

B-type natriuretic peptide (BNP) is a protein produced by the ventricles of the heart. It should be used in an unclear diagnosis of HF or if the diagnosis is unknown. BNP has a negative predictive value of at least 96%, so HF can be ruled out if patients have a BNP in the normal range<sup>9</sup>. A BNP of  $\geq 100$  pg/ml tends to suggest the presence of HF<sup>8</sup>. However, typically, BNP in patients with HF will be in the 1000 pg/ml range<sup>9</sup>. Although, bear in mind, some patients with chronic stable heart failure may have elevated BNP levels which do not require admission. Therefore, in chronic heart failure, a baseline BNP level may be helpful to determine whether the patient is in acute HF. Therefore, use your clinical judgement. Some patients with BNP levels between 100-500 pg/ml can be managed in an observation unit or as an outpatient<sup>9</sup>. Serial BNP levels can be useful in monitoring patients' condition on therapy<sup>9</sup>. If BNP is used to monitor a patient's condition, the BNP should be halved or less than 500 pg/ml upon discharge<sup>9</sup>. Patients' with higher levels of BNP than 500 pg/ml or a discharge BNP greater than half the admission BNP, tend to have higher readmission rates for HF<sup>9</sup>. BNP tends to be less elevated in patients in HF with preserved EF than low EF. BNP is lower in obese patients (205 pg/ml in obese vs. 335 pg/ml in non-obese)<sup>8</sup>. The etiology of this is unclear but may be related to an increase in clearance receptors and BNP degradation in obesity. BNP is more elevated in renal failure whether HF is present or not<sup>8,9</sup>. Nesiritide infusion causes an increase in BNP<sup>9</sup>.