Memorandum

Date: February 13, 2017

To: Calgary Zone Physicians and Rural Physicians, South Zone Physicians

From: Dr. Hossein Sadrzadeh, Section Chief Clinical Biochemistry

Re: **Update: Interference from Biotin with Laboratory Test Results**

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Key Messages:

- Biotin, when taken in doses >1 mg per day, may positively or negatively interfere with many of the laboratory tests offered by CLS, including βhCG and high sensitivity Cardiac Troponin T.
- Biotin interference can result in falsely low results for serum βhCG and high sensitivity Cardiac Troponin T leading to misdiagnosis and mistreatment.
- Biotin also affects urine pregnancy testing; the blue control line does not appear resulting in an invalid pregnancy test.

Importance/Impact:

- Due to the large number of laboratory tests affected by this supplement, if possible, Biotin use should be discontinued for a period of 48 hours prior to any laboratory testing, including pregnancy testing.

Background:

- Biotin (alternate names: Vitamin H, Vitamin B7, or coenzyme R) supplementation has become more prevalent in the last few years. Historically, small doses of Biotin in multivitamins were insufficient to interfere with laboratory tests, however new formulations of high dose Biotin >1 mg (1000 microgram), are now available over-the-counter at pharmacies and marketed for improvement of hair/skin/nail quality. Mega dose formulations of 100 – 300 mg/day are currently in clinical trials for Multiple Sclerosis patients.

Action Required:

- Request that all patients discontinue Biotin supplementation for 48 hours prior to specimen collection for laboratory tests.
- **If Biotin interference is suspected based on clinical history and testing cannot be delayed, please contact the laboratory.**

Inquiries and feedback may be directed to:

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This memorandum has been reviewed and approved by:

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