



NT-proBNP

Effective September 27, 2016, Laboratory Alliance of Central New York will offer NT-proBNP testing in our laboratories.

Natriuretic peptides are useful in diagnosing and monitoring congestive heart failure. B-type, or brain, natriuretic peptide (BNP) is produced primarily by the left ventricle of the heart. A precursor protein, pro-BNP, is also produced by the heart, and then enzymatically cleaved to release the active hormone BNP and an inactive fragment, NT-proBNP, into the blood. Although the measurement of either BNP or NT-proBNP may be used as an aid in diagnosis, prognosis, and management of acute and chronic heart failure, NT-proBNP offers important advantages. A recently released heart failure medication, Entresto[®], reduces the clearance of BNP from the system, complicating interpretation of BNP levels in a patient taking this drug. For these patients, monitoring with NT-proBNP may be preferred.

There are additional reasons why NT-proBNP is now considered to be superior to BNP as a biomarker for heart failure (HF). NT-proBNP is much more stable in patient samples than is BNP¹. The circulating concentration of NT-proBNP tends to be significantly higher than that of BNP in patients with HF due in large part to NT-proBNP's longer circulating half-life². This together with the superior stability of NT-proBNP in patient samples facilitates accurate and precise measurement of this biomarker. NT-proBNP was found to be more accurate than BNP in differentiating patients with mild HF from those without HF and thus is particularly beneficial in the early detection of HF³.

BNP has been offered in our laboratories for a number of years, and for now, will continue to be available at all four of our laboratory locations. Beginning September 27, 2016, providers will also have the option of requesting NT-proBNP. Testing will be performed at our Crouse Hospital, St. Joseph's Hospital and Operations Center sites, but will be available 24/7 as stat or routine requests from any ordering location. It is important to note that the analyte measured and the cutoffs for normal are different for each test; the test results are not interchangeable.

	BNP	NT-proBNP
Order code:	BNP	PROBNP
Method:	Fluorescent or Chemiluminescent Immunoassay	Chemiluminescent Immunoassay
Specimen Requirements:	One full lavender (EDTA) top tube. Partially filled tubes are not acceptable.	One gold (SST) top or light green (LiHep) top tube preferred. Lavender (EDTA) top tube is also acceptable.
Stability:	Whole Blood: Ambient: 7 hrs Refrigerated: 7 hrs	After separation from cells: Ambient: 3 days Refrigerated: 3 days
Billing Code:	1010009	1010519
CPT Code:	83880	83880
Cutoff:	100 pg/mL	0 – 74 y: 125 pg/mL ≥ 75 y: 450 pg/mL
Analytical range:	20 – 3,900 pg/mL	5 – 35,000 pg/mL

References

1. Ordonez-Llanos J, Collinson, PO, and Christenson, RH. Amino-Terminal Pro-B-Type Natriuretic Peptide: Analytic Considerations. *Am J Cardiol.* 2008;101(3A).
2. Hall C. Essential biochemistry and physiology of (NT-pro)BNP. *Eur J Heart Fail.* 2004;6:257-260.
3. Emdin M, Passino C, Prontera C, Fontana M, Poletti R, Gabutti A, Mammini C, Giannoni LZ, Zucchelli G, and Clerico A. Comparison of Brain Natriuretic Peptide (BNP) and Amino-Terminal ProBNP for Early Diagnosis of Heart Failure. *Clin Chem.* 2007;53:1289-1297.

Questions regarding this test may be directed to Cheryl Haskins, MS, MT(ASCP)SC, Manager of Chemistry and Referral Testing, at 315-410-7014 or cherylhaskins@lacny.com.

9/2/16, cmh/jar