NONINVASIVE HEMODYNAMIC MONITORING

ONE

PATIENT
MONITOR
PATHWAY

Cheetah Medical™

STARLING™ SV

Customize your own screen and select specific display parameters.

TRENDING...!

DYNAMIC STARLING CURVE

ONE MONITOR

OUTPUT
Cardiac Output (Index)
Stroke Volume (Index)

PRELOAD VOLUME
Stroke Volume Variation

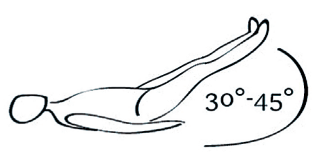
AFTERLOAD
Total Peripheral Resistance

OXYGENATION
Oxygen Delivery (Index)

ORGAN FUNCTION
Thoracic Fluid Content
Cardiac Power Output (Index)

PRESSURE
Mean Arterial Pressure
Arterial Blood Pressure

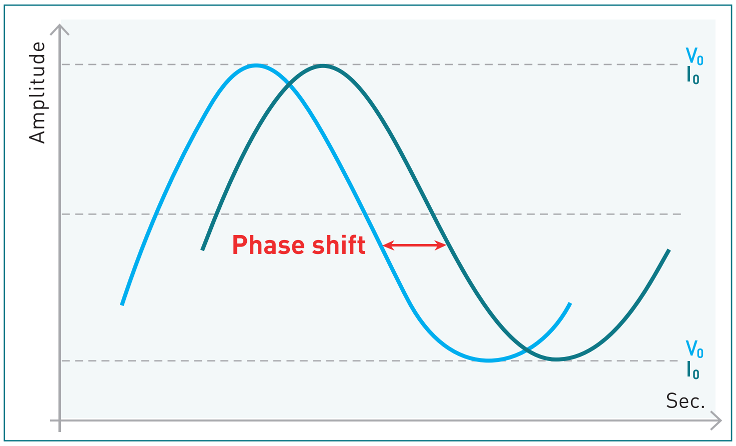
Passive Leg Raise or fluid bolus tests are performed automatically without interruption of patient monitoring.



Baseline measurement is obtained
PLR and/or fluid bolus performed
Results displayed: % change in SV, position on Starling curve.

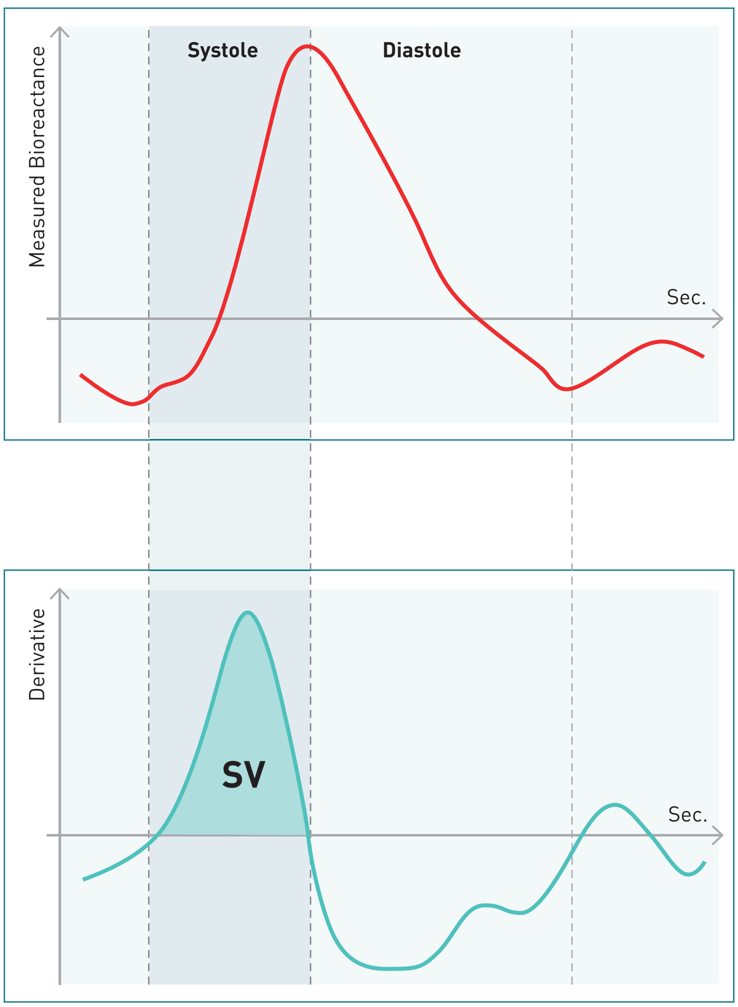
BIOREACTANCE

A new advanced technology for continuous dynamic central measurements.



PHASE SHIFT OR BIO REACTANCE

The Thorax consists of resistance and reactance components. **An AC current** is induced in the thorax. **A delay/phase shift** is recorded between the voltage and the applied current.



VOLUME

Phase shifts are mainly a result of changes in aortic blood volume. **During systole,** there is a rapid build up of phase shifts to the peak representing an increase in aortic blood volume. **During diastole,** a decrease in phase shift representing a reduction in blood volume.

FLOW

The derivative of the signal represents mainly the aortic flow. **The stroke volume** is derived by computing the area under the positive part of the curve, representing systole.

Starling™ SV is:
• 100% noninvasive
• Patient friendly
• Accurate
• Quick and easy

3.7 DAYS REDUCTION IN TOTAL LENGTH OF STAY (25%) WITH CONTINUOUS STOKE VOLUME EVALUATION.

Reference: Kuper M, Stuart J Gold S, Colin Callow C, Quraishi T, King S, Mulreany A, Bianchi M, Conway D. Intraoperative fluid management guided by oesophageal Doppler monitoring. British Medical Journal 2011; 342; 7809: 1256-1260.

PRE-OP

Nurses start the monitoring while preparing patient. Sensor placement is easy and noninvasive. Assessing fluid responsiveness and initiating IV fluid maintains adequate tissue perfusion and fluid homeostasis before surgery.

[1] Monnet X, Marik P, Teboul JL. Passive leg raising for predicting fluid responsiveness: a systematic review and meta-analysis. Crit Care 2015; 19(1): 18.

CONTINUUM OF CARE
FOR FLUID & DRUG TITRATION

As 50% of your patients are **not** fluid reponsive[1], and the Starling SV provides a precise and continuous assessment of cardiac preload, contractility and afterload. No need to upgrade or change the monitor when changing care area.

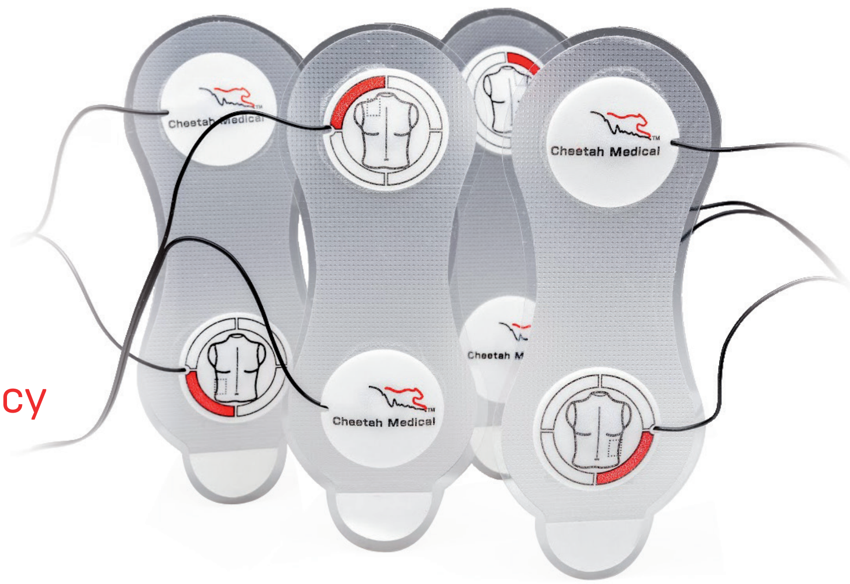
PERI-OP

Cardiac output, stroke volume, peripheral resistance and oxygen delivery are continuously monitored during surgery. Accurate monitoring is unaffected by arterial compliance changes occurring with anesthesia induction or vasopressor administration. Fluid responsiveness is assessed and the appropriate fluid is administered for any operation, patient position, cardiac rhythm or anesthesia level.

POST-OP

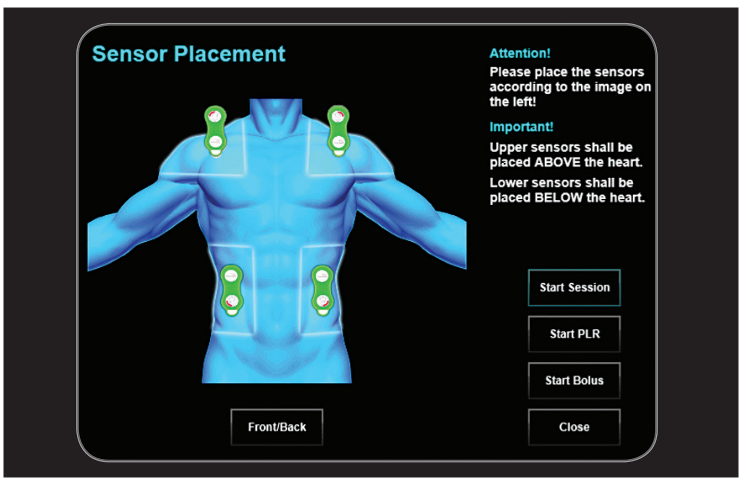
Monitoring continues post surgery and into the ICU or PACU. Dynamic assessments indicate when the appropriate amount of fluids has been given and the IV line can be removed. Cardiac contractility and after load status can guide inotropes and vasoactive agent management.

FRIENDLY & GENTLE SENSORS



QUICK TO SET UP

- The patient is ready for monitoring immediately!
- Ideal for triage in emergency
- Very gentle for the skin



HELP SCREEN HIGHLIGHTS SENSORS IN GREEN TO GO!

An electric current is applied across the thorax between the outer pair of sensors. The voltage is recorded between the inner pair of sensors.

• Two sensors above the heart
• Two sensor below the heart
Sensors can be placed on patient front or back, to accomodate body habitus or surgical requirements.

PRODUCT	CODE
Starling SV Monitoring System	CMA-ST5
Starling SV NIBP Module	CMA NIBP
Starling SV Sp0$_2$ Module	CMA SP02
Cheetah Sensors (Box of 10)	CMS 10
Cheetah Sensors (Box of 25)	CMS 25
Cheetah sensors (Box of 50)	CMS 50
Cheetah sensors (Box of 100)	CMS 100
Cheetah sensors (Box of 200)	CMS 200

TO ORDER

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Well proven technology

GOAL DIRECTED THERAPY

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