

# 19th WPA World Congress of Psychiatry

## Course: Neuroimaging

21 August 2019

### COURSE DESCRIPTION

#### Title: Neuroimaging for Psychiatrists in Clinical Practice

In the last years, exponential technological developments in the neuroimaging field, mainly in the magnetic resonance area, have revolutionized how we look at the brain, in terms of morphology and function. Neuroimaging techniques have gained an increasingly more relevant role not only in terms of research in the wide field of Psychiatry but also in the daily clinical approach of patients with psychiatric symptoms.

So, it is important for Psychiatrists to be familiarized with the basic principles of imaging techniques routinely used, to understand core neuroanatomical imaging data and to appropriately select the most adequate imaging method to study patients with psychiatric symptoms.

Recognizing the need for update and complementary training in the neuroimaging area, in this course we will focus on the clinical application of Computed tomography (CT) and magnetic resonance (MR) to study psychiatric symptoms. The usage of these imaging techniques on the increasingly vast field of neuroimaging research in Psychiatry will be only briefly addressed in complement of the clinical application of these techniques.

The course will focus on three main areas:

1. **Neuroimaging anatomy** – review and update on basic anatomical knowledge of brain structures using sectional imaging methods.
2. **Neuroimaging of Dementia** – imaging methods are an important part of the diagnostic investigation of patients with cognitive decline. Understanding the normal ageing imaging findings, as well as the selection of an appropriate imaging method and a correct clinic-imaging integration is crucial for correct patient management.
3. **Neuroimaging and Psychiatric symptoms** – review and development of further knowledge in the usage of neuroimaging technique to study patients with psychiatric symptoms.

The course will end with an interactive section with clinical cases for clinic-imaging discussion.

#### Learning objectives

- Review and update on CT and MR sectional neuroanatomy;
- Update on CT and MR basis physics principles;
- Understand the normal ageing imaging findings in CT and MR imaging;
- Neuroimaging of Dementia: role of imaging methods; selection of the most appropriate imaging method and appropriate protocol; review of the main imaging characteristics of the most common causes of dementia.
- Neuroimaging of organic causes of psychiatric symptoms: understand the main indications and selection criteria of the most appropriate imaging method in the clinical approach to a patient with psychiatric symptoms; review of imaging findings in the most common causes of secondary psychiatric symptoms.

## Schedule

	<i>Topic</i>	<i>Subject</i>
08:00 – 09:00	<b>Neuroimaging anatomy</b>	Basic notions of neuroanatomy. Normal brain anatomy in MR and CT sectional images.
09:00 – 10:00	<b>Neuroimaging of Dementia</b>	Imaging studies in the investigation of patients with cognitive decline. How to image?
10:00 – 10:15	<i>Coffee-break</i>	
10:15 – 11:15	<b>Neuroimaging and Psychiatric symptoms</b>	How to use imaging studies to investigate patients with psychiatric symptoms?
11:15 – 12:00	<b>Practical Clinical Cases</b>	Discussion of clinical cases.

## Course length

The course will have a duration of 4 hours, starting at 08:00.

## References

Appropriate references will be provided in the course end-outs.

## COURSE AUDIENCE

The **Neuroimaging for Psychiatrists in Clinical Practice** course is addressed to medical doctors, in their residency or already Psychiatry specialists.

The course will have a minimum number of participants of 12 and a maximum of 20.

## COURSE MATERIAL

All the presented material will be provided as course end-outs to all the attendants. There will be small group discussion of the clinical cases.

## COURSE EVALUATION

The course will be evaluated by the participants.

	<b>Topic</b>	<b>Teacher</b>	<b>Subject</b>
08:00 – 09:00	<b>Neuroimaging anatomy</b>	Professor Lia Neto	Basic notions of neuroanatomy. Normal brain anatomy in MR and CT sectional images.
09:00 – 10:00	<b>Neuroimaging of Dementia</b>	Dr. Carlos Morgado	Imaging studies in the investigation of patients with cognitive decline. How to image?
10:00 – 10:15	<i>Coffee-break</i>		
10:15 – 11:15	<b>Neuroimaging and Psychiatric symptoms</b>	Professor Sofia Reimão	How to use imaging studies to investigate patients with psychiatric symptoms?
11:15 – 12:00	<b>Practical Clinical Cases</b>	Dr. Manuela Abreu and Dr. Carla Guerreiro	Discussion of clinical cases.