

# Breaking news: Major Study published in Journal of AHA shows that EndoPAT™ can predict near-future cardiovascular events in high risk and CAD Patients independently and beyond conventional risk assessment

Peripheral Endothelial Function and Cardiovascular Events in High-Risk Patients,

J Am Heart Assoc. 2013;2:e000426;

Matsuzawa et al

528 subjects, two-center, 2.8 years mean follow up

## EndoPAT™

- A 15 minutes test at doctor's office
- Non-invasive
- Simple, Operator independent
- Immediate results
- Over 350 peer-reviewed papers

This landmark study is an extension of previous studies and demonstrates the importance of assessing endothelial health for the prediction of cardiac events in patients who had undergone revascularization procedures.

### Method:

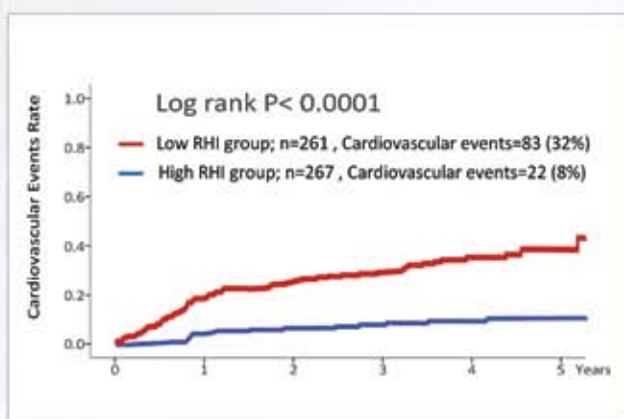
- High-risk 528 patients referred to diagnostic angiography and tested with EndoPAT™ for RHI (Reactive Hyperemia Index)
  - Stenting in 344 (77.8%)
  - CABG in 21 (4.8%)
  - Medical therapy in 77 (17.4%)
- Follow up – mean 2.8 years of follow-up for CV adverse events (CV death, MI or unstable angina, revascularization, HF, Stroke, Aortic disease or PAD)

### Conclusion:

- A low RHI signal (low EndoScore™) detected by EndoPAT™, consistent with endothelial dysfunction, was associated with higher adverse events rate.
- RHI was an independent predictor of AE.
- RHI CV Risk Reclassification (low-intermediate, high, very high) - Net 48.9% over FRS (Framingham Risk Score)

### Takeaway:

- Peripheral micro-vascular endothelial function as assessed by RHI can predict cardiovascular events in conductance vessels.
- Clinical evaluation of endothelial function with RHI provides useful and complementary prognostic information to improve risk assessment for the near-future cardiovascular events in high-risk patients.
- Use of the RHI as a noninvasive assessment of endothelial function could offer an important advance in clinical cardiovascular risk evaluation, even after invasive coronary revascularization with optimal medical treatments.



American Heart Association

