

(BMS), could be a good alternative to everolimus DES (E).

**Methods:** All 173 p included, with a mean age of 65.5±9.5 years and a mean follow-up of 510.3±228.9 days, were well balanced on basal variables. 1.6±0.8 lesions were treated and 1.7±0.9 stents/p were implanted in both groups (mean diameter: 3.0±0.4 mm; mean maximum length: 19.3±7.9 mm).

**Results:** A significant reduction in new revascularization rates was observed in E group (18.1% vs 7.8%; p=0.04) but no significant differences were found for the other adverse events or the composite major cardiac events. Insulindependent (ID) DM p subgroup (50 p) randomized to T stent had a significantly greater incidence of new PCI (33.3% vs 10.3%; p=0.04) and TVR (28.6% vs 6.9%; p=0.03). 9 months angiographic follow-up was performed in 77 p. 131 lesions (L) were revised. Stent length was significantly longer in E group (21.62±9.65 mm vs 18.72±5.53 mm; p=0.037). No differences were found in the other basal and post-PCI angiographic variables.

#### Results of the quantitative coronary angiographic analysis in the angiographic subgroup.

	T (65 L)	E (66 L)	p
In-stent LLL (mm)	0.76±0.54	0.13±0.31	<0.0001
In-segment LLL (mm)	0.52±0.58	-0.05±0.32	<0.0001
In-stent Binary Restenosis (%)	20 (19%)	0	<0.0001
In-segment Binary Restenosis (%)	22 (26.7%)	1 (2.2%)	<0.0001

LLL: Late Luminal Lose.

**Conclusion:** Among global DM p, T stent behaviour was better than expected for a non DES. Nonetheless, among ID-DM p E stent was superior to T stent. As expected, E shows a significantly lower LLL than the T stent. However the LLL of the latter is lower than that reported for other BMS and similar to that of some DES used until recently.

#### TCT-430

##### Two Years Clinical Outcomes of Diabetic Patients Treated With a New Generation Drug-Eluting Stent

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**Background:** Patients with diabetes have higher incidence of death, restenosis and stent thrombosis as compared to non-diabetic patients. We investigated safety and efficacy of a new DES, Nobori, in this complex patient population.

**Methods:** Of the 3067 consecutive patients treated with Nobori stent and enrolled in the NOBORI2 multi-center study, 888 patients had diabetes mellitus (DM); 213 of them were insulin dependent (IDDM). Primary endpoint was target lesion failure (TLF) defined as cardiac death, target vessel related MI and target lesion revascularization (TLR) at 1 year. Data were captured electronically and quality was extensively monitored. An independent clinical event committee adjudicates all adverse events.

**Results:** Compared to non-DM patients, patients with DM had a significantly higher frequency of hypertension, dyslipidemia and peripheral vascular disease. IDDM patients had higher frequency of hypertension, congestive heart failure and previous revascularization CABG than non-IDDM patients (p<0.05 for all). Moderate or severe calcification was more frequent in lesions of patients with DM as well as vessel tortuosity. Reference vessel diameter pre- and post-procedure was smaller in DM patients. Post-procedure minimum lumen diameter in-stent and in-segment as well as acute gain were also significantly smaller in DM patients. TLF rates at two years were: 7.2% in the DM group vs 4.2% in the non-DM group; p<0.001. There was a significant difference in TLF rate between IDDM and non-IDDM patients (11.7% vs 5.8%; p<0.006). In the DM group, 2.6% of patients died of a cardiac cause, 3.3% suffered MI and 4.2% underwent TLR. The TLR rate between the IDDM and non-IDDM group was significantly different (7.0% vs 3.3%; p<0.03). Stent thrombosis rate was 1.0% in the DM group (0.9% in IDDM and 1.0% in NIDDM) and 0.7% in the non-DM group.

**Conclusion:** Clinical outcomes at 2 years after Nobori implantation in patients with DM suggest that the DES is suitable for the treatment of this clinically complex patient population. Particularly encouraging is the low rate of very late stent thrombosis up to 2 year follow-up.

#### TCT-431

##### Coronary Plaque Characteristics in Diabetic and Non-diabetic Patients Evaluated by Integrated Backscatter Intravascular Ultrasound

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**Background:** Patients with diabetes mellitus are known to be at increased risk for acute coronary syndrome. The aim of this study was to examine plaque characteristics of the diabetic patients with ischemic heart disease.

**Methods:** A total of 77 target lesions from 51 symptomatic ischemic heart disease patients (26 diabetics and 25 non-diabetics) were enrolled. Intravascular ultrasound (IVUS) imaging was performed before intervention. By gray scale IVUS, external elastic membrane (EEM) cross-sectional area (CSA) and lumen CSA were measured. Plaque plus media (P+M) CSA was calculated as EEM minus lumen CSA. Plaque characteristics were further assessed by integrated backscatter (IB)-IVUS and classified as follows: fibrosis, dense fibrosis, calcification and lipid pool. Thin-cap fibroatheroma (TCFA) was defined as a lesion with confluent lipid plaque (≥ 55%) being directly in contact with coronary lumen.

**Results:** Lesions in diabetic and non-diabetic patients had similar EEM, P+M and lumen CSA. Lesions in diabetic patients had significantly higher % fibrosis area (47.7 ± 11.4 vs. 39.5 ± 11.9 %, p = 0.01) and lower % lipid pool area (42.8 ± 15.1 vs. 53.9 ± 17.4 %, p < 0.01) than those of non-diabetic patients. TCFA was less frequently detected in diabetic than in non-diabetic patients (25 % vs. 49 %, p = 0.04).

**Conclusion:** Target lesions in diabetic patients had more fibrous and less lipid plaque compared with non-diabetic patients. Plaque vulnerability of the diabetic patients may not be determined based only on plaque characteristics.

#### TCT-432

##### Impaired Lung Function is an Independent Predictor of Type 2 Diabetes in Korean Men: Five-year follow-up study

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**Background:** Impaired lung function, as measured by forced vital capacity (FVC) or forced expiratory volume in one second (FEV1), has been reported as a significant predictor of type 2 diabetes in Western countries. However, these previous, mostly western, studies are limited because they largely focus on obese study populations because obesity has been recognized to affect lung function. The aim of this study was to assess the relationship between lung function and type 2 diabetes in Korean men.

**Methods:** This study followed 9,220 men (mean age: 41.4 years, range: 24 to 82 years) without type 2 diabetes at baseline over five years.

**Results:** The overall incidence of type 2 diabetes in the study populations was 2.2% (207 of 9220 men). FVC and FEV1 were significantly and inversely associated with the incidence of type 2 diabetes. In multivariable logistic regression analysis adjusting for age, body mass index (BMI), education, smoking, exercise, alcohol, and homeostasis model assessment of insulin resistance (HOMA-IR), the odds ratios (OR) for type 2 diabetes (quartile 1 vs. quartile 4) were 1.90 (1.23-2.93) and 1.66 (1.10-2.50) for FVC (% predicted) and FEV1 (% predicted), respectively (P=0.004 and P=0.019). In non-obese subjects with BMI<25, quartile 1 of FVC (% predicted) and FEV1 (% predicted) had significantly increased odds ratios (OR) for type 2 diabetes compared with that of the highest quartile (quartile 4) after adjusting for age and BMI (OR[95% CI], 2.15[1.02-4.57] and 2.19[1.09-4.42], P=0.045 and P=0.028, respectively).

**Conclusion:** Impaired lung function as measured by FVC and FEV1 may be an independent predictor of incident type 2 diabetes in relatively lean and previously healthy Korean men.

#### TCT-433

##### Does Diabetes Mellitus Impact on Clinical Outcomes following Chronic Total Occlusion Intervention with Drug-eluting Stents?

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**Background:** Patients (pts) with diabetes mellitus (DM) are at increased risk of restenosis and other adverse cardiac events following percutaneous coronary intervention (PCI). However, there have been limited data regarding the impact of DM on major clinical outcomes following chronic total occlusion (CTO) intervention with drug-eluting stents (DESs).

**Methods:** A total 277 consecutive pts who underwent PCI with DESs for CTO lesions were enrolled for the study. Study population was divided into 2 groups; diabetic (n=93) and non-diabetics (n=184). Baseline clinical characteristics, procedure related complications and mid-term clinical outcomes were compared between the two groups.

**Results:** Baseline clinical characteristics were similar except that non-diabetics group had more males (70.0% vs. 67.7%, p=0.041), whereas diabetics had more hypertension (73.1% vs. 56.8%, p=0.008). No difference was found in procedure related complications & one year major clinical outcomes between the two groups (Table).