



## Multimodality Imaging

### ACCELERATED STENOTIC FLOW BY ENHANCED TRANSTHORACIC DOPPLER ECHOCARDIOGRAPHY IS SUPERIOR TO THE ASCVD RISK SCORE IN PREDICTING OBSTRUCTIVE CORONARY ATHEROSCLEROSIS IN PATIENTS WITH ATYPICAL ANGINA

Moderated Poster Contributions  
Saturday, May 15, 2021, 11:30 a.m.-11:40 a.m.

Session Title: Imaging in Atherosclerosis: What You See is What You Get  
Abstract Category: 27. Multimodality Imaging: Echo  
Presentation Number: 1048-15

Authors: *Carlo Caiati, Paola Siena, Mara Piccolo, Paolo Pollice, Fortunato Iacovelli, Stefano Favale, Mario Erminio Lepera, Division of Cardiology, University of Bari, Bari, Italy*

**Background:** Atypical angina (AA) has only an intermediate probability of coronary obstructive atherosclerosis (COA). Accelerated stenotic flow (ASF) by enhanced Doppler echo (E-Doppler TTE) in the whole left main (LMCA) and left anterior descending coronary artery (LAD) is a highly feasible and reliable approach to detect both mild and critical coronary stenosis. The ASCVD risk score is a practical, non-invasive way to risk-stratify patients for COA. The relative diagnostic potential of the 2 methods in predicting COA is unknown in pts with AA.

**Methods:** Eighty-six pts (age 30 -75 years) with AA scheduled for Angiography (CA)/IVUS (intracoronary Doppler) underwent E-Doppler TTE and ASCVD risk score assessment. ASF was expressed as % increment of velocity. COA was defined as either coronary plaque in the LAD/LMCA detected by IVUS (76 pts) or diffuse lumen irregularities in LAD along with stenosis in the other coronaries at CA (8 pts).

**Results:** COA was present in 59 pts (69%) and absent in 27 (31%). The ASCVD score was  $14 \pm 11$ : 36 pts were at low risk (ASCVD < 10) and the other 50 at moderate/high risk. E-Doppler TTE showed a better performance than ASCVD, with 85% sensitivity and 100% specificity (cutoff ASF 23 %) versus 66% and 59% (cutoff ASCVD score 10%), confirmed by AUC comparison (graph).

**Conclusion:** ASF had a better predictive power than the ASCVD score for COA in pts with AA. Moreover, E-Doppler TTE can reliably assess plaque severity and location in the LAD, making it a superior clinical tool compared to the ASCVD score.

