

SNP Array Product Summary | August 2018

CHROMOSOMAL MICROARRAY ANALYSIS (CMA) FOR COPY NUMBER VARIATION DETECTION

When To Consider Testing

SNP Array should be considered for all individuals with syndromic or non-syndromic conditions that may be caused by gain or loss of genomic material (imbalance of genomic copy number). Indications include individuals with neurodevelopmental conditions (intellectual disability, developmental delay, and/or autism), dysmorphic features, multiple congenital anomalies, seizure disorders, as well as other health and developmental concerns.



Practice Guideline

American Academy of Neurology (AAN)

American Academy of Pediatrics (AAP)

American College of Medical Genetics and Genomics (ACMG)

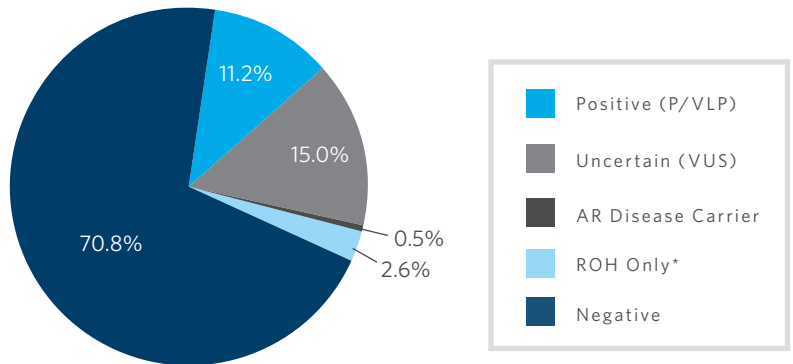
The AAN, AAP, and ACMG recommend chromosomal microarray (CMA) and fragile X DNA analysis as first-tier genetic tests in the evaluation of individuals with intellectual disability and/or autism spectrum disorder.

Michelson (2011) [Neurology](#)
Moeschler (2014) [Pediatrics](#)
Miller DT (2010) [Am J Hum Genet](#)

TEST DETAILS

- Genome-wide detection of copy number losses and gains at a much more detailed resolution than traditional chromosomal karyotype analysis
- Copy losses >100kb in size and copy gains >300kb in size are reported
- >1.9 million copy number probes and ~750,000 SNP probes
- Detection of copy number neutral regions of homozygosity (ROH); risk for autosomal recessive diseases and uniparental disomy (UPD)

Overall Detection Rates



* Additional ROH detected in 2.1% cases of pathogenic, likely pathogenic, VUS, or AR disease carrier CNV, for a total ROH detection rate of 4.7%

Samples Submission

Multiple sample types accepted including blood, saliva, and saliva swab.

Parental Studies

No-cost parental analysis is available for copy number variants that are of uncertain clinical significance. Please contact Ambry for more details.