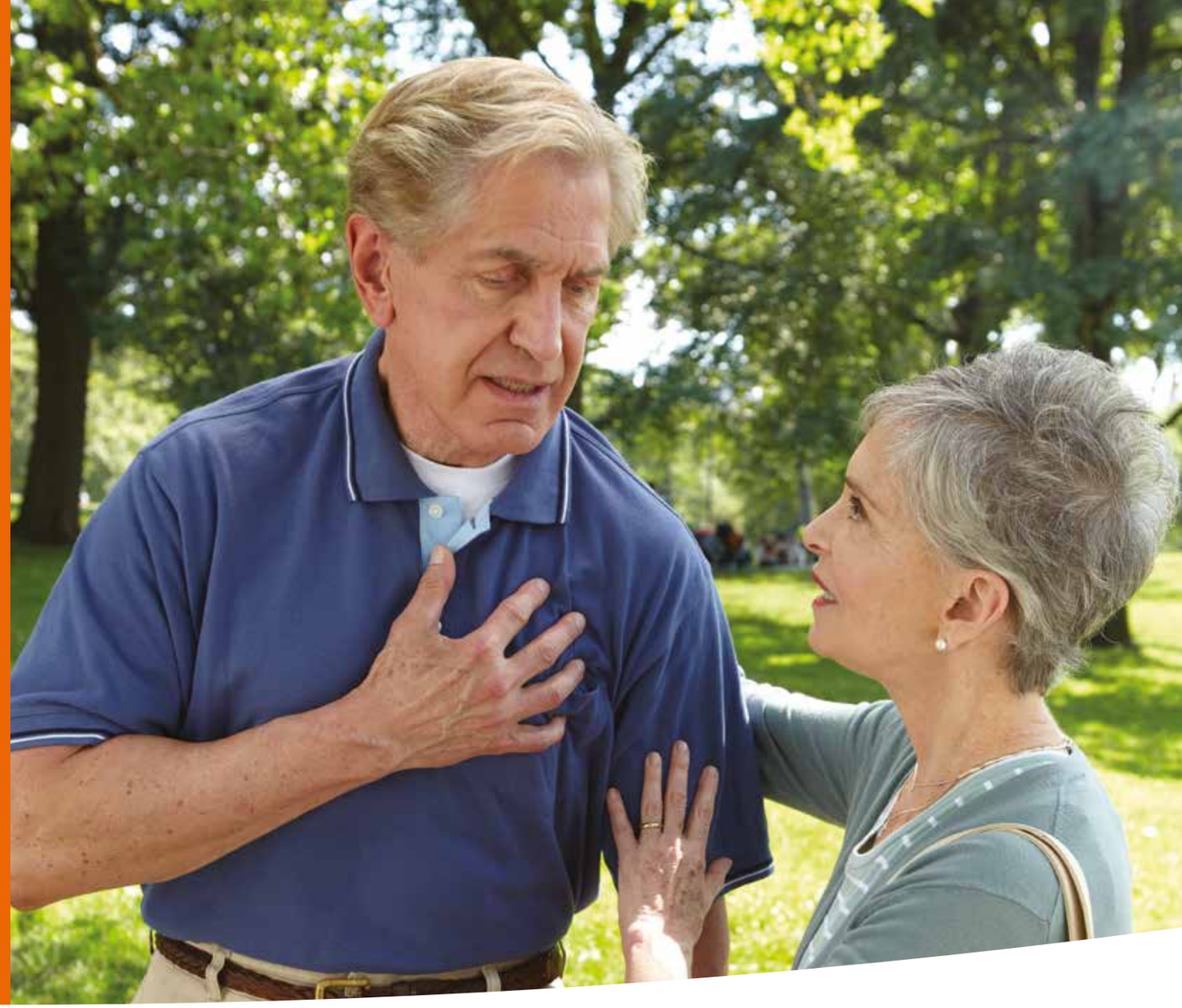

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# Two Trusted Assays, One Trusted Partner

## BNP and NT-proBNP Cardiac Assays

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# Your Trusted Partner for Natriuretic Peptide Testing

## Heart Failure—A Growing Health Problem

Heart failure, a condition where the heart cannot pump enough blood and oxygen to meet the body's needs, affects at least 1–2% of adults in developed countries.[1-5] This condition is becoming increasingly common as the population ages and more people survive myocardial infarction. In the United States (U.S.), heart failure affects 5.7 million adults, costs over 30 billion dollars in hospitalization, and contributes to one in nine deaths.[2,3] Throughout East Asia, the prevalence of heart failure is 1.3–6.7%, and the mortality rate due to heart failure is 2-9%.[6] Heart failure is reported to affect about one million people in Japan[7], 900,000 in the United Kingdom,[8] and 300,000 in Australia.[9] The global annual total cost of heart failure was estimated at $108 billion in 2012, and this number is expected to rise.[10] By 2030, it is estimated that heart failure will affect 8.0 million adults > 18 years of age, and total costs will increase to 70 billion dollars in the U.S.[2,11] Early diagnosis can improve outcomes and reduce the overall cost of care.[12,13] But because heart failure is a complex condition with symptoms that mimic other diseases, diagnosis is often difficult and time-consuming.[1,5,14,15]

## BNP and NT-proBNP—Reliable Answers to Critical Questions

Siemens Healthineers, the leader in cardiovascular testing, is the first company to offer a choice of B-type natriuretic peptides (BNP or NT-proBNP) to meet your needs. These precise and reliable natriuretic peptide tests enable labs to obtain accurate diagnostic and risk assessment results for heart failure and acute coronary syndrome.

The two tests work by measuring levels of either BNP or NT-proBNP which are the two B-type natriuretic peptides derived from the prohormone proBNP. BNP and NT-proBNP are produced in a 1:1 ratio when the left ventricle is stretched due to hemodynamic pressure. Elevated levels of either of these peptides are associated with heart failure and both are equally useful as an aid in the diagnosis of congestive heart failure (CHF).[13,16-23] Additional references for usefulness of natriuretic peptides in the diagnosis and prognosis of heart failure can be found in guideline documents.[1,5,14,15]

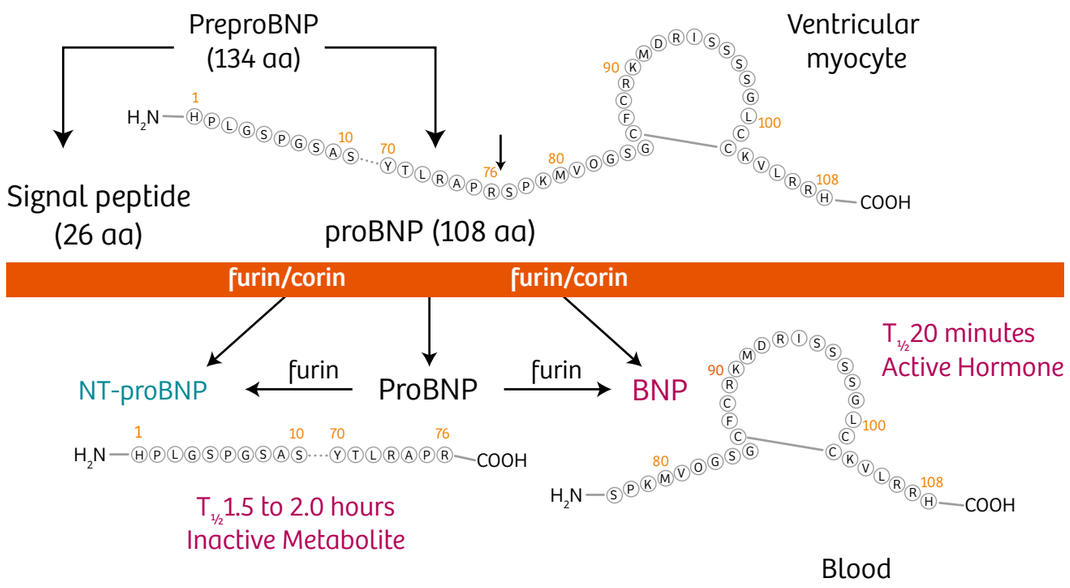


Figure 1. Schematic representation of pro-BNP, BNP, and NT-proBNP production.[35,37]

**For more information,** please contact your Siemens Healthineers representative.

## A Diagnostic Advantage

BNP and NT-proBNP assays improve the clinician's ability to assess a patient's condition with a higher degree of sensitivity and specificity than a physical exam alone.[14,17-19,21,24-26] Often, symptoms of heart failure, such as shortness of breath, fluid retention, and fatigue, are typical of other conditions including pulmonary disease, asthma, and even allergies.

### With BNP or NT-proBNP, Physicians Can:

- Rule-out the diagnosis of heart failure quickly
- Risk stratify patients with acute coronary syndrome (ACS) and heart failure
- Reduce decision time to get patients on the correct treatment pathway[13]
- Reduce costs by eliminating unnecessary procedures or therapies[13,18,20,27-29]

BNP and NT-proBNP assays are not approved for monitoring.

## Expanding Your Options with Siemens Healthineers Assays and Systems

### Different Assays, Same Benefits

While BNP and NT-proBNP are different molecules derived from the same prohormone, they both deliver clinical and economic benefits that make either one an essential tool in diagnosis, care, and management of heart failure.[22,26,30,31] Clinical consensus guidelines are available for both BNP and NP-proBNP, demonstrating the current utility of both natriuretic peptides as defined by clinical study outcome data.[26,32,33]

| Two Assays, Same Utility | BNP | NT-proBNP |
|---|---|---|
| Rule out Acute CHF | ✓ | ✓ |
| Aid in Diagnosis of CHF | ✓ | ✓ |
| Prognosis and Severity of Heart Failure | ✓ | ✓ |
| Risk Stratification in ACS & CHF | ✓ | ✓ |

### Different Systems and the Ability to Choose

The speed and accuracy of BNP and NT-proBNP assays would not be possible without the powerful performance of the systems which run these assays. Because of the flexibility and productivity of these platforms, fast, accurate natriuretic peptide results are obtained, irrespective of the platform used.

| Systems | BNP | NT-proBNP |
|---|---|---|
| ADVIA Centaur® CP | ✓ | ✓ |
| ADVIA Centaur® XP, XPT | ✓ | ✓ |
| Dimension® EXL™ Integrated Chemistry | | ✓ |
| Dimension Vista® | ✓ | ✓ |
| Stratus® CS | | ✓ |
| IMMULITE® (1000, 2000, 2000 XPi) | | ✓ |

Product availability may vary from country to country and will be subject to varying regulatory requirements"

## Lowering Costs, Enhancing Care

BNP and NT-proBNP tests can reduce delays in treatment and lower the overall cost of care.[12,13,17,18,20-22,24,25,29,30] Several studies have demonstrated that these tests reduce patient management cost due to:

- Decreased time to appropriate treatment[13]
- Decreased hospital admissions[13,20,25,27,34]
- Decreased median length of stay[13,20,22,25,27,34]
- Decreased need for unnecessary echocardiograms[18,28,29]

## Two Dependable Solutions from One Trusted Partner

No matter which natriuretic peptide you choose—BNP or NT-proBNP—you are making the right choice in heart failure testing. With Siemens as your partner, you have access to comprehensive and innovative offerings in cardiovascular testing. From high-performance systems to high-precision assays, Siemens offers many ways to empower your lab. Trust us to deliver new technologies and ideas to enhance diagnostic performance and improve cardiac health.

Note: All BNP and NT-proBNP assays cross-react with proBNP present in the circulation (Figure 1).[35-38]

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