



it takes a team: sick PE patients

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DISCLOSURES

Writing committee member of the 2026 AHA/ACC PE Guideline
these views are mine alone and do not represent the AHA/ACC

CASE

58 y/o M presents in respiratory distress

EMS course:

IM epi 0.3m

Methylprednisolone 125 mg

Albuterol/ipratroprium

diltiazem 15 mg

CPAP

VITALS

HR 102 bpm

BP 91/58 mmHg

SpO₂ 95% on BPAP

RR 30/min

CASE

58 y/o M presents in respiratory distress

EMS course

IM epi 0.5

Methylprednisolone

Albuterol/ipratropium

...diltiazem

CPAP

VITALS

HR 120 bpm

BP 158 mmHg

SpO₂ 96% on BPAP

RR

30/min



Your patient no longer has
a perfusing rhythm

resuscitate

HFNC



NIV

Lowest amount of PEEP
Vasopressors at the bedside
Calling for help/destination
Extra pair of pants

IMV

awake if able
vasopressors
ECMO standby



cautious fluid

≤ 500 cc if low cardiac output



norepi

titrate up to 15 mcg/min if needed

add

vasopressin

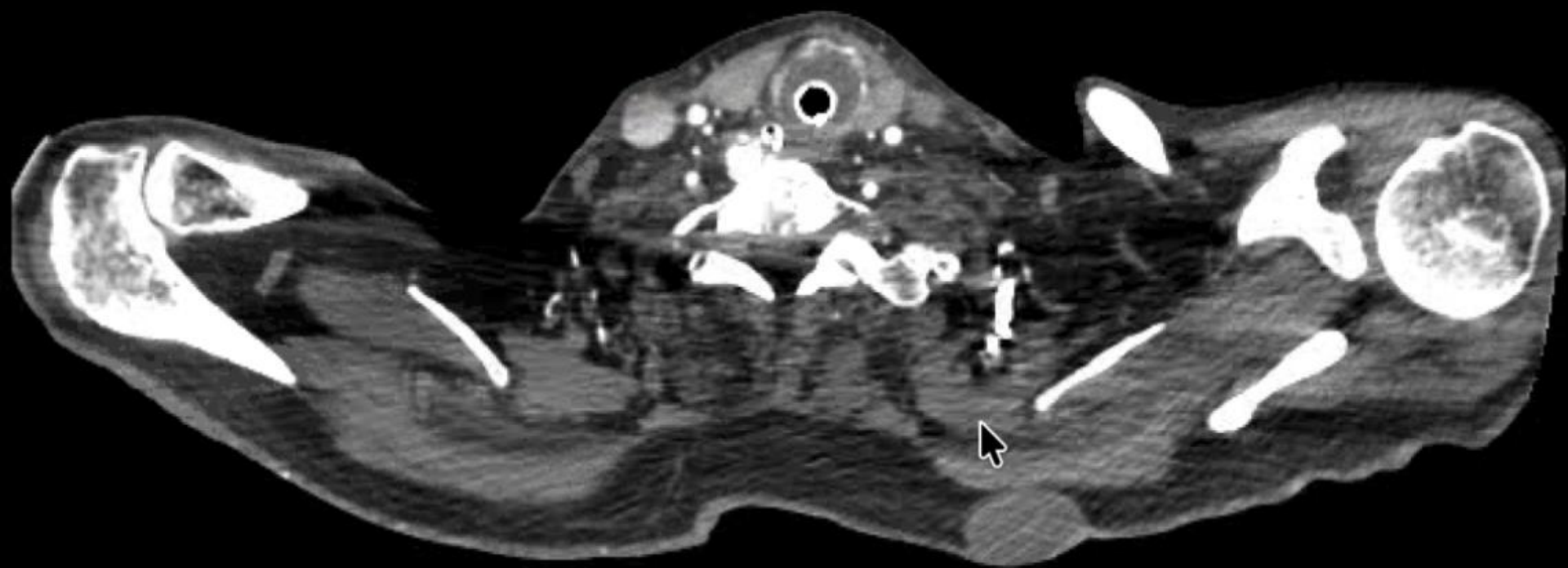
or phenylephrine

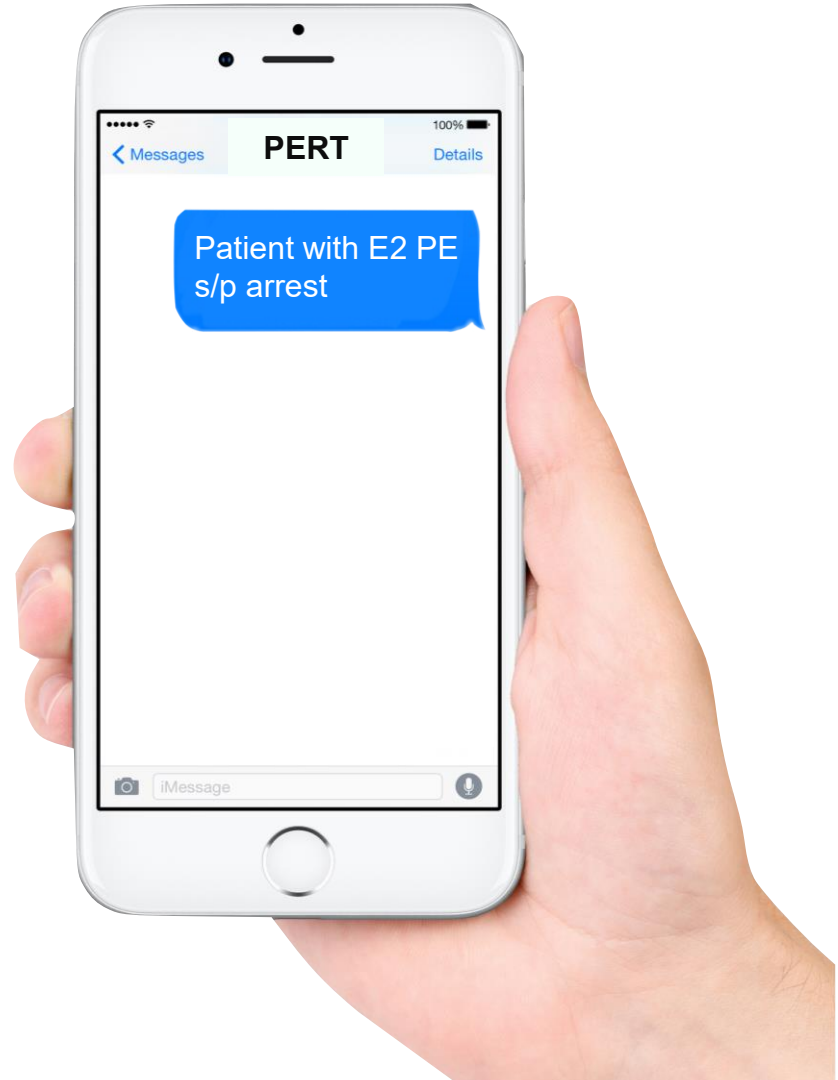
add

dobutamine

≤ 10 mcg/kg/min







< Messages

PERT

Details

Patient with E2 PE
s/p arrest



iMessage

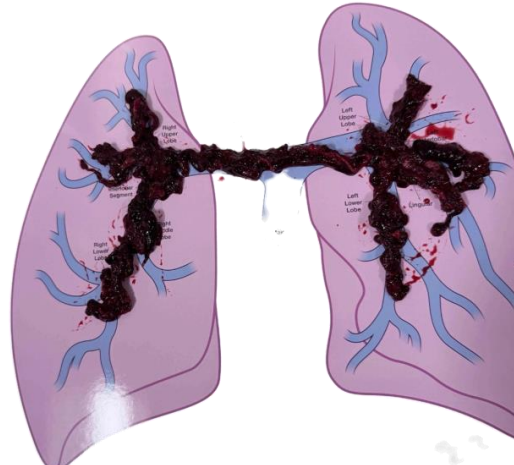


reperfusion

access

risk/benefit

are they going to decompensate?





Lytics ASAP unless absolute
contra-indication

reperfusion



can give at bedside

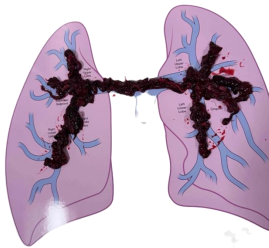
weigh risk of bleeding
reduced dose is preferable
for Category E2, don't wait!

reperfusion



can give at bedside

weigh risk of bleeding
reduced dose is preferable
for Category E2, don't wait!



less bleedy than lytics

can decompensate supine
distal embolization & reperfusion injury happen
(infrequently)



ECMO

bridge to reperfusion for critical
patients



ECMO

better before patients die



ECMO vs ECPR in-hospital mortality

42.7%
(n=209)

68.1%
(n=209)



ECMO

better *before* patients die

better outcomes when patients have
good functional baseline status

carries significant risk



ECMO risk in PE

bleeding in ~30%

North-South

East-West

CASE

58 y/o M presents in respiratory distress
now s/p cardiac arrest

TNK @ 16:07

Labs

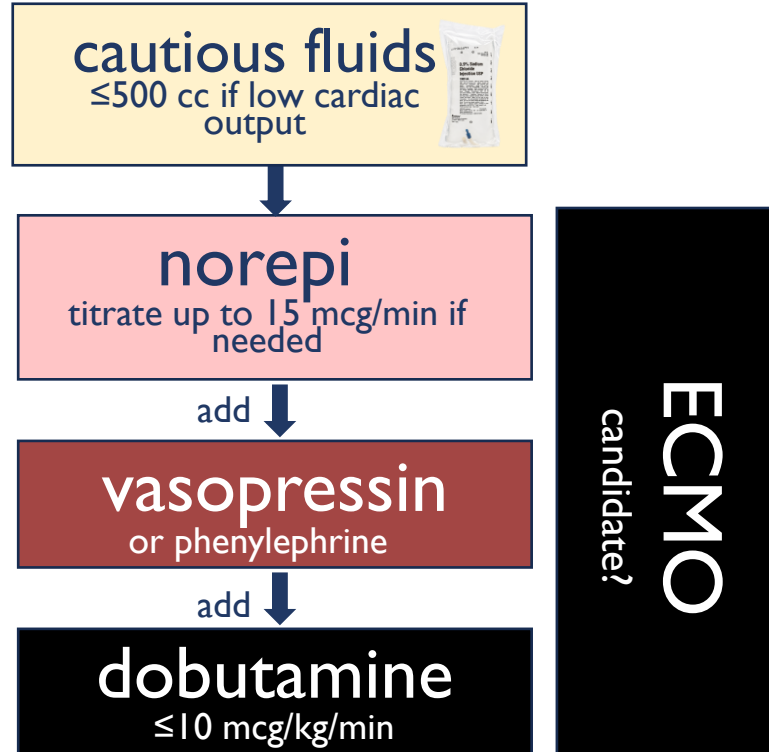
pH 7.38

lactate 6.5

ALT 486

troponin 611

shock support



CASE

58 y/o M presents in respiratory distress
now s/p cardiac arrest

TNK @ 16:07

ECMO case start @ 17:44

Labs

pH 7.38

6.99

lactate 6.5

IL-6 146

troponin 611

CASE

58 y/o M presents in respiratory distress
now s/p cardiac arrest

thrombectomy HD#2

Labs

pH 6.99

lactate 6.5

troponin 86

troponin 611

CASE

58 y/o M presents in respiratory distress
now s/p cardiac arrest

Labs

pH 6.99

Lactate 65

ALT 486

creatinine 6.11

**ED visit 10 months later for
work note**

CASE

17 y/o F presents with hypoxemia on exertion and bilateral main PE from outside hospital

Vitals/Labs

HR	120 bpm
BP	98/70
RR	20
O2	95% on RA
weight	60 kg
BNP	5500
troponin	60

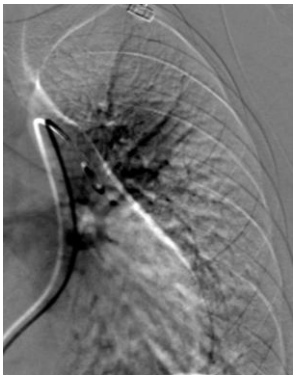
CASE

17 y/o F presents with hypoxemia on exertion and bilateral main PE from outside hospital

Vitals/Labs

HR	120 bpm
BP	98/70
RR	20
O2	95% on RA
weight	60 kg
BNP	5500
troponin	60

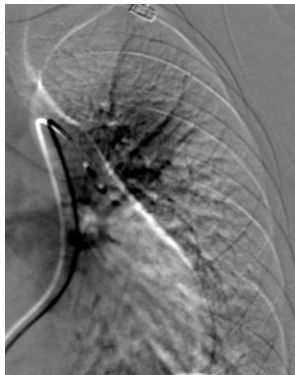
17:04



CASE

17 y/o F presents with hypoxemia on exertion and bilateral main PE from outside hospital

17:04 17:39



Vitals/Labs

HR	120 bpm
BP	98/70
RR	20
O2	95% on RA
weight	60 kg
BNP	5500
troponin	60

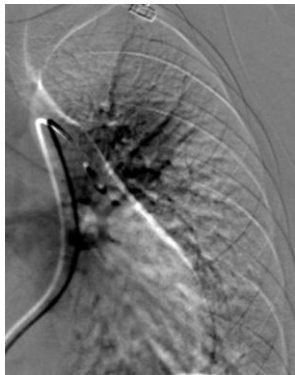
CASE

17 y/o F presents with hypoxemia on exertion and bilateral main PE from outside hospital

Vitals/Labs

HR	120 bpm
BP	98/70
RR	20
O2	95% on RA
weight	60 kg
BNP	5500
troponin	60

17:04 17:39 18:40



CASE

17 y/o F presents with hypoxemia and proximal PE
from outside hospital

**discharged home
to family**

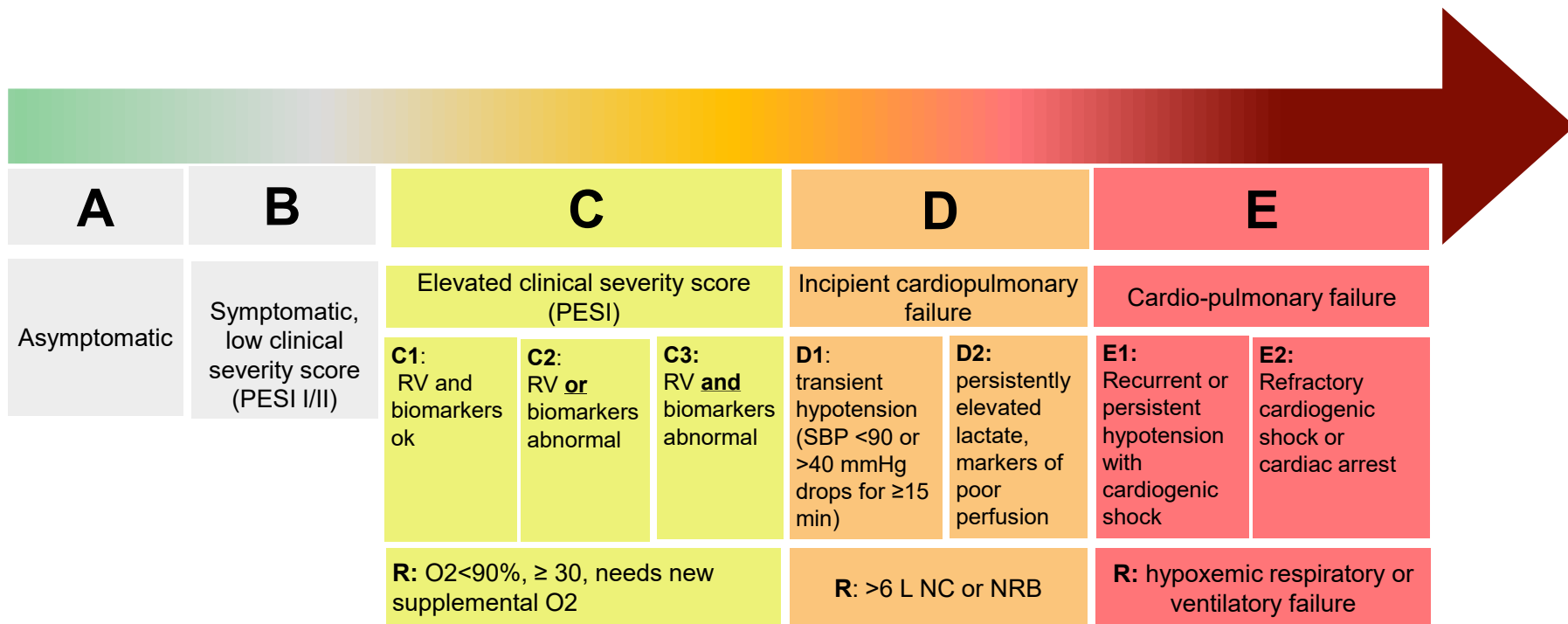
Vitals/Labs

HR 120 bpm

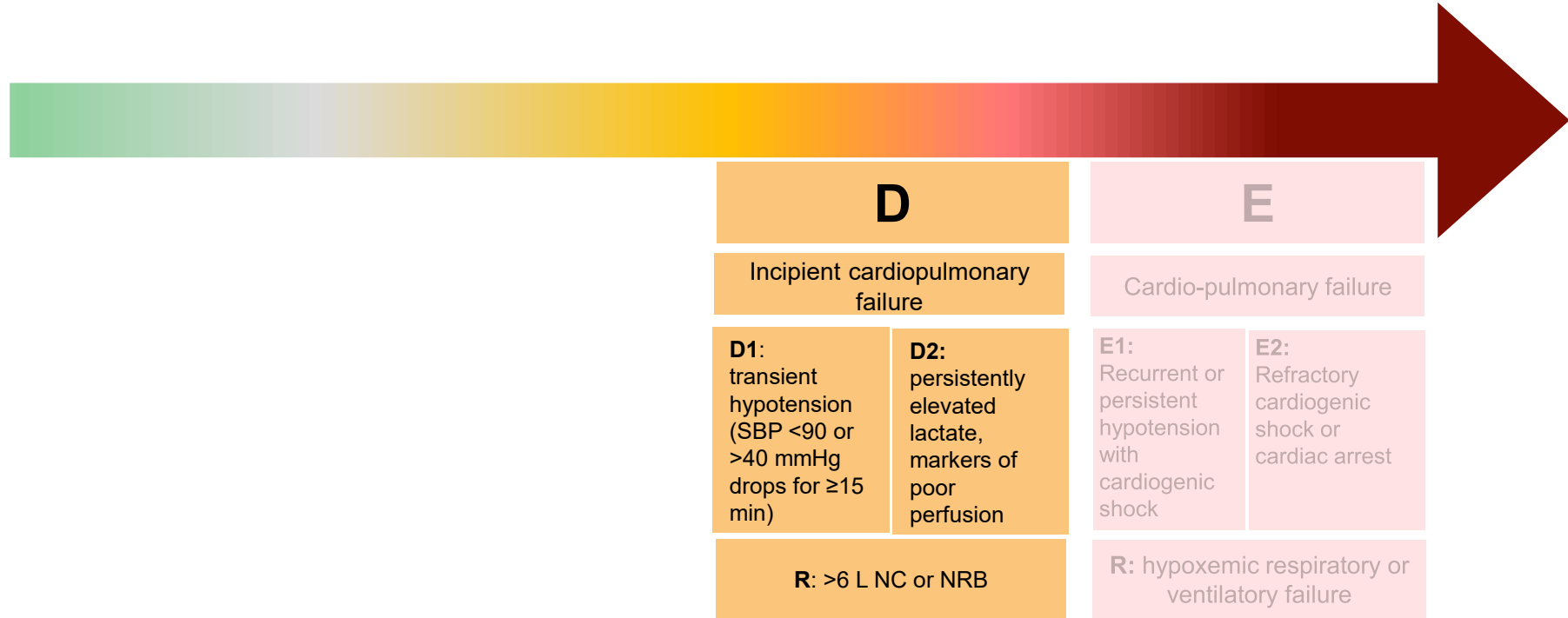
BP 96/62

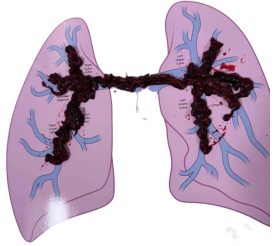
NP 55%

troponin 60



who is sneaky struggling?



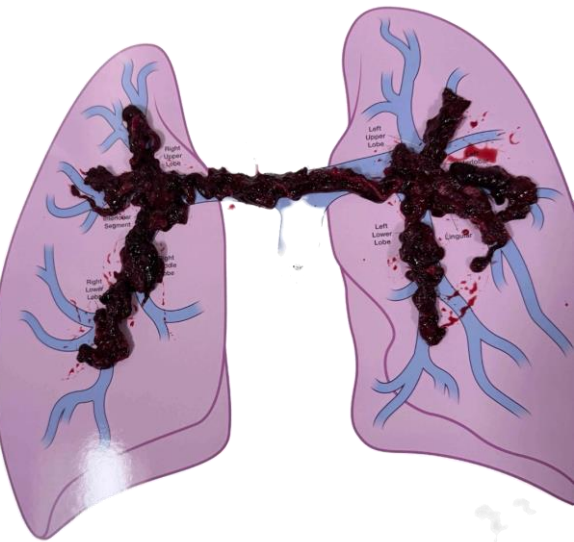


catheter based therapies

mostly safe

people compensate (til they

sedation = risky
can't
distal embolization can happen
worsened RV dysfunction
any sedation can be tough



prepare

trend labs/vitals

vital signs relative to age/baseline

what happens when you lie them flat?

ECMO available



team-based approach

be ready for backup reperfusion

spot the "at risk" for decompensation

