

DATE:	2021 April 06
TO:	All Zones
FROM:	Genetics and Genomics, Cytogenetics North & South Laboratories
RE:	Discontinuation of Sodium Heparin (NaHep) blood specimen collection and processing for Chromosomal Microarray (CMA) follow-up testing

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Key Message:

- Effective April 5, 2021, only one EDTA blood specimen will be collected for postnatal Chromosomal Microarray (CMA) testing. The Sodium Heparin (NaHep) blood specimen will no longer be required.
- Effective April 5, 2021, any NaHep blood specimens inadvertently collected and received by the Cytogenetic laboratories will not be processed.
- For cases requiring follow-up testing, recommendations will be made in the CMA report.

Background:

- Current practice is to collect a blood specimen in both an EDTA and a NaHep tube for patients requiring postnatal CMA testing. CMA testing is performed on DNA extracted from the EDTA blood specimen, while the NaHep blood specimen is processed for potential follow-up Fluorescence In Situ Hybridization (FISH) and/or Karyotype testing.
- A recent review of cases revealed that follow-up FISH and/or Karyotype testing is performed in less than 5% of cases. This change is a quality improvement and cost savings initiative, as a significant number of specimens are being collected and processed at significant cost to the healthcare system.

How this will impact you:

- The test directory changes reflect that only EDTA blood specimens are required for postnatal CMA testing.
- Occasionally, test orders and subsequent sample collection for follow-up testing will be required, indicated in the CMA report.

Action Required:

- For palliative patients, infants, cases where an aneuploidy is suspected, or in situations where sample recollection would be extraordinarily difficult, a test orderable for constitutional FISH and/or Karyotype testing, indicating "**hold for follow-up**", should be used so that a blood in a NaHep tube is collected and processed, supporting potential follow-up testing (see below for links).
- For test requests submitted using paper requisitions, please use the most recent version; for orders submitted electronically through Connect Care the electronic requisition has not be altered.
- The most recent version of Cytogenetic requisitions are available:
Chromosomal Microarray (CMA) requisition - <https://www.albertahealthservices.ca/frm-09591.pdf>
Constitutional Cytogenetics requisition (FISH and/or Karyotype testing) <https://www.albertahealthservices.ca/frm-21248.pdf>
- Follow APL test directory instructions for CMA sample collection: <https://www.albertahealthservices.ca/webapps/labservices/indexAPL.asp>



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Effective: April 5, 2021

Questions/Concerns:

Genetics and Genomics Laboratory Genetic Counsellors

- Edmonton/North: 780-407-1015
- Calgary/South: 403-955-5400

Approved by:

- Dr. Dennis Bulman, Medical/Scientific Director, Genetics & Genomics, APL
- Dr. Carolyn O'Hara, Chief Medical Laboratory Officer (Interim), APL