492) of patients met the primary outcome. Of the original cohort of 492 LI-PTP patients, only 230 completed 1 year follow up, and from this, one patient met the secondary outcome.

## Conclusion

Incorporation of CCTA into contemporary chest pain evaluation identified significant number of patients with significant CAD and was also associated with a low cardiac event rate at 1 year follow-u.

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### Coronary artery calcification – distribution, extent and 1-year outcomes in patients with low to intermediate pre-test probability of coronary artery disease

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### Background

Coronary artery calcium (CAC) is an established marker to predict major cardiovascular events (MACE), and has incremental value over traditional risk factors (CVRF). CAC is widely available, easily reproducible, and used in nearly all coronary computed tomography angiography (CCTA) assessment protocols for coronary artery disease (CAD). The distribution and extent of CAC, and its prognostic implications in local Malaysian patients with low to intermediate pre-test probability (LI-PTP) of CAD had not been established.

### Objectives

We aimed to establish the distribution, extent and prognostic implications of CAC in patients without known CAD, but with LI-PTP of CAD, undergoing CCTA for chest pain evaluation.

### Methods

Clinical information was obtained from consecutive patients who underwent CAC and CCTA examination from January 2020 to January 2021 at a single public access tertiary referral centre. The primary outcomes were the distribution and extent of CAC, and its relationship with MACE at 1 year.

### Results

Of 499 consecutive patients, 7 were excluded due to high PTP. CAC was present in 172/492 (35%). Within this group, 74/172 (41.3%) had CAC score of 1–100 (mild), 75/172 (42.4%) had a CAC of 101–400 (moderate), 23/172 (13.4%) had CAC of >400 (high). 136 had suspected significant CAD and was offered conventional coronary angiography (CCA). 91/492 underwent CCA, and 38 were found to have significant CAD. Of those found to have significant CAD, 7/38 (18.4%) had CAC of zero, 8/38 (21.1%) had mild CAC, 12/38 (31.6%) moderate, and 11/38 (30%) high CAC. Severe CAC was associated with a higher rate of revascularization 11/23 (47.8%), compared to those with zero 7/320 (2.2%), mild 8/74 (10.8%) and moderate 12/75 (16%) CAC. Predictors of high CAC were age, male gender, and presence of cardiovascular disease risk factors. Of the 492 patients, 230 patients completed 1 year follow-up, and from this, 1 patient had a MACE.

## Conclusion

In patients with LI-PTP risk of CAD, CAC was seen in approximately one third of our cohort. In the group with high CAC, a higher proportion required coronary revascularization, but MACE remained low at 1 year.

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### The prevalence and 10-year mortality rate of diabetic cardiomyopathy in the Malaysian population study

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### Background

Diabetic cardiomyopathy (DCM) is defined by the abnormal myocardial structure and performance in the absence of other cardiac risk factors in individuals with diabetes mellitus. Diabetics are at higher risk of developing heart failure and suffer from a significantly higher rate of mortality in comparison to those without DM. Being a nation with the highest rate of obesity in South East Asia, it is important to determine the prevalence and outcome in the Malaysian cohort.

### Methods

A longitudinal population-based study from Malaysia that spans a period of 15 years with a 3-yearly follow-up was extracted. Study recruits include adults aged ≥18 years from urban and rural communities. All subjects were clerked for medical history, clinically examined and offered echocardiogram.

### Results

A total of 1975 subjects were identified and a total of 1355 subjects were recruited. Subjects were further divided into non-DM ($n = 1086, 80.1\%$), pre-DM ($n = 88, 6.5\%$) and diabetic ($n = 181, 13.4\%$) groups. A significantly higher percentage of diabetics ($n = 108$, 59.7%) and pre-diabetics ($n = 44$, 50%) were found to have diastolic dysfunction compared to non-diabetics ($p < 0.001$). A total of 20 deaths occurred over an 10-year follow-up period: 12 (60%) in the DM group, 8 (40%) in the non-DM and 2 (10%) in the pre-DM cohort. The survival rate was worse in diabetic patients with 2.04 higher chance of death as compared to patients with no diabetes mellitus when adjusted with ejection fraction. [b = 1.84, hazard ratio (95% CI) = 7.67 (3.03, 19.43), $p \leq 0.001$]. Patients with abnormal ejection fraction have 2.92 higher chance of death as compared to patients with normal ejection fraction. [b = 2.92, hazard ratio (95% CI) = 18.61 (7.15, 48.43), p ≤ 0.001].

### Conclusions

This is the first large prospective study looking into the prevalence and outcome of diabetic cardiomyopathy in this community. The high prevalence of diabetic cardiomyopathy and