

## Workshop descriptions\*

### FACE-TO-FACE

\*Subject to change, until the application decision phase.

Title	Description
<p><b>EVAR basic Enhance EVAR</b></p> <p>Copenhagen, Denmark</p> <p>BASIC</p>	<p><b>Lead:</b> Jonas Eiberg, Kim Bredahl, Rebecca Skov</p> <p>This educational programme focuses on elective endovascular treatment of infrarenal aortic aneurysms (EVAR) and is designed for novices and advanced beginners. The format is mixed e-learning and hands-on training.</p> <p>ENHANCE is a certifying simulation-based educational programme aiming to prepare vascular surgical trainees to perform EVAR on patients with infrarenal abdominal aortic aneurysms. ENHANCE consists of mandatory pre-course e-learning and 3 intensive days of hands-on training in Copenhagen. We use high-fidelity simulators and the latest evidence within course design, assessment and certification. Participants will perform case sizing and planning on 3D-sizing stations and complete several EVAR procedures as surgeons and assistants on virtual reality endovascular simulators. Everything is supervised by highly experienced EVAR surgeons guiding the participants through each step of the EVAR procedure. Trainee to trainer ratio is 2:1, ensuring intensive learning and feedback.</p> <p>Completing and passing a comprehensive ENHANCE e-learning programme is mandatory before hands-on training in Copenhagen. Participants will receive a link for the modular eL programme 3-4 weeks before the hands-on sessions in Copenhagen.</p> <p><b>Learning objectives:</b> ENHANCE EVAR is aiming to prepare vascular surgical trainees to perform supervised EVAR and acquire all the necessary steps of the procedure and be ready to continue training in the OR on patients under supervision.</p> <p><b>Participant level:</b> The target group is vascular surgical trainees with limited experience in EVAR. Experience with essential peripheral endovascular techniques (wires, catheters, stents etc.) is recommended, as well as basic knowledge of abdominal aortic anatomy.</p>
<p><b>Open repair of abdominal aortic aneurysm Enhance OPEN</b></p> <p>Copenhagen, Denmark</p> <p>BASIC</p>	<p><b>Lead:</b> Jonas Eiberg, Kim Bredahl</p> <p>ENHANCE OPEN is a 3-day simulation-based training programme. Each course participant will perform 6-8 cases as a surgeon, and 6-8 as an assistant under the supervision of highly experienced open aortic surgeons. Participants will receive supervision, feedback and hear about tips &amp; tricks. Feedback will be summative in test-cases and formative in supervision-cases. The trainee-tutor rate will be 2:1. During the course, participants will train on state-of-the-art life-like pulsatile aortic simulation models and aortic inlays (Vascular International) and use original vascular instruments, grafts and sutures in a simulated OR environment.</p> <p>In order to get full benefit from the course, we recommend that the course participant is prioritized for supervising AAA operations afterwards.</p> <p><b>Learning objectives:</b> ENHANCE OPEN is an ambitious simulation-based educational programme aiming to prepare vascular surgical trainees to perform supervised elective open repair of infrarenal abdominal aortic aneurysms. If you pass the programme, you will master all the necessary steps of the procedure and be ready to continue training in the OR on patients under supervision.</p> <p><b>Participant level:</b> The target group is vascular surgical trainees with limited experience in open AAA repair. Experience with essential peripheral open surgical techniques (instruments, anastomotic techniques etc.) is required, as well as basic knowledge of</p>

	abdominal aortic anatomy. Participants will be trained in teams of two based on prior experience.
<b>Basic aortic vascular and endovascular techniques (Cadaveric workshop)</b>  Verona, Italy  BASIC	<b>Lead:</b> Luca Gariboli This specific vascular course aims at improving knowledge of anatomical access to the thoracic and abdominal aorta and its branches including practice on fresh cadavers. The participants under the supervision of expert vascular and endovascular surgeons will be led to perform the most common vascular and endovascular aortic access, reconstruction and techniques. Moreover, they will use the most part of endovascular devices thanks to the presence of the last generation C-Arm and translucency tables. <b>Learning objectives:</b> This course is providing hands on practice for vascular surgical trainees in aortic access (abdominal, thoracic, thoracoabdominal), basic aortic reconstructions and performing steps of aortic endovascular procedures (based on their level of expertise).  <b>Participant level:</b> The target group is vascular surgical trainees, advanced beginners and those aiming for advanced level. Experience with essential vascular and endovascular techniques is recommended, as well as basic knowledge of abdominal aortic anatomy. Techniques learned will also depending on the level of expertise of participants (groups with different levels in the same workshop are possible).
<b>Planning &amp; Sizing</b>  Zagreb, Croatia BASIC to MODERATE	<b>Lead:</b> Zoran Rančić, Predrag Pavić This lunch to lunch workshops would aim to provide basic and moderate knowledge related to planning and seizing aortic intervention. From MDCT interpretation to measuring adequate aortic features and planning the procedure, choosing material, intraoperative imaging techniques and procedural steps. <b>Learning objectives:</b> basic steps in measuring, seizing and planning endovascular procedures for treatment of different aortic pathologies (aneurysm, dissection, thoracic, abdominal). <b>Participants level:</b> advanced beginner and beyond
<b>TEVAR for thoracic aortic aneurysm, trauma and dissection</b>  Stockholm, Sweden  BASIC to MODERATE	<b>Lead:</b> Carl Wahlgren This is a hands-on 1.5-day workshop to gain knowledge on management of basic TEVAR for aneurysm, dissection and trauma including patient selection, sizing, and procedural steps of stent graft implantation. Case presentations covering state of the art management of aortic diseases as well practical training on access, procedural steps of TEVAR implantation with different devices, and troubleshooting/bail out will be part of the workshop. <b>Learning objectives:</b> Performing TEVAR for aneurysm, trauma and dissection from planning (more discussed in other dedicated workshops) to implantation. Managing all steps of implantation and bailout techniques. <b>Participants level:</b> The course is designed for vascular surgeons and vascular surgeons in training. No TEVAR experience is required but some prior EVAR experience is expected.
<b>Imaging in Aortic Diseases</b>  Lisbon, Portugal  BASIC to MODERATE	<b>Lead:</b> Frederico Bastos Goncalves The topic of the workshop is related to the use of imaging techniques in diagnosis and treatment of aortic diseases. In addition to the basic information and lectures, the hands-on part would be related to the ultrasound-guided puncture, planning and seizing, MDCT interpretation, use of image fusion techniques in the hybrid OR, IVUS etc. Techniques will be learning through a case based discussion and treatment of patient with complicated aortic dissection. <b>Learning objectives:</b> To introduce participants and provide practical knowledge of using imaging methods MDCT, IVUS and image fusion in hybrid OR.

	<p><b>Participants level:</b> Advanced beginners and advanced physicians with already experience in basic endovascular aortic procedures.</p>
<p><b>Basic principles and challenges in EVAR</b>  <b>Challenges - Hostile neck and distal landing zone</b></p> <p>Athens, Greece</p> <p>MODERATE</p>	<p><b>Lead:</b> Athanasios Giannoukas</p> <p>This 2-day workshop deals with challenges in EVAR. Programme starts shortly with basic techniques and information like planning and seizing and getting information about the different stent grafts and other materials. More detailed information and practical hands on is provided for neck challenges and performing chimney EVAR as a standardized procedure, from seizing to deployments and follow up. During the second day in the same manner distal landing zone is discussed, starting from more complex planning and seizing, inclusion criteria and finally performing internal iliac revascularization during EVAR. The participants will have hands-on practice on sizing and planning of many cases with 3-Mensio platform and hands-on practise on simulators of various devices as well as with VR simulators.</p> <p><b>Learning objectives:</b> To learn technical features of different stent grafts used for more complex anatomies, short neck and iliac aneurysms. To acquire procedural steps of endovascular solutions to treat such complex anatomies and manage intraoperative complications.</p> <p><b>Participants level:</b> Advanced beginners and advanced physicians with already experience in basic endovascular abdominal aortic procedures</p>
<p><b>RAAA repair MARB- Management of Aortic Rupture</b></p> <p>Barcelona, Spain</p> <p>MODERATE</p>	<p><b>Lead:</b> Elena Ibbora, Xavier Marti Mestre</p> <p>This workshop deals with treatment of ruptured AAA. Knowledge is provided by having classes in the dissection room at the University of Barcelona School of Medicine where one can try alternative aortic live saving approaches or in realistic simulation at hybrid operating room where skills for this demanding scenario can be practiced. In collaboration with experienced multidisciplinary professionals knowledge from various perspectives will be provided: Haemodynamic RAAA Approach: Explore patient management strategies with input from anesthesiologists, Radiological Interpretation: Master the art of interpreting CT scans accurately, Vascular RAAA Management: Learn aortic clamping techniques through hands-on simulation, Abdominal Compartment Syndrome: Understand identification and treatment with insights from a general surgeon, Non-Technical Abilities: Develop crucial non-technical skills for emergencies and team performance. Insights into creating and implementing a programme to enhance RAAA management will be provided.</p> <p><b>Learning objectives:</b> To develop a thorough understanding of RAAA management techniques and empower with the skills required to handle RAAA cases effectively.</p> <p><b>Participants level:</b> Advanced beginners and advanced physicians with already experience in basic vascular and endovascular abdominal aortic procedures</p>
<p><b>Graft infection</b></p> <p>Groningen, The Netherlands</p> <p>MODERATE TO ADVANCED</p>	<p><b>Lead:</b> Ben Saleem, Xavier Berard</p> <p>In this 2-days workshop focus will be on the treatment of vascular and endovascular graft infection. Besides didactic lectures and case-based presentation with interactive discussion participants would be able to learn in the hands-on sessions (explanting stent graft, aortobifemoral bypass, endovascular techniques and assessing imaging results suspected on graft infection etc.).</p> <p><b>Learning objectives:</b> To learn to apply methods of aortic graft infection management techniques.</p> <p><b>Participants level:</b> Advanced physicians with already experience in basic vascular and endovascular thoracic and abdominal aortic procedures</p>
<p><b>Complex procedures (open and hybrid) on thoracic, abdominal and</b></p>	<p><b>Lead:</b> Igor Koncar</p> <p>This is a practical 2.5-day workshop to gain knowledge and practical skills on management of complex aortic pathology using complex open and hybrid vascular techniques. Total endovascular repair is not feasible for all-comers with complex aortic pathology or with</p>

<p><b>thoraco-abdominal aorta</b></p> <p>Belgrade, Serbia</p> <p>ADVANCED</p>	<p>severe comorbid conditions – from conditions involving aortic arch to juxtarenal or extensive aortoiliac pathology or renal anomaly vascularization. Through case based discussion, informative lectures, video presentations and hands on models and cadavers practicing this workshop will provide moderate to advanced experience to its participants. Aortic debranching procedures (proximal, visceral), renal revascularization, juxtarenal and thoracoabdominal aneurysm repair will be covered in this particular workshop.</p> <p><b>Learning objectives:</b> To provide detailed information about complex aortic reconstructions and debranching procedures.</p> <p><b>Participants level:</b> Advanced physicians with already experience in basic vascular and endovascular thoracic and abdominal aortic procedures.</p>
<p><b>Thoracoabdominal open</b></p> <p>Paris, France</p> <p>ADVANCED</p>	<p>TBD – Lauren Chiche</p>
<p><b>Aortic arch</b></p> <p>TBD</p> <p>ADVANCED</p>	<p><b>Lead:</b> Michele Piazza</p> <p>Workshop about Endovascular repair of the aortic arch pathologies will focus on diagnostic and preoperative imaging analysis with case planning and seizing in the first part. Material presentations and device characteristics with basic hands-on techniques on the first day. Second day will include case-based discussion and hands on, step-by-step, implantation of different stent grafts.</p> <p><b>Learning objectives:</b> To provide detailed information and hands on practice of the endovascular repair of the aortic arch lesions.</p> <p><b>Participants level:</b> Advanced physicians with already experience in basic endovascular thoracic and abdominal aortic procedures.</p>

<b>Thoraco-abdominal Endovascular (FEVAR and BEVAR) x4</b>  A: Amsterdam, Netherlands  B: Athens, Greece  C: Genoa, Italy  D: Munich, Germany	<p><b>Leads: Vincent Jongkind (Amsterdam), Theodosios Bisdas (Athens), Nikolaos Tsilimparis (Munich), Giovanni Pratesi (Genoa)</b></p> <p>This group of complimentary workshops offer complimentary education in the field of complex endovascular procedures on thoracoabdominal aorta. Workshops will follow similar format of two days. General information and basic techniques will be discussed on the first day with focus on anatomy, imaging, planning and device characteristics. On the second day focus will be on the implantation, bridging stents, intraoperative imaging and complications. Devices and techniques used will be slightly different and focus on different stent graft models. Amsterdam and Athens will have their workshop in 2025, while Genoa and Munich in 2026.</p> <p><b>Learning objectives:</b> To provide detailed information and hands on practice of the endovascular repair of the thoracoabdominal aneurysms.</p> <p><b>Participants level:</b> Advanced physicians with already experience in basic endovascular thoracic and abdominal aortic procedures</p>
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## Online

Title	Description
<b>Basic techniques, materials</b>  BASIC	This is an introductory workshop exploring basic techniques and materials used in aortic surgery, open and endovascular. Information about most frequently used materials and their evolution to address clinical needs. Also, basic techniques will be described through a case-based discussion. Selection of wires, catheters, stents and stent grafts for basic aortic endovascular procedures.
<b>Planning and Sizing</b>  BASIC	This 90-minute online workshop provides rationale for accurate measurement and planning aortic procedure. Going through step by step of measurement of aortic features to seizing the graft and planning the details of the procedure. Using a dedicated software and going through a case-based discussion make this workshop very practical and hands-on.
<b>Radiation protection</b>  BASIC	This online session about radiation protection and radiation exposure reduction will introduce participants into the main topics of radiation exposure and measures to protect and reduce exposure of both patients and health care workers. After basic introduction case-based discussion and overview of different technologies will be used to analyze and discuss radiation protection and reduction strategies.
<b>Imaging - Interpretation of imaging in aortic disease</b>  BASIC to MODERATE	Modern vascular surgeons need to be capable to interpret vascular images proficiently. There are numerous vascular imaging techniques used nowadays in different occasions: ultrasound, multidetector computed tomography, magnetic resonant angiography, intravascular ultrasound, digital subtraction angiography etc.
<b>IVUS</b>  BASIC to MODERATE	TBD
<b>Advanced techniques, materials (endovascular)</b>	In this online workshop experts are discussing with participants their selection of materials and techniques used for complex endovascular aortic procedures in hostile infrarenal neck, IBD, FEVAR, BEVAR and aortic arch endovascular procedures.

ADVANCED	
<b>Advanced techniques, materials (open)</b>	<p>In this online workshop experts are discussing with participants their selection of materials and techniques used for complex open aortic procedures in hostile infrarenal neck, thoracoabdominal aortic aneurysm, graft infection.</p>
<b>Planning and Sizing</b>	<p>In this online workshop advanced planning and seizing techniques are presented by KOL through a planning and seizing of a complex cases not suitable for standard EVAR nor TEVAR procedure. Most important features are measured/seized and analysed while discussing the possibilities of different complex solutions. Finally procedure planning are performed and discussed step by step.</p>