

P1391

**Global longitudinal strain in chronic asymptomatic aortic regurgitation: a meta-analysis**

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**BACKGROUND** Previous studies have shown that left ventricle global longitudinal strain (GLS) assessed with 2D-speckle tracking echocardiography, is an independent predictor of outcome in asymptomatic moderate to severe chronic aortic regurgitation (AR) patients.

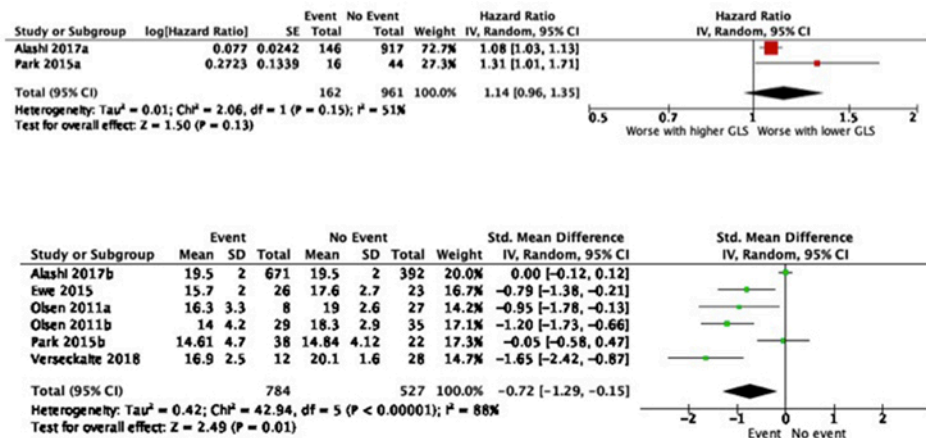
**OBJECTIVES:** To assess GLS impact on mortality and need for aortic valve replacement (AVR) or symptom development in chronic asymptomatic AR patients and preserved left ventricular ejection fraction (LVEF).

**METHODS** A literature search was performed according with these key terms "aortic regurgitation" and "longitudinal strain." The primary endpoint was all-cause mortality. Secondary end-points were: a composite of all-cause mortality, need for AVR or symptom development; and only AVR plus symptom development. Data was pooled using random-effects meta-analysis models. Pooled Hazard Ratio (HR) was performed using its log transformation and inverse variances as weights were then calculated for each study .

**RESULTS** Six studies were included, with a total of 1,571 asymptomatic patients with at least moderate AR and preserved LVEF. There were 996 events (death, AVR, symptom development) reported during follow-up. Pooled adjusted mortality HR tended to be higher for patients with worse GLS (1.14 [0.96–1.35], P = 0.13, I2 51%). GLS performed better in predicting AVR or symptom development (mean difference -0.72 [-1.29, -0.15], P = 0.01, I2 88%), with an estimated HR of 1.36 ([1.01–1.84], P = 0.04, I2 65%).

**CONCLUSIONS** In asymptomatic chronic moderate to severe AR patients, impaired GLS was associated with adverse cardiac outcomes. Left ventricular GLS may offer incremental value on risk stratification as well as on decision-making.

Abstract P1391 Figure 1



**Figure 1 Top.** Forest plot for adjusted mortality hazard ratio in chronic asymptomatic AR patients. **Bottom.** Forest plot of mean GLS in the event and no event patient subgroups. GLS is shown in absolute values.