

Considerations for Neurology Family Studies

Parental Variant Study (Step 1)

Parental testing for variant(s) of unknown significance (VUS) detected on neurology panels may be helpful for variant interpretation and/or detecting *de novo* alterations. Variant testing performed on both parents yields the most informative results. However, variant testing can still proceed if only one parent is available. If additional familial specimens are submitted concurrently, they are placed on hold until parental test results are assessed. Depending on the results of parental testing, these additional familial specimens may or may not be tested.

Although most neurology VUS cases will be eligible for parental testing, the exceptions are as follows:

- Clinically actionable alterations, such as mutations and VLPs. These alterations are not eligible for family study and may be tested through clinical diagnostic/carrier testing.
- One or more VUS detected in autosomal recessive genes are not applicable for family study (unless co-occurring with a mutation or VLP in the same gene)
- Gross deletions/duplications detected on array
- Maternal and paternal testing for X-linked VUS is only performed for female probands. If an X-linked VUS is detected in a male proband, only the proband's mother will be tested.

If you wish to move forward with parental testing, please follow the instructions below.

1. Download and complete the Neurology Request for Parental Studies form
2. Download and complete the Family Studies Participant Consent Form
3. Submit parental specimens with the aforementioned completed forms
4. If not previously submitted, please provide clinical records on the patient (and parents, if applicable) to ensure optimal variant interpretation

At the completion of the study, results will be issued under a Family Studies Report for the patient. The turnaround time for parental variant testing is approximately 2-3 months.

Variant Study for Additional Family Members (Step 2 - Optional)

Requests for studies of additional relatives other than the parents may be requested once parental studies have been reported. To be considered for additional family member studies, please complete and submit the Neurology Additional Family Member Studies Application form.