Paraneoplastic Autoantibody CSF Evaluation Algorithm

**PAC1 / Paraneoplastic Autoantibody Evaluation, Spinal Fluid**
The following tests are always performed

- Immunofluorescence Assay (tissue IFA)
  - Antineuronal Nuclear Antibody-Type 1 (ANNA-1), Spinal Fluid
  - Antineuronal Nuclear Antibody-Type 2 (ANNA-2), Spinal Fluid
  - Antineuronal Nuclear Antibody-Type 3 (ANNA-3), Spinal Fluid
  - Anti-Glia/Neuronal Nuclear Antibody-Type 1 (AGNA-1), Spinal Fluid
  - Purkinje Cell Cytoplasmic Antibody-Type 1 (PCA-1), Spinal Fluid
  - Purkinje Cell Cytoplasmic Antibody-Type 2 (PCA-2), Spinal Fluid
  - Purkinje Cell Cytoplasmic Antibody-Type Tr (PCA-Tr), Spinal Fluid
  - Amphiphysin Antibody Assay, Spinal Fluid
  - Collapsin Response-Mediator Protein-5 Neuronal (CRMP-5, IgG), Spinal Fluid

If neuronal voltage-gated potassium channel-complex autoantibody is ≥0.01 nmol/L
- Contactin-associated protein-like-2 (CASPR2)-IgG
- Leucine-rich glioma inactivated protein-1 IgG

If ANNA-1, ANNA-2, PCA-1, PCA-2, amphiphysin antibody, or CRMP-5 IgG pattern is indeterminate
- Paraneoplastic autoantibody, Western blot confirmation
- Amphiphysin antibody
  - Western blot
  - Dipeptidyl-peptidase-like protein-6 (DPPX) antibody by cell binding assay
  - Dipeptidylpeptidase-like protein-6 (DPPX) antibody by immunofluorescence titer assay

If IFA pattern suggests amphiphysin antibody
- Dipeptidyl-peptidase-like protein-6 (DPPX) antibody by cell binding assay
- Dipeptidylpeptidase-like protein-6 (DPPX) antibody by immunofluorescence titer assay

If IFA pattern suggests CRMP-5 IgG
- Collapsin response-mediator protein-5-IgG (CRMP-5-IgG) Western blot
- Neuronal glutamate receptor 1 (mGluR1) antibody by cell binding assay
  - Metabotrophic glutamate receptor 1 (mGluR1) antibody by immunofluorescence titer assay

If IFA pattern suggests NMDA-IgG
- AMPA-receptor antibody by CBA, and/or AMPA-receptor titer assay
- GABA-B-receptor antibody by GABA, and/or GABA-B-receptor titer assay
- NMDA-receptor antibody by GABA, and/or NMDA-receptor titer assay
- Glutamic acid decarboxylase (GAD65) antibody assay
- Neuronal voltage-gated potassium channel-complex autoantibody
  - Contactin-associated protein-like-2 (CASPR2)-IgG
  - Leucine-rich glioma inactivated protein-1 IgG

If IFA pattern suggests mGluR1 antibody
- Collapsin response-mediator protein-5-IgG (CRMP-5-IgG) Western blot
- Neuronal glutamate receptor 1 (mGluR1) antibody by cell binding assay
  - Metabotrophic glutamate receptor 1 (mGluR1) antibody by immunofluorescence titer assay

If IFA pattern suggests AMPA-R antibody
- Collapsin response-mediator protein-5-IgG (CRMP-5-IgG) Western blot
- Neuronal glutamate receptor 1 (mGluR1) antibody by cell binding assay
  - Metabotrophic glutamate receptor 1 (mGluR1) antibody by immunofluorescence titer assay

If IFA pattern suggests GABA-B-R antibody
- Collapsin response-mediator protein-5-IgG (CRMP-5-IgG) Western blot
- Neuronal glutamate receptor 1 (mGluR1) antibody by cell binding assay
  - Metabotrophic glutamate receptor 1 (mGluR1) antibody by immunofluorescence titer assay

If IFA pattern suggests NMDA-R antibody
- Collapsin response-mediator protein-5-IgG (CRMP-5-IgG) Western blot
- Neuronal glutamate receptor 1 (mGluR1) antibody by cell binding assay
  - Metabotrophic glutamate receptor 1 (mGluR1) antibody by immunofluorescence titer assay

If IFA pattern suggests GAD65 antibody
- Collapsin response-mediator protein-5-IgG (CRMP-5-IgG) Western blot
- Neuronal glutamate receptor 1 (mGluR1) antibody by cell binding assay
  - Metabotrophic glutamate receptor 1 (mGluR1) antibody by immunofluorescence titer assay

If IFA pattern suggests VGKC-antibody
- Collapsin response-mediator protein-5-IgG (CRMP-5-IgG) Western blot
- Neuronal glutamate receptor 1 (mGluR1) antibody by cell binding assay
  - Metabotrophic glutamate receptor 1 (mGluR1) antibody by immunofluorescence titer assay

If neuronal voltage-gated potassium channel-complex autoantibody is ≥0.01 nmol/L