Women’s Heart Health: Diagnosis

Presenters:
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No Disclosures
Exercise Capacity is An Important Predictor of Death in Asymptomatic Women

Maximal Predicted Heart Rate in Women vs. Men

Peak HR = 206 - 0.88(age)

Peak HR = 220 - age

Gulati et al. Heart Rate Response to Exercise Testing in Women. Circ 2010
Nomogram of percent peak heart rate for age in asymptomatic female volunteers compared with the traditional estimate

Martha Gulati et al. Circulation. 2010;122:130-137
Kaplan-Meier survival curves by heart rate response in maximal exercise stress testing in asymptomatic women

![Kaplan-Meier survival curves](image)

Martha Gulati et al. Circulation. 2010;122:130-137
Kaplan-Meier survival curves by heart rate response in maximal exercise stress testing in asymptomatic women

Martha Gulati et al. Circulation. 2010;122:130-137
Ischemic Symptoms in Women

• More often related to mental or emotional stress vs physical exertion
• Epigastric discomfort and nausea
• Fatigue and dyspnea
Risk Stratification in Symptomatic Women

**Low Risk**
- Premenopausal and no diabetes
- Age 50-60 and capable of ADLs

**Intermediate Risk**
- Age 50-60 and limited ADLs
- Age 60-70

**High Risk**
- Age > 70
- Peripheral arterial disease
- Diabetes (long history or poor control)

COPD, TIA, CVA, CKD
Diagnostic evaluation algorithm for women presenting with suspected ischemic heart disease (IHD) symptoms and intermediate IHD risk and intermediate-high IHD risk.

Acute Coronary Syndromes in Women vs Men

• Plaque erosion with distal embolization vs plaque rupture with occlusive thrombus
• Increased incidence of coronary microvascular disease
• Increased frequency of pathological vasoreactivity
• Spontaneous coronary artery dissection
• Takaotsubo
High Sensitivity Troponin Improves Diagnosis of Myocardial Infarction in Women

- Women: > 16 ng/L
- Men: > 34 ng/L

Shah et al. BMJ 2015
Survival free from death or recurrent myocardial infarction in women with suspected acute coronary syndrome

Anoop S V Shah et al. BMJ 2015;350:bmj.g7873

Log rank test P<0.001

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Non-obstructive Epicardial Disease IS Clinically Significant

• Women with stable ischemic symptoms have increased risk of coronary events
• Myocardial ischemia is associated with higher mortality in symptomatic women vs men
• Women with non-obstructive CAD and stress test abnormalities should be classified as having elevated risk of ischemic events.