



EXTRACORPOREAL CARDIOPULMONARY RESUSCITATION IN TRAUMA

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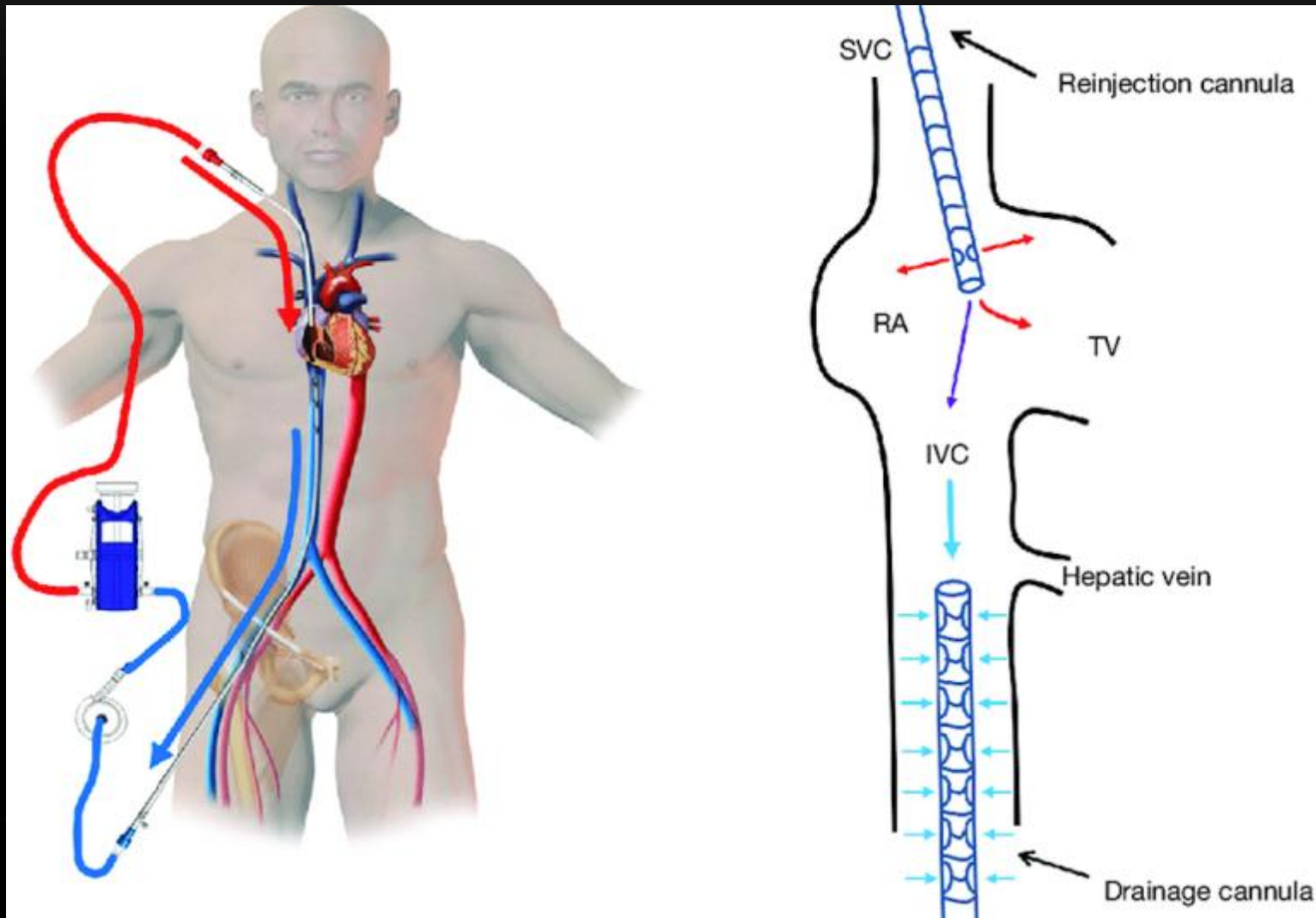
OBJECTIVES

- Describe how ECPR could be used in severe trauma and traumatic arrest
 - Identify which trauma patients may benefit from ECPR
 - Recognize the system resources for ECPR in traumatic arrest
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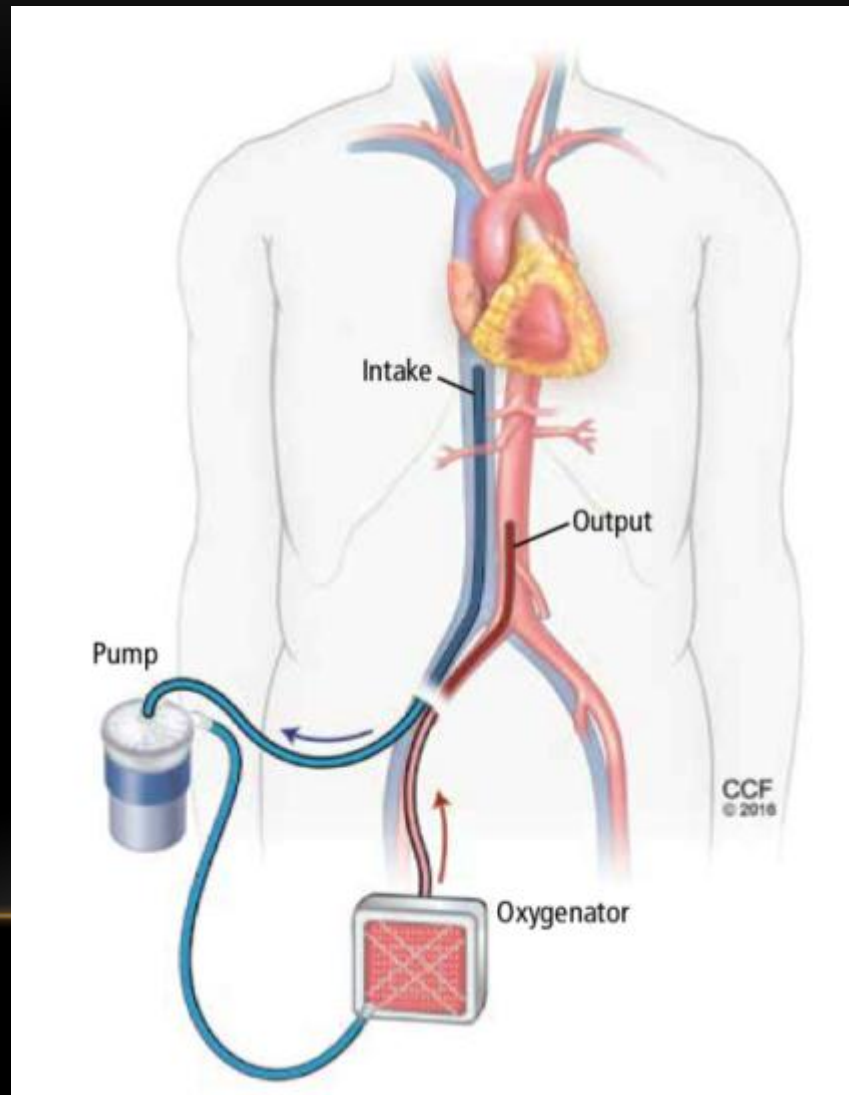
ECPR = ECMO AS RESUS TOOL



VV-ECMO



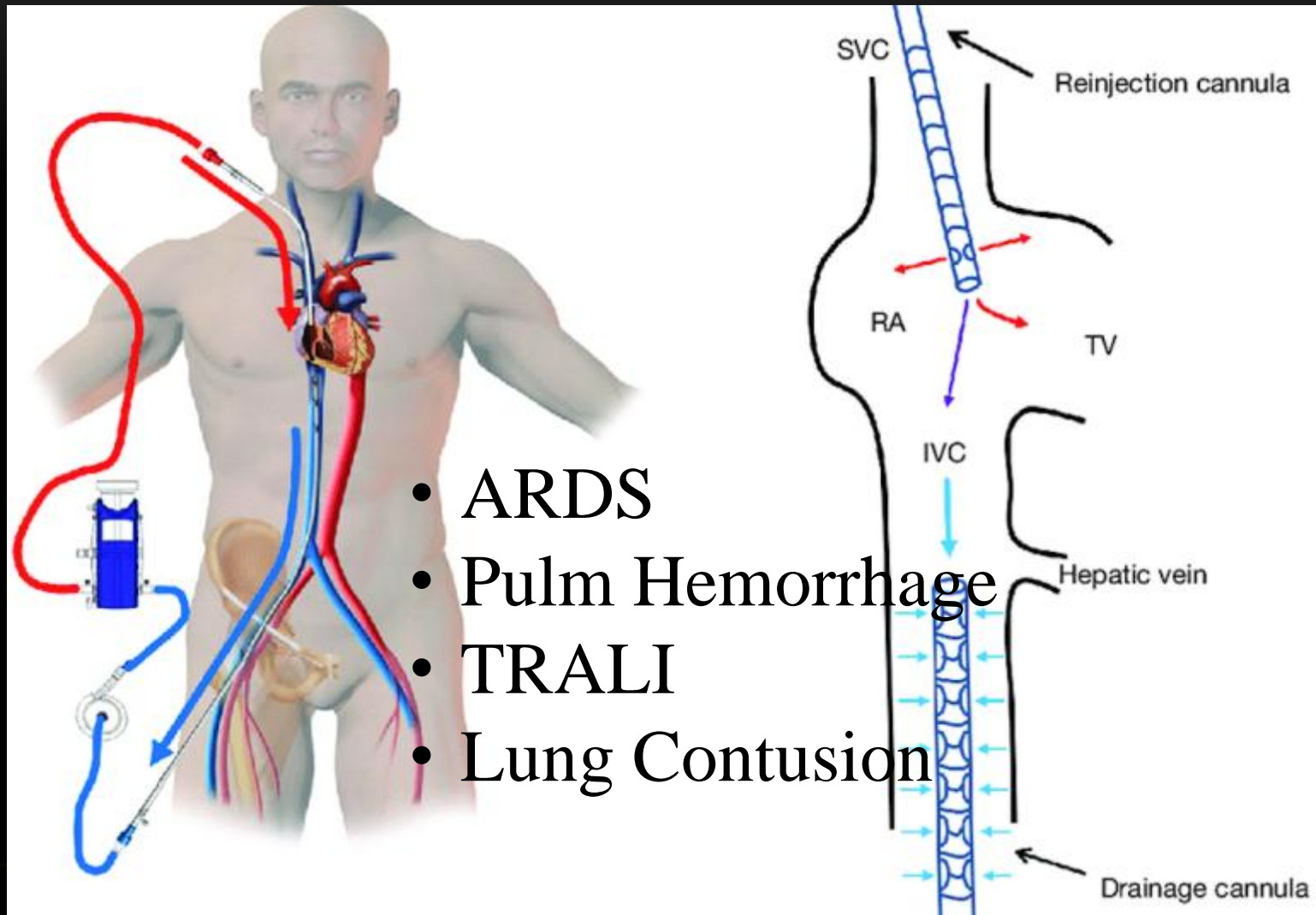
VA - ECMO



ECMO DOES NOT HEAL, IT BUYS TIME

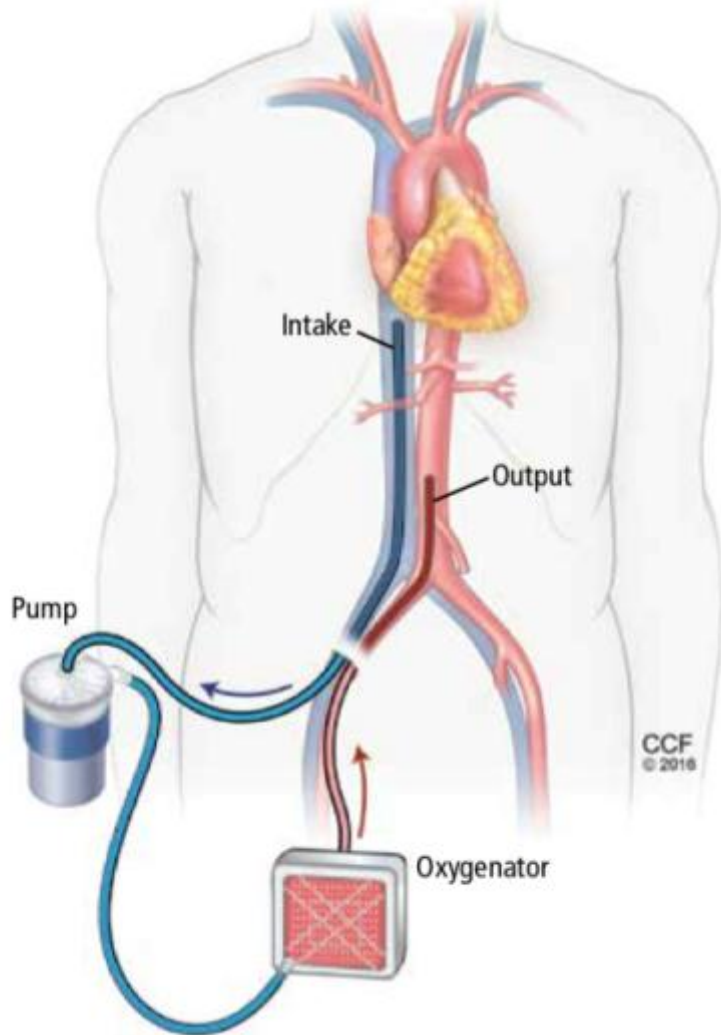


VV-ECMO: INDICATIONS IN TRAUMA



VA – ECMO IN TRAUMA

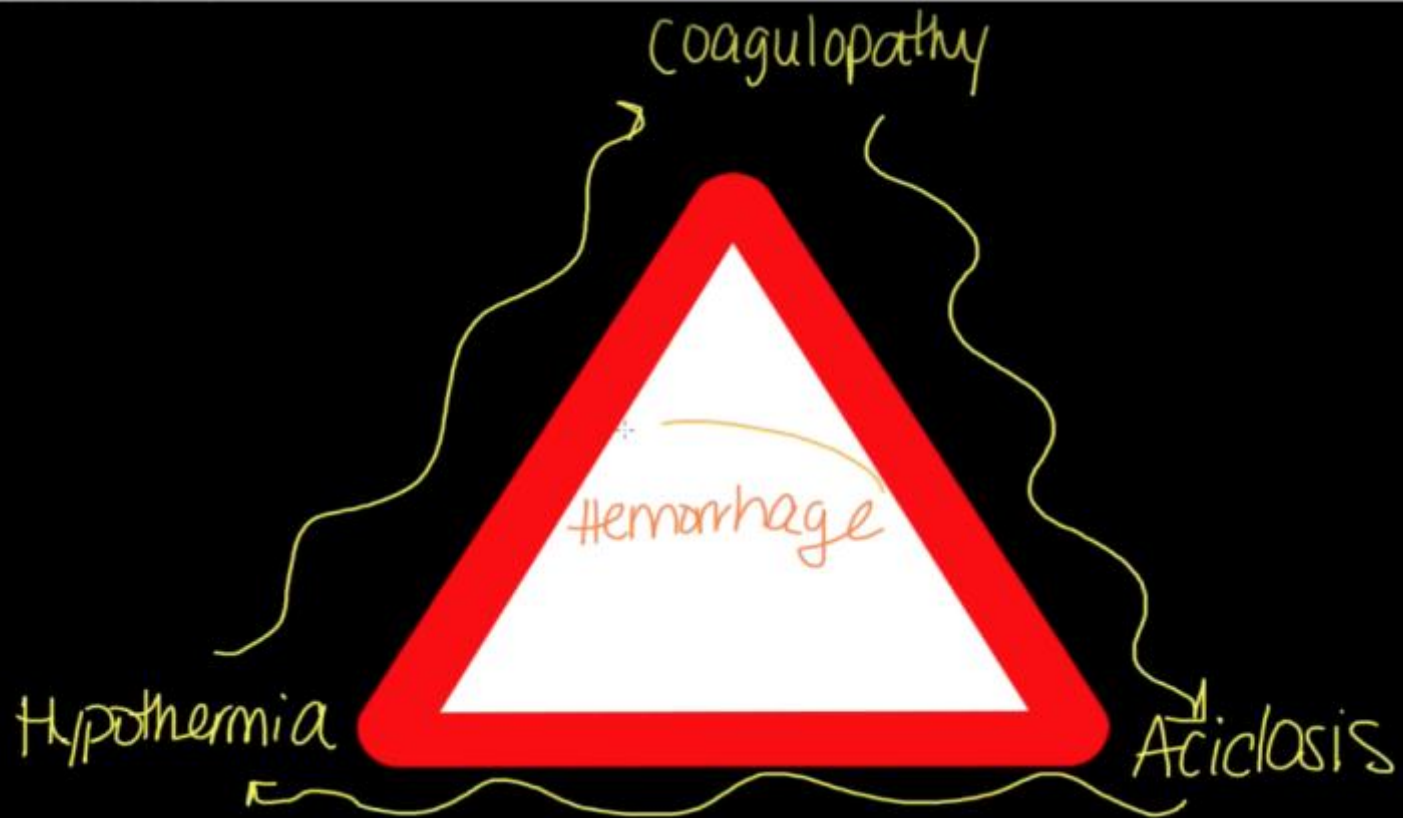
- Cardiogenic Shock?
- Refractory Shock?
- Bridge to Damage Control Surgery?



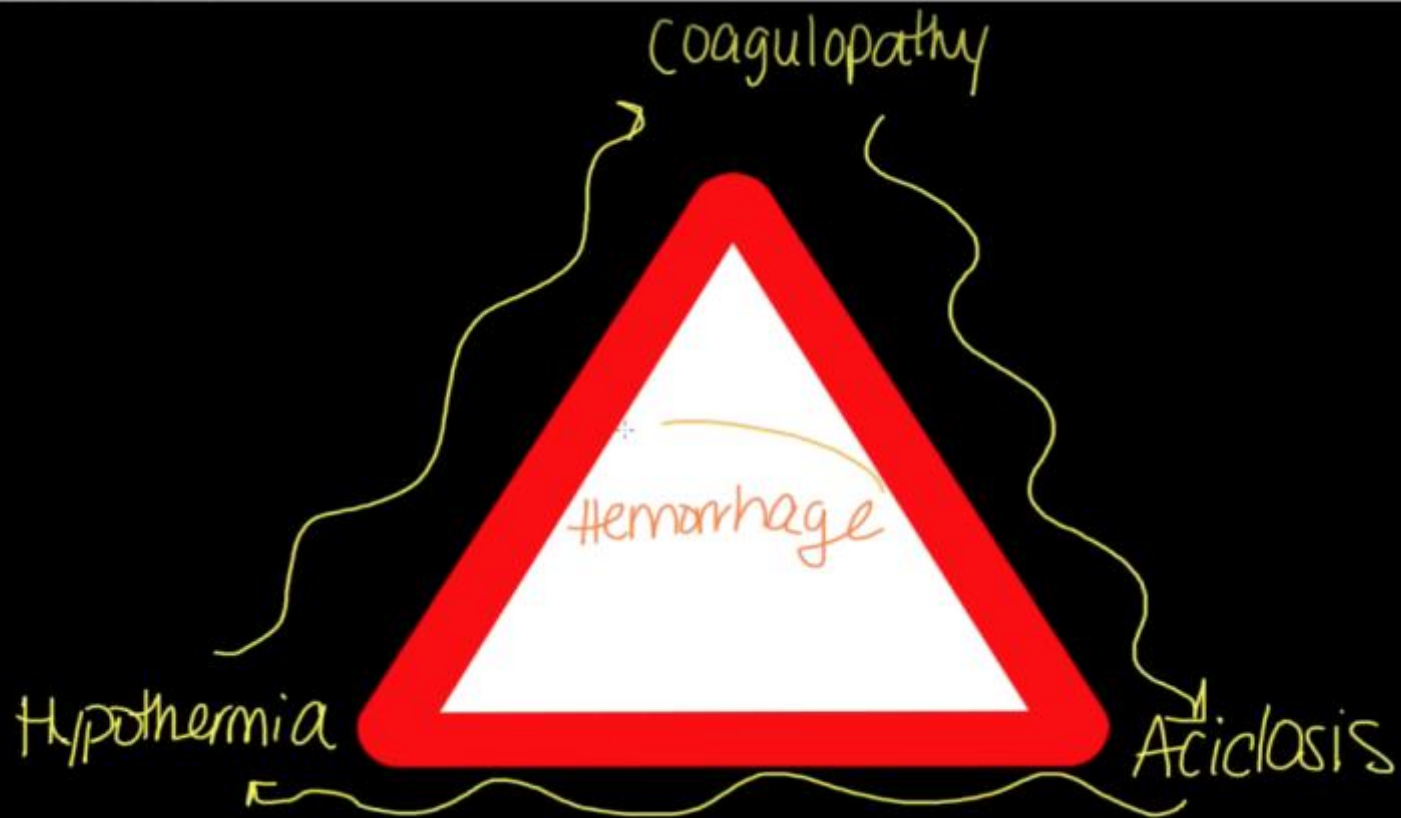


Mullenbach 2012

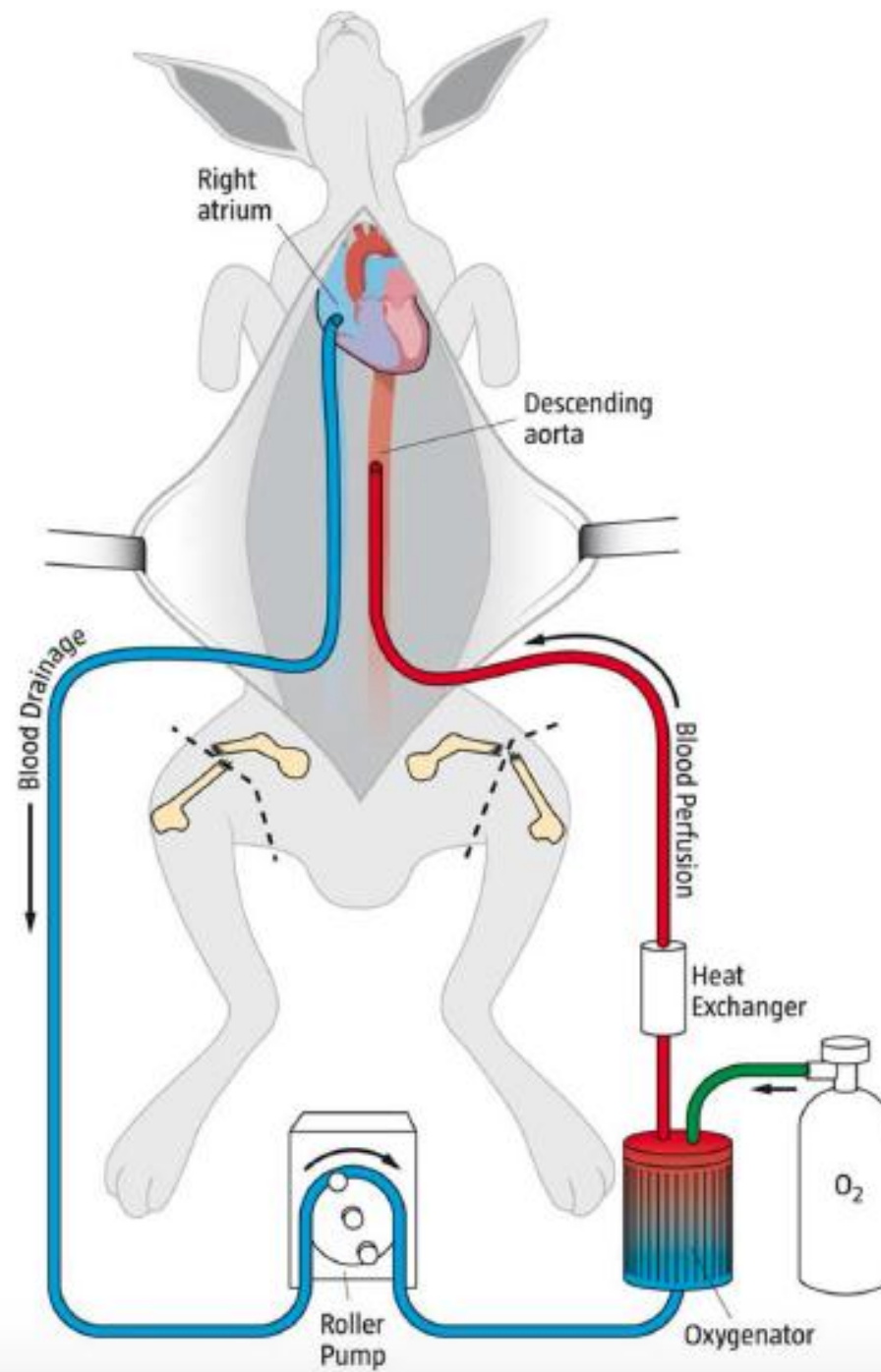
LETHAL TRIAD



TAKING PHYSIOLOGIC CONTROL







Larsson
2016

TRAUMATIC ARREST



ATLS: TRAUMATIC ARREST

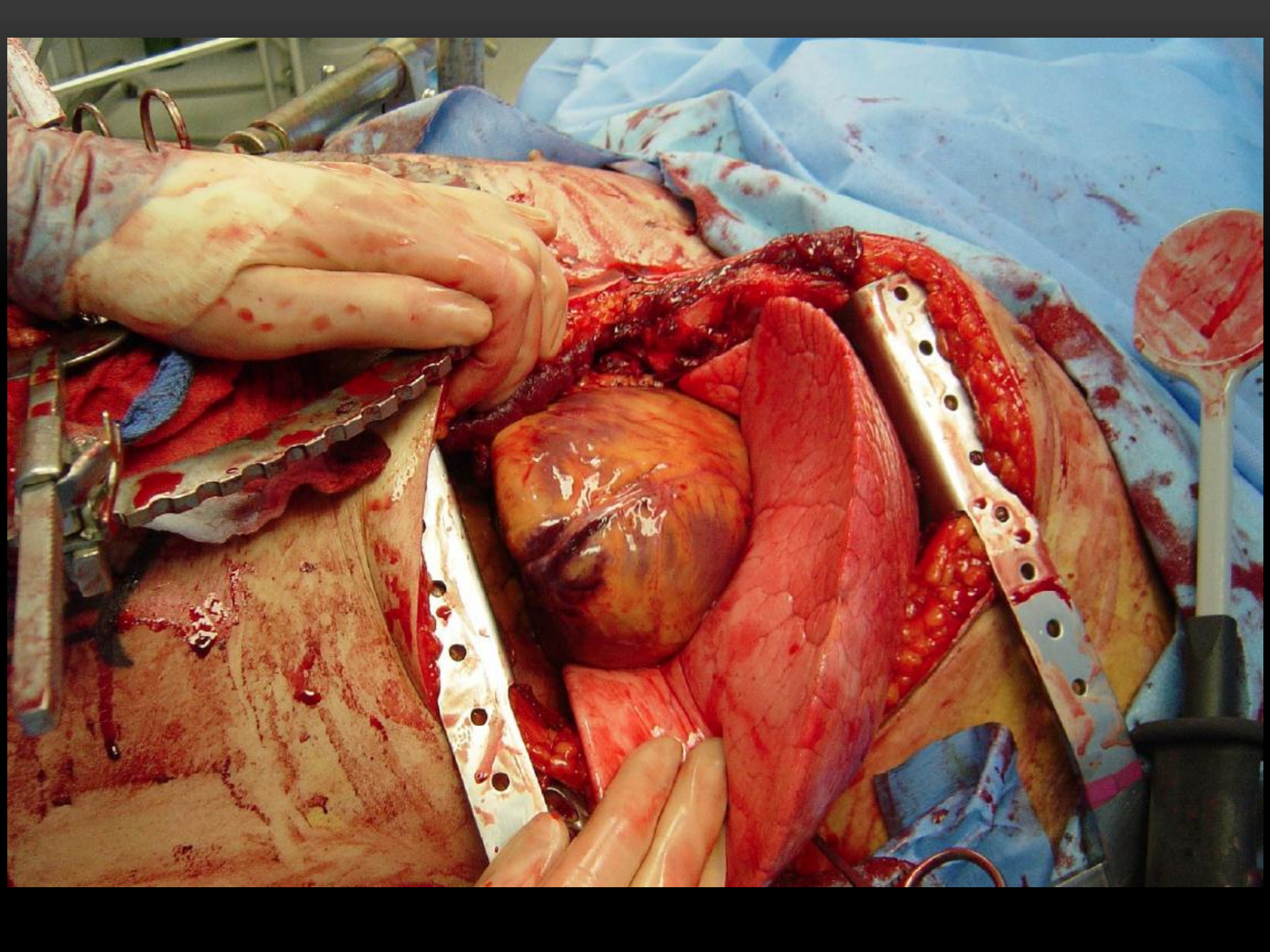
Intravenous blood infusion 1:1:1

Bilateral needle decompression

Emergency Thoracotomy

Repair cardiac or major vessel

Internal cardiac massage/internal defib



SUSPENDED ANIMATION



Tisherman



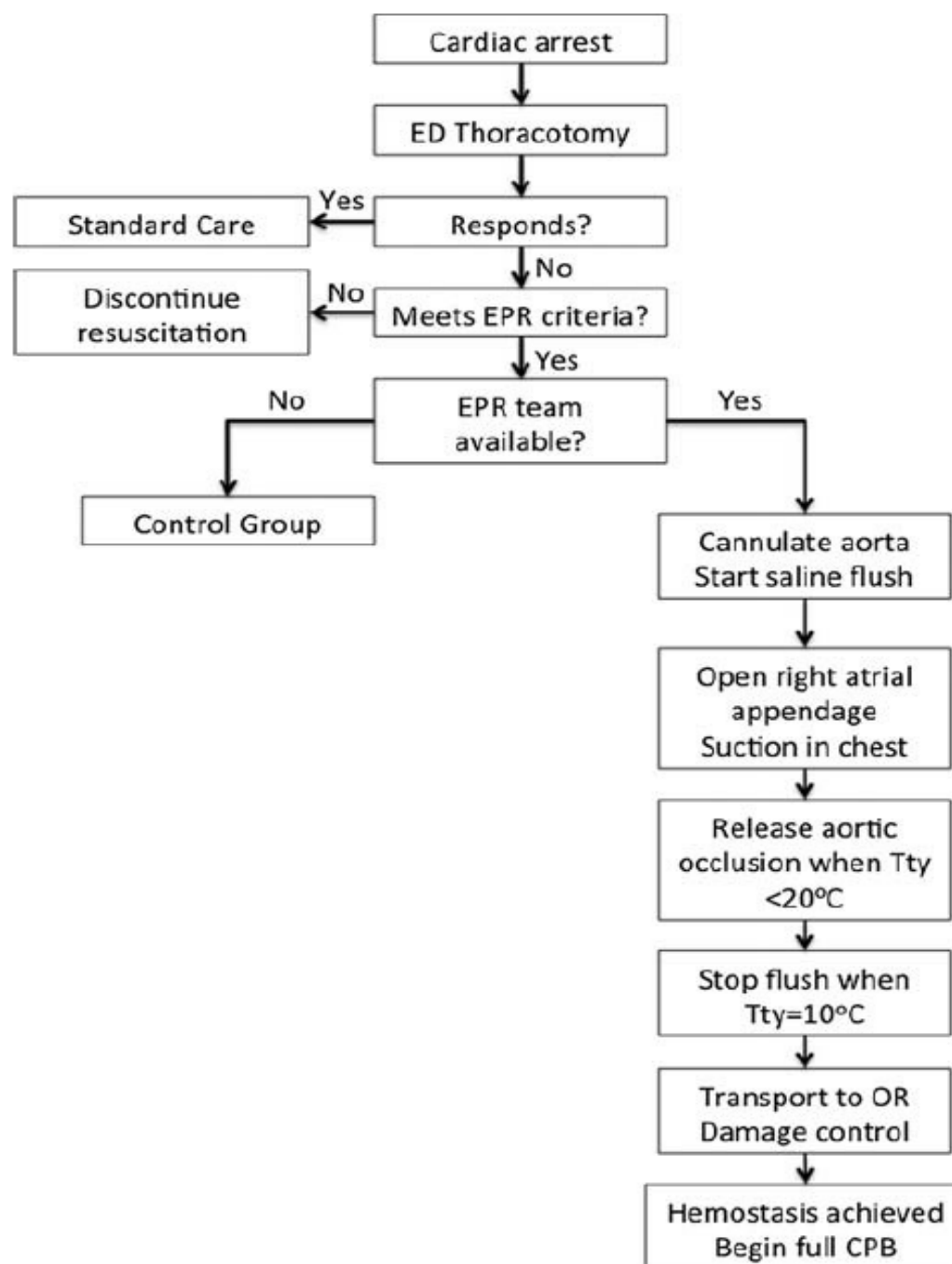
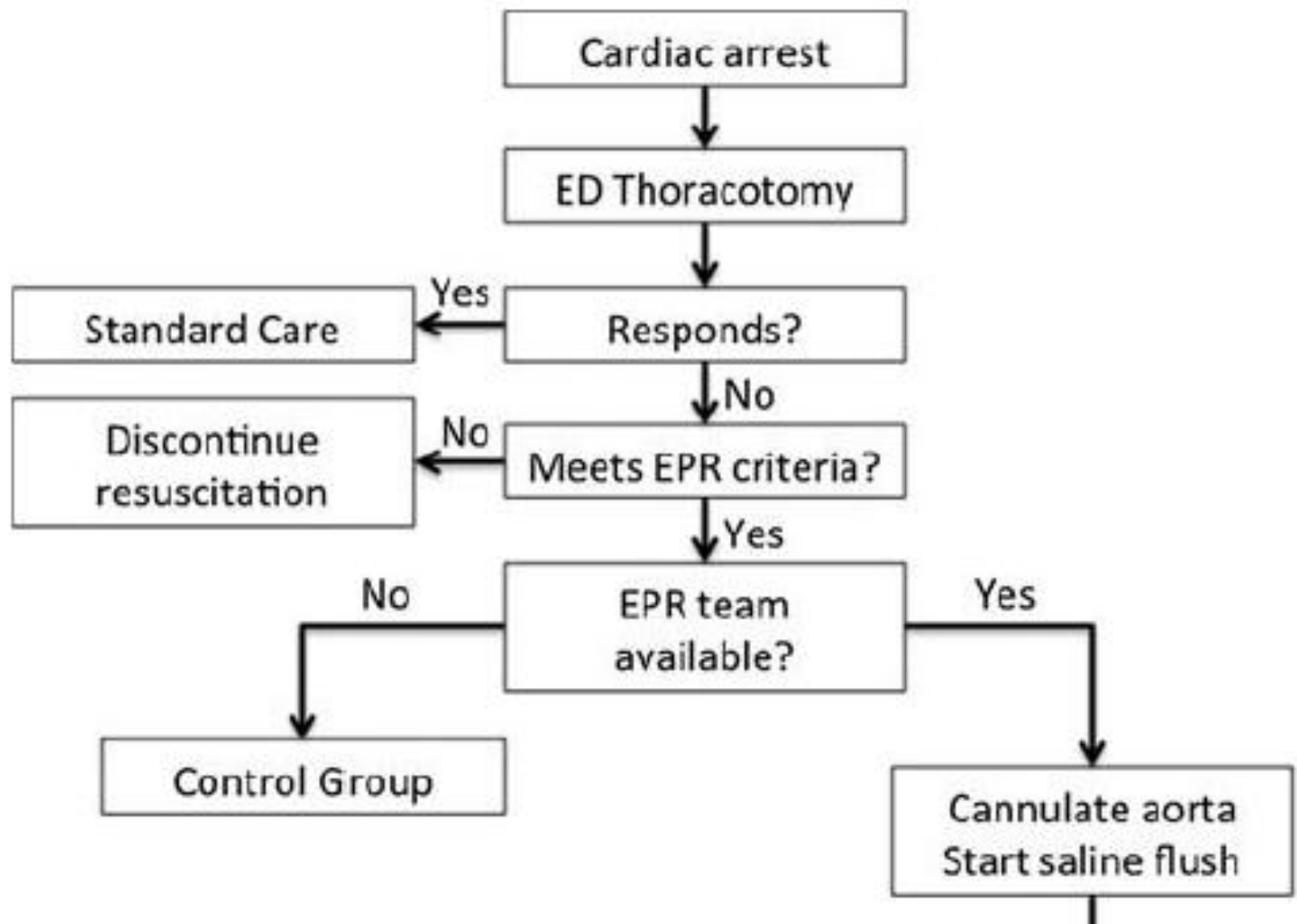
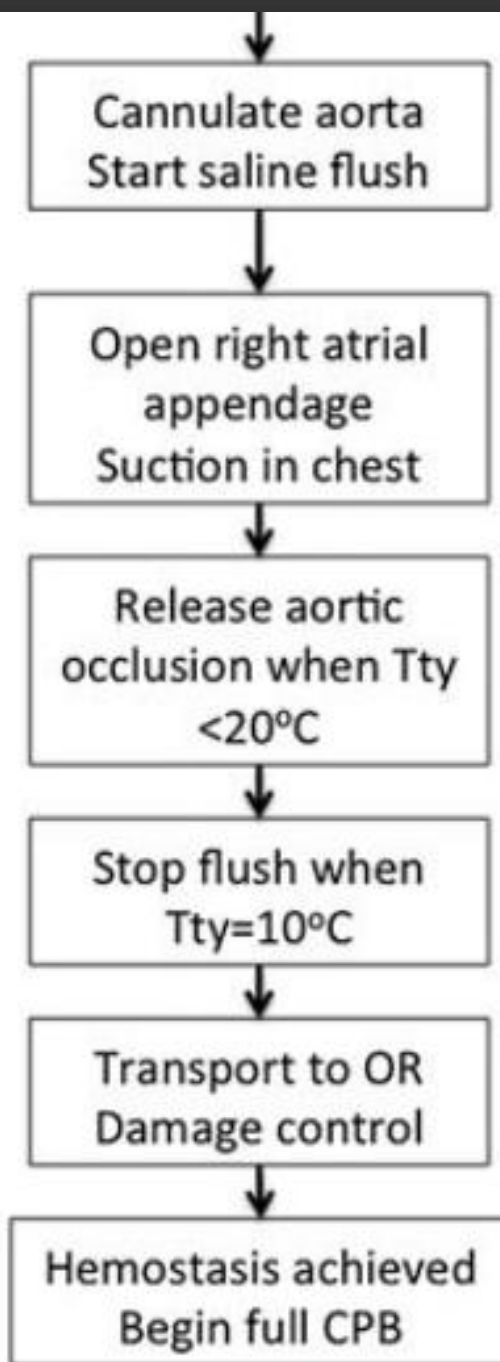


Figure 1. Emergency Preservation and Resuscitation algorithm.





TEAM

- Emergency Physician
 - Trauma Surgeon
 - Cardiac Surgeon
 - Perfusionist
 - Trauma Anesthetist
 - ED Nurse(s)
 - OR Nurses(s)
-

SIMULATION TRAINING



SUMMARY

ECPR = ECMO in the Trauma ED:

- Acute lung injury with refractory hypoxia

In the future it may show benefit in:

- The exanguinating multi trauma pt
 - The traumatic cardiac arrest
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THANK YOU

- ED ECMO podcast
- Extracorporeal Life Support Organization
ELSO.org