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**Date:** February 22, 2021  
**To:** Edmonton, North Zone, Central Zone (excluding Hanna, Drumheller, and Three Hills)  
**From:** Alberta Precision Laboratories (APL)  
**Re:** Addition of nasal bone to first trimester prenatal risk assessment for aneuploidy

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**Key Message:**

- **First trimester prenatal risk assessments reported on or after March 1, 2021 will include nasal bone if the nasal bone was evaluated by an ultrasound operator with valid Fetal Medicine Foundation (FMF) certification for nasal bone assessment.**
- Currently, first trimester prenatal risk assessment is determined from maternal age, nuchal translucency, fetal heart rate, and serum biochemistry measuring free beta-hCG and pregnancy associated plasma protein A.
- Inclusion of nasal bone in first trimester prenatal risk assessment improves the detection rate for trisomy 21, 18 and 13 and decreases the false-positive rate. Absent or hypoplastic nasal bone is associated with an increased risk for trisomy 21, 18, and 13.
- Nasal bone will only be included in the first trimester prenatal risk assessment if, at the time the ultrasound is performed: (1) the ultrasound operator has valid FMF certification to assess nasal bone and (2) has submitted their FMF license file that includes nasal bone assessment certification to the Newborn Metabolic Screening and Biochemical Genetics Laboratory.
- If the ultrasound operator is not certified or their certification has expired at the time of ultrasound or reporting, nasal bone will not be included in the risk assessment.

**Action Required:**

- All ultrasound operators performing ultrasounds for first trimester risk assessment must submit FMF license file with nasal bone certification to the Newborn Metabolic Screening and Biochemical Genetics Laboratory by email to [NMSLab@albertaprecisionlabs.ca](mailto:NMSLab@albertaprecisionlabs.ca) soon as possible.
- Effective March 1, 2021 ultrasound operators must assess nasal bone and indicate present/absent/unable to assess on Part C of the Maternal Prenatal Screen Requisition.
- Providers should review reports to determine which factors were included in the risk assessment. When nasal bone assessment is provided on the requisition, it is recorded on the report under **First Trimester Ultrasound (Chromosomal markers)**. If nasal bone has been included in the risk assessment, it will be listed with ultrasound factors under **Estimated risks**.
- Risk assessments may be amended by contacting the laboratory at 780-407-8820 if nasal bone status is known and ultrasound operator had valid certification at time of ultrasound.

**Inquiries and feedback may be directed to:**

- Miranda Brun, PhD, Clinical Biochemist, University of Alberta Hospital, Alberta Precision Laboratories, 780-722-4123, [Miranda.Brun2@albertaprecisionlabs.ca](mailto:Miranda.Brun2@albertaprecisionlabs.ca)
- Laboratory Genetic Counsellors North, 780-407-7907

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

- Dr. Kareena Schnabl, Section Chief Clinical Biochemistry – APL North Sector
- Dr. Dennis Bulman, Medical/Scientific Director, Genetics & Genomics, APL
- Dr. Carolyn O'Hara, Chief Medical Laboratory Officer (Interim), APL