

Use of Natriuretic Peptides in the Diagnosis and Management of Suspected Chronic Heart Failure in Adults

The information provided in this document is based on the NICE Guideline NG106, Chronic heart failure in adults: diagnosis and management (2018).

Diagnosing heart failure

Measure N-terminal pro-BNP (NT-proBNP) in people with suspected heart failure. Symptoms indicative of heart failure include breathlessness, oedema, and fatigue.

Note that NT-proBNP can be elevated in conditions other than heart failure and that certain drugs can reduce levels. Thus in the interpretation of NTproBNP, NICE cut-off levels should be used initially but drug therapy, age, other conditions and clinical suspicion should be taken into account.

Interpretation

NTproBNP <400 ng/L (Normal levels):

- NTproBNP <400 ng/L in an untreated patient makes heart failure unlikely.
- Obesity, African or African-Caribbean family origin, diuretics, ACE inhibitors, beta blockers, ARBs and mineralocorticoid receptors antagonists can reduce levels.

NTproBNP 400-2000 ng/L (Raised levels):

- Suggest specialist assessment and echo within 6 weeks.

NTproBNP >2000 ng/L (High levels):

- Suggest specialist assessment and echo within 2 weeks.

Caution:

- NT-proBNP levels do not differentiate between heart failure with reduced ejection fraction and heart failure with preserved ejection fraction.
- Elevated levels can have causes other than heart failure (age over 70y, left ventricular hypertrophy, ischaemia, tachycardia, right ventricular overload, hypoxaemia [including pulmonary embolism], eGFR <60 mL/minute, sepsis, COPD, diabetes and liver cirrhosis).

Monitoring

Measurement of NT-proBNP as part of a treatment optimisation protocol is not routinely recommended. The laboratory will block all repeat NT-proBNP requests received in patients within a 3-month window. This protocol has approval from the Vale of York and Scarborough Ryedale CCGs. For further advice please contact the Duty Biochemist on 01904 726366.

Please see <https://www.valeofyorkccg.nhs.uk/rss/index.php?id=heart-failure> for more information

For the diagnosis and management of Acute Heart Failure please refer to NICE Clinical Guideline CG187 (2021)