performed. The ED assigned was 7mSv for left cardiac catheterization, 15mSv for percutaneous coronary intervention and 9mSv for myocardial scintigraphy with sec-
tambiti. We also analyzed 196 consecutive exams in April 2013, including left cardiac catheterization and percutaneous coronary intervention, to evaluate absorbed dose in our institution.

Results: A total of 629 pts were included, mean age of 62±11 years. In this cohort, 505(80%) pts performed at least one cardiac examination with radiation exposure, with a mean of 2.6±2.9 examinations per patient (PP). ED estimation during an average 4.8±3.6 years follow-up was 66±34mSv, corresponding to 13±12 patients mSv/year, due to 0.66 cardiac catheterizations PP, 0.18 coronary interventions PP and 0.53 myocardial scintigraphy PP. Regarding our institution exams, the absorbed doses were the following: 139 cardiac catheterizations (953.68±180.06 mGy) and 57 coronary interventions (1968.46±250.41 mGy).

Conclusions: Data from our cohort demonstrates that pts with chronic CAD are exposed to high levels of radiation due to cardiovascular imaging only. Considering advances in this area, increasingly complex procedures performed and the widespread use of screening radiological studies during a lifetime, it will be easy to go beyond recommended limits of radiation exposure. Performance of any diagnostic test or therapeutic procedure requires careful assessment of risks and benefits and optimization of protocols to minimize patients and staff risks.

TCT-330

Determinants of Residual Syntax Score after Primary Percutaneous Coronary Intervention

Razi Khan1, Malek Al-Hawas1, Bajir Hateri1, Philippe L’Allier1, Hung Q. Ly1
1Montreal Heart Institute, Montreal, Quebec

Background: The SYNTAX score calculated after percutaneous intervention (PCI), termed the residual SYNTAX score (RSS), has been shown to correlate with short- and long-term outcomes in moderate-high risk acute coronary syndrome (ACS) patients. The role of the RSS has not been studied in ST-elevation myocardial infarction (STEMI) populations. Moreover, the completeness of revascularization in the setting of multi-vessel disease in patients undergoing primary PCI (PPCI) is still debated. Our study aim was to determine predictors of RSS using baseline characteristics of patients undergoing PPCI.

Methods: The Montreal Heart Institute STEMI database was used for analyses. Demographic, procedural and clinical data were collected prospectively.

Results: The last 100 consecutive patients undergoing PPCI were selected. Mean patient age was 62.3±13.4 years old and patients were predominantly male (80%). The SYNTAX score was positively correlated with RD in both genders (Fig 1). Increased age, diabetes, admission creatinine and history of chronic kidney disease (CKD) correlated with the RSS. The SYNTAX score at presentation was associated with higher TIMI thrombus grade severity in STEMI patients. However, this may have been because there were very few outcome events within this patient population. The SYNTAX score at presentation was associated with higher TIMI thrombus grade severity in STEMI patients prior to PPCI (p=0.027).

Conclusions: Increased age, admission creatinine, CKD and diabetes predict RSS in patients undergoing primary PCI. The impact of RSS on clinical outcomes in patients undergoing PPCI requires further study from larger population cohorts.

TCT-331

Impact of Gender on Radiation Dose from Percutaneous Coronary Intervention of Similar Complexity Quantified by ‘Target-lesion’ SYNTAX Score

Lea Hee1, Manish Kumar1, Andrew Hopkins1, Liza Thomas1, Craig P. Juergens1, Sidney Lo1, John K. French1, Christian J. Mussap1
1Liverpool Hospital, Sydney, NSW

Background: Radiation exposure is an adverse side effect of percutaneous coronary intervention (PCI). The SYNTAX score quantifies coronary lesion complexity. Our hypothesis was that gender impacts on PCI radiation dose (RD) and procedural characteristics.

Methods: We retrospectively studied 420 consecutive patients having PCI by six experienced operators, at a single center (May-Dec 2011). The “target-lesion” SYNTAX score (ISS) was used to quantify complexity of lesion(s) targeted for PCI. tSS was the mean from two cardiologists scoring independently. Procedural characteristics were extracted from a propriety database.

Results: Mean age was 65.1±11yrs. Males (74%) had similar body mass index (BMI), but greater body surface area (BSA), than females. There was no gender difference in PCI procedural characteristics (Table 1). The mean RD was 87±591Gy/pcm and mean ISS was 8.9±5.8. tSS was positively correlated with RD in both genders (Fig 1). Males received significantly higher RD than females, for PCI of comparable tSS.

Conclusions: Males receive significantly higher RD than females in PCI of similar complexity. Males have greater BSA (but similar BMI) than females, suggesting that anthropometric indices impact on RD.

TCT-332

A study comparing a paclitaxel drug-eluting balloon with a paclitaxel-eluting stent in diabetic patients with small coronary vessels disease: a sub-study of the the BELLO (Balloon Elution and Late Loss Optimization) Trial

Francesco Giannini1, Antonio Colombo1, Chirag Costopoulos1, Francesco De Felice1, Filippo Finigi1, Azem Lathi1, Alberto Menocci1, Antonio Micari1, Toru Naganuma5, Charbel Naim8, Patrizia Presbitero9, Francesca De Felice4, Filippo Figini3, Azeem Latib5, Alberto Menozzi6, Francesco Giannini1, Antonio Colombo1, Chirag Costopoulos1, Francesco De Felice1, Filippo Finigi1, Azem Lathi1, Alberto Menocci1, Antonio Micari1, Toru Naganuma5, Charbel Naim8, Patrizia Presbitero9, Gregorio A. Spagnuolo11, Corrado Tamburino11
1San Raffaele scientific institute, Milano, Italy, 2EMO GVM Centro Cuore Columbus/ San Raffaele Hospital, Milan, Italy, 3San Raffaele Scientific Institute, Milan, Milano, 4S.Camillo-Forlanini Hospital, Rome, Rome, 5San Raffaele Scientific Institute, Milan, Milano, 6Azienda Ospedaliero-Universitaria di Parma, Parma, Italy, 7Maria Eleonora Hospital, Palermo, Italy, 8San Raffaele Scientific Institute, milan, Milano, 9Humanitas Institute, Milan, Milano, 10Interventional Cardiology Unit, Ospedale Santa Maria Goretti, Latina, Italy, Latina, Italy, 11University of Catania, Catania, Italy

Background: Small coronary vessels remain a lesion subset in which drug-eluting stent (DES) remain associated with relatively high restenosis rates, especially in diabetic patients. The aim of this study was to evaluate the efficacy of drug-eluting balloons (DEB) compared with paclitaxel-eluting stents (PES) for the reduction of restenosis in diabetic patients with small vessels disease.

Table 1. Characteristics of the study cohort

<table>
<thead>
<tr>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yr)</td>
<td>65±11</td>
<td>64±11</td>
<td>66±12</td>
</tr>
<tr>
<td>Body Mass Index (kg/m²)</td>
<td>29.1±5.8</td>
<td>29.1±5.7</td>
<td>30.0±6.0</td>
</tr>
<tr>
<td>&lt;25</td>
<td>88 (21)</td>
<td>22 (9.14)</td>
<td>22.4±21</td>
</tr>
<tr>
<td>25–30</td>
<td>172 (41)</td>
<td>27±3.1</td>
<td>27±2.1</td>
</tr>
<tr>
<td>&gt;30</td>
<td>160 (38)</td>
<td>34±3.7</td>
<td>35±4.6</td>
</tr>
<tr>
<td>Body Surface Area (m²)</td>
<td>2.0±0.2</td>
<td>2.0±0.2</td>
<td>1.8±0.2</td>
</tr>
<tr>
<td>Diabetes Mellitus (%)</td>
<td>101 (24)</td>
<td>72 (23)</td>
<td>29 (26)</td>
</tr>
<tr>
<td>Prior CAG</td>
<td>26 (6)</td>
<td>19 (6)</td>
<td>7 (6)</td>
</tr>
</tbody>
</table>

Procedural characteristics:

- Target-lesion SS: 8.9±5.8, 8.8±6.0, 9.1±5.9, 0.555
- Radiation Dose (Gy/cmc): 872±591, 927±612, 718±499, 0.002
- No of lesions: 1.24±0.5, 0.50±0.03, 0.48±0.05, 0.774
- STEMI | 100 | 76 (25) | 24 (22) | 0.643
- Elective | 163 | 123 (40) | 40 (36) | 0.540
- Follow-on PCI | 257 | 187 (60) | 70 (64) | 0.540
- Fluoroscopy time (min) | 20.2±28.9 | 19.0±22.1 | 23.6±42.7 | 0.161
- Contrast volume (ml) | 186±71 | 187±72 | 183±67 | 0.617
- Radial access (%) | 7 (2) | 5 (2) | 2 (2) | 0.885
- No of stents per procedure | 1.4±0.8 | 1.4±0.8 | 1.5±0.9 | 0.220
- Total length of stents (mm) | 29.0±20.3 | 28.7±19.4 | 29.9±22.8 | 0.598
- Cine frame (n) | 33.5±12.5 | 33.7±12.5 | 32.7±12.5 | 0.436