Burn Emergencies

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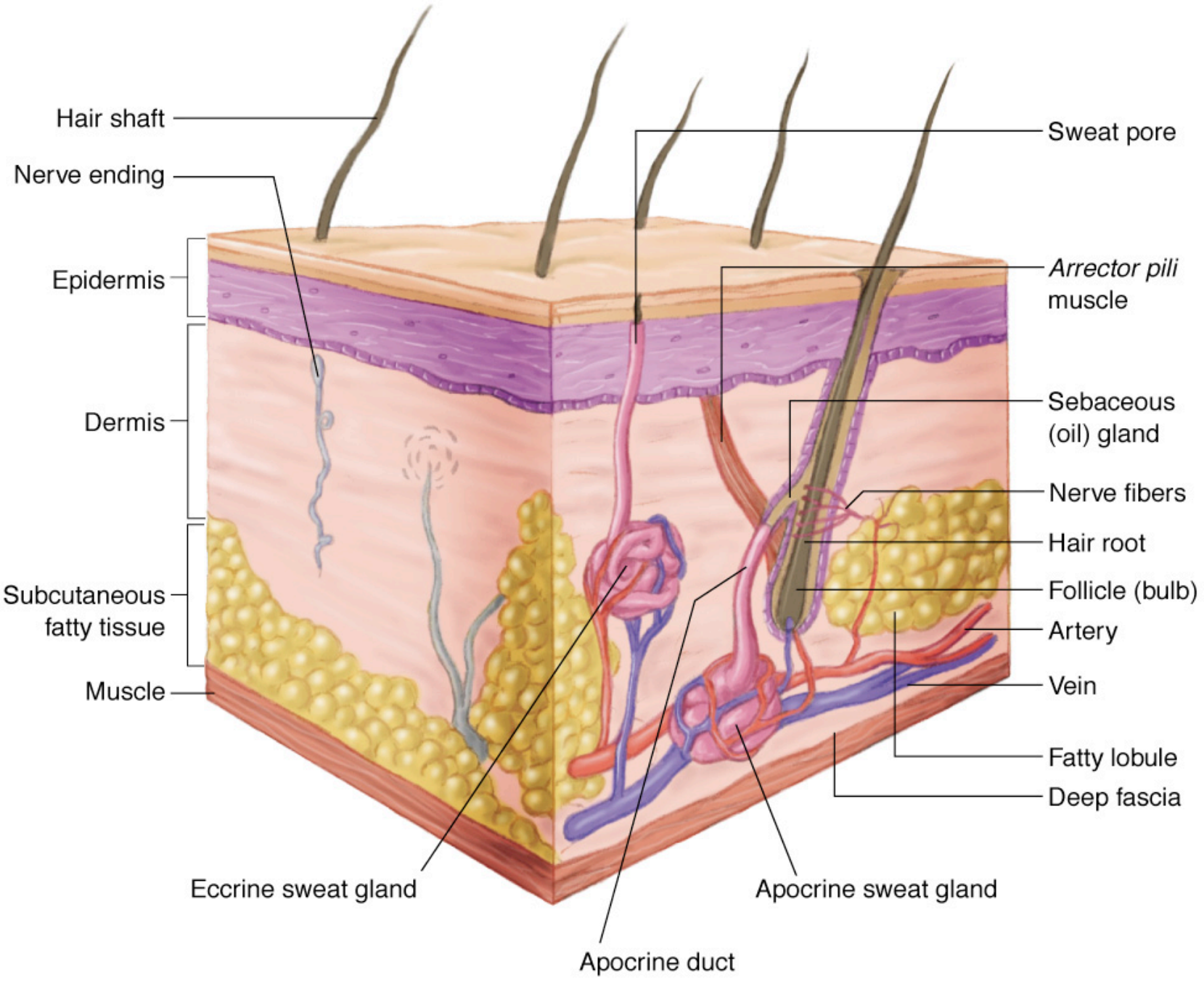
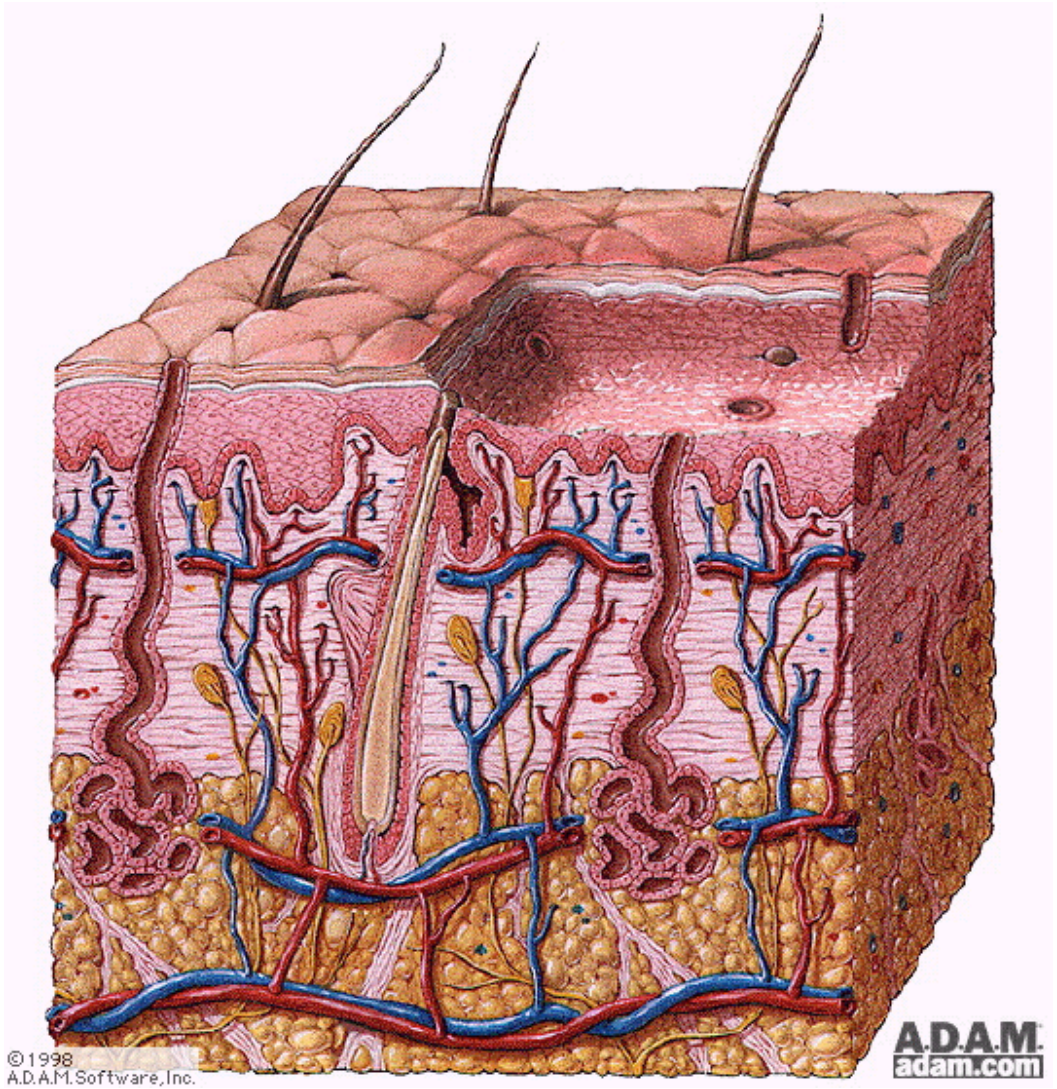
SAVING LIVES...ONE STUDENT AT A TIME

Quick Case 1

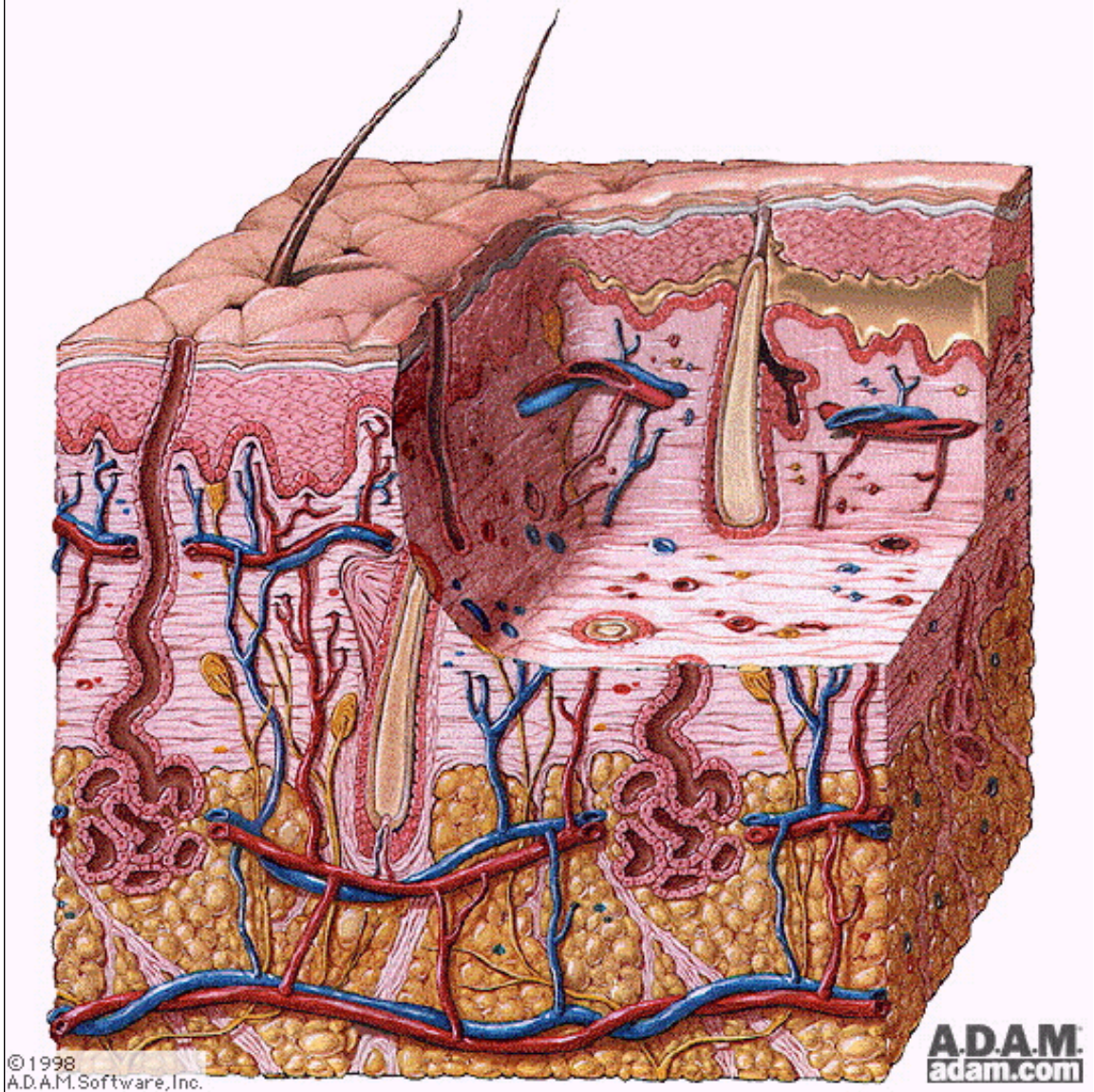

Hair shaft
Nerve ending
Epidermis
Dermis
Subcutaneous fatty tissue
Muscle
Sweat pore
Arrector pili muscle
Sebaceous (oil) gland
Nerve fibers
Hair root
Follicle (bulb)
Artery
Vein
Fatty lobule
Deep fascia
Eccrine sweat gland
Apocrine duct
Apocrine sweat gland

1° or Superficial Burn



- Signs & Symptoms
  - Reddened skin
  - Pain at burn site
  - Involves only epidermis

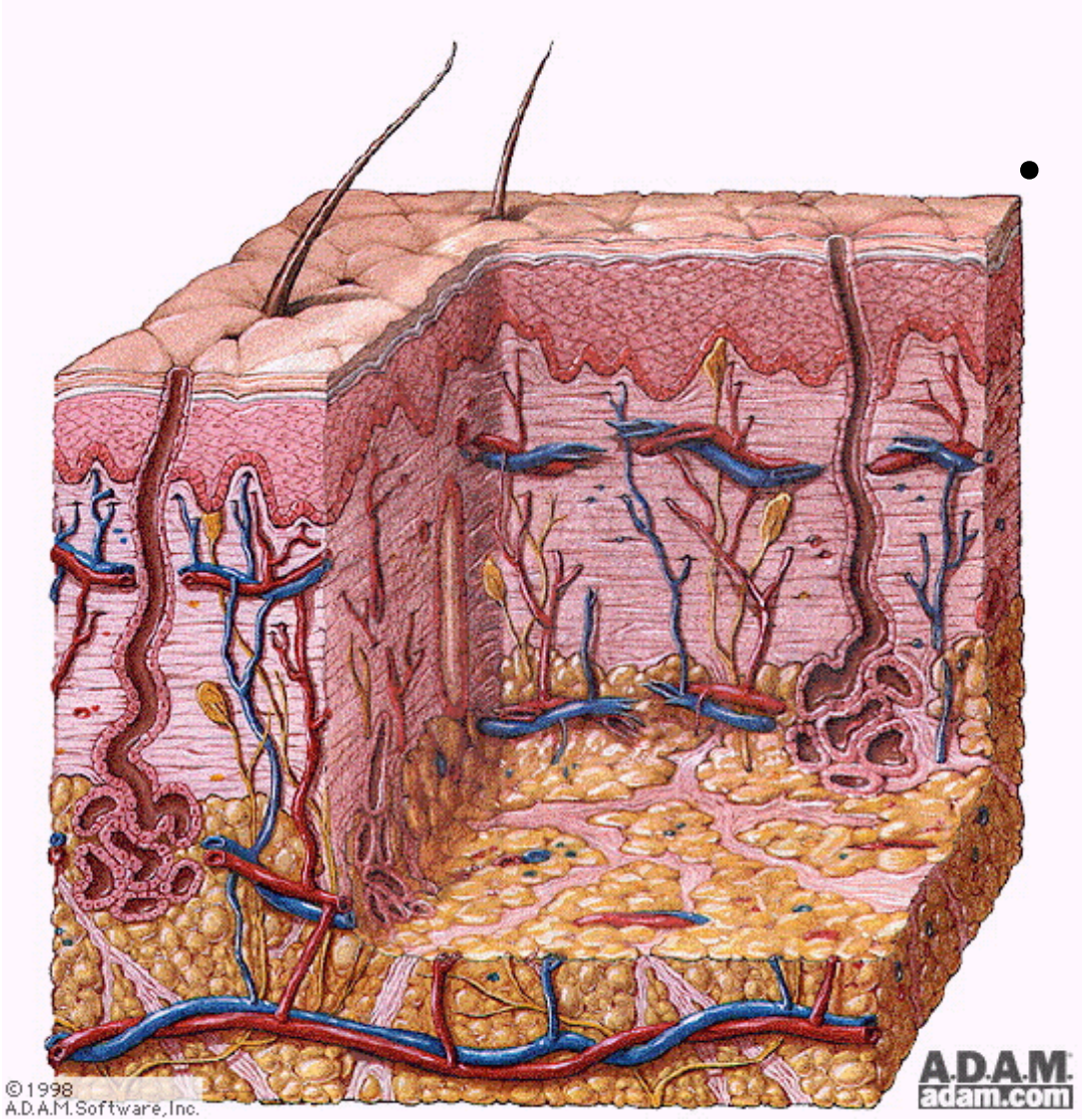
2° or Partial Thickness Burn



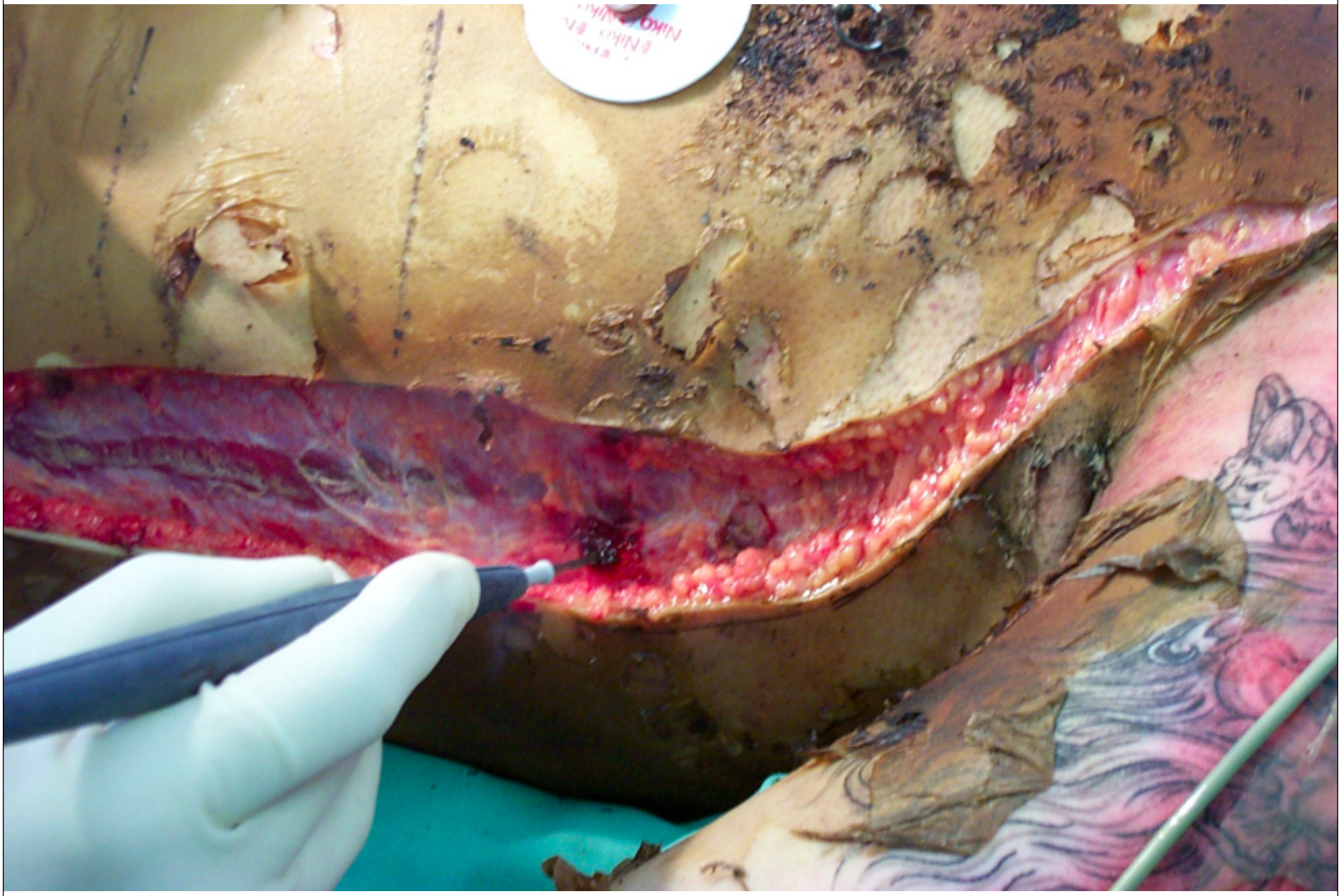
Signs & Symptoms

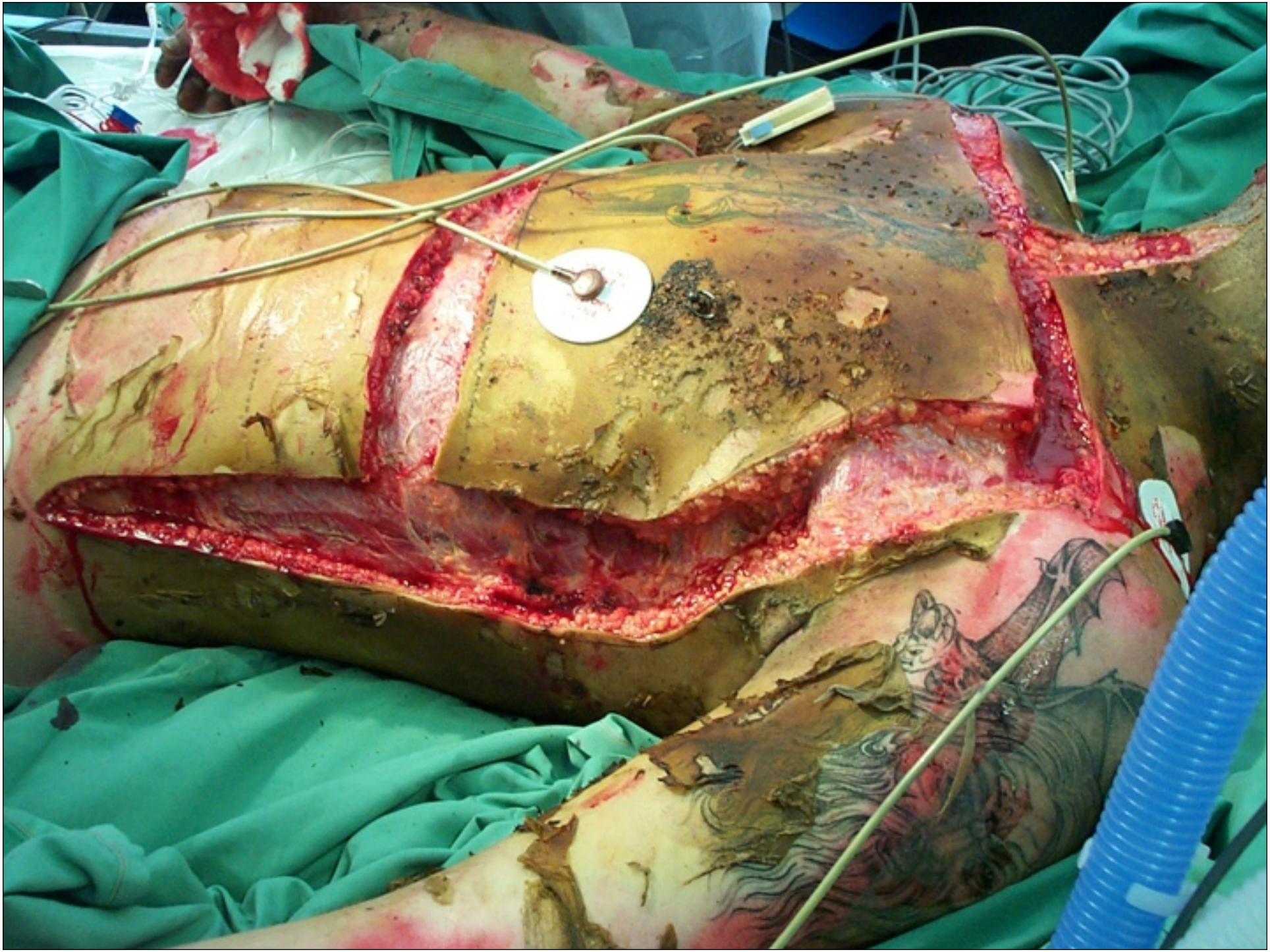
- Intense pain
- White to red skin
- Blisters
- Involves epidermis & dermis

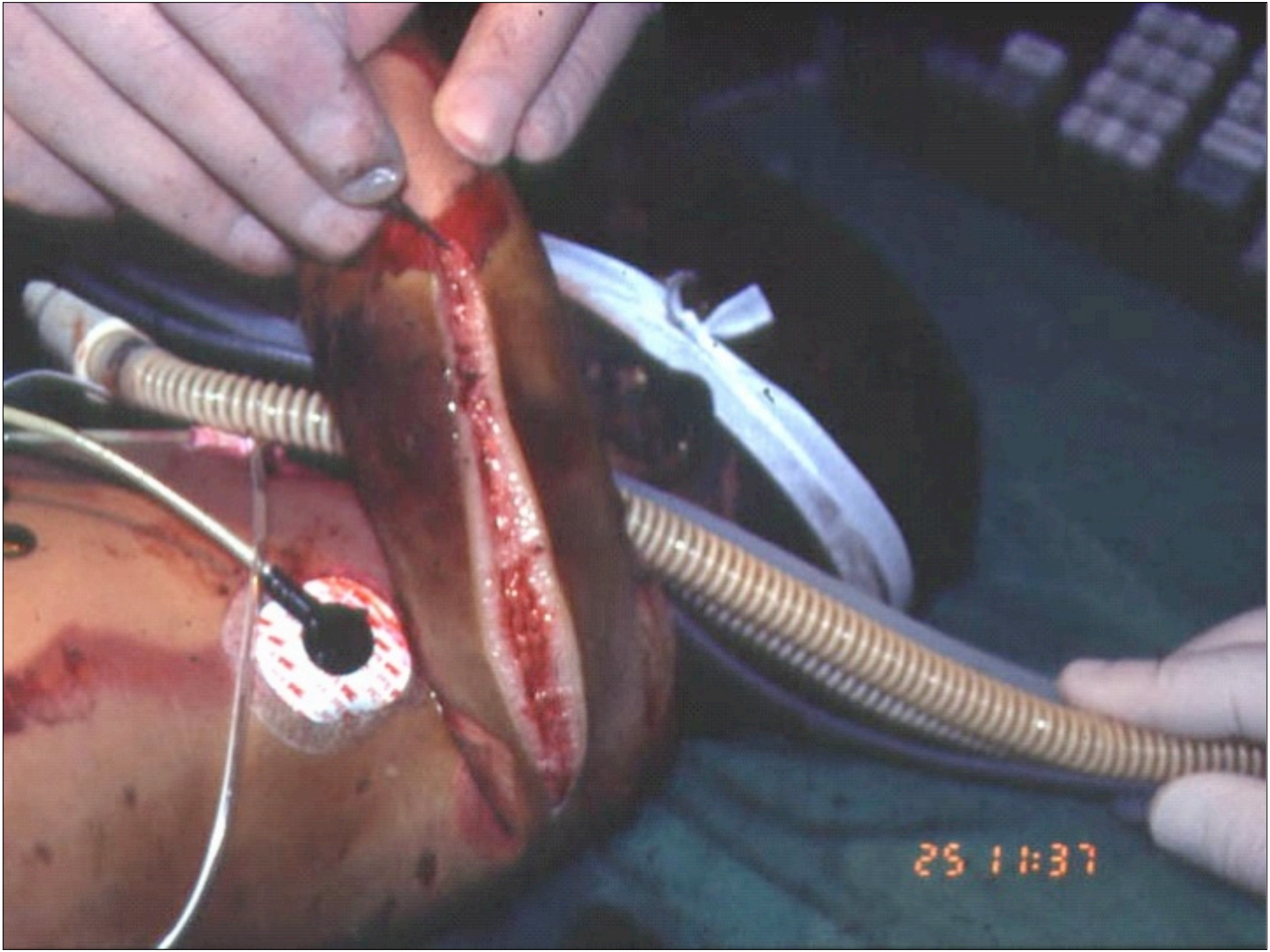
3° or Full Thickness Burn



- Signs & Symptoms
  - Dry, leathery skin (white, dark brown, or charred)
  - Loss of sensation (little pain)
  - All dermal layers/ tissue may be involved



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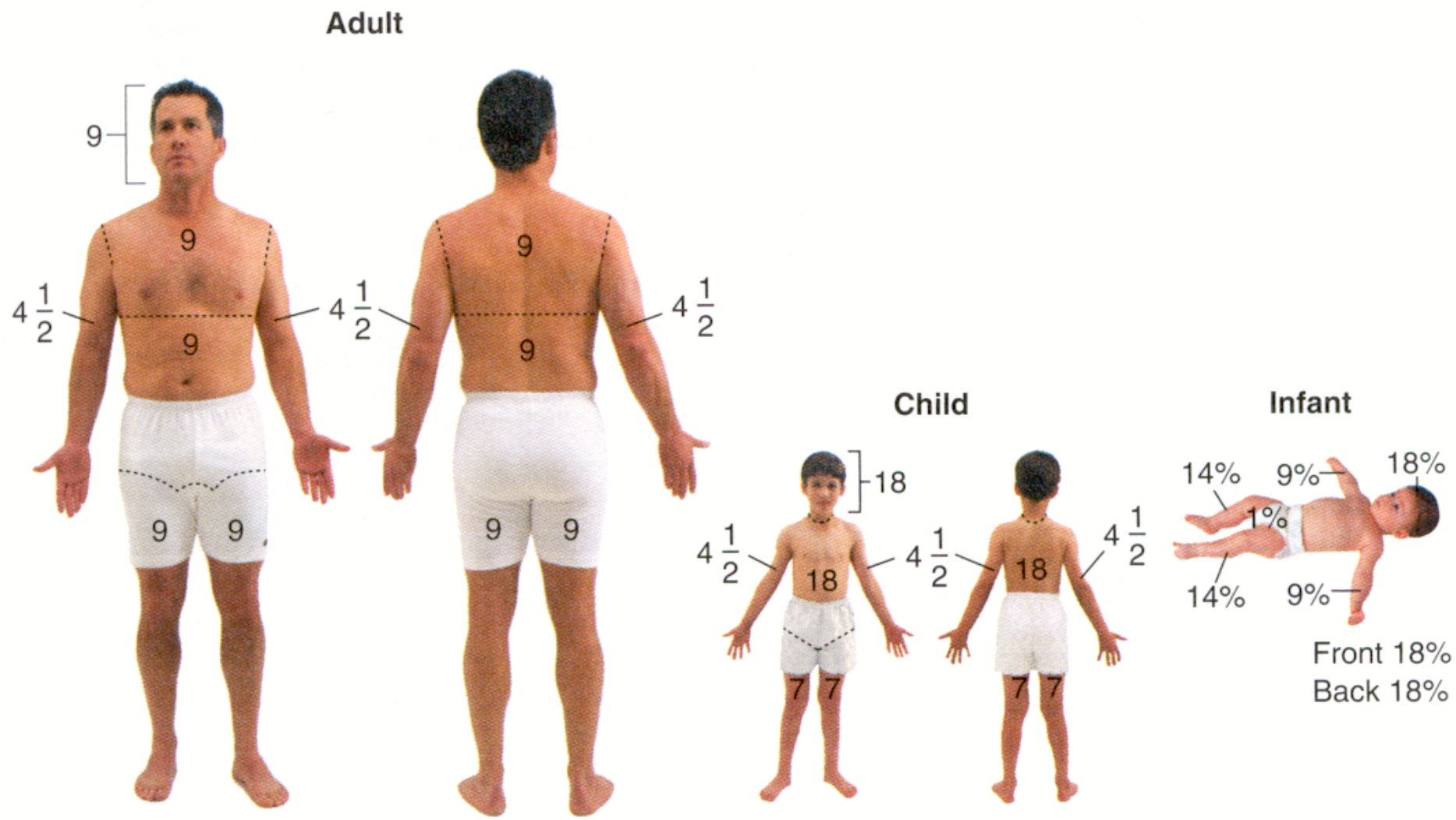
Body Surface Area

- Rule of Nines
  - Best used for large surface areas
  - Expedient tool to measure extent of burn
- Rule of Palms
  - Best used for burns < 10% BSA

Rules of Nines



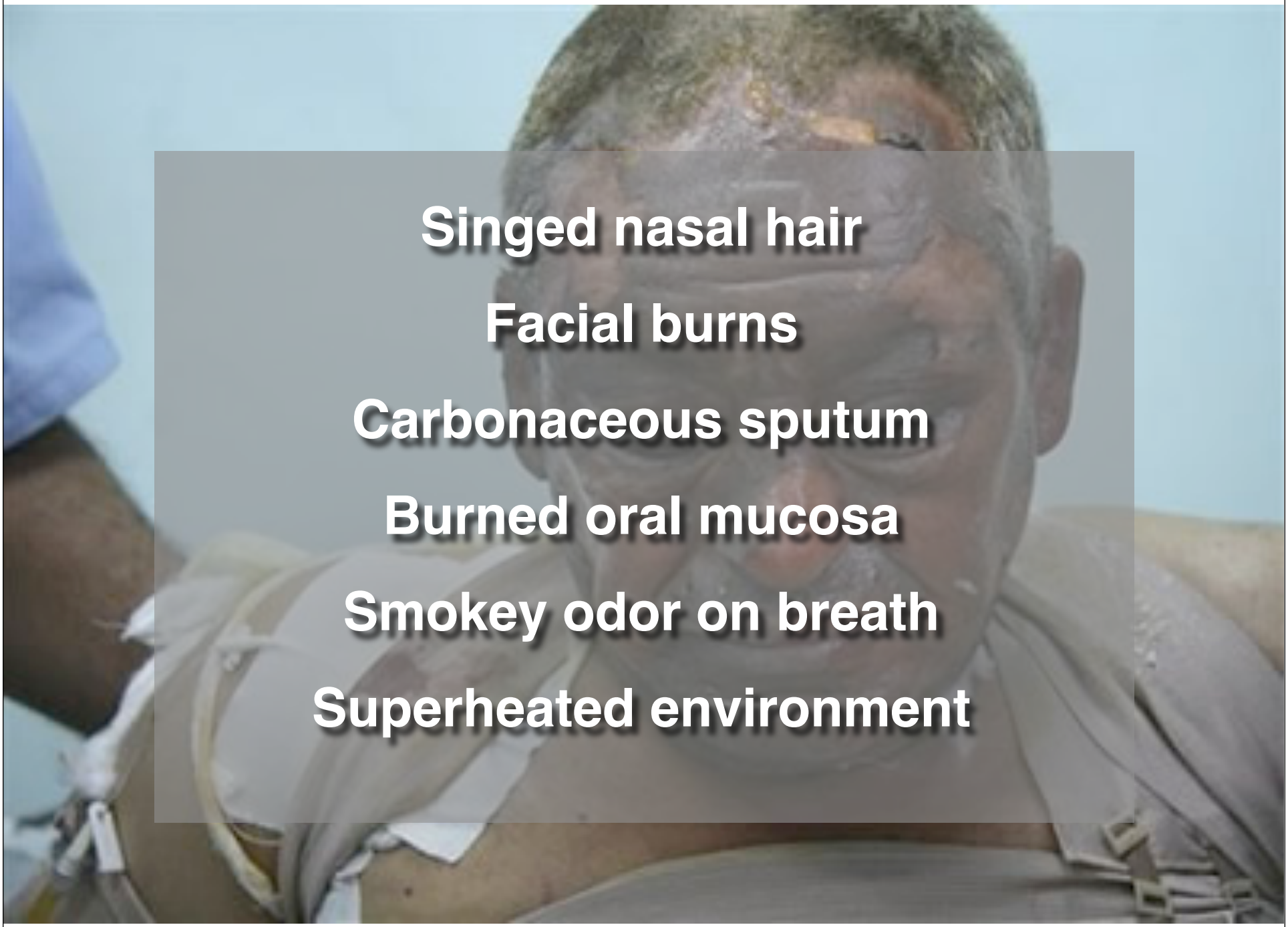
Rule of Palms

- A burn equivalent to the size of the patient's hand is equal to 1% body surface area (BSA)

- Concerns?

Inhalation Burns

- Huge concern!
- If you suspect airway burns and worsening airway edema, ALS airway control is a priority!
- S/S of upper airway swelling?
- BLS treatment?


Singed nasal hair
Facial burns
Carbonaceous sputum
Burned oral mucosa
Smokey odor on breath
Superheated environment

Treatment

- Move the patient from the source of the burn
- Stop the burning process

Treatment

- Airway
- Breathing
- Circulation

Treatment

- Expose the burned site
- Loosen and/or remove any constrictive items or jewelry on the patient's body

Treatment

- Classify the severity of the burn, and prepare for immediate transport if found to be critical
  - methods for classifying burn severity?

Treatment

- Cover any burns with a dry sterile dressing
- Keep the patient warm
- Treat other injuries
- Transport to an appropriate facility for burned patients

Treatment

- Special considerations for dressing burns
  - Do not use any material that may become enmeshed in the burn
  - Never apply any ointments, lotions, sprays, or antiseptics
  - Never break or drain blisters if present

Quick Case 2

- TBSA?
- How would you treat?

Treatment

- Special considerations: digits
  - Separate the digits with sterile gauze

Treatment

- Special considerations: digits
  - Cover/wrap the digits with dry sterile dressings

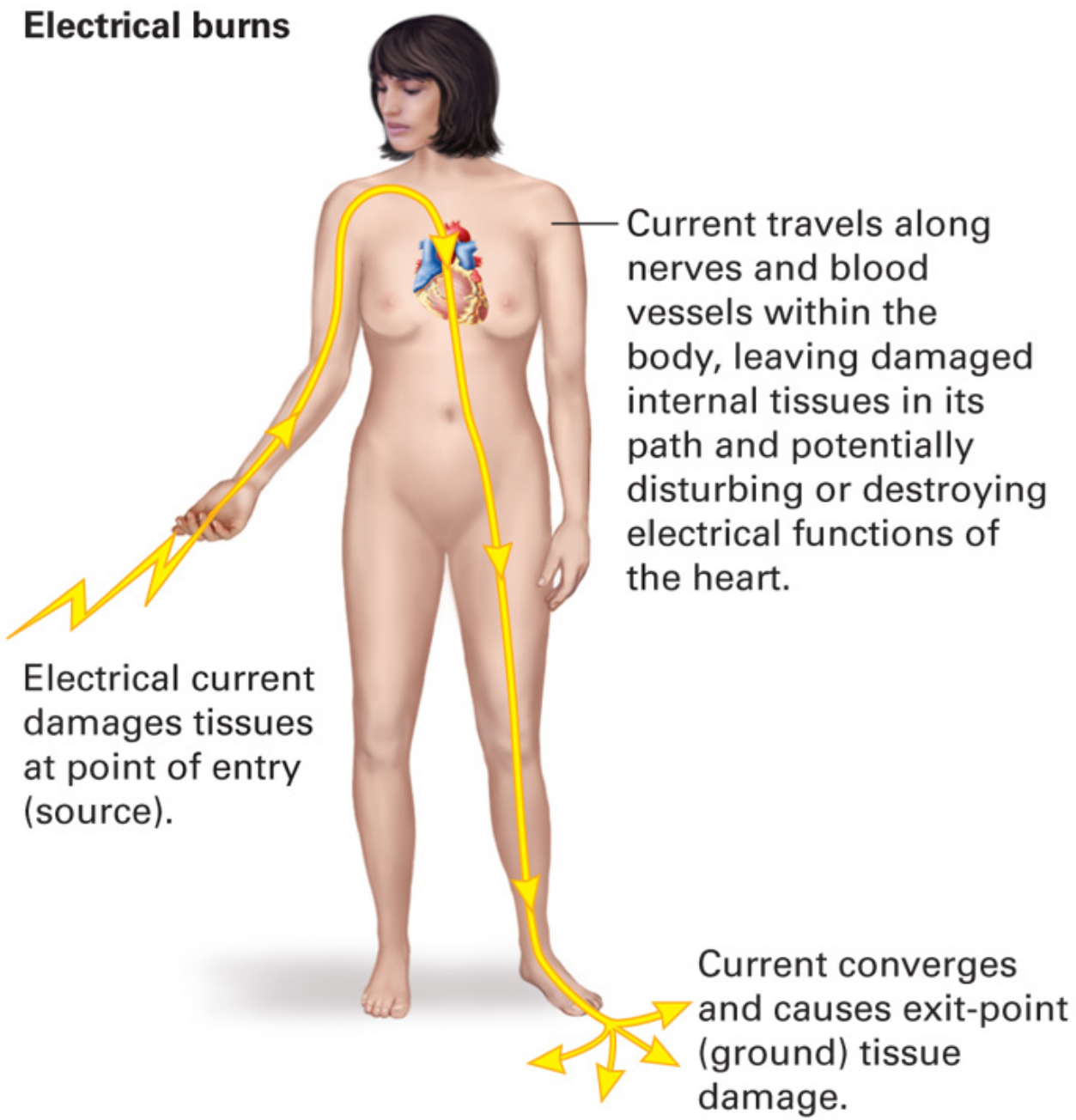
Quick Case 3

Electrical Burns

- Electricity flows through the body, in search of a “ground”
- Heat is created as the current travels through dense structures such as bones, muscles, ligaments, and the skin

Contact burn

Ground burn



Electrical Burns

- Point of contact (entry)
- Point of ground (exit)

Treatment

- Never attempt to remove a patient from a source unless trained to do so
- Administer oxygen via NRB or PPV as needed
- Have AED handy!
- Treat entry and exit wounds as you would for burns to soft tissue
- Transport the patient as soon as possible

Review


CIRCLE
TRACK


SCIENCEphotoLIBRARY

Quick Case 4

Treatment

- Special considerations: eyes
  - Do not open eyes if burned
  - Flush chemical burns for 20 minutes at least.
  - Dress both eyes with dry, sterile dressings

Chemical Burns

- These deserve special mention because they may occasionally require alterations in your treatment
- Most chemical burns are industrial in nature, and decontamination usually has started by the time EMS arrives

Treatment

- Dry chemicals should be brushed off first, then the area irrigated

Treatment

- Flush eyes medial to lateral
- Tilt head
- Prevent water from entering other eye