

## Natriuretic Peptide (NP) testing interpretative notes

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1. Current indications for NT-proBNP use in the community are as follows:
  - (i) Case finding and diagnostic work up for (new) heart failure, where clinically indicated
  - (ii) Registration/First visit to Treatment programme if type 2 diabetes, ischemic heart disease or atrial fibrillation
  - (iii) Re-Baselining of NT-proBNP if existing HF or above conditions\*
  - (iv) Existing HF, cardiology specialist request or deterioration\*\*

\*Note BNP and NT-proNP results differ by several fold and are not interchangeable.

\*\*Including deterioration of those with DM, IHD or AF.

2. NT-proBNP reports (results and interpretation)
  - (i) All NT-proBNP results from primary care are reported with the nationally agreed decision cut-off of 400 ng/L, which can be used to help ruling out/in (new) heart failure and adjudicate the need for ECHO and specialist referral<sup>1,2</sup>. This threshold is not applicable in all indications involving NT-proBNP testing.
  - (ii) NT-proBNP >400 ng/L does not confirm a diagnosis of Heart failure as levels may be raised in other cardiac (e.g. left ventricular hypertrophy) and non-cardiac (e.g. chronic renal failure) conditions.
  - (iii) NT-proBNP <400 ng/L does not completely exclude heart failure. Levels may also be lower in obesity and in presence of certain drugs (e.g. ACEi, ARBs, beta blocker, diuretics etc) which could cause false negatives. Levels <125 ng/L provide greater certainty for exclusion of heart failure.
  - (iv) NT-proBNP is higher in younger females compared to males (e.g. the upper reference limit (95<sup>th</sup> percentile, ng/L) for <55y: males = 115, females 237)
  - (v) NT-proBNP increases with age (e.g. Unisex upper reference limit (95<sup>th</sup> percentile, ng/L): <55y = 181 ng/L, 65-74y = 456 ng/L, >75y = 612 ng/L. *Such ranges are representative of apparently healthy individuals and individuals with DM, HTN and pulmonary disease. Renal status is unknown (see point ii).*
  - (vi) A change in NT-proBNP of 50% from previous may be clinically significant.

See below for further information:

1. "Natriuretic Peptide testing" guideline *accessed via*:  
<https://www.hse.ie/eng/about/who/cspd/ncps/pathology/resources/natriuretic-peptide-testing-guideline1.pdf>
2. Enhanced Community Care (ECC) GP Direct Access to Diagnostics NTproBNP Frequently Asked Questions *accessed via*  
<https://www.hse.ie/eng/services/list/3/acutehospitals/hospitals/regional-hospital-mullingar/our-services/>

<b>Doc. No:</b> GL-M/CC/2	<b>Doc Owner:</b> Paul Crowley	<b>Dept &amp; Location:</b> Clinical Chemistry RH, Mullingar	
<b>Vers. No:</b> 1	<b>Active Date:</b> 03/08/2022	<b>Doc Title:</b> NT-proBNP Testing Interpretative notes	<b>No. Of Pg:</b> 1 of 1