Citation: *Driver BE et al., [Emergency cricothyrotomy in morbid obesity: comparing the bougie-guided and traditional techniques in a live animal model.](#) Am J Emerg Med. 2021 Dec;*

Methodology (*Study design*): Prospective, randomized comparison of two-cricothyrotomy techniques in live, anesthetized sheep performed by emergency medicine residents at Hennepin County Medical Center b/t June 2015 and 2017; teaching of both techniques may have occurred previously during longitudinal training and residents watched an instructional video just prior to their randomly assigned technique. 78% had previously performed a cricothyrotomy on a sheep model. Primary outcome was total length of procedure time (>180 sec considered failure) Secondary outcome was first attempt success rate.

Results: Median procedure time for traditional technique was **183s** (IQR 134-270). Median procedure time for bougie-guided technique was 118s (IRQ 77-200) The absolute difference was 62s (CI 10-144)Success on the first attempt occurred in 7/11 (64%) in bougie and 6/12 (50%) of traditional group. Perceived median difficulty was higher in traditional.

Strengths:
- Versatility (anything in obese patients can be used in non-obese patients)
- Urgency present with the sheep being alive and NOT intubated during the cricothyrotomy
- Use of US to measure and confirm 3cm for simulation of fat neck
- Demonstrates relatively high failure rate (>180 s) with low first pass success 64% Bougie and 50% (would not be acceptable orotracheal success rate)

Weaknesses:
- Small sample size (23 people) Most (78%) had done this lab previously.
- Animals vs. humans. Blood injected may not exactly mimic humans
- Did not report on levels of training.

My Clinical Bottom Line: Obese patients who require an emergent cricothyrotomy should undergo the bougie-guided endotracheal tube technique as it is faster and has a higher success rate.
Despite live animal training, emergency cricothyrotomy may have a challenging first-pass success rate in EM trainees.