

# OPERATIVE TECHNIQUE



EXTERNAL FIXATOR

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## EXTERNAL FIXATOR

Components

Instrumentation

Assemblies types

Pins position

Tibia

Example 1, 2 & 3

Ankle

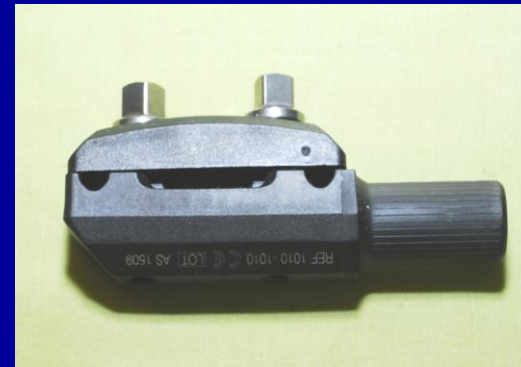
Pelvic

Humerus - Radius

Medical cases 1,2 & 3

# COMPONENTS

- Carbon tube
  - 5 lengths
- Connection & pin cluster clamp



- Pins

# COMPONENTS

## Self drilling/self tapping pins & reduction sleeves

- 5 mm pins
  - Translucent sleeves
- 4 mm pins
  - Yellow sleeves
- 4 & 5 mm transfixing pin
  - Yellow sleeves



# INSTRUMENTATION

- Handle and sleeve & trocar



- Drill brace



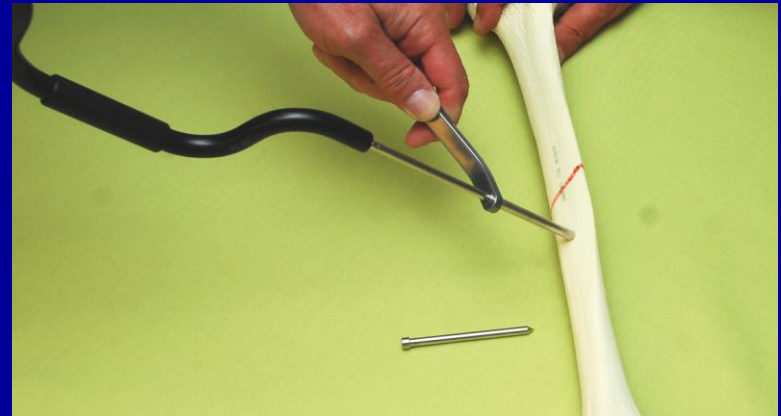


# ASSEMBLIES TYPES



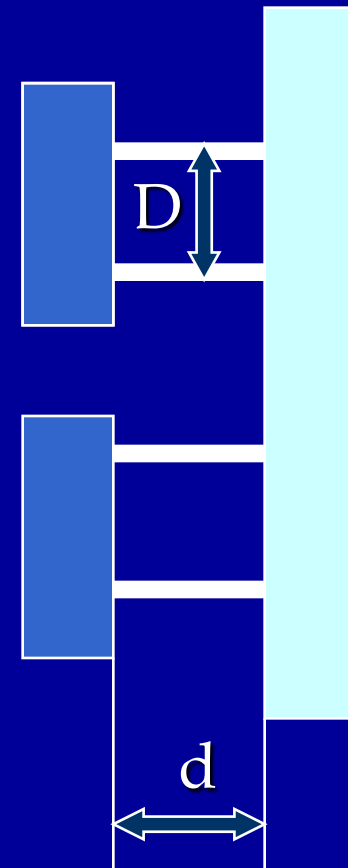
# PINS POSITION

- Approximately 3 cm from fracture
- 7 to 8 turns with drill brace after reaching the 2<sup>nd</sup> cortical



# PINS POSITION

- Increase of  $D$   
increases rigidity  
( $D \times 2 \Rightarrow \text{rigidity} \times 4$ )
- Increase of  $d$   
decreases rigidity





# TIBIA – Example 1

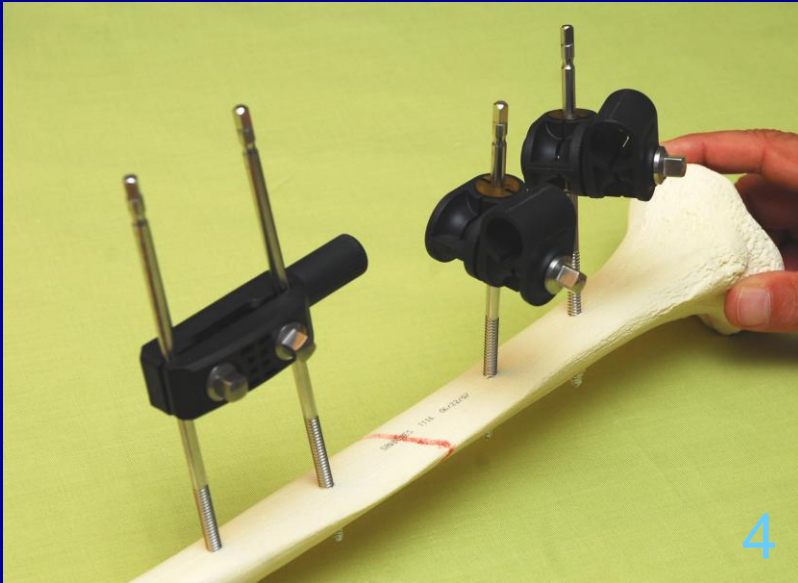


- Pins parallel

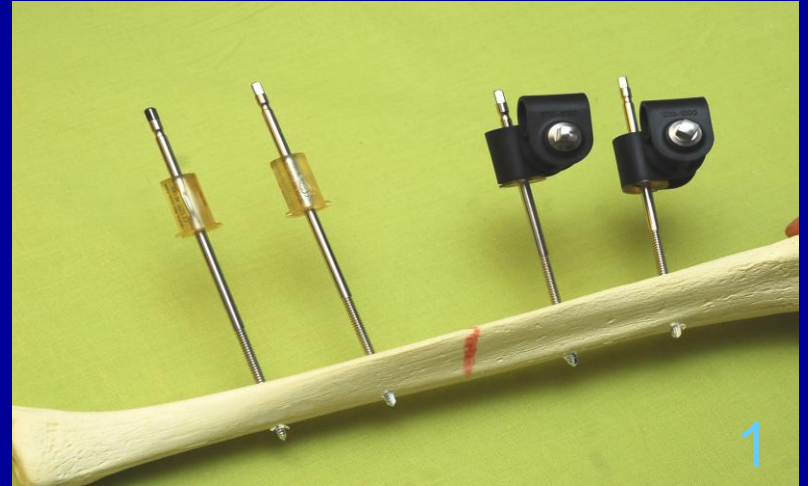


- Independent pins placement

# TIBIA – Example 1



# TIBIA – Example 2

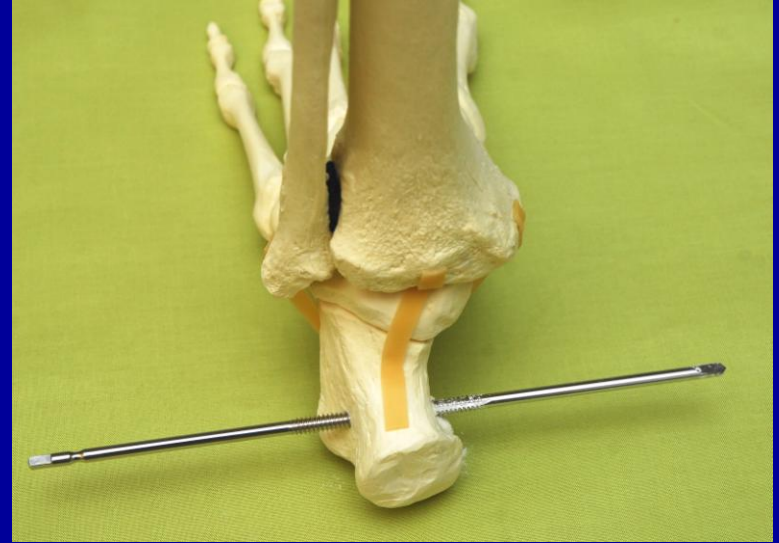




# TIBIA – Example 3



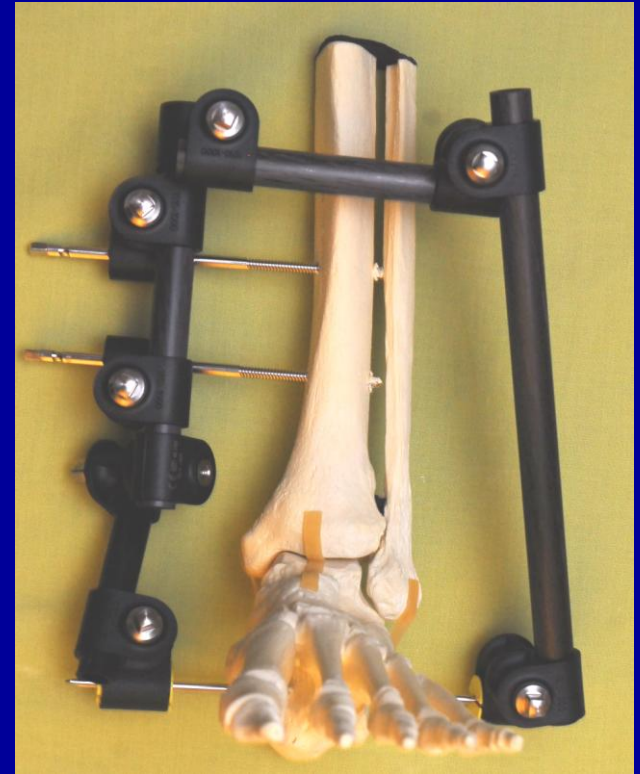
# ANKLE



# ANKLE



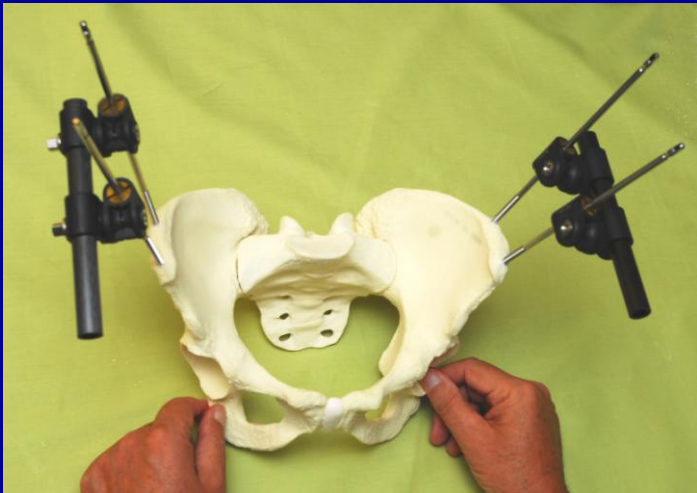
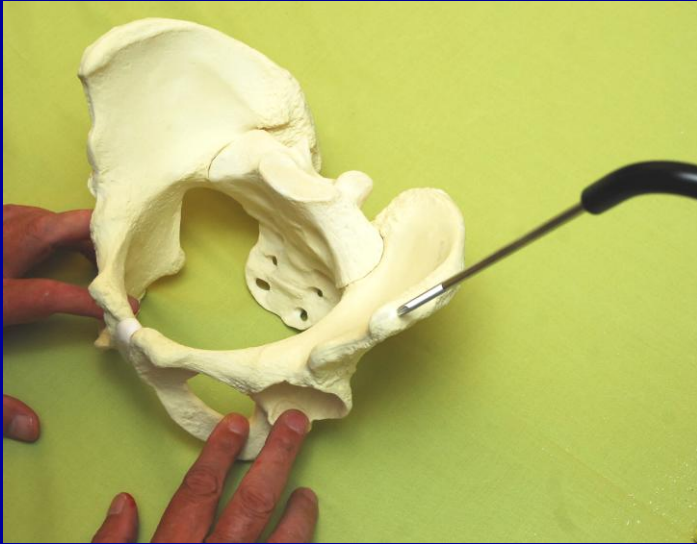
Example 1



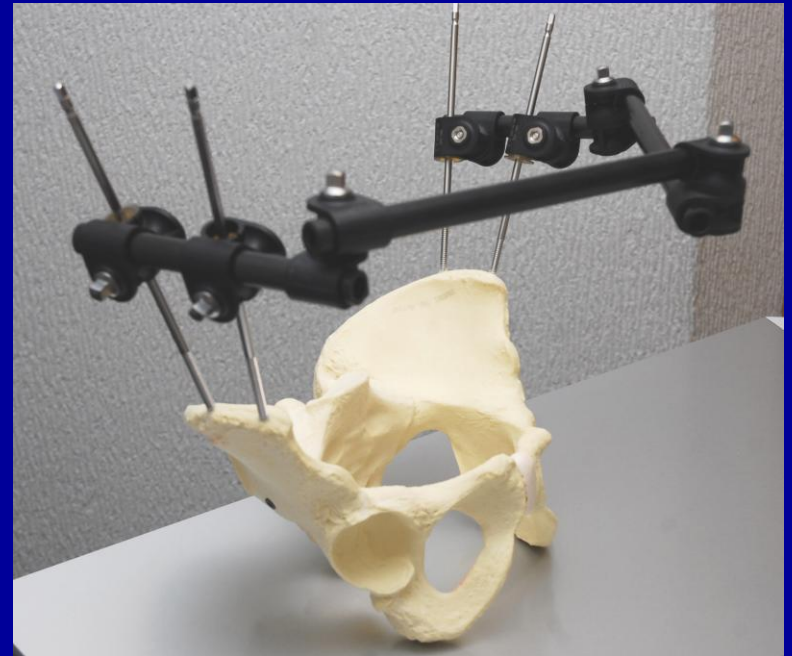
Example 2



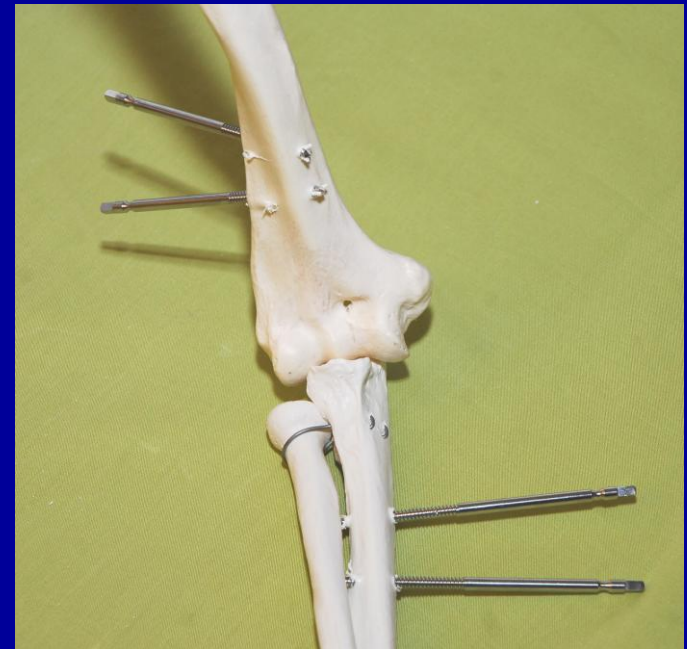
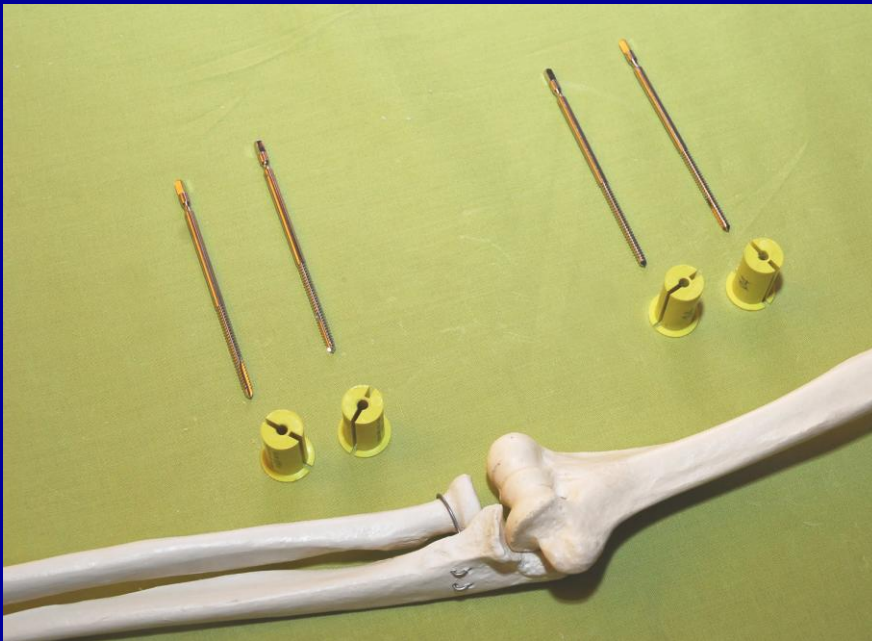
# PELVIC



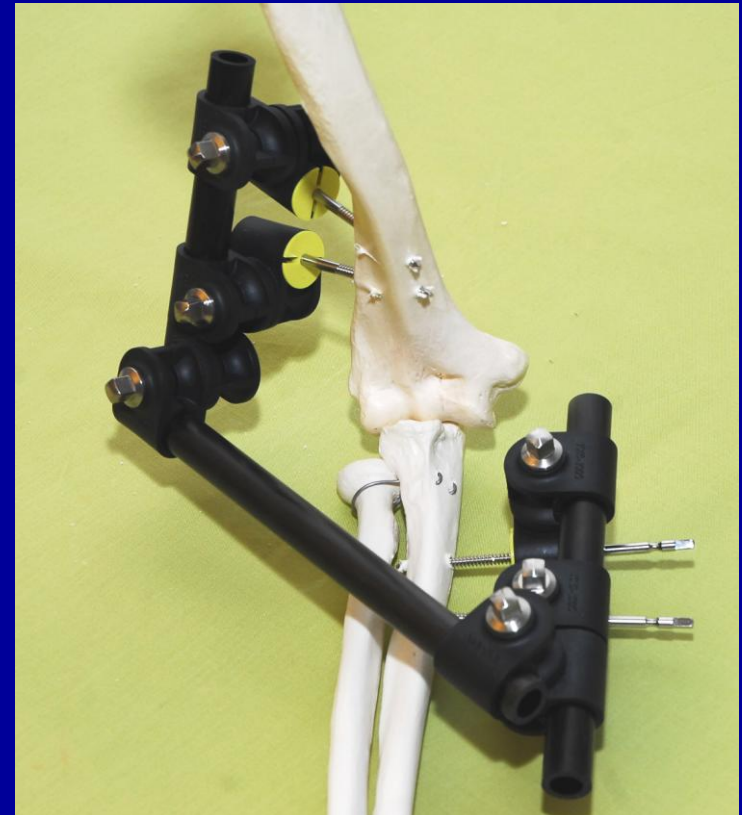
# PELVIC



# HUMERUS – RADIUS



# HUMERUS – RADIUS





# MEDICAL CASE N°1



# MEDICAL CASE N°1





# MEDICAL CASE N°1



7 months after

# MEDICAL CASE N°2



GEXFIX - October 2007

# MEDICAL CASE N°2





# MEDICAL CASE N°2



# MEDICAL CASE N°2

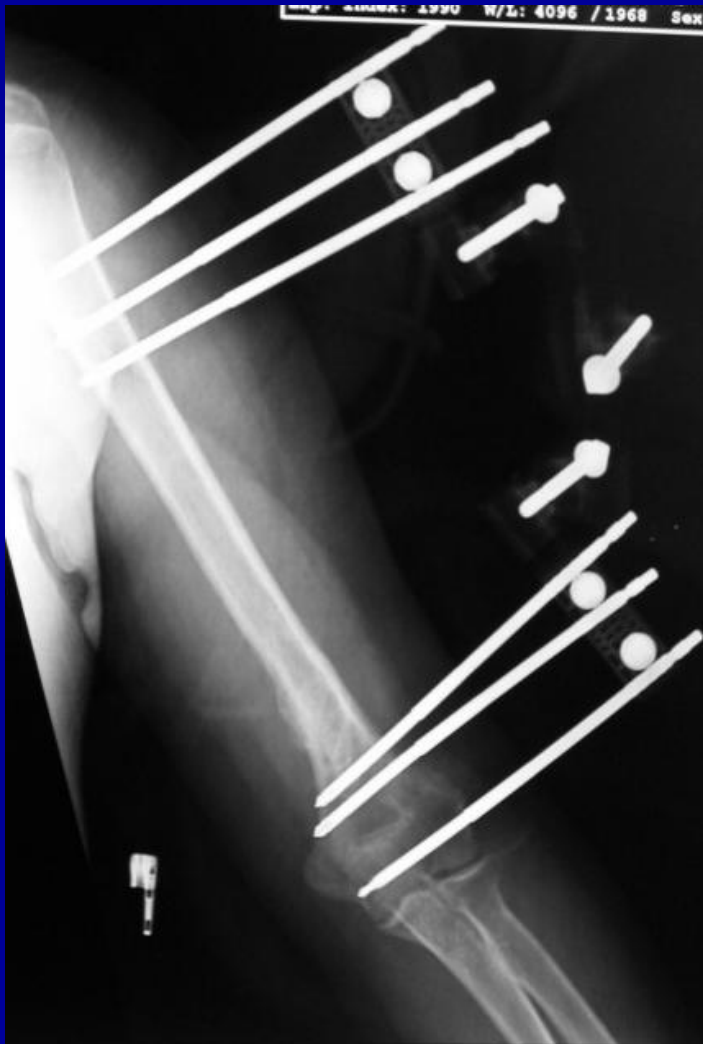


# MEDICAL CASE N°3





# MEDICAL CASE N°3



# MEDICAL CASE N°3

3 months post  
surgical intervention



# Stability and elasticity

Stability avoids loss of reduction.

Elasticity generate micro movements promoting callus formation.



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