OLV Clinic Aalst

Dear professor El-Tahan,

Dear members of the board of EACTAIC,

As the programme director, I am writing to apply for the re-accreditation of the EACTAIC fellowship programme of our host center the *OLV-Clinic Aalst*, Belgium. Next to this letter, I've enclosed the re-application file, a checklist for hosting the fellowship, and the annual programme of the fellowship.

Hosting a the EACTAIC fellowship programme is challenging. I strongly believe that the clinical experience of our faculty and the innovative role of our heart center, strengthen this ambitious programme. The OLV Heart center conducts considerable scientific research and has been recognized for its work by the Belgian government. Several of the hospital staff are key opinion leaders, running courses and both chairing and speaking at many international conferences. Our center is also involved in the Transatlantic Educational Network or TEN where experts from the USA and Europe share knowledge and science through virtual meetings, which is highly appreciated by the fellow(s).
The credo of the hospital has always been "*act fast; adopt the newest technology*". Building on its expertise in this area, the department of cardiac surgery performs a considerable number of its cardiac surgery by using thoracoscopic and / or robotic techniques.

Our center would therefore ask for the reaccreditation to continue the one-year cardiac anesthesia (basic) fellowship programme. The programme provides a solid clinical and theoretical experience to fellows to become experts in the perioperative management of patients undergoing a variety of cardiac procedures.

I and the other members of our faculty would like to thank EACTAIC for taking this re-accreditation in consideration.

Sincerely,

EACTAIC Fellowship Programme director
Member Certification and Accreditation Committee EACVI
Stefaan Bouchez,MD, FASE

Chair of the department of Anaesthesiology,
Intensive Care and Emergency Medicine.
Koen De Decker,MD

OLV Ziekenhuis vzw
KBO 0410.424.222
RPR Dendermonde

Campus Aalst
Moorselbaan 164
9300 Aalst
T. 053 72 41 11
F. 053 72 45 86

Campus Asse
Bloklaan 5
1730 Asse
T. 02 300 61 11
F. 02 300 63 00

Campus Ninove
Biezenstraat 2
9400 Ninove
T. 054 31 21 11
F. 054 31 21 21

Directiesecretariaat
Medisch Directeur
Dr. W. Jorissen
T. 053 72 88 45
F. 053 72 46 47

Our reference
PV/mvi/240213

Date
13.02.2024

ATTESTATION

I, undersigned Peter Verhulst, Chief Executive Officer of the OLV Hospital, formally confirm that Stefaan Bouchez MD, Programme Director of the AECTAIC Fellowship and Exchange Training Programme in our institution, will have a dedicated minimum of 10% of weekly working time for training the trainees in the Fellowship and Exchange Training Programs.

Peter Verhulst
Algemeen directeur
OLV Ziekenhuis VZW
Moorselbaan 164
9300 Aalst

Peter Verhulst
Chief Executive Officer

OLV Ziekenhuis vzw

Department of Anesthesia
Secr.: +32(0)53 72 44 61
Intensive Care
Secr.: +32(0)53 72 45 46
Pain Clinic
Secr.: +32(0)53 72 49 16
Emergency Medicine
Secr.: +32(0)53 72 49 96

Associatieleden
Dr. K. De Decker, chairman
Dr. M. Baeyens
Dr. Ch. Bert
Dr. V. Vanbiervliet
Dr. S. Bouchez
Dr. S. Buys
Dr. G. Cammu
Dr. R. Carette
Dr. G. Croonenborghs
Dr. T. Eykens
Dr. L. Foubert
Dr. J. Hendrickx
Dr. K. Hutsebaut
Dr. K. De Jongh
Dr. K. De Keersmaecker
Dr. J. Kennes
Dr. M. Van Laer
Dr. R. Lauwers
Dr. P. Lecomte
Dr. G. Leenders
Dr. K. De Leeuw
Dr. W. Lust
Dr. N. De Mey
Dr. K. Morias
Dr. N. De Neve
Dr. K. Suy
Dr. L. Torisaen
Dr. J. De Witte
Dr. K. De Wolf

Aalst, 14 februari 2024

ATTESTATION

I, undersigned, Koen De Decker, chairman of the department of Anesthesia, Intensive Care and Emergency Medicine, formally confirm that Stefaan Bouchez, MD as Programme Director of the EACTAIC Fellowship and Exchange Training Programme in our institution, will have a dedicated minimum of 10 % weekly working time for training the trainees in the Fellowship and Exchange Training Programs.

Sincerely,

Dr Koen De Decker
Chair of the department of Anesthesia and Intensive Care

Campus Aalst
Moorselbaan 164
9300 Aalst
T. 053 72 41 11
F. 053 72 45 86

Campus Asse
Bloklaan 5
1730 Asse
T. 02 300 61 11
F. 02 300 63 00

Campus Ninove
Biezenstraat 2
9400 Ninove
T. 054 31 21 11
F. 054 31 21 21

European Association of Cardiothoracic Anaesthesiology

Application for Hosting EACTA Cardiothoracic and Vascular Anaesthesia Fellowship Programme

1. Fellowship Information: Basic Fellowship in Cardiothoracic and Vascular Anaesthesia — Year (2)

2. Institution Name: OLV Clinic Aalst

Address: *Street, nr:* Moorselbaan, 164 *Postal code:* 9000 *City:* Aalst

Website:

Country: Belgium | City:

3. Chair Name: First name: Geert | Last name: Vandenbroucke | Email: koen.de.decker@olvz-aalst.be | Phone: 00 32 53 72 44 61

4. Programme Director: First name: Stefaan | Last name: Bouchez

Board Certification(s): Anesthesiology, National Board Echocardiography (FASE Fellow of the American Society of Echocardiography)

Title/Affiliation: Dr

Number of original publications: 60

EACTA membership	Yes	If yes, membership's number	100028
ESA membership	No	If yes, membership's number	
Societies membership	No	If yes, membership's number	

Email: stefaan.bouchez@olvz-aalst.be | Phone: 3253728461

Mailing Address: department of Anesthesiology, OLV Clinic Aalst | Fax:

Street: Moorselbaan, 164.

Country: Belgium | Region: | Aalst

Zip code: 9300

Will the Programme director devote sufficient time to provide substantial leadership to the programme and supervision for the fellows?

Yes

Will the Programme director review the fellows' clinical experience logs at least quarterly and verify completeness and accuracy?

Yes

Does the national/international regulatory authority(s) recognizes the institutional CTVA Fellowship Programme?

No — If yes, please explain:

Completion of the programme will be acknowledged by the Department of Anaesthesia and Intensive Care at the host centre in junction with European Association of Cardiothoracic Anaesthesia (EACTA) Candidate's requirements

Yes

5. Candidate's requirements

The candidates must be board certified or board eligible according to European residency programme standards

Yes

Language requirements: B2 — Comments: Dutch or English at a level of B2

Specific requirements towards the attending fellow:

Candidates must be board-certified in anesthesiology in their home country and have to apply for a national registration that allows them to work as a medical practitioner in Belgium. This registration and any working visa requirements (if needed) must be obtained by the attendee at own expense before the candidate will be permitted to provide patient care.
Furthermore, the fellow has to speak Dutch OR has to acquire the required level of English (B2 level).
A valid BLS certificate is obligatory for all medical practitioners working at the OLV Clinic Aalst, but this can be obtained on-site at the beginning of the fellowship.
We expect passionate candidates with a solid interest in cardiothoracic anesthesia who are motivated to study in parallel with their clinical tasks.
A bundle of highly relevant articles will be provided by our department prior to the start of the fellowship.

6. General Programme Information

Aims, goals and objectives of the Fellowship Programme

Participants will acquire the basic skills and competencies in anesthesia for cardiac, thoracic and vascular surgery as well as interventional cardiology procedures. The programme will cover different areas of anesthetic care for cardiothoracic and vascular surgery, including preoperative assessment and perioperative management.
Additionally, our center has a heart transplantation programme and is known for its minimally invasive cardiac procedures.
During the fellowship, the fellow will act most frequently in the role of primary anesthesia provider under close supervision of the programme directors and faculty members.
The programme includes training in transoesophageal echocardiography which should be concluded by passing the Theoretical EACVI/EACTA TEE certification exam. During the fellowship, the candidate is expected to become involved in the group's research activities and to publish at least one research article or literature review in the field of cardiothoracic anesthesiology and/or a poster presentation at the EACTA Annual Meeting.
We expect active participation in local case conferences and journal clubs.
After completion the participant will be able to independently provide safe and evidence-based anesthesia for cardiothoracic and vascular surgical cases.

Preferred Duration: * Of note, the training period should not be interrupted by frequent and/or prolonged periods of secondment to other divisions / departments.

Preferred Programme Training: Start: October | 1 | End: September | 30

Number of Positions Per Year: 1 | Type of fellowship training available: Clinical / Clinical Research

If clinical, will the fellows be allowed to work with the patients under supervision: Yes

Comments: The candidate will work under close supervision during the first months of the fellowship: direct supervision 1:1 will be continued for a minimum of 3 months Depending on the progression in his/her clinical abilities and communication skills, the fellow can gain permission to work under indirect supervision with the opportunity to guide local trainees during their cardiothoracic anesthesia rotation. The fellow will be asked to be available to participate in interesting cases during nights and at weekends. Involvement in our center's on-call system is optional and will be discussed at the beginning of the fellowship. At all times the fellow will be supervised directly or indirectly by experienced anesthesiologists.

Offered Advamced Training: No

7. Faculty

CTV Anaesthesia Faculty - Research Interest and/or Clinical Expertise. * **Please, list at least three names.**

Name	EACTA member	Certification in Cardiothoracic and Vascular Anaesthesia	Additional Qualifications	Email address	Contact address
Stefaan Bouchez	Yes	No	Echocardiography	Stefaan.Bouchez@olvz-aalst.be	Department of Anesthesiology, OLV Clinic Aalst
Luc Foubert	Yes	No		Luc.Foubert@olvz-aalst.be	Department of Anesthesiology, OLV Clinic Aalst
Guy Cammu	Yes	No		Guy.Cammu@olvz-aalst.be	Department of Anesthesiology, OLV Clinic Aalst
Patrick Lecomte	Yes	No		Patrick.Lecomte@olvz-aalst.be	Department of Anesthesiology, OLV Clinic Aalst
Nathalie De Mey	Yes	No	Echocardiography, Intensive Care	Nathalie.de.mey@olvz-Aalst.be	Department of Anesthesiology, OLV Clinic Aalst
Sara Buys	Yes	No		Sara.Buys@olvz-aalst.be	Department of Anesthesiology, OLV Clinic Aalst
Koen De Decker	Yes	No	Intensive Care	Koen.de.decker@olvz-aalst.be	Department of Anesthesiology, OLV Clinic Aalst
Guy Van Camp	Yes	No	Cardiologist, Echocardiography	Guy.van.camp@olvz-aalst.be	Department of Cardiology, OLV Clinic Aalst
Frank Van Praet	Yes	No	Cardiac Surgery	Frank.van.praet@olvz-aalst.be	Department of Cardiovascular Surgery, OLV Clinic Aalst
	Yes / No				
	Yes / No				
	Yes / No				
	Yes / No				
	Yes / No				
	Yes / No				

Publications lists of the faculty's members in PubMed

About 275 publications

8. Resources

Check if each of the following is available at the host centre.

Resources	Yes / No	Days in week	Number
Total cardiothoracic and vascular ward beds	Yes	7	50
Number of ICU beds dedicated to CTV patients	Yes	7	12
Is there an emergency department in which cardiothoracic patients are managed 24 hours a day?	Yes	7	8
An adequately designed and equipped post-anaesthesia care unit for cardiothoracic patients located near the operating room suite?	Yes	7	

Is there monitoring and advanced life support equipment representative of current levels of technology?	Yes	7	
Hybrid Operating Rooms	Yes	7	3
Cardiac Operating Rooms	Yes	7	2
Thoracic Operating Rooms	Yes	7	1
Vascular Operating Rooms	Yes	7	1
Catheterisation Labs	Yes	7	5
Electrophysiology Labs	Yes	7	4
Pulmonology Labs	Yes	7	
Interventional Vascular Suits	Yes	7	1
Separate CVICU Facility	Yes	7	
Animal Laboratory for research purposes	Yes	7	
Outpatient Clinic for perioperative evaluation of patients undergoing cardiothoracic and vascular procedures	Yes	7	
24-hours acute pain service available for patients undergoing cardiac, thoracic and vascular procedures	Yes	7	
Meeting Rooms	Yes	7	8
Classrooms with visual and other educational aids	Yes	7	6
Study areas for fellows	Yes	7	2
Office space for faculty members and fellows	Yes	7	1
Diagnostic facilities	Yes	7	
Therapeutic facilities	Yes	7	
24-hour laboratory services available in the hospital	Yes	7	
Cardiac stress testing	Yes	7	
Cardiopulmonary scanning procedures	Yes	7	
Pulmonary function testing	Yes	7	
Computers and IT support	Yes	7	
Appropriate on-call facilities for men and women	Yes	7	

9. Clinical Skills and Responsibilities

Will your Programme offer a 12-24 months of fellowship education in fundamental clinical skills of medicine relevant to the practice of CTVA?

If yes, for each rotation or experience below, specify the duration (in months, four weeks = one month) during the 12-24 months of education in fundamental clinical skills.

Caring for inpatients in	**Number of performed produces/year**
Cardiac Surgery using CPB	**500**
Cardiac Surgery without CPB	**75**
Minimally-Invasive Cardiac Procedures	**200**
Interventional Cardiac Catheterization (e.g. TAVI, Mitraclip, ASD)	**85**
Electrophysiology Lab (e.g. mapping, ablation, pacemakers, ICDs)	**1000**
Robotic Cardiac Surgery	**25**
Heart, Lung, and Heart/Lung Transplants	**7**
ECLS, ECMO, VAD Procedures	**10**
Echocardiography Lab	**1000**
Thoracoscopic Surgery	**250**
Pulmonary Resection	**90**
Oesophageal Surgery	
Tracheo-Bronchial Surgery	**6**
Interventional Pulmonology Procedures	
Major Vascular Procedures	**120**
Neurological monitoring during major vascular surgery	**120**
Interventional Vascular Procedures	**1400**
Acute and Chronic Pain Management for CTV patients	
Basic Research	
Clinical Research	
Rotaions in	**Number of performed produces/year**
Cardiac anaesthesia	**7 months (160 cases)**
Thoracic anaesthesia	**50 cases**
Anaesthesia for major supra-inguinal vascular procedures	**50 cases**
Trans-esophageal and trans-thoracic echocardiography	**300 cases**
Medical or surgical Critical Care Rotation	**1 month**
Inpatient or outpatient cardiology	
Inpatient or outpatient pulmonary medicine	
Extracorporeal perfusion technology (CPB, ECMO,Nova-Lung.)	**2 weeks**
Paediatric cardiothoracic anaesthesia	
Basic Research	
Clinical Research	**optional**

Will all fellows entering the CTVA Programme complete each of the fundamental clinical skills of requirements?

If no, explain	yes

In the clinical anaesthesia setting, including nights and weekends, will faculty members at any time direct perioperative CTVA care, involving fellows, for more than two anaesthetizing locations simultaneously?

If Yes, describe	No; the fellow will participate in duties at night, weekends and holidays but under the direct supervision of a faculty member. Anesthesia will therefore not be performed in more than two locations simultaneously without direct supervision.
Clinical Responsibility	We aim for a gradual extension of the fellow's clinical tasks and responsibilities (i.e. working under indirect supervision) depending on his/her individual clinical performances

List any other rotations (along with their duration, in months) offered in the Programme to augment fellows' learning.

The fellowship will consist of fixed rotations as determined by the EACTA Fellowship Curriculum. Additionally, there will be an opportunity to include non-cardiac echocardiography rounds (Lung Ultrasound, FAST etc).

Will advanced subspecialty rotations reflect increased responsibility and learning opportunities?	Yes	
Maximum Time in Non-Clinical Activities	Limited but to be discussed	

10. Financial Statement

An employment contract will be signed with the candidate		Yes		
Accommodation options are provided		No		
Transportation/travel options are provided		No		
Monthly Salary	Amount	6000.00	Currency	Euro (Gross income)
This opportunity is not funded by the centre		No	Source of financial support for the candidate:	Host centre (monthly salary)
			Others	

11. Educational and Academic Programme

Didactic Sessions

Will faculty members' attendance be monitored?	Yes
Will fellows' attendance be monitored?	Yes
Will attendance be mandatory for faculty members?	Yes
Will attendance be mandatory for fellows?	Yes
Who of the following will provide content at conferences? Check all that apply.	Yes
Anaesthesiology faculty members from this department	Yes
Anaesthesiology faculty members from other sites	Yes
Non-anaesthesiologists from the primary clinical site	No
Non-anaesthesiologists from the participating sites	No
Visiting faculty members	No
Drug/industry representatives	No
Fellows	Yes
Others (specify): Click here to enter text.	

What will be the frequency of the following educational topics in the programme's schedule?

	Weekly	Bi-weekly	Monthly	Quarterly	Semi-annually	Annually
Critical care appraisal of the literature (i.e., journal club)	No	No	No	Yes	No	No
Quality improvement (M&M, QA)	No	No	Yes	No	No	No
Board review (e.g., oral exams, keywords)	No	No	No	No	No	No
Grand rounds	Yes	No	No	No	No	No

Other (specify) Click here to enter text.

2 times in a month: presentation of a case (echocardiographic images) or lecture (theory) which will be discussed afterwards with the fellow and the cardiovascular anesthesia residents.

Formal Course Work Available in

The department of anesthesiology organises anesthesia simulation sessions several times a year.
OR scenario's are simulated and both anesthesia trainees and fellows as well as OR nurses join these sessions.
We aim for participants to become familiar with critical OR scenarios and to learn and apply the principles of Crisis Resource Management.

Extra-Institutional Educational Conference Support:

In the Previous 5 Years, Fellows were 1st or 2nd Author On:

Abstracts		Peer-Reviewed Journal Articles	
Book Chapters		Other Publications	
Dedicated Research Time			

In the Previous Year, Fellows present an oral or poster presentation in a national or international meeting: No

The Opportunioty for Exchange with other training facilities: No

Patient Care — CanMEDS competency framework

Competency Area / Skills	Settings/ Activities	Assessment Method(s)
1. Basic Training		
1. I. General patient assessment and risk estimation		
Assessment of patients based on physical examination and history with use of appropriate laboratory tests and examinations. Level C	Preoperative assessment of the next day patients.	Clinical skills evaluation by faculty members
Scores evaluation, e.g., physical status in accordance with American Society of Anesthesiologists (ASA). Level D	Participation in preoperative screening process; every day assessment of next day patients	Clinical skills evaluation by faculty members
Airway evaluation. Level C	Participation in preoperative screening process; every day assessment of next day patients	Clinical skills evaluation by faculty members
Interpretation and limitations of peri-operative monitoring, including invasive and non-invasive cardiac function tests, pulmonary function tests, blood gas analysis, common radiological imaging, coagulation tests, liver and renal function tests, endocrine function tests, and drug monitoring. Level C	Participation in preoperative screening process; every day assessment of next day patients; bedside teaching	Clinical skills evaluation by faculty members
Selection and planning of the individual anesthesia technique. Level C	On-site training and fellowship teaching; making a perioperative plan for next day patients according to surgical procedure and medical history	Clinical skills evaluation by faculty members
Postponement or cancellation of surgery decision making. Level C	Evaluating and performing a discussion of pros and cons.	Clinical skills evaluation by faculty members
Participation in multi-disciplinary (morbidity) conferences. Level C	Involving the fellow in multidisciplinary patient discussions.	Clinical skills evaluation by faculty members
Pre-operative fasting, pre-medication and adaptation of pre-operative drug therapy. Level C	Participation in preoperative screening process; following hospital guidelines.	Clinical skills evaluation by faculty members
1. II. Anesthesia management – cardiac surgery		
Workplace preparation following environmental safety measures and checklists. Level C	On-site training; following hospital checklist and guidelines.	Clinical skills evaluation by faculty members
Use of technical and medical equipment, inclusive advanced hemodynamic monitoring, neuromonitoring, coagulation monitoring and basic peri-operative TEE. Level C	The fellow will learn to perform ROTEM analysis, principles of cell salvage technology as well as the use of NIRS and processed EEG and the use of TEE	Clinical skills evaluation by faculty members
Provision of safe induction, maintenance, and emergence from anesthesia. Level C	On-site training, bedside teaching	Clinical skills evaluation by faculty members
Defibrillation, cardioversion. Level D	On-site training, bedside teaching	Clinical skills evaluation by faculty members
Transvenous pacemaker insertion and modes of action; use of a temporary pacemaker. Level C	On-site training and fellowship teaching; the fellow will learn to manage the PM during weaning from CPB and in the cathlab, as well as its transvenous insertion in selected cases	Clinical skills evaluation by faculty members
Central and peripheral venous (ultrasound-guided) access and peripheral arterial catheterization, pulmonary artery catheterization, arterial blood gas collection, and gastric tube insertion. Level D	On-site training, bedside teaching	Clinical skills evaluation by faculty members
Blood salvage and transfusion. Level D	On-site training and fellowship teaching; the fellow will be introduced to modern patient blood management.	Clinical skills evaluation by faculty members
Organ systems and hemostasis homeostasis maintenance throughout cardiac surgery procedures. Level C	On-site training and fellowship teaching; the fellow will be advised how to decide which therapy is better for each patient. Other options will be discussed on a case-by-case base at the bedside.	Clinical skills evaluation by faculty members
Interpretation of point-of-care coagulation monitoring such as rotational thromboelastometry (ROTEM) and thromboelastography (TEG). Level C	On-site training and fellowship teaching; the fellow will learn how to interpret ROTEM analyses as well as its limitations.	Clinical skills evaluation by faculty members
Management of patients on cardiopulmonary bypass. Level C	On-site training and fellowship teaching; the fellow will learn principles of CPB, how to manage complications and how to wean cardiac surgical patients from CPB.	Clinical skills evaluation by faculty members
Diagnosis and management of intraoperative critical incidents including. Level C - allergic reactions, anaphylaxis, - gas embolism, aspiration pneumonia and pneumothorax, - hypoxia, hypercarbia, hypoventilation, hyperventilation, high ventilator peak inspiratory pressures, - hypertension (systemic / pulmonary), hypotension, arrhythmias, myocardial ischemia, cardiac failure, cardiopulmonary resuscitation, - oliguria, anuria, - intra-operative blood gas and electrolyte disturbances, - intra-operative awareness, - adverse blood products transfusion reaction, - coagulopathy and excessive bleeding, - systemic inflammatory response syndrome (SIRS) / postoperative vasoplegic syndrome (PVS).	On-site training and fellowship teaching; debriefing and discussion in M&M rounds	Clinical skills evaluation by faculty members
Management of patient transport to and from the intensive care unit (ICU). Level C	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
Consideration of ethical and medico-legal aspects. Level C	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
1. III. Anesthesia management – thoracic surgery		
Bronchoscopic examination to verify the position of a lung-separation device and to confirm the correctness of the bronchus to be stapled and the patency of the other bronchi. Level C	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
Provision of safe induction, maintenance, and emergence from anesthesia in patients undergoing thoracic surgery of varying complexity, including airway management, the decision of which drug to use, one-lung ventilation technique, and management of intraoperative adverse events. Level C	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
Management of most common peri-operative critical incidents and complications including: Level C - bronchospasm, - hypoxemia, hypercapnia, - pneumothorax, - pulmonary hypertension.	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
One-lung ventilation with a double-lumen tube. Level C	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
One-lung ventilation with other techniques (e.g., Arndt blocker, EZ blocker). Level B	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
Postoperative pain management, including epidural and paravertebral analgesia. Level C	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
Additional techniques in pain management (e.g., epidural analgesia, truncal blocks, multimodal analgesic techniques). Level B	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
1. IV. Anesthesia management – major vascular surgery		
Pre-operative assessment, risk stratification and medical management of vascular patients. Level D	Participation in preoperative screening process; every day assessment of next day patients. An anesthesia plan will be conducted in consultation with faculty members.	Clinical skills evaluation by faculty members

Provision of safe induction, maintenance, and emergence from anesthesia in patients undergoing vascular surgery of varying complexity, including airway management, the decision of which drug to use, hemodynamic management, and management of intraoperative adverse events. Level C	On-site training and bedside teaching.	Clinical skills evaluation by faculty members
Management of the most common perioperative critical incidents and complications including Level C - acute kidney injury, - neurological insults, - paraplegia, - post-reperfusion syndrome	On-site training and bedside teaching. The fellow will learn how to place spinal catheters in selected cases and how to use spinal fluid drainage perioperatively.	Clinical skills evaluation by faculty members
Management of elective and emergency open abdominal aortic aneurysms (AAA) and AAA repair. Level D	On-site training and bedside teaching.	Clinical skills evaluation by faculty members
Management of carotid endarterectomy, angioplasty, or stenting. Level D	On-site training and bedside teaching. This includes the use and interpretation of neuromonitoring.	Clinical skills evaluation by faculty members
1.V. Post-operative care/ Critical care		
Physical examinations and patient assessment (e.g., respiratory and peristaltic sounds, temperature gradient capillary refill). Level D	Bedside teaching	Clinical skills evaluation by faculty members
Applying sedation, general anesthesia, multimodal analgesia. Level D	Bedside teaching and application of local hospital protocols.	Clinical skills evaluation by faculty members
Management of the airways, inclusive of emergency intubation. Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Central venous, peripheral venous, arterial catheters, and pleural drains insertion using aseptic techniques. Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Gastrointestinal tube insertion. Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Airway maneuvers inclusive of suction of endotracheal secretions, tracheotomy (percutaneous), bronchoalveolar lavage and sampling. Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Invasive ventilation including prone position ventilation and weaning strategies. Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Delivery of continuous positive pressure ventilation and non-invasive ventilation. Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Hemodynamic stabilization and management, inclusive of pacing, cardioversion, defibrillation, advanced and basic life support, vasoactive and inotropic therapy, advanced cardio-vascular monitoring. Level B	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Volemia management and fluids administration. Level D	On-site training and bedside teaching; clinical teaching rounds, the fellow will learn how to assess fluid status and fluid responsiveness	Clinical skills evaluation by faculty members
Management of blood product transfusion and coagulopathies correction. Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Renal replacement therapy and acute renal failure. Level B	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Identification of relevant pre-existing co-morbidities. Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Responding to trends in physiological variables. Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Patient transportation inter- and intra-hospital. Level B	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Arterial and central venous line cannulation (ultrasound-guided). Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Myocardial infarction, pulmonary embolism, tamponade, hypovolemia. Level D	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Assessment of intravascular volume status. Level C	On-site training and bedside teaching	Clinical skills evaluation by faculty members
Recognition of substantial pericardial or pleural effusion. Level B	On-site training and bedside teaching	Clinical skills evaluation by faculty members
1. VI. Basic peri-operative echocardiography		
Basic levels of peri-operative TEE and lung and vessel ultrasonography as performed in the operating room. Level C	On-site training and fellowship teaching; the fellow will learn basic and advanced principles of TEE.	Clinical skills evaluation by faculty members
Performance of the recommended number of peri-operative echocardiography exam according to EACVI / EACTA certification guidelines. Level D	On-site training and fellowship teaching; the fellow will be advised to perform at least 200 TEE examinations independently.	During the fellowship the candidate will be stimulated to attend the EACTA echo course with the goal to pass the EACTA/EACVI TEE certification exam.
1. VII. Anesthesia management – interventional procedures in cardiology		
Safe induction of, maintenance of, and emergence from anesthesia in patients undergoing interventional cardiac procedures, including the decision of which drug to use, ventilation techniques, management of airways and management of intraoperative adverse events. Level C	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
Sedation for invasive procedures in cardiology. Level D	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
Sedation and anesthesia outside the operating theatre, also considering the local organization and the specific patients and procedures. Level D	On-site training and fellowship teaching	Clinical skills evaluation by faculty members
1. VIII. Extracorporeal perfusion management		
Providing the theoretical background of extracorporeal circulation and associated subject areas, including: Level D - Anticoagulation monitoring and management. - Cardioprotective measures (cardioplegia, hypothermia). - Acid-base management (alpha-stat vs. pH-stat). - Management of complications, e.g., air entry, CPB failure.	On-site training and fellowship teaching; additional self-study	Clinical skills evaluation by faculty members
2. Advanced training		
In cooperation with the local Program Director, after the completion of the basic training, the fellow can design the advanced training to include any or a combination of the following options.		
2. I. Anesthesia management – cardiac surgery		
Clinical management of patients with pericardial diseases. Level D		
Management of cardiomyopathy patients and of those with congenital and acquired valvular heart disease, electrophysiological disturbances, congenital heart disease, heart failure, infectious and neoplastic cardiac diseases. Level D		
2. II. Anesthesia management – thoracic surgery (as described previously, as well as the followings:)		
Alternative ventilation techniques in thoracic surgery (e.g., jet ventilation). Level D		
Principles of postoperative chronic pain management. Level D		
2. III. Anesthesia management – major vascular surgery (as described previously, as well as the followings:)		
The use of rapid ventricular pacing (RVP) during deployment of the stent for TEVAR. Level B		
Pain management for patients undergoing vascular procedures. Level B		
Anesthesia for peripheral vascular procedures. Level C		
Care of patients undergoing limb amputation. Level D		
Pain management, with particular reference to critical limb ischemia. Level B		
2.IV. Post-operative management/ Critical care (as described previously, as well as the followings:)		
Interpretation of invasive and non-invasive cardiovascular monitoring. Level D		
Use of inotropes and vasodilators. Level D		
Management of intra-aortic balloon counter pulsation and other mechanical circulatory support devices. Level C		
Detection of problems occurring with extracorporeal circulation management. Level C		

Anesthesia for procedures in intensive care, including emergency resternotomy, re-intubation, tracheostomy or cardioversion. Level D		
Principles and management of chest drains. Level D		
2. V. Advanced perioperative echocardiography (as described previously, as well as the followings:)		
2. VI. Heart and/or lung transplantation		
Central venous pressure invasive arterial monitoring, pulmonary artery catheter insertion and interpretation. Level D		
TEE for monitoring of left and right ventricular function and diagnosis of primary graft dysfunction / failure. Level C		
Insertion and management of thoracic epidurals Level D		
2.VII. Organizational module		
Communicating effectively with patients and their families. Level D		
Communicating effectively with surgical colleagues. Level D		
Communicating with the intubated patient. Level D		
Recognizing the need for senior help. Level D		
Maintaining accurate clinical records. Level D		
Presentations at departmental meetings. Level D		
Participation in multi-disciplinary clinical audits. Level C		
Commitment to continued professional development. Level D		
2.VIII. Research module		
Ability to help design a clinical or basic science research project or part of it as a member of the investigative team. Level D		
Ability to help complete an ethics application. Level C		
Ability to discuss basic statistical approaches. Level C		
Ability to consent, recruit, and follow up research participants according to regulatory frameworks. Level C		
Ability to help analyze data. Level C		
Ability to contribute to disseminating study results in abstracts, presentations and publications. Level C		

Medical Knowledge

Indicate the activity(ies) (lectures, conferences, journal clubs, clinical teaching rounds, etc.) in which residents will demonstrate knowledge in each of the following areas. Also indicate the method(s) used to assess competence.

Area of Knowledge	Settings/ Activities	Assessment Method(s)
1. Basic Training		
1.I. General patient assessment and risk estimation (Level A)		
Physiology of the heart, the circulatory system and the respiratory system. Basic knowledge of embryological development of cardiac, thoracic and vascular structures.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Pre-operative invasive and non-invasive assessment of cardiac diseases and interpretation of results including electrocardiogram (ECG), chest X-ray, echo-cardiography, cardiac stress testing, coronary angiography, cardiac magnetic resonance imaging (cMRI), and computer tomography (CT).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Pre-operative pulmonary evaluation and interpretation of the results, including arterial blood gas and acid-base analysis, pulmonary function tests, oximetry and thoracic imaging.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Patient information and informed consent including medico-legal aspects, appraisal of discernment and consent capacity.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Principles of risk and outcome assessment and relevant scoring systems (e.g., EuroSCORE).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
1. II. Anesthesia management – cardiac surgery (Level A)		
Knowledge of anesthetic agents and their effects on cardiac function and in patients with cardiac diseases.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Principles of intraoperative pharmacology and relevant medication, including positive inotropes, chronotropes, vasoconstrictors, vasodilators, and anti-arrhythmic agents.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Principles of patient blood management, including specific diagnostic tools, application of relevant medication and blood products.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Principles of basic hemodynamic monitoring and relevant techniques, such as arterial pressure measurement, central venous pressure.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Principles of relevant neuromonitoring techniques (e.g., processed electro-encephalography (pEEG), near-infrared sonography (NIRS), somato-sensible evoked potentials (SSEP), motor evoked potentials (MEP).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Principles of conventional cardiopulmonary bypass techniques. Principles of myocardial preservation. Effects of cardiopulmonary bypass on human physiology, organ function, and pharmacology.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Basic principles of common procedures in cardiac surgery, such as coronary artery bypass grafting (CABG).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
1. III. Anesthesia management – thoracic surgery (Level A)		
Principles of pulmonary evaluation as described previously, and basic knowledge in the interpretation of results from pulmonary function tests, lung perfusion testing and CT.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Knowledge of the bronchial anatomy.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Knowledge about relevant anesthetic agents and their effects in patients with lung diseases.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Principles of intraoperative pharmacology and relevant medication, including bronchodilators and steroids.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Basic principles of common procedures in thoracic surgery (mediastinoscopy, video-assisted thoracoscopic surgery (VATS), open lung resection, pneumonectomy).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Basic principles of endoscopic pulmonary procedures, such as bronchial stenting and endoscopic lung volume reduction (ELVR).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
1. IV. Anesthesia management – major vascular surgery (Level A)		
Knowledge of peri-operative management for vascular patients undergoing vascular interventions, including anesthetic choices, perioperative monitoring, and risk identification.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Basic principles of the peri-operative management of lumbar drainage for aortic interventional procedures.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Basic principles of spinal cord protection during surgical and interventional aortic procedures.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Basic principles of neuromonitoring.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
1. V. Post-operative care/ Critical care (Level A)		
Scoring systems in the ICU (e.g. the Sequential Organ Failure Assessment (SOFA), the Simplified Acute Physiology Score (SAPS), the Confusion Assessment Method (CAM)-ICU).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Etiology, pathophysiology, diagnosis and treatment plans / bundles according to international standards for specific critical conditions in cardiothoracic and vascular surgery patients.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Circulatory failure (heart failure, shock, cardiorespiratory arrest, cardiac arrhythmias, ischemic heart disease, pulmonary embolism, bleeding complications, vasoplegia).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members

Anaphylaxis.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Respiratory failure, including adult respiratory distress syndrome (ARDS), pulmonary edema, pneumothorax, pneumonia.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Acute kidney injury and failure.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Gastrointestinal failure, peritonitis, pancreatitis, liver failure, non-occlusive mesenteric ischemia (NOMI).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Neurological failure (delirium and coma, cerebral ischemia and bleeding).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Airway and chest injuries.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Aortic injuries.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Infectious diseases (systemic inflammatory response syndrome (SIRS) and sepsis, including sepsis bundle strategy).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Coagulation disorders (disseminated intravascular coagulopathy (DIC), heparin resistance, heparin-induced thrombocytopenia, severe bleeding, transfusion reaction).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Equipment and apparatus (equipment design, physics, standards, limitations; e.g. non-invasive and invasive postoperative ventilation, continuous renal replacement therapy devices, non-invasive and invasive hemodynamic monitoring).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Indication, contraindication, drug selection, complications: sedation, anesthesia, analgesia, neuromuscular relaxation, nutrition.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Multimodal and pre-emptive analgesia concepts.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Weaning and extubation criteria.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Transfer and discharge criteria.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
Indications for and application of extracorporeal circulation in intensive care patients for cardiac and / or respiratory support (e.g., ECMO).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members.
1. VI. Basic peri-operative echocardiography (Level A)		
Principles of basic theory of peri-operative cardiac echocardiography according to the European Association of Cardiovascular Imaging (EACVI) / EACTA process of certification for TEE.	Self-study, bedside teaching, we aim for the fellow to perform at least 120 intra-operative TEE exams independently	Clinical skills evaluation by faculty members and participation in EACTA/EACVI TEE exam
1. VII. Anesthesia management – interventional procedures in cardiology (Level A)		
Basic principles of common procedures in interventional cardiology, such as coronary angiography, ablation, transcatheter aortic valve replacement (TAVR), and mitral / tricuspid clipping with relevant complications.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Procedural sedation guidelines from the European Board of Anaesthesiology (EBA)/ European Society of Anaesthesiology (ESA).	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
Monitoring and capnography use according to the safety recommendations from EBA.	Self-study, bedside teaching	Clinical skills evaluation and oral bedside discussion with faculty members
1. VIII. Extracorporeal perfusion management (Level A)		
Basic principles of extracorporeal perfusion.	Self-study, bedside teaching, clinical teaching rounds	Clinical skills evaluation by faculty members
Types of extracorporeal circuits, e.g., cardiopulmonary bypass (CPB), extracorporeal membrane oxygenation (ECMO).	Self-study, bedside teaching, clinical teaching rounds	Clinical skills evaluation by faculty members
Types, composition and mechanisms of cardioplegic solutions.	Self-study, bedside teaching, clinical teaching rounds	Clinical skills evaluation by faculty members
Cardioprotective measures.	Self-study, bedside teaching, clinical teaching rounds	Clinical skills evaluation by faculty members
Safety recommendations for extracorporeal circulation from the European Board of Cardiovascular Perfusion (EBCP).	Self-study, bedside teaching, clinical teaching rounds	Clinical skills evaluation by faculty members
2. Advanced training		
2. I. Anesthesia management – cardiac surgery (Level A)		
Principles of advanced hemodynamic monitoring and relevant techniques, such as use of the pulmonary artery catheter, continuous cardiac output monitoring and measurement.		
Principles of modified cardiopulmonary bypass (minimized CPB, left-heart CPB) and the off-pump revascularization technique.		
Principles of advanced procedures in cardiac surgery and clinical management of affected patients (valve surgery and thoracic aortic surgery, including ascending, transverse, and descending aortic surgery with circulatory arrest).		
Principles and state of the art of mechanical support including intra-aortic balloon pumps, and extracorporeal membrane oxygenation.		
Current state of temporary and long-term mechanical circulatory support (ventricular assist devices, total artificial hearts).		
Principles of use of inhaled pulmonary vasodilators (nitric oxide (NO), prostaglandins).		
Principles of fast-track surgery.		
2.II. Anesthesia management – thoracic surgery (Level A)		
Principles of common procedures in thoracic surgery (open and thoracoscopic lung resections, robotic lung resection, lung volume reduction surgery, mediastinoscopy, pneumonectomy).		
Principles of diagnostic and interventional bronchoscopic surgery (lung volume reduction, bronchopulmonary lavage; endoscopic, rigid fiber optic and laser resection; bronchial stenting and sealing).		
Principles of peri-operative management of esophageal surgery for varices, neoplastic, colon interposition, foreign body, stricture, and tracheoesophageal fistula.		
2. III. Anesthesia management – major vascular surgery (Level A)		
Knowledge of perioperative management of TEVAR and EVAR.		
Knowledge of the principles of perioperative management of lumbar drainage for aortic interventional procedures.		
Excellent knowledge of the principles of spinal cord protection during surgical and interventional aortic procedures.		
Excellent knowledge of the principles of cerebral function monitoring.		
2. IV. Post-operative management/ Critical care (Level A)		
Knowledge of cardiac and thoracic physiology.		
Postoperative cardiac critical care, including analgesia, sedation and ventilation.		
Postoperative care and analgesia after thoracic surgery.		

An understanding of the management of cardiac pacing modes.		
An understanding of extracorporeal membrane oxygenation and other devices used for mechanical circulatory support.		
2. VII. Advanced perioperative echocardiography (Level A)		
Advanced level of knowledge in peri-operative cardiac echocardiography according to the EACVI/ EACTA process of certification guidelines.		
2. VIII. Heart and/or lung transplantation (Level A)		
Understanding of the physiology and clinical presentations of end-stage heart and lung disease and surgical options for their management.		
Understanding of the principles of heart transplantation and clinical management of affected patients.		
Knowledge of current limitations of organ transplantation and efforts to increase the suitable donor pool.		
Understanding of the multidisciplinary nature of patient evaluation and listing for transplantation.		
Knowledge of the principles of donor optimization, management and allograft retrieval.		
Knowledge of the principles of ex-vivo heart and lung perfusion.		
Understanding of the physiology of the denervated organ.		
Understanding of the surgical conduct of heart transplantation and knowledge of intra-operative and immediate postoperative care, including stability of induction, ventilation, oxygenation, hemodynamic support, and allograft and noncardiac organ protection.		
Understanding of primary graft dysfunction and indications for mechanical circulatory support.		
Understanding of the surgical options for lung transplantation, including minimally invasive lung transplantation and various intraoperative extracorporeal support mechanisms.		
Knowledge of intra-operative and immediate postoperative care, including protective ventilation, oxygen delivery, hemodynamic support, indications for inhaled NO and other pulmonary vasodilators, allograft and non-pulmonary organ protection.		
Knowledge of the principles of primary lung dysfunction and conservative and extracorporeal treatment options, including indications for and techniques of ECMO.		
Understanding of immunosuppressive regimens and the role of postoperative infections and sepsis.		
2. IX. Research module (Level A)		
Principles of clinical trials, including design, end points, inclusion / exclusion criteria, reporting requirements.		
Understanding of Good Clinical Practice (GCP) requirements for clinical research involving patients.		
Understanding of European and specific national ethics frameworks, including research ethics applications, clinical regulatory frameworks and hospital site-specific assessment.		
Principles of sample size and study power determinations and basic statistical evaluation		
Principles of patient and data confidentiality agreements.		
Understanding tools for data collection, analysis and reporting.		
Principal international basic science priorities in the field of cardiac anesthesia.		
Ethics and practicalities of biological sample collection, storage and biobanking		
Principles and ethics of scientific publishing.		

12. Assessment

The Programme Director will evaluate each fellow every 3 months: Yes

Assessment tools

360-degree evaluations	Yes	Clinical skills evaluations	Yes
Personal reports from the faculty	Yes	Self-assessment by Fellow	Yes
Learning goals for the next three months	Yes	Feedback from Fellows	Yes
A logbook will be available	Yes	Reports of Evaluation will be available	Yes

The Programme Director will give an appraisal for each fellow every 3 months	Yes
The faculty and trainee should agree a joint evaluation both fellow's progress and the training programme, and devise a plan for addressing any perceived difficulties or deficiencies.	Yes
Training programmes should encourage fellows to provide a written confidential evaluation of the programme.	Yes
External evaluation / assessment will be held as per EACTA regulations	Yes
The centre will be able to maintain a register of those fellows who have entered and successfully completed a training programme in order to continue its accreditation as a training centre	Yes
There will be regular opportunities for Fellows to provide confidential written evaluations of the faculty and program to the EACTA Education Chair	Yes
Periodic evaluation of patient care (quality assurance) is mandatory. Subspecialty trainees in cardiac, thoracic, and vascular anesthesia will be involved in continuing quality improvement and risk management.	Yes
Trainees in cardiac, thoracic and vascular anesthesia will actively participate in the periodic evaluation and reassessment of the Fellowship training goals and objectives	Yes
Should unforeseen circumstances arise such as personal conflict between a Fellows and tutors, this should be reported immediately to the Chair of the Education Committee.	Yes
At the end of the training period, the centre would acknowledge in writing successful completion of a fellow training.	Yes

13. Practice-based Learning and Improvement

1. Briefly describe one planned learning activity in which fellows engage to: identify strengths, deficiencies, and limits in their knowledge and expertise (self-reflection and self-assessment); set learning and improvement goals; and identify and perform appropriate learning activities to achieve self-identified goals (life-long learning).

We aim for a weekly evaluation round in which we discuss and comment on last weeks cases. Important clinical findings will be highlighted and relevant diagnostics, hemodynamics, echocardiographic findings and treatment options will be discussed in team. All these elements will be reviewed and clinical implications will be adressed in order to strive for a continuous quality improvement. This process involves time for self-assessment and self-reflection for both the fellow as well as the faculty members and create an opportunity to set future learning and improvement goals.

2. Briefly describe one planned quality improvement activity or project that will allow the fellows to demonstrate an ability to analyse, improve and change practice or patient care. Describe planning, implementation, evaluation and provisions of faculty support and supervision that will guide this process.

The fellow will be invited to actively participate in weekly evaluation rounds and monthly M & M meetings in which we discuss cases and critical incidents that happened in the OR. He will also be stimulated to join the evaluation of our fast-track cardiac surgery program in which our local database will be analyzed and different outcome parameters compared with the ones from previous years and with the overall results of fast-track programs in other centers. This analysis can result in daily practice changes in our center.

3. Briefly describe how fellows will receive and incorporate formative evaluation feedback into daily practice

We aim for a daily bedside case-discussion with a member of the faculty. As needed, the faculty will provide personal feedback at the end of the day. A global feedback will take place every 3 months in which the clinical and communicating skills, medical knowledge and the functioning of the fellow in the OR team will be discussed. This evaluation interview will be done by the program directors.

4. Briefly describe one example of a learning activity in which fellows engage to develop the skills needed to use information technology to locate, appraise, and assimilate evidence from scientific studies and apply it to their patients' health problems. The description should include:

The fellow will be asked to actively participate in educational sessions given and organized by the anesthesia department. These sessions include M & M meetings and clinical teaching rounds in which we discuss cases, critical incidents that happened in the OR and hot topics in the field of cardiothoracic anesthesia. He/she will be assigned to review evidence on relevant topics for these meetings with close help from the faculty.

5. Briefly describe how fellows will participate in the education of patients, families, students, fellows, and other health professionals.

Depending on his/her communication skills, the fellow will be involved in the preoperative evaluation of next day cardiovascular and thoracic patients. As the fellowship progresses, he/she will get the opportunity to work under indirect supervision where he/she can accompany local trainees in their cardiac, vascular and thoracic anesthesia rotation.

14. Interpersonal and Communication Skills

1. Briefly describe one learning activity in which fellows demonstrate competence in communicating effectively with patients and families across a broad range of socioeconomic and cultural backgrounds, and with physicians, other health professionals, and health-related agencies.

Depending on his/her communicating skills, the fellow will participate in the preoperative patient preparation of next day cases and will be involved in the information process toward patients and families. He/she will stepwise become responsible for the whole process in accompanying patients through the perioperative period. At all times, the fellow will be supervised directly or indirectly by the faculty members.

2. Briefly describe one learning activity in which fellows demonstrate their skills and habits to work effectively as members or leaders of a health care team or other professional group. In the example, identify the members of the team, responsibilities of the team members, and how team members communicate to accomplish responsibilities.

With increasing skills and experience, the fellow can get the opportunity to work under indirect supervision where he will lead a team of OR nurses and anesthesia trainees. He will also actively interact with members of the cardiovascular and thoracic surgical team throughout the perioperative period. Furthermore, the fellow will be asked to identify next-day fast-track candidates where he takes into account patient selection criteria, PACU capacity and the availability of medical expertise during the night.

3. Briefly describe how fellows will be provided with opportunities to act in a consultative role to other physicians and health professionals related to clinical information systems.

During the management of every day cases the fellow will have to interact with other consultants to adress patient-specific issues.

4. Briefly describe how fellows will be provided with opportunities to maintain comprehensive, timely, and legible medical records, if applicable

As his clinical skills progress, the fellow will be asked to perform the written TEE-report of every day cases. At any time, he/she will get full access to patients perioperative medical records.

5. Briefly describe how fellows will maintain a comprehensive anaesthesia record for each patient, including evidence of pre- and post-operative anaesthesia assessment, an ongoing reflection of the drugs administered, the monitoring employed, the techniques used, the physiologic variations observed, the therapy provided as required, and the fluids administered.

he fellow will be asked to follow the routine in-hospital procedure for the quality and comprehensiveness of anesthesia records. In our institution, we use KWS, which is an electronic patient data system that records every aspect of patient care from preoperative medical records to intraoperative and postoperative vital parameters and registrations.

6. Briefly describe how fellows will create and sustain a therapeutic relationship with patients, engage in active listening, provide information using appropriate language, ask clear questions, provide an opportunity for comments and questions, and demonstrate sensitivity and responsiveness to cultural differences, including awareness of their own and their patients' cultural perspectives.

Depending on his/her communication skills, the fellow will actively participate in preoperative patient evaluation of next day cases. He will visit next day patients on the ward and will be involved in the information process towards patients and families. In addition we routinely care for patients with different cultural background and sometimes different nationalities.

15. Professionalism

Briefly describe the learning activity(ies), other than lecture, by which fellows demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles, including: compassion, integrity, and respect for others; responsiveness to patient needs that supersedes self-interest; respect for patient privacy and autonomy; accountability to patients, society, and the profession; and sensitivity and responsiveness to a diverse patient population, including to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation

The candidate will stepwise become responsible for the whole process in accompanying a patient through the perioperative process. During this process she or he will be continuously indirectly or directly supervised by an experienced member of the staff or his mentor.The fellow has to demonstrate his commitment to professional responsabilities and ethical principles in the conversation with the patient and in daily practice in the OR.

15. Systems-based Practice

1. Describe the learning activity(ies) through which fellows achieve competence in the elements of systems-based practice: working effectively in various health care delivery settings and systems, coordinating patient care within the health care system; incorporating considerations of cost-containment and risk-benefit analysis in patient care; advocating for quality patient care and optimal patient care systems; and working in inter-professional teams to enhance patient safety and care quality

The fellow will progressively gain responsibility for the whole process in accompanying patients through the perioperative phase. His/her professionalism will be reflected as his/her involvement in this whole perioperative care process. At any time, the fellow will work under direct or indirect supervision from the faculty members.

2. Describe an activity that fulfils the requirement for experiential learning in identifying system errors and implementing potential systems solutions.

The fellow will be asked to actively participate in M & M meetings held by the department in which critical incidents will be discussed. As such, system errors and potential solutions can be discovered.

16. EACTA Site Visit (for 1-day)

Dates proposed for the visit (at least 3) 04/06/2021 or 11/06/2021 or 25/06/2021

I hereby accept the regulations of the Hospital Visiting especially to take in charge the travel costs and the hotel accommodation of the 2 reviewers on the most reasonable base

Yes

Other comments: Other dates for the visit can be proposed by EACTAIC.

To be completed by the Head of department or the authorised deputy.

Please fill in all required fields and send to eacta@aimgroup.eu

European Association of Cardiothoracic Anaesthesiology

Checklist for Hosting EACTA Thoracic Anaesthesia Fellowship Programme

Institution Name	**OLV Clinic Aalst**
Address	Moorselbaan, 164 9300 Aalst (Belgium)
Preferred Duration	☒ **12 months** ☐ **24 months**

Type of fellowship training available:

☐ Clinical only
☐ Clinical / Basic Research
☒ Clinical / Clinical Research
☐ Basic Research only
☐ Clinical Research only

Financial Statement

**** The financial sources policy should be declared by the host centre.**

**** There should be a clear consensus between the host centre and the trainee about the financial statement prior to the joining the programme.**

An employment contract will be signed with the candidate ☒ Yes ☐ No

Accommodation options are provided ☐ Yes ☒ No

Transportation/travel options are provided ☐ Yes ☒ No

Monthly Salary: **Amount** 6000 (gross salary) **Currency** Euro

This opportunity is not funded by the centre ☐ Yes ☒ No

Source of financial support for the candidate:

☒ Host centre (monthly salary)
☐ Candidate 's centre
☐ Scholarship
☐ Educational grant
☐ Award
☐ Candidate's own expenses
☐ Others

Please, describe: Click here to enter text.

Programme Training and facilities of the host centre

1.	The fellow should be authorized to provide direct patient care during his/her training programme under supervision of the programme director and faculty's members "i.e. hands-on practice"	☒ Yes ☐ No
2.	Declaration of financial recourses and signed agreement between the host centre and trainee.	☒ Yes ☐ No
3.	Uninterrupted training for 12-24 months.	☒ Yes ☐ No
4.	The programme should be approved by the head of department or other advisory authority.	☒ Yes ☐ No
5.	The programme director should attain sufficient time to do his responsibilities. If yes, please define 1 hours per day 2 days per week 8 days per month	☒ Yes ☐ No
6.	At least two faculty members should be involved.	☒ Yes ☐ No
7.	Evaluation should be done every 6 months.	☒ Yes ☐ No
8.	A portfolio / logbook will be performed monthly and signed by the programme director	☒ Yes ☐ No
9.	The hosting centres should have:	☒ Yes ☐ No

9. 1	Available ICU for both general and thoracic procedures.	☒ Yes	☐ No
9. 2	Available ER for 24 hr. a day (7/24).	☒ Yes	☐ No
9. 3	Operating rooms (ORs) are adequately equipped for thoracic procedures (fiberoptic bronchoscopy, different lung isolation tools (double lumen endobronchial tubes, bronchial blockers, etc.), high frequency ventilation, advanced haemodynamic monitoring, trans-oesophageal echocardiography (TOE), blood saving devices).	☒ Yes	☐ No
9. 4	Designed and equipped post-anaesthesia care unit (PACU) / or high-dependency unit (HDU) for thoracic procedures.	☒ Yes	☐ No
9. 5	Volume of cases. *		
9. 5. 1	Minimum 200 thoracic cases using either thoracoscopy or open thoracotomy approaches /1 yr. (20% of them should be open thoracotomy)	☒ Yes	☐ No
9. 5. 2	Accessibility for training on high frequency ventilation, extracorporeal membrane oxygenation (ECMO), and Nova-Lung.	☒ Yes	☐ No
9. 5. 3	Accessibility for training on interventional pulmonology procedures (diagnostic bronchoscopy, biopsy, stenting, mass excision, sealing, cryo-coagulation, Laser, etc.).	☐ Yes	☒ No
9. 5. 4	Accessibility for training on the different techniques for lung isolation.	☒ Yes	☐ No
9. 5. 5	Accessibility for training on the different techniques for management of one lung ventilation.	☒ Yes	☐ No
9. 5. 6	Accessibility for training on the different techniques for acute post-thoracic surgery pain management including paravertebral, epidural, truncal nerve blockades, and ultrasound guided blocks.	☒ Yes	☐ No
9. 5. 7	Accessibility for training on the management of chronic post-thoracic surgery pain.	☒ Yes	☐ No
9. 5. 8	Two weeks training in each of the followings;		
9. 5. 8. 1	Inpatient or outpatient pulmonology medicine.	☐ Yes	☒ No
9. 5. 8. 2	Pulmonology laboratory.	☐ Yes	☒ No
9. 5. 8. 3	Medical or surgical critical care.	☒ Yes	☐ No
9. 6	Minimum 10 major tracheo-bronchial surgery cases / 1 yr. *	☐ Yes	☒ No
9. 7	Minimum 30 mediastinal surgery case / 2 yr. *	☒ Yes	☐ No

Decision ☐ Approve ☐ Reject

Conditions ☐ Yes ☐ No

If yes, please define Click here to enter text.

* There are several possible types of clinical fellowships can be approved by EACTA according to the availability of these facilities at the host centre, as follows;

- Cardiothoracic and Vascular Anaesthesia Fellowship Programme
- Cardiothoracic Anaesthesia and Cardiothoracic Intensive Care Fellowship Programme
- Advanced Cardiothoracic and Vascular Anesthesia and Intensive Care Fellowship Programme
- Paediatric Cardiothoracic Anaesthesia Fellowship Programme
- Thoracic Anaesthesia Fellowship Programme

Please fill in all required fields and send to eacta@mci-group.com

Submit

EACTAIC Fellowship Programme OLV Clinic Aalst, Belgium.

		Monday	Tuesday	Wednesday	Thursday	Friday
MORNING		MIDCAB / OPCABG	Valve surgery (sternotomy or port-access)	MIDCAB / OPCABG	Valve surgery (Sternotomy or port-access)	CABG & Valve surgery
AFTERNOON		Valve surgery (sternotomy or port access)	MIDCAB / OPCABG	OPCABG / valve surgery	CABG & Valve surgery	Valve surgery (sternotomy or port-access)

This is an example of a weekly schedule during the fellow's cardiac anesthesia rotation period at the OLV Clinic Aalst.

Each day our department provides anesthesia for 2 cardiac surgery operating rooms.

CABG-surgery consists mainly of off-pump procedures and minimally invasive CABG (left mini-thoracotomy with or without robotic surgery). Cardiopulmonary bypass is only used in a minority of CABG-procedures. Combined procedures of valve and coronary bypass surgery are also performed.

Our centre performs a lot of cardiac valve surgery too. A significant proportion of these procedures is being done by port-access (right mini-thoracotomy) using port-access.

EACTAIC Fellowship Programme OLV Clinic Aalst, Belgium.

		Monday	Tuesday	Wednesday	Thursday	Friday
MORNING		ICU	ICU	ICU	ICU	ICU
AFTERNOON		ICU	Theoretical round/teaching Presentations for fellows in ICU	ICU	Theoretical round/teaching Presentations for fellows in ICU	ICU

This is an example of a weekly schedule (period of 4 weeks) during the fellow's ICU at the OLV Clinic Aalst. Included two afternoons with teaching rounds: presentations, bedside teaching (US, monitoring…).

EACTAIC Fellowship Programme OLV Clinic Aalst, Belgium.

	Monday	Tuesday	Wednesday	Thursday	Friday
MORNING	Thoracic surgery	Vascular surgery	Thoracic surgery	Thoracic surgery	Thoracic surgery
AFTERNOON	Vascular surgery	Vascular surgery	Vascular surgery	Thoracic surgery	Vascular surgery

This is an example of a daily schedule during the period of thoracic and vascular surgery during the fellow's ICU at the OLV Clinic Aalst.

At hoc variation on this schedule is possible depending on the daily case load for each surgical discipline. These changes will be evaluated permanently by the programme directors in order to expose the fellow to as many interesting cases as possible during his/her rotation.

EACTAIC Fellowship Programme OLV Clinic Aalst, Belgium.

		Week 1	Week 2	Week 3	Week 4
MORNING		Cardiac anesthesia	Perfusion	Perfusion	Cardiac anesthesia
AFTERNOON		Cardiac anesthesia	Perfusion	Perfusion	Cardiac anesthesia

During one month of cardiac anesthesia, two weeks of education in perfusion techniques is scheduled. During these two weeks, also theoretical sessions will be included (theoretical sessions by the perfusionists regarding temperature, coagulation management…)

EACTAIC Fellowship Programme OLV Clinic Aalst, Belgium.

		Week 1	Week 2	Week 3	Week 4
MORNING		Interventional cardiology	ECHO-LAB	ECHO-LAB	Interventional cardiology
AFTERNOON		Electrophysiology lab	ECHO-LAB	ECHO-LAB	Interventional cardiology

During one month two weeks of dedicated ECHO-LAB in cardiology is planned. We've planned during a month with a lot of exposure to interventional cardiology where echocardiography is important and also is teached during the procedures.

The echocardiography lab :

- **TTE/TEE performed on patients and supervised by the cardiologists.**
- **discussion of cases with cardiac anesthesiologist in the echolab. (preoperative assessment + perioperative review of cases)**

OLV Aalst, Belgium.

EACTAIC Fellowship 2023-24

Welcome Dr Rottiers

An EACTAIC fellowship can be an opportunity to "do something exceptional', as a source of knowledge to boost your career or to challenge yourself to improve your professional skills. Our host center, the OLV-Clinic Aalst, is a place where ambitious and talented people can grow together with our faculty. I strongly believe that the clinical experience of our faculty and the innovative role of our heart center, may strengthen the objectives of the EACTAIC fellowship program.

The OLV Heart center conducts considerable scientific research and has been recognized for its work by the Belgian government. Several of the hospital staff are key opinion leaders, running courses and both chairing and speaking at many international conferences. The credo of the hospital has always been "act fast; adopt the newest technology". Building on its expertise in this area, the department of cardiac surgery now performs a considerable number of its cardiac surgery by using thoracoscopic and / or robotic techniques.

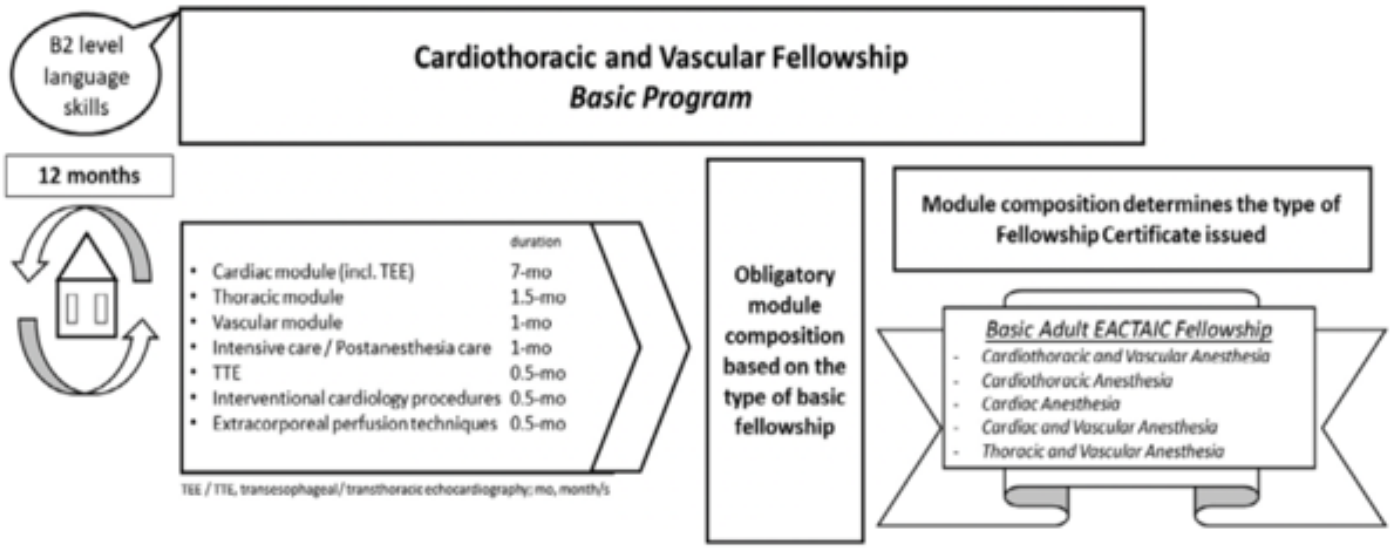
The fellowship program will offer one cardiac anesthesia fellowship position for one year (basic). The program will provide a solid clinical and theoretical experience to fellows to become experts in the perioperative management of patients undergoing a variety of complex cardiac procedures.

I and the other members of our faculty would like to thank you for your interest in our hosting center. As the program director, I look forward to speaking with you about this great opportunity.

Sincerely,

Stefaan Bouchez
EACTAIC Fellowship Program Director OLV Aalst

Fellowship program



Basic CTVAIC Fellowship Rotation Schedule

Basic Program	12 mo
Modules*	Minimum Requirements*
Cardiac anesthesia; transesophageal echocardiography; basic and advanced theory of perioperative cardiac echocardiography according to EACVI. Intraoperative training in TEE according to EACVI standards and performance of a comprehensive examination.	7 months; a minimum of 100 cases with CPB (30% other than CABG surgery). Candidates must pass the theoretical part of the EACVI TEE Certification Examination.* Fellows may be considered for continuation of the training at the end of the basic training period, even if they have not passed the theoretical part of the EACVI-EACTAIC TEE exam, provided they meet all other requirements, including case numbers, basic rotations, scientific presentations, research activities, etc. In this case, EACTAIC will not issue the certificate of completion of the Basic Fellowship Program until the Fellow passes the theoretical part of the TEE exam.
Thoracic anesthesia	1.5 months; a minimum of 25 thoracic cases
Vascular anesthesia	1 month; a minimum of 25 major vascular cases
Postanesthesia care unit; intensive care unit	1 month; a focus on postoperative care of patients who undergone cardiovascular or thoracic surgery
Transthoracic echocardiography (only for cardiac anesthesia); training in TTE and TEE according to EACVI through training courses, didactic teaching, and simulation-based training whenever possible.	0.5 months; training provided by cardiologists or echocardiography technicians.
Interventional cardiology (only for cardiac anesthesia)	0.5 months; in a hybrid operating room or cardiology laboratory
Extracorporeal perfusion techniques (only for cardiac anesthesia)	0.5 months; training provided by perfusionists

Abbreviations: CPB, cardiopulmonary bypass; CTVAIC, cardiothoracic and vascular anesthesia and intensive care; CABG, coronary artery bypass grafting; EACVI, European Association of Cardiovascular Imaging; ICU, intensive care unit; PACU, postanesthesia care unit; TEE, transesophageal echocardiogram; TTE, transthoracic echocardiogram.

* Fellows trained for the Basic Fellowship Program in Cardiothoracic and Vascular Anesthesia must complete all modules according to the time specified. Fellows trained in for the Basic Fellowship Program without cardiac anesthesia (ie, thoracic and vascular anesthesia) must complete other modules correspondingly longer.

Adult Cardiothoracic and Vascular Fellowship program

Duration: 12 months

Start fellowship: Monday 2/10/2023

Preliminary EACTAIC Agenda

ANNUAL CONGRESS EACTAIC: 15-18/10/2023 Budapest

eSeminar: 4/12/2023. 'Shaping the future of Intraoperative TEE'

EACTAIC Echo Congress in Milan: 15 - 18 June 2024 Certification course !

Fellowship Seminars: to be announced. (Check website)

EACTAIC Fellowship Seminars

Fellowship Seminars are a series of regular annual EACTAIC educational activities alternatingly hosted and supported by the EACTAIC hosting centres for fellowship programmes in collaboration with the EACTAIC Education Committee.
They offer opportunities for exchanging experiences and thoughts among the Programme Directors, Faculty members, and trainees among the EACTAIC accredited hosting centres through open discussions and a friendly atmosphere.

This opportunity is offered free of charge not only for EACTAIC fellows and trainees but extended for all worldwide practitioners.

Objectives: EACTAIC aims to strengthen the networking between the EACTAIC hosting centres, programme directors, trainees and worldwide practitioners.

EACTAIC aims to harness the young trainees to EACTAIC as per its third strategic thrust through its leadership in the sector as a specialised association including cardiac, thoracic, and vascular anesthesiologists, intensivists, perfusionists, nurses, and echocardiographers.

Each event includes a 1.5-hour virtual meeting including 45-min talk(s) and interactive polls followed by an open interactive discussion for 45 minutes.

Preliminary Fellowship Schedule

October: Cardiac Anesthesia (start 2/10/2024)

November: Cardiac Anesthesia

December: Cardiac Anesthesia

Christmas Holidays 25/12/2023 - 7/1/2024

January: 15/1/2024 - 26/1/2024 Echolab training

February: 1/2/2024 - 1/3/2024: Cardiac ICU
22/2/2024: OLV Aalst ECMO training

March: 18/3/2024 - 29/3/2024 Perfusion management

Easter Holidays 1/4/2024 - 14/4/2024

April: Thoracovascular Anesthesia
19-20/4/2024: OLV Aalst POCUS Course

May: Thoracovascular Anesthesia & Interventional Cardiology

June: Cardiac Anesthesia (15-18 June EACTAIC Echo)

July: to be announced

August: to be announced

September: to be announced

'Rules of engagement' for the anesthesiologist in the OR

The day starts at 7h45 (Present in OR !)

Check the anaesthetic equipment and prepare the anesthetic drugs.

Handhygiene should be performed at the minimum before aseptic tasks; after removing gloves; when hands are soiled or contaminated; and when entering and exiting the OR.

The preoperative chart should be carefully reviewed before handling the patient. Introduce yourself properly to patient and complete a brief history.

Make sure all standard monitors (incl. neuromonitoring) are properly working before the induction of anesthesia.

An automated record will be kept of all events taking place during the course of anesthesia: accurate and thorough documentation is an essential element of high quality and safe anesthetic care.

The WHO checklist should be available in the operating room and checked by the entire surgical team before the operation begins.

Syringes should be labelled and capped with a sterile cap at all times. The syringes are retained in a neat, orderly fashion at a position which is conveniently located near the head of the patient.

Use the EACTAIC-OLV App as a guide to perform specific procedures: weaning of CPB, handover ICU etc.

Be punctual, efficient, and respectful at all times to fellow health care members, patients and families

Educational activities OLV Aalst.

Friday at 6h55: Room Guernica: Multidisciplinary teaching.

Wednesday at 15h: Room Bos ICU: ICU scientific meeting (only during ICU rotation or in agreement with faculty anesthesia)

At least once / month: article discussion, echo case discussion.

POCUS course (2 days) —>

- Physics and knobology of US
- Vascular access
- TTE
- Lung US
- Gastric US
- E-FAST
- AAA (Aorta)
- Rush protocol

ECMO day course

Locoregional day course: date to be announced

LVAD hemodynamics workshop: date to be announced

Proficiency based learning: dates to be announced
- centraal catheter placement
- epidural catheter placement
- airway management: endobronchial blocker placement

3 monthly evaluation of fellow

FACULTY

Dr S. Bouchez
Dr S. Buys
Dr G. Cammu
Dr K. De Decker
Dr N. De Mey
Dr L. Foubert
Dr P. Lecomte
Dr G. Van Camp
Dr F. Van Praet

Every three months, the fellow is required to send the following reports to the fellowship director:

- Update of the logbooks:
    - Anonymized records of patient management
    - Review of TEE exams
    - Educational activities

- Self-Assessment by fellow

- Feedback by fellow

Educational material

- Anesthesia protocols (including TOE) are available on every computer in the OR, ICU and Cathlab.

- Recommended articles will be provided by the faculty.

Not obligatory:

Echocardiography
- Perioperative TOE booklet by S. Bouchez
- A Practical Approach to Transesophageal Echocardiography by Perrino

Cardiothoracic Anesthesia
- Hensley's Practical Approach to Cardiothoracic Anesthesia by G. Gravlee
- Kaplan's Essentials of Cardiac Anesthesia by J. Kaplan

Thoracic Anesthesia
- Anesthesia in Thoracic Surgery: Changes of Paradigms by M. Granell and M. Senturk