

DATE:	14 April 2025
TO:	Health Care Providers in Central, Edmonton, and North Health Zones
FROM:	APL Hematology and Microbiology
RE:	Provincial Malaria Testing Standardization

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Key Messages

- **Effective April 14, 2025**, malaria testing in Alberta will be standardized.
- Only one specimen will be required to rule out malaria, rather than the previously recommended three.
- Loop-mediated isothermal amplification (LAMP) will be used directly, or to confirm negative Rapid Diagnostic Test (RDT) or smear results. LAMP is more sensitive than RDT or thick/thin smears for detecting *Plasmodium* spp., the etiologic agent of malaria.
- All positive LAMP or RDT results will have a smear performed for speciation and parasitemia.
- This LAMP assay does not speciate *Plasmodium*; speciation will be done by microscopy. In select cases, a malaria speciation PCR will be done on positive samples.
- There are no changes to testing in Calgary and South Zones.

How this will impact you

- To improve quality and scalability, Edmonton Base Lab will perform LAMP testing for all of Edmonton Zone (excluding University of Alberta Hospital [UAH]), and North Zone acute care sites not performing RDT (see APL Test Directory for RDT sites).
- University of Alberta/Stollery Hospital (UAH) will maintain on-site smears as an interim state. Smear-negative samples will be sent to Edmonton Base Lab for LAMP.
- Samples for acute malaria will be expedited for transport and tested on a stat basis
- Malaria test results can be found in the Microbiology folder in Netcare.

Actions Required

- Order only one Malaria test for suspected cases.
- When ordering malaria in the community, submit the APL Malaria History Form <https://www.albertahealthservices.ca/frm-22245.pdf>

Questions/Concerns

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- Dr. Artur Szkotak, Section Chief for Hematopathology, North Sector, APL art.szkotak@aplabs.ca

Reference

Committee to Advise on Tropical Medicine and Travel (CATMAT). Canadian recommendations for the prevention and treatment of malaria. Chapter 6-Malaria Diagnosis. Updated Summer 2023. Available online: <https://www.canada.ca/en/public-health/services/catmat/canadian-recommendations-prevention-treatment-malaria/chapter-6-malaria-diagnosis.html>

Table 1. Current and Future Primary Malaria Tests by Alberta Health Zone

Health Zone		Previous Primary Malaria Testing	Future State
South		LAMP, with additional RDT done at selected sites	No change
Calgary		LAMP, with additional RDT done at SHC	No change
Central	~DTHR	RDT at Red Deer	LAMP, with RDT done at RDRH
	~ECHR	Smear at Edmonton	LAMP
Edmonton	everywhere except UAH	Smear	LAMP
	UAH	Smear	smear, with LAMP for negatives
North		RDT or Smear	LAMP, with additional RDT done at selected sites

DTHR=Former David Thompson Health Region, ECHR=Former East Central Health Region, UAH=University of Alberta Hospital

Approved by

- Dr. Carolyn O'Hara, Interim Chief Medical Laboratory Officer, APL