Chromosome Analysis: Products of Conception (POC)

Test Code: CO
Turnaround time: 10 days - 21 days
CPT Codes: 88291 x1, 88233 x1, 88262 x1

Condition Description

This test will detect abnormalities in chromosome number and large deletions/duplications of chromosome material, as well as balanced chromosome rearrangements.

Please note: We recommend microarray analysis as the cytogenetic test for POC samples. For more information about the microarray, please click here.

The advantages of POC microarrays are:

- it utilizes uncultured DNA, which overcomes many of the limitations of G-banded analysis, including cell culture failure, suboptimal chromosome preparations and maternal overgrowth of cells
- it has the potential to detect chromosomal abnormalities that cannot be visualized by G-banded analysis
- it provides at least a ten-fold increase in the detection of chromosomal imbalances compared to G-banded analysis
- it has a shorter turnaround time since cells do not have to be cultured

Indications

Chromosome analysis performed on POC is warranted for the evaluation of any spontaneous pregnancy loss and can provide a diagnosis as well as the recurrence risks of chromosome problems in a future pregnancy.

Methodology

Chromosome analysis on non-cancerous solid tissue.

Detection

Chromosome analysis by ISCN and ACMG guidelines; minimum band resolution of 450.

Specimen Requirements

Type: Products of Conception

Specimen Requirements:
Sterile container with EGL transport media| If EGL media is not available, other sterile culture media can be used (RPMI, Hanks Solution) 
15-30 mg chorionic villi/placental tissue using sterile technique. Place in sterile tube(s) with transport media.
Tissues fixed in formalin cannot be used.
The laboratory cannot legally accept entire fetuses/stillbirths. Must be a part of an individual.

Specimen Collection and Shipping:
Must be received in securely closed, sterile container with sterile culture media. If fetal demise occurred more than 48-72 hours prior to retrieval of tissue and delivery to the Lab, fetal tissue is unlikely to grow. In this case, placenta is most likely to grow. Refrigerate until time of shipment. Ship sample at room temperature for receipt at EGL within 24 hours of collection.

Related Tests

- Chromosomal Microarray, EmArray Cyto POC (CMPOC) – may detect microdeletions/duplications that are not visible by chromosome analysis and is recommended as a first tier diagnostic test.
- Infertility Panel: Female (MG)
- Infertility Panel: Male (MH)