

EACTAIC
Fellowship
Adult Cardiothoracic
And Vascular Anaesthesia

Anesthesiologie

uw kenmerk
ons kenmerk
doorkiesnummer 043-3877457
datum 11 mei 2023

Dear,

I support the renewed collaboration in the Fellowship Adult Cardiothoracic And Vascular Anaesthesia. Costs necessary for visitation of our hospital are taken on our account.

On Behalf of MUMC+ I'm looking forward to work together in this important training program

sincerely,



dr. M. Buise
Head of departement of Anaesthesia

EACTAIC
c/o AIM
Via Flaminia, 1068
00189 Rome (Italy)

Anesthesiologie

uw kenmerk
ons kenmerk
doorkiesnummer 043-3877457
datum 7 juni 2023

To whom it may concern,


The undersigning persons declare that the Department of Anaesthesia of MUMC will comply with requirement #8 of the EACTAIC white paper for CTVA host centres for the upcoming accreditation period of 2023-2027.

The program director (or a dedicated faculty member) will be available to train the fellow for at least 10% of the average weekly working hours.

With kind regards,



M.P. Buise, MD, PhD
Head of Department
fellowship



J.U. Schreiber, MD, PhD
Director Maastricht EACTAIC CTVA
program



Application for Hosting EACTAIC Adult Cardiothoracic and Vascular Anaesthesia Fellowship Programme

1. Fellowship Information

Basic Fellowship in Cardiothoracic and Vascular Anaesthesia	
Year (1)	

2. Institution Name

Maastricht University Medical Centre Department of Anesthesia and Pain Therapy

Address

Professor Debyelaan 25, 6229 HX Maastricht PO Box 5800, 6202 AZ Maastricht

Country

Netherlands	City	Maastricht
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3. CEO / Chair Name

First name	Marc	Last name	Buise	
Email	marc.buise@mumc.nl		Phone	31433875606

4. Programme Director(s)

First name	Jan-Uwe	Last name	Schreiber	
Board Certification(s)	Anesthesiology (NL, DE), Intensive Care (DE)			
EACTAIC membership	Yes	if yes, membership's number		101567
Email	j.schreiber@mumc.nl		Phone	31433875606
Mailing Address	PO Box 5800, 6202 AZ Maastricht		Fax	

Street	Prof. Debyelaan 25		
Country	Netherlands	Region	
Zip code	6229 XH		

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 Anaesthesiology and Intensive Care (EACTAIC) 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

C1

Comments

Requirements for knowledge of Dutch language. In addition, we expect the candidate to be proficient in English, at least at level B2.

The candidate must be eligible to obtain a national registry that allows him to work as a medical practitioner in the Netherlands (BIG-registration). Information on BIG registration and language proficiency can be found online at the website of the BIG register.

This registration and any working visa requirements (if needed) must be obtained by the attendee at their own expense before the candidate can be hired. It would be highly appreciated if the candidate had followed a Basic Course on transesophageal echocardiography before entering the fellowship. A valid ALS provider course certificate is obligatory for all medical practitioners working at Maastricht University Medical Centre. If not attended elsewhere, the course can be visited here.

6. General Programme Information

Aims, goals and objectives of the Fellowship Programme

Together with Maastricht University, the hospital forms the Maastricht University Medical Centre. We are dedicated to the University's slogan, 'Leading in Learning,' and offer comprehensive training regarding the fellow's individual requirements, including training in TOE. With around 1000-1200 cardiothoracic procedures, p.a. Maastricht UMC belongs to the smaller centres. Next to the standard procedures, the surgical focus lies on minimally-invasive surgery and robotic surgery. Moreover, the hospital is highly reputed for vascular surgery. The hospital's high-fidelity simulation centre has advanced TOE and bronchoscopy simulators. Next to the training of technical skills, we are dedicated to the training of non-technical skills and communication. At the end of the program, the fellow will be able to manage complex cases in adult cardiothoracic and vascular surgery. We expect dedicated and open-minded candidates who are also interested in research and will support research activities within the scope of the department (Prediction and Outcome, Cognitive effects, Haemostasis management)

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

1	February	1	End	January	31
Number of Positions Per Year			1	Clinical only	

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

Yes

Comments

The training will follow an individual schedule designed with the fellow and evaluated every three months. We aim to let the fellow participate in 'on calls' under supervision. The level of supervision will depend on the individual performance of the fellow.

Offered Advanced Training

No

Name	EACTAIC member	Certification in Cardiothoracic and Vascular Anaesthesia	Additional Qualifications	Email address	Contact address
Jan Schreiber	yes		ICU (DE)	j.schreiber@mumc.nl	P.Debyelaan 25, 6229 HX Maastricht
Ralph Dudink	yes	EACTAIC	EACVITTEE		
Hans Ubben	yes		EACVITTEE, ICU		
Cristy vd Hombergh	yes	yes			

Publications lists of the faculty's members in PubMed

Attached list of 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	100
Number of ICU beds dedicated to CTVA patients	Yes	7	10
Is there an emergency department in which cardiothoracic patients are managed 24 hours a day?	Yes	7	6
An adequately designed and equipped post-anaesthesia care unit for cardiothoracic patients located near the operating room suite?	Yes	7	10
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	3
Thoracic Operating Rooms	Yes	7	1
Vascular Operating Rooms	Yes	7	2
Catheterisation Labs	Yes	7	3
Electrophysiology Labs	Yes	7	1
Pulmonology Labs	Yes	7	1
Interventional Vascular Suits	Yes	7	2
Separate CVICU Facility	Yes		
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	4
Classrooms with visual and other educational aids	Yes	7	2
Study areas for fellows	Yes	7	
Office space for faculty members and fellows	Yes	7	
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
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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?

Yes

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	600	
Cardiac Surgery without CPB	150	
Minimally-Invasive Cardiac Procedures	100	
Interventional Cardiac Catheterization (e.g. TAVI, MitraClip, TriClip, PFO/ASD closure)	200	
Electrophysiology Lab (e.g. mapping, ablation, pacemakers, ICDs)	1100	
Robotic Cardiac Surgery	120	
Heart, Lung, and Heart/Lung Transplants	0	
ECLS, ECMO, VAD Procedures	50	
Echocardiography Lab	2000+	
Thoracoscopic Surgery	100	
Pulmonary Resection	60	
Oesophageal Surgery	0	
Tracheo-Bronchial Surgery	0	
Interventional Pulmonology Procedures	30	
Major Vascular Procedures	50	
Interventional vascular procedures	100	
Neurological monitoring during major vascular surgery	50	
Acute and chronic pain management services	24 hours, 7 days	
Basic or Advanced Research		
Rotations in	Number of performed produces/basic rotations	Number of performed produces/advanced rotations
Cardiac anaesthesia	150	
Thoracic anaesthesia	50	
Anaesthesia for major supra-inguinal vascular procedures	25	
Trans-oesophageal and trans-thoracic echocardiography	100	
Medical or surgical Critical Care Rotation	1 month (ICU or PACU)	
Inpatient or outpatient cardiology	2 weeks (echo lab)	
Inpatient or outpatient pulmonary medicine	on demand	
Extracorporeal perfusion technology (CPB, ECMO, Nova-Lung.)	2 weeks	
Paediatric cardiothoracic anaesthesia	n/a	
Basic Research	on request	
Clinical Research	on request	

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

If no, explain

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

Clinical Responsibility: Providing anesthetic care for cardiac, cardiothoracic, thoracic, and vascular patients. Postoperative treatment of patients at the Post Anesthesia Care Unit. Participating in the pre-anesthesia clinic.

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

External rotation Leuven UMC, Belgium for complex cardiac surgery, transplantation, assist systems (minimum of 2 weeks)

Will advanced subspecialty rotations reflect increased responsibility and learning opportunities?

No

Maximum Time in Non-Clinical Activities 4 hours per week

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

net 3500 Currency EUR

This opportunity is not funded by the centre

No Source of financial support for the candidate:

Host centre (monthly salary)

Others

no VAT applicable

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	Yes
Non-anaesthesiologists from the participating sites	Yes
Visiting faculty members	Yes
Drug/industry representatives	Yes
Fellows	Yes
Others (specify): Click here to enter text.	

Sim instruction including TEE simulation (simulator for self-instruction), exchange with Leuven UMC (see above)

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

	Weekly	Bi-weekly	Monthly	Quarterly	Semi-annually	Annually	Fellows' attendance would be monitored
Critical care appraisal of the literature (i.e., journal club)	Yes	No	No	No	No	No	Yes
Quality improvement (M&M, QA)	Yes	No	No	No	No	No	Yes
Board review (e.g., oral exams, keywords)		No	No	No	No	No	Yes
Grand rounds	Yes	No	No	No	No	No	Yes
Other (specify) Click here to enter text.							

Formal Course Work Available in

n/a

Extra-institutional Educational Conference Support:

According to the Dutch Labor Agreement for University Hospitals, the fellow can claim 10 working days for personal education in the field of (cardiothoracic) anaesthesia and Intensive Care Medicine. The fellow will have a personal budget for these activities.

The Opportunity for Exchange with other training facilities

No

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

Abstracts	1	Peer-Reviewed Journal Articles	2
Book Chapters		Other Publications	
Dedicated Research Time	to be discussed		

In the Previous Year, Fellows present an oral or poster presentation in a national or international meeting

Yes

Patient Care

CanMEDS competency framework

Technical Skills	Settings/ Activities	Assessment Method(s)
1. I. General patient assessment and risk estimation		
	Participation in the pre-anesthesia clinic and preoperative screenings together with the supervisors.	On-site evaluation and case-based discussions
1. II. Anesthesia - Clinical part		
	Participation as an acting anesthesiologist in daily OR activities. Training of clinical skills in accordance with the curriculum.	DOPS On-site evaluation
1. II. Postoperative Care / ICU - Clinical part		
	Rotation into PACU or ICU depending on pre-fellowship experience with cardiothoracic intensive care therapy. In case of an ICU rotation an individual schedule will be made in cooperation with the responsible instructor at the department of Intensive Care Therapy	On-site evaluation
1. II. Echocardiography - Clinical part		
	Active participation in TEE exams during surgical procedures Opportunity to make use of our TEE simulator (self-instruction)	On-site evaluation and case-based discussions
1. VIII. Extracorporeal perfusion management		
	2 week rotation into the department of perfusion and an additional external rotation into Leuven UMC	

Medical Knowledge

Fellows are encouraged to actively participate in the weekly training seminars. They are also encouraged to present their own research results at national and international congresses. For this purpose, the fellows are given appropriate time off. The evaluation takes place in a personal conversation with the programme director.

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	Evaluation by 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).	Participation in the preoperative screening / pre-anaesthesia clinic	Evaluation by 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.	Participation in the preoperative screening / pre-anaesthesia clinic	Evaluation by faculty members
Patient information and informed consent including medico-legal aspects, appraisal of discernment and consent capacity.	Participation in the preoperative screening / pre-anaesthesia clinic	Evaluation by faculty members
Principles of risk and outcome assessment and relevant scoring systems (e.g., EuroSCORE).	Participation in the preoperative screening / pre-anaesthesia clinic	Evaluation by 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, discussion with faculty members	Evaluation by faculty members
Principles of intraoperative pharmacology and relevant medication, including positive inotropes, chronotropes, vasoconstrictors, vasodilators, and anti-arrhythmic agents.	Self study, discussion with faculty members	Evaluation by faculty members
Principles of patient blood management, including specific diagnostic tools, application of relevant medication and blood products.	Self study, discussion with faculty members	Evaluation by faculty members
Principles of basic hemodynamic monitoring and relevant techniques, such as arterial pressure measurement, central venous pressure.	Self study, discussion with faculty members	Evaluation by 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, discussion with faculty members	Evaluation by 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, discussion with faculty members	Evaluation by faculty members
Basic principles of common procedures in cardiac surgery, such as coronary artery bypass grafting (CABG).	Self study, discussion with faculty members	Evaluation by 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, discussion with faculty members	Evaluation by faculty members
Knowledge of the bronchial anatomy.	Self study, discussion with faculty members	Evaluation by faculty members
Knowledge about relevant anesthetic agents and their effects in patients with lung diseases.	Self study, discussion with faculty members	Evaluation by faculty members
Principles of intraoperative pharmacology and relevant medication, including bronchodilators and steroids.	Self study, discussion with faculty members	Evaluation by faculty members
Basic principles of common procedures in thoracic surgery (mediastinoscopy, video-assisted thoracoscopic surgery (VATS), open lung resection, pneumonectomy).	Self study, discussion with faculty members	Evaluation by faculty members
Basic principles of endoscopic pulmonary procedures, such as bronchial stenting and endoscopic lung volume reduction (ELVR).	Self study, discussion with faculty members	Evaluation by 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, discussion with faculty members	Evaluation by faculty members
Basic principles of the peri-operative management of lumbar drainage for aortic interventional procedures.	Self study, discussion with faculty members	Evaluation by faculty members
Basic principles of spinal cord protection during surgical and interventional aortic procedures.	Self study, discussion with faculty members	Evaluation by faculty members
Basic principles of neuromonitoring.	Self study, discussion with faculty members	Evaluation by 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, 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, discussion with faculty members	
Circulatory failure (heart failure, shock, cardiorespiratory arrest, cardiac arrhythmias, ischemic heart disease, pulmonary embolism, bleeding complications, vasoplegia).	Self study, discussion with faculty members	
Anaphylaxis.	Self study, discussion with faculty members	

Respiratory failure, including adult respiratory distress syndrome (ARDS), pulmonary edema, pneumothorax, pneumonia.	Self study, discussion with faculty members	
Acute kidney injury and failure.	Self study, discussion with faculty members	
Gastrointestinal failure, peritonitis, pancreatitis, liver failure, non-occlusive mesenteric ischemia (NOMI).	Self study, discussion with faculty members	
Neurological failure (delirium and coma, cerebral ischemia and bleeding).	Self study, discussion with faculty members	
Airway and chest injuries.	Self study, discussion with faculty members	
Aortic injuries.	Self study, discussion with faculty members	
Infectious diseases (systemic inflammatory response syndrome (SIRS) and sepsis, including sepsis bundle strategy).	Self study, discussion with faculty members	
Coagulation disorders (disseminated intravascular coagulopathy (DIC), heparin resistance, heparin-induced thrombocytopenia, severe bleeding, transfusion reaction).	Self study, 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, discussion with faculty members	
Indication, contraindication, drug selection, complications: sedation, anesthesia, analgesia, neuromuscular relaxation, nutrition.	Self study, discussion with faculty members	
Multimodal and pre-emptive analgesia concepts.	Self study, discussion with faculty members	
Weaning and extubation criteria.	Self study, discussion with faculty members	
Transfer and discharge criteria.	Self study, 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, 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) / EACTAIC process of certification for TEE.	Discussion with faculty, self-study, TOE simulator	
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.	Rotation into interventional cardiology	
Procedural sedation guidelines from the European Board of Anaesthesiology (EBA)/ European Society of Anaesthesiology (ESA).	Hybrid operating theatre	
Monitoring and capnography use according to the safety recommendations from EBA.	Hybrid operating theatre	
1. VIII. Extracorporeal perfusion management (Level A)		
Basic principles of extracorporeal perfusion.	Rotation into department of perfusion	
Types of extracorporeal circuits, e.g., cardiopulmonary bypass (CPB), extracorporeal membrane oxygenation (ECMO).	Rotation into department of perfusion	
Types, composition and mechanisms of cardioplegic solutions.	Rotation into department of perfusion	
Cardioprotective measures.	Rotation into department of perfusion	
Safety recommendations for extracorporeal circulation from the European Board of Cardiovascular Perfusion (EBCP).	Rotation into department of perfusion	
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/ EACTAIC 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 as per EACTAIC regulations
https://www.eactaic.org/wp-content/uploads/2020/11/EACTA-Three-Monthly-Evaluation_09.11.2020.pdf

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

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.

Training programmes should encourage fellows to provide a written confidential evaluation of the programme.

External evaluation / assessment will be held as per EACTAIC regulations

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

There will be regular opportunities for Fellows to provide confidential written evaluations of the faculty and program to the EACTAIC Education Chair

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.

Trainees in cardiac, thoracic and vascular anesthesia will actively participate in the periodic evaluation and reassessment of the Fellowship training goals and objectives

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.

At the end of the training period, the centre would acknowledge in writing successful completion of a fellow training.

Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes

13. Practice-based Learning and Improvement

1. Briefly describe the main learning activities regarding non-clinical skills and their assessment during the fellowship

Learning activities will include the main elements of team resource management. These are situational awareness, decision-making, communication, and workload management. The elements will be discussed. Tools such as mental mapping will be introduced and practised. The fellow will be expected to define their learning goals daily. These may include technical or non-technical skills. The pre-defined learning goals will be assessed during and after the treatment of actual cases and during simulation training in our skills lab.

2. 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).

The fellow will be required to define a learning goal at the beginning of the day. The day's patients will be discussed to be prepared for the briefing (paragraph 14.2). Critical clinical findings will be highlighted, and relevant diagnostics, echocardiography findings and treatment options will also be discussed. The discussed items will be reviewed, and clinical implications will be addressed to strive for continuous quality improvement. This process involves time for self-assessment and self-reflection for both the fellow and the faculty members and creates an opportunity to set future learning and improvement goals.

3. 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 able to review at least one of the current treatment protocols during the fellowship. Protocols have to be updated regularly based on the most recent evidence. The hospital offers online access to all relevant cardiothoracic surgery and anaesthesia journals, including databases such as UpToDate.com.

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

Fellows will receive direct feedback on their clinical and non-clinical performance generally at the end of a working day and on individual request. Observations will be shared informally, and the fellow will get the opportunity to self-evaluate the day concerning the pre-defined learning goals.

5. 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 join the journal club that will be held once per week. A clinical item will be discussed during the journal club based on information gained from a PICO process. We expect the fellow to prepare at least one clinical item concerning cardiothoracic anaesthesia during the fellowship.

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

Interest in educational activities for residents and anaesthesia nurses will be highly appreciated. There are several various opportunities to participate. One example might be participating in training on echo-guided placement of IV access. Further details can be discussed. The fellow can expect to receive support from faculty members for the preparation.

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. The fellow will actively participate in the pre-anaesthetic preparations and the pre-anaesthesia clinic. The expected procedure will be discussed during the patient's interviews, and informed consent will be taken. The fellow will be guided through the process in case of need and may expect support in case of challenging scenarios or communications.

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.

MUMC handles a system of extensive briefing/debriefing on its operating theatres. The use of briefing and debriefing is intended to create open and transparent communication among all team members and clearly define each team member's tasks. After getting familiar with this system, improving communication skills and reflecting own communication habits will be part of the debriefing regularly.

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

See following paragraph

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.

The fellow will get an extended introduction to the Patient Data Management System used throughout the hospital. Data of each patient are stored centrally and can be reviewed by the user and the supervisor concerning current laws on data protection. This includes a comprehensive TEE documentation. The fellow will be required to maintain an anonymized logbook documenting the procedures he was actively involved during the fellowship (following the valid edition of the EACTAIC fellowship curriculum)

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.

The fellow has to take part in the screening of patients during the pre-anaesthesia clinic. Cases will be discussed with a faculty member. The fellow will be expected to take an increasingly active part in the screenings with growing experience.

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.

As a care and knowledge institution, the MUMC is one of the frontrunners; internationally, we have a top position in research, education and training. And our ambitions remain as strong as ever. We can only achieve groundbreaking progress if we connect the best of all worlds. Have an eye and an ear for what moves each person and what each person brings. We, therefore, strive for a diversity of employees in cultures, religions, orientations, ages, ethnicity and gender at all levels, towards an environment where people can be themselves and have equal opportunities. This not only ensures better cooperation and more robust decision-making. It also means that we better understand our diverse patients, include knowledge of other cultures and people's customs in our research, and train people with a broad perspective. We expect candidates to share this vision, and the item will be discussed based on actual cases.

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 candidate will regularly be informed of and encouraged to follow changes in practice when recommended by departmental groups or newly implemented into treatment protocols. These recommendations will incorporate the principles of evidence-based medicine as well as cost-effectiveness in a way to improve patient outcomes. We expect the fellow to be updated with the relevant treatment protocols. Protocols and SOPs are stored centrally on the hospital server.

16. EACTAIC Site Visit (for 1-day)

Dates proposed for the visit (at least 3) or or

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

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

Please fill in all required fields and send to eactaic@aimgroup.eu and EACTAIC Education Chair



European Association of
Cardiothoracic Anaesthesiology
and Intensive Care

Checklist for Hosting EACTAIC Adult Cardiothoracic Anaesthesia Fellowship Programme

Institution Name Maastricht UMC, Department of Anaesthesia and Pain Management

Address Prof. Debyelaan 25
6229 HX Maastricht
The Netherlands

Preferred Duration 12 months for basic training year 12 months for advanced training year

Type of fellowship programme offered:

- Cardiothoracic and Vascular Anaesthesia
- Cardiovascular Anaesthesia
- Cardiothoracic Anaesthesia
- Cardiac Anaesthesia only
- Thoracic and Vascular Anaesthesia

Type of fellowship training available:

- Clinical only
- Clinical / Basic Research
- Clinical / Clinical Research
- Basic Research only
- Clinical Research only

Legal statement

The applying trainee should be either a licensed anaesthesiologist or have a completed training certificate in anaesthesia. Yes No

Working hours directives will be respected according to the prevailing national law. Yes No

The head of the department approves the programme of the hosting centre. Yes No

An agreement between the CEO or an authorized representative of the institution and Programme Director at the host centres for the EACTAIC Fellowship Training Programmes to free the former to have a dedicated minimum of 10% of weekly working time for training the trainees in the Fellowship Training Programmes is submitted to EACTAIC. Yes No

The programme directors, faculty members and trainees would maintain a good standing EACTAIC membership. Yes No

Declaration of financial sources

The financial support of the EACTAIC Fellowship will be regulated by an individual agreement between the hosting centre and the fellow. Yes No

The hosting centre declares the financial sources policy. Yes No

EACTAIC will divide the hosting centres into two categories as follows; **Category (A):** The hosting centres which can offer monthly salary payments and **Category (B):** The hosting centres which cannot provide salary payments; instead, the candidates may be supported by an educational grant, scholarship, or are self-sponsoring, etc.

Preferred Fellowship Category: Category A Category B



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The candidates can choose between the hosting centres in the two categories. Yes No

A signed consensus between the hosting centre and trainee regarding both parties' financial arrangement and responsibilities will be delivered to EACTAIC. Yes No

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 Currency

The centre does not fund this opportunity Yes No

Source of financial support for the candidate:

- Host centre (monthly salary)
- Candidate's centre
- Scholarship
- Educational grant
- Award
- Candidate's expenses
- Others

Please, describe

Employment contract according to the Dutch National Labour Agreement for University Hospitals, restricted to a maximum duration of 12 months in case of a 100% employment.

Programme Training and facilities of the host centre

1. The fellow should be authorized to provide direct patient care during their training programme under the supervision of the programme director and faculty members, "i.e., hands-on practice."	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
2. Uninterrupted training for 12 months for the "basic" training programme.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
3. Uninterrupted training for 12 months for the "advanced" training programme.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
4. At least two faculty members should be involved.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5. Evaluation of the fellows should be done every four months or end of each advanced rotation module.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
6. Every four months, a complete evaluation report should be submitted to the EACTAIC Education Chair. [https://www.eactaic.org/wp-content/uploads/2020/11/EACTA-Three-Monthly-Evaluation_09.11.2020.pdf]	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
7. A portfolio/logbook will be performed monthly and signed by the programme director	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
8. The programme director and a minimum of two faculty members declare in writing that they will dedicate sufficient time (i.e., minimum 10% of working time) to attend to their responsibilities. <input style="width: 60px;" type="text" value="3.5"/> hours per week	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
9. At least one of the faculty is transesophageal echocardiography (TOE) certified (e.g., EACVI-EACTAIC joint accreditation, Association of Cardiothoracic Anaesthesia and Critical Care (ACTACC) or National Board of Echocardiography (NBE)).	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
10. The hosting centre has:		
10.1. Available intensive care unit (ICU) or postoperative anaesthesia care unit (PACU) for cardiac, thoracic and vascular patients.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
10.2. Designed and equipped post-anaesthesia care unit (PACU), high-dependency unit (HDU), or an ICU incorporating a PACU.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
10.3. Available emergency room (ER) 24 hrs. a day (24/7).	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
10.4. Operating rooms (ORs) to be adequately equipped for cardiac, thoracic and vascular procedures (advanced haemodynamic monitoring, TOE, neuromonitoring, coagulation monitoring, blood-saving (salvage) devices).	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
10.5. Available an outpatient Clinic for perioperative evaluation of patients undergoing cardiac, thoracic, and vascular procedures	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No



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10.6. 24-hours acute pain service available for patients undergoing different cardiac, thoracic, and vascular procedures	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.7. Available Meeting Rooms	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.8. Available classrooms with visual and other educational aids	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.9. Available study areas for fellows	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10. The volume of cases and training in the followings;	
10.10.1. A minimum of 100 cardiac cases using cardiopulmonary bypass (CPB) during the basic training year will be available per fellow per year.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Click here to enter text.
10.10.2. 30% of the cases are non-coronary artery bypass grafts (CABG).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Click here to enter text.
10.10.3. An "optional" 3-to-6-month advanced cardiac anaesthesia training module will be available for each fellow if the centre offers the advanced training year.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Click here to enter text.
10.10.4. A programme director should personally perform a minimum of 100 cardiac anaesthesia cases per annum.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.5. Training in thoracic anaesthesia (A minimum of 25 cases per fellow or 1.5 months during the basic training year and an "optional" 3-to-6-month advanced training module if the centre offers the advanced training year).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.6. Training in supra-inguinal vascular anaesthesia. (A minimum of 25 cases or one month per fellow during the basic training year and an "optional" 3-to-6-month advanced training module if the centre offers the advanced training year).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.7. Training in interventional vascular (TEVAR, EVAR) and neuromonitoring.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.8. Accessibility for training in a dedicated intensive care unit (ICU) or postoperative anaesthesia care unit (PACU) for caring of cardiac, thoracic and vascular patients for one month during the "basic" training year and an "optional" 3-to-6-month advanced training module if the centre offers the advanced training year.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.9. Training in anaesthesia for interventional catheterization laboratory procedures for two weeks during the "basic" training year and longer if the centre offers an advanced training module in cardiac anaesthesia.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.10. Training in electrophysiology study (EPS) procedures (pacemakers, implanted cardioverter/defibrillator (ICDs), mapping, ablations, etc.).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.11. Training in the Extracorporeal perfusion technology with a perfusionist in the management of patients who have mechanical support in situ, e.g., intra-aortic balloon pump (IABP), extracorporeal membrane oxygenation (ECMO) and ventricular assist device (VAD) for two weeks during the basic training year.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.12. Training in the Echocardiography Lab mainly on transthoracic echocardiography for two weeks during the basic training year.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.13. Basic training in TOE will be available.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.14. Advanced training in TOE will be available.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10.10.15. Accessibility for training on the basic and/or clinical research	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10.10.16. These requirements will be applied to all new fellows	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Decision Approve Reject
Conditions Yes No

If yes, please define

Click here to enter text.

Please fill in all required fields and send them to eactaic@aimgroup.eu and EACTAIC Education Chair

Week schedule cardiothoracic and vascular anaesthesia – Maastricht UMC

Location	Monday	Tuesday	Wednesday	Thursday	Friday
Cardiothoracic 1	RATS or Lung surgery	RATS or Lung surgery	Cardiac (MIMVS)	Cardiac (MIMVS)	R-MIDCAB
Cardiothoracic 2 (hybrid)	Cardiac (Rhythm surgery)	Cardiac	Cardiac	Cardiac (TAVR)	Cardiac
Vascular (hybrid)	TEVAR/EVAR	Aortic (TAAA)	----	TEVAR/EVAR or Carotid surgery	Shunt surgery
Outside OR		Pre-anaesthesia clinic (half day) EP Lab			Pre-anaesthesia clinic (full day) EP Lab
Others	PICO presentation (16:15)		M&M conference (8:00)	Aortic surgery conference (17:00)	Grand round discussion (12:30)

Daily activities: Heart team (14:30, optional)
 Cardiothoracic pre-briefing next day's cases (16:30)
 24/7 PACU for cardiac, thoracic and vascular patients