

8/15/16

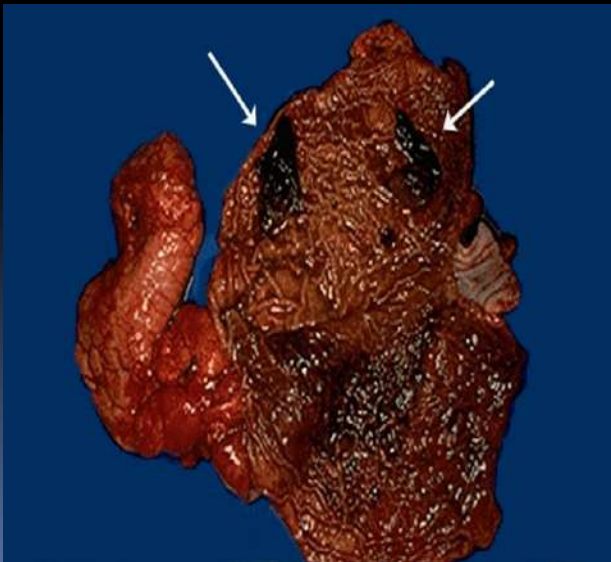
WARM-UP: Standards- SFS2c & SFS5a & b

EQ: How can manner, cause & time of death be determined?

Study the pictures below & match the cause of death with each picture.

MANNER OF DEATH: natural, homicide, & accidental

1.



2.

3.



1.8: DEATH & AUTOPSY

FORENSIC PATHOLOGY

*Most important piece of evidence at a crime scene is the dead body of the victim.

Forensic Pathologists study medicine as it relates to the application of the law

They can be medical examiners or coroners

Main role is to determine cause of death.



MANNER (WAY IT HAPPENED) OF DEATH

- 1. **Natural**-heart failure, disease, death during sleep
- 2. **Homicide**-killing of a human; murder
- 3. **Suicide**-intentionally taking one's own life
- 4. **Accident**-if it can be avoided an investigation will take place (ex. Safety guard left off machinery)
- 5. **Undetermined**-unknown (autopsy required)
- * **Involuntary Manslaughter**-killing someone w/o meaning to

CAUSE (WHY) OF DEATH


- 1. **Blunt Force**-damage to organs , bleeding (ex. Bat)
- 2. **Stabbing**-excessive loss of blood or damage to organs
- 3. **Stroke**-blockage in brain
- 4. **Hanging**- lack of oxygen
- 5. **Drowning**-lack of oxygen; water in lungs and stomach

You Choose:
Which
wound was
caused by:
stabbing,
incision, &
laceration?




TIME OF DEATH

- 1. **Rigor Mortis**-muscles stiffening between 24-36 hours
- 2. **Livor Mortis**-settling of blood in areas of the body closest to the ground (skin appears dark blue or purple)
Begins and continues for up to 12 hrs after death
- 3. **Algor Mortis**-temp of the body cools until it reaches the surrounding temp (Begins 1hr after death & heat loss is 1-1.5 F per hour)
- 4. **Ocular Fluid/Vitreous Humor**- measure the rate of potassium levels present at difference times of death
- 5. **Stomach Contents**-amount of food in stomach can help estimate when last meal was eaten (a lot of food-1-2hrs)



Two additional areas of forensics associated with death:

- **Forensic Anthropology-**
concerned with identifying and examining skeletal remains
 - **Forensic Entomology-**
uses insects to estimate time of death when circumstances are unknown
- 



PERFORMING AN AUTOPSY

What Warrants an Autopsy

- Questionable Death-as determined by the coroner
 - Homicide
 - Drowning
- Auto Accidents
- Death of a child

Used to Collect Vitreous



Tags & Heart Needle

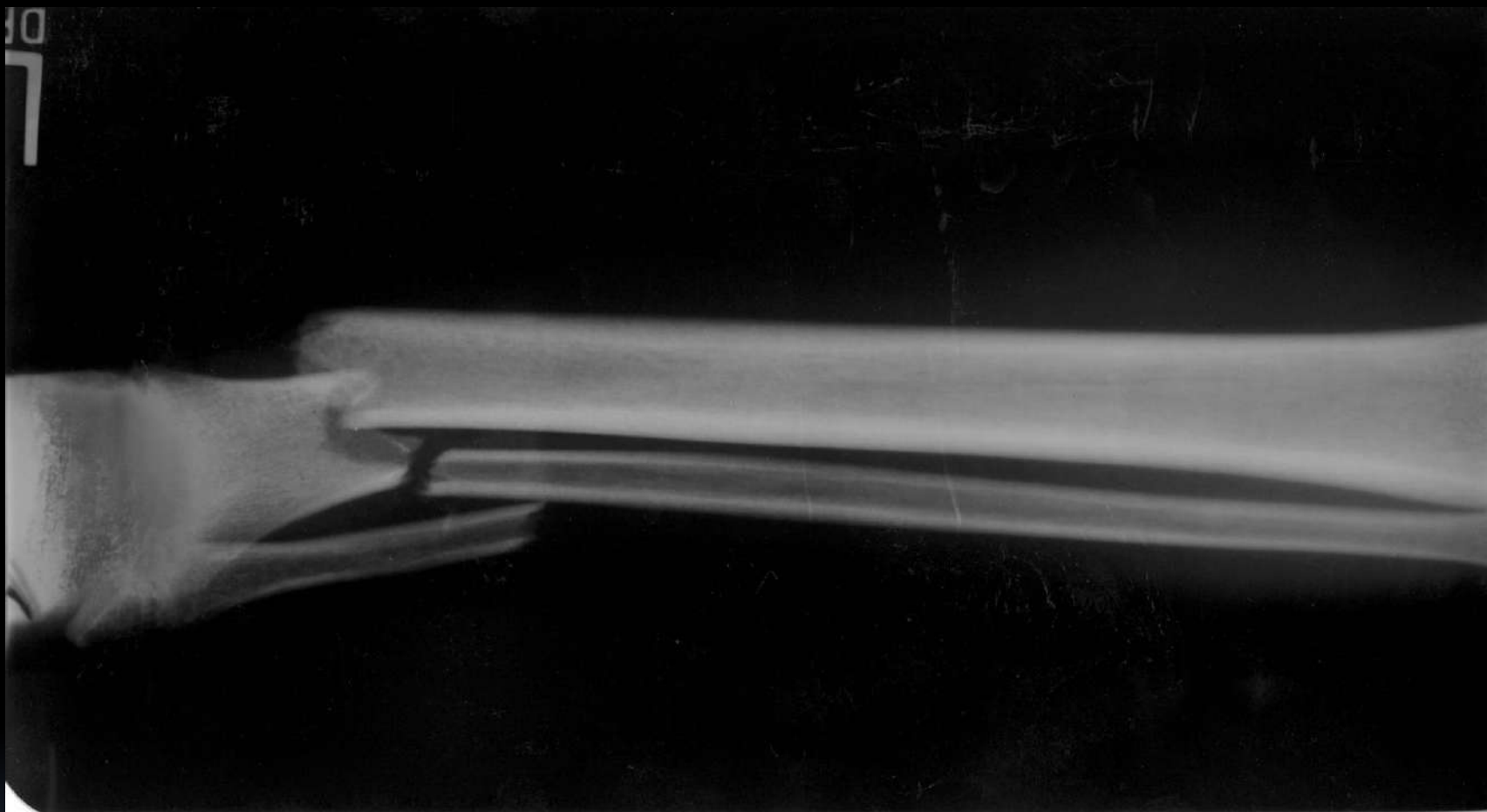


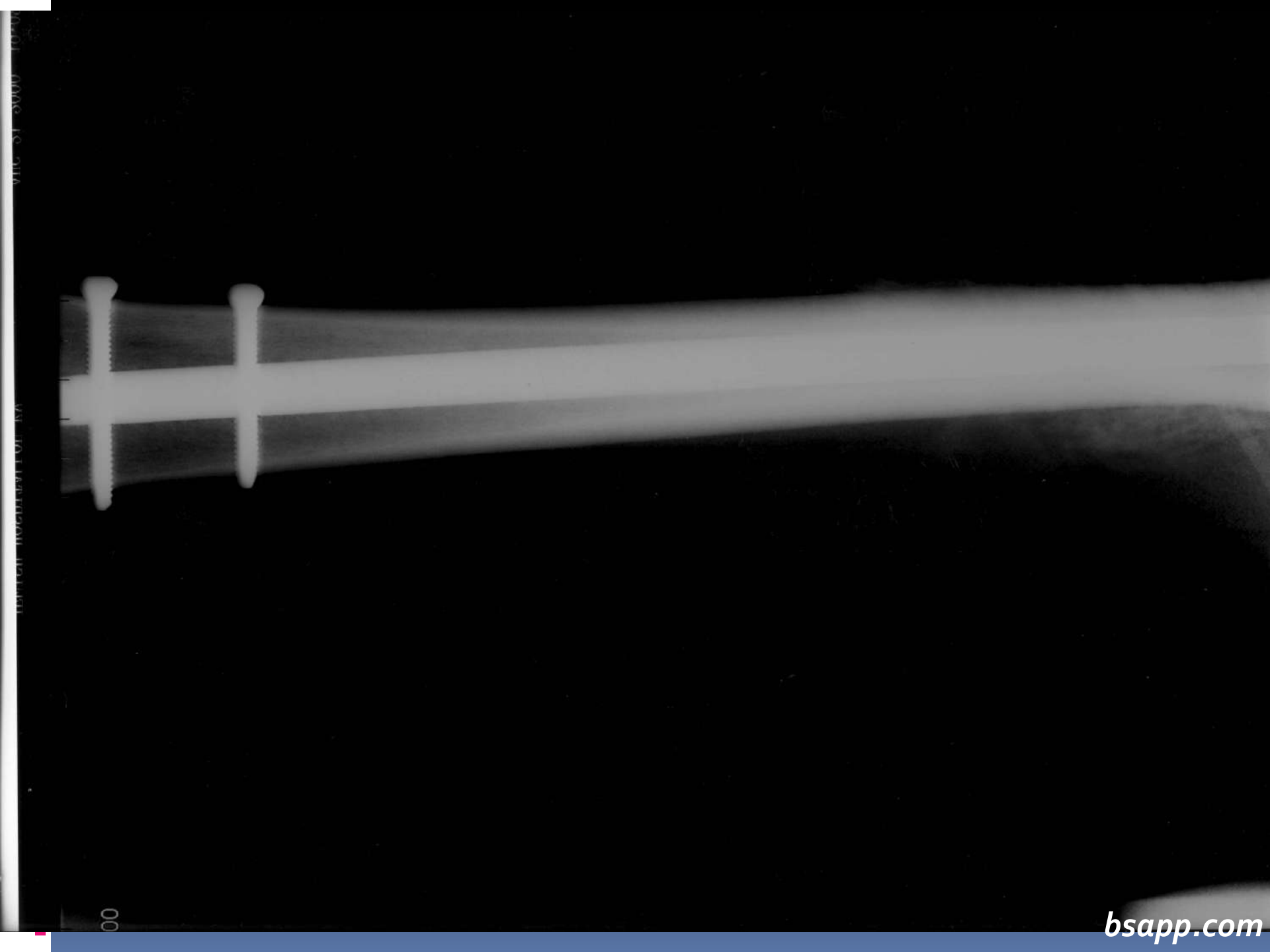


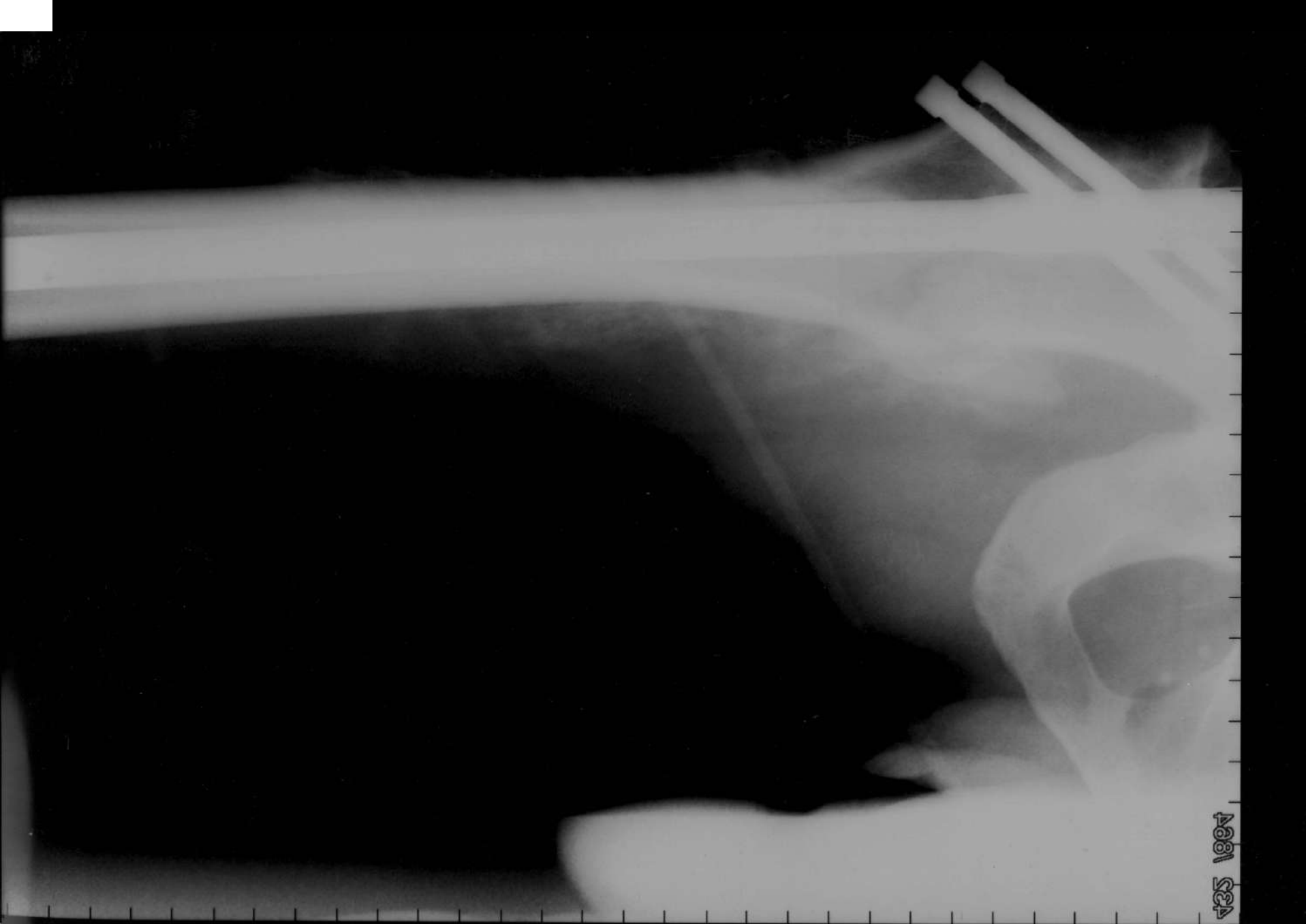
Benefits of Autopsy

Discover cause of death for:

- Criminal cases
- Family peace of mind
- Genetic disease or deformity
- Insurance claims
- Medical advancement









Autopsy Room



External Examination

- Trace Evidence
- Sign of injury or mistreatment
- Sign of illness, disease, or abnormalities



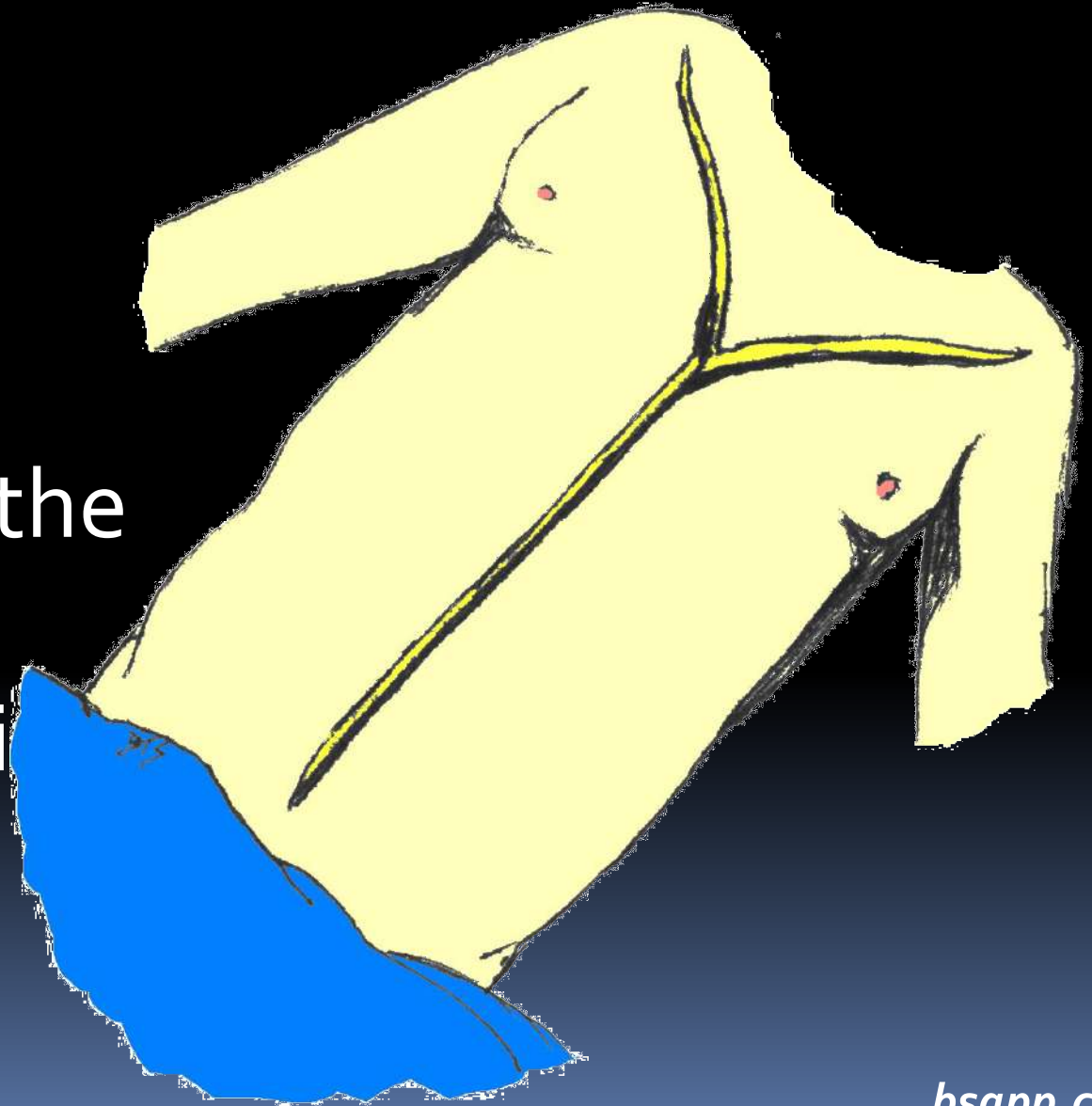


Body Block

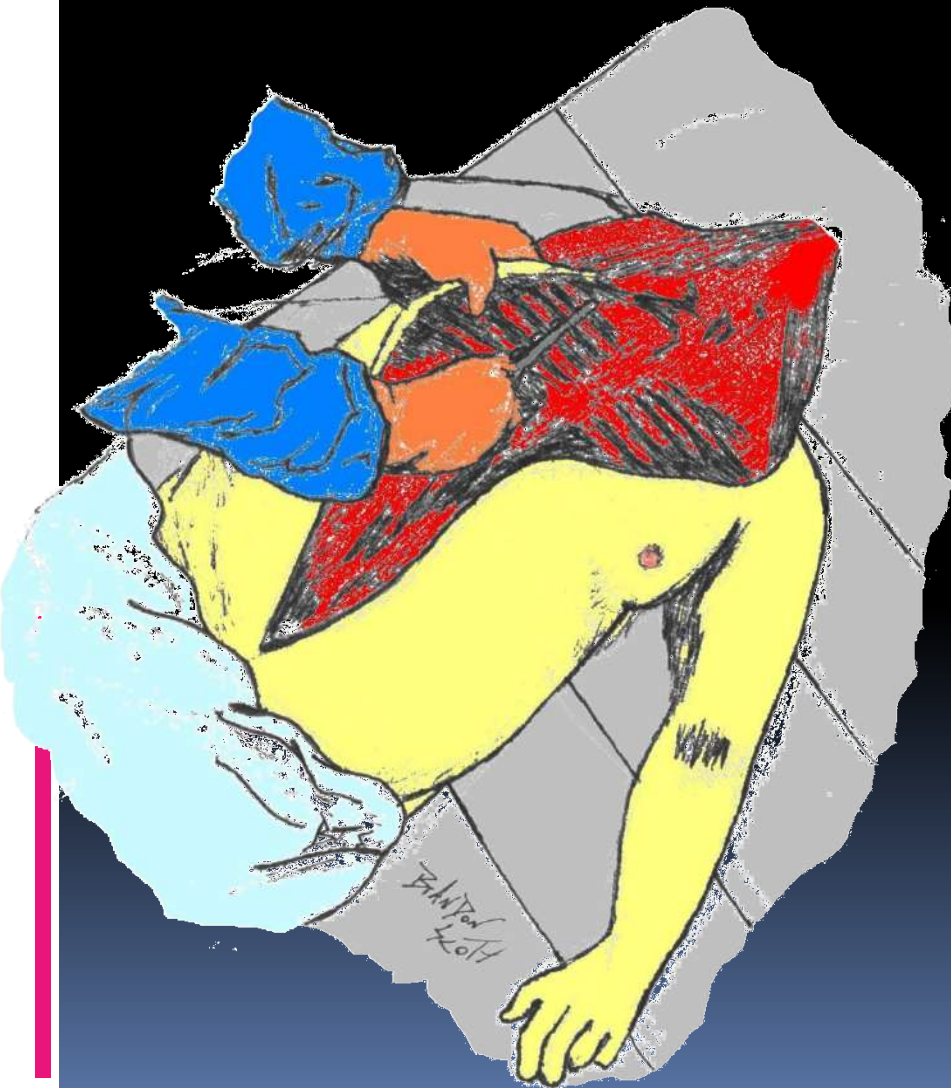


Trunk Dissection

- Y-shaped incision
- From the shoulders to the pelvic bone
- This incision is deep



Opening the Chest



- Skin & muscle, are pulled from the chest wall
- Chest Plate is extracted
- Heart is extracted

Removal and Dissection of the Organs:

- One organ at a time
- All body organs at once - "Rokitansky Method"
- Upon removal each organ is:
 - Weighed & measured
 - Examined
 - Sliced in cross sections
 - Sampled for microscopic & chemical analysis

Samples





Organ Containers

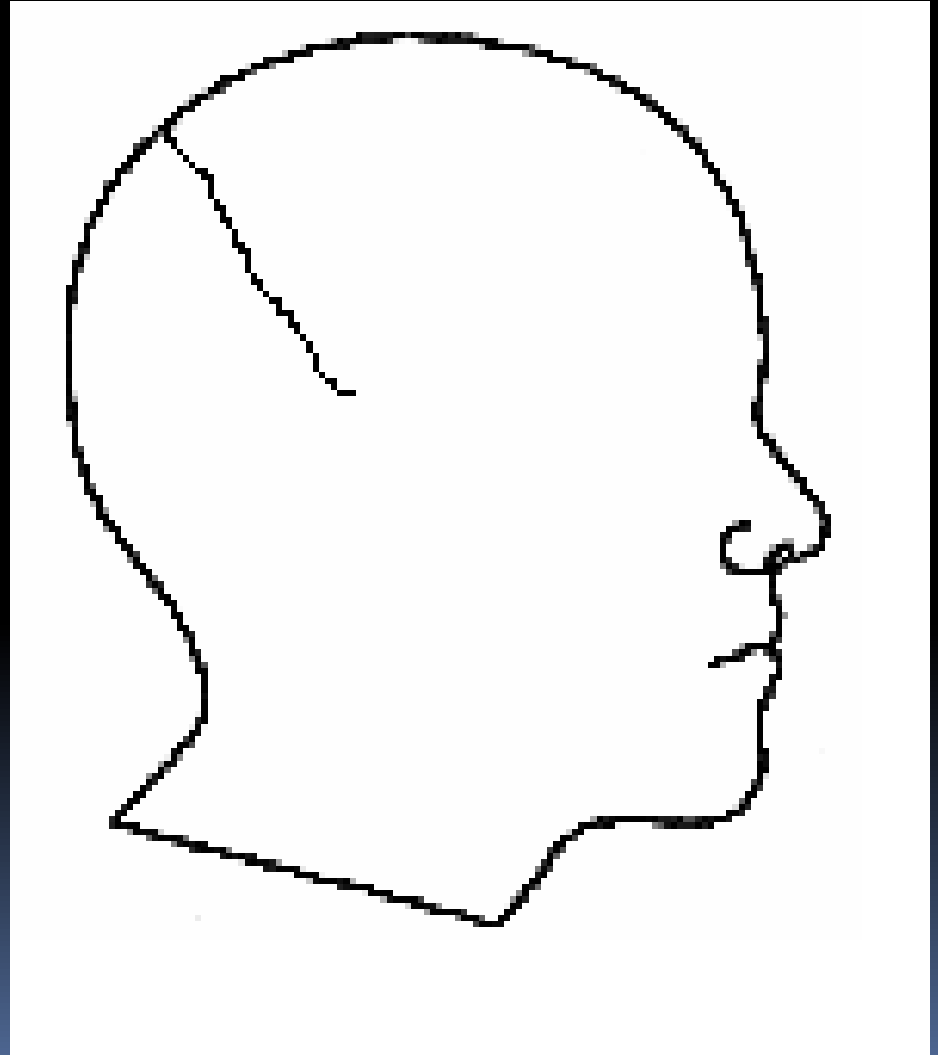
“Running the Gut”



The contents of the stomach, intestines, and bowels must be inspected as well

Removing the Brain

The Scalp is cut
ear to ear across
the crown of the
head



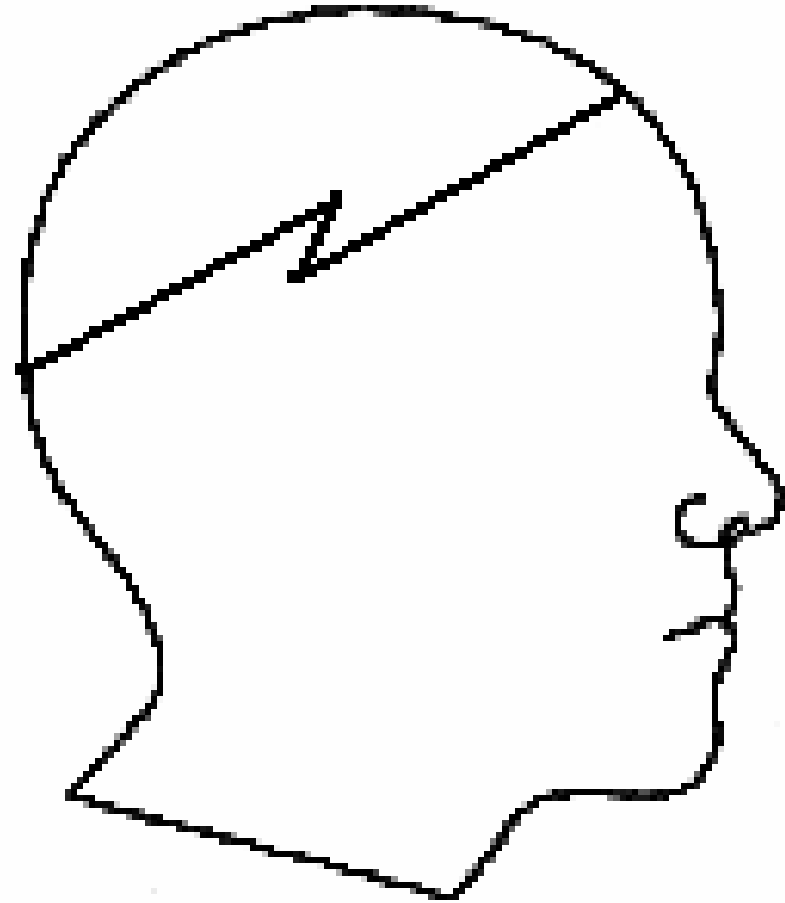
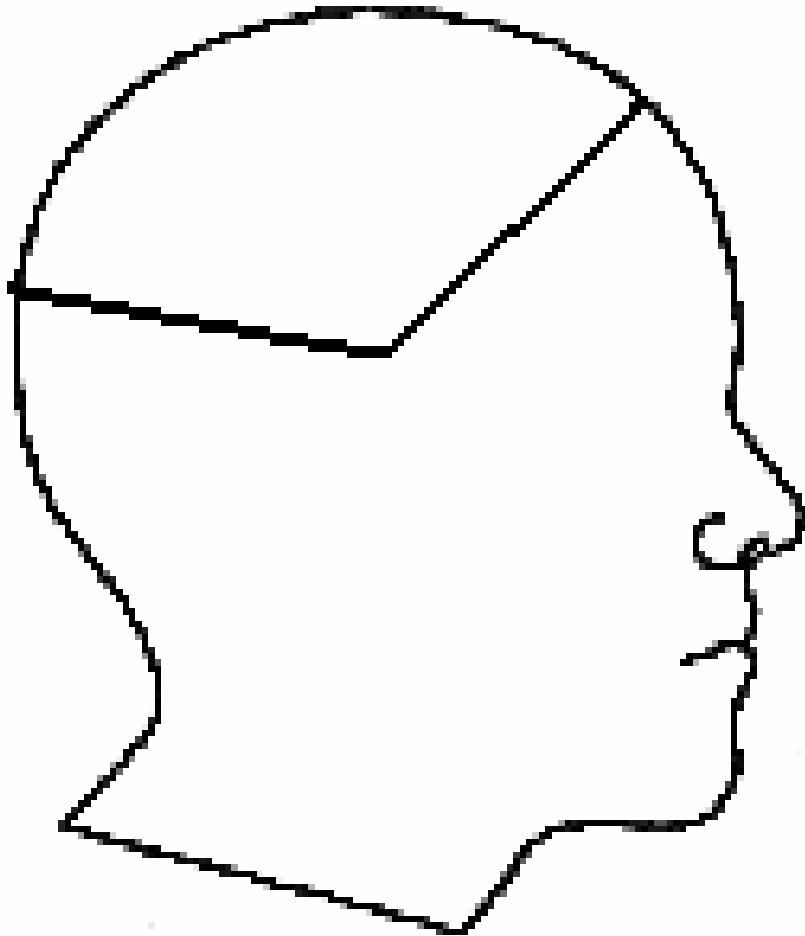
Exposing the Skull

Next the scalp is pulled forward and back to expose the skull



Exposing the Brain

Two methods of cutting the skull cap

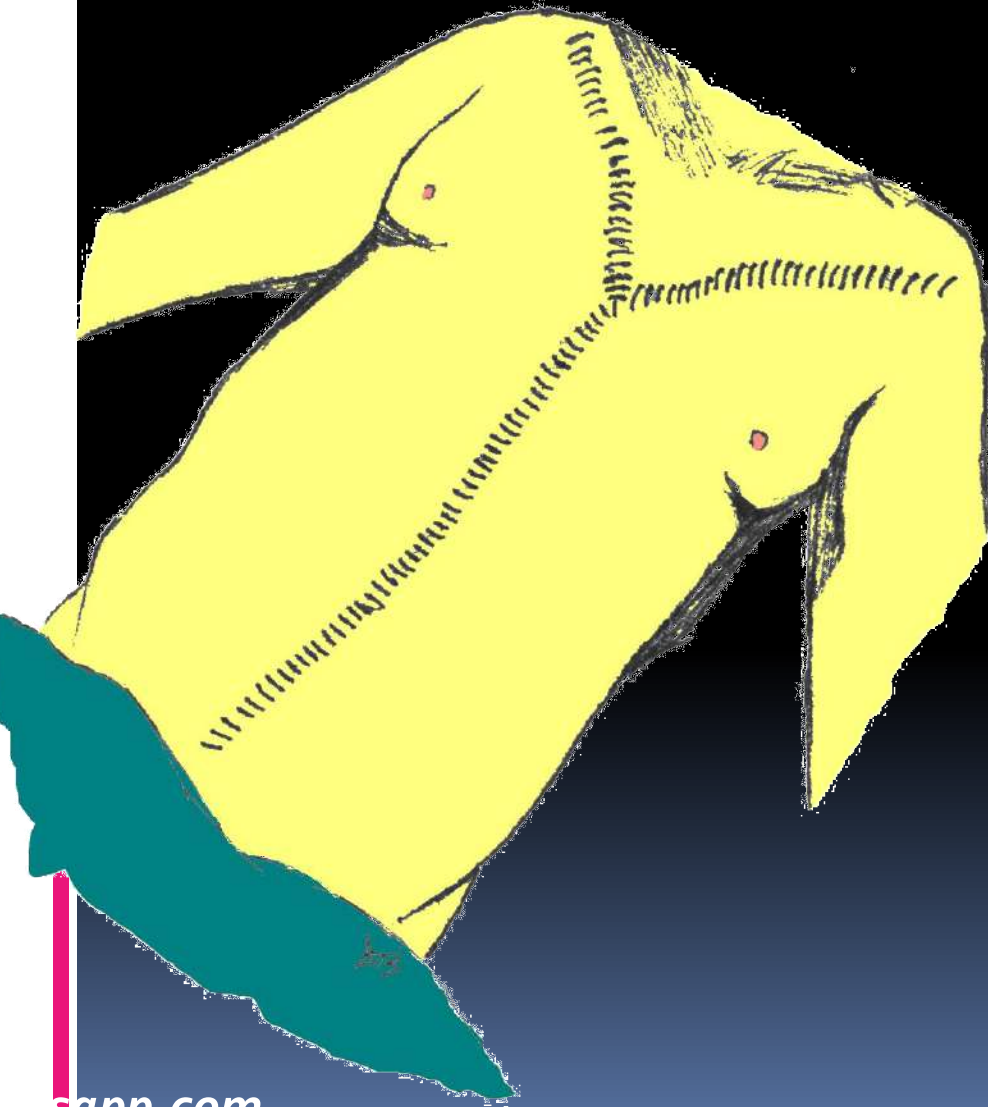


Removal of the Brain

- Spinal Cord is cut
- The soft brain is removed
- Brain is so soft it must be placed in formaldehyde for about a week before an in depth examination



Close Up



- Skull cap is replaced
- Skin pulled back in place
- Body Organs may or may not be replaced
- Incisions are sown up with the use of a baseball stitch