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**In Quest of Predictors of Response to Cardiac Resynchronization Therapy (CRT/D)**

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Background: Up to 30 % of CRT/D recipients implanted according to guidelines do not respond to this therapy. Despite more than a decade of CRT experience, there are still contradictory data on the value of various baseline parameters as predictors of response to CRT.

Methods: We reviewed our prospectively collected institutional CRT/D database of 509 pts implanted with CRT/D since 1998. 353 pts had complete baseline and follow up data and they formed the study population. All parameters were assessed at baseline and 6- 12 months post implantation. Clinical response to CRT was defined by being alive with a combined score of improvement in NYHA class, QOL and 6mw ( $<-1/0/>1$ ). Echocardiographic response was defined as a combined score of absolute increase in LVEF  $\geq 5\%$  and relative decrease in LVESV  $\geq 10\%$  ( $<-1/0/>1$ ). Responders had to have a combined score of  $\geq 1$ . Multiple baseline clinical and echocardiographic parameters were analyzed as predictors of clinical and of echocardiographic response

Results: The clinical response rate was 59.5%. The only significant predictor of clinical response was higher NYHA class ( $p=0.002$ ). The echocardiographic response rate was 50.8%. Significant predictors of echocardiographic response included prior RV pacing, BBB as compared to normal and IVCD ECG pattern. The following baseline parameters were not predictive of any type of response: age, gender, etiology of cardiomyopathy, atrial fibrillation, pulmonary artery pressure, septal to lateral delay, YU score, QRS Width, QOL, 6mw, LVEDD, LVEDV, LVESV, LVESD, and LVEF.

Conclusions: In this large CRT pts cohort, the only predictor of clinical response to CRT/D was worse NYHA functional class at implantation, and the only predictors of Echo response were RV pacing and QRS morphology. Other commonly used clinical and echocardiographic measures failed to predict clinical response. New parameters should be sought in order to better predict response to CRT.