

It's Humanly Possible

Earliest View of Data on the Impact of Various
Airways on Carotid Blood flow in a Cadaveric Cardiac
Arrest Model

Joe Holley, MD FACEP
Memphis and Shelby County, TN
EMS Medical Director

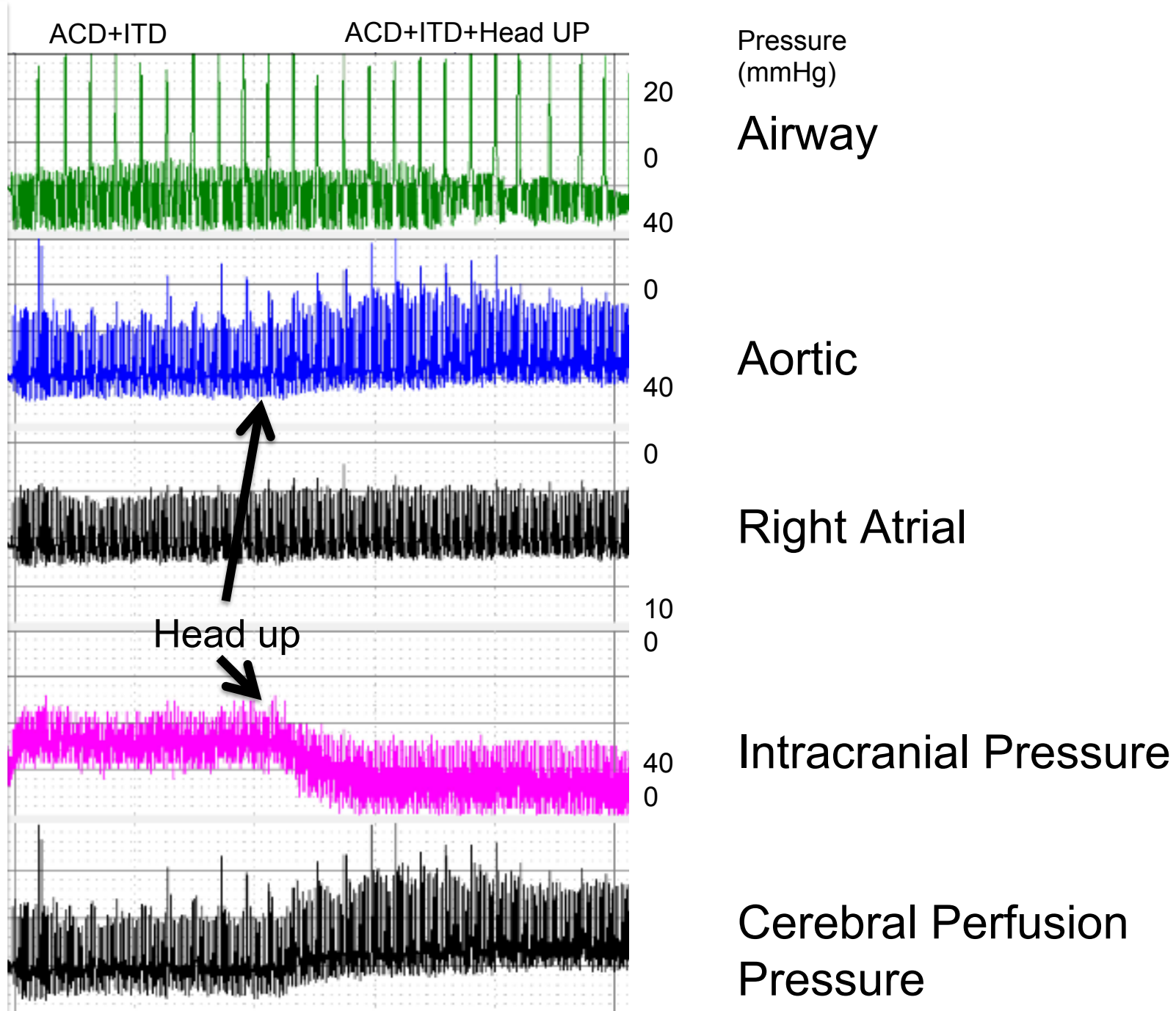
Methodology

- Fresh, non-frozen cadaver
- Perfused
- Millar pressure catheters placed in Right Atrium, Aorta, Left Carotid.
- Airway pressure monitor placed
- ICP bolt placed
- Occlusion of both Iliac arteries and veins.
- Intubated and ventilated.

Studies to date:

- CPR performed in intervals as follows:
 - SCPR without/with HU
 - LUCAS/ITD without/with HU
 - Autopulse/ITD without/with HU
 - ACD/ITD without/with HU
- Multiple other observations including:
 - SGA's, ITD 10 vs ITD 16, new puck/pad system

js



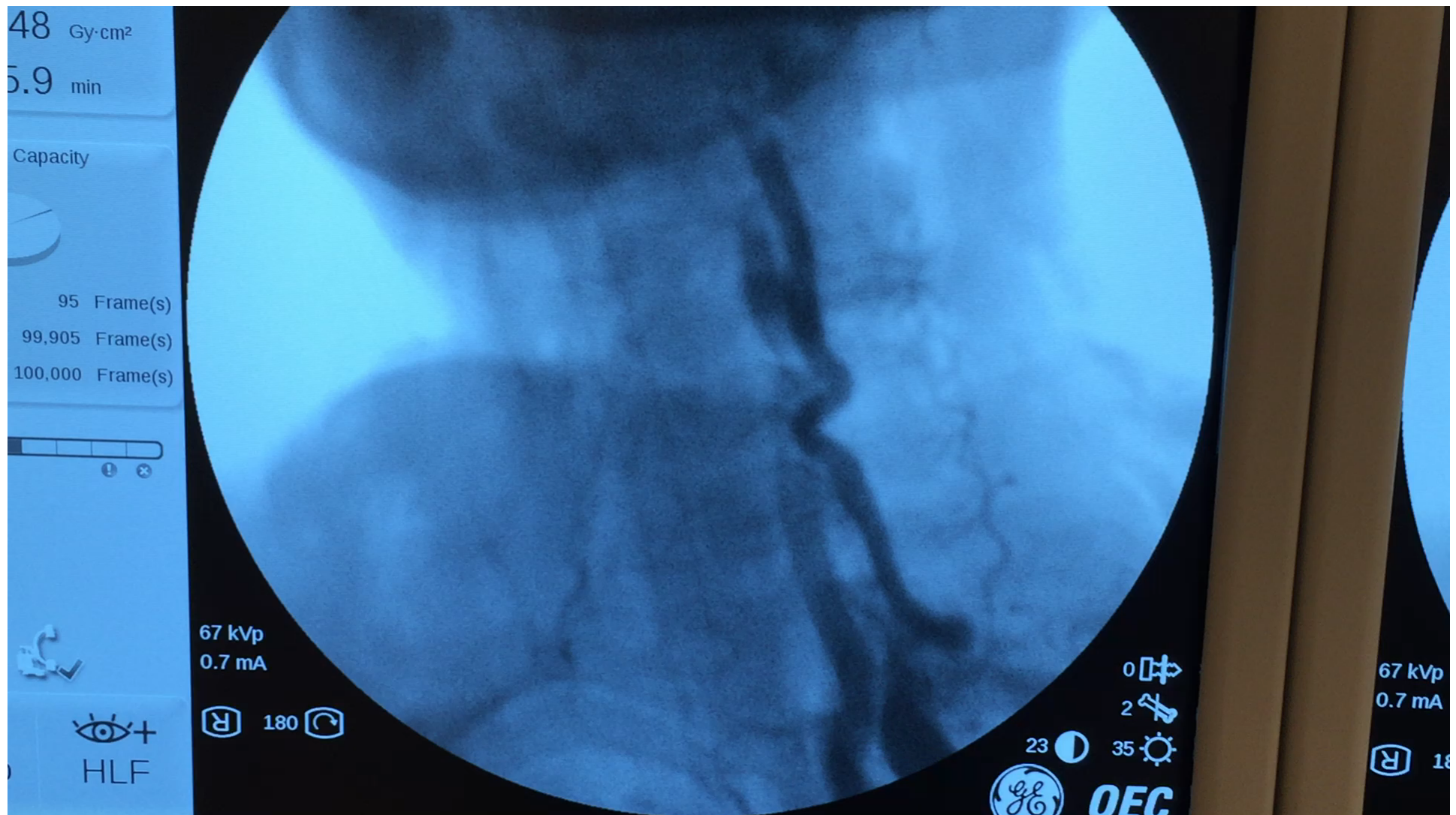
Evaluation of the Impact of Airway Devices on Carotid Blood Flow

Airway checked for ability to maintain both positive and negative pressure during CPR

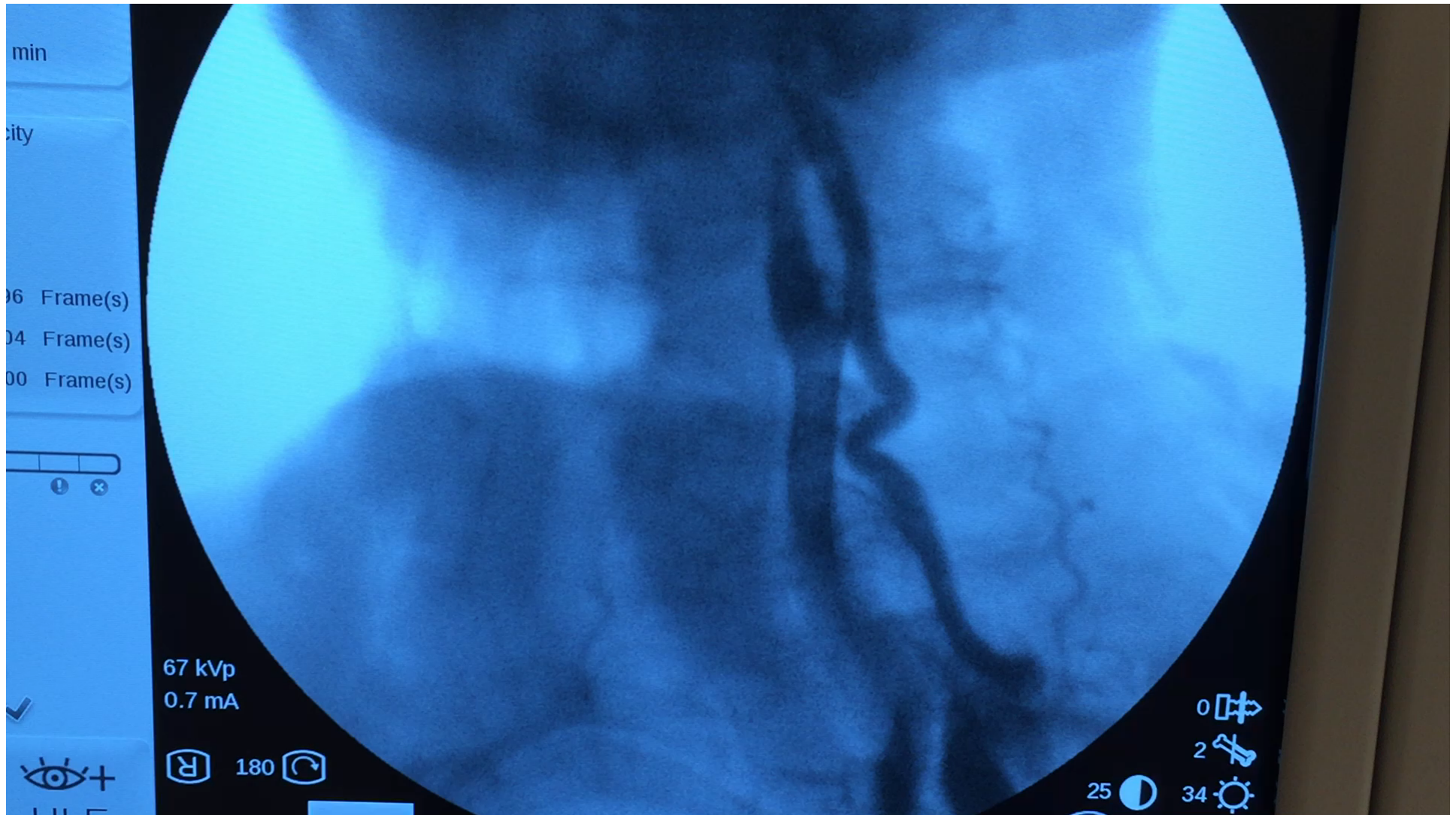
Ventilations and compressions continued during angiography

Angiography interpreted and scored by blinded reviewer

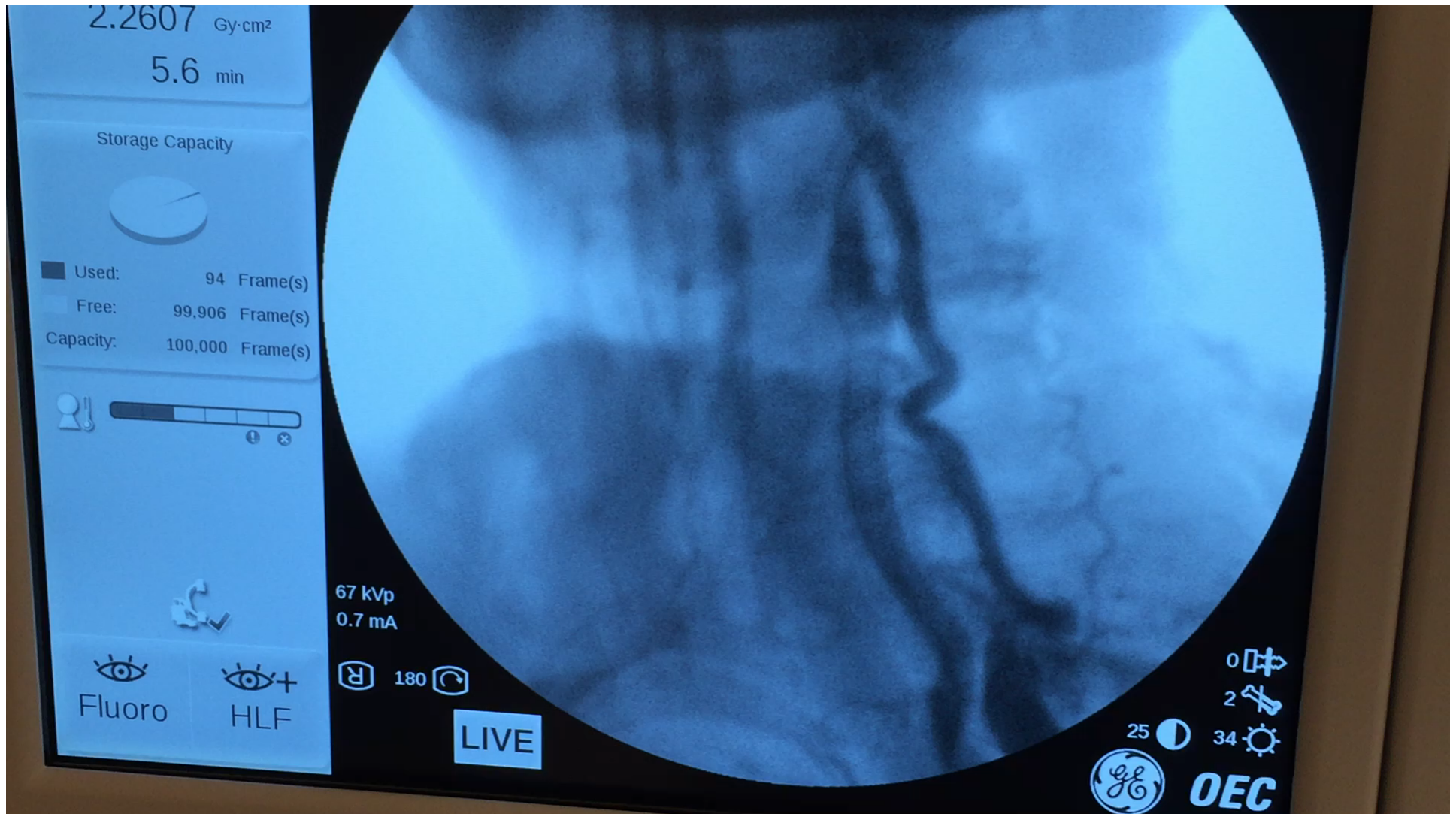
ETT Angio during CPR



IGel Angiography during CPR



King Airway Angiography During CPR



Internal Carotid Artery Compression Phase Flow Score Performed by blinded reviewer

ETT	3.0
IGel	2.75
LMA	2.0
King	1.75

0 = no flow a.k.a. Current US Political System

1 = poor flow, obstruction significant

2 = incomplete flow, obstruction partial

3 = normal flow, no obstruction