Baxter

Starling
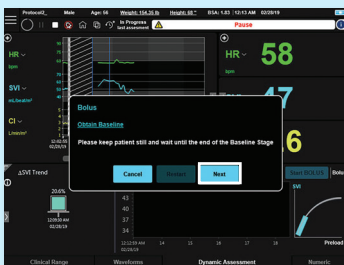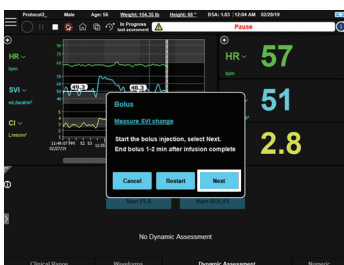**FLUID MANAGEMENT MONITORING SYSTEM**

FLUID BOLUS DYNAMIC ASSESSMENT

- Select **Start BOLUS** from the Dynamic Assessment dashboard.
  *This view is the main home screen default view. **Start PLR** and **Start Bolus** buttons will always be visible from the home screen. Your hospital may have chosen a different default view and displayed parameters.*

BOLUS BASELINE

- If this message appears: **"A stable baseline has been established, do you want to proceed directly to the Bolus?"** It is asking, "Can the last 3 minutes of SVI data be used for the Baseline?" (i.e., no nursing interventions).

- Selecting **No** will allow the user to run a 3-minute baseline.

- Selecting **Yes** will prompt the user to proceed to step 2 of the Bolus.

- A pop-up window will appear instructing the user to keep the patient still for the 3-minute baseline.

- Select **Next**.

- Bolus baseline stage lasts for 3 minutes. Timer will start 3-minute countdown.
  Do not give fluid during this baseline stage.

PERFORMING BOLUS

- When prompted, begin IV fluid infusion. Select **Next**.

- In the Dynamic Assessment box, a timer will begin to count up during the bolus injection.

  - Give a 250 mL bolus in 5 minutes or less.[1,2]
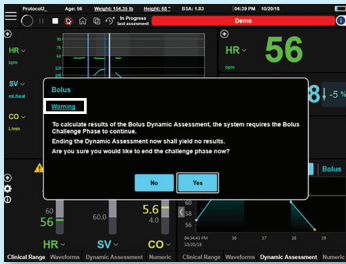
  - Give a 500 mL bolus in 10 minutes or less.

END BOLUS

- Wait 1-2 minutes after infusion is complete and then select **End Bolus** on the dashboard.
  By waiting 2 minutes after the bolus injection before ending the protocol, this ensures the peak Stroke Volume is captured.

ENDING THE BOLUS AS SOON AS PATIENT IS FLUID RESPONSIVE

- **User may end the Bolus Dynamic Assessment as soon as patient is shown to be fluid responsive.**
- If patient's ΔSVI increases to 10% or more, the user may select **End Bolus**.
- **End Bolus** button will turn blue once the patient is shown to be fluid responsive.
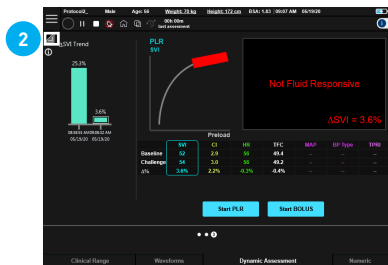

WARNING MESSAGE IF BOLUS ENDS TOO SOON

- If the user attempts to end a bolus challenge before 2 minutes has elapsed and ΔSVI <10%, an error message will warn the user.
- Selecting **Yes** will end the Bolus challenge and yield no results.
- Selecting **No** will take the user back to the Bolus challenge phase without interruption.
  * The clock will continue to count up even if this warning appears.

BOLUS RESULTS

- The Dynamic Assessment report will then be displayed on the screen.

  1 To enlarge the report, use corner arrow.

  2 To minimize report, click arrow again.

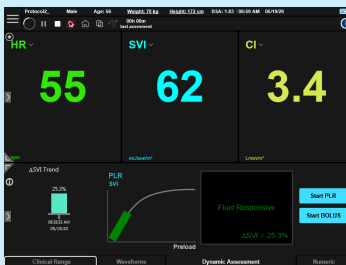 **3** Previous Dynamic Assessments will now appear to the left of the current Dynamic Assessment report.
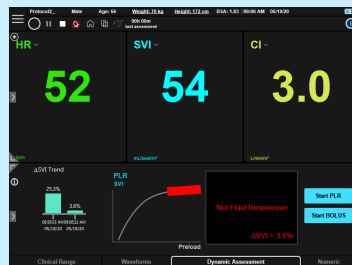
Dashboard View

Full-Screen View

WHAT DO MY RESULTS MEAN?

Starling curve is green = ΔSVI ≥10%
Patient is fluid responsive[2]

Starling curve is red = ΔSVI <10%
Patient is not fluid responsive[2]

NORMAL VALUES[2]

SVI = 33–47 mL/beat/m^2

TPRI = 1970–2390 dynes • sec/cm^5/m^2

CI = 2.5–4.0 L/min/m^2

1. Aya HD, et al. Pharmacodynamic analysis of a fluid challenge. *Crit Care Med.* 2016;44:880–891.
2. Cecconi M, et al. What is a fluid challenge? *Curr Opin Crit Care.* 2011:17:290-295.
3. Sramek BB. *Systemic Hemodynamics and Hemodynamic Management.* 2002;Instantpublisher.com ISBN 1-59196-04600.