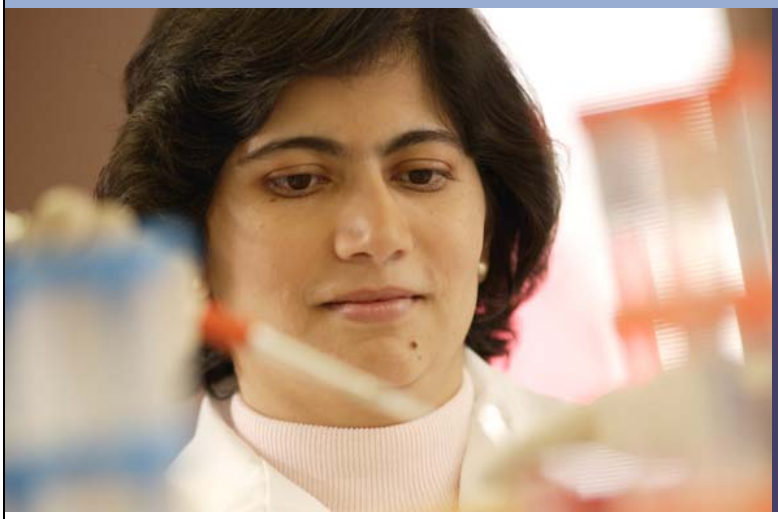
TPMG Regional Genetics Laboratory

Array Comparative Genomic Hybridization (Array CGH)

Also called Molecular Karyotyping or Chromosomal Microarray Analysis (CMA)



Array CGH is a genetic test that looks for extra or missing genetic material from your DNA. Differences in the amount of genetic material can sometimes cause health problems.

A gain or loss in your genetic material is called a *copy number variant* (CNV). Many CNVs are common in the general population and are considered normal. However, other CNVs can lead to many different types of health problems.

Array CGH testing is most often done to try to find the cause for the following conditions:

- Slow development (developmental delay)
- Intellectual disability (mental retardation)
- Unusual ("dysmorphic") features
- Birth defects
- Problems with early growth
- Autism or autism spectrum disorders

How is testing done?

Array CGH testing is usually done by taking a small blood sample.

What are the limits of array CGH?

Array CGH does not provide information about all genetic disorders. It is not able to detect:

- *Small* gains or losses of genetic material
- Errors in the way the DNA code is written (e.g., point mutations, balanced rearrangements, repeated sequences)

RESULTS

Results from array CGH are usually ready in two to three weeks.

Possible results include:

- NORMAL – No CNV was detected **or** a CNV was detected, but it is common in the general population.
- ABNORMAL – A CNV was detected that has been seen in other people with health problems **or** a CNV was found that is large enough to expect it will cause health problems.
- UNCERTAIN – A CNV was detected in an area of DNA where there is limited information.

When the array CGH result is abnormal or uncertain, blood tests from both parents may be requested. Testing the parents can help find out if the CNV is inherited.

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