



Child Abuse Symposium 2018

10 minutes on Fractures

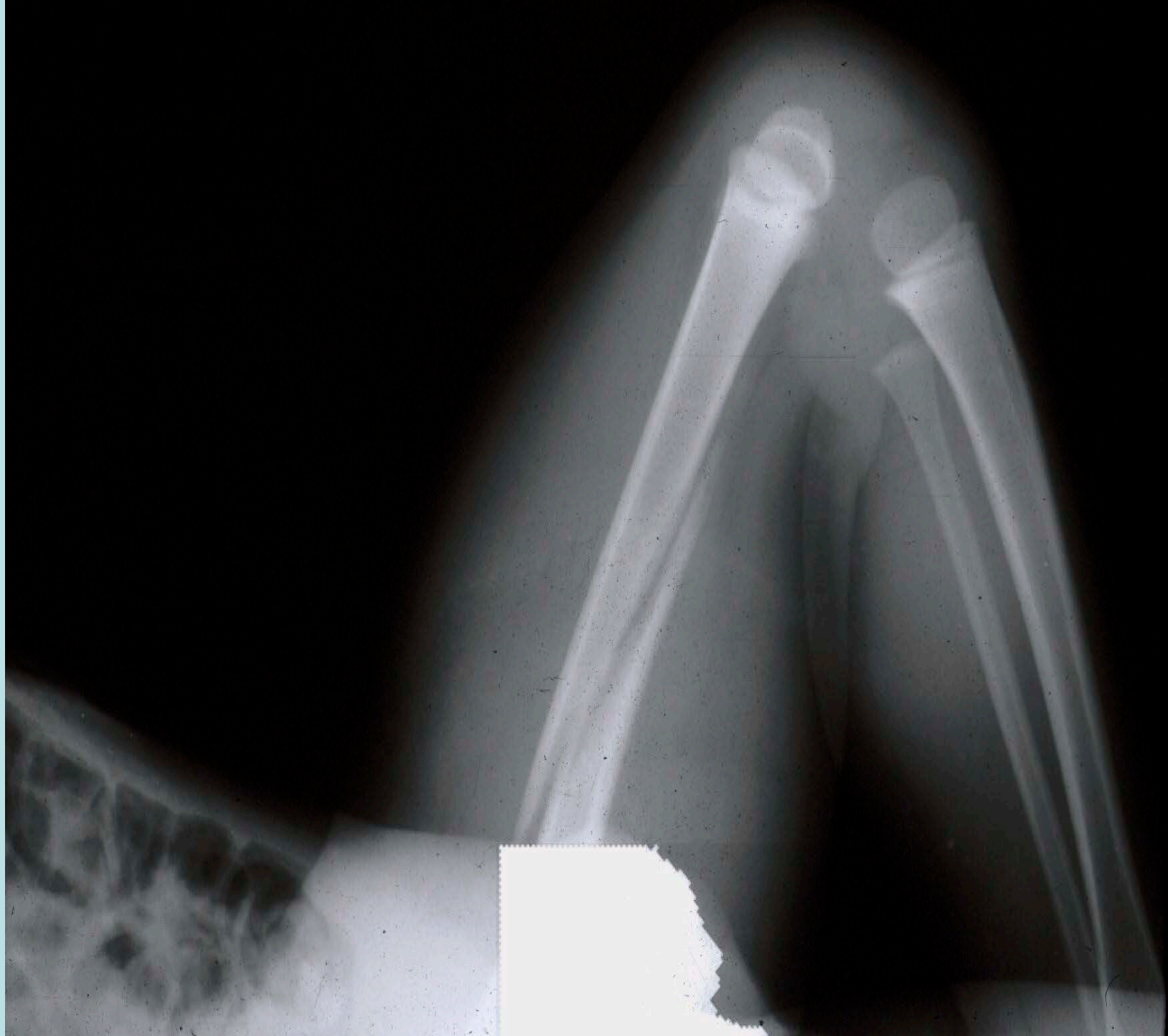
Christopher C. Stewart, MD
Professor, Pediatrics, UCSF
Board Certified Child Abuse Pediatrics

Question

- 14 month old was walking and fell/tripped unwitnessed by report, has a fracture through their thigh bone (femur)
- 5 month old infant has an oblique/spiral fracture of their left arm (humerus)
- Are these likely abuse cases?

Abuse Fractures

- Specificity of the fracture(s)
- Mechanism (History)
- Biomechanics
- Age, Development, Medical History, other associations in exam/history
- Work-up
 - Exam and History
 - Skeletal Survey
 - Laboratory results



What is a Skeletal Survey?

Has other names: Bone survey, etc.

About 20 x-rays

Is used as a screening tool when abuse suspected

Usually in less than 2 year olds, sometimes up to 5

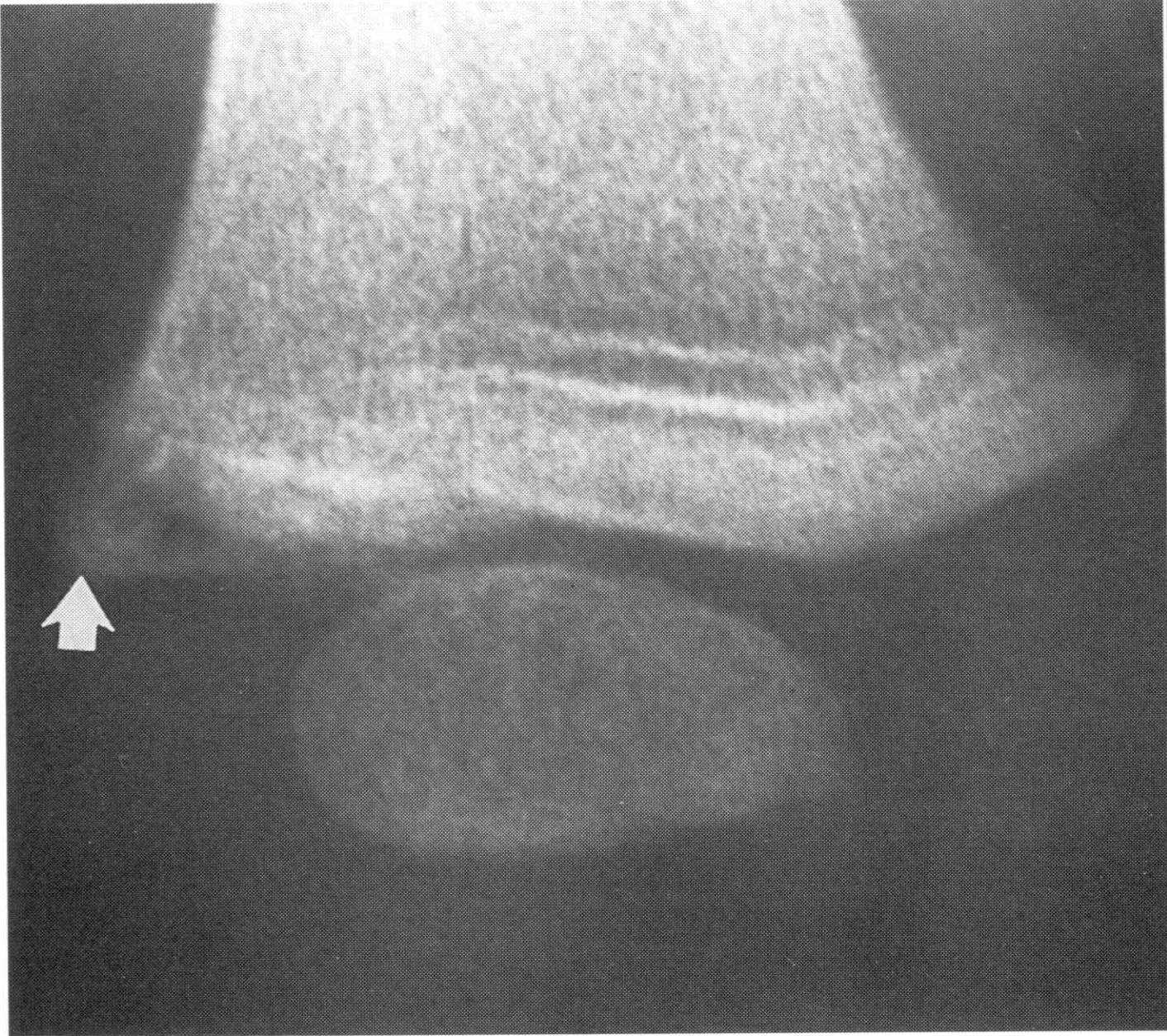
Might reveal fractures that are specific for abuse

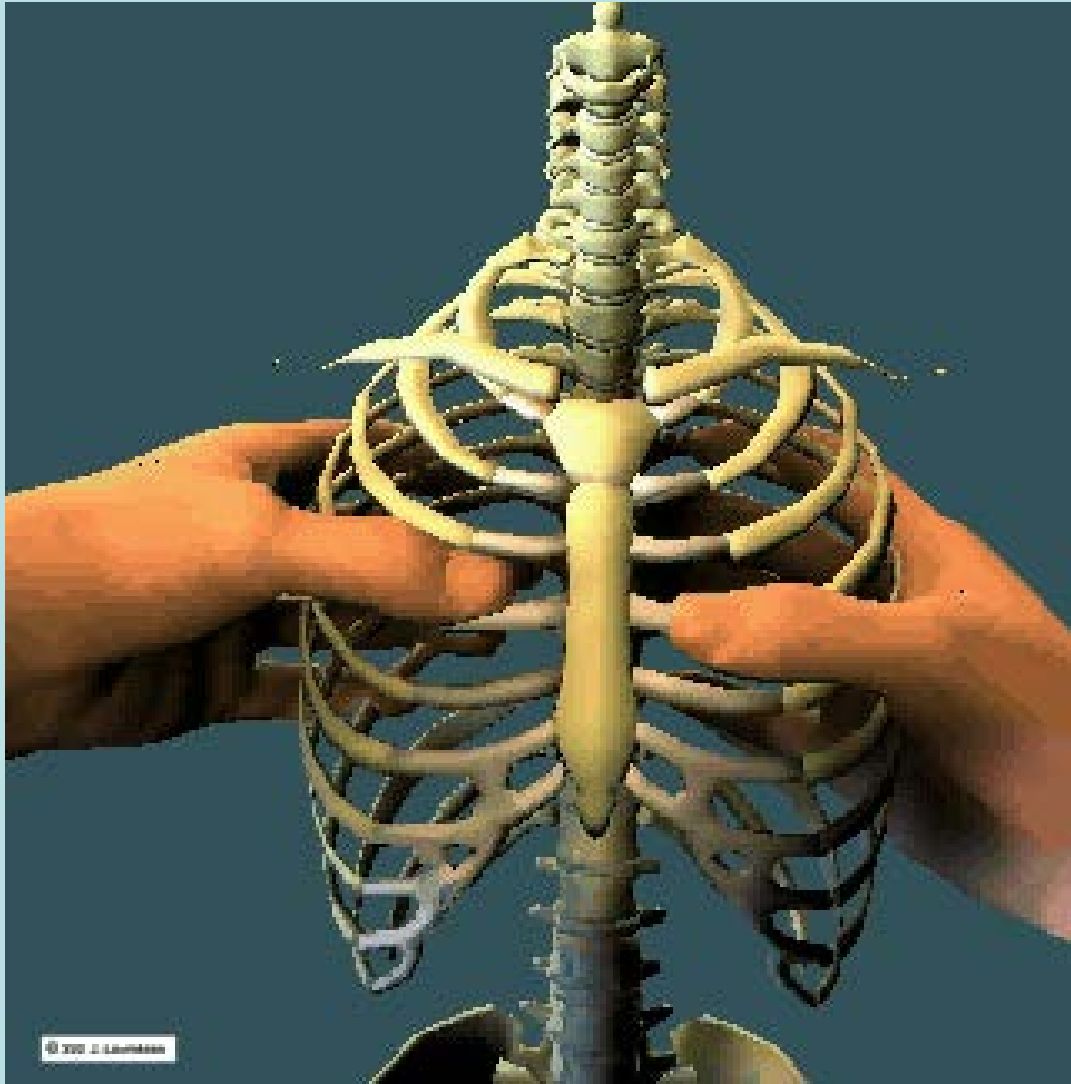
Might reveal other fractures

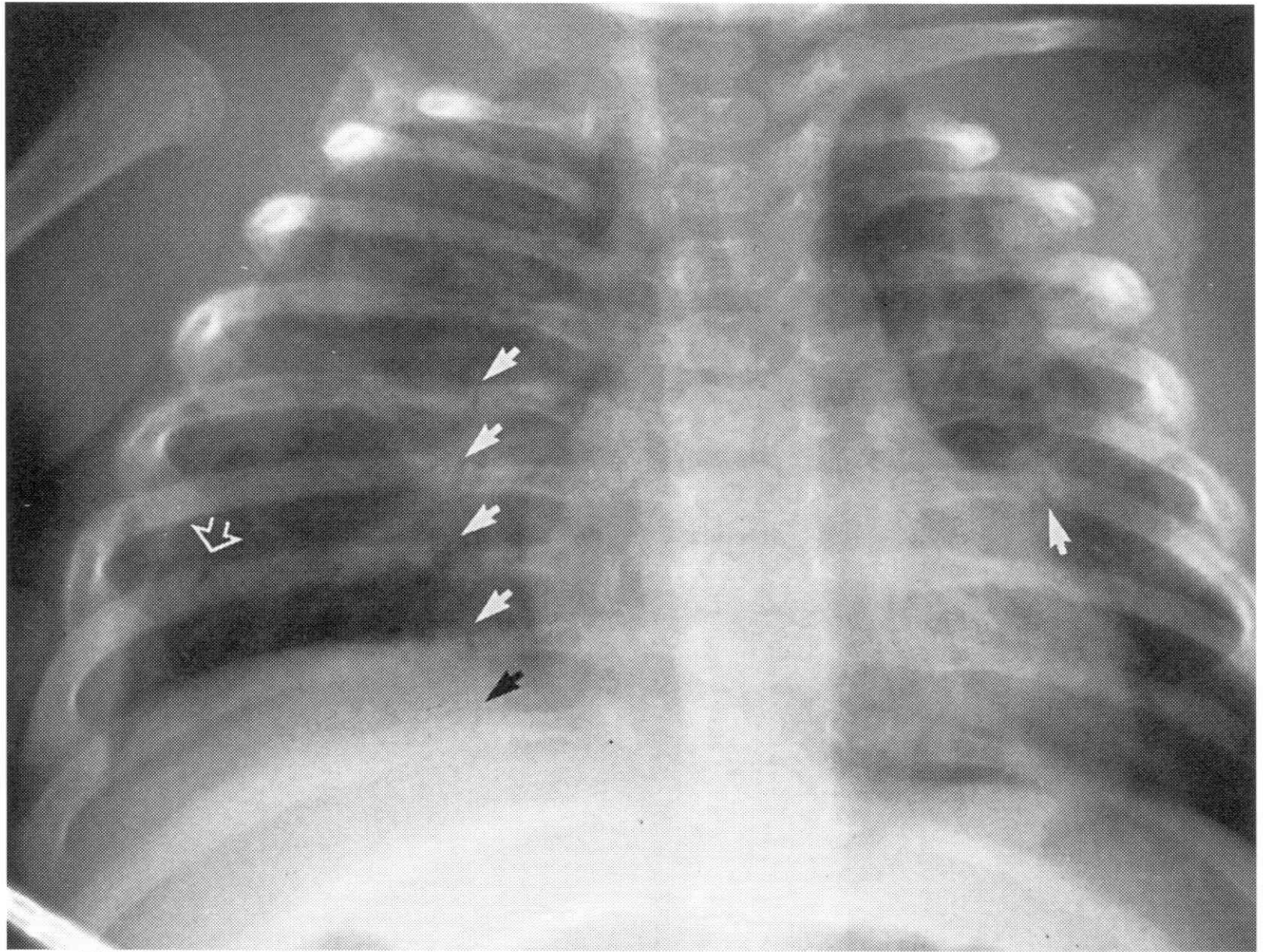
Does not rule out abuse











“Take-home points” about Skeletal Surveys?

- 1) Screening tool for suspected abuse
- 2) They should be done and read by experienced pediatric radiologists
- 3) If positive, or if suspicion for abuse is high, repeat in two weeks
- 4) They don't rule out abuse, have false positive and false negative.
- 5) Consultation with child abuse specialists is recommended

Other “Pearls” about Abuse Fractures

- Timing of injury possible in some long-bone fractures
- Often fractures are not accompanied by obvious pain, swelling or bruises
- When abuse is being considered, child abuse specialist review is recommended
- 5 month old with arm fracture

Summary

- Some fractures highly associated with abuse
- Understand mechanism, child's development and medical history
- A child abuse medical evaluation should be considered
- Skeletal survey may be part of that work-up in infants and toddlers