

Commencement of NT-proBNP measurement

On Tuesday 15th August, St Vincent's Pathology will commence testing NT-proBNP in-house and will cease routine measurement of BNP.

Like BNP, NT-proBNP measurement can assist with exclusion, diagnosis, and management of heart failure however NT-proBNP offers several advantages over BNP, including higher stability and superior utility in patients on neprilysin inhibitors (Entresto).

Circulating concentrations of NT-proBNP are higher than those of BNP and age-specific clinical decision limits apply (please see below). An NT-proBNP concentration < 300 ng/L makes a diagnosis of heart failure unlikely at any age^{1,2}. NT-proBNP levels increase in renal failure to a greater extent than BNP. There is no simple conversion factor to translate NT-proBNP to BNP levels.

Upon commencement of our routine NT-pro BNP service, all BNP requests will automatically be converted to NT-proBNP. Please contact Dr Christina Trambas with clinical enquiries (9231 3638) and the laboratory with general enquiries (9231 4112).

NT-proBNP Testing	
Units	ng/L
Clinical decision limits	For heart failure diagnosis, the following diagnostic thresholds apply ^{3,4} : Age < 50 > 450 ng/L Age 50 – 75 > 900 ng/L Age > 75 > 1800 ng/L
Sample type	Serum (red top) Li Hep Plasma (green top)
Add on suitability	6 days
Frequency	24/7
Turnaround time	< 2 hours for urgent requests < 8 hours for routine requests

References

1. Tsutsui H et al, 2023 Natriuretic peptides: role in the diagnosis and management of heart failure: a scientific statement from the Heart Failure Association of the European Society of Cardiology, Heart Failure Society of America and Japanese Heart Failure Society. *Eur J Heart Fail* 25: 616 - 631.
2. Ponikowski P et al, 2016 European Society of Cardiology Guidelines for the diagnosis and treatment of acute and chronic heart failure. *Eur J Heart Fail* 16 : 891 - 975
3. Januzzi JL et al, 2018 N-Terminal Pro-B-Type Natriuretic Peptide in the Emergency Department: The ICON-RELOADED Study. *J Am Coll Cardiol*. 71 : 1191 - 1220
4. Mueller C et al, 2019 Heart Failure Association of the European Society of Cardiology practical guidance on the use of natriuretic peptide concentrations. *Eur J Heart Fail* 21: 715 - 731