

Observations on Stunning Placement in Cattle

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Guidelines for selection of the most appropriate site for conducting euthanasia in cattle

“The point of entry should be at the intersection of two lines each drawn from the inside corner of the eye to the base of the opposite horn (or slightly above the ear in cattle without horns).”

Practical Euthanasia of Cattle, The AABP Brochure on Euthanasia of Cattle

Evaluation of 3 Anatomical Sites for Conducting Euthanasia in a Holstein Cow

1. Medial canthus (inside corner) of the eye to the top of the ear (opposite side)
2. Medial canthus (inside corner) of the eye to the base of the horn
3. 1 ½ inches above the intersection of #2

Inside corner of the eye to top of the ear



Inside corner of the eye to top of the ear

Bolt held perpendicular to the forehead

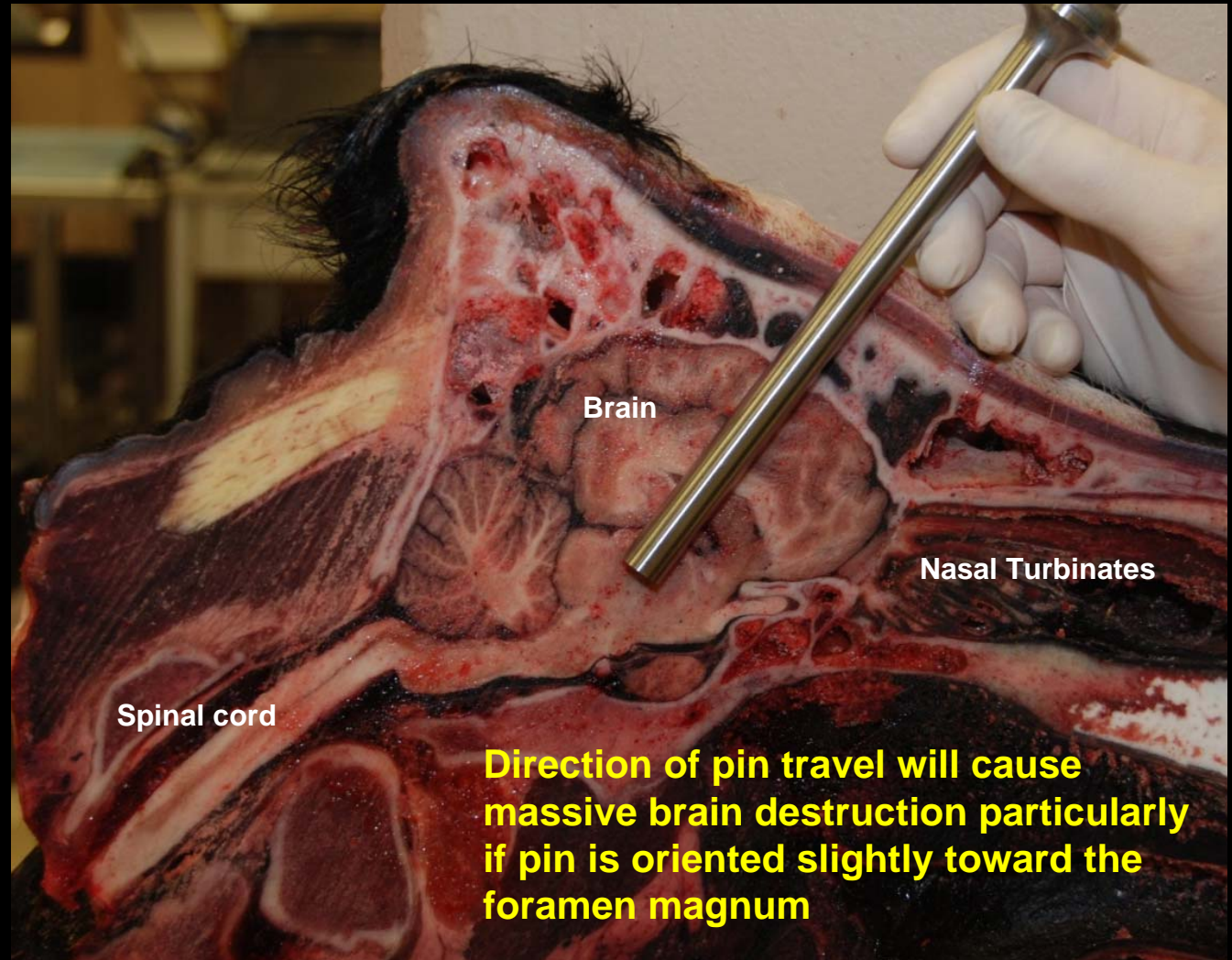


At the intersection of 2 lines each drawn from the inside corner of the eye to the base of the horn on the opposite side



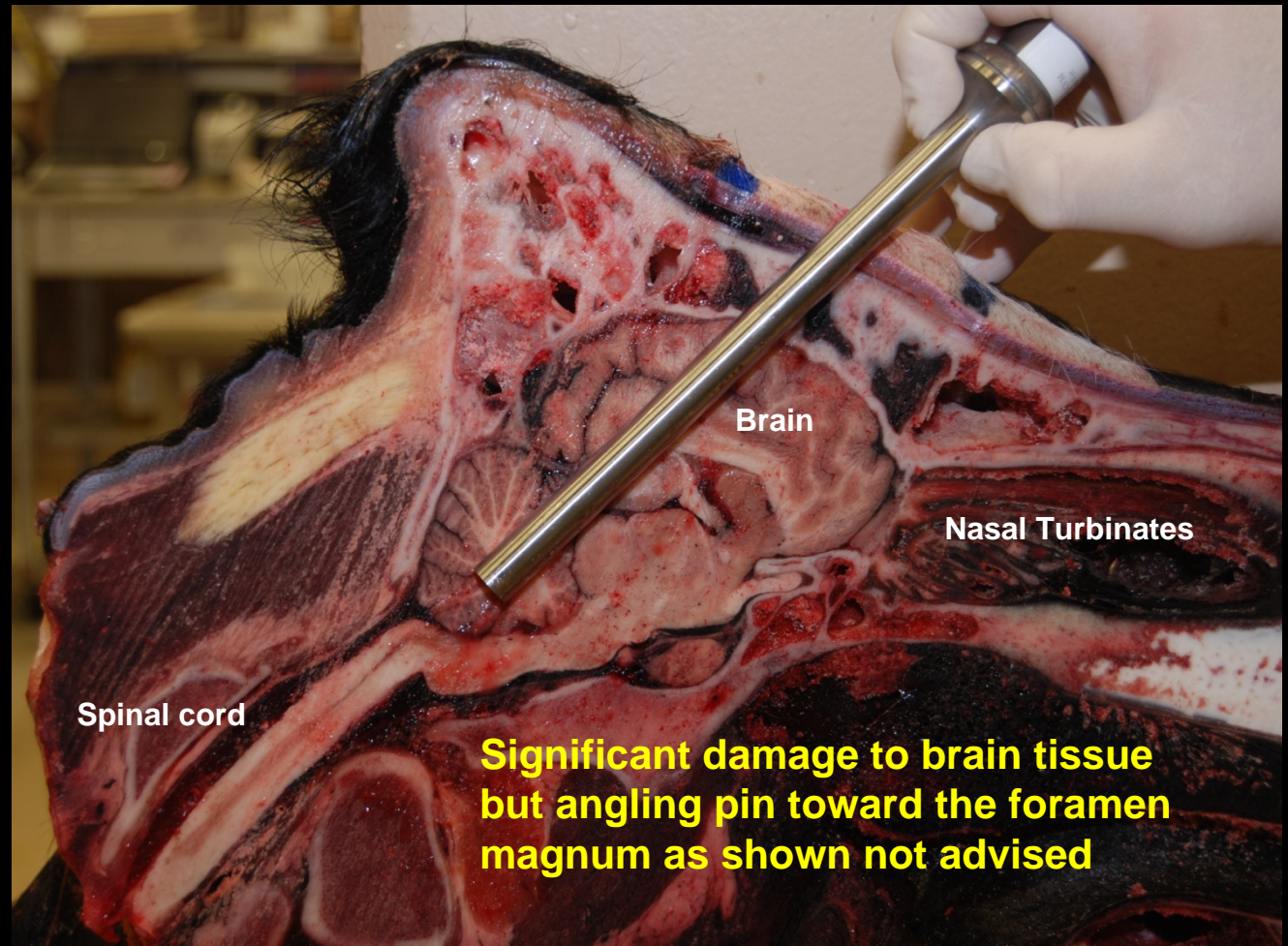
Inside Corner of the Eye to the Base of Horn

**Pin held perpendicular
to the forehead**



Inside Corner of the Eye to the Base of Horn

**Pin angled toward the
foramen magnum**

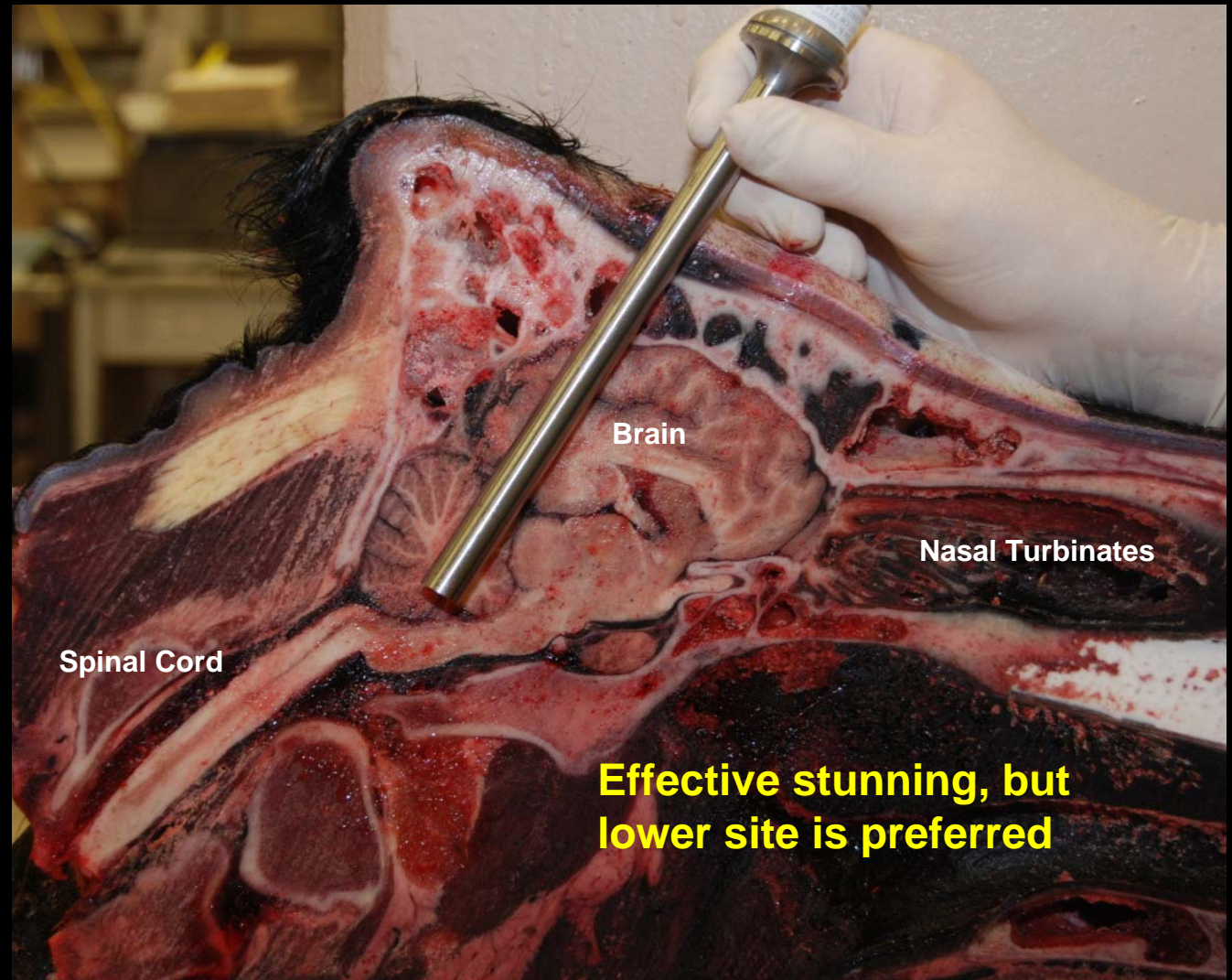


Site: 1 ½ inches above the intersection of 2 lines each drawn from the inside corner of the eye to the base of the horn on the opposite side

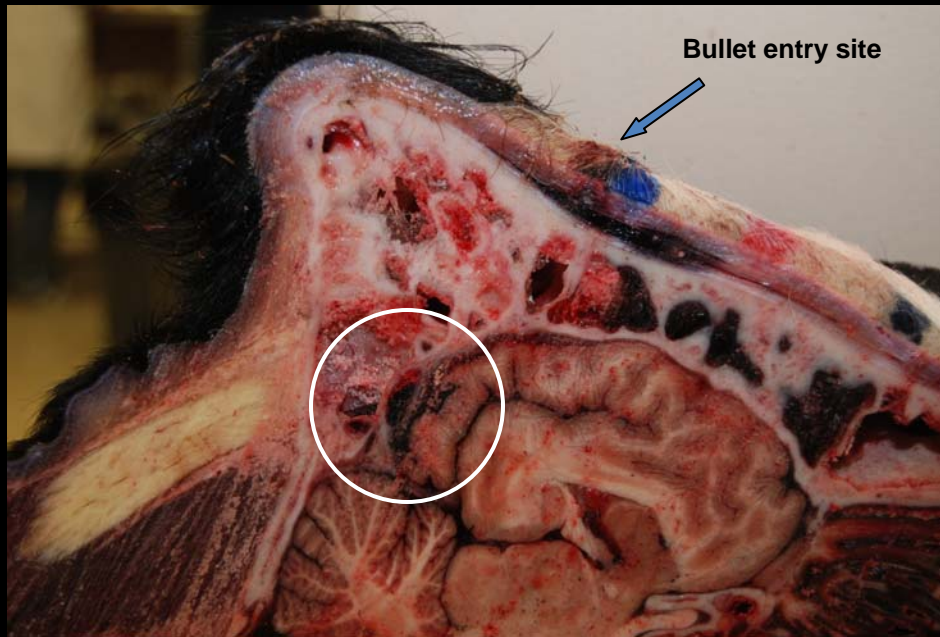


Inside Corner of the Eye to the Base of Horn (1 ½ inches above)

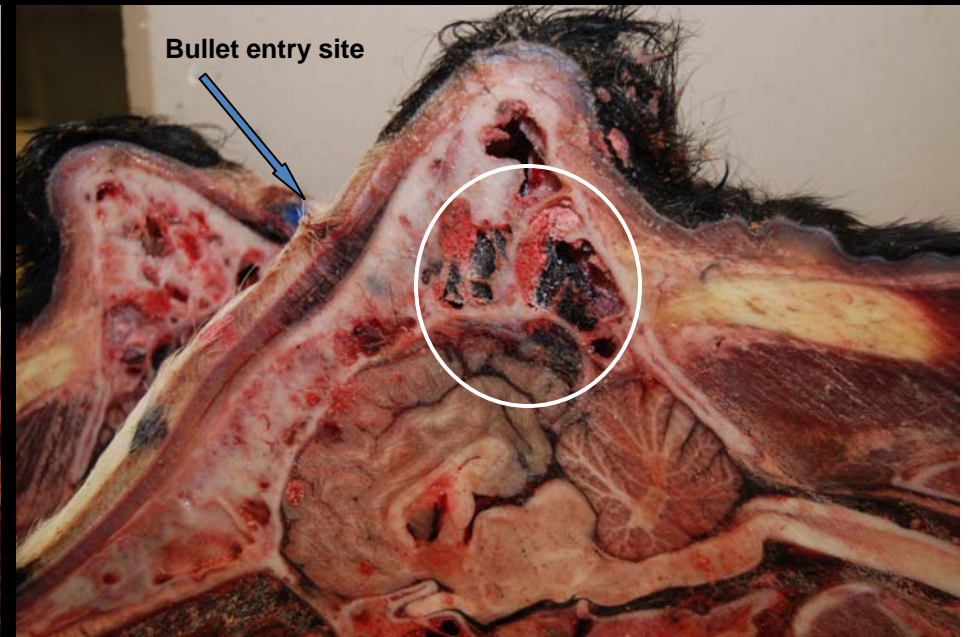
Pin held perpendicular
to the forehead



Path of the bullet used to kill this cow



Skull – left half



Skull – Right half

Bullet appears to have missed the brain completely

Anatomical sites in an AngusXHereford Steer

3 Anatomical Sites

1. Medial canthus (inside corner) of the eye to the top of the ear (opposite side)
2. Medial canthus (inside corner) of the eye to the base of the horn
3. 1 ½ inches above the intersection of #2

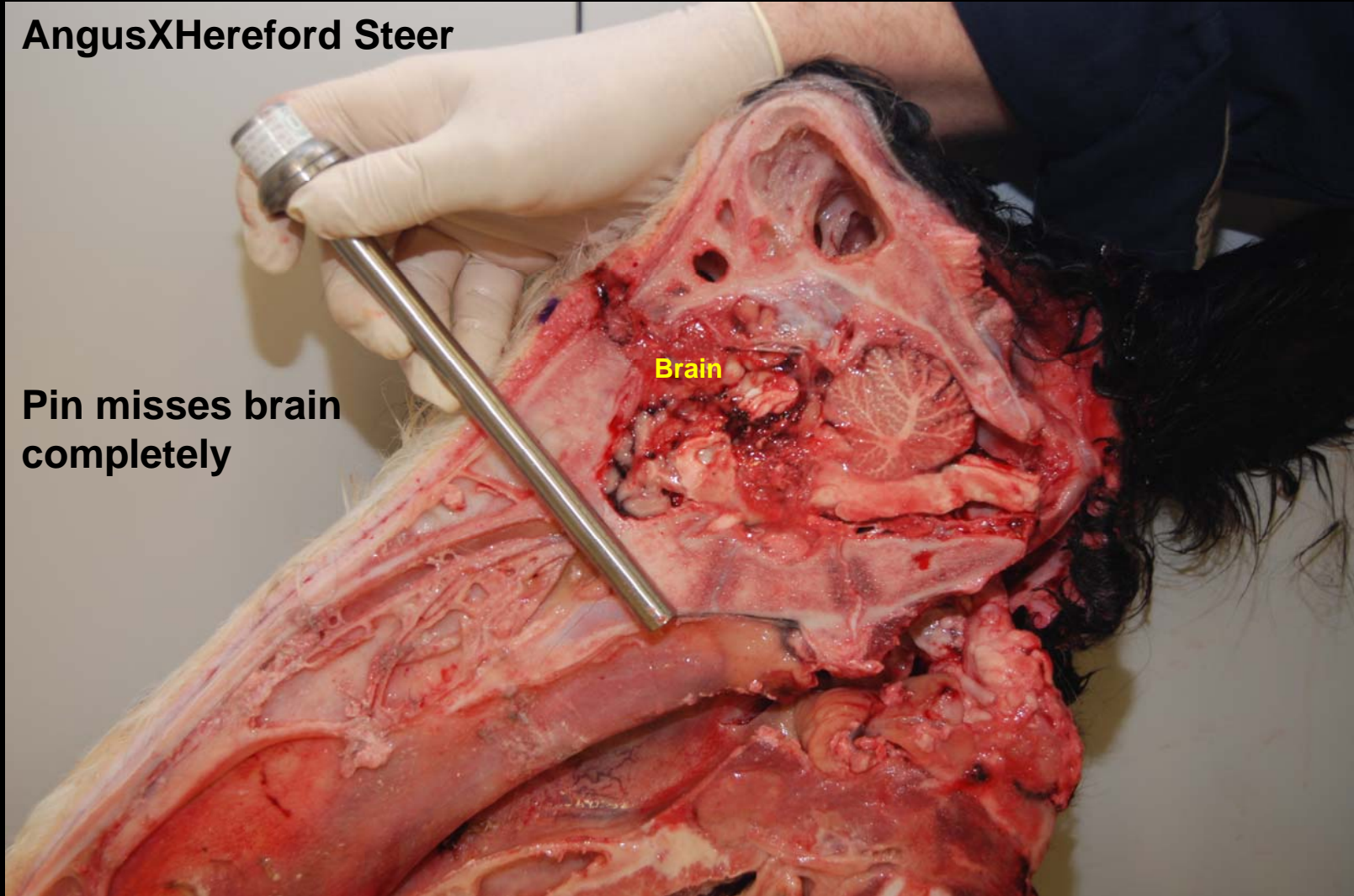


Inside corner of the eye to top of the opposite ear

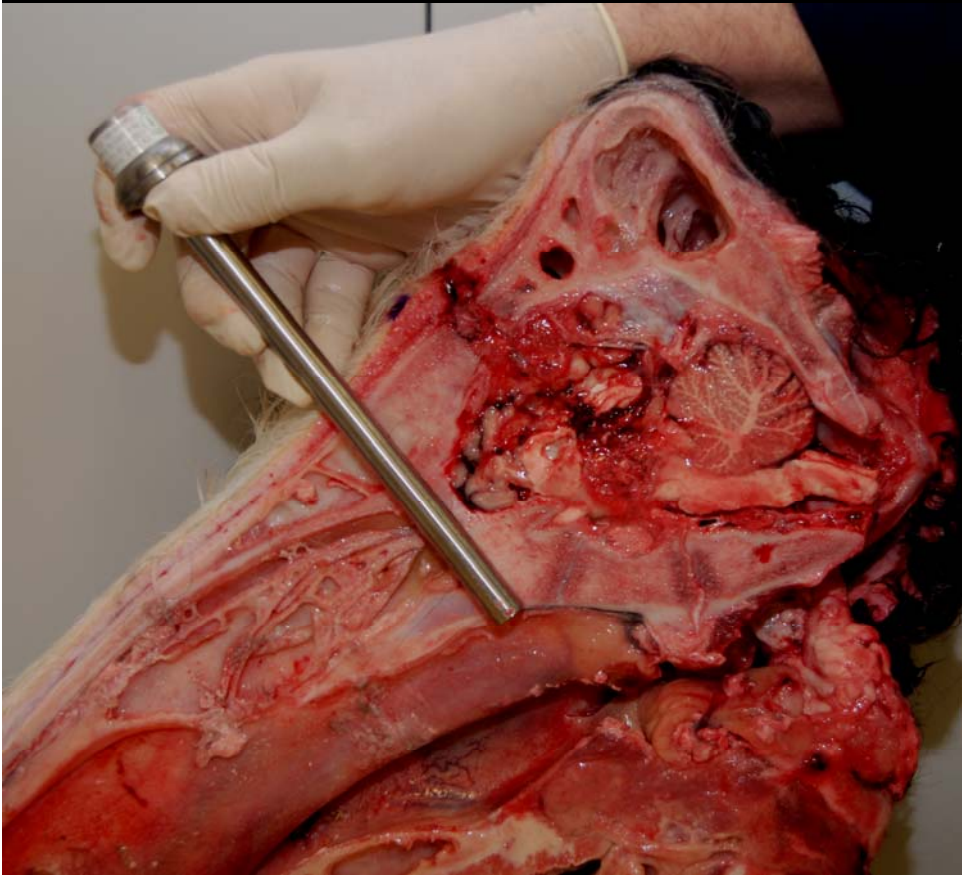
AngusXHereford Steer

Pin misses brain
completely

Brain



**Inside corner of the eye to top of the
opposite ear**

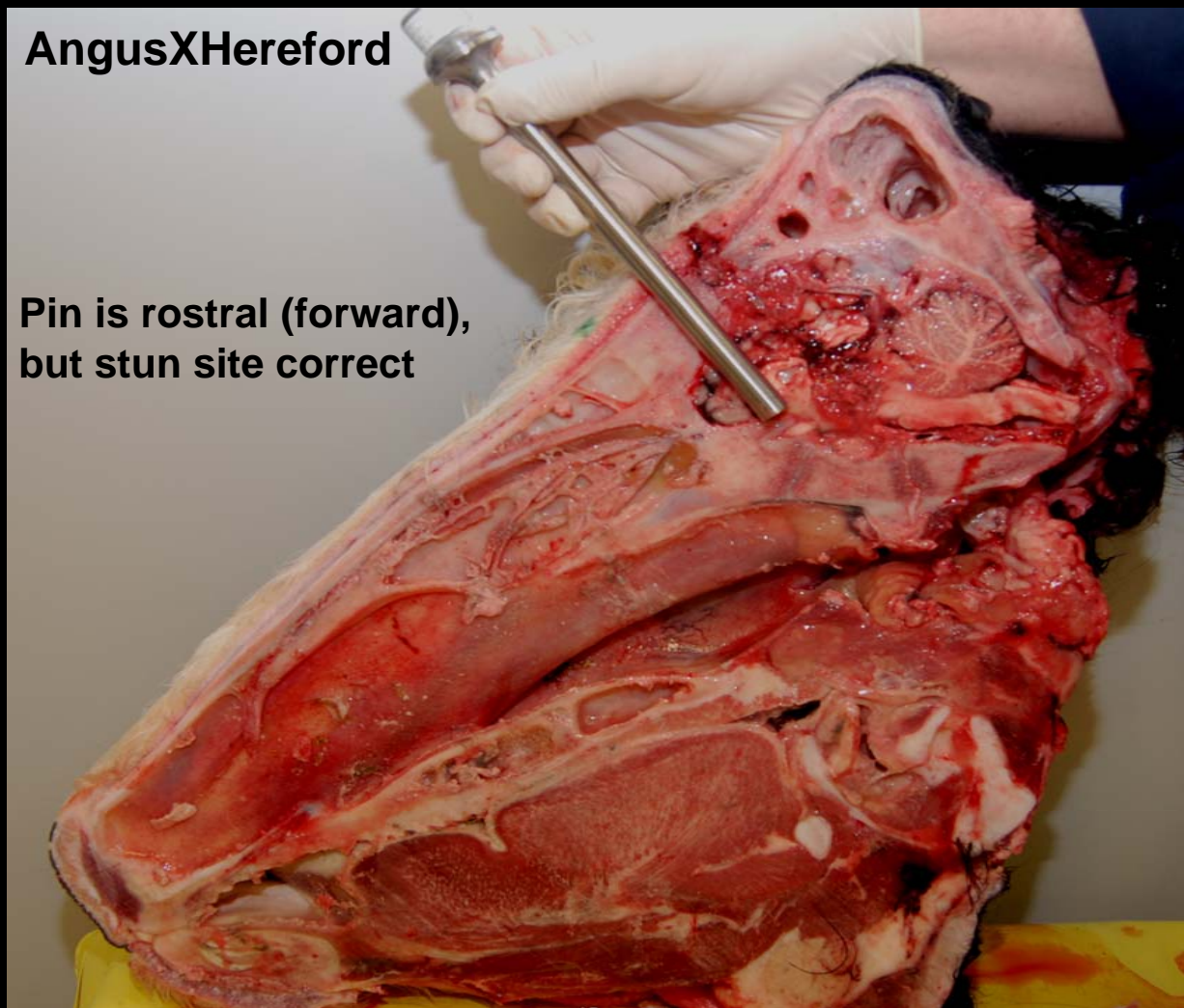


AngusXHereford Steer

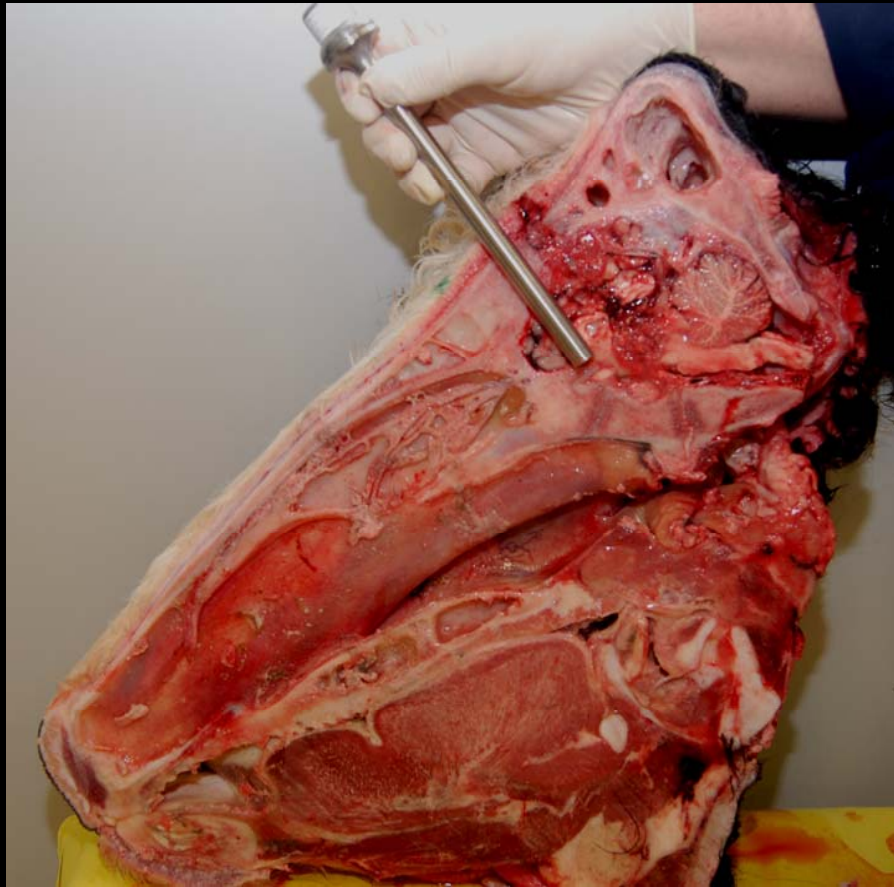


Holstein Cow

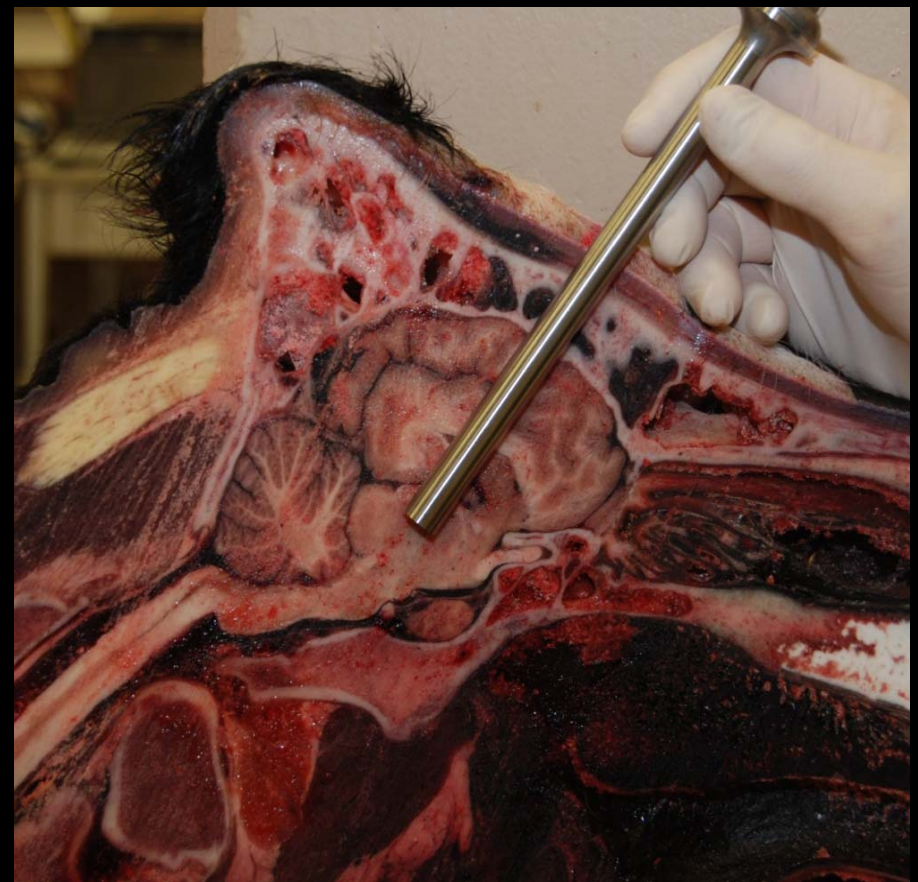
**At the intersection of 2 lines each drawn from
the inside corner of the eye to the base of the
horn on the opposite side**



**At the intersection of 2 lines each drawn from
the inside corner of the eye to the base of the
horn on the opposite side**



AngusXHereford Steer



Holstein Cow

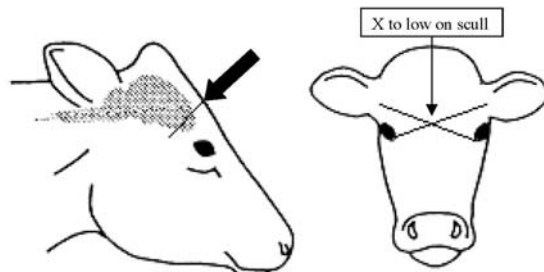
Anatomical Sites for Proper Stunning

Cargill
Meat Solutions
Quebec, Est. 51

Incorrect Stun



Cross section of skull after penetrating captive bolt

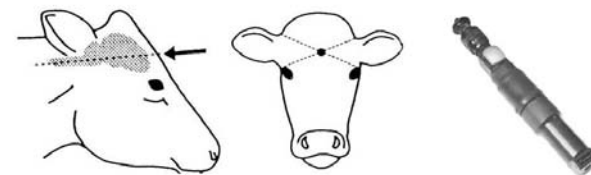


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Meat Solutions
Quebec, Est. 51

Correct Stun



Cross section of skull after penetrating captive bolt



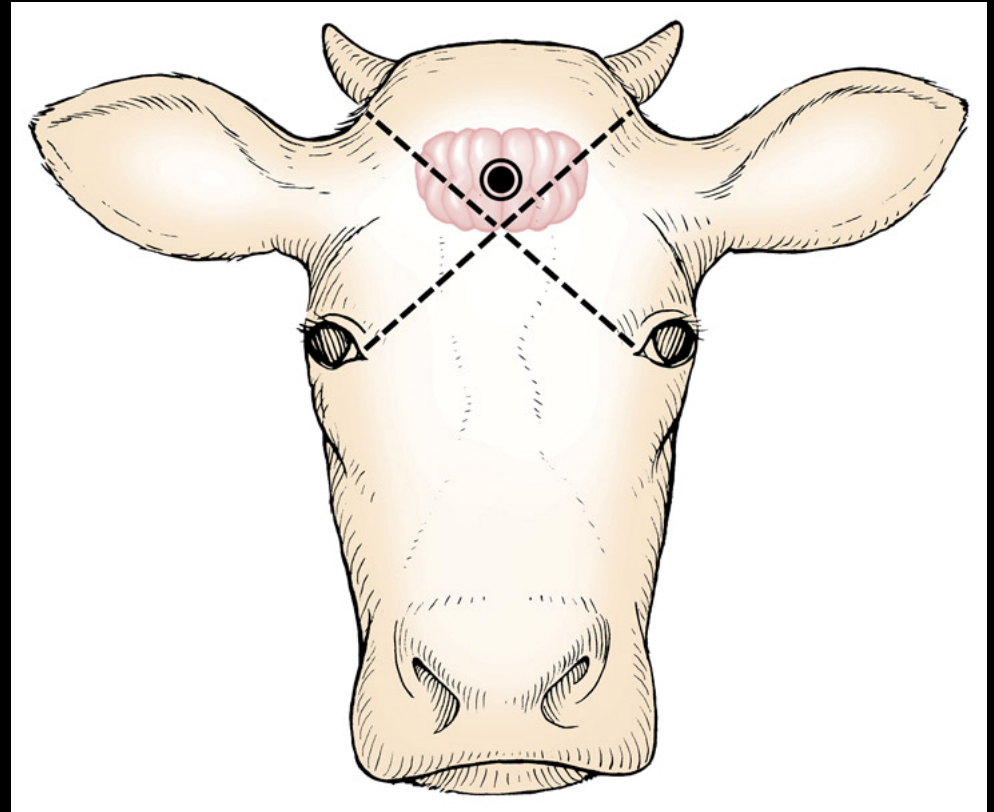
Anatomical location for proper stunning of cattle is on the intersection of 2 lines each drawn from the top of the eye to the base of the horn on the opposite side

Correct stunning location



Alternative Method for Site Selection

- Approximately 1 to 1 ½ inches above the intersection of 2 lines each drawn from the inside corner of the eye to the base of the opposite horn



From Shearer and Nicoletti, Procedures for Euthanasia of Livestock

In Summary,

- Many of the current recommendations on selection of the most appropriate anatomical site for conducting euthanasia in cattle are incorrect
 - The site most commonly used is too low and in many cases misses the brain completely

In Summary,

- Anatomical location for proper stunning of cattle is
 - on the intersection of 2 lines each drawn from the top of the eye to the base of the horn on the opposite side or,
 - 1 - 1 1/2 inches above the intersection of 2 lines each drawn from the inside corner of the eye to the base of the opposite horn
 - There may be breed differences but use of above guidelines should provide consistent results

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