NEUROLOGY CONSULT
Assessing Disease Progression, Targeted Approaches, and Emerging Options in Multiple Sclerosis Therapy
• The core MS phenotypes (relapsing and progressive disease) should be retained with some modification
  – The progressive relapsing MS (PR MS) phenotype is eliminated

• Assessment of disease activity, measured by clinical relapses or CNS lesion activity is an important modifier of the core phenotypes

• Assessment of ongoing progression of disability is an important modifier of the core phenotypes

OLYMPUS Trial: Rituximab in patients with primary progressive multiple sclerosis

- Phase II trial in PPMS
  - subset analysis showed rituximab treatment effect in young (age <51) PPMS, esp with baseline contrast lesion activity

Progressive Disease (SP)

- Progressive accumulation of disability from onset (PP)
- Progressive accumulation of disability after initial relapsing course

Active* and with progression#
Active but without progression
Not active but with progression
Not active and without progression (stable disease)

*Activity: clinical relapses and/or MRI (Gd-enhancing MRI lesions; new/enlarging T2 lesions)
# Progression measured by clinical evaluation at least annually

BECOME Study: Efficacy of treatment of MS with IFNbetta-1b or glatiramer acetate by monthly brain MRI

- Interferon beta
- Glatiramer acetate
- Natalizumab
- Fingolimod
- Ocrelizumab (humanized anti-CD20 monoclonal antibody)
• Ibudilast (oral phosphodiesterase inhibitor)
• Anti-LINGO monoclonal antibody (promotes remyelination)
• Recombinant Human IgM22 (rHIgM22)
• Laquinimod (oral quinoline carboxamide)
Phase III Progressive Trial

• INFORMS: fingolimod 0.5 mg PO daily vs. placebo
Anti-LINGO-1

- Anti-LINGO-1 monoclonal antibody
- Phase 1 safety trial of intravenous anti-LINGO-1 monoclonal antibody has been completed (ClinicalTrials.gov Identifier: NCT01244139)
- Phase 2 trials in RRMS (SYNERGY) and optic neuritis: ongoing

Recombinant Human IgM22 (rHlgM22)

- Natural IgM antibody present in animals and humans shown to promote remyelination in animal models
- Directed against a surface antigen on oligodendroglial cells
- Phase 1 safety trials in MS ongoing

• Clemastine (oral antihistamine): to promote oligo remyelination
Thank You for Participating

• To claim credit for your participation in this continuing medical education activity, please proceed to the posttest