

**Date:** December 14, 2015  
**To:** All Zones  
**From:** Genetic Laboratory Services (GLS)  
**Re:** **Prenatal Chromosomal Microarray Testing**

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### Key Messages:

- **Effective January 4, 2016**, GLS will offer prenatal chromosomal microarray (CMA) in both Calgary and Edmonton Cytogenetic laboratories.
- The inclusion criteria for prenatal CMA include pregnancies where a fetal congenital anomaly, unexplained intrauterine growth retardation (IUGR) or a nuchal translucency  $\geq 3.5\text{mm}$  is identified. CMA detects chromosome imbalances (additional and/or missing information) at a greater resolution than standard karyotyping (chromosomal analysis).
- Rapid aneuploidy detection (RAD) will continue to be performed as the initial test on all prenatal samples received in the Calgary and Edmonton Cytogenetic / Molecular Diagnostic Laboratories. This test detects the most common aneuploidies of chromosomes 13, 18, 21 and X and Y.
- If the inclusion criteria are met fetuses with normal RAD results are eligible for CMA.
- Access to prenatal CMA will be restricted to those healthcare specialties that currently have access to prenatal karyotyping.
- Detailed clinical information is critically important for the accurate interpretation of CMA findings. **It is the responsibility of the healthcare provider completing the requisition to ensure all relevant information is clearly written on the requisition including family history and ultrasound findings.**

### Action Required:

- A new requisition for CMA is now available on the GLS website.
- **Blood samples (EDTA) from both parents are required at the time the fetal sample is received** to allow for maternal cell contamination studies and to expedite interpretation of fetal copy number variants. Provide both parents with the Array CGH Analysis (microarray) requisition.
- Refer to the Cytogenetic Laboratory section of the Genetic Laboratory Services website (<http://www.albertahealthservices.ca/lab/Page8667.aspx>) for requisitions and collection and handling information.

### Inquiries and feedback may be directed to:

#### GLS Genetic Counsellors:

- Calgary: Allison Sluyters & Kim Gall Phone: 403-955-3097.
- Edmonton: Margaret Lilley & Susan Christian Phone: 780-407-1015

### This bulletin has been reviewed and approved by:

Dr. Martin Somerville, Medical/Scientific Director, Genetic Laboratory Services  
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