

Achieving biomarker-based treatment target goals implies good prognosis for obese heart patients

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In a recent study published in the *Journal of the American Heart Association* by University of Alabama at Birmingham researchers,

findings indicate that among patients with heart failure, obesity is associated with a higher risk of heart failure hospitalization or death due to cardiac causes. However, achieving biomarker-based treatment goals in heart failure improves the prognosis for patients irrespective of their obesity status.

Heart failure is one of the leading causes of death in the United States and contributes to nearly 14% of all deaths in the U.S. Highly efficacious medications are now available for management of this disease.

Vibhu Parcha, M.D., a clinical research fellow in UAB's Division of Cardiovascular Disease and the first author of this study, says [obese individuals](#) frequently have multiple comorbidities, which impacts how the [heart](#) functions; but paradoxically they were traditionally thought to have better prognosis in the setting of heart failure.

"Obese individuals also have low circulating levels of beneficial heart hormones called natriuretic peptides that help control blood pressure and handling of salt," Parcha said. "These hormones are increased in the setting of heart failure and are hence used as biomarkers for how badly the heart is doing. Previously it has been demonstrated that heart failure patients who regularly take their medications and have their NT-proBNP levels (a natriuretic peptide used as a heart failure biomarker) less than 1,000 pg/mL do better in terms of being admitted to hospital for worsening of heart failure or dying due to cardiac causes.

Parcha and his investigative team analyzed heart failure patients enrolled in the NHLBI-sponsored Guiding Evidence-Based Therapy Using Biomarker-Intensified Treatment in Heart Failure, or GUIDE-IT, trial.

"The assessment of heart failure patients in the setting of a randomized clinical trial allows us to look closely at how [obesity](#) impacts heart failure

outcomes and whether good medical therapy can help improve outcomes for these patients," Parcha said.

Researchers found that, unlike the previously reported obesity paradox of heart failure, increasing body mass index was associated with a higher risk of heart failure hospitalizations for worsening heart failure or death from cardiac causes.

They found that obese patients have nearly 60% lower levels of the natriuretic peptide-based biomarker NTproBNP, but still have worse outcomes. The important finding of the study was that, irrespective of obesity, if heart failure patients are adherent with their treatments and achieve an NTproBNP level of

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