

## Prevention

### IS LEAN MASS PROTECTIVE IN PATIENTS WITH PRESERVED EJECTION FRACTION?

ACC Moderated Poster Contributions  
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Authors: *Alban De Schutter, Carl Lavie, Dharmendrakumar Patel, Richard Milani, Ochsner Health System, New Orleans, LA, USA*

**Background:** In many disease states and in the elderly, an inverse relationship between obesity and mortality has been observed. Critics have attributed this relationship to the poor performance of body mass index (BMI) to adequately reflect body composition, attributing the protective effects to lean mass index (LMI) instead.

**Patients and Methods:** We retrospectively assessed 47866 patients with a preserved left ventricular ejection fraction (LVEF;  $\geq 50\%$ ). We calculated BMI as weight over height squared and body fat (BF) as determined by the Jackson Pollock equation and LMI as  $(1-BF) \times \text{BMI kg/m}^2$ . Patients were divided according to LMI: low ( $< 18.7 \text{ kg/m}^2$  in men and  $< 14.9 \text{ kg/m}^2$  in women;  $N=6106$ ), medium ( $N=28055$ ), and high ( $> 21 \text{ kg/m}^2$  in men and  $> 17.2 \text{ kg/m}^2$  in women;  $N=13704$ ). The three groups were analyzed by total mortality over average 3.1-year follow-up by National Death Index.

**Results:** Mortality was highest in the low LMI group (15.0%;  $p<0.0001$  vs others), followed by the medium (8.4%) and lowest in the high LMI group (2.9%;  $p<0.0001$  vs others). In proportional hazard analysis, after adjusting for age, gender, LVEF, relative wall thickness and left ventricular mass index, higher LMI category (HR 0.68; CI 0.64-0.72;  $p<0.0001$ ) was associated with lower mortality (Figure).

**Conclusions:** In patients with preserved LVEF, higher LMI seems to be protective, even after adjusting for confounding variables and adjusting LMI for age and gender.

