

Use of MR imaging in diagnosis and management of multiple sclerosis

TUESDAY, 28 JUNE 2016

- 08.15 - 08.30** **Course Presentation**
N. De Stefano (Siena, IT), A. Rovira (Barcelona, ES)
- 08.30 - 09.15** **Introductory Lecture: History of MRI in MS**
F. Fazekas (Graz, AT)
- 09.15 - 11.15** **Session 1: MRI Diagnosis 1**
Chairs: X. Montalban (Barcelona, ES), A. Rovira (Barcelona, ES)
- 09.15 Typical brain and spinal cord MR features
A. Rovira (Barcelona, ES)
- 09.45 Atypical MR features
C. Enzinger (Graz, AT)
- 10.15 Differential diagnosis and MS mimics
N. De Stefano (Siena, IT)
- 10.45 Diagnostic criteria
X. Montalban (Barcelona, ES)
- 11.15 - 11.45** **Coffee Break**
- 11.45 - 12.45** **Session 2: MRI Diagnosis 2**
Chairs: J. Palace (Oxford, UK), A. Thompson (London, UK)
- 11.45 Primary progressive MS
A. Thompson (London, UK)
- 12.15 Pediatric MS
B. Banwell (Toronto, CA)
- 12.45 - 14.15** **Lunch Break**
- 14.15 - 15.15** **Session 2: MRI Diagnosis 2 (continued)**
Chairs: J. Palace (Oxford, UK), A. Thompson (London, UK)
- 14.15 Neuromyelitis optica spectrum disorders
J. Palace (Oxford, UK)

- 14.45 *ADEM*
B. Banwell (Toronto, CA)
- 15.15 – 16.45 Session 3: MRI in monitoring disease progression and treatment effect**
Chairs: D. Miller (London, UK), N. De Stefano (Siena, IT)
- 15.15 Conventional MRI in monitoring and predicting treatment response
L. Kappos (Basel, CH)
- 15.45 Brain/spinal cord atrophy as a predictor of disease progression
D. Miller (London, UK)
- 16.15 MRI in monitoring treatment related adverse effects and safety aspects concerning gadolinium
T. Yousry (London, UK)
- 16.45 - 17.00 Coffee Break**
- 17.00 - 18.00 Computer Assisted Hands-on Workshop**
Basic Quantitative MRI analysis in MS, Part 1 – Lesion segmentation
S. Ropele (Graz, AT)
Group 1
- 19.30 Dinner at the hotel**

WEDNESDAY, 29 JUNE 2016

- 08.45 - 09.45 Computer Assisted Hands-on Workshop**
Basic Quantitative MRI analysis in MS, Part 2 – Brain atrophy
M. Battaglini (Siena, IT), S. Ropele (Graz, AT)
Group 1
- 09.45 - 11.15 Workshops 1-3: How and when should brain and spinal cord MRI be performed in the diagnostic and monitoring process?**
(3 groups, 30 minutes each)
- Workshop 1: Assessing brain lesions
A. Rovira (Barcelona, ES), T. Yousry (London, UK)
- Workshop 2: Assessing spinal cord lesions
H. Kearney (London, UK), C. Lukas (Bochum, DE)
- Workshop 3: Assessing spinal cord volumes
P. Valsasina (Milan, IT)
- 11.15 - 11.45 Coffee Break**

- 11.45 - 12.45** **Session 4: MRI: advanced techniques. Their value in clinical practice and research**
Chairs: M. Filippi (Milan, IT), C. Enzinger (Graz, AT)
- 11.45 Advanced techniques for assessing focal lesions
D. Reich (Bethesda, US)
- 12.15 Advanced techniques for assessing diffuse damage
M. Filippi (Milan, IT)
- 12.45 - 14.15** **Lunch Break**
- 14.15 - 15.15** **Session 4: MRI: advanced techniques. Their value in clinical practice and research (continued)**
Chairs: M. Filippi (Milan, IT), C. Enzinger (Graz, AT)
- 14.15 Grey matter imaging
J. Geurts (Amsterdam, NL)
- 14.45 Spinal cord and optic nerve imaging
H. Kearney (London, UK)
- 15.15 - 16.45** **Workshops 4-6: Advanced MR techniques**
(3 groups, 30 minutes each)
- Workshop 4: Microstructural and molecular measures
C. Wheeler (London, UK), B. Bodini (Paris, FR)
- Workshop 5: fMRI: task related, resting state
M. A. Rocca (Milan, IT), D. Pareto (Barcelona, ES)
- Workshop 6: MR spectroscopy
N. de Stefano (Siena, IT), M. Inglese (New York, US)
- 16.45 - 17.00** **Coffee Break**
- 17.00 - 18.00** **Computer Assisted Hands-on Workshop**
Basic Quantitative MRI analysis in MS, Part 1 – Lesion segmentation
S. Ropele (Graz, AT)
Group 2
- 19.30** **Summer School Dinner**

THURSDAY, 30 JUNE 2016

08.45 - 09.45

Computer Assisted Hands-on Workshop

Basic Quantitative MRI analysis in MS, Part 2 – Brain atrophy

M. Battaglini (Siena, It), S. Ropele (Graz, AT)

Group 2

09.45 - 11.15

Working Groups

(3 working groups, 90 minutes each)

Participants will work in 3 working groups (A, B, C) and prepare 3 MRI projects for clinical practice and research. The projects should consider MRI techniques, timing, and measures

Participants will receive feedback from three senior investigators (facilitators).

Working Group A: MS Diagnosis

Facilitators: X. Montalban (Barcelona, ES), F. Fazekas (Graz, AT), B. Banwell (Toronto, CA)

Working Group B: MRI in monitoring and predicting treatment response (relapsing remitting MS)

Facilitators: A. Rovira (Barcelona, ES), D. Reich (Bethesda, US), T. Yousry (London, UK)

Working Group C: MRI in monitoring disease progression (progressive MS)

Facilitators: N. De Stefano (Siena, IT), C. Lukas (Bochum, DE), M. A. Rocca (Milan, IT)

11.15 - 11.45

Coffee Break

11.45 - 13.15

Plenary Session

(3 working groups, 30 minutes each)

Participants' presentations of their acquired knowledge

Participants will make proposals of MRI projects for clinical practice and research. Each project will be presented by WG coordinators and discussed. The session will be led by 3 facilitators

13.15 - 13.45

Panel Discussion

13.45 - 14.00

Wrap up

X. Montalban (Barcelona, ES)

14.00 - 15.00

Lunch and individual departure