

# EndoVascular resuscitation, bleeding and Trauma Management (EVTM)

## Hands-on workshop



**Örebro, 29-30 November 2018**

*Endovascular and hybrid solutions* for the bleeding patient; Aorta balloon occlusion (**REBOA**) usage, vascular access, Embolization, Endografts and modern techniques in resuscitation

**Local organizing committee (preliminary):**

Thomas Larzon MD, PhD, Asko Toivola MD, Artai Pirouzram MD, Rickard Lindgren MD, PhD, Per Skoog MD, PhD, Kristofer Nilsson MD PhD and Tal Hörer MD, PhD.

Dept. Cardiothoracic and Vascular Surgery, Dept. of General Surgery, Dept. of Anesthesia and intensive care

Örebro University Hospital, Sweden.

**Guest faculty** and cooperation with the Japanese society of diagnostic and interventional radiology in emergency, critical care and trauma (DIRECT). **TBA**

**Target:** Surgeons with trauma/bleeding interest, Intensivists with interest in trauma/bleeding, Emergency trauma teams/doctors, ER and military trauma teams (doctors and nurses).

**Date:** 29-30 November 2018 at Örebro University Hospital Training center and animal lab

**Registration:** asa.strandberg@regionorebrolan.se

**Workshop Director:** Dr. Tal Hörer MD, PhD Associate Professor of Surgery

**Partners:** TBA

**Objectives:**

**The main aim of this WS is to get a discussion and practice platform of endovascular resuscitation, bleeding and Trauma management (EVTM) using a multidisciplinary approach.** Main issue is the vascular access, obtained by different methods (blind, Doppler, ultrasound, fluoroscopy and surgical access), usage in bleeding patients for temporary and permanent bleeding control. The usage of Aorta Balloon Occlusion (ABO/REBOA), as well as basic/advanced endografts and embolization methods will be practiced. Bailout and alternative methods will be discussed and practiced. Basic postoperative considerations as intra-abdominal pressure monitoring will be practiced. Participant's cases as well as ABOTrauma Registry cases will be discussed. The WS includes basic material knowledge, dry models as well as intensive training on live tissue. The WS give the basics for building a "REBOA or EVTm service" by the participants needs. The workshop is built for experienced physicians and adjusted to individual level during the practical moments. Participants will get all basic training and knowledge for REBOA placement as part of the EVTm concept.

**Day 1 (1<sup>st</sup> February): Clinical Training Center (KTC), USÖ**

Endovascular trauma and resuscitation algorithm, theory on access and methods, physiology of REBOA/pREBOA/iREBOA and literature. Use of access, aortic/arterial balloon occlusion endografts, embolization and other tools for the bleeding patient. Dry model training and

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Mentice<sup>®</sup> simulator training. Group discussion of participant's cases and ABO Trauma registry cases. Building a REBOA/EVTM service. TBA

11:45 Gathering in the training centrum second floor

12:00-12:30 *Lunch at the training center*, Welcome and general Information (Tal H)

10 minutes' presentations and short discussions (coffee served during sessions)

**Changes might occur! TBA**

12:30- 12:40 Welcome and **EVTM, the concept** (Tal H)

13:00-16:30 Short lectures and discussions including cases

16:30-19:00 **Practical training in stations:**

**Practical scenario on a training model** TBA

Aorta 3D models. Ultrasound access station. C-arm usage, Angiography table, Endo-simulator and REBOA station. Practice and discussion with faculty in groups. **Material** for endo-trauma and hybrid management. The "EVTMABO/REBOA trolley". **Over the wire methods** (Seldinger) on dry model; Blind and ultrasound guided. Introducers and upgrading, **REBOA, iREBOA, pREBOA, and dREBOA.**

*Around 19:00 Departure to dinner – TBA*

**Day 2 (2 February): Animal lab training & research center, USÖ**

**The workshop will end by 13:00**

Meet at the KTC second floor at **07:00**.

07:15-08:30 **Cadaver "EVTM anatomical review- what can we do?"** including REBOA practical practice (**Preliminary-if available case, to be announced the day before**).

08:40-09:00 Breakfast with the industry (training center)

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**09:00-13:00 Animal lab:** Hands-on animal lab including vascular and endovascular access. REBOA principles and practice. As time allows- Basic angiography training and embolization. Basic ultrasound guided access. Hybrid procedures. CPR procedures. Lunch and coffee will be served in the lab. Every station with highly experienced faculty and one-on-one training as well as group scenario discussions on live tissue.

**Practical training points in the animal lab:**

- 1) **Material usage** in bleeding patients, general considerations. The trauma-bay kit.
- 2) **Vascular Access** basic principles. Dissection techniques for access, Endoshunts (and shunts), hybrid procedures and other techniques. **Puncture; Seldinger technique, ultrasound, blind, fluoroscopy, cut-down.**
- 3) **Upgrading/introducers/guide wires.** The failing access/alternatives including retroperitoneal, conduit, axillar etc. Access on venous side.
- 4) **REBOA:** Material and REBOA kit, practical deployment and using the ABO. Deflation and re-position issues; Intermittent/Partial inflation with MAP as target - **pREBOA**). Ongoing bleeding practice!

**-As times allows:** Case discussions #2 and the following:

- 5) **Balloons in other locations** (Iliac, Subclavian, and Brachiocephalic trunk/zone I neck), Sizing and techniques.
- 6) Aortography and Angiography considerations (type, volume etc.) **Embolization** in target vessels: Material, access, coils, Onyx/Phil. Endografts deployment (basic/advanced issues) practice. **Pelvic bleeding.** Bleeding management **scenarios on live tissue will be in cooperated.**

The practical training is built on individual profession and capacity.

**14:00-15:00 End of workshop and evaluation**

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More info on [www.jevtm.com](http://www.jevtm.com) under workshop