



## Laerdal-SonoSim Ultrasound Solution

### **Cardiac Resuscitation Bundle**

The Cardiac Resuscitation Bundle is a set of 10 Cardiac Resuscitation Scenarios, Scenarios for use with LLEAP, extensive Scenario support materials, and accompanying hands-on ultrasound scanning cases designed to assess and train healthcare providers and senior medical students in the care of critically ill patients.

The Cardiac Resuscitation Bundle is designed specifically for the Laerdal-SonoSim Ultrasound Solution, which integrates simulated diagnostic ultrasound capacity from SonoSim into the Laerdal patient simulator platform. The Laerdal-SonoSim Ultrasound Solution delivers realistic and challenging scenario-based simulations designed to promote proficient critical thinking and clinical decision-making skills. For participants, it provides the opportunity to apply cardiac resuscitation knowledge and practice common procedures used in treating critically ill patients in a challenging but risk-free environment.

# The Laerdal-SonoSim Ultrasound Solution

## Cardiac Resuscitation Bundle

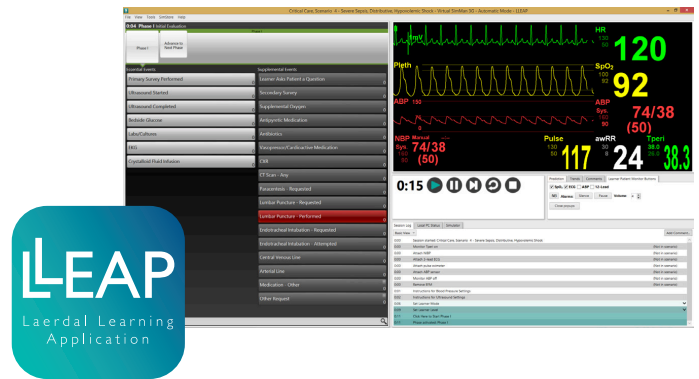
### Description

The Cardiac Resuscitation Scenarios are designed to assess a learner's ability to care for critically ill patients. Learners will need to perform primary and secondary trauma surveys, in addition to a Focused Cardiac UltraSound (FoCUS) examination. For each Cardiac Resuscitation Scenario, learners will obtain and interpret 3 cardiac, 1 proximal IVC, and 2 pulmonary imaging windows from real-patient cases. Consequently, learners are provided with exposure to a multitude of normal and pathologic ultrasound images.

Learners will need to develop an appropriate differential diagnosis, initiate timely resuscitative interventions, prioritize diagnostic interventions, order appropriate basic laboratory tests, and correctly acquire, interpret, and apply FoCUS images towards medical decision-making. Participants must formulate a patient-care plan that effectively utilizes health-system resources and personnel, and ensures optimal patient outcomes.

### Cardiac Resuscitation Scenarios

- Scenario 1: Pulseless Electrical Activity, Hyperkalemia
- Scenario 2: Acute Ascending Aortic Dissection, Thoracic Aortic Aneurysm
- Scenario 3: Massive Pulmonary Embolism
- Scenario 4: Severe Sepsis with Pulmonary Source of Infection
- Scenario 5: Anaphylaxis
- Scenario 6: Cardiac Syncope, Hypertrophic Cardiomyopathy
- Scenario 7: Cardiac Tamponade
- Scenario 8: Hypertension, Dehydration, Electrolyte Imbalance
- Scenario 9: Tension Pneumothorax
- Scenario 10: Acute Coronary Syndrome



### Ultrasound Findings

Significant cardiac ultrasound findings in the Cardiac Resuscitation Bundle include pericardial effusions, a swinging heart, pacemakers and pacer wires, asymmetric left ventricular hypertrophy, a dilated left ventricle, thin interventricular septal walls, a positive leftward septal deviation (D-sign), a dilated and hypokinetic right ventricle; a dilated right atrium, and both decreased and hyperdynamic heart contractility. Learners are also able to visualize on ultrasound pleural effusions, B-line artifact in both lungs, a pleural defect in the right lung, IVC findings supportive of low intravascular volume, and a markedly dilated aortic root. Learners also have the opportunity to visualize a lack of lung sliding accompanied by a "barcode sign" on M-mode Doppler ultrasound.



### Ordering Information

**390-10052** Cardiac Resuscitation Bundle  
Includes: 10 Cardiac Resuscitation Cases, 10 Cardiac Resuscitation Scenarios

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