cardiac model with CV anatomy (panel A) was interactively shown to the implanting cardiologist prior and during CRT implantation to support LV lead placement. Intra-procedural angiographic images (panel B) of CV anatomy were taken in right and left anterior oblique views. CT-derived CV anatomy was visually compared to intra-proce-
dural angiography and concordance between the two modalities was defined by simi-
lar numbers and shapes of coronary veins on the LV free wall.

Results: Sixteen patients were included. One patient was specifically referred for pre-
procedural CT due to an already diagnosed persistent left-sided superior vena cava (SVC) and one due to an unsuccessful LV lead placement attempt two years earlier. So far, fourteen patients underwent a CRT implantation procedure. In one patient, implantation was postponed due to a right ventricular thrombus on CT. In two patients, a right-
sided implantation approach was necessary due to a persistent left-sided SVC with no left innominate vein, which was a de novo CT diagnosis in one patient. In three patients angulation or stenosis at the ostium of the initial target vein on the LV free wall (shown on CT) prohibited cannulation, and an alternative vein had to be targeted. Concordance in imaging of the lateral veins was present in thirteen out of fourteen patients. In one patient, a very small interlateral vein on angiography was missed on CT. In three patients, CT-derived CV anatomy demonstrated an inferior vein that was more difficult to visualize on angiography. Eleven out of thirteen patients had at least three coronary sinus tributaries; in two patients, CV anatomy was limited to only two veins.

Conclusion: Imaging of CV anatomy pre-procedurally by CT can be done reliably when using a designated protocol and impacts the CRT implantation approach sub-
stantially.

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Influence of Etiology, QRS duration, and Baseline Systolic Function on Long-
term CRT Response Rate with Multipoint Pacing: A Multicenter Experience

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Background: Cardiac resynchronization therapy (CRT) with multipoint left ventricular (LV) pacing (MultiPointTM Pacing [MPP]) has been shown to improve CRT response. MPP response rates for patients with variable etiology, QRS duration, and baseline systolic function have not been compared in a multinational cohort.

Purpose: Evaluate the long-term response rate of patients receiving CRT with MPP in multiple EU centers, as assessed by end-systolic volume (ESV) reduction.

Methods: Patients receiving a CRT device (Quadra Assura MP™ CRT-D, Quartet™ LV lead) were programmed to MPP per each center’s programming strategy at the time of implant, and followed for 6-12 months. CRT response was defined by an ESV reduction ≥ 15% relative to pre-implant baseline, as determined by a blinded echocar-
diography technician.

Results: Eighty-six patients (81% male, 66±11 yr, NYHA III [26%] IV[74%], ejection frac-
tion [EF] 28±7%, QRS 150±19 ms) from 6 EU centers were included in this analysis. An overall CRT response rate of 80% was observed with an ESV reduction of 26±15%. A similar response rate was achieved with MPP regardless of ischemic vs. non-ischemic eti-
ology (79% for ischemic [N=42], 82% for non-ischemic [N=44], p=ns) and QRS duration ≥150 ms vs. <150 ms (78% for QRS≥150ms [N=51], 83% for QRS<150 ms [N=35], p=ns). Further, patients with better baseline systolic function were associated with higher response rates (60% for EF<30% [N=41], 67% for EF≥30% [N=45], p<0.01).

Conclusions: Our multicenter European study suggests that MPP significantly improves long-term reverse remodeling in patients treated with CRT irrespective of baseline QRS duration and etiology.

Abstract P1140 Figure.