ESOR
EUROPEAN SCHOOL OF RADIOLOGY

GALEN FOUNDATION Course
NEURORADIOLOGY

LEVEL I+II

Learning Objectives
NEURORADIOLOGY

June 25–27, 2015
Saint Petersburg/Russia

CT perfusion of the brain
I. Pronin, Moscow/RU

- to become familiar with the technique of brain perfusion CT
- to understand the added diagnostic value of perfusion CT in assessment of gliomas
- to understand the input of perfusion CT in different diagnosis of brain lesions
- to learn about input of perfusion CT for assessment of treatment

Dementia: role of MRI
N. Ananyeva, Saint Petersburg/RU

- to become familiar with the most common ethiologies of dementia
- to understand how to perform the correct imaging in the work-up of patients with dementia
- to review the MRI findings of the most common dementia syndromes (AD, VasD, FTLD, NTD)

MRI monitoring of cerebral gliomas after surgery and adjuvant therapy
T. Trofimova, Saint Petersburg/RU

- to understand the possible MRI criteria for assessing the effectiveness after neurosurgery and adjuvant therapy
- to understand the possible complications of radiotherapy
- to learn the basic principles of the differential diagnosis of complications developing after neurosurgery and radiotherapy
- to learn how to select the protocols for effective differential diagnosis after neurosurgical treatment and radiotherapy

Pattern recognition in neuroradiology
L. Van den Hauwe, Antwerp/BE

- to learn how to use anatomic location in CNS lesion characterisation (intra- vs. extra-axial, supra- vs. infratentorial)
- to learn how to correlate signal intensity changes with biochemical and pathological findings
- to learn how to integrate these findings in a pattern analysis approach to establish the (differential) diagnosis

MRI of the brain: why, how, when
R. Gasparotti, Brescia/IT

- to learn about the most common neurological disorders that require MR investigation
- to understand the specific role of MRI in the assessment of brain neurological disorders and to learn the appropriate protocols
- to become familiar with typical MR imaging findings in main neurological disorders
- to consolidate which MR imaging techniques should be used to answer the clinical question based on the patient's clinical/neurological symptoms

Congenital abnormalities of the brain
M. Argyropoulou, Ioannina/GR

- to be able to identify the most common congenital abnormalities of the brain
- to become familiar with the pros and cons of US in detecting congenital malformations of the brain
- to learn about the role of MRI in exploring the main malformation and in detecting additional abnormalities

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Brain injury
P.M. Parizel, Antwerp/BE

- to present a pattern-based diagnostic approach to the patient with acute traumatic brain injury
- to review different types of traumatic intracranial lesions, and explain the difference between primary and secondary traumatic brain lesions
- to illustrate how the brain can be severely damaged in closed head injuries (deceleration trauma, diffuse axonal injuries)
- to demonstrate how advanced MRI techniques, such as DWI and DTI, can reveal evidence for micro-structural brain damage

CNS malignancies
Y. Özsunar, Aydin/TR

- to understand characteristic features and imaging findings of central nerve system malignancies
- to become familiar with applications and pitfalls of various radiological imaging techniques that are used in tumour imaging
- to discuss the differential diagnosis of malignant tumours versus non tumoural pathologies of central nerve system

CNS infections
S. Karampekios, Heraklion/GR

- to become familiar with cerebral and spinal infections (viral, bacterial and fungal) and their imaging characteristics
- to learn the applications of the advanced MR techniques (DWI, PWI, MR Spectroscopy) for the detection and characterisation of infectious lesions
- to learn how to differentiate CNS infections from tumour
- to become familiar with new concepts in infectious diseases of the brain, e.g. immunity reconstituted inflammatory syndrome (IRIS)

Imaging in epilepsy
P. Sundgren, Lund/SE

- to gain knowledge about the different causes of epilepsy
- to understand how to perform the correct imaging in the work-up of patients with epilepsy
- to gain knowledge about the imaging characteristics of mesial temporal sclerosis and malformations of cortical development
- to become aware of a proper work-up approach for patients with refractory epilepsy

Stroke: diagnosis and therapy
P. Vilela, Lisbon/PT

- to become familiar with the most common ethiologies and pathophysiologic mechanisms of stroke in the adult population
- to recognise the imaging signs of early infarct on CT and MRI
- to understand the importance of multimodal CT and/or MR imaging protocols in stroke
- to overview the current treatment strategies of stroke treatment and its implication on stroke imaging

White matter diseases
M. Thurnher, Vienna/AT

- to learn the classification of white matter diseases (WMD) of the brain
- to review the MRI findings in multiple sclerosis (MS)
- to learn how to distinguish MS from other white matter diseases and MS mimics