

# Study design



## Participants

Discovery cohort: 235,611 women from UK Biobank  
Validation cohort: 1,224 women from Hospital-based cohort (laparoscopically confirmed)



**Exposure**  
**Endometriosis**



**Dietary flavonoid intake**



## Peripheral biomarkers

- Metabolism
- Inflammation
- Oxidative stress
- Hormone

Follow-up

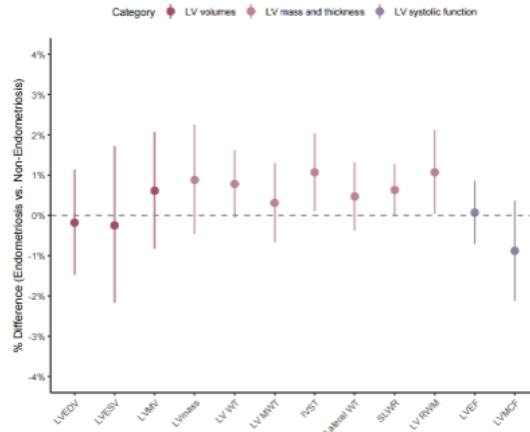
Median: 13.0 years



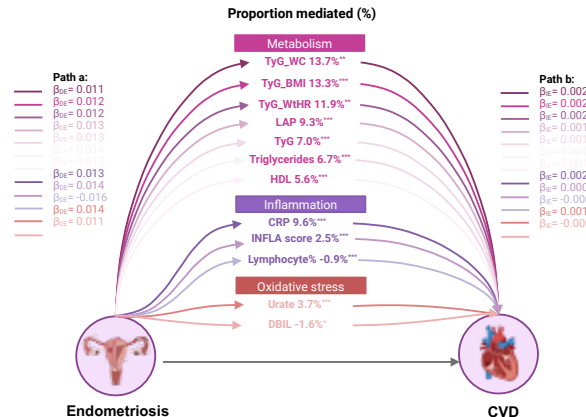
**CMR imaging:** cardiac structure and function

# Main finding

## 1. Endometriosis and CMR phenotypes



## 2. Potential mechanisms



## 3. Flavonoids–endometriosis interplay in CVD risk

Total flavones	Participants without endometriosis	Reference	Reference
High intake	Reference	Reference	Reference
Medium intake	0.99 (0.94–1.04)	0.94 (0.87–1.02)	
Low intake	1.10 (1.04–1.16)	1.03 (0.95–1.11)	
Participants with endometriosis			
High intake	1.07 (0.84–1.38)	1.16 (0.82–1.64)	
Medium intake	1.10 (0.85–1.42)	1.41 (1.03–1.92)	
Low intake	1.36 (1.10–1.68)	1.17 (0.85–1.61)	
Total flavanones	Participants without endometriosis	Reference	Reference
High intake	Reference	Reference	Reference
Medium intake	0.99 (0.94–1.04)	1.00 (0.93–1.06)	
Low intake	1.10 (1.05–1.14)	1.11 (1.03–1.20)	
Participants with endometriosis			
High intake	1.07 (0.84–1.38)	1.08 (0.73–1.52)	
Medium intake	1.10 (0.85–1.42)	1.60 (0.91–1.80)	
Low intake	1.36 (1.10–1.68)	1.53 (1.15–2.04)	

## Findings

- **Endometriosis** linked to higher CVD risk (+18% overall; +25% CHD).
- **CMR** reveals subtle structural abnormalities (↑ septal thickness, wall motion changes).
- **Pathways:** metabolic, inflammatory, oxidative stress partly mediate risk.
- **Flavonoids**—high flavone/flavanone intake attenuates this associations.