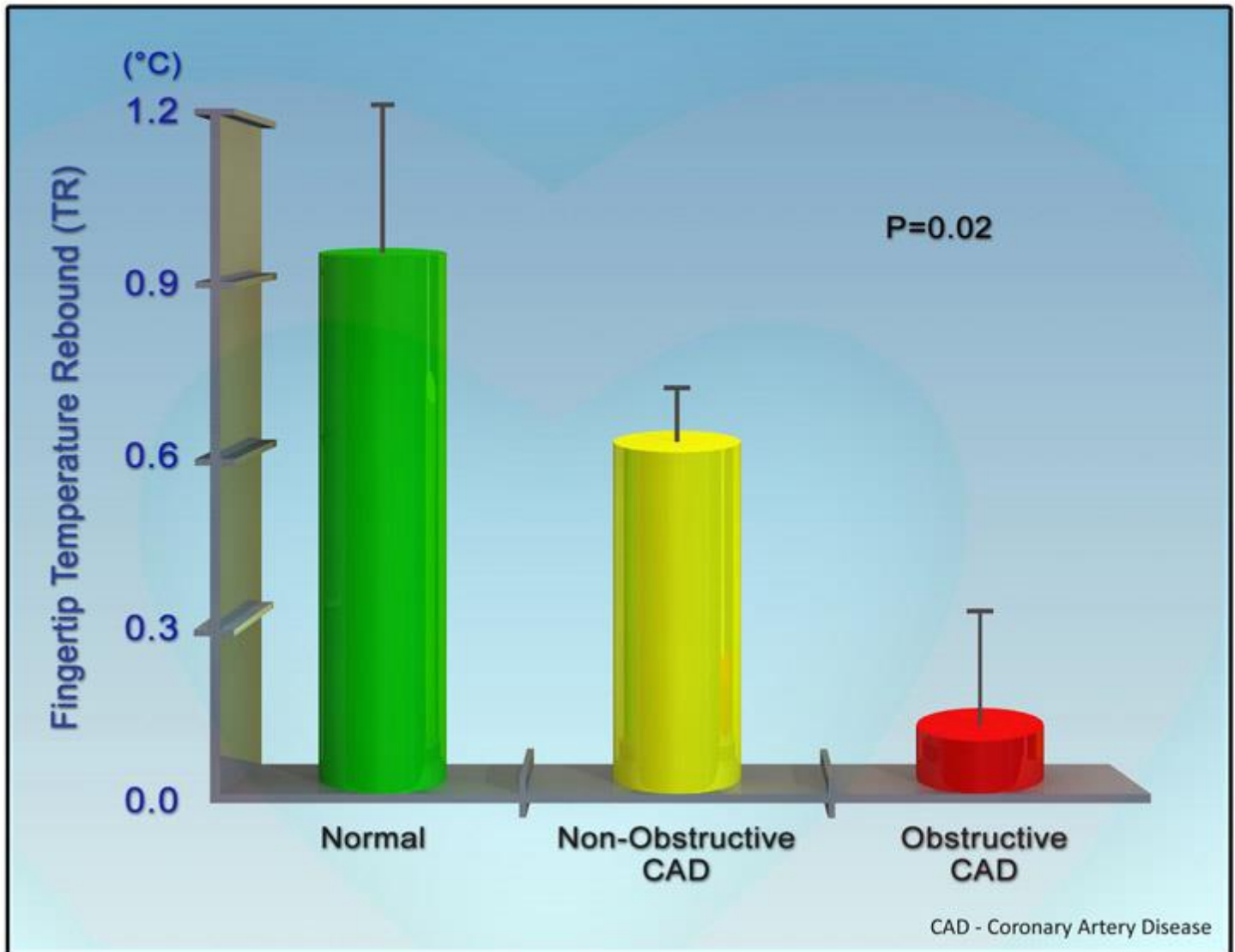


## VENDYS for Symptomatic Patients

In Patients with Chest Pain, Lower Fingertip Temperature Rebound is Associated with Coronary Artery Disease



### Vascular Dysfunction Measured By Digital Thermal Monitoring Strongly Correlates with the Extent of Coronary Artery Disease Diagnosed by 64 Slice Multidetector Computed Tomography

Background: Previous studies have demonstrated the correlation between vascular dysfunction measured by digital thermal monitoring (DTM) and cardiovascular risk factors measured by Framingham Risk Score (FRS) as well as subclinical atherosclerosis measured by coronary artery calcification (CAC). This study evaluates the correlation between DTM and the extent of coronary artery disease (CAD) measured by computed tomography angiography (CTA). Methods: 181 patients, age 63±9 years, 68% male, underwent DTM (during a 5 minute arm-cuff induced reactive hyperemia), CAC scoring and CTA. Fingertip temperature rebound (TR) was used as DTM index of vascular reactivity and FRS was calculated. Obstructive CAD was defined as ≥50% luminal stenosis.

Results: TR decreased significantly from normal coronaries ( $0.99\pm 0.12$ ) to non-obstructive CAD ( $0.67\pm 0.09$ ) to obstructive CAD ( $0.15\pm 0.08$ )  $P < 0.05$ . After adjusting for age, gender and cardiac risk factors using logistic regression analysis, the odds ratio for lowest vs. 2 upper tertile of TR was 3.8 (95% CI 1.1- 14.4,  $p=0.008$ ) for non-obstructive CAD and 8.5 (95% CI 1.8-19.8,  $p=0.006$ ) for obstructive CAD compared to normal coronaries. The combination of TR, FRS and CAC resulted in the area under ROC curve equal to 0.94 to diagnosis of obstructive CAD. Conclusions: In patients suspected of coronary artery disease, severely impaired vascular reactivity is strongly associated with obstructive CAD. Further studies are needed to corroborate our findings and define the clinical utility of DTM for cardiovascular risk assessment.