ULTRASOUND LIFE SUPPORT

“USCME Level 1” Certification Skill Set
Entry Course For ‘USLS BL1-P’
[Ultrasound Life Support – Basic Level 1 Provider]

22nd – 23rd May 2015, Gurgaon
Venue: 2nd Floor Auditorium,
Medanta - The Medicity, Gurgaon
Ultrasound Life Support
Basic level 1 provider (USLS BL1P)

22nd – 23rd May, 2015

2nd Floor Auditorium, Medanta - The Medicity, Gurgaon

Improving Primary, Emergency, and Critical Care Medicine, by incorporating 'point-of-care' Ultrasound into Clinical Practice

TARGET AUDIENCE

This continuing education activity is intended to meet the needs of intensivists, anesthesiologists and emergency physicians and all other providers who care for patients in any setting where critical care is provided.

LEARNING OBJECTIVES

✓ To gain a basic understanding of “point of care” ultrasound
✓ To practice acquisition of high-quality images via hands-on exercise
✓ To acquire knowledge for image interpretation and utilization of ultrasound as a diagnostic, therapeutic and monitoring bedside tool
WINFOCUS (World Interactive Network Focused On Critical UltraSound)

The world leader scientific organization committed to develop point-of-care ultrasound practice, research, education, technology, and networking, addressing the needs of patients, institutions, services, and communities in “critical” scenarios.

“CRITICAL ULTRASOUND”

The concept of 'critical ultrasound' evolved recently from 'emergency ultrasound' performed at the 'point-of-care' in scenarios such as emergency departments, ICUs, pre-hospital care, austere environments, disaster scenes, tactical operations, and humanitarian care missions. Clinical scenarios turn into 'critical' ones when there is a dangerous performance gap between the patient status and the resources available for an appropriate decision making and problem solving.

In such settings ultrasound point-of-care image acquisition and interpretation, integrated with advanced life support protocols (ACLS, ATLS) according 'ABCDE' and 'Head-to-toes'—type approaches, allows for rapid and effective decision making, enhanced triage, diagnosis, therapy, monitoring, and follow up. Nowadays, that's approach is also known as ‘Ultrasound Life Support’.

This typically occurs in the acutely ill patient (Emergency US) or intensive (Intensive/Critical Care US), and/or where human or technical resources are particularly limited (Screening US, TriageUS, Remote US, Primary US).

WINFOCUS DELHI ITO DIRECTOR

Dr. Deepak Govil

COURSE DIRECTOR

Dr. Shrikanth Srinivasan

COURSE CO-DIRECTOR

Dr. Sachin Gupta

FACULTY

Dr. Sweta Patel
Dr. Jagadeesh K.N
Dr. Manuj Sodhi
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter</th>
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<tr>
<td>08:00</td>
<td>Registration, Pre-Course Test</td>
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<tr>
<td>08:30</td>
<td>Point-of-care Ultrasound: empowering primary, Emergency &amp; critical care worldwide. Dr Deepak Govil</td>
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<td>08:50</td>
<td>Ultrasound techniques: image generation, acquisition, interpretation &amp; administration. Dr Jagadeesh KN</td>
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<td>08:15</td>
<td>Review, Q/A</td>
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<td>08:30</td>
<td>Assessment: Abdominal &amp; thoracic aortic aneurysm, dissection and rupture. Dr Sweta J. Patel</td>
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<td>09:00</td>
<td>Assessment: Optic nerve &amp; pupil abnormalities, midline shift, cervical fracture, diaphragm impairment. Notes on focused TCD. Dr Jagadeesh KN</td>
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<td>09:20</td>
<td>Procedures: Peripheral &amp; central venous catheterization. Dr Shrikanth Srinivasan</td>
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<td>10:00</td>
<td>Management: Neurological Protocols &amp; Interactive Cases [US-NEU]</td>
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<td>10:20</td>
<td>Assessment: Abdominal &amp; thoracic aortic aneurysm, dissection and rupture. Dr Sweta J. Patel</td>
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<td>10:40</td>
<td>Coffee Break</td>
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<td>11:00</td>
<td>Case-Based Interactive Session</td>
<td>Dr Deepak Govil</td>
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<td>Ultrasound Practice: Circulation, Disability.</td>
<td>ALL Faculty</td>
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<td>13:00</td>
<td>Lunch Break</td>
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<td>14:00</td>
<td>Ultrasound Life Support Protocols: US Trauma Life Support [US TLS]</td>
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<td>14:00</td>
<td>Ultrasound Life Support Protocols: US Advanced Cardiac Life Support [US ACLS]</td>
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<td>Ultrasound Practice: Circulation, Disability.</td>
<td>ALL Faculty</td>
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The "LEVEL 1" ULTRASOUND-ENHANCED CRITICAL MANAGEMENT CYCLE

1. "ABCDE" PRIMARY ASSESSMENT (FAST-ABCDE: Vital signs, anomalies, detectable causes, responses, complications)

   AIRWAY: Airway patency & obstructive causes
     - Ventilation
     - Tracheal lesions
     - Tracheal displacement
     - Compressive haematoma
     - Prandial status

   BREATHING: Respiratory performance & dyspnea/hypoxemia causes
     - Ventilation
     - Emphysema
     - Pneumothorax
     - Pleural fluid
     - Atelectasis
     - Dysph. lesions
     - Multiple fractures

   CIRCULATION: Haemodynamics & shock/hypotension causes
     - Heart performance (rythm, contractility, volume, ratio)
     - Pericardial fluid
     - Tamponade
     - Acute dilation
     - Pulmonary lesions
     - Pulm. embolism

   ECHOCARDIO
     - Cavo-venous
     - Venous return
     - Deep venous thrombosis
     - Prox limbs, subcutaneous, iliac veins

   VASCULAR US
     - Peritoneal fluid/blood (free, FAST protocol)
     - Fluid/haematomas
     - Parenchyma, subcapsular, peritoneal, retroperitoneal
     - Arterio, arterial
     - Perforating pulse

   ABDOMINAL US
     - Large haematomas
     - (chest and abdominal wall, limbs, pelvis, perineum)

   SOFT TISSUE US
     - Large haematomas
     - (chest and abdominal wall, limbs, pelvis, perineum)
     - Pneumoperitoneum
     - Frank pneumothorax
     - Niflurectomy
     - Peritoneal dialysis

   CRANIAL US
     - optic nerve entrapment
     - Pupillary reflexes
     - Midline shift
     - Neonatal/Infant assessment

   DISABILITY: Neurologic status & coma/focal signs causes
   - Preventing missed life-threatening lesions

   EXPOSURE: Exclude missed findings
     - Preventing missed life-threatening lesions

   Miscellanea
     - Preventing missed life-threatening lesions

2. "ABCDE" RESUSCITATION (FAST-ABCDE: electric, respiratory, fluid/drug, interventional, operative treatment)

   Airway device management:
     - Naso-/orotracheal intub., crico-/thyroid intub., tracheo-tomy
     - Tracheo-stomy

   Needle thoraco-centesis
   Chest tube insertion

   Pericardiocentesis
   Thoracotomy

   Diagnostic paracentesis
   DPL/Mini-laparotomy

   Other emergency surgical procedures
   (pre/intra/post-operative US-enhancement)

   Central & peripheral vascular puncture
   Venous cutdown, intravenous puncture (confirmation)

   Nasogastric tube insertion
   Urinary catheterization
   Cistocentesis
   Pre/intra/post-operative application

   Respiratory management (oxygenation, ventilation, perfusion, ...)

   Fluid therapy management (input, output, ...)

   Drug therapy management (inotropes, thrombolytics, diuretics, antidots, ...)

   Defibrillation (recovery, PEA vs pseudo-PEA)

3. "HEAD-to-TOE" SECONDARY ASSESSMENT

4. TRANSPORT/ INTENSIVE / DEFINITIVE CARE

   Pre/intra/post-operative applications

   Loco-regional anaesthesia

   Foreign body detection/extraction

   Drainages... OTHERS

   "ABCDE" US applications

   "LEVEL 2 & 3" US applications

5. CONTINUING FOLLOW UP

   SERIAL Examinations & MONITORING

Assess anatomy, vital functions, lesions, failures, and causes - Address electric, respiratory, fluid/drug, interventional, and operative resuscitation - Provide pre/intra/post-interventional/operative guidance - Evaluate and monitor treatment efficacy - Detect and treat complications - Re-assess