

# PENETRATING TRAUMA

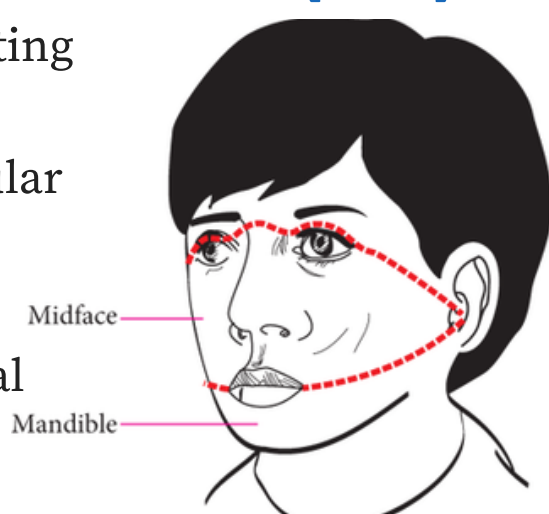
Episodes 3.1-3.2

## TRAUMA GENERAL PRINCIPLES

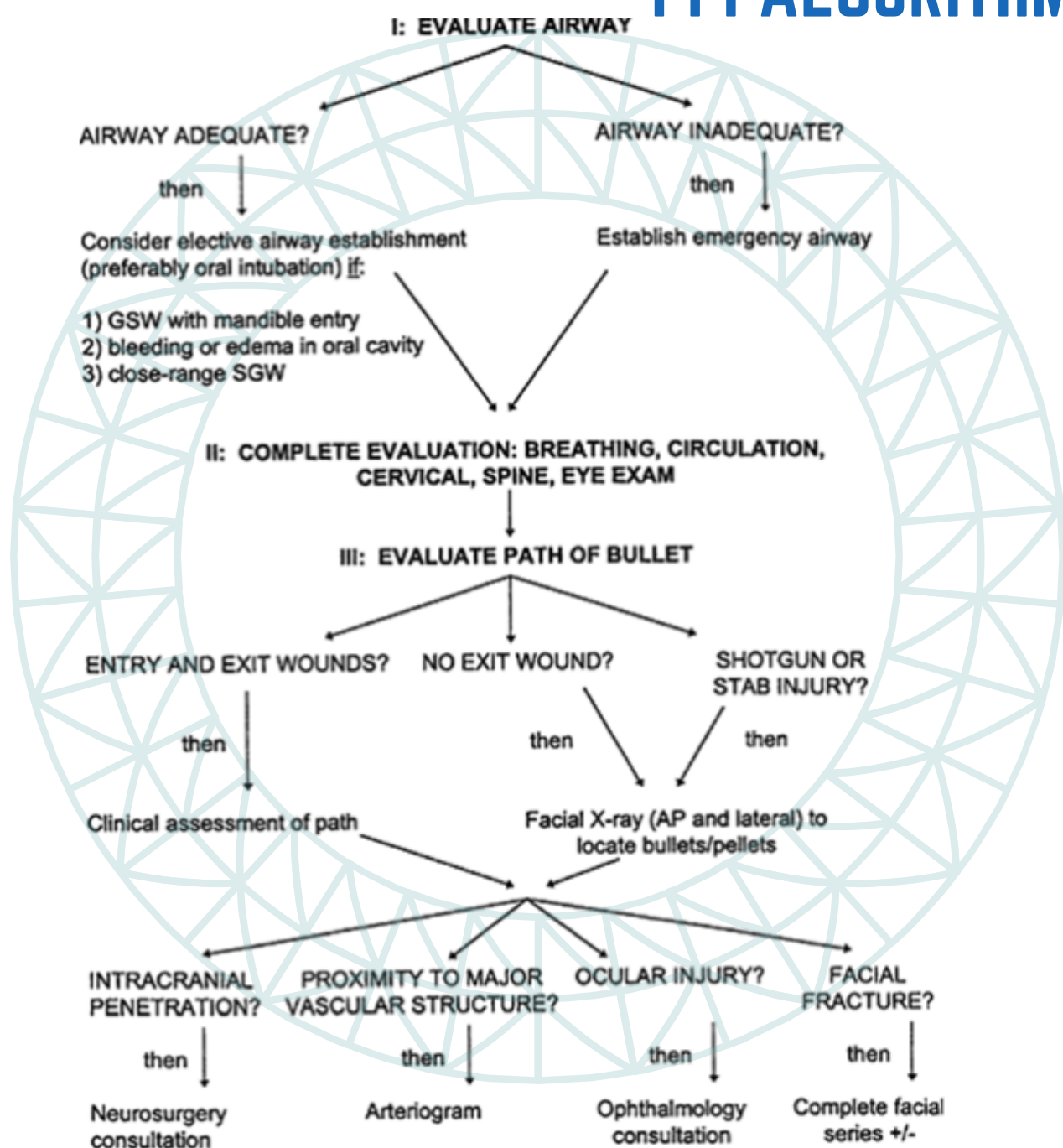
- A - airway
  - B - breathing
  - C - circulation
  - D - disability (degree of consciousness, GCS)
  - E - exposure (complete examination)
- C-spine precautions until cleared  
Be prepared for the emergent surgical airway!  
Consider tetanus and antibiotic prophylaxis

## PENETRATING FACIAL INJURIES (PFI)

Facial zoning important for anticipating pattern of injury  
Midface injury associated with vascular injury, globe injury, intracranial penetration, facial fracture  
1/3 mandible injuries require surgical airway

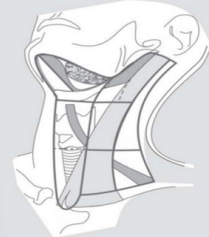


## PFI ALGORITHM



## MAJOR SIGNS OF INJURY

**Vascular** - hypotension, expanding hematoma, hemoptysis  
**Laryngeal** - stridor, subcutaneous emphysema, resp distress  
**Esophageal** - blood in saliva, fever, severe odynophagia



# PENETRATING TRAUMA

Episodes 3.1-3.2

## PENETRATING NECK INJURIES (PNI)

Zone II is the largest and most common entry zone

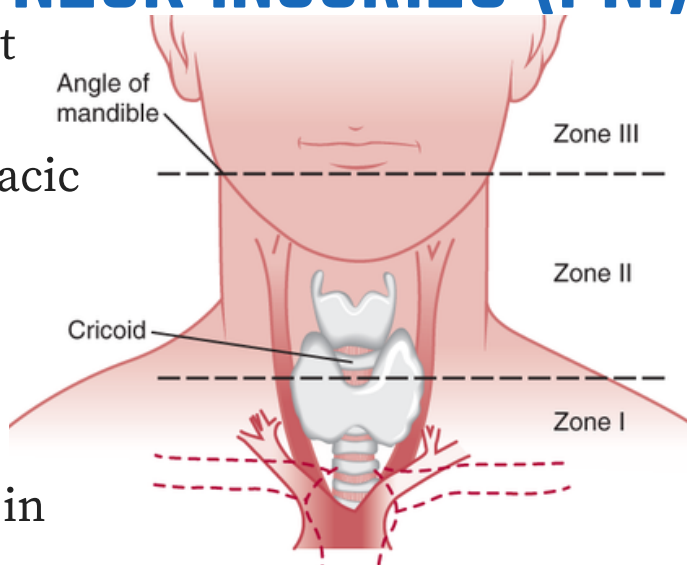
Zone I injuries, consider thoracic injuries (eg. pneumothorax)

GSW 45%, stab wound 45%

3-6% mortality due to

exsanguinating hemorrhage

Airway injury more common in blunt trauma



## MANAGEMENT OF PNI

Surgical airway if unstable

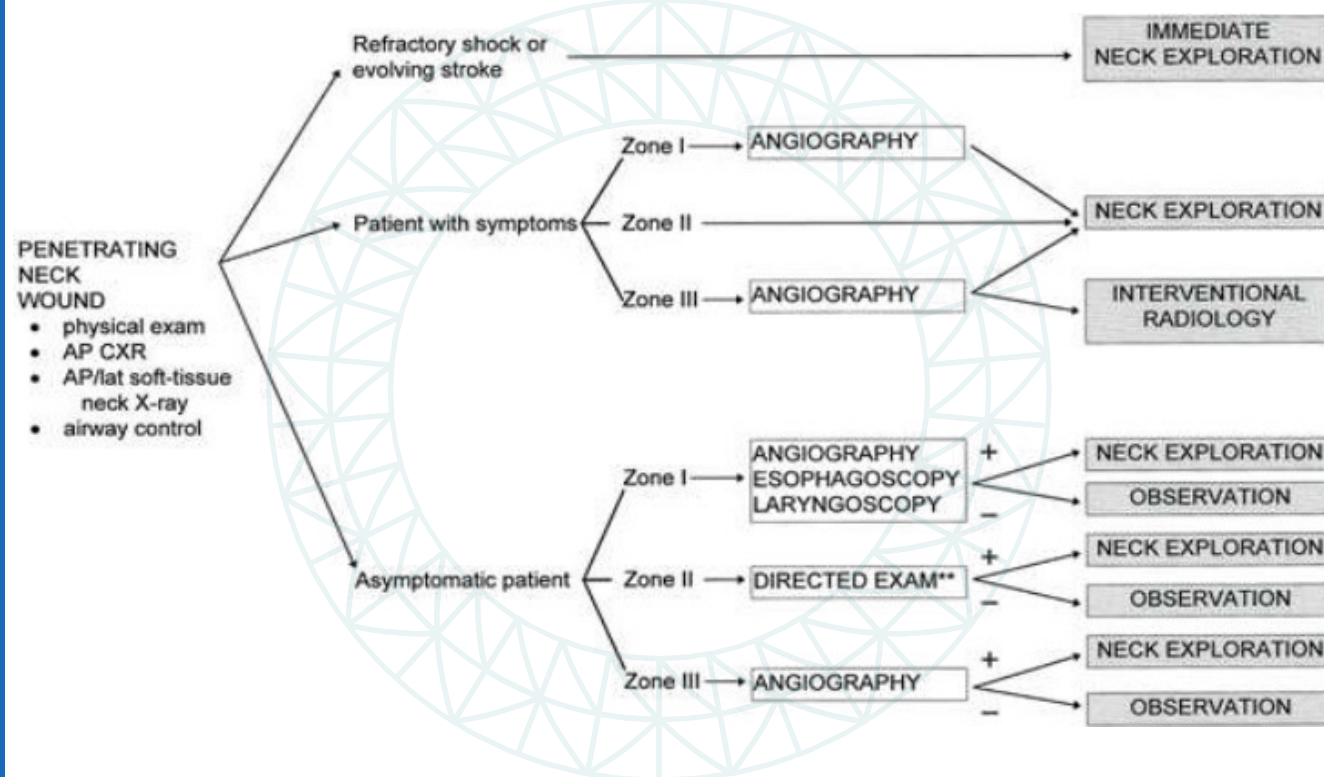
Physical exam, AP CXR, AP / lateral soft tissue neck x-ray

**Mandatory neck exploration** with signs of injury to vital neck structures -- shock, evolving stroke, blood in aerodigestive tract, subcutaneous air, multiple major injuries

Stable Zone I and III injuries require **angiography** given false negative physical exam / surgical findings in 32% of patients

Mandatory **esophageal evaluation** in Zone I to rule out impending mediastinitis and sepsis

## PNI ALGORITHM



## OPERATIVE APPROACH- VASCULAR INJURY

Repair, ligation, embolization, grafting or shunting

## OPERATIVE APPROACH - ESOPHAGEAL INJURY

Injection of air or methylene blue into mouth to localize injury

Close wounds in watertight 2-layer fashion

NPO for 5-7 days