

HOW CAN sST2 MAKE A DIFFERENCE FOR YOUR PATIENT

sST2 is a powerful prognostic marker for Heart Failure patients' outcome

sST2 helps for risk stratifying your post MI patients

sST2 helps you **predicting therapy efficacy**, particularly for antifibrotic drugs like Mineralocorticoid receptor antagonist (MRA) and neprilysin inhibitor.

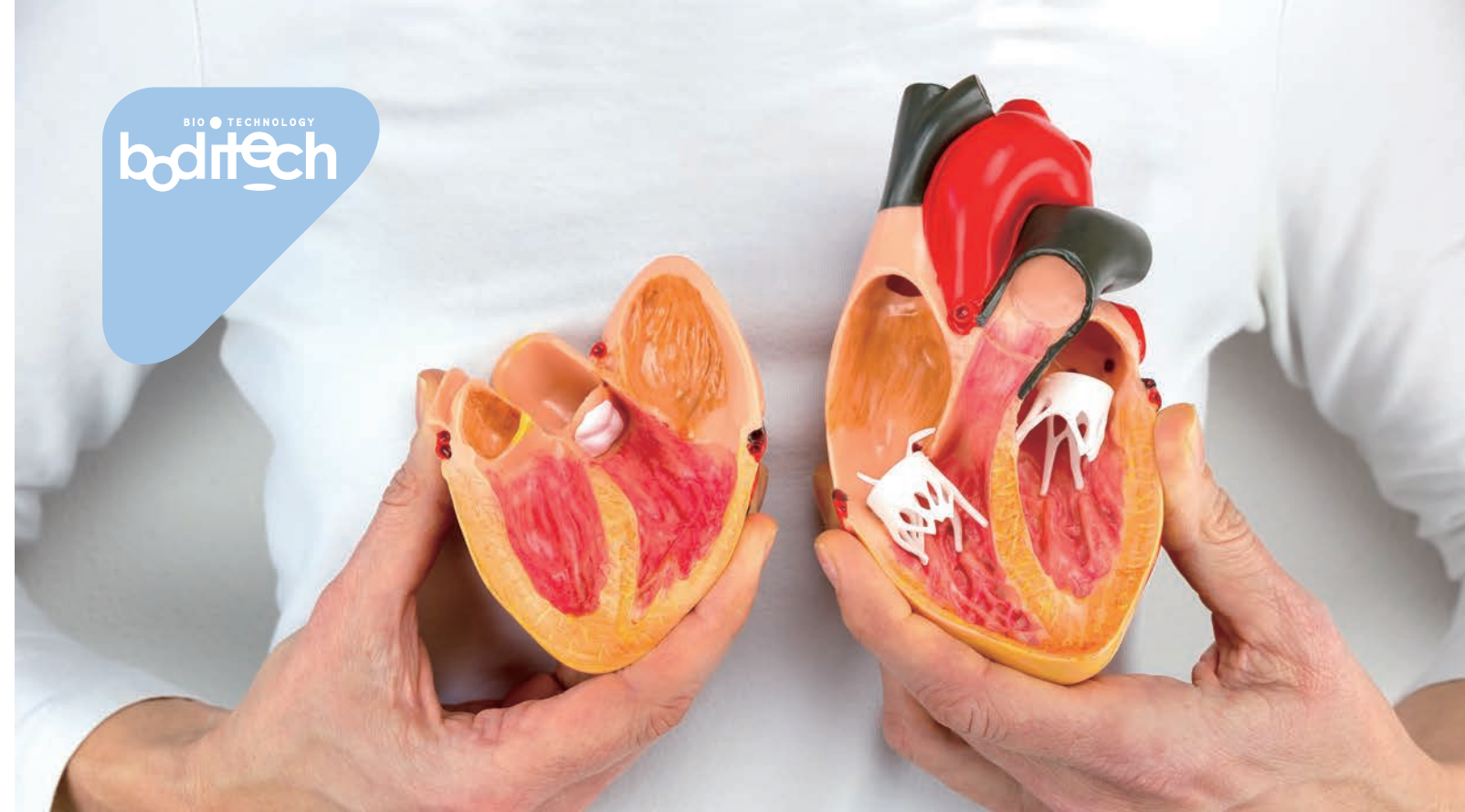
REFERENCE

- 1. van Vark LC, Lesman-Leegte I, Baart SJ, et al., Prognostic value of serial ST2 measurements in patients with acute heart failure, Journal of the American College of Cardiology 2017;70:2378-88.
- 2. Antoni Bayés-Genís, Julio Núñez, Josep Lupón, Soluble ST2 for Prognosis and Monitoring in Heart Failure, journal of the American College of Cardiology, VOL. 70, NO. 19, 2017
- 3. Gaggin HK, Szymonifka J, Bhardwaj A, et al., Head-to-head comparison of serial soluble ST2, growth differentiation factor-15, and highly-sensitive troponin T measurements in patients with chronic heart failure, Journal of the American College of Cardiology HF 2014;2:65-72.
- 4. Weir RA, Miller AM, Murphy GE, et al., Serum soluble ST2: a potential novel mediator in left ventricular and infarct remodeling after acute myocardial infarction, Journal of the American College of Cardiology 2010;55: 243-50.
Breibthardt T, Balmelli C, Twerenbold R, et al., Heart failure therapy - induced early ST2 changes may offer long-term therapy guidance., Journal of Cardiac Failure 2013;19:821-8.
- 5. Nicholas Wettersten, Alan S. Maisel, Biomarkers for Heart Failure: An Update for Practitioners of Internal Medicine, The American Journal of Medicine, 2016 Jun;129(6):560-7. doi: 10.1016/j.amjmed.2016.01.013. Epub 2016 Feb 1
- 6. Daniels LB, Bayes-Genis A., Using ST2 in cardiovascular patients: a review. Future Cardiol. 2014;10(4):525-539.
- 7. 2017 acc/AHA/HFSA Focused Update of the 2013 ACCF/AHA Guideline for the Management of Heart Failure, Circulation 2017;136-e161.
- 8. Manzano-Fernandez S, Mueller T, Pascual-Figal D, et al.. Usefulness of soluble concentrations of interleukin family member ST2 as predictor of mortality in patients with acutely decompensated heart failure relative to left ventricular ejection fraction.Am J Cardiol. 2011; 107:259-67.
- 9. Lassus J, Gayat E, Mueller C, et al.. Incremental value of biomarkers to clinical variables for mortality prediction in acutely decompensated heart failure: the Multinational Observational Cohort on Acute Heart Failure (MOCA) study.Int J Cardiol. 2013; 168:2186-94
- 10. Bayes-Genis A, Januzzi JL, Gaggin HK, de Antonio M, Motiwala SR, Zamora E, Galán A, Domingo M, Urrutia A, Lupón J, ST2 pathogenetic profile in ambulatory heart failure patients, J Card Fail. 2015 Apr;21(4):355-61.



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What is sST2?

sST2 is a member of the interleukin-1 (IL-1) receptor family and it can be found in a transmembrane form (ST2 ligand or ST2L) and a soluble, circulating form (sST2). IL-33 when bound with ST2L protects the myocardium against hypertrophy and cardiac fibrosis. However Soluble ST2 acts as a decoy receptor for IL-33 and prevents the IL-33/ST2L interaction.¹

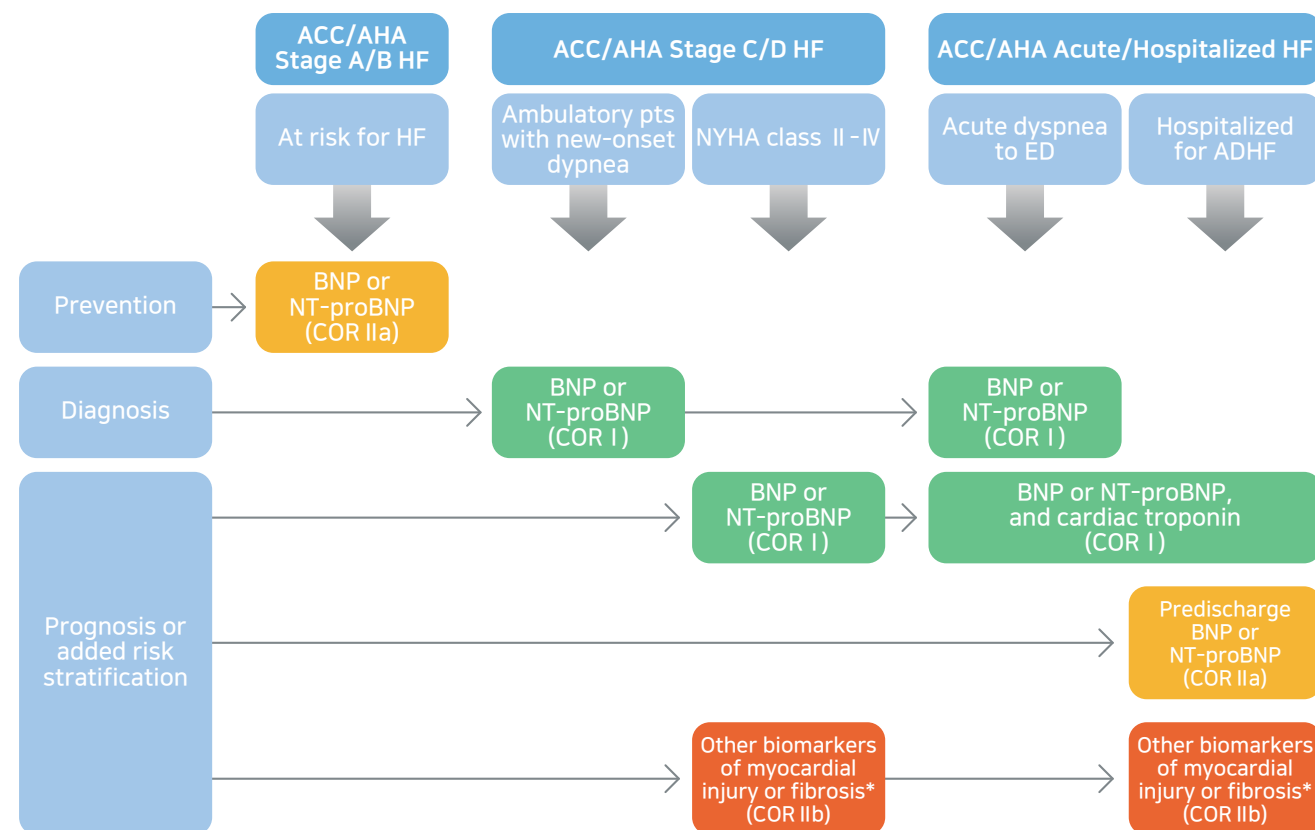
Value of sST2 analysis

Higher concentration of soluble ST2 is associated with increased myocardial fibrosis, adverse cardiac remodeling, and worse cardiovascular outcomes.^{1,2}

Studies shows that the changes in sST2 level during follow up patients admitted with acute HF represent a strong, independent predictor of the composite endpoint of all-cause mortality or readmission for HF over at least 1 year follow-up.^{1,3,4}

Guidelines on ST2

ST2 is currently recognized as a valuable adjunct for prognosis and monitoring of heart failure patients. It was included in the 2017 update of the American College of Cardiology (ACC)/ American Heart Association(AHA) HF guidelines as part of the biomarkers of myocardial injury or fibrosis:⁷



The ACC and AHA recognize in this guidelines that biomarkers of myocardial fibrosis are predictive of hospitalization and death in patients with HF and also are additive to natriuretic peptide biomarkers levels in their prognostic value.^{7,8} Further indicating that, a combination of biomarkers may ultimately prove to be more informative than single biomarkers.⁹

When is the usage of sST2 indicated?

1. Before discharging a HF patient to risk assessment of death and hospitalization
2. Serial testing during clinical therapy. This practice provides meaningful data to guide the therapy.¹
3. Helpful in assessing the fibrosis status of a patient in case of cardiac strain, inflammation, myocardial necrosis with remodeling and other pathogenic pathways¹⁰.

It is meaningful to note that studies show that sST2 is not effected by age, sex and body mass index⁵. Furthermore sST2 levels are independent of renal function¹⁰.

sST2 and other biomarkers

Biomarkers have become an integral part of medicine, aiding in the diagnosis and treatment of numerous conditions. Natriuretic peptides, troponin, ST2 and procalcitonin, all provide significant information for the doctor to know which is the best treatment for a patient presenting at the hospital with chest pain, shortness of breath, sign of infections, etcetera. Biomarkers also can help decide on appropriateness of discharge and follow up frequency. All these parameters work together to provide the most vivid picture for the clinician to consider and adapt the therapy to the single patient.^{5,6}

Why Choose AFIAS ST2?

AFIAS is a platform which can be easily adapted to various usages and environment. It is fast, easy to use and it is particularly suited for delocalized testing in or near the emergency room and ICU. Because it can run multiple tests at the same time it is also suitable for use in the central laboratory for time critical assays.

- Multiplex capability : Mix and match biomarker essay to be run at the same time on AFIAS-6
- Large Menu: Panel of related tests available to help clinical decisions.
- Easy to use: Ready to use reagent contained in a single-use cartridge
- Quick: add sample and walk away, results in 12 minutes
- Automated and connected, for simple data management and compliance

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