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»Frequently Asked Questions for Patients

What is cytogenetic testing?

DNA is present in almost every cell in our bodies and is bundled into packages called chromosomes. Most people have 46 chromosomes in every cell of their bodies. These chromosomes exist in two sets: we inherit one set of 23 chromosomes from our mother and one set of 23 chromosomes from our father. In this way, DNA is passed from parent to child and contributes to development and health. Cytogenetic testing can detect gains or losses of chromosomes or segments of chromosomes. People with changes in their DNA or in the structure of their chromosomes may have birth defects, behavior issues, delay in development, or learning problems.

What is array CGH?

Microarray-based comparative genomic hybridization (array CGH) is a type of cytogenetic testing. This technology evaluates important areas of a patient's chromosomes to see if there are extra or missing DNA segments that could be the cause of the person's medical problems.

Is array CGH appropriate for my child?

Your child's doctor may consider array CGH testing if your child has problems with learning, physical development, behavior or has birth defects, mental retardation or developmental disabilities such as seizures.

My child has already had genetic testing. What does array CGH add?

There are many different genetic tests. Array CGH is a new technology that is able to detect differences in chromosome structure that are too small for traditional chromosome testing (often called karyotyping) to detect. Even if other testing is normal, array CGH has the potential to find an abnormality.

What are the benefits of array CGH testing?

A diagnosis of a specific condition may help your doctor to watch for common health problems that occur with that condition and may help predict what to expect as the child gets older. Also, some parents find it helpful to give their child's diagnosis to the school system to obtain special services. Others choose to join a support group to meet other parents facing similar challenges. Also, when a specific condition is diagnosed, the parents can be checked to see if they are carriers of changes in their DNA that put them at risk for having more children with the same or more severe problems. The same benefit is also shared with this child's siblings.

What type of sample is needed?

Array CGH is most commonly performed on a blood sample. It can also be performed on other types of samples, such as stored DNA, cells from amniotic fluid in pregnancy, or cells from a skin sample. Your child's doctor will determine which type of sample to submit for analysis.

When should I expect results, and who will contact me to discuss results?

In general, array CGH testing takes 5-7 days from the time the sample is received by our laboratory. The results are reported by fax and mail to the ordering doctor. Your child's doctor or other designated health care provider will contact you to explain the results.

What does a positive or abnormal array CGH result mean?

Your child's doctor will discuss the specific results with you. Often, a positive result will explain your child's health or developmental problems. Other times, additional blood samples from parents or other family members are needed to get a more complete answer.

What does a negative or normal array CGH result mean?

Many genetic conditions cannot be diagnosed by array CGH, especially those that are caused by differences in DNA that are too small for even array CGH to detect. Therefore a normal result cannot rule out all genetic differences. Your child's doctor will discuss the results with you.

My child had array CGH testing, but that was two years ago. Should she be tested again?

Array CGH technology is advancing rapidly. Depending upon how long ago your child was tested, it may be beneficial to test her again. Your doctor can help you make this decision. Your doctor or genetic counselor can also help to find out whether a new sample needs to be submitted, how much the test will cost, and whether insurance will cover the cost of additional testing.

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I have additional questions about array CGH testing. Whom can I contact?

Your doctor, genetic counselor, or other genetics health care providers can talk with you more about the details of this testing. To find a genetic counselor, genetic clinic, or other genetic professionals in your area, please call your doctor, or our laboratory at 1.877.SigChip.

In accordance with Washington State Law RCW 7.70.050 and WAC 388-531-0050, providing patients with the information necessary for them to be able to give their informed consent for testing or treatment is the responsibility of the health care provider who has direct contact with the patient. Laboratory tests are ordered and prescribed by physicians so it is the physician, not the laboratory, that is required to obtain the patient's informed consent for testing.

The contents of the ***Frequently Asked Questions for Physicians***, ***Frequently Asked Questions for Patients and Frequently Asked Questions for Prenatal*** are provided for informational purposes only and are not and should not be construed as medical advice, diagnosis, or treatment. Only a properly qualified physician can address specific questions regarding a patient's health care needs. Individual inquiries about medical or healthcare issues should be addressed to appropriate healthcare professionals. Nothing contained in the ***Frequently Asked Questions for Physicians***, ***Frequently Asked Questions for Patients and Frequently Asked Questions for Prenatal*** should be used to replace or substitute for a patient's personal physician's advice.