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Laboratory Bulletin

DATE:	2 February 2026
TO:	All Zones – All Healthcare Providers
FROM:	Clinical Biochemistry, Alberta Precision Laboratories
RE:	**Change in Amiodarone and Metabolite Level Instrumentation and Reporting**

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Key Message

- Effective February 3, 2026, the *Amiodarone and Metabolite Level* t*est* will be performed by a new methodology: Liquid Chromatography Mass Spectrometry (LC-MS/MS). There will be a change in critical value, therapeutic ranges, and linear range.

Background

- Amiodarone is an antiarrhythmic drug used to treat supraventricular and ventricular arrhythmias.
- Amiodarone requires therapeutic drug monitoring due to its potential for serious toxic side effects. One of the most notable risks is pulmonary toxicity, which can be challenging to diagnose because of its non-specific symptoms. Additionally, amiodarone contains approximately 37% iodine by mass and is structurally similar to thyroid hormones. Therefore, it is essential to regularly monitor the thyroid function of patients on amiodarone using TSH and free T4.
- Amiodarone testing was historically performed using High-Performance Liquid Chromatography (HPLC) with a Diode array detector. As part of laboratory workflow improvements, this method is being transitioned to LC-MS/MS analysis.

How this will impact you

- There will be no change to ordering and collecting of *Amiodarone and Metabolite Level Test* [LAB567]
  - Refer to APL test directory: Alberta Precision Laboratories | Lab Services

Action Required

- Be aware of the following test parameter changes:
  - New critical value for amiodarone is > 3.5 µmol/L.
  - New therapeutic ranges will be adjusted to:
    1.0 - 2.0 µmol/L for the treatment of atrial fibrillation and related arrhythmias.
    1.5 - 3.0 µmol/L for the treatment of ventricular arrhythmias.
  - The interpretation comment:
    "Desethylamiodarone concentrations are approximately 0.5 - 2 times those of Amiodarone."
    Will be applied to each test result.

Questions/Concerns

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