

- 1 Define the disease mechanism
- 2 Evaluate applicability of general classes of assay used in the field

Does the general class of assay model pathogenesis/disease mechanism?

NO → Do not use PS3/BS3

YES → 3

- 3 Evaluate validity of specific instances of assays

Were basic controls included?

- Normal/Negative/Wild type
- Abnormal/Positive/Null

AND

Were multiple replicates used?

YES

Were variant controls used?\*

- Known pathogenic
- Known benign

\*Or were variants tested that reach P/LP or B/LB without PS3/BS3 criteria?

NO →

NO →

YES → 4

Has the class of assay been:

- broadly accepted historically
- previously validated

OR

- provided as a kit with defined performance metrics, but where controls/replicates are not documented for the specific instance of the assay?

NO → Do not use PS3/BS3

YES → Max PS3\_supporting  
Max BS3\_supporting

- 4 Apply evidence to individual variant interpretation

Are the statistical analyses sufficient to estimate or calculate OddsPath?

NO →

YES

Correlate the strength of evidence to the calculated OddsPath (Table 1)

Max PS3\_very\_strong  
Max BS3

How many total benign/pathogenic variant controls were used?

10 or less in total

Max PS3\_supporting  
Max BS3\_supporting

At least 11 in total

Max PS3\_moderate  
Max BS3\_moderate