

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,

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