WISE-CVD

CLINICAL TRIAL SUMMARY

Presenters	Cedars-Sinai Medical Center
Objectives	To explore noninvasive methods for detecting and evaluating coronary vascular dysfunction in women by comparing results from the standard invasive diagnostic procedure, coronary angiography, with those from the additional noninvasive technique, CMR imaging.

https://clinicaltrials.gov/study/NCT00832702

TRIAL DESIGN

Prospective Study

SAMPLE SIZE

198 women with suspected Ischemia with no obstructive coronary artery disease (INOCA)

INCLUSION CRITERIA

- Symptomatic angina or anginal equivalent,
- Aged ≥18 years of age,
- No obstructive CAD at coronary angiography (performed within the previous 24 months).
- Competent to give informed consent.

METHODOLOGY

- In a predefined subgroup (n = 198) with repeat CMRI at 1 year, angina severity (SAQ-7) was analyzed against risk factors, baseline invasive coronary function, and CMRI findings.

- Refractory angina was defined as SAQ-7 <75 at baseline with <10-point improvement at 1 year.

RESULTS

Women with refractory angina (n = 60, 30%) had lower income levels, higher rates of hypertension, and greater nitrate use at 1 year ($p < 0.05$) compared to those without.

They also showed significantly lower baseline coronary blood flow (CBF) response to acetylcholine ($p < 0.01$), though myocardial perfusion reserve index remained similar at both time points. At 1 year,

SAQ domain scores showed less improvement in physical limitation, disease perception, angina stability, and frequency ($p < 0.05$) in the refractory group.

In age-adjusted models, hypertension (OR 4.48, 95% CI 1.23–16.25; $p = 0.02$) and abnormal CBF (OR 3.34, 95% CI 1.04–10.72; $p = 0.04$) were independently associated with refractory angina.

CONCLUSION

Refractory angina is frequent among women with INOCA. Hypertension and endothelial-dependent microvascular dysfunction are independently linked to a 4- and 3-fold increased risk of refractory angina at 1 year, highlighting potential therapeutic targets to reduce angina burden in this population.

Luu JM, Wei J, Shufelt C, et al. Refractory angina in women with ischemia and no obstructive coronary artery disease - A report from the Women's Ischemia Syndrome Evaluation-Coronary Vascular Dysfunction (WISE-CVD) study. *Am Heart J Plus*. 2025;54:100547. Published 2025 Apr 22. doi:10.1016/j.ahjo.2025.100547