Figure. e-1

Mixed active/inactive and demyelinating lesion (MS#6)

A

DAPI  TDP-43  CNPase  Merged

Active and demyelinating lesion (MS#13)

B

PPWM  Lesion

DAPI  TDP-43

C

Active lesion

DAPI  TDP-43  CNPase  Merged

PPWM

D

Frequency of TDP-43 mislocalization in CNPase-positive oligodendrocytes

P = 0.0001
Supplemental Data

Figure e-1: TDP-43 mislocalization in oligodendrocytes of active demyelinating lesion of MS.

(A) Double immunofluorescence for TDP-43 and CNPase in inactive demyelinating lesion from MS#6. The dashed line shows the boundary of demyelinating lesion and periplaque white matter (PPWM). Nuclear expression of TDP-43 is seen in the demyelinating lesion as well as PPWM. (B-D) Double immunofluorescence for TDP-43 and CNPase in active demyelinating lesion from MS#13. (B) Nuclear expression of TDP-43 is seen in PPWM, while nuclear staining of TDP-43 is markedly diminished in the demyelinating lesion. (C) Higher magnification of double immunofluorescence. Nuclear TDP-43 is depleted in CNPase-positive oligodendrocyte of the active demyelinating lesion, whereas TDP-43 is expressed in the nuclei of oligodendrocytes of PPWM. (D) Frequency of TDP-43 nuclear depletion and cytoplasmic mislocalization in CNPase-positive oligodendrocytes. TDP-43 mislocalization in oligodendrocytes is significantly higher in demyelinating lesions than PPWM (95% CI, 37.99 to 66.51; P = 0.0001). Scale bars: 100 µm (A, B) and 10 µm (C).