

Epilepsy Multigene Panel

- I. The use of an epilepsy multigene panel is considered **medically necessary** when:
 - A. The member has a history of unexplained epilepsy (i.e., seizures not caused by acquired etiology such as trauma, infection, structural brain abnormality, and/or stroke).
- II. The use of an epilepsy multigene panel is considered **investigational** for all other indications.

RATIONALE AND REFERENCES

Epilepsy Multigene Panel

National Society of Genetic Counselors (NSGC)

The National Society of Genetic Counselors (NSGC) published evidence-based practice guidelines for individuals with unexplained epilepsy. The NSGC recommendations are as follows (page 4):

- Individuals with unexplained epilepsy should be offered genetic testing, without limitation of age.
- Multi-gene, comprehensive testing, such as exome sequencing, genome sequencing or a multigene panel as a first-tier test is strongly recommended*

Per the practice guideline, the multi-gene panel should have a minimum of 25 genes and include copy number analysis. However, specific genes to be included in such panels were not outlined in the guidelines. For this reason, the number of genes included in the multi-gene panel was not added to the clinical coverage criteria. In rare situations, an epilepsy panel of fewer than 25 genes may be performed, in which case alternate coverage criteria should be used (please refer to Concert medical policy “General Approach to Genetic and Molecular Testing”).

Smith L, Malinowski J, Ceulemans S, et al. Genetic testing and counseling for the unexplained epilepsies: An evidence-based practice guideline of the National Society of Genetic Counselors. *J Genet Couns*. 2023;32(2):266-280. doi:10.1002/jgc4.1646