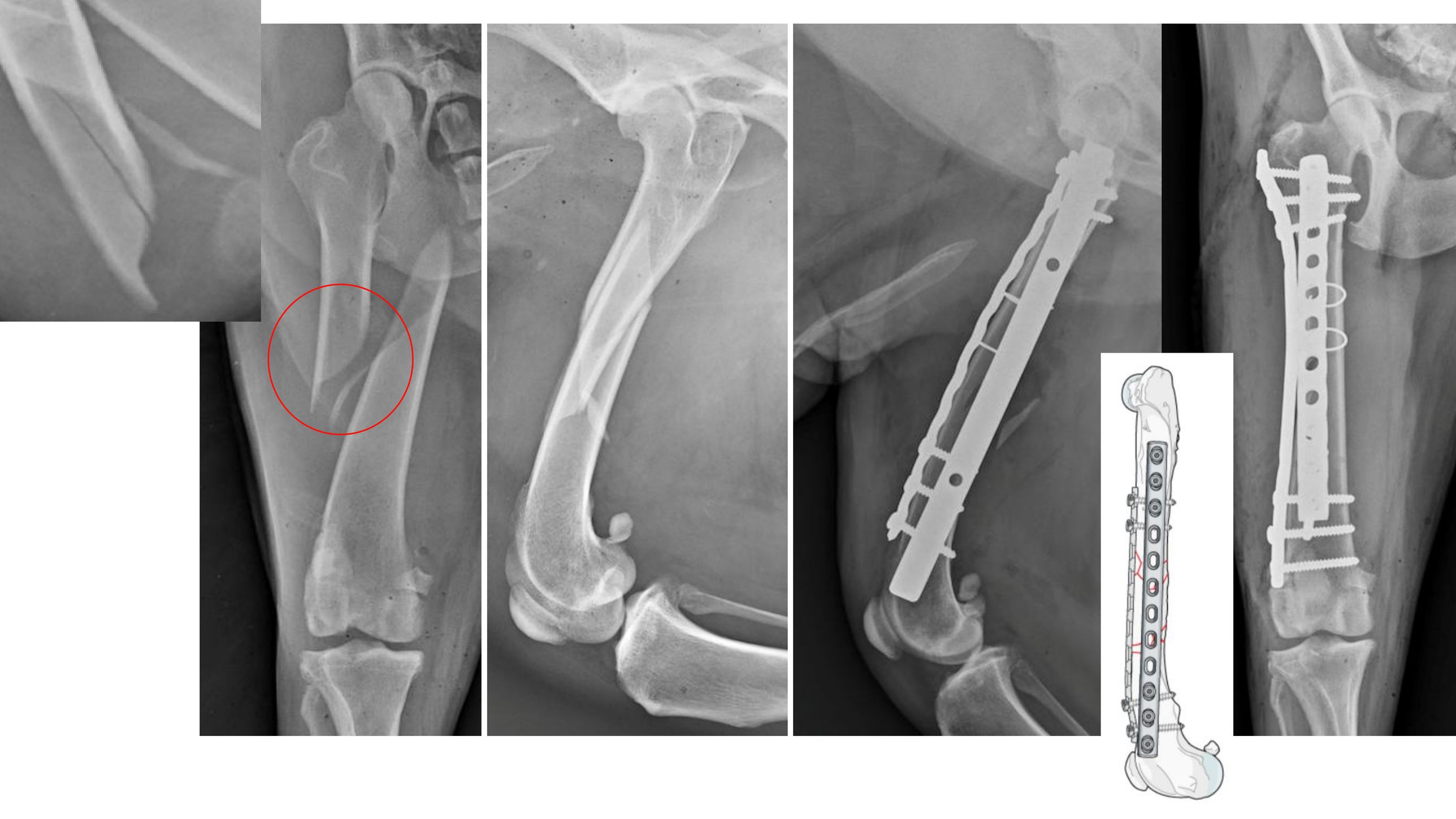
Редуцируем клиновиден фрагмент

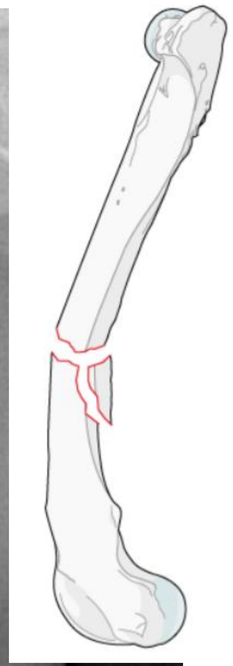
- Допълнителни фисурни линии
- Анатомична реконструкция със серклажи и пластина от неутрализационен тип

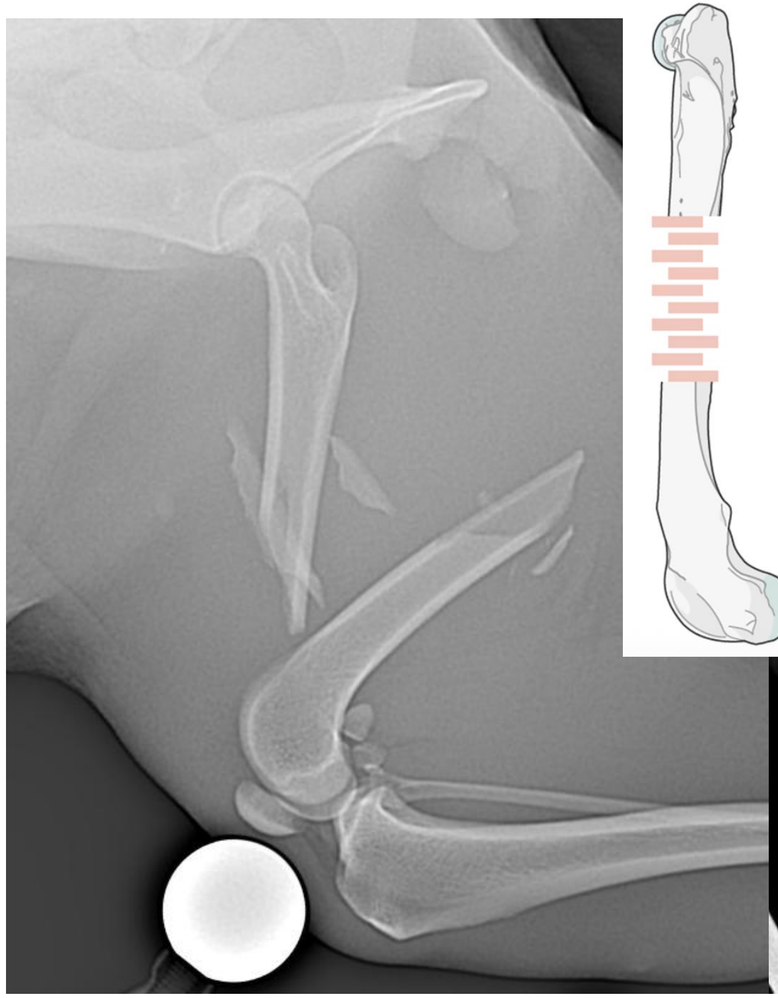


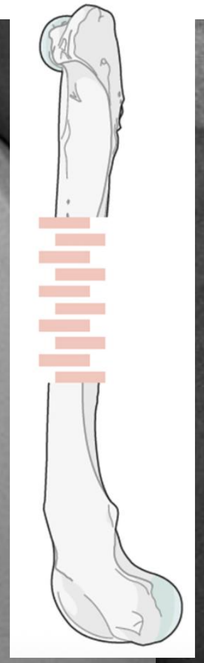




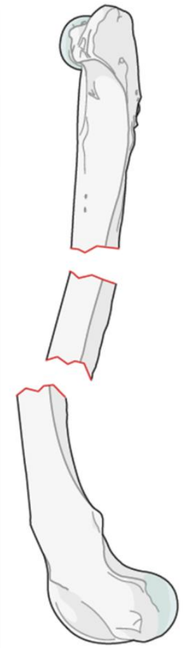
Редуцируем бътерфлай фрагмент





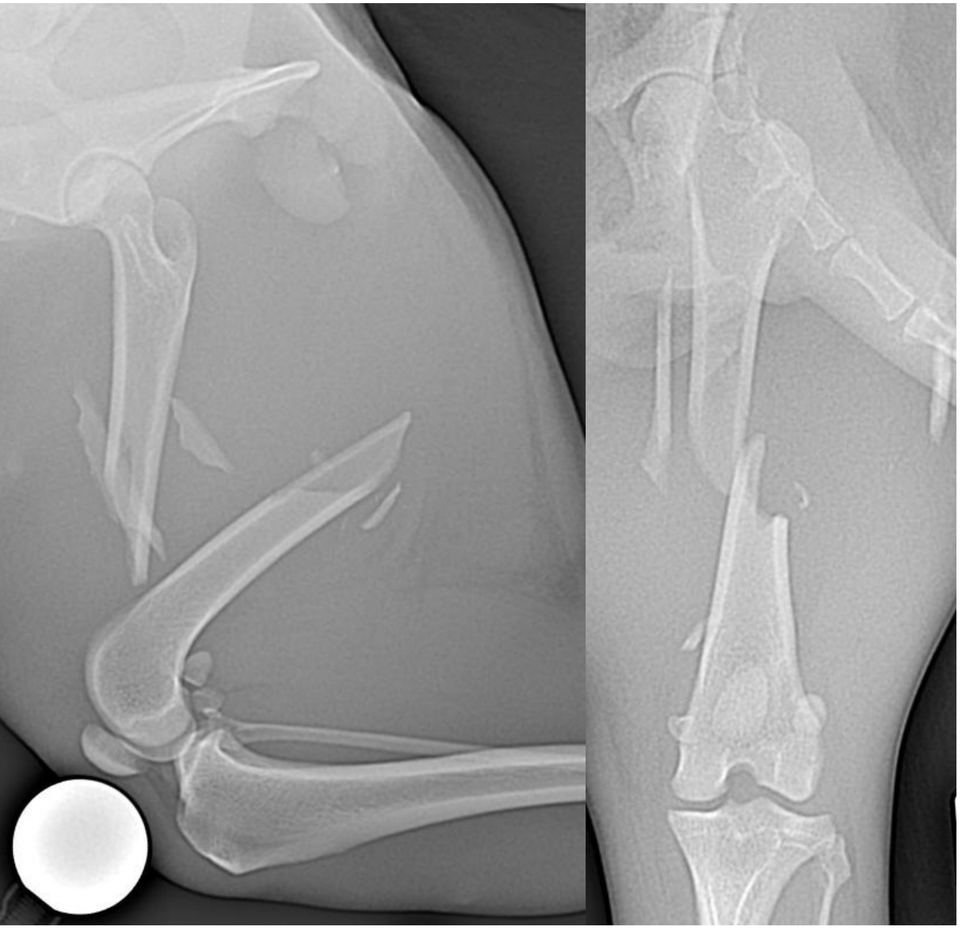


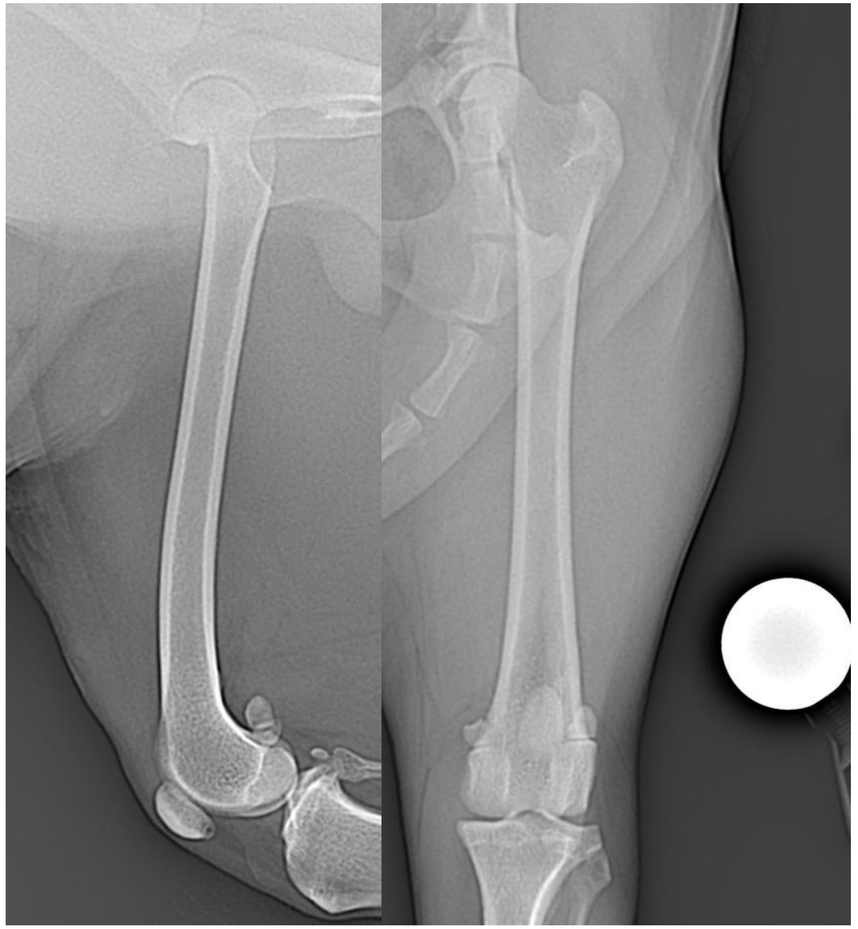


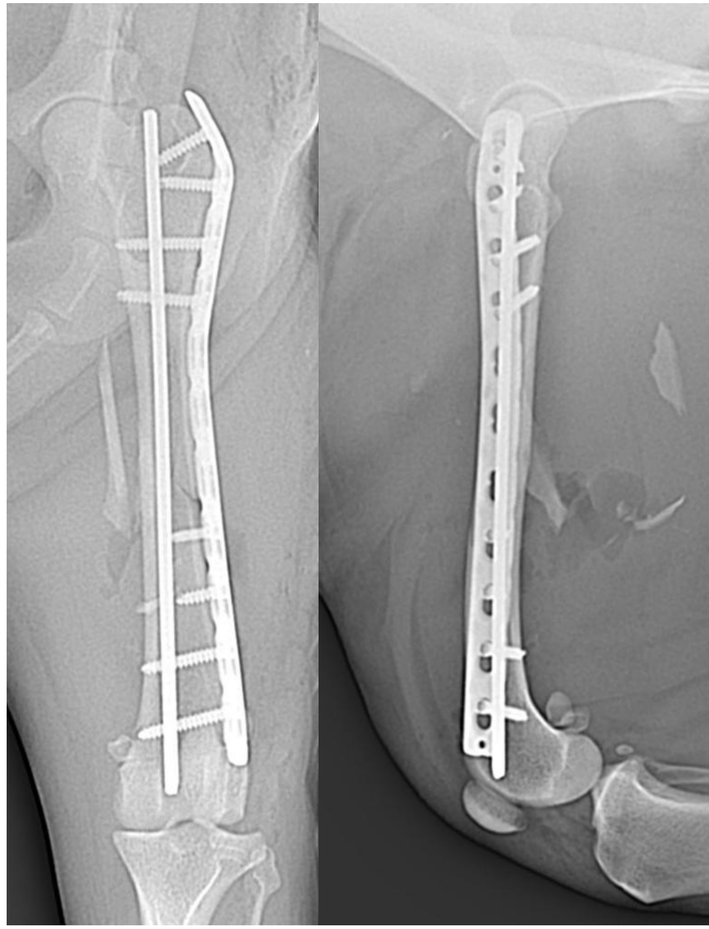


Фрактурна линия, която не подлежи на анатомична реконструкция

- Биологичен подход с по-малко инвазивен достъп
- Индиректна репозиция на фрагментите, алиниране на големите фрагменти и оптимално възстановяване дължината на костта
- Релативна стабилност



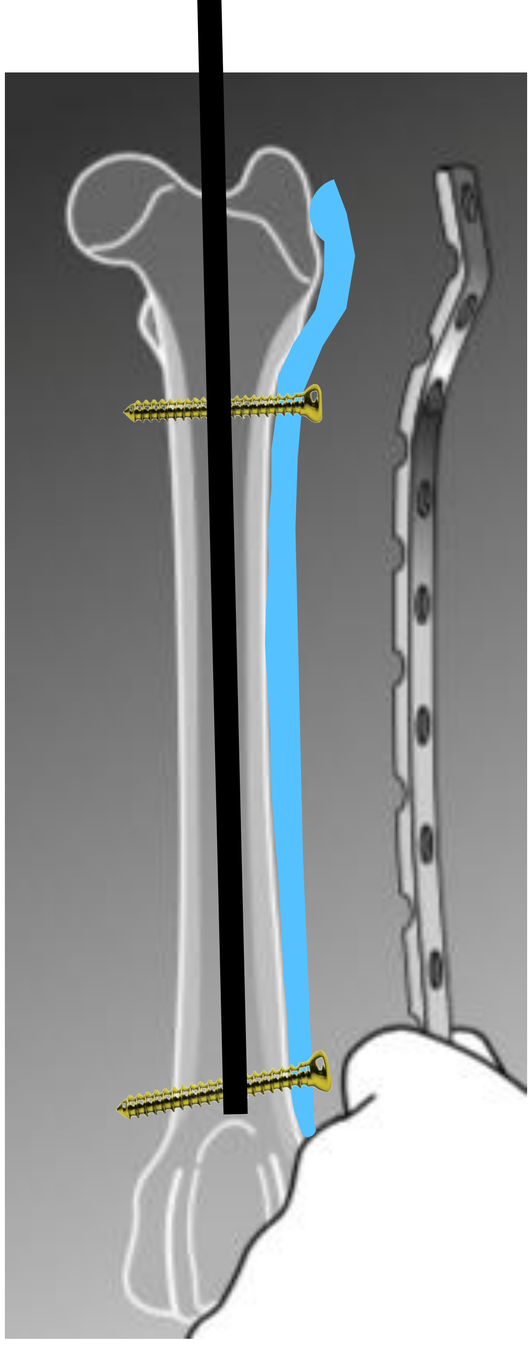


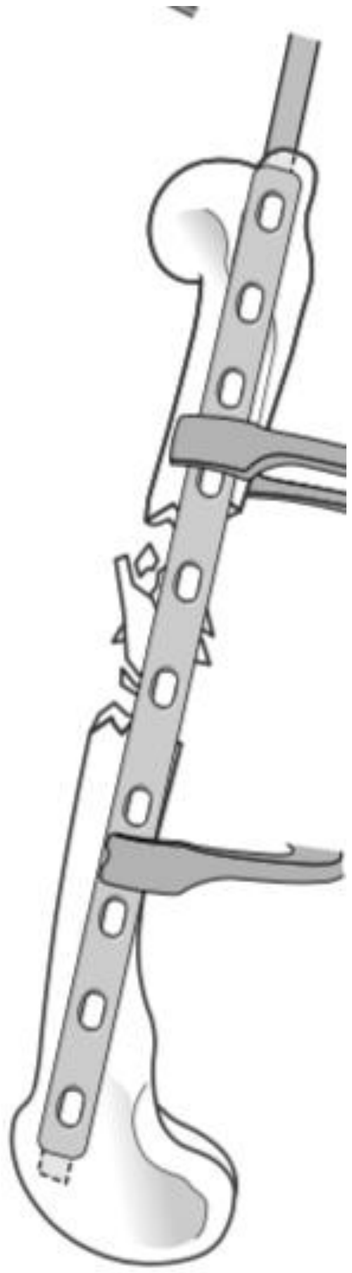


The Evolution of Femoral Shaft Plating Technique

October 1998 · Clinical Orthopaedics and Related R... 354(354):195-208

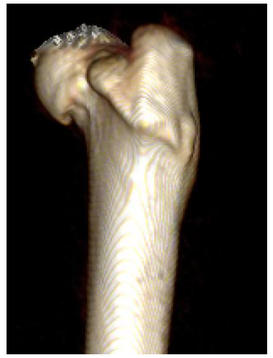

75.0 kV
5.00 mAs
Bones3



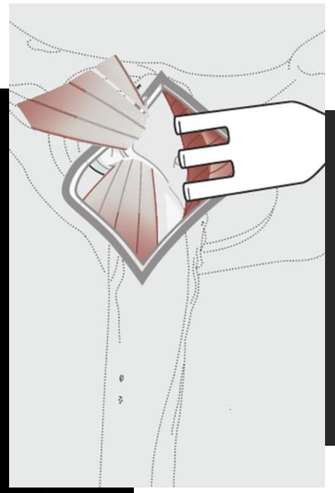


If in doubt - nail it!

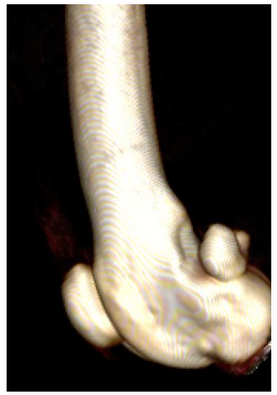
Интраоперативна оценка на торзионно алиниране на костта



Антеверзия

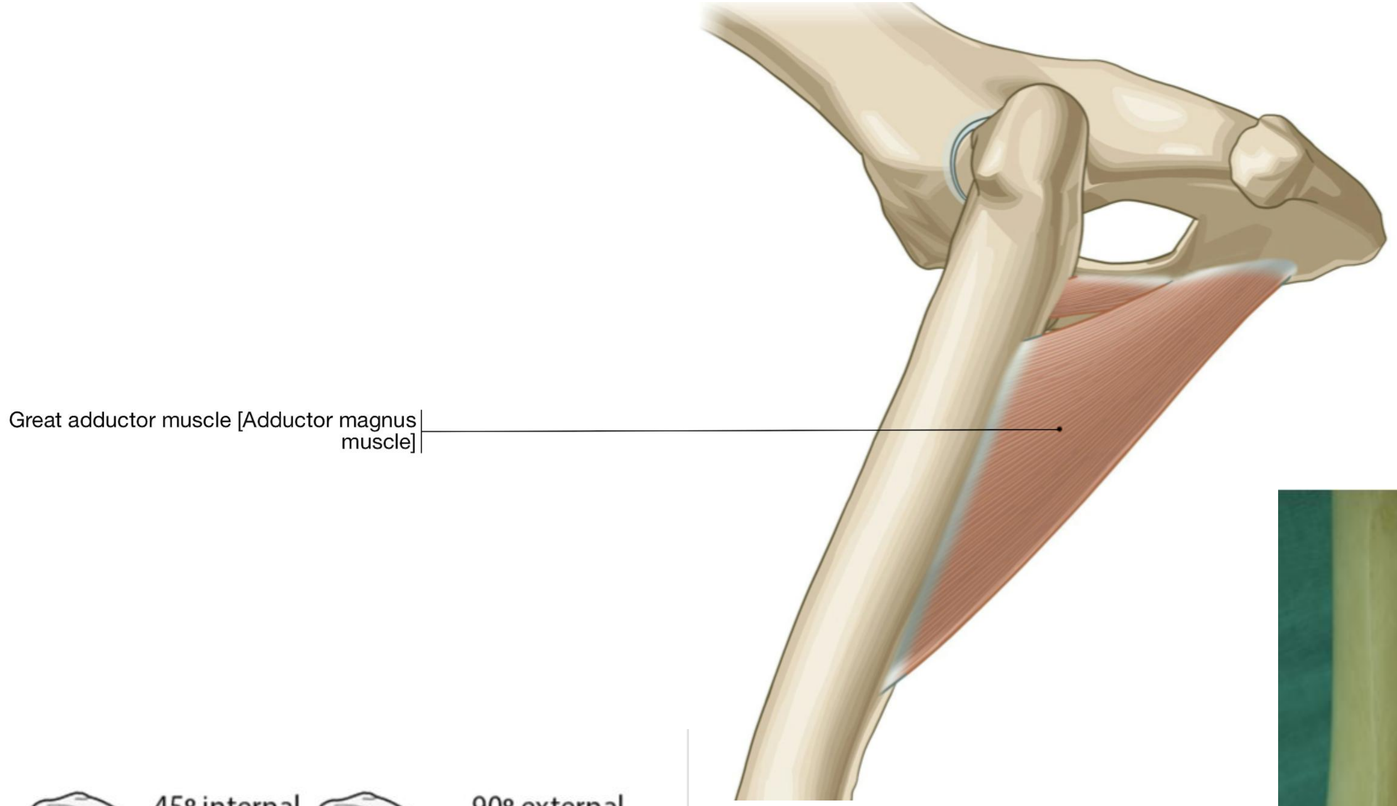


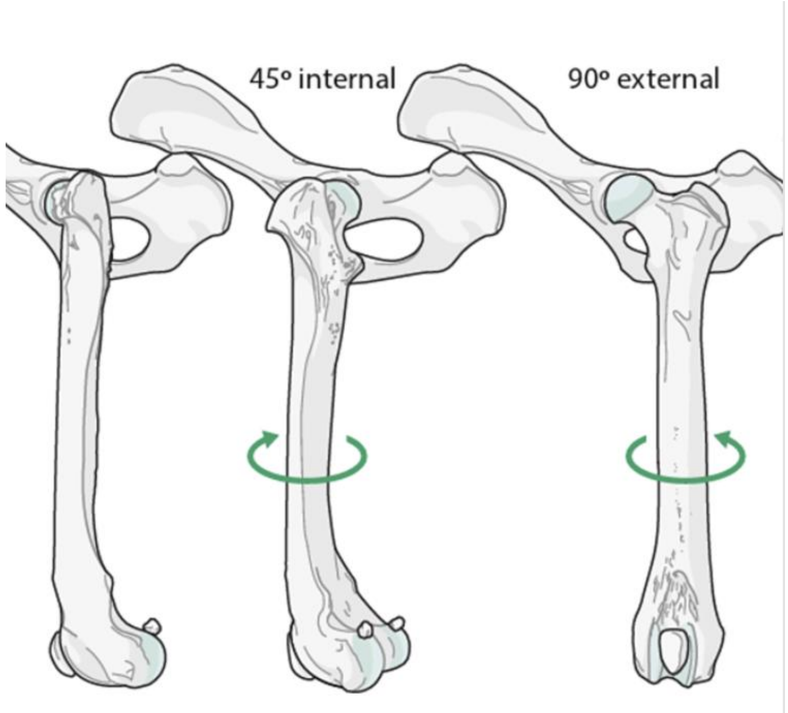
Ретроверзия



- Позиция на големия трохантер

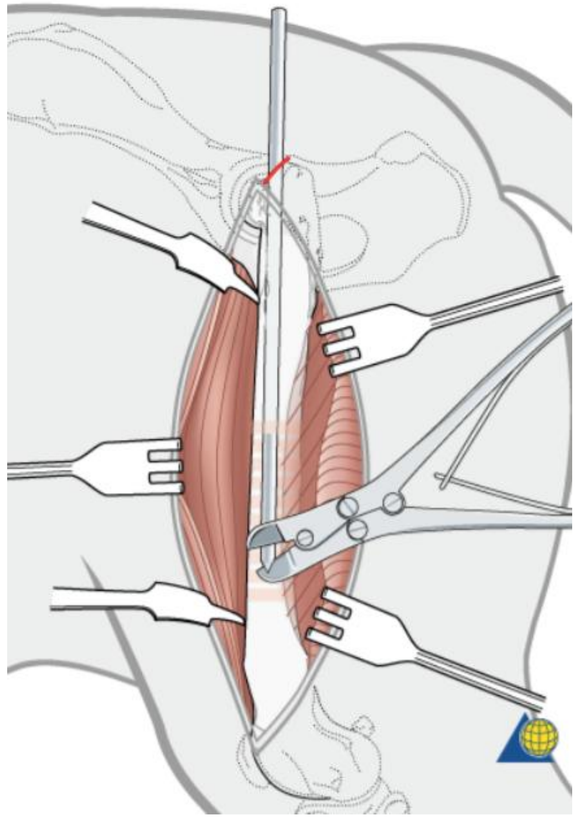
- Визуализиране на facies aspera
- Проверка за външна/вътрешна ротация на тазобедрената става
- Палпиране (визуализиране) на бедрената глава

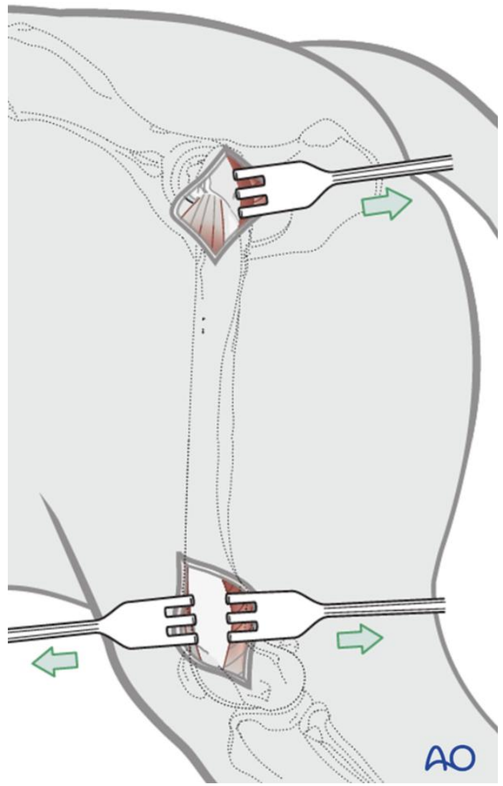


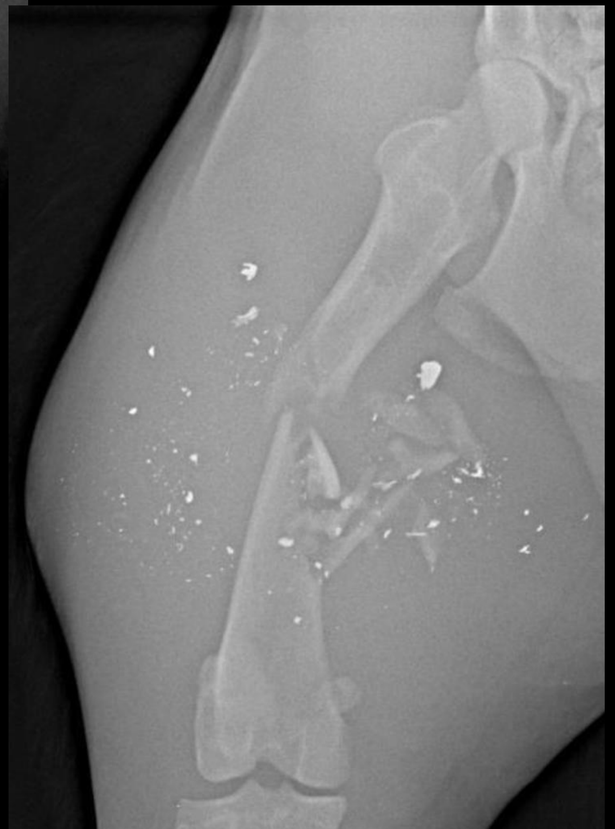


Фрагментирана (нереконструируема) фрактурна линия

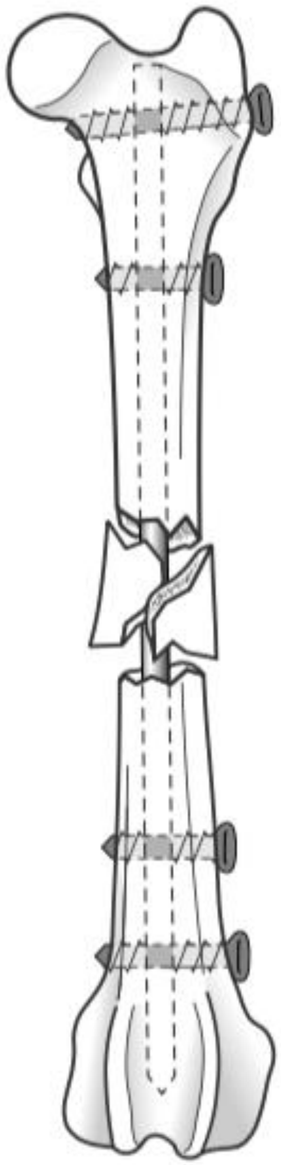
- Индиректна репозиция - MIO или OBDNT
- Plate/rod
- Bridging -тип пластина
- Две пластини





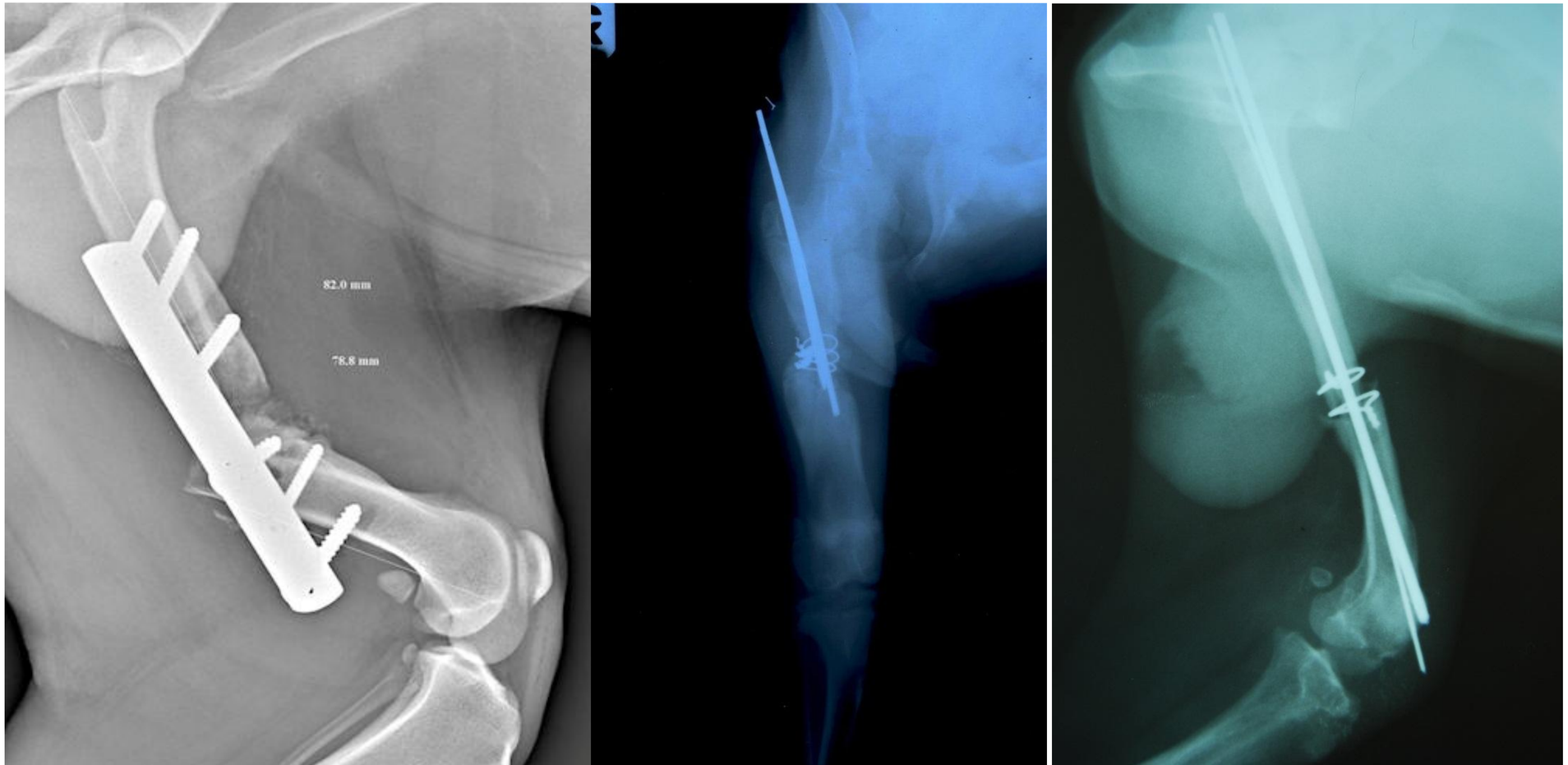


If in doubt….nail it!



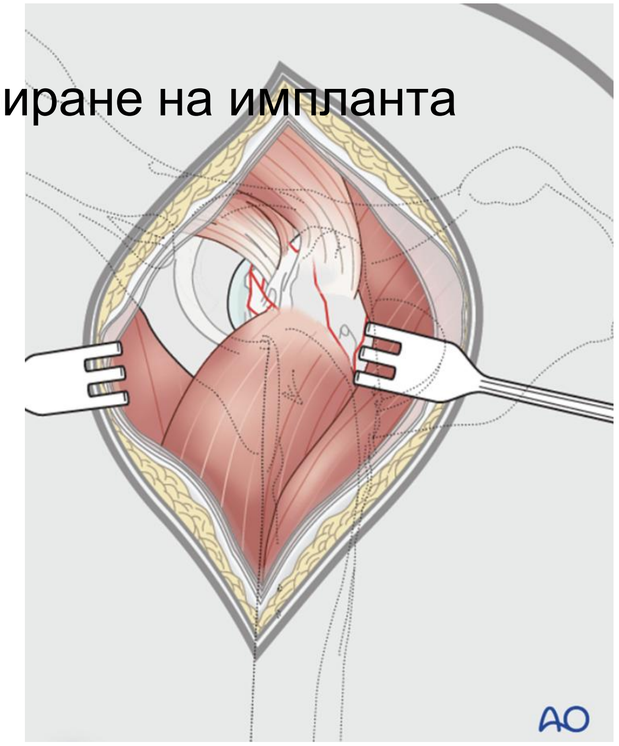
Summary

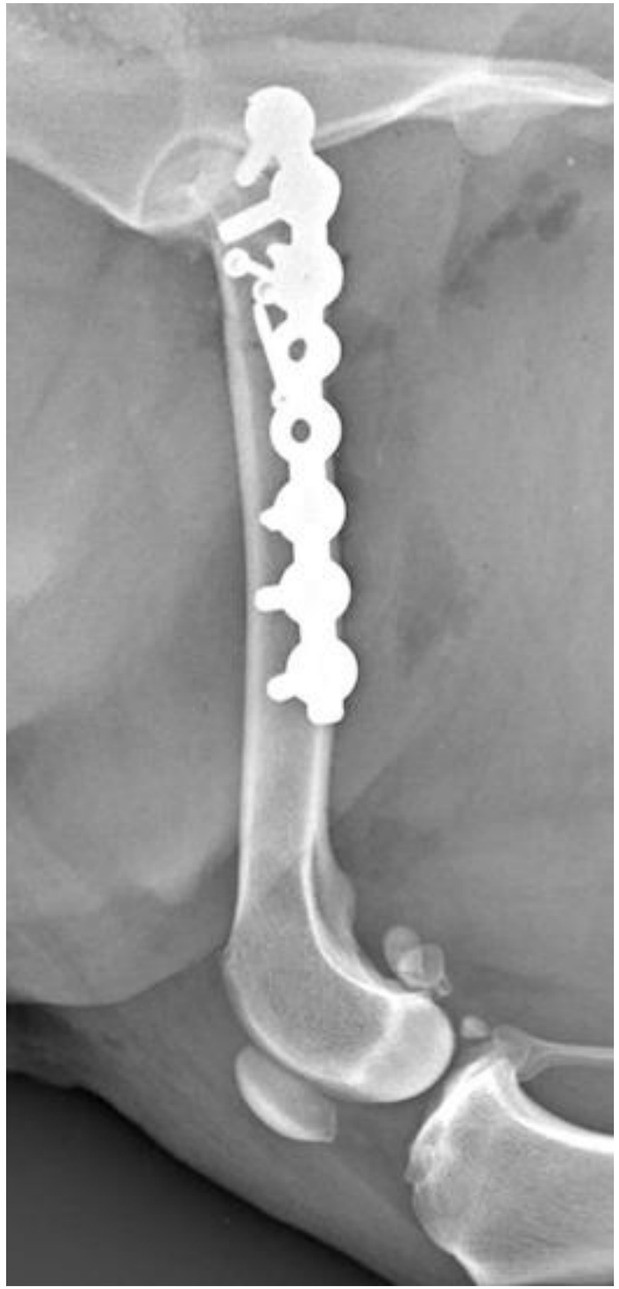
- Бедрената кост е най-засегнатата кост като инцидентност на костно незарастване, малюнион и остеомиелит

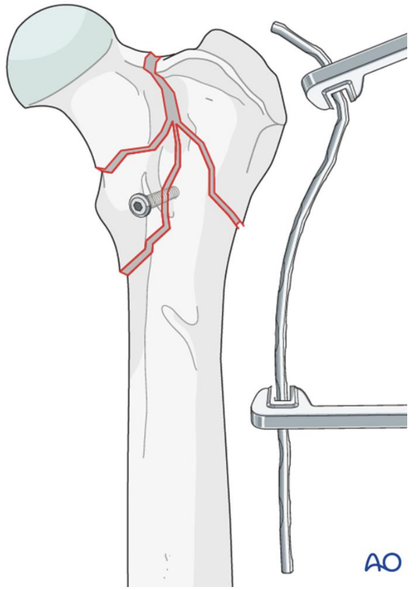


Комбинирана субтрохантерна и интертрохантерна фрактура

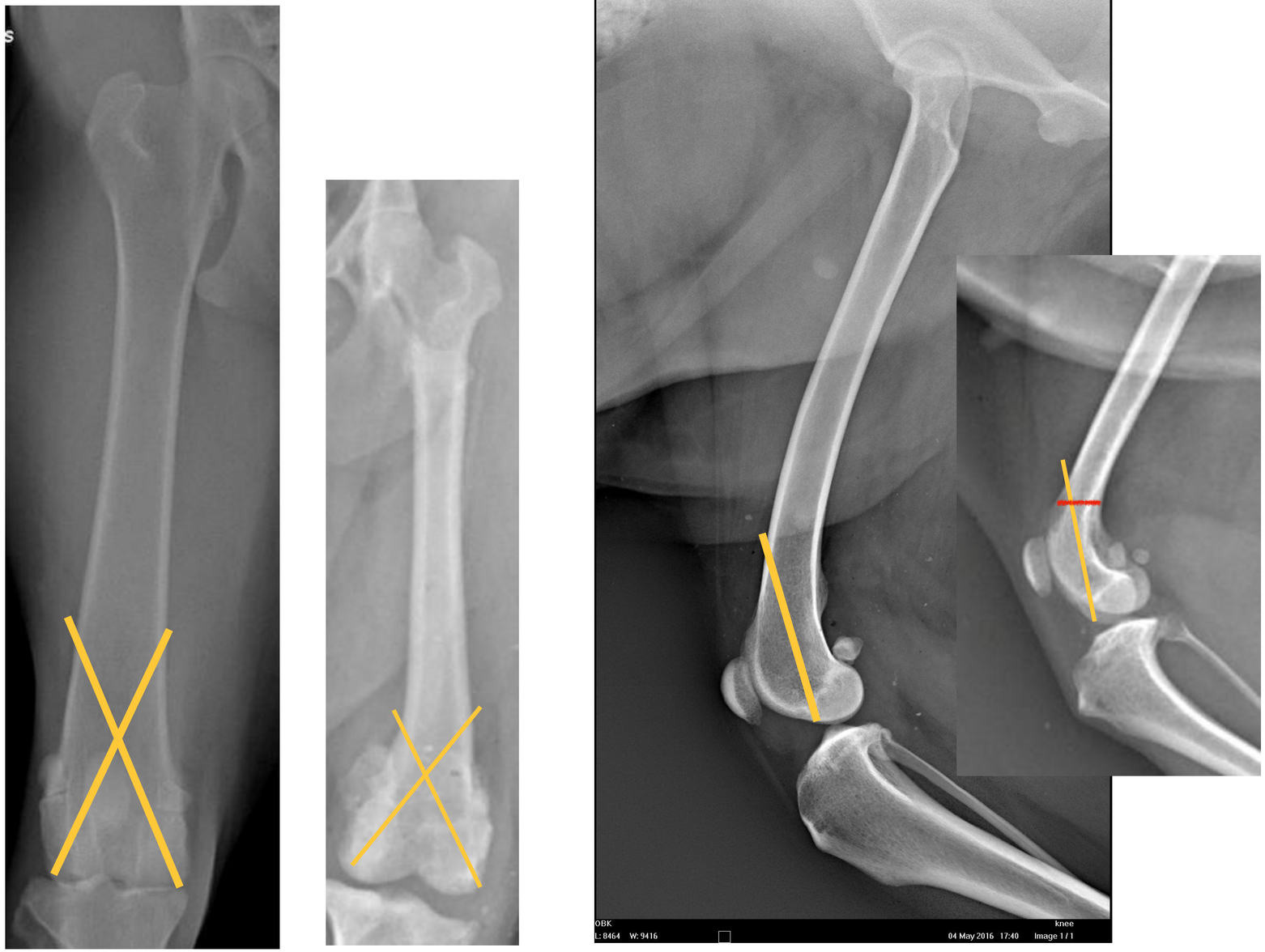
- Изисква комбиниран краниолатерален и латерален достъп
- Анатомична реконструкция
- Често използване на бедрената глава и шийка за поставяне на имплант
- Комплексно контуриране на импланта

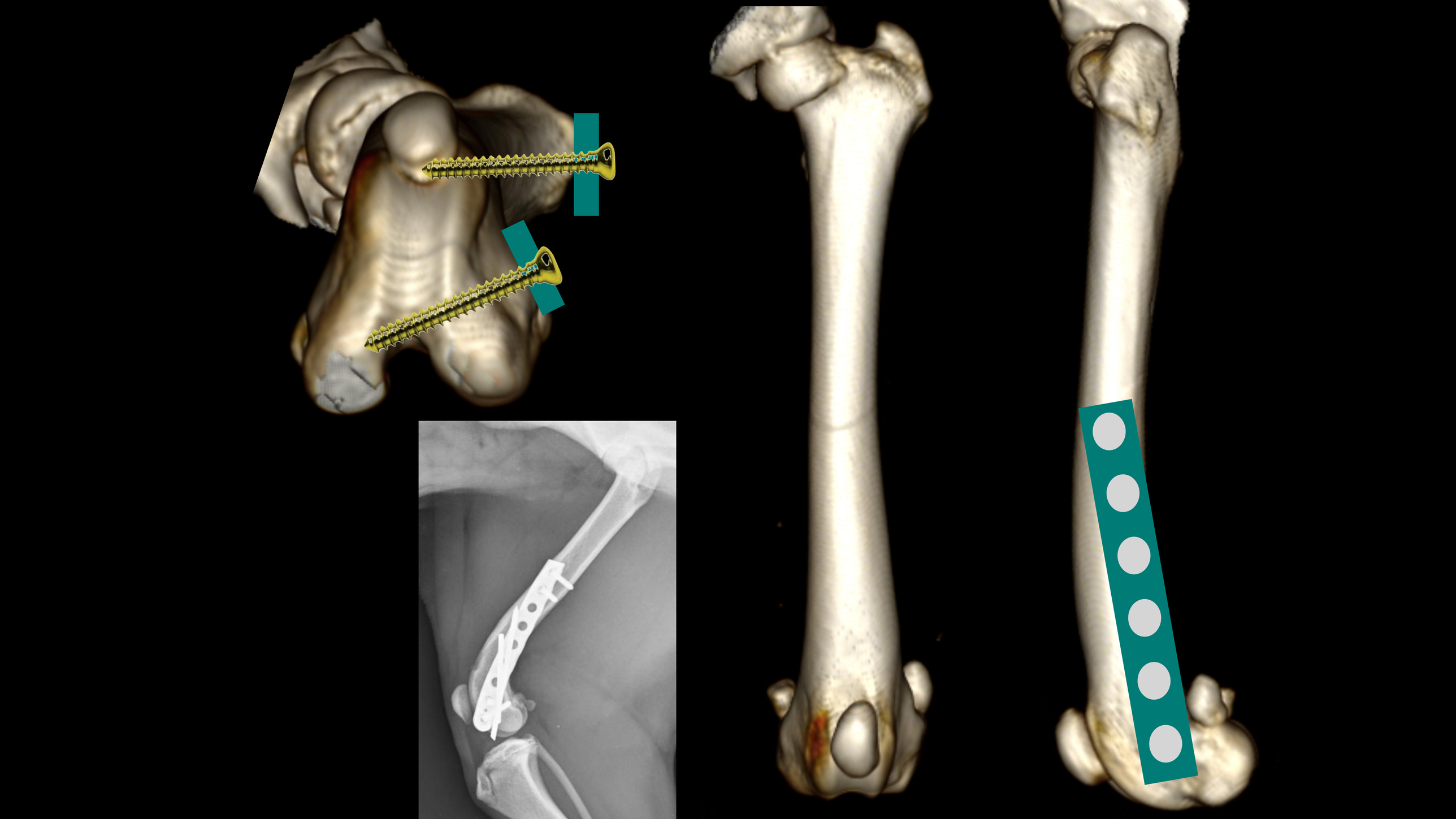


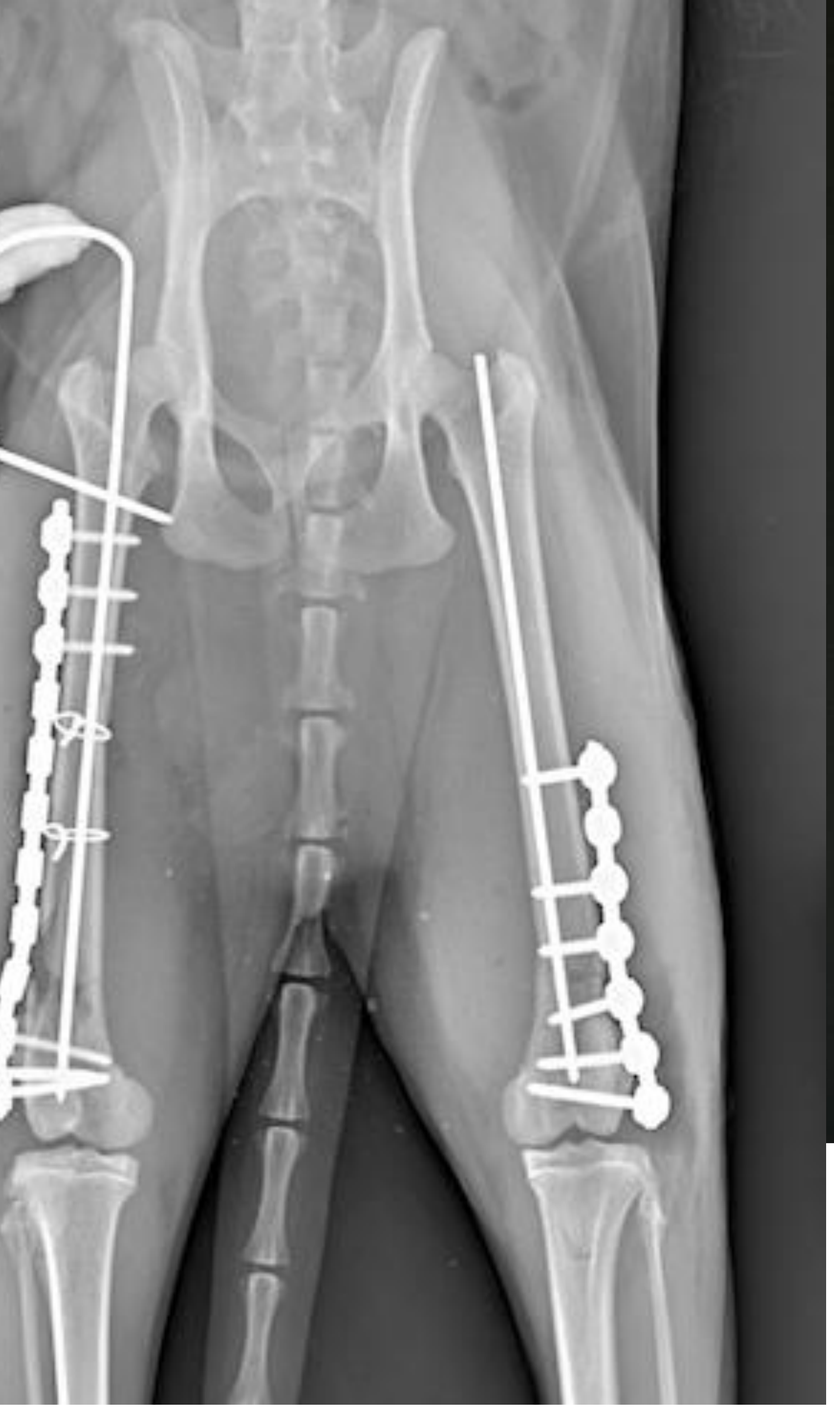


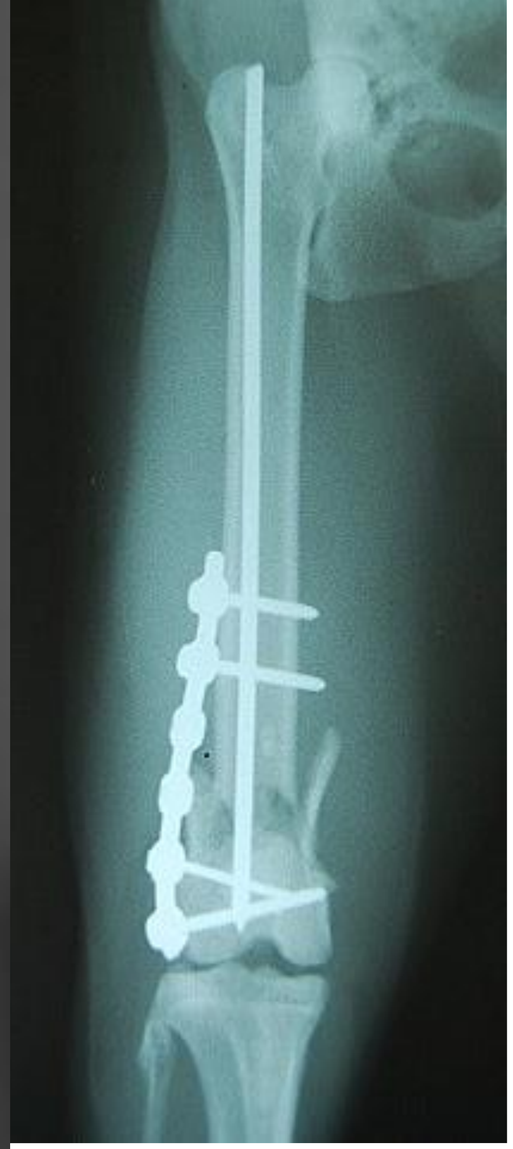

AO

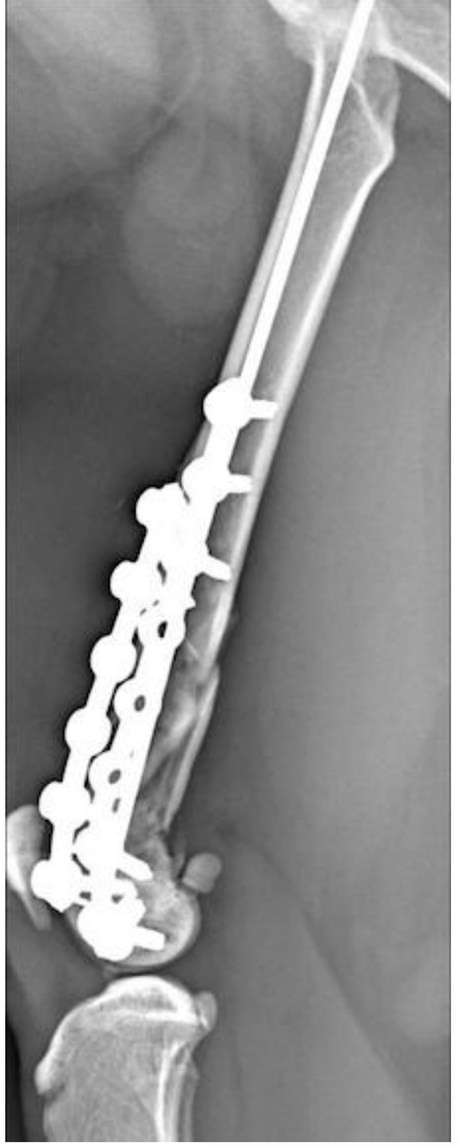
Toy breed vs large breed





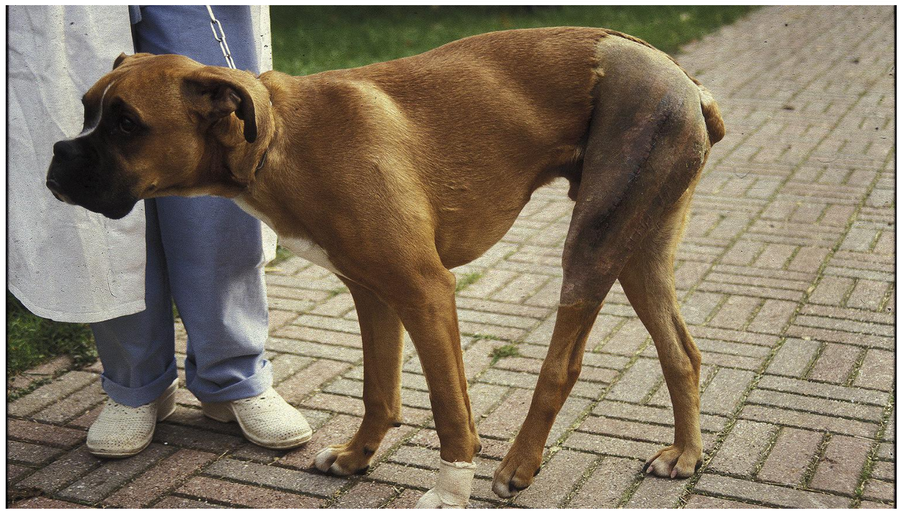






External skeletal fixation

- Large thigh musculature
- Proximity to the abdominal body
- Long working length of the fixation pins
- Improved frame stiffness increases the patient morbidity
- Pin tract infection in 60-80% of dogs and in 22% of cats



Femoral and humeral fracture treatment with an intramedullary pin/external fixator tie in configuration in growing dogs and cats, B.Peirone et all, VCOT, 2002