

## **Supplementary material 2**

### **Disease modifying treatment**

Type of disease modifying treatment was defined as first line (interferon, glatiramer acetate, teriflunomide, dimethylfumarate), second line (natalizumab, fingolimod, alemtuzumab) or third line (autologous haematopoietic stem cell transplantation). Due to possible prolonged efficacy of disease modifying treatment after withdrawal, patients who were *not* on treatment at the MRI acquisition date were nonetheless classified as on treatment if the MRI acquisition was performed within 3 months after withdrawal ( $n=8$ ), or within one year after stem cell transplantation ( $n=1$ ) or last administration of alemtuzumab ( $n=3$ ).