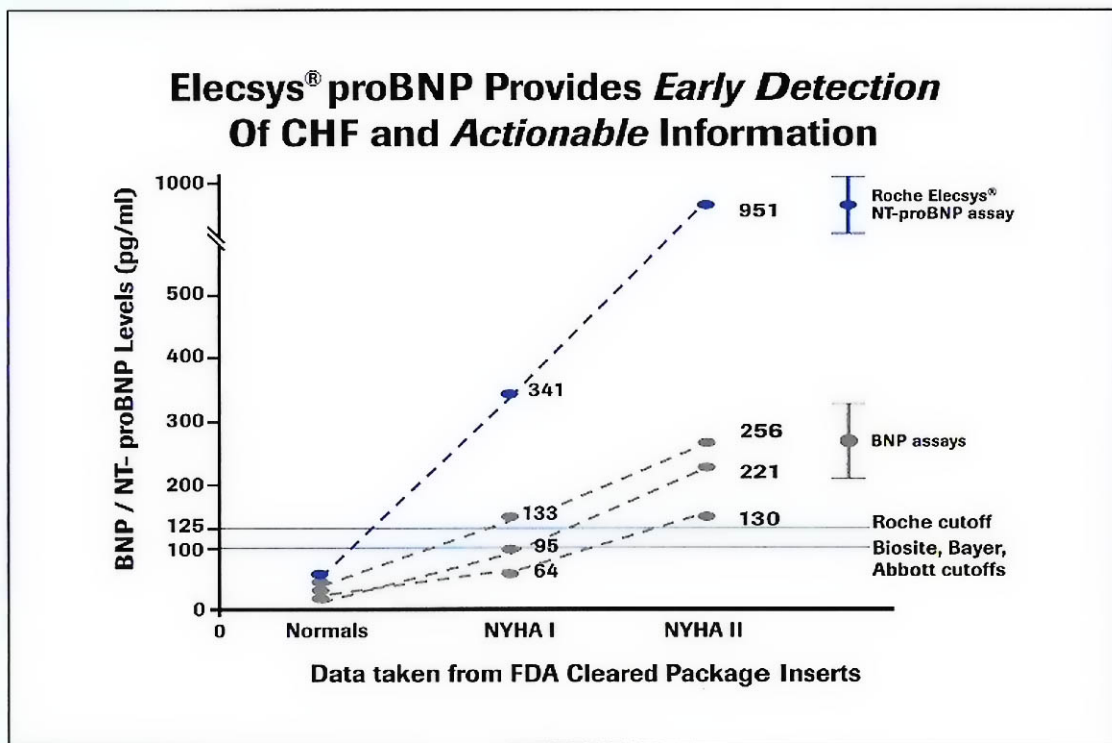


Salem Hospital will soon be in some very good company. Several of the top cardiology centers in the nation, as ranked by *US News & World Report* are NT-proBNP users.

### Wide Dynamic Measuring Range And Excellent Sensitivity Lets You Be Confident In Your Results

NT-proBNP values are 6-8 times higher than BNP values in those who have heart failures. This increase in values gives your physicians confidence that you are identifying the patients who need further cardiac care. This greater sensitivity decreases the chance of false-negative results, especially in those with early heart failure, as opposed to BNP, which can miss up to 1/5 of diagnosed heart failure patients.



### What To Expect

#### Accurate Results Save Community Resources

False-negative test results in a patient with a chronic disease like heart failure can be costly. The excellent sensitivity of NT pro-BNP assay ensures that the right resources are assigned to the correct patient. Use of the NT proBNP assay in the Emergency Department has been shown to reduce echocardiograms by 58%, decrease initial hospitalization by 13%, and reduce in-patient hospital days by 12%.

#### High Negative Predictive Value Aids In The Accurate Rule Out Of Heart Failure Patients

Strong negative predictive values (NPV) give your Emergency Physicians the ability to rule out heart failure with close to 100% accuracy. This can result in decreased length of stay in the Emergency Department and hospital. In a recent study, with the standard of care algorithm applied, the NT-proBNP assay reduced unnecessary echos and prevented the admission of misdiagnosed patients.

## Longer Circulating Half-Life

### Get An Accurate Picture of Patient Status

NT-proBNP and BNP are released from the myocyte as a monomer and cleaved in the circulation. NT-proBNP has a circulating half-life of 1-2 hours, vs. the 20 minute circulating half-life of BNP. This increase in time in the circulation allows you to get an accurate picture on BNP secretion, with less chance of missing the analyte. Due to fewer physiological modes of clearance, proBNP can be detected much longer, even after short bursts of release.

### Freedom From Analytical Problems

Unlike BNP, NT-proBNP is an extremely stable analyte, with recoveries of close to 100% after storage at room temperatures for 48 hours. The COBAS proBNP assay can be used in EDTA or heparinized-plasma samples with a total coefficient of variation of less than 3.2%. Highly sensitive electrochemiluminescent technology (ECL) in the Elecsys assay allows you to detect analytes at concentrations of  $10^{-18}$  moles. This can be compared to finding one needle in a haystack the size of SafeCo Field. With Elecsys proBNP, you can be confident that you are accurately detecting picogram quantities of analyte.

### NT-proBNP Is Useful In Assisting In The Diagnosis Of Chronic Heart Failure And In Assessing Risk In These Patients

Patients with chronic heart failure express high levels of NT-proBNP. The values obtained from the assay not only assist you in diagnosing heart failure, but also give information on the patient's risk of cardiac morbidity and mortality. In addition, NT-proBNP is more sensitive than BNP at identifying patients in the early stages of heart failure, defined by the New York Heart Association guidelines as class I and class II.

### NT-proBNP Is Useful Assessing Risk In Patients With Acute Coronary Syndrome

Used in conjunction with Troponin T, NT-proBNP gives prognostic information in patients presenting with chest pain. Higher values of NT-proBNP in the patient population independently denote short-term and long-term risk of cardiac morbidity and mortality.

### NT-proBNP Provides Useful Information When Assessing Risk In Patients With Stable Coronary Artery Disease

Detecting early risk for adverse heart events in CAD patients can provide the physician with the opportunity to improve the patient's clinical outcome. An elevated NT-proBNP serum level substantially contributes in the assessment of increased risk of cardiovascular events and mortality in patients with stable coronary artery disease. This assay provides prognostic information above and beyond that provided by conventional cardiovascular risk factors.

## Research Suggests You Should Consider

### All Cardiac Causes When Measuring proBNP

In general, natriuretic peptide assays provide very strong negative predictive values, making them good tools along with clinical findings for the rule out of heart failure in patients with negative values. Research suggests there are other things that may cause an elevation in the natriuretic peptides that are other things that are not heart failure and these should be considered when evaluating a patient's proBNP value and clinical findings.

- Advanced Age
- Thyroid Disease
- Primary Pulmonary Hypertension
- Sclerosis
- Amyloidosis
- Renal Disease
- Cirrhosis
- Anemia
- Myocardial Infarction
- Lung Disease with Right-Sided Heart Stress
- Stable NYHA Class I Patients with Lower Ejection Fractions

- Aortic Stenosis
- Sepsis
- Acute Coronary Syndrome
- Pulmonary Embolism
- Coronary Artery Disease

### **Use of NT-proBNP In patients With Renal Disease**

Even in the presence of poor renal function, NT-proBNP does not lose its prognostic abilities. While there has been considerable discussion that proBNP is cleared through the kidneys, it appears that both BNP and NT-proBNP have an element of renal clearance, and caution must be used with either when making a heart failure diagnosis in a patient with renal disease. Always look for clinical signs and symptoms to support the diagnosis.

### **Sampling Strategy**

The NT proBNP assay should be run when there is a suspicion of heart failure. The results will give diagnostic and prognostic information to the physician. In addition, a NT proBNP upon presentation in the chest pain patients will also assist physicians in risk-stratifying that patient.