**Educational Sessions**

**Wednesday, 11 September 2019**

### Educational Session 1 (MAGNIMS): Update on MAGNIMS guidelines on the use of MRI in the diagnosis and monitoring of multiple sclerosis

**Level:** Basic  
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)

**Chairs:**  
A. Rovira (Barcelona, ES)

- **08.00** How and when to obtain brain MRI in the diagnosis and monitoring of multiple sclerosis?  
  M. Wattjes (Hannover, DE)

- **08.30** Value of spinal cord MRI  
  O. Ciccarelli (London, UK)

- **09.00** When and how to use gadolinium?  
  A. Rovira (Barcelona, ES)

### Educational Session 2: Paediatric MS

**Level:** Basic  
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)

**Chairs:**  
R. Hintzen (Rotterdam, NL)  
J. Gärtner (Göttingen, DE)

- **08.00** How to prevent secondary progression in children with MS  
  J. Gärtner (Göttingen, DE)

- **08.30** The management of anti-MOG positive ADS  
  R. Hintzen (Rotterdam, NL)

- **09.00** Differential diagnosis  
  C. Hemingway (London, UK)
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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>08.00</td>
<td><strong>Educational Session</strong></td>
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<td><strong>Educational Session 3: B cell therapy of MS – pathology, immunology, clinical effects</strong></td>
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<td><strong>Chairs:</strong></td>
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<td>C. Stadelmann (Göttingen, DE)</td>
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<td>K. Schmierer (London, UK)</td>
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<tr>
<td>08.00</td>
<td><strong>Insights from pathology underpinning B cell-targeted therapy</strong></td>
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<td>C. Stadelmann (Göttingen, DE)</td>
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<td>08.30</td>
<td><strong>Are B cells all that matters?</strong></td>
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<td>D. Baker (London, UK)</td>
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<td>09.00</td>
<td><strong>Relapses, inflammation, progression: Mind our life-changing language</strong></td>
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<td>K. Schmierer (London, UK)</td>
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<td>08.00</td>
<td><strong>Educational Session</strong></td>
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<td><strong>Educational Session 4: Disease modifying treatments in MS</strong></td>
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<td>A. Green (San Francisco, US)</td>
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<td>08.00</td>
<td><strong>Modifying the immunological milieu in MS - the development of platform therapeutic agents - success and limits of understanding</strong></td>
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<td>J. Sabatino (San Francisco, US)</td>
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<td>08.30</td>
<td><strong>Keeping injury from the CNS - therapeutic agents that impact immune cell trafficking - prominent efficacy and pitfalls</strong></td>
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<td>A. Green (San Francisco, US)</td>
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<td>09.00</td>
<td><strong>Depleting the source of immunological injury in MS - Therapeutic agents that target the source of injury - Robust Effect and Risks</strong></td>
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<td>A.-K. Pröbstel (San Francisco, US)</td>
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08.00 – 09.30 Educational Session  
**Educational Session 5 (RIMS): Rehabilitation in progressive MS** 

**Level: Basic**  
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)  

Chairs:  
J. Freeman (Plymouth, UK)  
P.L. Eelen (Melsbroek, BE)  

08.00  
**Rehabilitation approaches in progressive MS**  
J. Freeman (Plymouth, UK)  

08.30  
**Bladder and bowel in progressive MS**  
P.L. Eelen (Melsbroek, BE)  

09.00  
**Caregiver burden in progressive MS**  
V. Matthews (Herts, UK)  

09.45 – 10.30 Educational Session  
**Meeting Room T3**  
**Case-based Educational Session 6: How to manage urogenital problems and spasticity**  

Chairs:  
P. Flachenecker (Bad Wildbad, DE)  
I. Kleiter (Berg, DE)  

09.45  
**Case #1: Multimodal management of spasticity**  
P. Flachenecker (Bad Wildbad, DE)  

10.05  
**Case #2: Diagnosis and therapy of voiding difficulties**  
I. Kleiter (Berg, DE)  

09.45 – 10.30 Educational Session  
**Meeting Room T4**  
**Case-based Educational Session 7: How to manage non response to induction therapies?**  

Chairs:  
A.J. Coles (Cambridge, UK)  
J. Sastre-Garriga (Barcelona, ES)  

09.45  
**Case #1**  
A.J. Coles (Cambridge, UK)  

10.05  
**Case #2**  
J. Sastre-Garriga (Barcelona, ES)
09.45 – 10.30  Educational Session  
Meeting Room T5

**Case-based Educational Session 8: Progressive MS: who should be treated and what should patients expect?**

Chairs:

*J. Chataway (London, UK)*
*R.J. Fox (Cleveland, US)*

09.45 **Case #1**

*J. Chataway (London, UK)*

10.05 **Case #2**

*R.J. Fox (Cleveland, US)*

13.45 – 15.15  Educational Session  
Hall F

**Educational Session 9: Neurofilament light chains and other fluid biomarkers in MS**

*Level: Intermediate*

*(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)*

Chairs:

*J. Kuhle (Basel, CH)*
*F. Piehl (Stockholm, SE)*

13.45 **Setting the scene: the relevance of conventional CSF and imaging biomarkers in MS**

*F. Piehl (Stockholm, SE)*

14.15 **Assay stability and preanalytics of neurofilament determinations.**

*E. Willemse (Amsterdam, NL)*

14.45 **Blood neurofilament light chain: ready for the clinic?**

*J. Kuhle (Basel, CH)*

13.45 – 15.15  Educational Session  
Hall G

**Educational Session 10: NMO-spectrum disorders: current concepts and clinical management**

*Level: Intermediate*

*(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)*

Chairs:

*J. Palace (Oxford, UK)*
*F. Paul (Berlin, DE)*

13.45 **NMOSD: an update**

*J. Palace (Oxford, UK)*

14.15 **Making the diagnosis in challenging cases with case studies**

*K. Fujihara (Sendai, JP)*

14.45 **Treatment challenges in NMOSD with case studies**

*F. Paul (Berlin, DE)*
13.45 – 15.15 Educational Session

**Educational Session 11: Getting it right – accurate diagnosis and avoiding misdiagnosis of MS**

**Level:** Basic  
*(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)*

Chairs:  
G. Arrambide (Barcelona, ES)  
W. Brownlee (London, UK)

13.45 **MS: What’s typical, what’s not?**  
*W. Brownlee (London, UK)*

14.05 **Applying the 2017 McDonald criteria to make an accurate diagnosis**  
*G. Arrambide (Barcelona, ES)*

14.25 **Tips for avoiding misdiagnosis**  
*A. Solomon (Burlington, US)*

14.45 **Interactive case presentations for discussion**  
*G. Arrambide (Barcelona, ES)*  
*W. Brownlee (London, UK)*  
*A. Solomon (Burlington, US)*

15.45 – 17.15 Educational Session

**Educational Session 12 (MAGNIMS): Big data and deep learning: new avenues for MRI research in MS?**

**Level:** Advanced  
*(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)*

Chairs:  
M.A. Rocca (Milan, IT)  
H. Vrenken (Amsterdam, NL)

15.45 **Big data in MRI research in MS**  
*M.A. Rocca (Milan, IT)*

16.15 **Collaborative research environments and crowd-sourced science in MRI in MS**  
*H. Vrenken (Amsterdam, NL)*

16.45 **Machine learning in MRI research in MS**  
*D. Pareto (Barcelona, ES)*
15.45 – 17.15 Educational Session

Educational Session 13: Pregnancy management in MS

**Level: Basic**
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)

**Chairs:**
- M.K. Houtchens (Brookline, US)
- K. Hellwig (Bochum, DE)

15.45
Reproductive counseling in MS: guidance and guidelines in 2019
M.K. Houtchens (Brookline, US)

16.15
Disease modifying medications in women with MS planning a pregnancy: 2019 update
K. Hellwig (Bochum, DE)

16.45
Postpartum management in women with MS
R. Bove (San Francisco, US)

15.45 – 17.15 Educational Session

Educational Session 14: Diagnosis and management of other neuroinflammatory diseases (CLIPPERS, anti-GFAP, neurosarcoïdosis, other systemic autoimmune diseases with CNS involvement)

**Level: Basic**
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)

**Chairs:**
- D.M. Wingerchuk (Scottsdale, US)
- E. Flanagan (Rochester, US)

15.45
Autoimmune GFAP astrocytopathy: characteristics and comparison to AQP4 and MOG-related disease
E. Flanagan (Rochester, US)

16.15
Neurosarcoïdosis, CNS vasculitis, and Behcet’s disease
J. Gelfand (San Francisco, US)

16.45
CLIPPERS and other rare CNS inflammatory syndromes
D.M. Wingerchuk (Scottsdale, US)
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<tr>
<td>08.00</td>
<td>Educational Session</td>
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<td>08.00</td>
<td>Educational Session 15: How do our treatments impact the immune system?</td>
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| Chairs: | R. Liblau (Toulouse, FR)  
L. Klotz (Münster, DE) |
| 08.00  | Impact of first-line MS treatments on the immune system                 |
| 08.30  | Migration-targeting therapies in MS: impact on immune responses         |
| 09.00  | Cell-depleting strategies in MS: impact on immune responses             |
|        | L. Klotz (Münster, DE)                                                 |
|        | R. Liblau (Toulouse, FR)                                               |
|        | A. Bar-Or (Philadelphia, US)                                           |
| 08.00  | Educational Session                                                    |
| 08.00  | Educational Session 16 (IMSCOGS): Cognitive dysfunction in MS          |
| Level: Basic | (Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists) |
| Chairs: | R.H. Benedict (Buffalo, US)  
M.P. Amato (Florence, IT) |
| 08.00  | Epidemiology and risk factors: an update                                |
| 08.30  | How to diagnose and monitor in clinical practice                        |
| 09.00  | How to manage: recent developments                                      |
|        | M.P. Amato (Florence, IT)                                              |
|        | R.H. Benedict (Buffalo, US)                                            |
|        | J. DeLuca (West Orange, US)                                            |
10.00 – 11.30  Educational Session  
**Educational Session 17: Pharmacovigilance and multiple sclerosis in the post-marketing setting: opportunity and lessons learned**  
**Level:** Advanced  
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)  
Chairs:  
H. Tremlett (Vancouver, CA)  
M. Magyari (Copenhagen, DK)

10.00  Using linked health administrative and clinical data to investigate drug safety in MS  
H. Tremlett (Vancouver, CA)

10.30  Using registry data to investigate drug safety in MS  
M. Magyari (Copenhagen, DK)

11.00  Evolution of biological agents: how established drugs can become less safe  
D. Hunt (Edinburgh, UK)

10.00 – 11.30  Educational Session  
**Educational Session 18: Antibodies and Complement in MS Spectrum Disorders**  
**Level:** Intermediate  
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)  
Chairs:  
J. Bennet (Denver, US)  
J. Lünemann (Münster, DE)

10.00  Antibody- and complement-mediated effector functions  
J. Lünemann (Münster, DE)

10.30  Antibody-mediated pathogenesis in central and peripheral neuroinflammatory disorders  
J. Bennet (Denver, US)

11.00  Therapeutic complement inhibition in neuroinflammatory diseases  
R. Mantegazza (Milan, IT)
11.45 – 12.45 Educational Session  
**Case-based Educational Session 19: When to stop treatment?**

Chairs:
- G. Edan (Rennes, FR)
- E. Le Page (Rennes, FR)

11.45  
**Case #1: When to stop in relapsing remitting multiple sclerosis (RRMS) patient**
E. Le Page (Rennes, FR)

12.15  
**Case #2: When to stop in secondary progressive multiple sclerosis (SPMS) patient**
G. Edan (Rennes, FR)

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14.15 – 15.45 Educational Session  
**Educational Session 20: Immunisation in MS**

**Level:** Basic  
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)

Chairs:
- S. Vukusic (Lyon, FR)
- J. Correale (Buenos Aires, AR)

14.15  
**Vaccines and the risk of MS**
J. Correale (Buenos Aires, AR)

14.45  
**Vaccines and the risk of relapses**
J. Frederiksen (Copenhagen, DK)

15.15  
**Vaccines and DMTs**
S. Vukusic (Lyon, FR)

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14.15 – 15.45 Educational Session  
**Educational Session 21: Comprehensive appraisal of MS studies**

**Level:** Advanced  
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)

Chairs:
- M.P. Sormani (Genoa, IT)
- F. Deisenhammer (Innsbruck, AT)

14.15  
**How to assess and summarize study**
E. Hernández Martínez-Lapiscina (Barcelona, ES)

14.45  
**Data analyses, interpretation, misinterpretation, and biases**
M.P. Sormani (Genoa, IT)

15.15  
**Interpretation of analytical/deductive statistics**
F. Deisenhammer (Innsbruck, AT)
16.15 – 17.15 Educational Session

Case-based Educational Session 22 (RIMS): Progressive MS: losing mobility

Chairs:
V. de Groot (Amsterdam, NL)
A. Guldhammer Skjerbæk (Ry, DK)

16.15 Diagnosing and treating gait problems using gait analysis
V. de Groot (Amsterdam, NL)

16.35 Ensuring an effective training to deal with mobility loss
A. Guldhammer Skjerbæk (Ry, DK)
**Friday, 13 September 2019**

### Educational Session 23: Radiologically Isolated Syndrome (RIS): incidental MRI findings or subclinical MS?

**Level:** Basic  
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)

**Chairs:**  
N. De Stefano (Siena, IT)  
C. Lebrun (Nice, FR)

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<tr>
<th>Time</th>
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<tr>
<td>08.30</td>
<td><strong>RIS: just incidental MRI findings or a real disease entity?</strong></td>
<td>D. Okuda (Dallas, US)</td>
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<td>09.00</td>
<td><strong>Can we diagnose subclinical MS?</strong></td>
<td>N. De Stefano (Siena, IT)</td>
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<td>09.30</td>
<td><strong>The management of RIS</strong></td>
<td>C. Lebrun (Nice, FR)</td>
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### Educational Session 24: Pathology of MS

**Level:** Advanced  
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)

**Chairs:**  
H. Lassmann (Wien, AT)  
O. Howell (Swansee, UK)

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<tr>
<td>08.30</td>
<td><strong>The inflammatory response in the MS brain: implications for pathogenesis and therapy</strong></td>
<td>H. Lassmann (Wien, AT)</td>
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<td>09.00</td>
<td><strong>The spectrum of cortical pathology in the MS brain: when, where and why</strong></td>
<td>O. Howell (Swansee, UK)</td>
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<td>09.30</td>
<td><strong>Pathological correlates of 7T MRI: how far can we image MS pathology in the living patient</strong></td>
<td>S. Hametner (Vienna, AT)</td>
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10.30 – 12.00 Educational Session 25: Preventing, monitoring and managing infectious complications of MS therapies

Level: Basic
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)

Chairs:
A. Vidal-Jordana (Barcelona, ES)
L. Prosperini (Rome, IT)

10.30 Prevention of infectious complications of MS therapies
A. Vidal-Jordana (Barcelona, ES)

11.00 Monitoring MS therapies to rapidly detect infectious complications
L. Prosperini (Rome, IT)

11.30 Managing infectious complications of MS therapies
E. Ciampi (Santiago, CL)

10.30 – 12.00 Educational Session 26: Which remyelination strategies are most promising?

Level: Advanced
(Basic = neurologists in training, non MS-specialists / Intermediate = board examined neurologists / Advanced = MS specialists)

Chairs:
M. Simons (Munich, DE)
G. Castelo-Branco (Stockholm, SE)

10.30 Remyelination: insights from mouse models and transcriptomic studies
G. Castelo-Branco (Stockholm, SE)

11.00 Remyelination: insights from human neuropathology
C. Stadelmann (Göttingen, DE)

11.30 Remyelination: molecular mechanisms and therapeutic developments
M. Simons (Munich, DE)