

# Heart Failure

## AGREEMENT BETWEEN CLINICAL, ECHOCARDIOGRAPHIC AND NEUROHORMONAL RESPONSE TO CARDIAC RESYNCHRONIZATION THERAPY

ACC Moderated Poster Contributions  
McCormick Place South, Hall A  
Monday, March 26, 2012, 9:30 a.m.-10:30 a.m.

Session Title: Optimizing the Benefit of Cardiac Resynchronization Therapy  
Abstract Category: 13. Heart Failure: Therapy  
Presentation Number: 1221-363

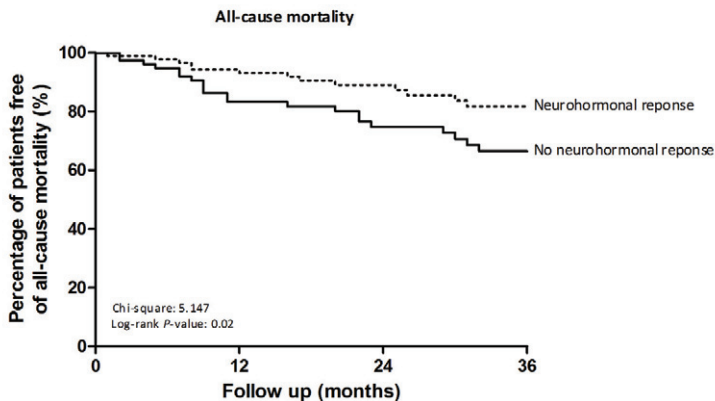
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**Background:** The aim of the present study was to assess the relationship between changes in NT-proBNP after CRT and clinical and echocardiographic response in heart failure patients.

**Methods:** 170 patients treated with CRT were included (mean age  $61 \pm 11$  years, 75% male, QRS duration  $154 \pm 30$  ms). Clinical and echocardiographic parameters and circulating NT-proBNP levels were assessed at baseline and 6 months after CRT. At 6 months follow-up, increase in New York Heart Association class  $\geq 1$  point, decrease in left ventricular end-systolic volume  $\geq 15\%$  and decrease in NT-proBNP  $\geq 15\%$  defined clinical, echocardiographic and neurohormonal CRT response, respectively. All-cause mortality data were also collected.

**Results:** At 6 months follow-up, percentages of neurohormonal, echocardiographic and clinical response were 54%, 58% and 66%, respectively. Majority of patients (71%) who showed echocardiographic response had a reduction in NT-proBNP  $\geq 15\%$ . In contrast, only 58% of patients who showed clinical response had also significant NT-proBNP reduction. Patients with neurohormonal response to CRT demonstrated a significantly better long-term outcome compared to patients without neurohormonal response (log-rank  $P = 0.02$ , Figure).

**Conclusions:** NT-proBNP reduction showed a better agreement with echocardiographic response compared to clinical response, indicating that echocardiographic response and NT-proBNP may be more useful to evaluate the effects of CRT.



Patients at risk	0	12	24	36
Neurohormonal response	92	78	53	37
No neurohormonal response	78	56	39	26