Discuss the benefits
of Quantra realized in clinical practice.

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Divisions of Cardiothoracic Anesthesia
and Critical Care Medicine
University of Florida College of Medicine

Quantra Qplus® by Hemosonics

Point of Care Coagulation Testing –Made Possible

Clinical Use

Melissa A. Burger, MD, MS, F.ABA

University of Florida College of Medicine

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Quantra QPlus®
Point of Care Coagulation Testing –in action

- 62 year old male
- Emergent transfer for Acute Type 1 Aortic Dissection

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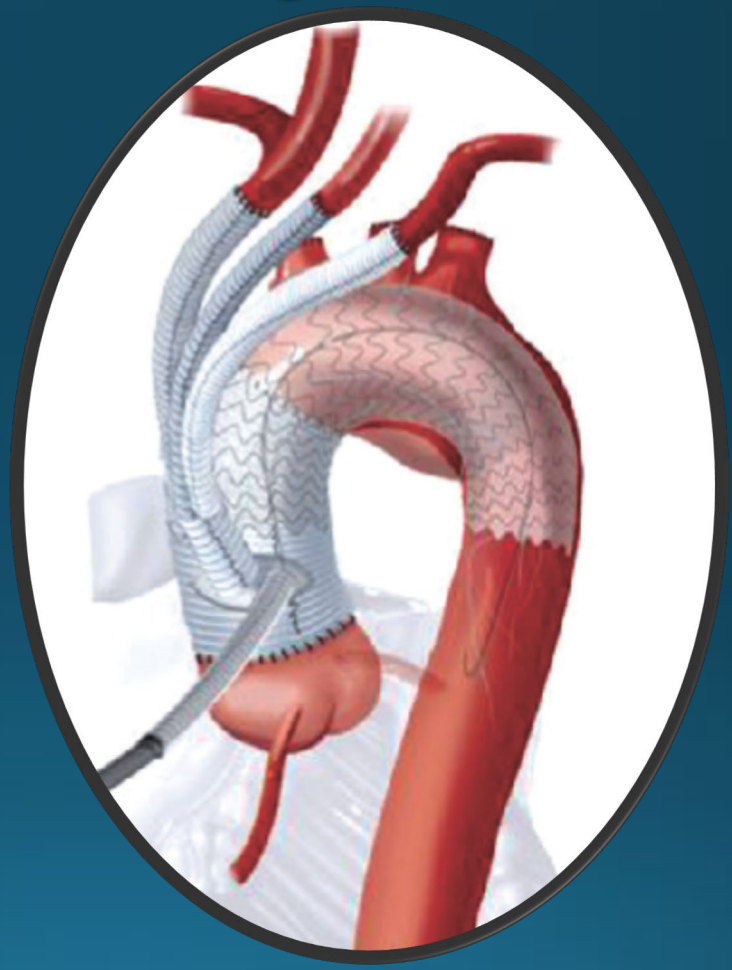
Point of Care Coagulation Testing –in action

- Taken directly to OR
  - Ascending aorta, hemiarch replacement with Zone 2 debranching under DHCA with ACP
  - Valve-sparing aortic root reconstruction (Florida Sleeve)
  - Left atrial appendage clip
  - PFO closure



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Point of Care Coagulation Testing –in action

Quantra QPlus® plan:

- Obtain Baseline
- Evaluate coagulopathy just prior to coming off cardiopulmonary bypass
- Post transfusion follow up evaluations as needed

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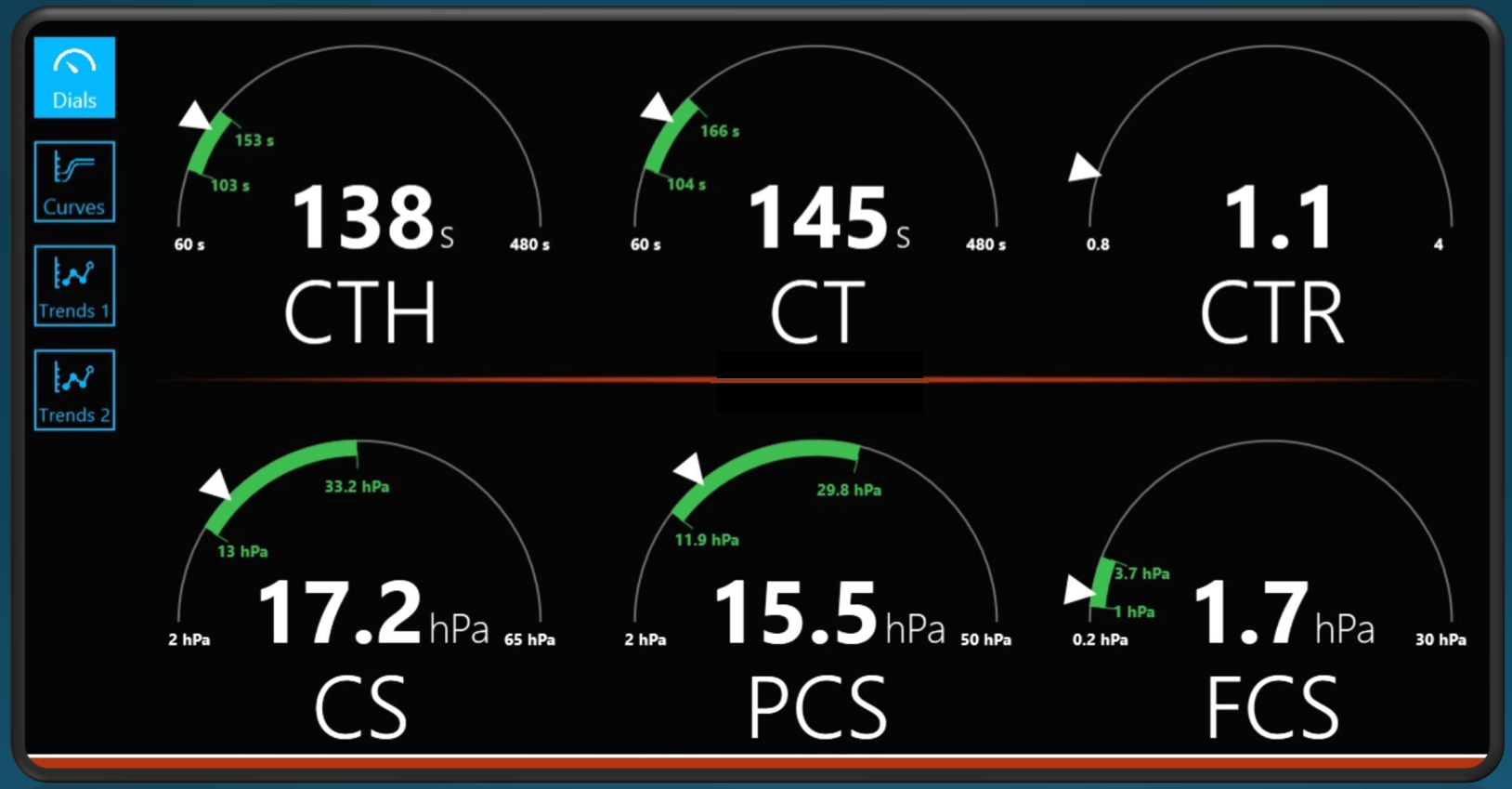

Baseline Quantra QPlus®

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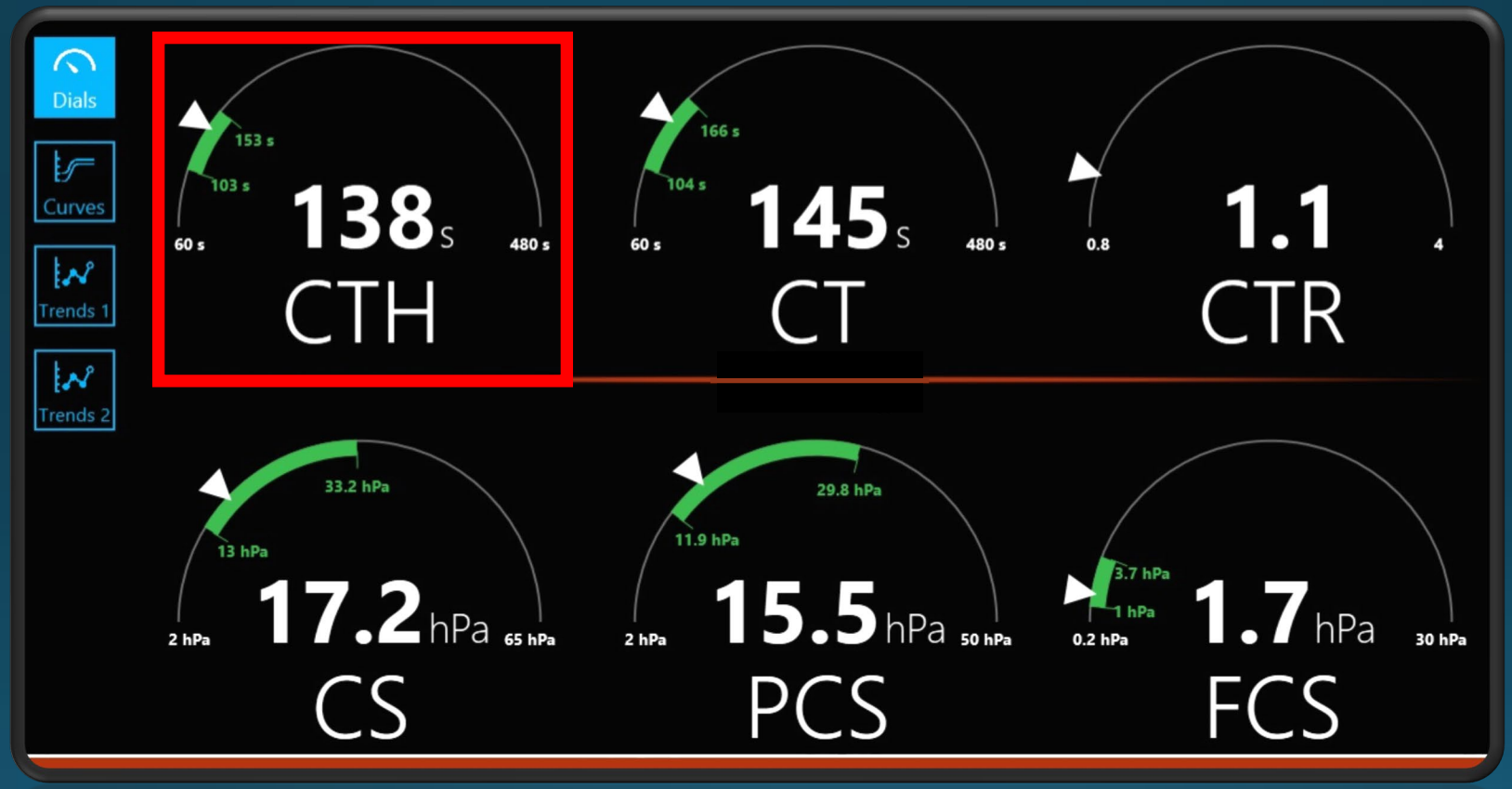

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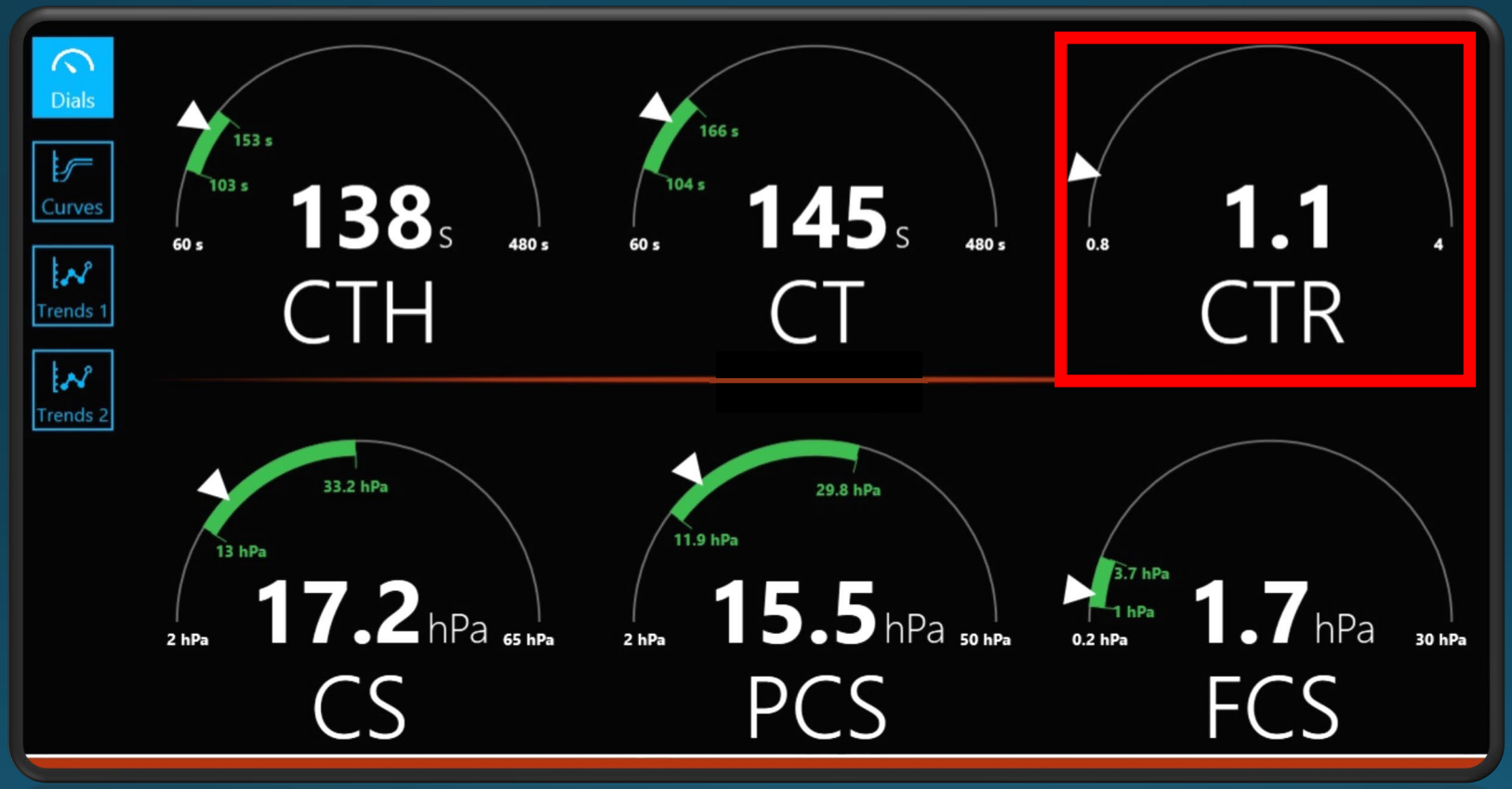

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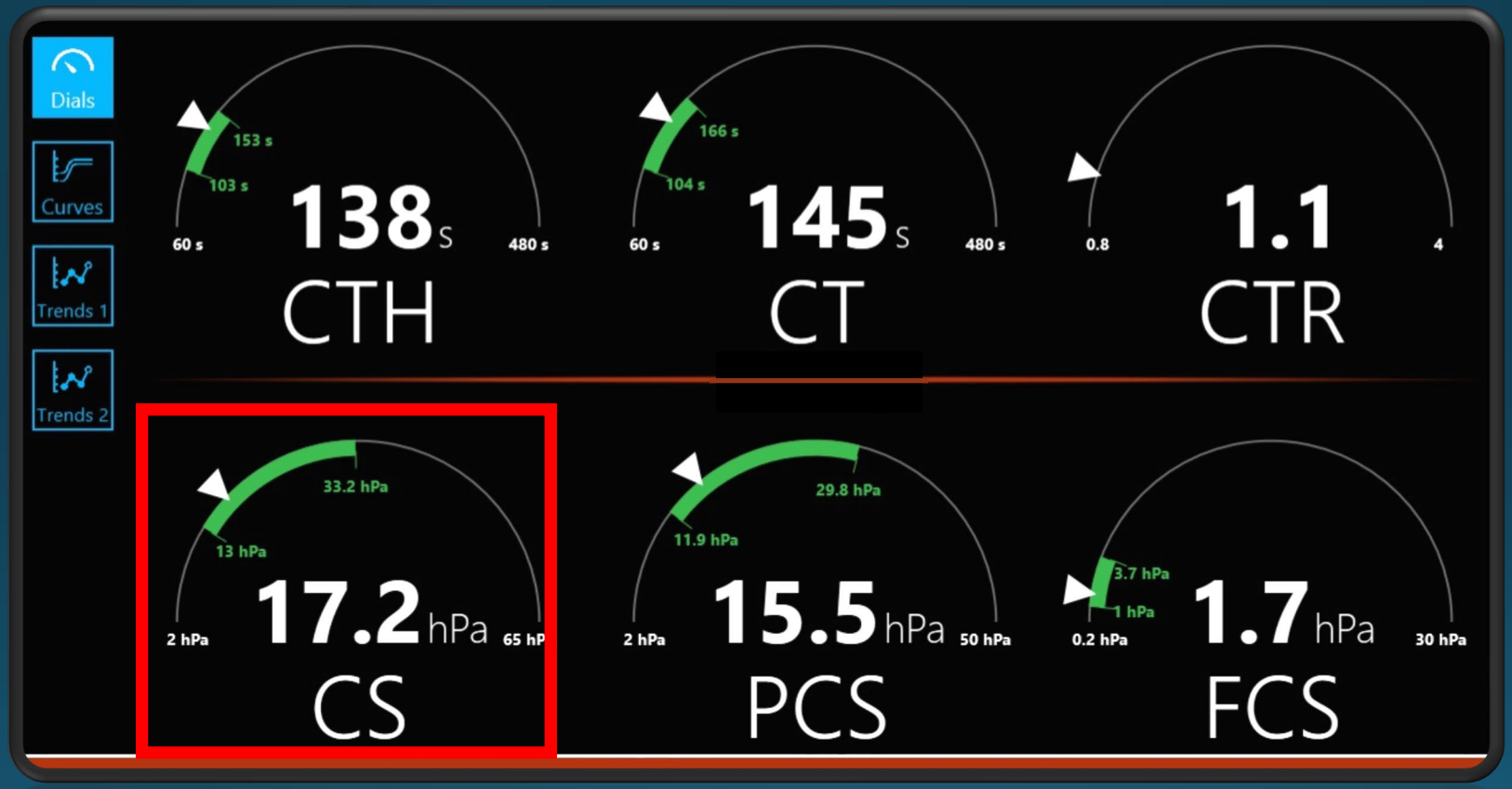

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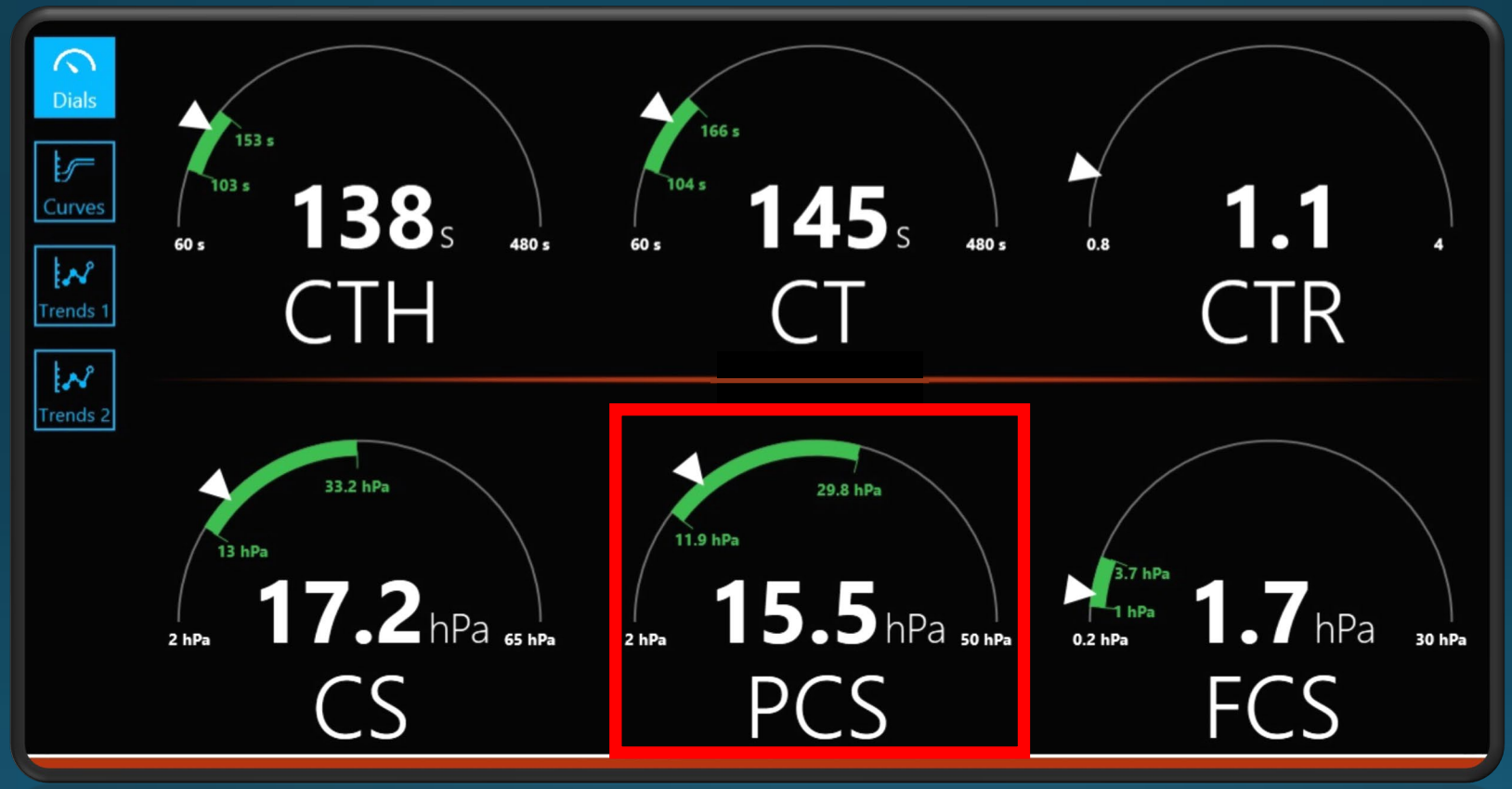

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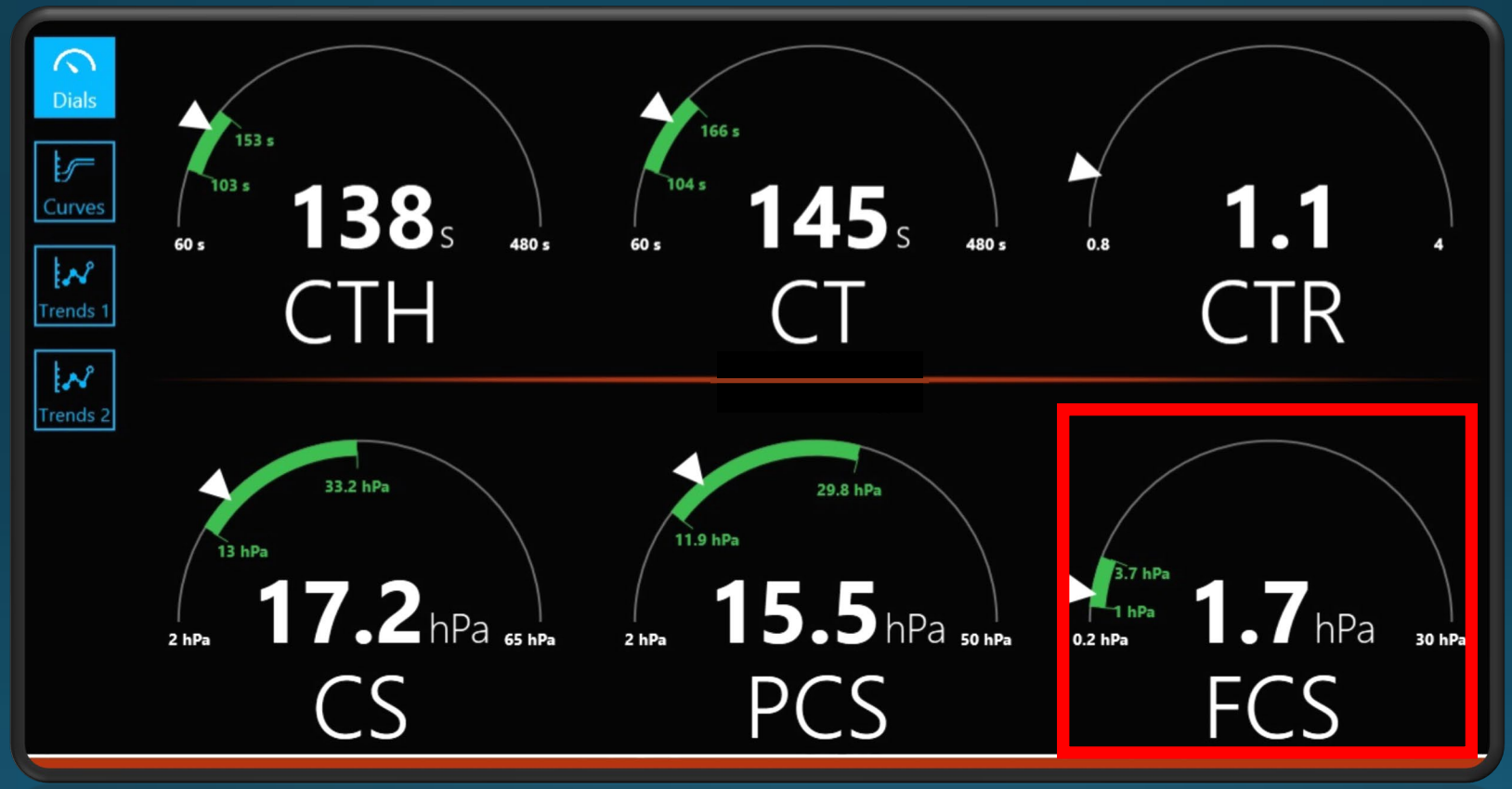

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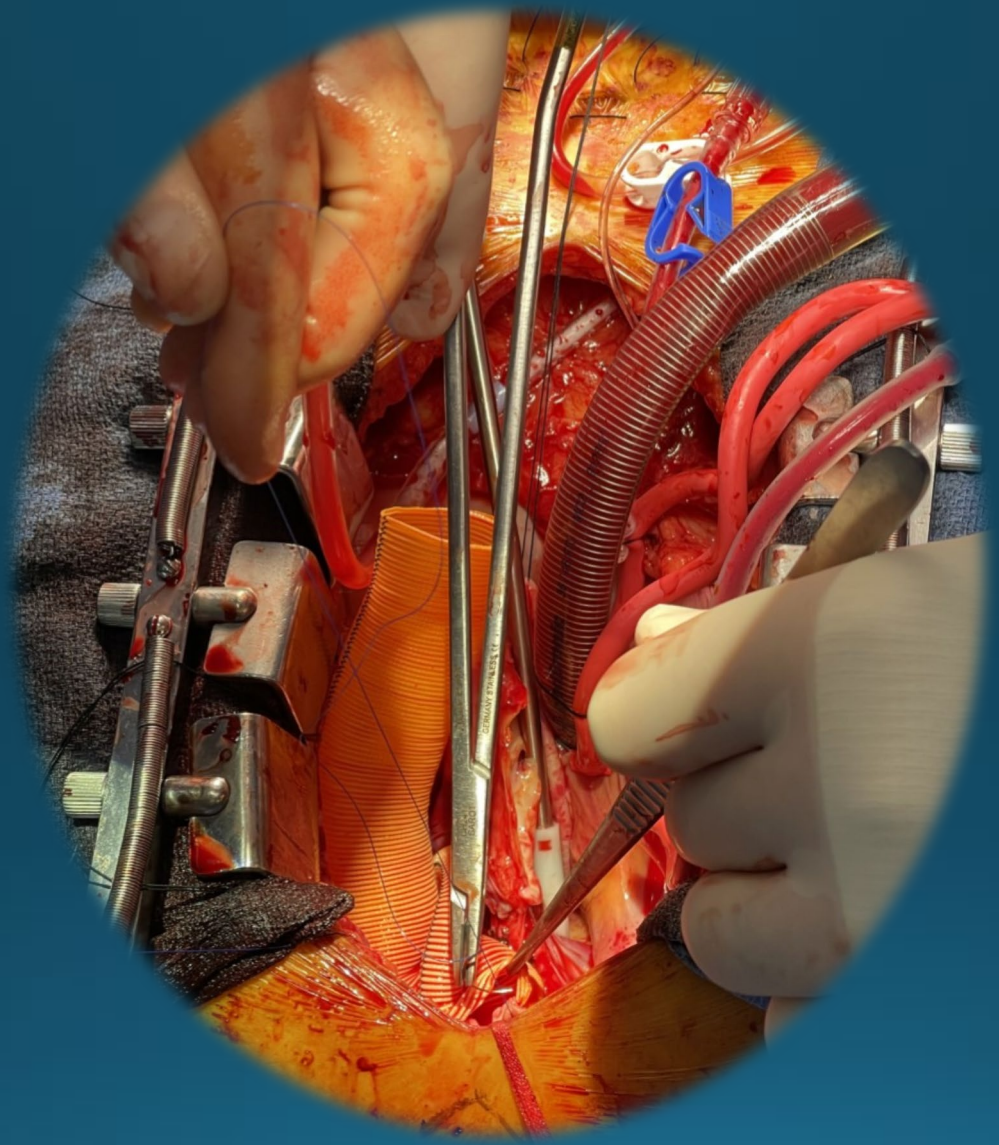

Quantra QPlus®
on Cardiopulmonary Bypass

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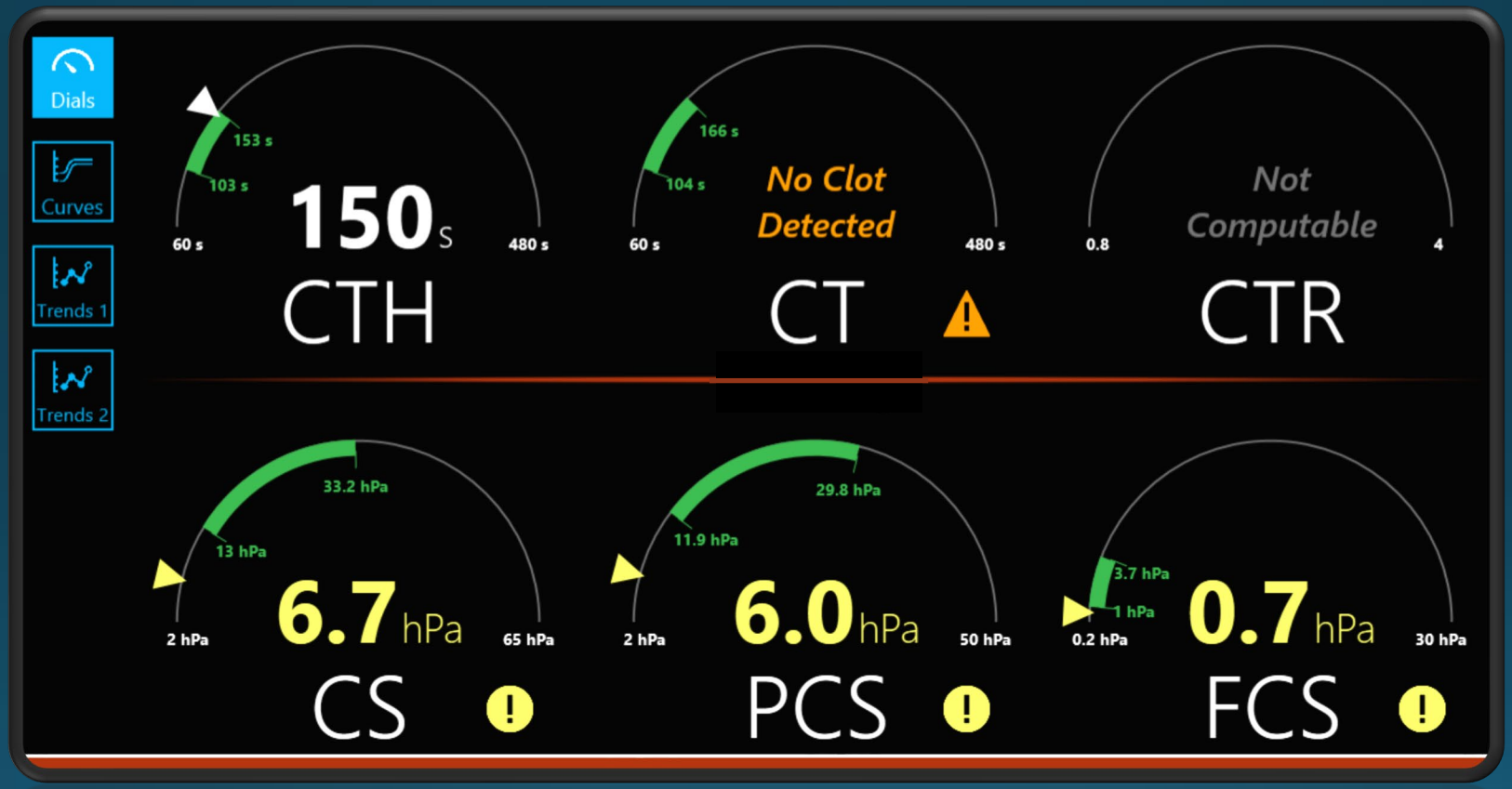

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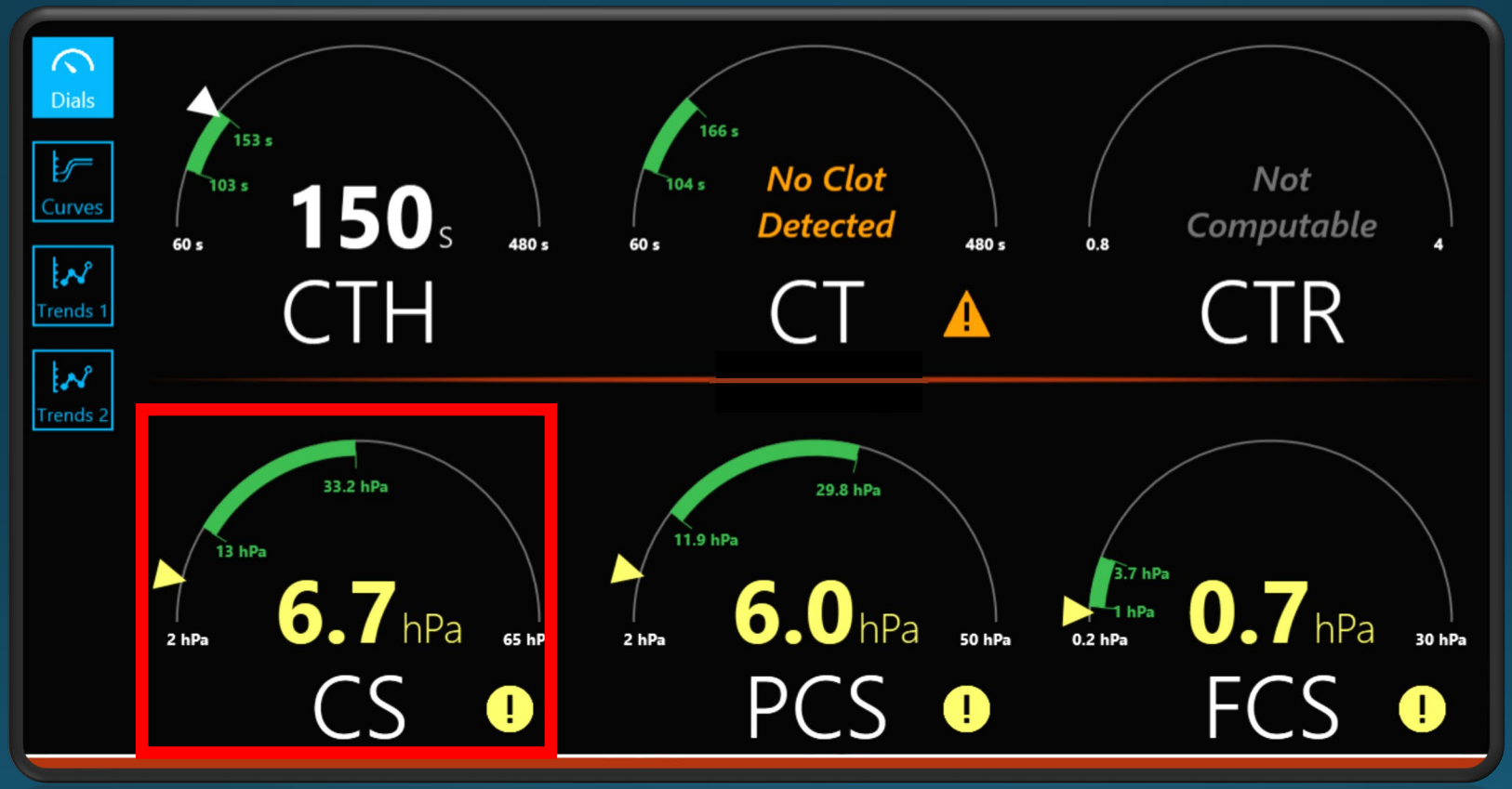

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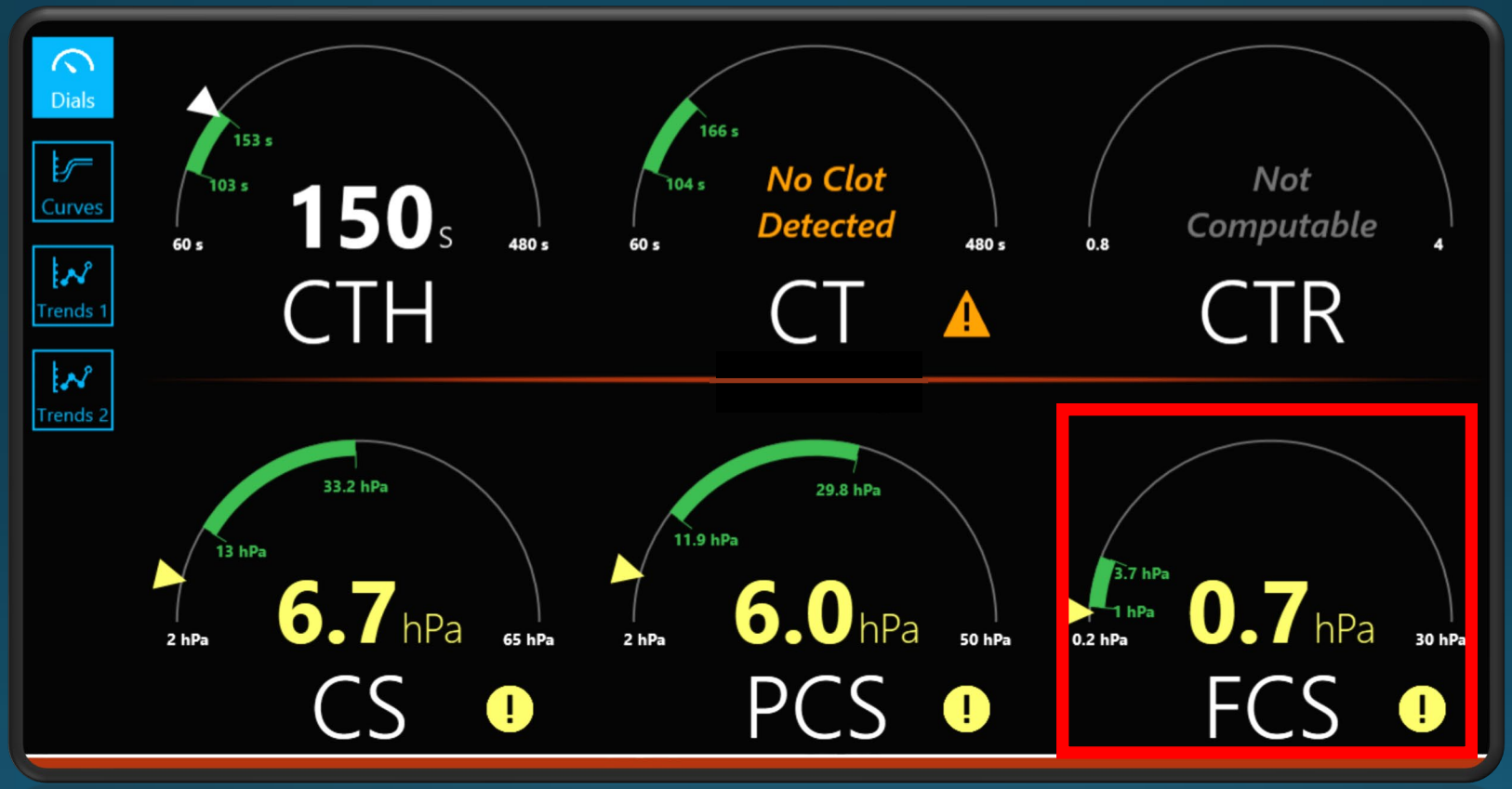

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Decision Guide

All Treatments Begin with Microvascular Bleeding!

Decision to Treat Values

Protamine
- CTR ≥ 1.4 = Heparin Influence
- Consider Protamine

Cryo
- CS < 13.7 hPa – Low Clot Stiffness
- FCS < 1.4 hPa
- Consider Fibrinogen

Platelets
- CS < 13.7 hPa – Low Clot Stiffness
- FCS > 1.4 hPa and PCS < 11.8 hPa
- Consider Platelets

FFP or PCC
- CT > 189 sec and CTR < 1.3
- Consider FFP or KCentra

Therapeutic Goals – Reassess after intervention

Amicar or TXA
- Severely Low CS/FCS
- Consider Antifibrinolytics if not given previously

Protamine
- CTR 1.4 to 2.0 give 25 mg
- CTR >2.0 give 50 mg

Cryo
- FCS < 1.4 hPa give cryo or
- Fibrinogen concentrate:
- Calculate dose from deficit to target[1]

Platelets
- If Known DAPT consider DDAVP
- PCS < 14.1 hPa 1pk platelets
- PCS<11.2 hPa 2pk platelets

FFP or PCC
- CT > 189 give FFP or KCentra

Simultaneous Therapeutic Interventions:

Mild Bleeding
- Maximum of 1 intervention concurrently.

Moderate Bleeding
- Maximum of 2 interventions concurrently.

Severe Bleeding
- Maximum of 3 interventions concurrently.

1. Pools of 5 units of Cryo or hFC- to hit target of 150-200 mg/dl

	weight in kg				
< FCS hPa	50 - 60	60 -70	70-80	80 - 90	90 - 100
1.2	1	1	1	1	1
1	1	2	2	2	2
0.8	2	2	3	3	3
0.6	3	3	4	4	4

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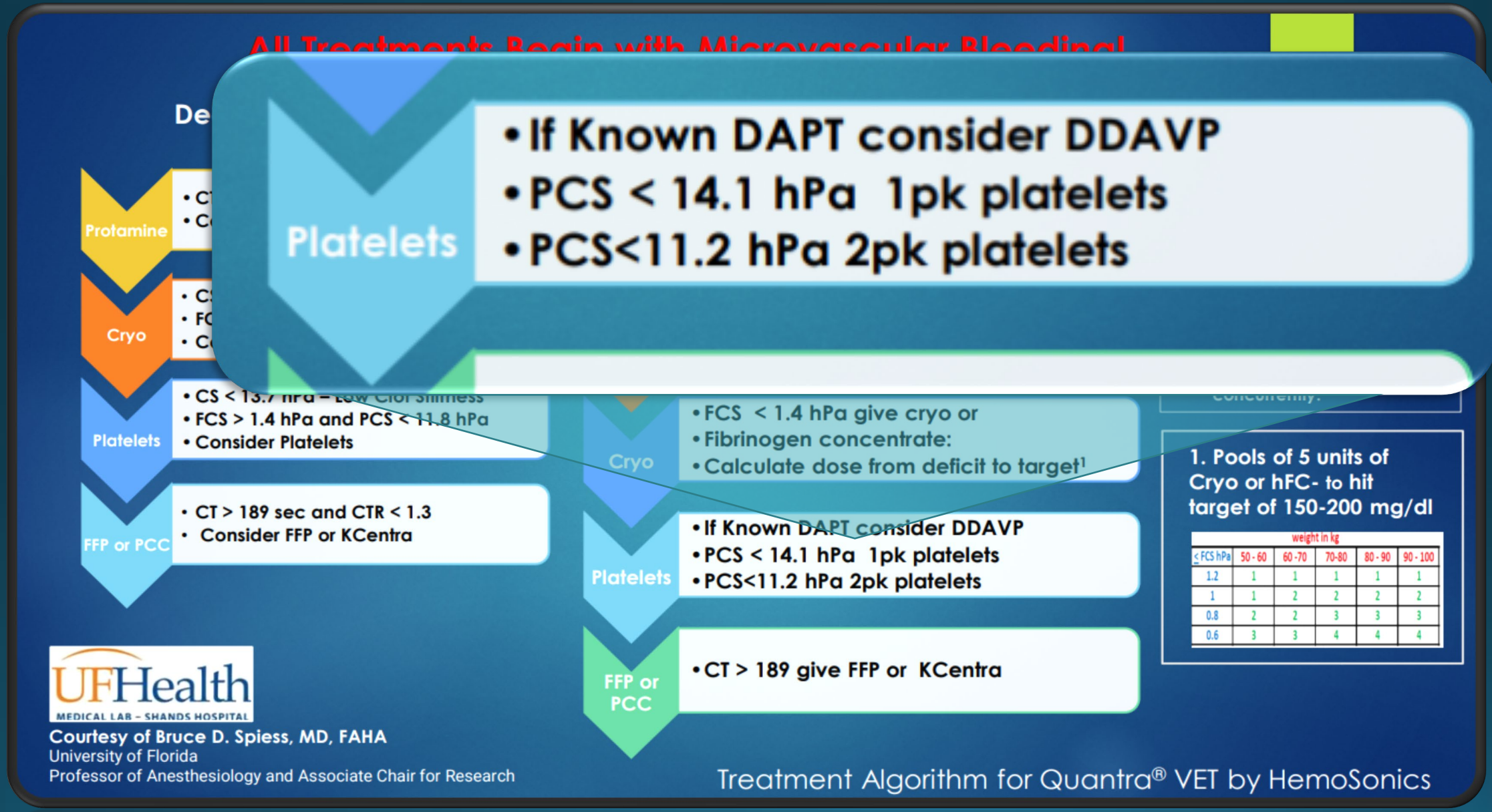
MEDICAL LAB – SHANDS HOSPITAL

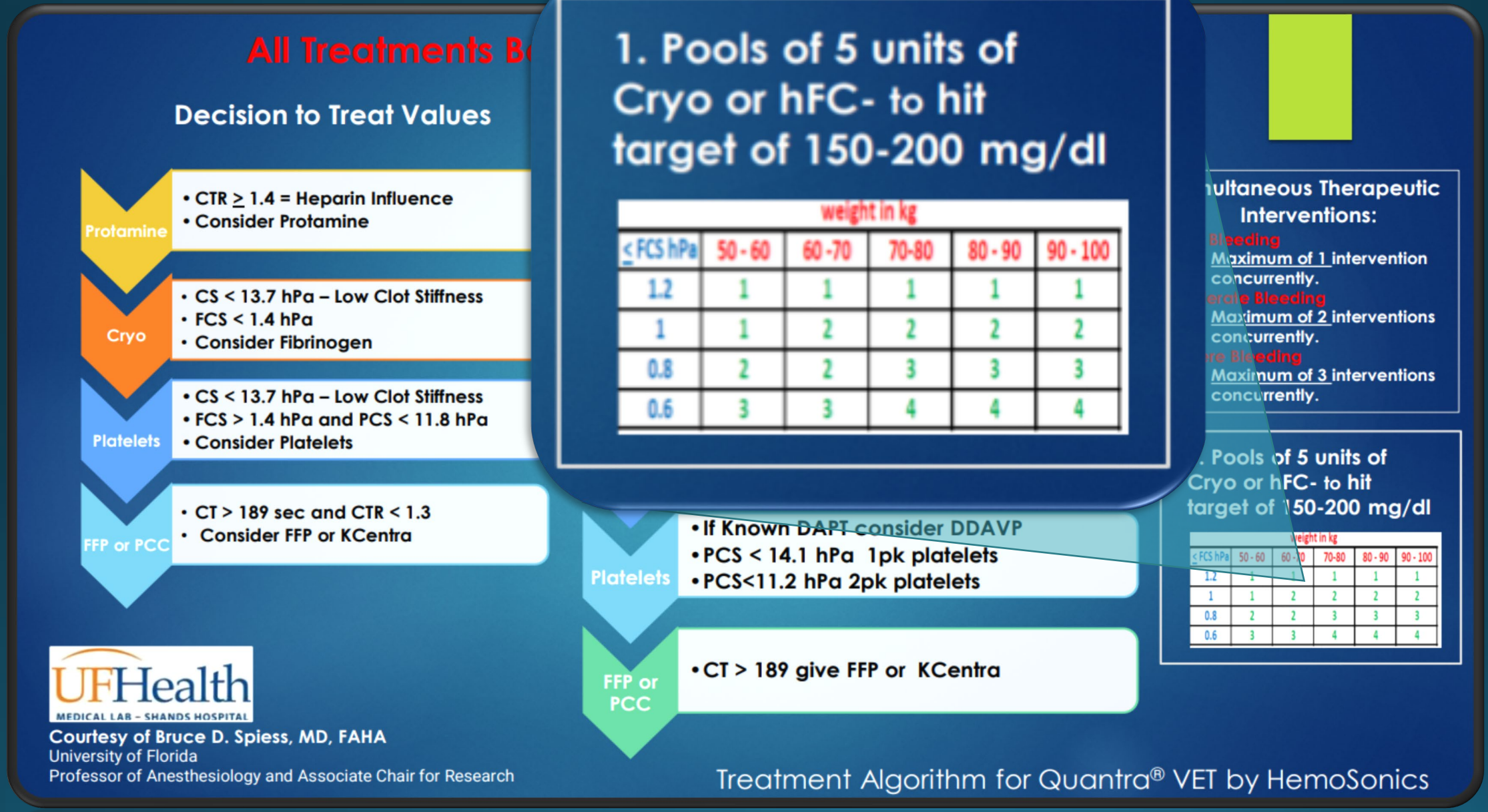
Courtesy of Bruce D. Spiess, MD, FAHA
University of Florida
Professor of Anesthesiology and Associate Chair for Research

Treatment Algorithm for Quantra® VET by HemoSonics

Decision Guide



Decision Guide



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Point of Care Coagulation Testing –in action

- Decreased clot strength due to platelet and fibrinogen deficiency
- Patient given 2 U platelets and 2 U Cryoprecipitate

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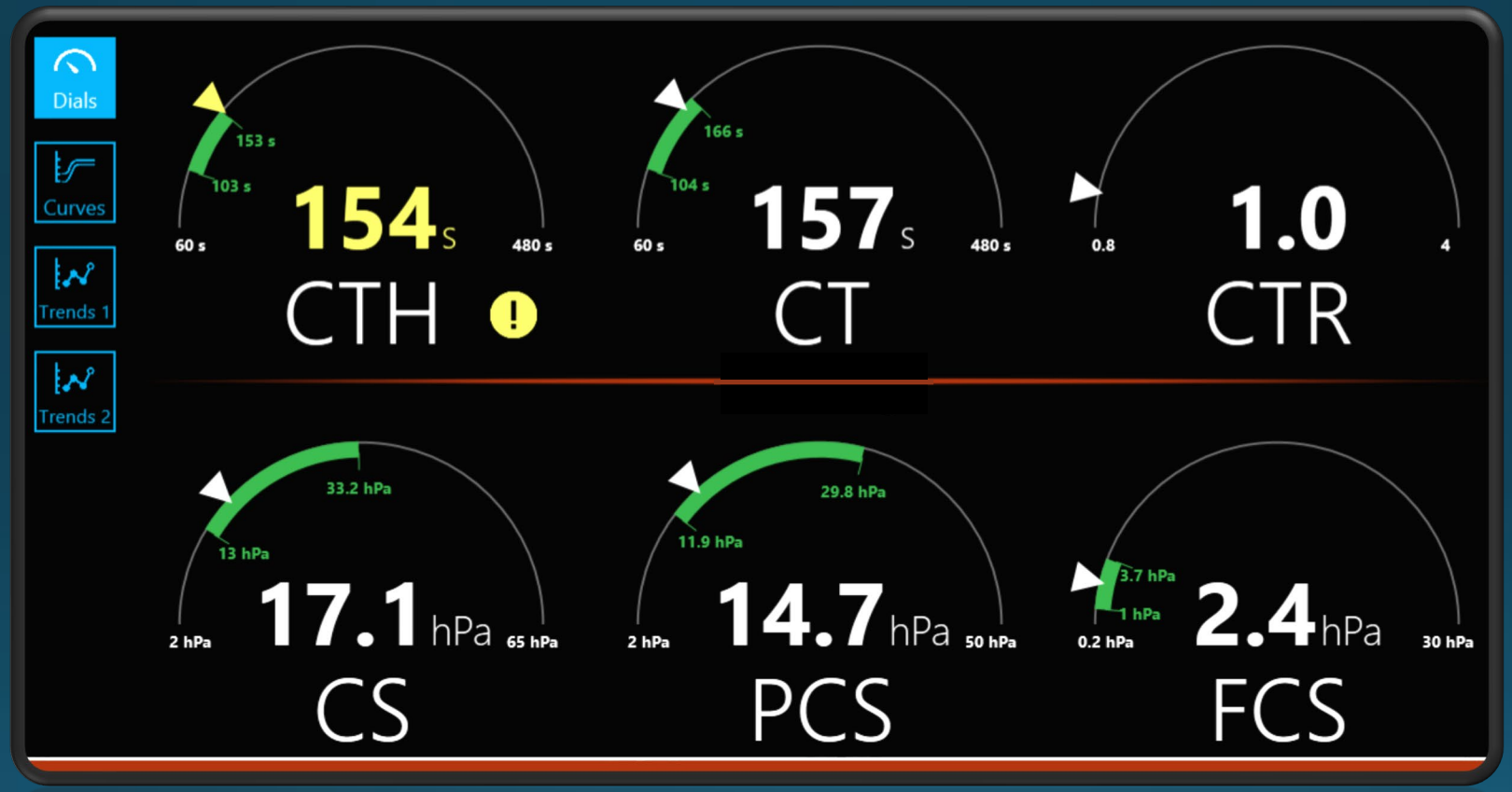

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Post Transfusion

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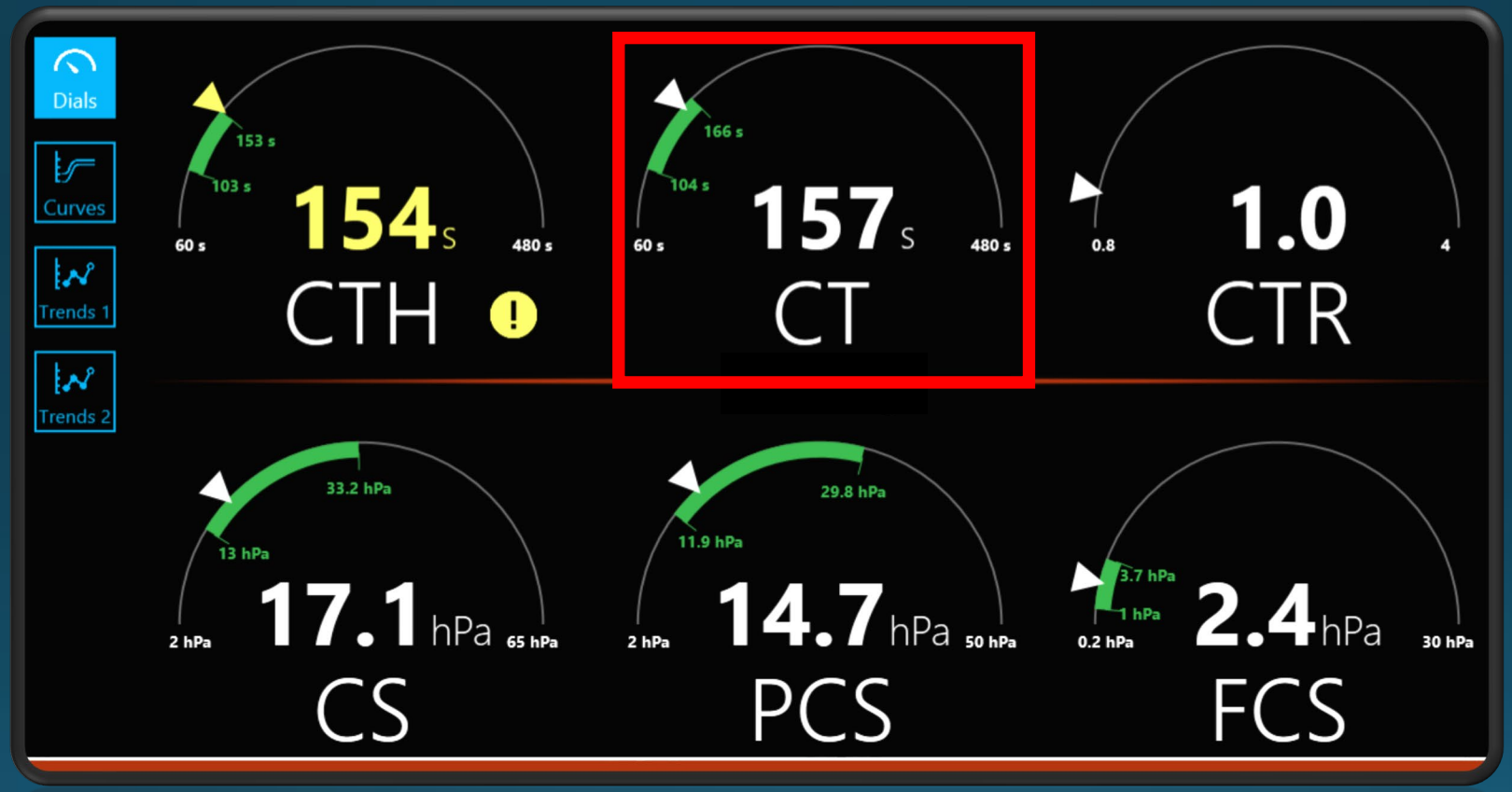

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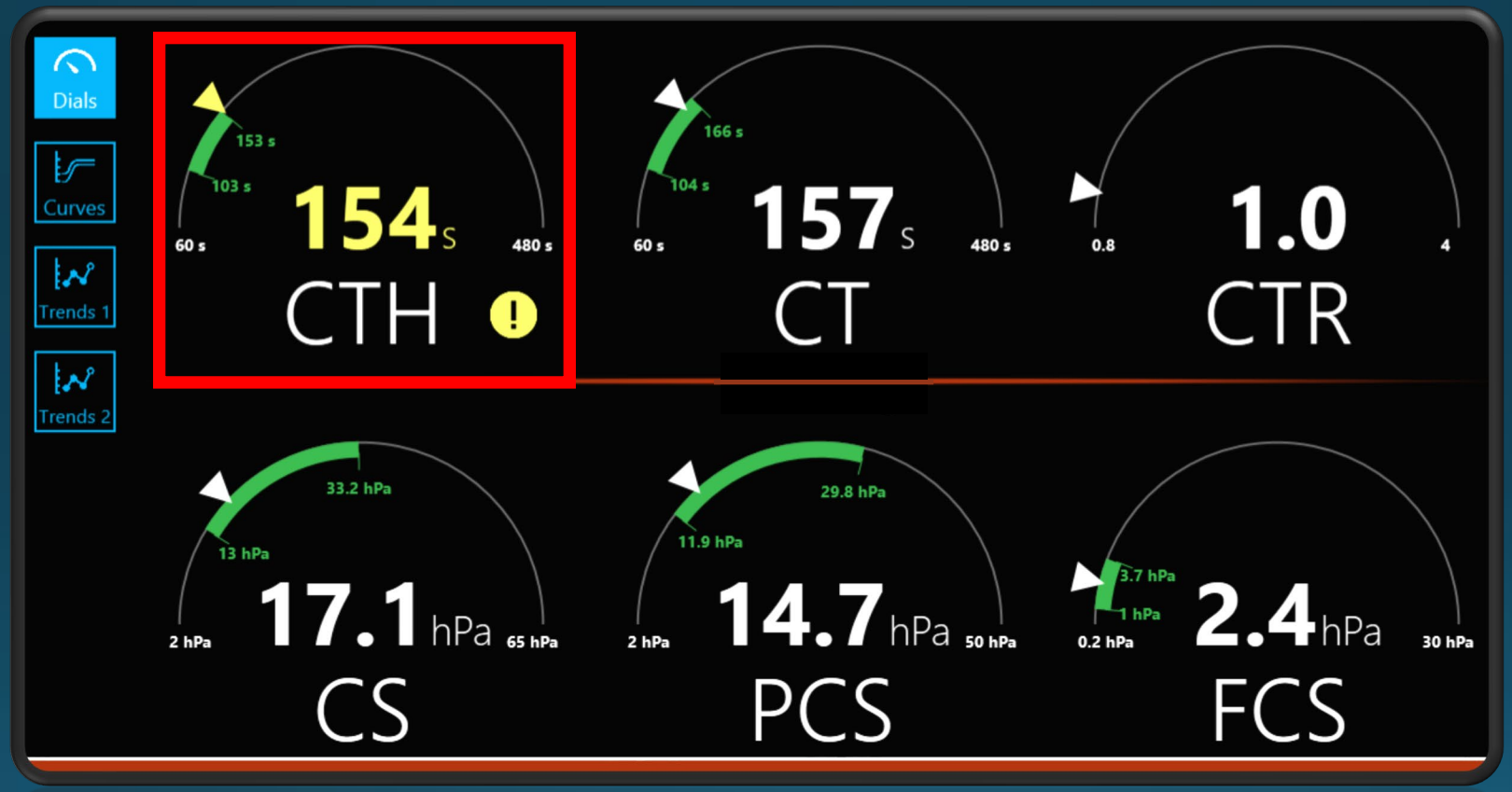

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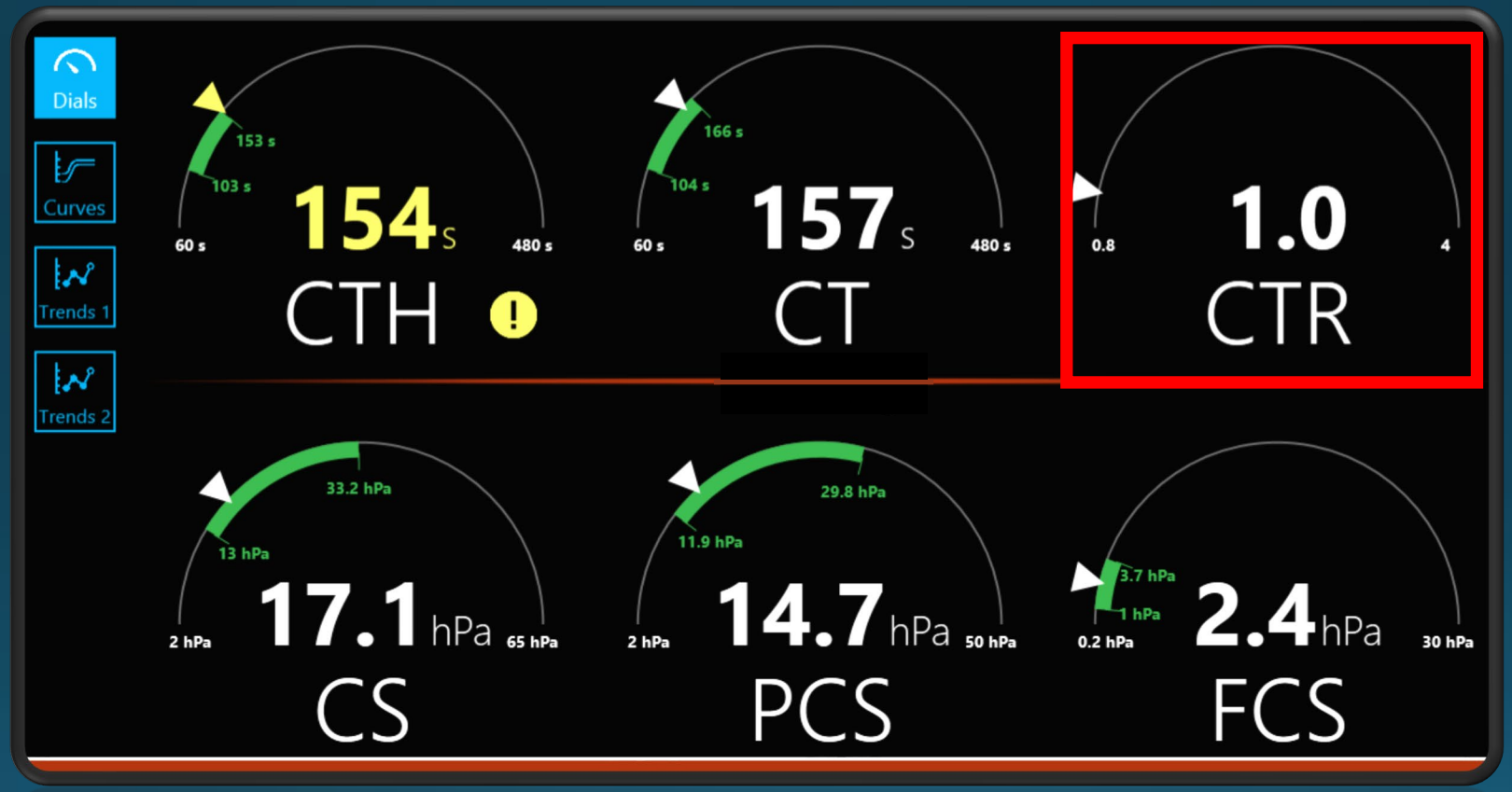

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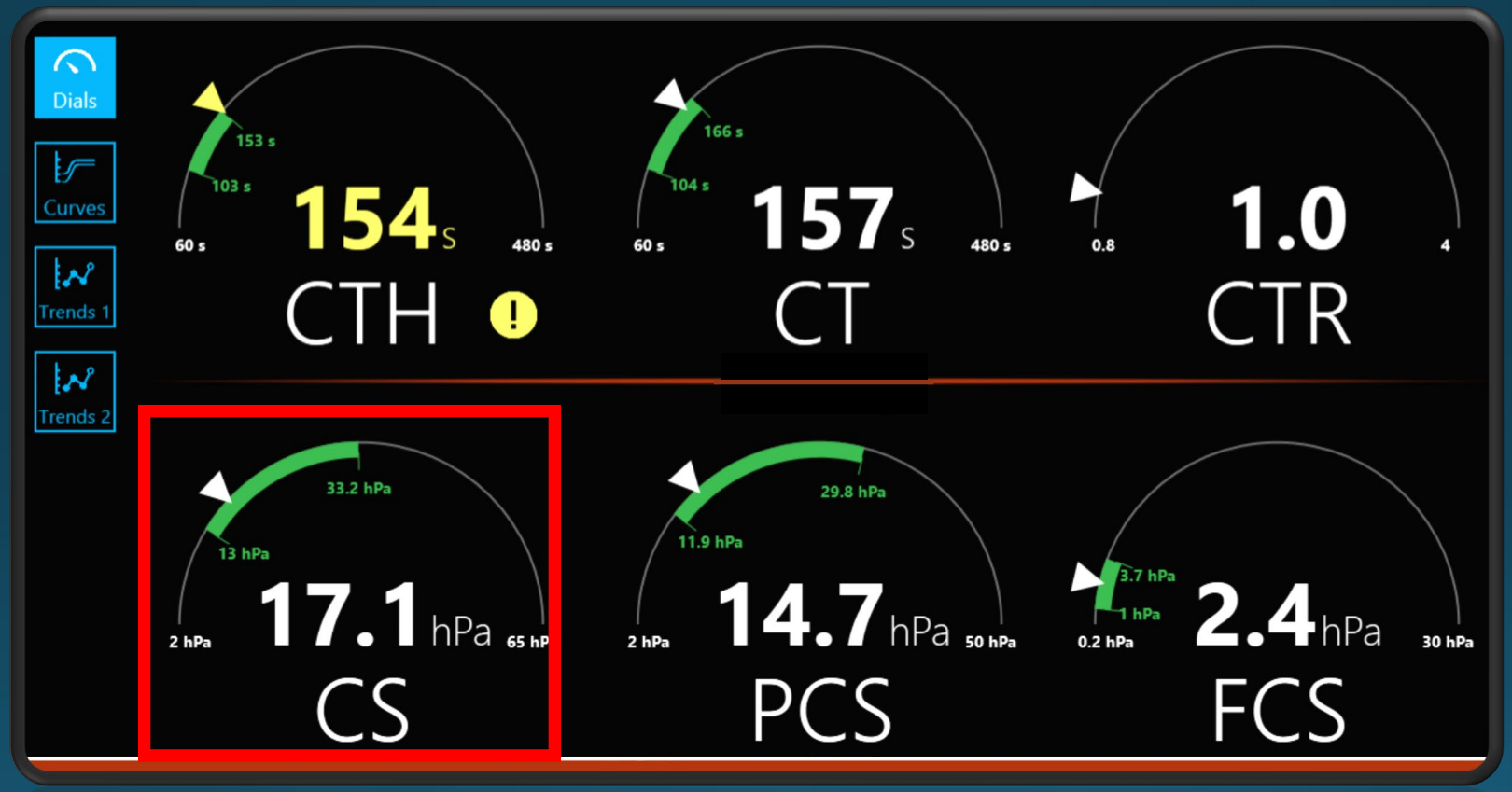

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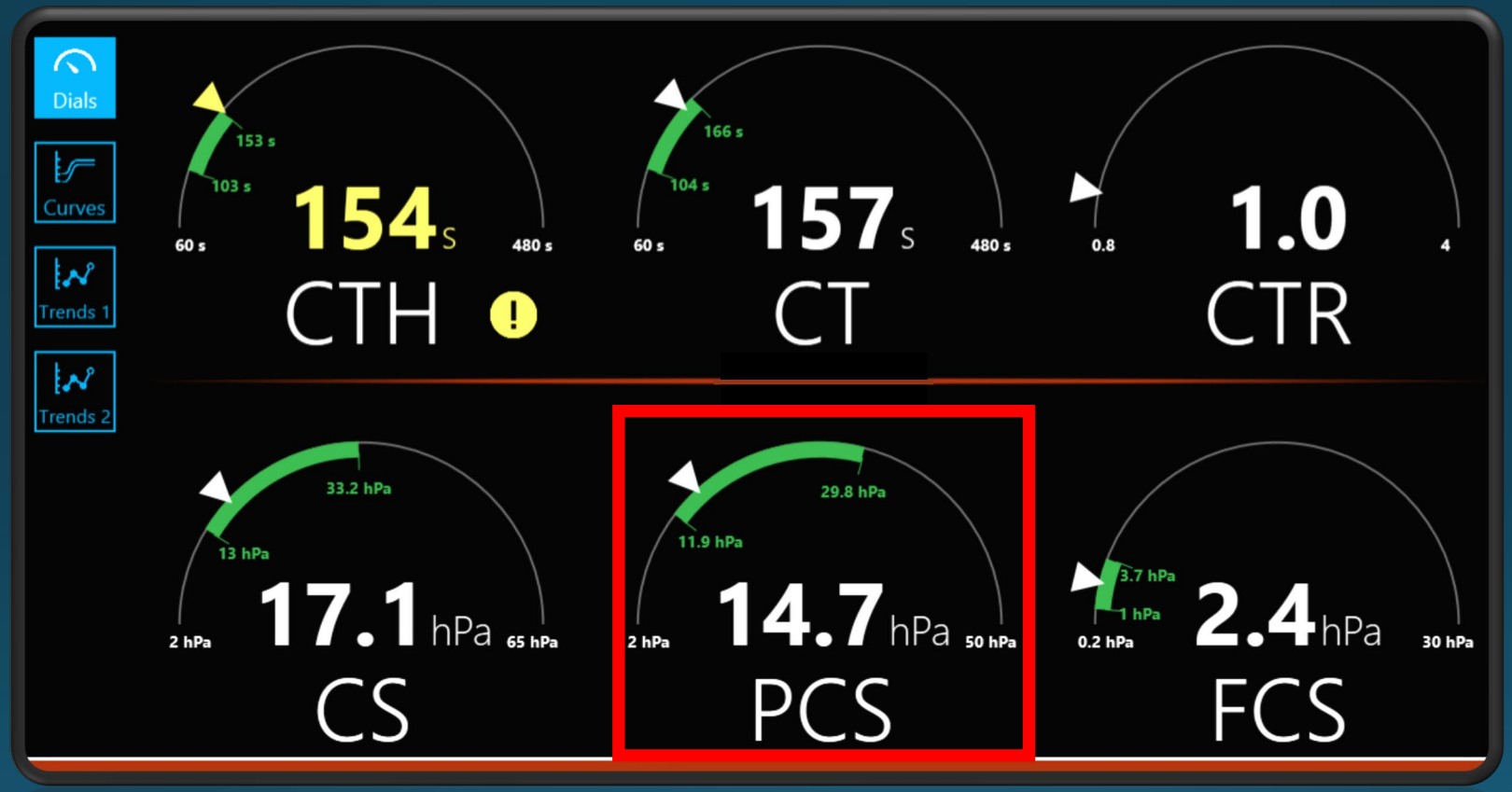

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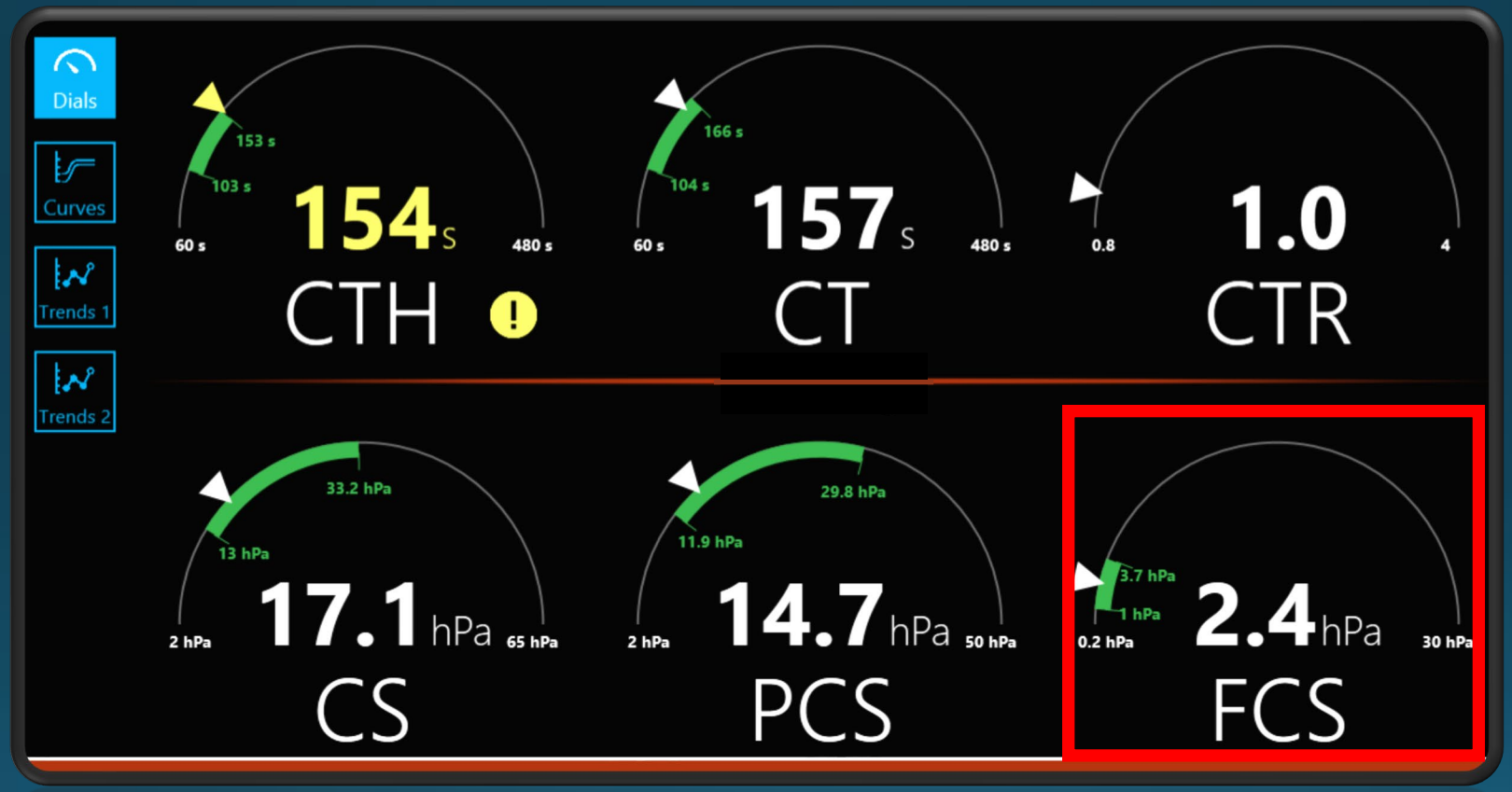

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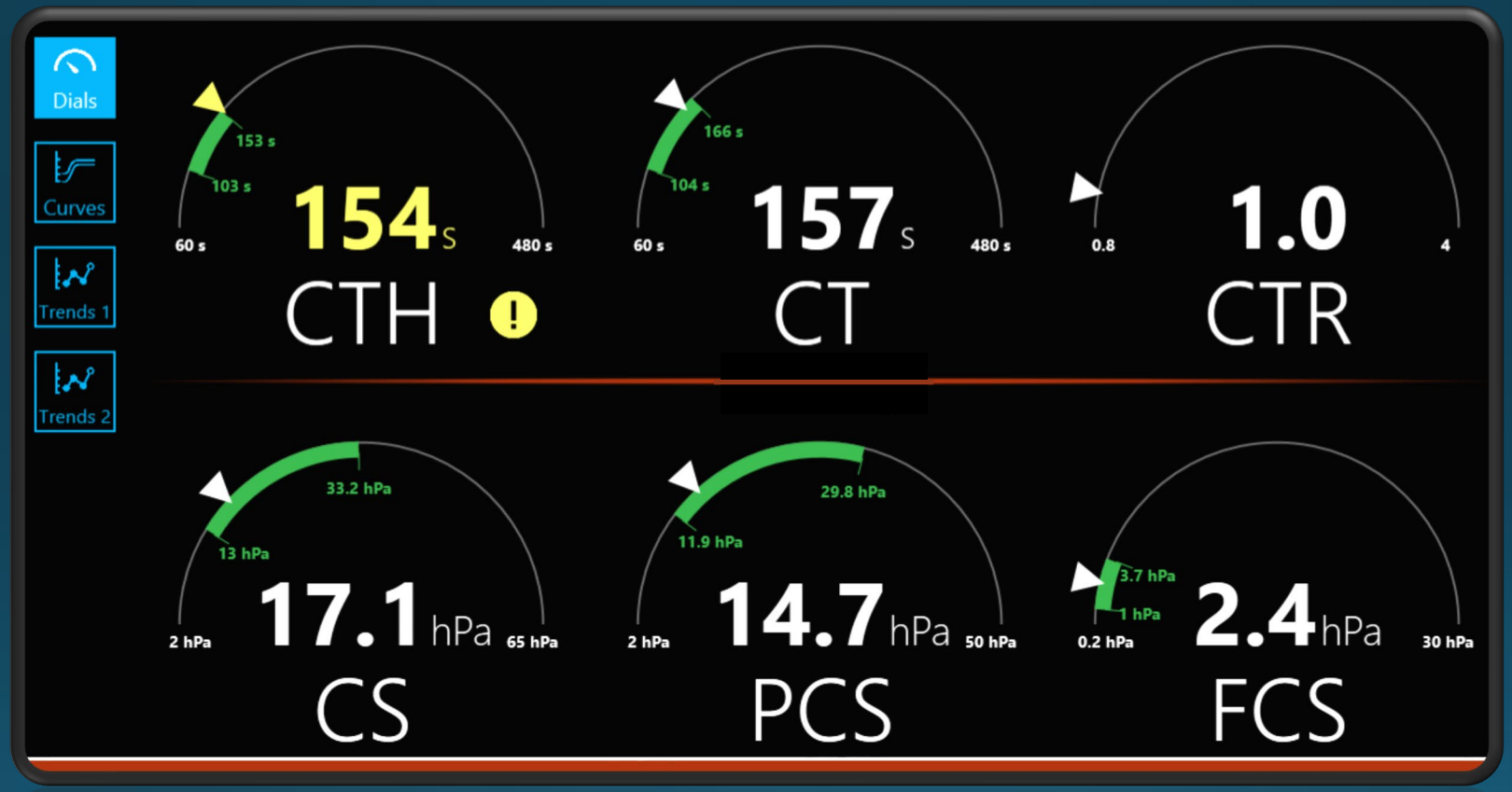

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Point of Care Coagulation Testing –in action

- Patient still oozing from chest!

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Point of Care Coagulation Testing –in action

- Platelet and fibrinogen contributions corrected based on PCS and FCS.
- Heparin fully reversed based on normal CTR.

- In the presence of microvascular bleeding, CT and CTH slightly prolonged suggesting relative clotting factor deficiency.

- Patient given PCC.

- Oozing slows and surgeons able to close chest.