

Laboratory Memorandum

Date: 2023-08-02

To: Vancouver General Hospital Physicians

From: Division of Clinical Chemistry, Vancouver General Hospital

Re: **New Method: Urine Catecholamines/Metanephrines Testing**

As of August 8, 2023, a new method will be used for the simultaneous measurement of fractionated urinary free catecholamines and metanephrines. This laboratory-developed method measures all the analytes using liquid-chromatography tandem mass spectrometry (LC-MS/MS), offering improved analytical specificity, minimizing the likelihood of interference from other substances in urine.

Urine specimens no longer require acidification but are instead frozen after collection. This means 24 hour urine cortisol or other tests that must not have preservatives can now be ordered on the same collection.

All adult reference intervals and some units will change (summary table below). For pediatric-specific reference intervals, where available, please refer to the laboratory report. A comment will be appended to all results to highlight the changes for a period of 6 months after the transition.

Please note that the new method analyses free (unconjugated) metanephrine and normetanephrine instead of total metanephrine and normetanephrine, resulting in markedly different reference limits compared to the current method.

Test Name	Sex	New Reference Interval for 24 hour Excretion, Adults (nmol/d)
Normetanephrine	Female	< 243
	Male	< 281
Metanephrine	Female	< 192
	Male	< 250
Norepinephrine	Female or Male	< 473
Epinephrine	Female or Male	< 85
Dopamine	Female or Male	< 2660



More information on metanephrines reference intervals and diagnostic performance can be found in the following article:

Eisenhofer G. et al Clinica Chimica Acta. 2019 Mar 1;490:46-54.

(<https://doi.org/10.1016/j.cca.2018.12.019>)

For any questions related to these changes and test interpretation please do not hesitate to contact the VGH clinical/medical biochemist on-call.

Sincerely,

Division of Clinical Chemistry
Vancouver General Hospital and UBC Hospital
Non-urgent enquiries only: VGHChemistry@vch.ca

