



## Imaging

### IMPACT OF OBESITY ON REVERSIBILITY OF CONTRACTILE DYSFUNCTION IN PATIENTS WITH HYPERTENSIVE HEART DISEASE

ACC Moderated Poster Contributions  
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**Background:** Obesity has been associated with subclinical LV contractile dysfunction, even in the presence of a normal EF. The extent to which subclinical LV dysfunction is reversible in obese versus non-obese individuals is unknown.

**Methods:** We studied a subset of 166 patients (51% women; 51% obese) from the Exforge Intensive Control of Hypertension to Evaluate Efficacy in Diastolic Dysfunction (EXCEED) trial who underwent 24 weeks of intensive vs. standard anti-hypertensive therapy with valsartan + amlodipine (titrated to goal SBP <135 vs <140 mmHg) and had baseline and follow-up echocardiography. We examined the relation of BMI with reversibility of contractile dysfunction, as reflected by global longitudinal systolic strain.

**Results:** Obese compared to non-obese patients had similar systolic contractile function at baseline ( $-17.2 \pm 3.6\%$  vs  $-17.3 \pm 4.4\%$ ;  $P=0.77$ ) but worse contractile function at follow up ( $-18.1 \pm 3.1\%$  vs  $-19.4 \pm 3.8\%$ ;  $P=0.02$ ). Percent improvement in contractile function was less in patients with greater BMI (Figure). In multivariable analyses, greater BMI was associated with significantly less improvement in longitudinal strain ( $\beta=0.596$ ;  $P=0.01$ ) after adjusting for age, sex, treatment arm, change in SBP, and baseline measures of SBP, DBP, EF, LVM, E', and longitudinal strain.

**Conclusion:** In the setting of hypertensive heart disease with normal EF, patients with increased BMI experience less improvement in contractile function following treatment with antihypertensive therapy.

### Improvement in LV Contractile Function

