A Study to Develop Clinical Decision Rules for the Use of Radiography in Acute Ankle Injuries

Stiell et al. (1992)

Background
- Cost of ankle x-rays exceeded that of low volume but high technology procedures like cardiac catheterization
- Unnecessary x-rays led to long wait times and unnecessary radiation exposure to patients
- No widely accepted guidelines for the use of radiography in ankle injuries was available at the time of the study

MVP INFOGRAPHIC SERIES

The goal: to develop decision rules that were 100% sensitive for clinically significant ankle and foot fractures on radiography

Study Design
- Conducted at Ottawa Civic and Ottawa General Hospital
- Prospective study over a 5 month period
- Inclusion: All patients with acute blunt injuries of the ankle
- Exclusion: Pregnant, < 18 years of age, returning for assessment of same injury, referred from elsewhere with radiographs

Outcome Definitions

Ankle x-ray if:
- Pain near the MALLEOLI AND one of:
  - AGE 55 or greater
  - UNABLE TO BEAR WEIGHT: both immediately and in ED - 4 steps
  - BONE TENDERNESS: at posterior edge or tip of either malleolus

Foot x-ray if:
- Pain in the MIDFOOT AND:
- BONE TENDERNESS: at navicular, cuboid or the base of the fifth metatarsal

Results

REFERENCES:

Bottom Line

Studies since 1992 have led to a modification in these clinical decision rules