



## **Neuroimaging**

### **Pilot project - Blended Learning Course:**

Presence phase at 27th International Epilepsy Congress in Singapore,  
followed by 4 months of e-learning

#### **Course description**

The course will cover the methodological basics of neuroimaging techniques and their application to the diagnostic work up and management of people with new onset or chronic epilepsy, adults and children.

It will be pragmatic and aimed at the general neurologist / pediatric neurologist / pediatrician / radiologists dealing with - but not necessarily exclusively involved in – epilepsy care.

The course material will focus on the basic role of different imaging techniques for the diagnosis and management of epilepsy: in particular the role of MRI in temporal and in extratemporal lobe epilepsy; SPECT, PET and PET-CT in partial epilepsy with negative MRI; functional MRI in presurgical work up of pharmaco-resistant partial epilepsies.

Special attention will be given to practical aspects, including minimal standards for techniques, optimisation of neuroimaging requests and reports, common misconceptions (positive and negative) and potential pitfalls, specifically in the context of epilepsy, adults and children.

The course will include definitions and examples of the cerebral lesions involved in epilepsy and their functional impact, together with neuroanatomy tutorials to help with accurately localizing lesions in the brain. The course will discuss the sensitivity, specificity and prognostic value of imaging features, benign variants and artefacts, and the possible diagnostic significance of non epileptogenic lesions as well as maturational aspects.

The course will address all aspects of neuroimaging techniques, extending from standard CT and MRI to presurgical work up including SPECT, PET, functional MRI and multimodality imaging, with their specific indications and requirements. Since this is the first basic course, intended to be relevant for day to day practice in average clinical circumstances, the emphasis will be on standard MRI and functional neuroimaging techniques most commonly used in pharmaco-resistant epilepsies.

Clinical cases will be presented to illustrate the role of each imaging modality for diagnosis, prognosis and management of epilepsy in adults and children, and increase interactions between participants. Imaging material will be submitted exclusively by the teachers.

Basic practical knowledge of MRI (not only of CT) and a minimum of daily epilepsy practice are a prerequisite, as image analyzing techniques and clinical cases presented will only focus on epilepsy.

The course will commence with a half day of teaching sessions (Saturday, July 7<sup>th</sup>, 2007) during the 27<sup>th</sup> International Epilepsy Congress in Singapore, focusing on general aspects, some specific aspects of MRI and ictal SPECT and on the practical aspects of participation in the course, including an introduction to the e-learning platform of the Virtual Epilepsy Academy.

#### **Learning objectives**

The course, on completion, will enable participants to improve the quality of the diagnostic approach in adults and children with new onset as well as chronic epilepsies. It will help to decide on the appropriate imaging study indicated for a specific clinical problems. It will improve the competence and confidence in the recognition, localization, and differentiation of

epileptogenic lesions and functional impact of epilepsy as well as the understanding of the clinical significance of these two factors for diagnosis and management of epilepsy in adults and children.

**Entry criteria:**

- Minimum 3 years training in neurology, neuropediatrics, neuroradiology, neuropsychology, clinical neurophysiology, psychiatry or neurosurgery or combinations of these;
- A minimum of 4 months of EEG training;
- Mandatory participation in the initial workshop at the 27<sup>th</sup> International Epilepsy Congress on Saturday, July 7, 2007 from 14:00 – 18:00 hrs.

**Certification:** Successful participation in this course will be awarded up to 65 CPs (equivalent to 1 month) for the core curriculum “Neuroimaging” for the European Certification in Epileptology for Medical Doctors. For successful participation, participants have to attend the initial workshop and complete the tasks during the e-learning phase, including a series of general questions and diagnostic tasks which will be presented at the end of the course.

During the distance learning tutorials, participants are expected to spend about 4 hours per week for individual study of the learning material provided, to take part actively in the discussion fora and to complete tasks.

**Applications** sent to the EUREPA Secretariat should contain

- A signed confirmation of the neurology department on the 3 years of neurological or comparable training
- A signed confirmation on the 4 months of EEG training
- CV
- List of publications

**Duration:** The course will start with a half day workshop at the 27<sup>th</sup> International Epilepsy Congress in Singapore (Saturday, July 7, 2007 from 14:00 – 18:00 hrs) followed by about 4 months of distance learning starting in mid September 2007.

**Deadline** for application is **April 30, 2007**.

**Course Fee:** Euro 450 respectively Euro 400 for EUREPA members. A restricted number of bursaries will be available.

**Number of participants:** 30

**Technical requirements for participation in the e-learning phase:**

Personal Computer with CD-Rom drive

Operating system: Windows 95, 98 / 2000 / NT / XP (incl. windows media player), Apple; Linux

Internet access: Modem, ISDN (64 kbit) or DSL (recommended)

Browser: Internet Explorer (recommended) 5.5 (and higher) (cookies activated); Netscape Navigation; Safari; Mozilla

**Course Directors:**

Catherine Chiron, MD, PhD, Co-chair of the ILAE Commission on Diagnostic Methods  
William Gaillard, MD, PhD, Chair of the ILAE Commission on Diagnostic Methods

**Responsibles for the course content:**

Fernando Cendes, MD, PhD; Catherine Chiron, MD, PhD; William Gaillard, MD, PhD;  
Csaba Juhász, MD, PhD; Matthias Koepp, MD, PhD; Ruben Kuzniecky, MD, PhD.

For **application** and further **information**, please contact:

Verena Hézszer-v.Wehrs, M.A.

Maraweg 21, D – 33617 Bielefeld, Germany

Tel. +49 521 144 – 4310

Fax +49 521 144 – 4311

Email: [office@epilepsy-academy.org](mailto:office@epilepsy-academy.org), URL: <http://www.epilepsy-academy.org>