

January 19, 2023

CLINICAL BIOCHEMISTRY

## Serum Total Bile Acids Testing Update

Date effective: January 23, 2023

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### Background Information:

Serum Total Bile Acid testing will be performed in the laboratory at HSC. Marked elevation of serum bile acids in pregnant individuals aids in the diagnosis and management of Intrahepatic Cholestasis of Pregnancy (ICP). In neonates with low-GGT cholestasis, very low (<3.85 µmol/L) or undetectable serum bile acids may be an indication of a Bile Acid Synthesis Defect (BASD).

### Change in Test Procedure:

- Serum total bile acids quantification is now being performed at Health Sciences Centre.
- There is no change in the test ordering procedure, requisition, or specimen type.
- The current reference cut-off of <6.7 µmol/L will be replaced with a range: 2 – 10 µmol/L.
- Interpretive comments will be added to all reports with a result >10 µmol/L.
- Fasting specimens are required (≥8 hours) for accurate results. **If patient is not fasting, results will be elevated. Physicians must inform their patient that they need to be fasting (> 8 hrs) prior to sample collection.**
- Results from the in-house assay are approximately 5% lower when comparing results to those produced by the previous assay.

### System Improvements/Patient Impact:

- Reduction in turnaround time for results.

### Resources

For complete test information, please consult the [Shared Health Lab Information Manual](#)

### References:

- Manzotti C, Casazza G, Stimac T, Nikolova D, Gluud C. Total serum bile acids or serum bile acid profile, or both, for the diagnosis of intrahepatic cholestasis of pregnancy. Cochrane Database Syst Rev. 2019 Jul 5;7(7):CD012546.
- Egan N, Bartels A, Khashan AS, Broadhurst DI, Joyce C, O'Mullane J, O'Donoghue K. Reference standard for serum bile acids in pregnancy. BJOG. 2012 Mar;119(4):493-8.

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