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European Society of Intensive Care Medicine

GENIUS MONOTHEMATIC SESSION: Fluid Management

December 2nd 2025 – 09:00 – 13:00 (CET)
Format: Online

Moderators: O. Hunsicker/P. Tuinman

09:00	Welcome	O. Hunsicker/P. Tuinman
09:10	Chasing hypovolemia with CCUS	F. Weisrock
09:30	How to identify cardiac causes of congestion?	F. Sanfilippo
10:00	How to assess pulmonary congestion?	M. Smit
10:30	VExUS: Vision or Illusion?	A. Wong
11:00	*Break*	
11:10	Predicting fluid responsiveness with CCUS	B. Cholley
11:40	The deceptive vein: myths and facts about the IVC	*to be confirmed*
12:00	Dare to drain: CCUS guided fluid removal	K. Opschoor
12:30	Clinical case	L. Galarza
13:00	Bringing all together & end session	O. Hunsicker/P. Tuinman

Intended learning outcomes of course:

Title	Learning objectives
Chasing hypovolemia with CCUS ***(20min)***	• Participants should be able to identify key CCE findings such as reduced LVEDA (<10 cm^2, systolic cavity obliteration ("kissing walls"), and a small end-expiratory IVC (<10 mm). • Participants should be able to distinguish overt hypovolemia from conditions such as vasoplegia by interpreting LVEDA and related parameters. • Participants should be able to use advanced CCE techniques to detect LV outflow tract obstruction.
How to identify cardiac causes of congestion? ***(30 min)***	• Participants should be able to recognize echocardiographic signs suggestive of conditions associated with pulmonary or systemic congestion, including RV dilation, severe valvular disease, and elevated LV filling pressures. • Key indicators of elevated LVFP in basic CCE (e.g., severely reduced LVEF, left atrial enlargement, interatrial septal bowing,…)
How to assess pulmonary congestion? ***(30 min)***	• Understand and apply lung-ultrasound signs to discriminate between cardiogenic pulmonary edema and non-cardiogenic interstitial lung syndromes in ICU patients • Evaluate and choose lung-ultrasound scoring systems for quantification of pulmonary edema, including their correlation with reference standards • Use lung ultrasound for monitoring dynamics of pulmonary congestion and guiding clinical decision making
VExUS: Vision or Illusion? ***(30 min)***	• Understand the physiological basis and methodological components of the VExUS score • Understand the indications, benefits, and limitations of VExUS in assessing venous congestion across different clinical scenarios (cardiac surgery, septic shock, general ICU population, others) • Reflect the current evidence regarding VExUS
Predicting fluid responsiveness with CCUS ***(30 min)***	• Participants should be able to explain why evaluating fluid responsiveness is essential after ruling out overt hypovolemia and identifying potential contraindications to fluid administration • Participants should be able to use changes in LVOT-VTI during passive leg raise (PLR) and other dynamic maneuvers as indicators of the expected efficacy of a fluid bolus • Participants should be able to describe and evaluate alternative approaches such as end-inspiratory/expiratory occlusion tests and superior vena cava variation to assess fluid responsiveness
The deceptive vein: myths and facts about the IVC ***(20 min)***	• Participants should understand the anatomical and physiological basis of IVC assessment with point-of-care ultrasound • Participants should understand the role and limitations of IVC assessment in evaluating fluid responsiveness and fluid tolerance
Dare to drain: CCUS guided fluid removal ***(30 min)***	• Identify non–fluid responsive patients using CCUS (echo + venous + lung) to determine safe timing for fluid removal. • Detect signs of pulmonary and systemic congestion (B-lines, EVLW, venous congestion patterns, cardiac filling pressures) with CCUS. • Guide deresuscitation strategies (diuretics/ultrafiltration) using CCUS monitoring to achieve negative fluid balance while avoiding harm.