



ESER

European Society of
Emergency Radiology

European Diploma in Emergency Radiology (EDER)

European Board of Emergency Radiology

1. Aim(s) and target group

The European Society of Emergency Radiology (ESER) plans to introduce the 'European Diploma in Emergency Radiology' (EDER) with the beginning of 2018. This diploma shall be a common European qualification for emergency radiology imagers and will help to standardise training and expertise in emergency radiology across Europe. The EDER is submitted for endorsement to the European Society of Radiology (ESR).

The European Society of Emergency Radiology (ESER) aims to unify and offer the acquisition of emergency radiology (ER) competencies and certificates. Consequently, a curriculum for the European Diploma in Emergency Radiology (EDER) was developed as concrete implementation of the [ESR European Training Curriculum \(ETC\) for Subspecialisation in Radiology \(Level III\)](#) for ER using the Six-Step Approach by Kern [1]. As the curricula of both ETC Level III and EDER have a modular structure based on anatomical regions, the learning objectives were also grouped this way.

The candidates have to be fully trained, licensed and practicing radiologists with at least one year of subspecialty training. Full subspecialisation should only take place after the designated time for radiology residency, which should usually be no less than 5 years. For candidates with less than 5 years of training 'Proof of experience' as a supervised staff radiologist is required.

2. Fee structure

Application fee for the diploma is set as following:

Full member: € 400.00

Corresponding member: € 600.00

If a candidate fails the European Diploma in Emergency Radiology he/she has the opportunity to retake the examination one year later. A reduced fee of € 200.00 will be granted for a re-examination.

Diploma renewal fee is set with € 50.00.

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3. Eligibility criteria

Applicants for the European Diploma in Emergency radiology must fulfil several requirements and provide documents as follows:

(If applicable an English translation must also be provided in addition to original documentation)

1. Board Certification

The candidate has to be a board certified radiologist and needs to send a proof for verification.

2. Training in Radiology

The candidate has to have at least five (5) years of national training in radiology, plus one (1) year of subspecialty training. A proof, signed by the head of department or programme director has to be sent for verification.

If less than 5 years of training a 'proof of experience' is required.

3. Training in Emergency Radiology

Approval from the candidate's head of department or Emergency Radiology programme director, confirming that the candidate was trained in emergency radiology for a cumulative duration of at least one (1) year. The proof has to be sent for verification.

Furthermore, please indicate the name/email of your head of department or Emergency Radiology programme director within the application form.

4. Proof of practice

Applicants need to send a proof of practice.

5. Webinars

ESER is offering 11 diploma related webinars per year. The applicant must attend all webinars. Webinars are free of charge but require active ESER membership.

6. Workshops

ESER is offering 11 diploma related workshops per year. The application must attend all workshops. A separate fee for each workshop is applicable.

7. Accepted paper/poster at ESER Annual Meeting

Applicants must have at least one (1) paper/poster abstract, covering an ER-topic, accepted by the ESER Board. If not presented during an ESER Annual Scientific Meeting, a proof of paper/poster presentation has to be sent for verification.

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8. Curriculum Vitae

Applicants must provide a CV including a record of:

- previous training posts in general and Emergency Radiology
- all scientific and educational activities

9. CME credits in Emergency Radiology

The candidate has to proof at least 25 CME credits (or equivalent national credits) within the last three years specifically in Emergency Radiology with various modalities.

10. ESER and ESR Membership

Proof(s) of being member of ESER and member of ESR in good standing (full or corresponding member).

4. Knowledge base

The knowledge base is in line with the European Training Curriculum for Subspecialisation in Radiology (Level III) published by ESR in March 2015

(<http://www.myESR.org/TrainingCurriculum>):

NEURO / MAXILLOFACIAL / HEAD & NECK

- To differentiate traumatic from non-traumatic and axial from extra-axial intracranial haemorrhages
- To understand the imaging protocol in evaluating intracranial haemorrhages
- To know the clinical and imaging features of traumatic osseous and non-osseous injuries of the neurocranium and facial bones
- To know the clinical and imaging features of traumatic osseous and soft tissue injuries of the spine, spinal cord, nerve roots and peripheral nerves
- To understand the need for imaging in patients with trauma of the neuroaxis based on up-to-date classifications and test characteristics
- To explain penetrating injury patterns and adequately analyze trajectory / direct injury and complications of indirect injury
- To understand the clinical and imaging features of infectious and inflammatory axial and extra-axial entities and their complications and to know the appropriate imaging techniques (CT, CTA/CTV, MRI including advanced sequences), both within and around the neurocranium, facial bones and spine
- To understand the clinical and imaging features of arterial and venous occlusive disease and sequelae to the brain, with adequate choice of imaging protocol
- To know the typical and atypical fracture patterns in the skull and spine and their respective common and rare associated injuries, explaining their mechanism of injury and understanding appropriate imaging protocols for the low- or high risk patient

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- To understand current clinical and radiological algorithms in emergency neuro imaging and their implications

CARDIOVASCULAR AND THORACIC IMAGING

- To understand the clinical and imaging features of simple and complicated trauma patterns to the chest
- To know the clinical and imaging features of non-traumatic thoracic emergencies with common and rare acute pathology of the lungs, airways and pulmonary vasculature
- To understand the imaging findings and treatment options of traumatic injuries of the thoracic parenchymal structures and pleural spaces and to also know rare traumatic entities
- To know common and rare traumatic and non-traumatic acute pathologies of the cardiovascular and mediastinal structures (heart, pericardium, mediastinum, aorta and branching vessels) and to understand adequate follow-up strategies, including the timely involvement of interventional radiologists for successful non-operative management

ABDOMINAL AND GENITO-URINARY IMAGING

- To know the most appropriate imaging modality for traumatic injuries (US, CI, CTA) to parenchymal organs, hollow viscera, peritoneum and retroperitoneum, aorta/major vessel and soft tissues
- To know the most appropriate imaging technique (RX, US, CT, MRI) for non – traumatic emergencies in abdominal imaging
- To understand the clinical and imaging features of common and rare traumatic injuries to parenchymal organs, hollow viscera, aorta / major vessels and soft tissues and to know the adequate follow-up strategies, including timely involvement of interventional radiologists for successful non-operative management
- To know common and rare non-traumatic emergencies in abdominal imaging including infectious, inflammatory and ischemic entities of the abdominal parenchymal organs, hollow viscera, vascular system and peritoneal lining and their complications
- To differentiate simple and complex pelvic fractures and associated injuries and to know ad-hoc imaging protocol amendments to demonstrate vascular or bladder injury
- To explain imaging strategies in trauma work-up and the up-to-date application of injury grading based on imaging
- To understand spontaneous haemorrhage patterns depending on the organ of origin and the implications for interventional radiology treatment
- To differentiate free fluid, fluid collections and abscesses of common and rare etiologies, both acute and sub-acute/chronic
- To differentiate common and rare acute and sub-acute obstructive entities in the hepatobiliary, genito-urinary and gastro-intestinal tracts
- To differentiate normal from abnormal findings in the pregnant patient and the implication in emergency imaging with respect to the imaging protocol
- To understand the clinical and imaging findings of common and rare scrotal acute traumatic and non-traumatic scrotal pathologies

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MUSCULOSKELETAL IMAGING

- To understand the clinical and imaging features of common and rare traumatic skeletal injuries in emergency radiology and to differentiate these from normal variants and non-traumatic osseous pathology (infectious, inflammatory, metabolic, oncologic), in upper and lower extremities as well as the axial skeleton including the pelvis and acetabulum
- To differentiate acute and sub-acute/chronic muscular and musculotendinous injuries in emergency radiology
- To know the clinical and imaging features of common and rare joint dislocations and associated osseous and soft-tissue injuries
- To understand the clinical and imaging features of acute traumatic and non-traumatic nerve pathology

OTHER (Special patient groups, such as polytrauma, children, pregnant woman, and miscellaneous topics, such as radiation protection, organisational aspects, decisions between life and death)

- To describe the indications and contraindications for the various imaging examinations in special patient groups
- To understand the radiation burden, risks and protection strategies of different examinations in special patient groups
- To describe the various phases of contrast media application (plain, arterial, portal, delayed, hepatobiliary) and their respective values according to the clinical problem in special patient groups
- To understand key principals of team building and respective roles of team members
- To know key principles in quality assurance and management

5. Examination structure

The examination takes place twice a year, once at the ESER annual meeting and once during ECR.

The examination consists of written and oral components, both contributing 50% of the total score for the exam. Both parts of the examination (oral and written) have to be passed.

Each candidate will be examined by ESER qualified examiners.

a) Written examination

The written part of the examination will be run using a qualified software like the EDiR software or similar:

- 20 multiple choice questions
- MCQs – five answer options, 1 or more of the given answer options are correct.
- No negative marking for incorrect answers

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- 10 pictorial multiple choice questions – five answer options, 1 or more of the given answer options are correct
- No negative marking for incorrect answers
- The exam lasts 60 minutes
- Candidates knowledge will be tested in all aspects relevant to emergency radiology such as anatomy, physiology, clinical practice, pathology, protocols, quality parameters

b) Oral examination

This consists of a 20-minute oral examination by ESER representatives in English language. The examiners will show each candidate a series of cases. The examiners will test all aspects of the cases relevant to emergency radiology – indication, clinical background, diagnosis, technical parameters, limitations, teamwork, therapeutic options, ethical aspects, etc.

6. Terminology

Successful candidates will be awarded the “European Diploma in Emergency Radiology” and may add the title “FESER - Fellow of the European Society of Emergency Radiology.” to their names. The fellow title is allowed to be used/is active until the respective expiration date of the diploma.

7. Diploma renewal after five years

ESER will renew the European Diploma in Emergency Radiology every five years for full/corresponding radiologist members in good standing of ESR and ESER upon proof of at least 100 CME credits in emergency radiology (or equivalent national credits) and the visit of at least one ESER Annual Meeting within past 60 months.

A renewal fee of € 50.00 will be applicable.

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