

Application for Hosting EACTAIC Adult Cardiothoracic and Vascular Anaesthesia Fellowship Programme

1. Fellowship Information
Year (1) Basic-fellowship in cardiac anaesthesia
Year (2) Advanced fellowship in caediac anaesthesia

2. Institution Name
Heart Center Leipzig

Address
Struempellstrasse 39, 04289 Leipzig

Country
Germany City Leipzig

3. CEO / Chair Name
First name Joerg Last name Ender
Email joerg.ender@medizin.uni-leipzig Phone 0049 341 865 1439

4. Programme Director(s)
First name Anna Last name Flo Former
Board Certification(s) Spanish Board
EACTAIC membership Yes If yes, membership's number 101012
Email anna.floformer@medizin.uni-leipzig.de Phone 0049 341 865 1439

4. Programme Director(s)
First name Rajni Last name Singh
Board Certification(s) MCI India
EACTAIC membership Yes If yes, membership's number 2513
Email rajni.singh@medizin.uni-leipzig.de Phone 0049 341 865 1439
Mailing Address Heart Center Leipzig
Street Struempellstrasse 39
Country Germany Region Saxony
Zip code 4289

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) recognize the institutional CVA Fellowship Programme?
 Yes If yes, please explain EACTAIC accreditation

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 B2

Comments Official German B2 level followed by a medical language test by the saxony medical association

Specific requirements towards the attending fellow

A completed specialisation in anaesthesia from home country or an eligibility for the same is mandatory for the programme. The candidate has to acquire the required level of german (Official B2 level and has to clear a medical language examination conducted by the Saxony medical association in Dresden, Germany) and complete other requirements for acquiring the german "Berufserlaubnis" and a work visa at his/her own expense, before the final fellowship contract can be signed. During this period the candidate is guided by the fellowship director (per email and Skype) as well as the office of the departmental chair.

6. General Programme Information

Aims, goals and objectives of the fellowship Programme

Participants of the programme will learn the basic and advanced skills in cardiac anaesthesia. The programme will cover all areas of cardiac anaesthetic care including preoperative diagnostics and postoperative care. They will be prepared actively for acquiring the EACTAIC TEE certification in the course of the fellowship. After completing the programme the participant will be able to provide anaesthesia in complex cardiovascular surgical procedures and to perform and interpret corresponding TEE and TTE images

Preferred Duration **One obligatory training year in Cardiac Anaesthesia followed with an "optional" second year in Advanced Cardiac Anaesthesia, ICU and paediatric cardiac anaesthesia**
* 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	January	1	End	December	1
Number of Positions Per Year	2	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 be supervised with 1:1 coverage till the time the communication as well as clinical abilities allow him or her to work independently under indirect supervision (minimum of 3 months direct 1:1 and 3 months indirect supervision). The candidate will be given increasing responsibilities with the aim of him/her being able to handle all complex cardiac cases independently at the completion of the fellowship. The fellow will be posted for night and weekend calls when he is deemed fit to work independently with indirect supervision. At all times the fellow will be supervised directly or indirectly.

Offered Advanced Training

Name	EACTAIC member	Certification in Cardiothoracic and Vascular Anaesthesia	Additional Qualifications	Email address	Contact address
Anna Flo Former	yes	no	EACVI-TEE	anna.floformer@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Rajni Singh	yes	yes	EACVI-TEE	rajni.singh@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Joerg Ender	yes	yes	TEE	joerg.ender@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Masimiliano Meineri	yes	no	TEE	masimiliano.meineri@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Jörgen Banusch	yes	no	TEE	joergen.banusch@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Carmine Bevilacqua	yes	no	EACVI-TEE/Intensive care	carmine.bevilacqua@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Arne Käthner	yes	no	TEE/Intensive care	arne.kathner@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Wassem Zakhary	yes	yes	EACVI-TEE-TTE	wassem.zakhary@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Anirudha Janai	yes	yes	EACVI-TEE	anirudha.janai@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Nadeen Khalil	yes	yes	EACVI-TEE	nadeen.khalil@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Volodymyr Protysk	yes	yes	EACVI-TEE	volodymyr.protysk@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany
Sven Gudehus	yes	no	D-GAI-TEE/Intensive care	sven.gudehus@medizin.uni-leipzig.de	Anaesthesia and intensive care, Heartcenter Leipzig, Struempellstrasse 39, 04289, Leipzig, Germany

Publications lists of the faculty's members in PubMed

1. Beslman C, Noack T, von Roeder M, et al., Transcatheter edge-to-edge mitral valve repair with the PASCAL system: early results from a real-world series. 2020; 16: 824-832, <https://doi.org/10.4244/ej-d-20-00216>
2. Boshmann K, Meineri M, Ender JK, et al., Interventions Triggered During Routine Use of NIRS Cerebral Oxygenation Monitoring in Cardiac Surgical Patients. 2021; <https://doi.org/10.1053/j.jvca.2021.09.049>
3. El Tahar MR, Vasquez LM, Rp A, et al., Perspectives on the Fellowship Training in Cardiac, Thoracic, and Vascular Anesthesia and Critical Care in Europe From Program Directors and Educational Leads Around Europe. 2020; 34: 512-520, <https://doi.org/10.1053/j.jvca.2019.09.029>
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5. Grütznher H, Flo Former A, Meineri M, et al., A Comparison of Patients Undergoing On- vs. Off-Pump Coronary Artery Bypass Surgery Managed with a Fast-Track Protocol. 2021; 10: <https://doi.org/10.3390/jcm1019194470>
6. Khalil NH, Anders R, Former AF, et al., Radiological Incidence of Unilateral Pulmonary Edema After Minimally Invasive Cardiac Surgery. 2020; 34: 151-156, <https://doi.org/10.1053/j.jvca.2019.07.006>
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10. Pannmüller B, Noack T, Eitz CD, et al., Tricuspid valve repair with echocardiographic guidance. 2022; 63: 208-211, <https://doi.org/10.23736/journal.2021.11910-x>
11. Protysk V, Meineri M, Kitamura M, et al., Echocardiographic Guidance of Intentional Leaflet Laceration prior to Transcatheter Aortic Valve Replacement: A Structured Approach to the Bioprosthetic or Native Aortic Scallop Intentional Laceration to Prevent Iatrogenic Coronary Artery Obstruction Procedure. 2021; <https://doi.org/10.1016/j.jecho.2021.01.015>
12. Zakhary WZ, Turton EW, Flo Former A, et al., A comparison of sufentanil vs. remifentanyl in fast-track cardiac surgery patients. 2019; 74: 602-608, <https://doi.org/10.1111/anae.14572>
13. Ackermann MA, Ender JK, Recent Developments in Catheter-Based Cardiac Procedures. 2019; 37: 621-638, <https://doi.org/10.1016/j.janclin.2019.08.014>
14. Besler C, Blazek S, Rommel KP, et al., Combined Mitral and Tricuspid Versus Isolated Mitral Valve Transcatheter Edge-to-Edge Repair in Patients With Symptomatic Valve Regurgitation at High Surgical Risk. 2018; 11: 1142-1151, <https://doi.org/10.1016/j.jcin.2018.04.010>
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19. Elgamal H, Borgmer M, Ender J, et al., Intraoperative Diagnosis of Subaortic Stenosis in a Young Patient Scheduled for Elective Aortic Valve Replacement. 2020; 14: e01288, <https://doi.org/10.1213/xa.00000000000001288>
20. Elgamal H, Luedi MM, Ender JK, et al., Preoperative management of anticoagulation in the surgical patient: Highlights of the latest guidelines. 2020; 34: 141-152, <https://doi.org/10.1016/j.jpba.2020.06.002>
21. Ender A, Ebel S, Hasheminejad E, et al., [Real-time 3 dimensional full volume data set : benefits in problem focused intraoperative transesophageal echocardiography]. 2012; 61: 875-882, <https://doi.org/10.1007/s00101-012-2088-z>
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24. Ender J, Selbach M, Borgmer MA, et al., Echocardiographic identification of iatrogenic injury of the circumferential aorta during minimally invasive mitral valve repair. 2010; 89: 1866-1872, <https://doi.org/10.1016/j.athorvasc.2010.02.059>
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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	240
Number of ICU beds dedicated to CTV patients	Yes	7	24
Is there an emergency department in which cardiothoracic patients are managed 24 hours a day?	Yes	7	
An adequately designed and equipped post-anesthesia care unit for cardiothoracic patients located near the operating room suite?	Yes	5	
Is there monitoring and advanced life support equipment representative of current levels of technology?	Yes	7	
Hybrid Operating Rooms	Yes	5	2
Cardiac Operating Rooms	Yes	7	7
Thoracic Operating Rooms	No		
Vascular Operating Rooms	No	5	1
Catheterisation Labs	Yes	7	4
Electrophysiology Labs	Yes	5	4
Pulmonology Labs	No	5	1
Interventional Vascular Suite	Yes	5	1
Separate CVICU Facility	Yes	7	1
Animal Laboratory for research purposes	Yes	5	1
Outpatient Clinic for perioperative evaluation of patients undergoing cardiothoracic and vascular procedures	Yes	5	1
24-hours acute pain service available for patients undergoing cardiac, thoracic and vascular procedures	Yes	7	1
Meeting Rooms	Yes	7	4
Classrooms with visual and other educational aids	Yes	7	3
Study areas for fellows	Yes	7	1
Office space for faculty members and fellows	Yes	7	5
Diagnostic facilities	Yes	7	1
Therapeutic facilities	Yes	7	1
24-hour laboratory services available in the hospital	Yes	7	1
Cardiac stress testing	Yes	5	2
Cardiopulmonary scanning procedures	Yes	7	2
Pulmonary function testing	Yes	5	1
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?

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 procedures/year	
Cardiac Surgery using CPB	2279	
Cardiac Surgery without CPB	509	
Minimally-Invasive Cardiac Procedures	207	
Interventional Cardiac Catheterization (e.g. TAVI, MitraClip, TICI, PFO/ASD closure)	1245	
Electrophysiology Lab (e.g. mapping, ablation, pacemakers, ICDs)	1300	
Robotic Cardiac Surgery		
Heart, Lung, and Heart-Lung Transplants	35	
ECLS, ECMO, VAD Procedures	46	
Echocardiography Lab	3000	
Thoracoscopic Surgery		
Pulmonary Resection		
Esophageal Surgery		
Tracheo-Bronchial Surgery		
Interventional Pulmonology Procedures		
Major Vascular Procedures		
Interventional vascular procedures		
Neurological monitoring during major vascular surgery		
Acute and chronic pain management services	yes	
Basic or Advanced Research	yes	
Rotations in	Number of performed procedures/basic rotations	Number of performed procedures/advanced rotations
Cardiac anaesthesia	150 / year (10 months)	6 months
Thoracic anaesthesia		
Anaesthesia for major supra-inguinal vascular procedures		
Trans-esophageal and trans-thoracic echocardiography	150 TEE and TTE (2 weeks)	optional 3-6 months TEE
Medical or surgical Critical Care Rotation	1 month PACU	optional 3-6 months optional rotation surgical ICU / PACU
Inpatient or outpatient cardiology		
Inpatient or outpatient pulmonary medicine	no	
Extracorporeal perfusion technology (CPB, ECMO, Nova-Lung)	2 week	
Paediatric cardiothoracic anaesthesia	no	
Basic Research	no	optional 3 months
Clinical Research	no	optional 3 months

Will all fellows entering the CTVA Programme complete each of the fundamental clinical skills of requirements? 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? No

If Yes, describe Extension of clinical tasks and responsibilities (ie. Working under indirect supervision) will depend on the fellow's individual clinical performance

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

Will advanced subspecialty rotations reflect increased responsibility and learning opportunities?	Yes
Maximum Time in Non-Clinical Activities	Depending on the fellow and his/her research interest, 10% working time

10. Financial Statement

An employment contract will be signed with the candidate	Yes	6 months probation period
Accommodation options are provided	No	
Transportation/travel options are provided	Yes	
Monthly Salary	4500.00	Currency Euro
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.	
Anesthesiology faculty members from this department	Yes
Anesthesiology faculty members from other sites	Yes
Non-anesthesiologists from the primary clinical site	no
Non-anesthesiologists from the participating sites	no
Visiting faculty members	Yes
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	Fellows' attendance would be monitored
Critical care appraisal of the literature (i.e., journal club)			yes				Yes
Quality improvement (M&M, QA)		Yes					Yes
Board review (e.g., oral exams, keywords)							yes
Grand rounds	Yes						Yes
Other (specify) Click here to enter text.							Yes

Monthly - TEE grand round; Monthly - research round; Monthly - fellowship teaching round

Formal Course Work Available in In house: US guided puncture, TTE and TEE (basic and advanced), Lung US, Basic Rea, Simulations Training and ALS courses are offered for fellows free of charge

Extra-Institutional Educational Conference Support: German work group "Cardiac Anesthesia" annual conference meeting; 40h German Cardioanesthesia theory course; EAACI/ACC Accredited/Advanced Course; Financial support from HCL

The Opportunity for Exchange with other training facilities

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

Abstracts 4 Peer-Reviewed Journal Articles 1 Review
Book Chapters 0 Other Publications 1 Case Report

Dedicated Research Time According to requirements for specific projects

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 Assessment of patients based on physical examination and history with use of appropriate laboratory tests and examinations. Risk-Score evaluation. Interpretation of cardiac function tests, pulmonary function tests, blood gas analysis, radiological imaging, coagulation tests, renal and liver function tests, endocrine function tests and drug monitoring. Selection and planning of individual anesthesia technique. Postponement or cancellation of surgery decision making. Participation in M and M conferences. Pre-operative fasting and adaptation of pre-operative medication.	Daily premedication visit under supervision. National and international guidelines. Daily morning round. M and M conference. Interactive case presentation and discussion.	Preoperative evaluation according to clinical standard operating procedure. Interactive case discussion. Assessment interview.
1. II. Anesthesia - Clinical part Workplace preparation following environmental safety measures and checklists. Use of technical and medical equipment, inclusive advanced hemodynamic monitoring, neuromonitoring, coagulation monitoring and basic peri-operative TEE. Provision of safe induction, maintenance, and emergence from anesthesia. Defibrillation, cardioversion. Pacemaker modes of action, use of a temporary pacemaker. Central and peripheral venous (ultrasound-guided) access and peripheral arterial catheterization, pulmonary artery catheterization, arterial blood gas collection, and gastric tube insertion. Blood salvage and transfusion. Organ systems and hemostasis homeostasis maintenance throughout cardiac surgery procedures. Interpretation of point-of-care coagulation monitoring (Quantra). Management of patients on cardiopulmonary bypass. Diagnosis and management of intraoperative critical incidents including: Management of patient transport to and from the PACU / intensive care unit. Consideration of ethical and medico-legal aspects.	Communication skills. Clinical standard operating procedures. Teaching of technical skills during first three month	Team Time Out, CIRS. Daily direct observation of procedural skills. Knowledge Assessment Interview.
1. II. Postoperative Care / ICU - Clinical part Physical examinations and patient assessment (e.g., respiratory and peristaltic sounds, temperature gradient capillary refill). Applying sedation, general anesthesia, multimodal analgesia. Management of the airways, inclusive of emergency intubation. Central venous, peripheral venous, arterial catheters, and pleural drains insertion using aseptic techniques. Gastrointestinal tube insertion. Airway maneuvers inclusive of suction of endotracheal secretions, tracheotomy (percutaneous), bronchoalveolar lavage and sampling. Invasive ventilation including prone position ventilation and weaning strategies. Delivery of continuous positive pressure ventilation and non-invasive ventilation. Hemodynamic stabilization and management, inclusive of pacing, cardioversion, defibrillation, advanced and basic life support, vasoactive and inotropic therapy, advanced cardio-vascular monitoring. Volemia management and fluids administration. Management of blood product transfusion and coagulopathy correction. Renal replacement therapy and acute renal failure. Identification of relevant pre-existing co-morbidities. Responding to trends in physiological variables. Patient transportation inter- and intra-hospital. Arterial and central venous line cannulation (ultrasound-guided). Myocardial infarction, pulmonary embolism, tamponade, hypovolemia. Assessment of intravascular volume status. Recognition of substantial pericardial or pleural effusion.	Clinical teaching under supervision. Theoretical interactive discussion. Daily examination under supervision. Self-study	Knowledge Assessment interview. Procedural observation practical skills
1. II. Echocardiography - Clinical part Basic levels of peri-operative TEE, TTE and lung and vessel ultrasonography as performed in the PACU and operating room. Performance of the recommended number of peri-operative echocardiography exam according to EACVI / EAACI certification guidelines	Clinical teaching with the instructor. Monthly TEE/TTE rounds. Daily morning rounds. In house: US guided puncture, TTE and TEE (basic and advanced) courses. Self-study.	TEE-Simulation, Knowledge Assessment Interview. Daily supervision. TEE-Logbook
1. VIII. Extracorporeal perfusion management Providing the theoretical background of extracorporeal circulation and associated subject areas, including: 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	Rotation with perfusionist	Knowledge Assessment

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, theoretical interactive discussion and clinical teaching rounds	Knowledge Assessment Interview
Pre-operative invasive and non-invasive assessment of cardiac diseases and interpretation of results including electrocardiogram (ECG), chest X-ray, echocardiography, cardiac stress testing, coronary angiography, cardiac magnetic resonance imaging (CMR), and computer tomography (CT).	Clinical teaching rounds and self study	Knowledge Assessment Interview
Pre-operative pulmonary evaluation and interpretation of the results, including arterial blood gas and acid-base analysis, pulmonary function tests, oximetry and thoracic imaging.	Clinical teaching rounds and self study, theoretical interactive discussion	Knowledge Assessment Interview
Patient information and informed consent including medico-legal aspects, appraisal of discernment and consent capacity.	Clinical teaching rounds	Knowledge Assessment Interview
Principles of risk and outcome assessment and relevant scoring systems (e.g., EuroSCORE).	Self study and clinical teaching rounds	Knowledge Assessment Interview
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 and clinical teaching rounds	Knowledge Assessment Interview

Principles of intraoperative pharmacology and relevant medication, including positive inotropes, chronotropes, vasoconstrictors, vasodilators, and anti-arrhythmic agents.	Self study and clinical teaching rounds	Knowledge Assessment Interview
Principles of patient blood management, including specific diagnostic tools, application of relevant medication and blood products.	Self study and clinical teaching rounds	Knowledge Assessment Interview
Principles of basic hemodynamic monitoring and relevant techniques, such as arterial pressure measurement, central venous pressure.	Self study and clinical teaching rounds	Knowledge Assessment Interview
Principles of relevant neuromonitoring techniques (e.g., processed electro-encephalography (pEEG), near-infrared sonography (NIRS), somato-sensibile evoked potentials (SSEP), motor evoked potentials (MEP).	Self study and clinical teaching rounds	Knowledge Assessment Interview
Principles of conventional cardiopulmonary bypass techniques. Principles of myocardial preservation. Effects of cardiopulmonary bypass on human physiology, organ function, and pharmacology.	Self study, extracorporeal perfusion technology. Rotation and on site examination	Knowledge Assessment Interview and observation procedural skills
Basic principles of common procedures in cardiac surgery, such as coronary artery bypass grafting (CABG).	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
1. III. Anesthesia management – thoracic surgery (Level A)		
1. IV. Anesthesia management – major vascular surgery (Level A)		
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 and clinical teaching rounds	Knowledge Assessment Interview
Etiology, pathophysiology, diagnosis and treatment plans / bundles according to international standards for specific critical conditions in cardiothoracic and vascular surgery patients.	Self study and clinical teaching rounds	Knowledge Assessment Interview
Circulatory failure (heart failure, shock, cardiorespiratory arrest, cardiac arrhythmias, ischemic heart disease, pulmonary embolism, bleeding complications, vasoplegia).	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Anaphylaxis.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Respiratory failure, including adult respiratory distress syndrome (ARDS), pulmonary edema, pneumothorax, pneumonia.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Acute kidney injury and failure.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Gastrointestinal failure, peritonitis, pancreatitis, liver failure, non-occlusive mesenteric ischemia (NOMI).	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Neurological failure (delirium and coma, cerebral ischemia and bleeding).	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Airway and chest injuries.	On site examination and discussion	Knowledge Assessment Interview
Aortic injuries.	Self study, on site examination and discussion	Knowledge Assessment Interview
Infectious diseases (systemic inflammatory response syndrome (SIRS) and sepsis, including sepsis bundle strategy).	Self study and clinical teaching rounds	Knowledge Assessment Interview
Coagulation disorders (disseminated intravascular coagulopathy (DIC), heparin resistance, heparin-induced thrombocytopenia, severe bleeding, transfusion reaction).	Self study, clinical teaching rounds and on site examination and discussion	Knowledge Assessment Interview
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).	On site examination and discussion	Knowledge Assessment Interview
Indication, contraindication, drug selection, complications: sedation, anesthesia, analgesia, neuromuscular relaxation, nutrition.	On site examination and discussion	Knowledge Assessment Interview
Multimodal and pre-emptive analgesia concepts.	Self-study, Clinical teaching rounds, on site examination and discussion (PACU/ICU)	Knowledge Assessment Interview
Weaning and extubation criteria.	Self-study and on site examination and discussion (PACU /ICU)	Knowledge Assessment Interview
Transfer and discharge criteria.	Self-study and on site examination and discussion (PACU /ICU)	Knowledge Assessment Interview
Indications for and application of extracorporeal circulation in intensive care patients for cardiac and / or respiratory support (e.g., ECMO).	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
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.	On site examination and supervision the first 125 exams; Self study; monthly TEE/TTE round; clinical teaching rounds	TEE and TTE simulation, knowledge Assessment Interview, Logbook
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.	On site examination; Self study; clinical teaching rounds	Knowledge Assessment Interview, Logbook
Procedural sedation guidelines from the European Board of Anaesthesiology (EBA) / European Society of Anaesthesiology (ESA).	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Monitoring and capnography use according to the safety recommendations from EBA.	Self study, on site examination and discussion	Knowledge Assessment Interview
1. VIII. Extracorporeal perfusion management (Level A)		
Basic principles of extracorporeal perfusion.	self-study, Clinical teaching rounds and theoretical discussion with perfusionist	Knowledge Assessment Interview
Types of extracorporeal circuits, e.g., cardiopulmonary bypass (CPB), extracorporeal membrane oxygenation (ECMO).	self-study, Clinical teaching rounds and theoretical discussion with perfusionist	Knowledge Assessment Interview
Types, composition and mechanisms of cardioplegic solutions.	self-study, Clinical teaching rounds and theoretical discussion with perfusionist	Knowledge Assessment Interview
Cardioprotective measures.	self-study, Clinical teaching rounds and theoretical discussion with perfusionist	Knowledge Assessment Interview
Safety recommendations for extracorporeal circulation from the European Board of Cardiovascular Perfusion (EBCP).	self-study, Clinical teaching rounds and theoretical discussion with perfusionist	Knowledge Assessment Interview
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.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Principles of modified cardiopulmonary bypass (minimized CPB, left-heart CPB) and the off-pump revascularization technique.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
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).	Self study, clinical teaching rounds and on site examination and supervision	Knowledge Assessment Interview
Principles and state of the art of mechanical support including intra-aortic balloon pumps, and extracorporeal membrane oxygenation.	Self study, clinical teaching rounds and on site examination and discussion	Knowledge Assessment Interview
Current state of temporary and long-term mechanical circulatory support (ventricular assist devices, total artificial hearts).	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Principles of use of inhaled pulmonary vasodilators (nitric oxide (NO), prostaglandins).	Self study, clinical teaching rounds and on site examination and discussion	Knowledge Assessment Interview
Principles of fast-track surgery.	Self study, clinical teaching rounds and on site examination during PACU rotation	Knowledge Assessment Interview
2. II. Anesthesia management – thoracic surgery (Level A)		
2. III. Anesthesia management – major vascular surgery (Level A)		
Knowledge of perioperative management of TEVAR and EVAR.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Knowledge of the principles of perioperative management of lumbar drainage for aortic interventional procedures.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Excellent knowledge of the principles of spinal cord protection during surgical and interventional aortic procedures.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview

Excellent knowledge of the principles of cerebral function monitoring.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
2. IV. Post-operative management/ Critical care (Level A)		
Knowledge of cardiac and thoracic physiology.	Self study, clinical teaching rounds	Knowledge Assessment Interview
Postoperative cardiac critical care, including analgesia, sedation and ventilation.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Postoperative care and analgesia after thoracic surgery.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
An understanding of the management of cardiac pacing modes.	Self study, clinical teaching rounds and on site examination and discussion	Knowledge Assessment Interview
An understanding of extracorporeal membrane oxygenation and other devices used for mechanical circulatory support.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
2. VII. Advanced perioperative echocardiography (Level A)		
Advanced level of knowledge in peri-operative cardiac echocardiography according to the EACV/ EACTAC process of certification guidelines.	Self study, monthly TEE/TE rounds, clinical teaching rounds and daily on site examination	Knowledge Assessment Interview, Logbook
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.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Understanding of the principles of heart transplantation and clinical management of affected patients.	Self study, clinical teaching rounds and on site examination	Knowledge Assessment Interview
Knowledge of current limitations of organ transplantation and efforts to increase the suitable donor pool.	Self study	Knowledge Assessment Interview
Understanding of the multidisciplinary nature of patient evaluation and listing for transplantation.	Self study, clinical teaching rounds and LVAD/Transplant weekly round	Knowledge Assessment Interview
Knowledge of the principles of donor optimization, management and allograft retrieval.	Self study	Knowledge Assessment Interview
Knowledge of the principles of ex vivo heart and lung perfusion.	Self study	Knowledge Assessment Interview
Understanding of the physiology of the denervated organ.	Self study and clinical teaching rounds	Knowledge Assessment Interview
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.	Self study and clinical teaching rounds	Knowledge Assessment Interview
Understanding of primary graft dysfunction and indications for mechanical circulatory support.	Self study and clinical teaching rounds	Knowledge Assessment Interview
Understanding of the surgical options for lung transplantation, including minimally invasive lung transplantation and various intraoperative extracorporeal support mechanisms.	Self study and clinical teaching rounds	Knowledge Assessment Interview
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.	Self study and clinical teaching rounds	Knowledge Assessment Interview
Knowledge of the principles of primary lung dysfunction and conservative and extracorporeal treatment options, including indications for and techniques of ECMO.	Self study and clinical teaching rounds	Knowledge Assessment Interview
Understanding of immunosuppressive regimens and the role of postoperative infections and sepsis.	Self study and clinical teaching rounds	Knowledge Assessment Interview
2. IX. Research module (Level A)		
Principles of clinical trials, including design, end points, inclusion / exclusion criteria, reporting requirements.	Self study and monthly research round	Logbook
Understanding of Good Clinical Practice (GCP) requirements for clinical research involving patients.	GCP course	Logbook
Understanding of European and specific national ethics frameworks, including research ethics applications, clinical regulatory frameworks and hospital site-specific assessment.	Self-study and GCP course	Logbook
Principles of sample size and study power determinations and basic statistical evaluation	Self study and monthly research round	Logbook
Principles of patient and data confidentiality agreements.	Self study and monthly research round	Logbook
Understanding tools for data collection, analysis and reporting.	Self study and monthly research round	Logbook
Principal international basic science priorities in the field of cardiac anaesthesia.	Self study	Logbook
Ethics and practicalities of biological sample collection, storage and biobanking	Self study	Logbook
Principles and ethics of scientific publishing.	Self study and monthly research round	Logbook

12. Assessment

The Programme Director will evaluate each fellow every 3 months as per EACTAC regulations
https://www.eactac.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

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 EACTAC 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 EACTAC Education Chair

Yes

Periodic evaluation of patient care (quality assurance) is mandatory. Subspecialty trainees in cardiac, thoracic, and vascular anaesthesia will be involved in continuing quality improvement and risk management.

Yes

Trainees in cardiac, thoracic and vascular anaesthesia 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 the main learning activities regarding non-clinical skills and their assessment during the fellowship

The fellow is encouraged to design and participate in original clinical research under active supervision of the fellowship directors and other faculty members. He / She is also encouraged and supported to present his / her research at national and international meetings. The mentor also guides the fellow during preparation of presentations for the weekly departmental teaching sessions, and helps in the developing effective public speaking skills. Feedback is provided to the fellowship director by all the faculty members which acts as the basis of identification of weakness and strengths and subsequent efforts to enhance the non clinical aspects of training.

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 exposed to every clinical aspect of the field of Cardiac Anaesthesia. Direct supervision, assessment through the supervisor and other members of the staff will be reflected in regular interviews; the fellow will be able to objectively define his/her strengths, deficiencies, difficulties and limits. A constructive feedback will guide the fellow into his/her needed learning objectives. The supervisor will concentrate accordingly. Additionally, daily morning rounds act a discussion of the important clinical queries on the previous days cases as well as the day to come. Important diagnostic, monitoring and treatment options are discussed. Important diagnostic imaging findings are reviewed and possible clinical implications evaluated. The process involves a self-reflection with stress on self as well as collective improvement.

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.

Case reviews are always encouraged for interesting or challenging cases in daily morning round. Attendance and active participation in M and M meetings where complications are discussed and alternatives to the given course of treatment discussed in an interdisciplinary setting. Internal SOPs (Standards of Practice) are always under continuous reviewing and updating.

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

The fellow will get the opportunity to discuss the daily cases and TEE images on an informative basis with a member of the faculty and will get a personal feedback at the end of the day. A 360 degrees feedback will take place every 4 months and results will be discussed.

5. Briefly describe one example of a 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.

The fellow will be assigned to review topics of importance for the clinical teaching rounds, with active help and review by the mentor during the preparation and presentation

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

The fellow will actively engage with the patient and family during rotation in the PAC Clinic, at the beginning with direct followed by remote supervision. He will be encouraged to participate in clinical teaching of students and interns once he has acquired the requisite training and mastery of the relevant teaching areas

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.

The fellow is encouraged to participate in the monthly M and M meetings and to present and discuss cases conducted by him with support of the supervising faculty

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 fellow will be handling the fast track PACU where he will lead a team of nurses and will be actively engage with the supervisors as well as members of other clinical specialities (radiology, surgery, etc) to diagnose and manage all complications arising in the acute postoperative phase

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

The fellow will be advised and trained in comprehensive perioperative documentation archiving system for the intraop anaesthetic and TEE records as well as saving of the TEE studies in the departmental TEE archives (Tom Tec)

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.

By reviewing each intraoperative anaesthesia protocol before saving it electronically after completion of every case

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 candidate will be involved in the pre-operative screening process by attending the consultation hours. After an initial period where the candidate will be accompanied by a member of the staff the candidate will be expected to work independently with a back-up on call

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 be encouraged and guided to become increasingly 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.

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 be regularly informed of and encouraged to follow changes in practices as and when recommended by inter hospital speciality groups incorporating the principles of evidence based medicine as well as cost effectiveness in a way to improve patient outcomes as well as risk benefit result

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@imgroup.eu and EACTAIC Education Chair



European Association of Cardiothoracic Anaesthesiology and Intensive Care

Checklist for Hosting EACTAIC Adult Cardiothoracic Anaesthesia Fellowship Programme

Institution Name Heart Center Leipzig

Address Struempellstraße 39, 04289 Leipzig, Germany

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

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



European Association of Cardiothoracic Anaesthesiology and Intensive Care

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

EACTAIC will be notified about the signed consensus between the hosting centre and trainee regarding both parties' financial arrangement and responsibilities at the being of the training.

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

[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 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 checked="" type="checkbox"/> Yes <input 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 type="text" value="4"/> 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) of 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



European Association of Cardiothoracic Anaesthesiology and Intensive Care

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
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 checked="" type="checkbox"/> Yes <input 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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10.15. Accessibility for training on the basic and/or clinical research	<input checked="" type="checkbox"/> Yes <input 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

Herzzentrum Leipzig GmbH - Postadresse: 04281 Leipzig

**Abteilung für Anästhesiologie
und Intensivmedizin**
Chefarzt
Prof. Dr. med. Jörg Ender

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Fax: 0341 / 865-1820
Anaesthesie.herzzentrum@helios-
gesundheit.de

Leipzig, 30.05.2022

Dear Mohamed,

We would hereby like to apply to the EACTAIC Educational committee for reaccreditation of Heart center Leipzig as a center for advanced cardiac anesthesia fellowship of the EACTAIC.

Heart center Leipzig is one of the leading tertiary cardiac centers in Germany and offers the complete diagnostic and treatment spectrum for all diseases of the cardiovascular system.

We have been one of the pioneering centers for the fellowship program in Europe. In the last 13 years, 18 fellows have been trained till date in cardiac anesthesia and perioperative echocardiography at the Heart center Leipzig, all of whom have gone on to practice as successful experts in the field of cardiac anesthesia in reputed centers of cardiac surgery in different parts of the world.

Seite 1 / 2

We also confirm hereby that the hospital management and departmental head have agreed that the fellowship directors will dedicate 10% of the working time towards the fellowship program.

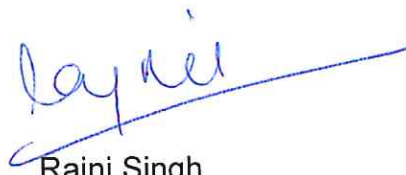
Thank you for your time and consideration,



Dr. med. Massimiliano Meineri

Co-Chair

Department of Anesthesiology and
Intensive Care Medicine



Rajni Singh

Fellowship Director

Department of Anesthesiology and
Intensive Care Medicine

Dear Mohamed,

We would hereby like to apply to the EACTAIC Educational committee for reaccreditation of Heart center Leipzig as a center for basic and advanced cardiac anesthesia fellowship of the EACTAIC.

Heart center Leipzig is one of the leading tertiary cardiac centers in Germany which offer the complete diagnostic and treatment spectrum for all diseases of the cardiovascular system.

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We also confirm hereby that the hospital management and departmental head have agreed that the fellowship directors will dedicate 10% of the working time towards the fellowship program.

Thank you for your time and consideration,

Ms Dr Flo-Forner

Ms Rajni Singh

(Co-directors, Fellowship Program, Heart center Leipzig)

EACTAIC Adult Cardiac Anaesthesia Fellowship Programme

Department of Anesthesiologie and Intensive Care Medicine, Heart Center Leipzig

	Monday	Tuesday	Wednesday	Thursday	Friday
OR 1	Minimalinvasive heart valve surgery	Minimalinvasive heart valve surgery	Off-pump bypass surgery (OPCAP, MIDCAB)	Minimalinvasive heart valve surgery	Off-pump bypass surgery (OPCAP, MIDCAB)
	Off-pump bypass surgery (OPCAP, MIDCAB)	Conventional valve surgery	Conventional coronary bypass surgery	Conventional valve surgery	Conventional coronary bypass and valve surgery
OR 2	Pediatric cardiac surgery	Pediatric cardiac surgery	Pediatric cardiac surgery	Pediatric cardiac surgery	Pediatric cardiac surgery
	Pediatric cardiac surgery	Conventional valve surgery	Pediatric cardiac surgery	Conventional coronary bypass surgery	Off-pump bypass surgery (OPCAP, MIDCAB)
OR 3	Off-pump bypass surgery (OPCAP, MIDCAB)	Minimalinvasive heart valve surgery	Off-pump bypass surgery (OPCAP, MIDCAB)	Conventional coronary bypass surgery	Conventional coronary bypass and valve surgery
	Off-pump bypass surgery (OPCAP, MIDCAB)	Conventional coronary bypass surgery	Conventional coronary bypass surgery	Conventional coronary bypass surgery	Off-pump bypass surgery (OPCAP, MIDCAB)
OR 4	Conventional coronary bypass and valve surgery	Conventional coronary bypass and valve surgery	LVAD	Minimalinvasive heart valve surgery	Conventional valve surgery
	Off-pump bypass surgery (OPCAP, MIDCAB)	Conventional coronary bypass surgery	Conventional coronary bypass surgery	Off-pump bypass surgery (OPCAP, MIDCAB)	Conventional coronary bypass surgery
OR 5	Conventional coronary bypass and valve surgery	Combined valve surgery	Conventional coronary bypass and valve surgery	Conventional coronary bypass and valve surgery	Conventional coronary bypass and valve surgery

	Minimalinvasive heart valve surgery	Conventional coronary bypass surgery	Conventional valve surgery	Conventional coronary bypass surgery	Conventional valve surgery
OR 6	Combined valve surgery	Conventional coronary bypass surgery	Combined valve surgery	Conventional coronary bypass surgery	Off-pump bypass surgery (OPCAP, MIDCAB)
	Conventional valve surgery	Minimalinvasive heart valve surgery	Conventional coronary bypass surgery	Conventional valve surgery	Conventional valve surgery
Hybrid OR 8	Interventional Aortic Valve Procedures (TAVR) x 4	Interventional Aortic Valve Procedures (TAVR) x 4	Interventional Mitral and Tricuspid Valve Procedures x 3	Interventional Mitral and Tricuspid Valve Procedures x 3	Interventional Aortic Valve Procedures (TAVR) x 4
Hybrid OR 9	Interventional Aortic Valve Procedures (TAVR) x 4	Interventional Aortic Valve Procedures (TAVR) x 4	Interventional Aortic Valve Procedures (TAVR) x 4	Interventional Aortic Valve Procedures (TAVR) x 4	Interventional Aortic Valve Procedures (TAVR) x 4
Others	7:05 Early daily discussion	7:05 Early daily discussion	7:05 Early daily discussion	7:05 Early daily discussion	7:05 Early daily discussion
	17:00 Monthly – research and investigation session	17:00 Monthly echocardiography (TEE and TTE) session	Biweekly 6:30 interdisciplinary morbidity & mortality session	7:00 weekly – clinical sessions	

This is an example of a weekly schedule during the fellow's cardiac anesthesia rotation period at the hosting center. Each day our department provides anesthesia for 6 cardiac surgery operating rooms and 2 Hybrid OR.