Chorionic Villus Sampling: Full Chromosome Analysis

Test Code: 6100

Department: Cytogenetics

Test Synonyms: CPT Code(s):
Chorionic Villus Study 88235
CVS Chromosomal Analysis 88267
Chromosome Analysis, Chorionic Villi 88280 x 2
Chorionic Villus Sampling Chromosomes 88285

Background:
Chromosome analysis of chorionic villus cells (CVS) by G-banded karyotype is used to determine the chromosomal constitution of the fetus, and can be very useful in addressing abnormal ultrasound findings and abnormal first trimester screen results, as a fraction of such abnormal findings are the result of a chromosome abnormality. Additionally, fetal sex is determined during the course of the investigation, which may have implications when sex-chromosome associated disorders are suspected. Chorionic villus cells are collected and cultured from chorionic villi, which are generally sampled at 10-12 weeks gestation. The sample is extensively cleaned of maternal decidua in our laboratory by highly-skilled technologists. Complete karyotype analysis is performed. Reflex fluorescent in situ hybridization (FISH) may be included to confirm certain abnormal chromosome results and/or to address specific clinical abnormalities. If performed, FISH will be billed with the chromosome analysis.

Indications for CVS chromosome analysis include:
- advanced maternal age
- abnormal first trimester screen
- abnormal fetal ultrasound
- previous child with a chromosome abnormality
- family history of a chromosome abnormality

Methodology:
G-banded chromosome analysis
Reflex testing to FISH, as appropriate

Specimen Requirements:
Collection of Samples:
All specimens should be handled as aseptically as possible and immediately transported to the laboratory. Transport medium is available from our laboratory upon request. [Transport medium: 500 ml Ham F-10 (Gibco), 0.5 ml gentamycin, 5 ml sodium heparin (1,000 USP units/ml). Aliquot 10 ml of transport medium into sterile, screw-cap plastic test tubes. The shelf life is 2 months at 4C. Store in refrigerator.]

Procedure:
1. Use approximately half of medium (5ml) in vial for syringe receiving villi.
2. Pour remaining half of medium from vial into sterile Petri dish.
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3. Villi are transferred from syringe to Petri dish for evaluation. If sample contains a number of red blood cells, more medium may be added to dilute for better visualization. It may also be necessary to rinse syringe with fresh medium.

4. If an adequate sample is obtained (an adequate amount of villi is 20-25 mg), use forceps and sterile technique to transfer villi to one of the vials that still contain medium. Samples 5-10 mg will be accepted with disclaimer due to small sample size.

5. Label vial with patient name, date of birth, and gestational age.

- For optimum results, please call Client Services for transport medium and specific shipping instructions at (855) 535-1522 or (503) 494-5400.

A REQUISITION FORM MUST ACCOMPANY ALL SAMPLES. Please include detailed clinical information, including ethnicity, clinical history, and family history.

Test Performed (Days):
Mon - Sat

Turn Around Time:
10 – 14 Days

Shipment Sensitivity Requirements:
Keep specimen cold during transit, but do not ship on dry ice. Please use the cold pack provided in the KDL shipping kit. Ship the specimen overnight express, using the FedEx priority overnight label provided. The specimen must arrive at the lab no more than 24 hours after collection.