all-cause mortality was performed. The real-world cost of an FFR-CT strategy was assessed.

**Results** Twelve centres submitted 2298 CCTAs for FFR-CT analysis. Stable chest pain was the main symptom in 77% of patients, with CCTA stenosis of 50–69% in 41%. FFR-CT £0.80 was found in 996 (47%), resulting in revascularisation in 348 (35%). Compared to invasive FFR, the patient-level sensitivity, specificity, positive and negative predictive values of FFR-CT were 90%, 24%, 49%, and 76%, respectively. A total of 46 events occurred over a mean follow-up of 17 months, and FFR-CT with a cut-off of 0.80 was not predictive. Economic modelling demonstrated that the FFR-CT strategy cost £3913 per patient, compared with an average cost of £2148 for non-FFR-CT pathways.

**Conclusion** In clinical practice, NICE recommendations for the use of FFR-CT were met in only 77% of cases for symptoms and 41% for stenosis. FFR-CT showed low specificity, making its use more expensive than strategies using other functional tests. FFR-CT was not predictive of cardiac events.

**Conflict of Interest** None

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**Abstract 137** GESTATIONAL DIABETES, PREECLAMPSIA AND THE MATERNAL HEART

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**Background** Gestational diabetes mellitus (GDM) and preeclampsia (pE) are both associated with an increased risk of cardiovascular mortality and morbidity, including an increased risk of developing heart failure in later life. Both conditions are increasing in prevalence; GDM affects up to 12% and pE affects 3–5% of pregnancies worldwide. Compromised cardiac energy production is an important contributor to most forms of heart disease. The changes in myocardial energetics in GDM and pE have not been characterised previously.
Purpose We sought to assess if women with GDM and women with pE in the third trimester of pregnancy exhibit adverse cardiac alterations in myocardial energetics, function or tissue characteristics.

Methods Thirty-eight healthy pregnant (HP) women, thirty women with GDM and fifteen women with pE were recruited, matched for age and ethnicity. Participants underwent phosphorus magnetic resonance spectroscopy and cardiovascular magnetic resonance for assessment of myocardial energetics (phosphocreatine to ATP ratio (PCr/ATP)), tissue characteristics, biventricular volumes and ejection fractions, left ventricular (LV) mass, global longitudinal strain (GLS) and mitral in-flow E/A ratio.

Results The biochemical characteristics and multiparametric MR results are given in Table-1. The women in the GDM and the pE groups had higher body-mass index. There was a stepwise increase in the systolic and diastolic BP from the HP to the GDM group and pE group. There was no difference in NTproBNP concentrations between the groups. The gestational weight gain was higher in women with GDM and pE compared to the HP group. The women in the GDM and the pE groups showed similar reductions in myocardial PCr/ATP ratios compared to the HP group (Figure 1A), accompanied by lower LV end-diastolic volumes and higher LV mass (Figure 1B) and enhanced LV concentricity in both groups (Figure 1C). While LV ejection fractions were similar across the groups, the GLS was reduced in women with GDM and in women with pE (Figure 1D).

Conclusions We show here for the first time that despite no prior diagnosis of diabetes or hypertension, women with GDM or pE manifest impaired myocardial contractility and higher LV mass, associated with reductions in myocardial energetics. These findings may aid our understanding of the long-term cardiovascular risks associated with these conditions.

Conflict of Interest No conflict of interest

Abstract 138 Table 1 Patient characteristics divided into groups based on stress myocardial blood flow (MBF) thresholds (more than or less than 1.94ml/g/min). Groups are then compared with one another using the appropriate test (independent t test or chi squared). P value is considered significant at the <0.05. Continuous variables are presented as mean±SD. Dichotomous variables are presented as number (%).