### **Teaching Course**

# Progressive Multifocal Leukoencephalopathy

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## PC Disclosures (current and past 12 months)

- Biogen
- Cellevolve
- Exevir
- Gilead
- Johnson & Johnson
- Pfizer
- Polpharma
- Shire
- Takeda
- Viiv Healthcare

#### Learning objective(s)

- To understand the mechanisms leading from benign infection to PML (virus and host determinants of disease)
- To understand the mechanisms leading to either PML progression or stabilization (virus and host determinants of progression)
- To explore feasibility and efficacy of current experimental treatments, including immune-based treatments
- To explore the current approaches to prevent/reduce the risk of PML

#### Key messages

- PML, caused by the polyomavirus JC (JCV) remains a disease with no direct antiviral treatment available
- Because PML develops in the context of an immune deficit, regaining the JCV-specific immune function seems key to both prevent disease onset and halt disease progression
- The responses to currently available immune-based treatments vary largely
- Clinical trials are essential to test the efficacy of immune-based (and possibly other) approaches, although these are difficult to implement