women) patients respectively. Myocardial infarction was diagnosed in 6% (74/1,242) and 14% (232/1,695) of patients in the unselected and selected patient cohorts respectively. More patients had myocardial infarction ruled-out in the unselected (74%/828/1,112) versus 66% [1,102/1,678]; P<0.001), with similar negative predictive value (99.9% [95% CI 99.7%-100%]) versus 99.7% [95% CI 99.4%-99.0%] and sensitivity (99.3% [95% CI 97.4%-100%]) versus 98.9% [95% CI 97.6%-99.9%]; Figure). In the selected cohort, more patients had intermediate troponin concentrations requiring serial testing (36% versus 29%) or had myocardial infarction diagnosed (34% versus 26%; P<0.001 for both). In contrast, the positive predictive value for myocardial infarction was lower in unselected patients (26.1% [95% CI 21.2%-31.4%]) versus 39.9% [95% CI 35.9%-44.0%]).

Conclusion The prevalence of myocardial infarction is lower in patients with suspected acute coronary syndrome evaluated in routine practice compared to those selected to participate in a research study. Whilst more patients have myocardial infarction accurately ruled out, the positive-odds value in those ruled in is lower resulting in more hospital admissions with elevated cardiac troponin due to other conditions.

Conflict of Interest Nothing to declare

62 INTRACORONARY IMAGING IN LEFT MAIN STENT PERCUTANEOUS CORONARY INTERVENTION HAS A CLEAR SURVIVAL BENEFIT PARTICULARLY IN MORE COMPLEX PATIENTS

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Background Left Main Stem Disease (LMS) is prognostically important coronary artery disease that is managed either with coronary artery bypass surgery (CABG) or percutaneous coronary intervention (PCI). Use of intracoronary imaging (ICI) modalities such as intravascular ultrasound (IVUS) and optical coherence tomography (OCT) have been shown to improve outcomes with PCI revascularization. The primary objective of this study was to evaluate the impact of ICI on outcomes following LMS PCI.

Methods Retrospective observation study of 498 (5.1% of all PCI cases) patients who had undergone LMS PCI at our tertiary primary PCI centre hospital over a 11-year period between July 2010-July 2021. Data was collected from electronic medical records. Follow-up was also obtained through linkage with the Office of National Statistics.

Results The mean age at the time of enrolment was 70.7 ± 11.5 years. Majority of the patients were male 351 (70.5%), 353 (70.9%) of cases had acute coronary syndrome (ACS) presentation while the remainder were elective procedures. Mean follow-up duration was 3.75 ± 3.06 years. Survival calculated by Kaplan Meier was 70%. 87 patients (17.5%) deceased during first year of enrolment. 344 (69.1%) patients had ICI, with IVUS in 316 (63.5%) and OCT in 28 (5.6%) patients. IVUS comprised 91.9% of ICI procedures. Protected LMS (OR 0.175, 95% CI: 0.037–0.833, P-value=0.029) and the use of left ventricular mechanical support device (OR 0.324, 95% CI: 0.122–0.859, P-value=0.024) were associated with decreased odds of undergoing an ICI. Patients undergoing ICI had significantly better survival compared to those without ICI (HR: 0.54, P<0.001). Moreover, OCT showed significantly better survival compared with IVUS (HR: 0.181, P=0.017). Use of ICI was associated with better survival in patients who had Rotablation (HR: 0.455, 95% CI: 0.232–0.892, P=0.022), ACS (HR: 0.523, 95% CI: 0.383–0.714, P<0.001) or comorbidities of diabetes and stroke (HR: 0.551, 95% CI: 0.337–0.807, P=0.002).

Conclusion ICI in LMS PCI has a significant survival benefit in our dataset. This is especially the case in patients presenting with ACS, those with comorbidities of Diabetes mellitus and stroke and those undergoing rotablation.

Conflict of Interest No

63 COMPARING THE SAFETY & EFFICACY OF RADIAL VERSUS FEMORAL ARTERIAL ACCESS IN CHRONIC TOTAL OCCLUSION PERCUTANEOUS CORONARY INTERVENTION

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Background The radial arteries have increasingly become the primary choice for arterial access in percutaneous coronary intervention (PCI), surpassing the use of the femoral arteries due to a reduction in access site complication, reduction in mortality, and the avoidance of major bleeding. Despite this, there remains a lack of support for the routine adaptation of radial artery access in PCI for chronic total occlusion (CTO PCI).

Methods Patients undergoing CTOPCI between January 2015 and January 2022 at a single tertiary cardiology centre were classified according to arterial access method, gender, age, previous MI status, previous PCI status, previous CABG status, operator determined procedural success, incidence and type of complication, length of inpatient stay, and in-hospital mortality.

Results A total of 638 cases were included for analysis in this study. The mean age of patients in this study was 66±11 years, 82.9% of patients were male, with no significant difference between gender or age. A chi-square test found those who had previously undergone PCI were more likely to require femoral access (χ²(1) = 11.6, p = < .001).

The mean length of an inpatient stay was 1.1±4 days, with no significant difference between length of stay in either group, t(636) = -1.13, p = .261. A chi-square test found that a procedure was more likely to be successful if radial access was utilised (χ²(1) = 5.6, p = 0.018). A chi-square test found that those in the femoral group were more likely to experience procedural complication (χ²(1) = 3.9, p = 0.048). Chi-square tests for complication types found those in the femoral group were more likely to experience a retroperitoneal bleed (χ²(1) = 6.7, p = 0.010).

Binomial logistic regression was performed to determine the effect of the measured variables on procedural success, incidence of complication, and in-hospital mortality. Procedural success was significantly associated with age (OR 1.04, 95%
CI[1.02 - 1.06], p =<0.001), and with radial access (OR 1.75, 95% CI [1.15 - 2.67], p = 0.010). There were no significant associations between the variables and incidence of complication or in-hospital mortality.[Table 1][Table 2]

Conclusions This data shows that CTOPCI performed purely via the radial arteries is safer than via the femoral arteries, with a significant difference in complication as well as a significant difference in procedural success. Existing literature is encouraging for the use of at least one radial access site in CTOPCI and this study offers valuable information on the viability of a purely radial approach to CTOPCI and strengthens the existing evidence base for its more routine adoption.

Conflict of Interest Nil

### Abstract 63 Table 1

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Overall (n=638)</th>
<th>Radial (n=398)</th>
<th>Femoral (n=240)</th>
<th>P-value</th>
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</thead>
<tbody>
<tr>
<td>Length of Stay (Days)</td>
<td>1.1 ±1</td>
<td>1.00 ±0.3</td>
<td>1.4 ±0.5</td>
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<tr>
<td>Procedural Success (%)</td>
<td>82.1</td>
<td>84.9</td>
<td>77.5</td>
<td>0.018</td>
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<td>Acute MI (%)</td>
<td>8.9</td>
<td>10.8</td>
<td>13.3</td>
<td>0.44</td>
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<tr>
<td>Access Site Haematoma (%)</td>
<td>0.5</td>
<td>0.2</td>
<td>0.8</td>
<td>0.298</td>
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<td>Access Site Bleed (%)</td>
<td>0.6</td>
<td>1.7</td>
<td>-</td>
<td>0.010</td>
</tr>
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</table>

* Mean ± standard deviation

<table>
<thead>
<tr>
<th>Clinical Characteristics</th>
<th>Overall (n=638)</th>
<th>Radial (n=398)</th>
<th>Femoral (n=240)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years) a</td>
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<td>66 ±11</td>
<td>65 ±11</td>
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<tr>
<td>Male (%)</td>
<td>82.9</td>
<td>84.2</td>
<td>80.8</td>
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<td>Previous PCI (%)</td>
<td>45.9</td>
<td>40.7</td>
<td>54.6</td>
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<td>Previous MI (%)</td>
<td>48.7</td>
<td>46.2</td>
<td>52.9</td>
<td>0.102</td>
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<td>Previous CABG (%)</td>
<td>22.3</td>
<td>21.1</td>
<td>23.8</td>
<td>0.435</td>
</tr>
</tbody>
</table>

* Mean ± standard deviation

### 64 CONTRAST NEPHROPATHY IN PPCI

**Introduction** Contrast induced nephropathy (CIN) is a well recognised complication in patients undergoing interventional cardiovascular procedures. It is associated with increased morbidity and mortality as well as longer length of stay and increased hospital costs.1,2 CIN is defined as an absolute increase in serum creatinine of 44.4 μmol/l (0.5 mg/dl) and/or a 25% increase in serum creatinine concentration from baseline within 72 h of the administration of contrast media.3 CIN is a form of Acute Kidney Injury (AKI) which can be devided into grades of severity. Stage 1 defined as serum creatinine 1.5-1.9 x baseline or urine output <0.5 ml/kg/h for 6-12 hours, Stage 2 defined as serum creatinine 2.0-2.9 times baseline or urine output <0.5 ml/kg/h for >12 hours and Stage 3 defined as serum creatinine 3 times baseline or initiation of renal replacement therapy (RRT) or urine output <0.3 ml/kg/h for 24 hours or anuria for >12 hours.4 Iodixanol (Visipaque) is an iodinated contrast medium in the form of a non-ionic dimer which is associated with a reduced incidence of CIN compared with Iohexol (Omnipaque), non-ionic monomer contrast medium.5 For this reason Visipaque is the contrast medium of choice at our centre for Primary Percutaneous Coronary Intervention (PPCI) where the renal function is unknown prior to undertaking the procedure. We therefore sought to investigate the incidence of CIN in our patient cohort following PPCLI.

**Methods** In this retrospective cohort study we analysed 474 consecutive patients between September 2020 and March 2021 who presented on the PPCI pathway and were subjected to an emergency angiogram +/- PCI. We collected data using our local database along with hospital records. Baseline creatine was measured and compared to peak creatinine within 72 hours. Patients were excluded if there were fewer than 2 creatinine levels recorded within a 72 hour period.

**Results** The mean age was 64 years (SD=12) with 73% males and 27% females. Mean contrast volume used was 136 ml (range 20-340, SD=59.9). The incidence of CIN was 16% (N=74). Of these patients 10 had AKI stage 1 (2%) and 1 had AKI stage 2 (0.2%). No patients had AKI stage 3. CIN was present in 8 of 17 patients (47%) of those who presented in cardiogenic shock.

**Discussion** Our results suggest that CIN is common affecting around 1.5 in 10 people undergoing PPCI. The incidence of people progressing to AKI was low and the majority of these were AKI stage 1. CIN appeared unrelated to presence of diabetes or use of nephrotoxic heart failure optimising medications such as ACE inhibitors and diuretics although it is possible that these medications were introduced later in patients where there was concern over kidney injury. Patients presenting with cardiogenic shock had the greatest risk of developing CIN.

Conflict of Interest Nil

**65 LONG TERM CLINICAL OUTCOMES FOLLOWING PERCUTANEOUS CORONARY INTERVENTION TO IN- STENT RESTENOSIS OF SAPHENOUS VENOUS GRAFT IN ACUTE CORONARY SYNDROME**

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**Aims** The longevity of saphenous vein graft (SVG) is poor. However, if SVG has already been stented and if there is restenosis within the previously stented then long-term outcomes is considered to be poor, although there is no long-term data on the treatment of SVG restenosis. In this study, we have assessed long-term outcomes following treatment of SVG- restenosis in acute coronary syndrome (ACS).

**Methods** A retrospective analysis was conducted on all patients who received PCI to a saphenous venous graft in the context of acute coronary syndrome between January 2011 to December 2021. Follow-up was achieved by reviewing admission records and previous clinic visits. The outcomes measured included: cardiac death, target-vessel myocardial-infarction (TVMI), target lesion revascularisation (TLR), target vessel