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| **NT-proBNP by point-of-care vs laboratory testing** |

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| **Aim:** To investigate the difference in NT-proBNP results provided by point-of-care (PoC) and clinical laboratory assays, and the potential misclassification using thresholds in clinical use.  **Method:** A community cohort undergoing screening for abdominal aortic aneurysm consented to a blood sample for research. No exclusions were made for heart failure (HF) or other cardiovascular conditions. After venepuncture, samples were taken for the PoC (Cobas h232) and laboratory (Cobas e411; “lab value”; referent) assays. The methods were compared with Bland-Altman analysis and, for illustration, by categorisation of NT-proBNP to the ESC HF guideline of ≤ or >15 pmol/L (126 pg/mL).  **Results:** Of 704 participants, median age 66 (IQR 63-69) years, 56% women, 58% Māori, 41% Pacific peoples. Median lab NT-proBNP 8.6 (IQR 4.4-19.5) pmol/L. After reconciling the lower limit to <7pmol/L for both methods, PoC overestimated NT-proBNP by 2.8 pmol/L, on average, including significantly greater overestimation of values >50 pmol/L; however, 33% (n=230) had a PoC value lower than their lab value.  Among people with a lab value >15 pmol/L, PoC misclassified 29/215 (13%) to values ≤15pmol/L; among people with a lab value ≤15 pmol/L, PoC misclassified 29/489 (5.9%) to values >15pmol/L (Figure). Overall, applying a lab threshold of 15pmol/L means 8.2% of the cohort would be misclassified if using PoC.  **Conclusion:** For Māori and Pacific people in the community, NT-proBNP thresholds are not interchangeable between laboratory and PoC assays. Further assessment of NT-proBNP by PoC in patients with suspected HF is needed to ensure appropriate thresholds can be utilised in clinical practice.  A diagram of a graph  AI-generated content may be incorrect. |