**Supplemental File**

**METHODS**  The patient was referred to the National Pediatric Myoclonus Center, specialized for pediatric-onset OMS. Parents gave written informed consent for their child to participate in this institutional-review-board-approved study of immunological abnormalities in OMS. Clinical data were collected and extra CSF and blood were obtained from lumbar punctures and venipunctures performed for clinical reasons, such as incomplete treatment response, relapses, occurrence of the second paraneoplastic syndrome, and in demonstration of no evidence of disease activity. The parents signed informed consent for each lumbar puncture and research participation. OMS severity was assessed by a blinded rater from 0 – 36 using the 12-item, 3-level, validated OMS Evaluation Scale.1 Immunotherapy was given in clinical practice, not a drug trial, by treating physicians. Western IRB (Puyallup, WA) conferred exempt review status for retrospective data analysis.

Lymphocyte subsets were measured in CSF and blood by flow cytometry in the clinical laboratory as previously described. CSF oligoclonal bands not found in serum (positive if ≥ 2) were measured by isoelectric focusing with immunofixation at ARUP Lab (Salt Lake City, UT). CSF and serum or plasma chemokines/cytokines were measured in Dr. Pranzatelli’s neuroimmunology laboratory by enzyme-linked immunosorbent assay (ELISA) using commercial kits, as per the manufacturer’s instructions. A paraneoplastic serologic evaluation was performed by Mayo Clinic Lab (Rochester, MN) for ANNA Type 1, 2, and 3, anti-glial nuclear antibody (AGNA) Type 1, Purkinje cell cytoplasmic antibody (PCA Type 1, 2 and Tr), amphiphysin antibody, CRMP-5-IgG; antibodies to GAD65 and to NMDA, GABA, or AMPA receptors; SRP, striational, P/Q-Type calcium channel, N-Type calcium channel, ACh receptor binding, AChR ganglionic neuronal, neuronal (V-G) K+ channel antibodies.

Published control data from Dr. Pranzatelli’s laboratory were obtained from children with non-inflammatory neurological disorders and non-neurological disorders who underwent lumbar puncture as part of clinical diagnostic testing.1 Those data provided medians and reference ranges for use in comparisons with the index patient.