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**MOG-IgG Associated Demyelination Induced by Pembrolizumab Treatment in a Patient
With Malignant Melanoma**

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Qian Liu: Drafting/revision of the manuscript for content, including medical writing for content; Study concept or design; Analysis or interpretation of data

Bin Wang: Major role in the acquisition of data

Wenjuan Zhao: Major role in the acquisition of data; Study concept or design

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A 39-year-old male with melanoma was treated with Pembrolizumab for six months, presented with acute-onset paraparesis. MRI showed multiple contrast-enhancing intraparenchymal lesions in the brain and spinal intramedullary lesions (Figure, A-F). Anti-MOG-Ab IgG was positive in serum (1:320) and CSF (1:10). Visual evoked potentials are normal. After methylprednisolone treatment, the limb paraparesis improved. But the tumor lesion enlarged (Figure, H-I). As the tumor grew, the patient stopped taking hormones one month later, which led to recurrence of limb paraparesis. Fewer cases of MOG-IgG associated neurological disorders had been described in patients receiving PD-1 inhibitor than other CNS demyelination^{1, 2}.

References

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Figure legend:

MRI showed multiple lesions in the brain and spinal of the patient

(A, C) Axial and (B) sagittal T1-weighted MRI shows multiple gadolinium-enhancing in the pons and bilateral paraventricular areas; (D, E, F) T2-weighted MRI shows spinal intramedullary lesions at C2-C7 , T2-T12 , L1-L2 level; After methylprednisolone treatment, (G) the enhancing intraparenchymal lesions were disappeared, (H, I) While the tumor lesion enlarged significantly

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