**BACKGROUND** The aim of the study was to investigate 3-year major clinical outcomes in patients(pts) with different type of lesions treated with the zotarolimus-eluting stent (ZES) and everolimus-eluting stent (EES) in a series of Korean population in real-world clinical practice.

**METHODS** A total of 1477 consecutive pts who underwent percutaneous coronary intervention (PCI) with ZES or SES from April 2003 to July 2011 were enrolled. We analyzed the overall 3-year clinical outcomes with logistic regression, and according to left main lesion, bifurcation, small vessel lesion (<2.5mm), calcification, ostial lesion, and diffuse long lesion (>3cm) after propensity score matching. Further, subgroup analysis was performed for diabetics.

**RESULTS** In overall study population after the baseline adjustment, there were no difference between two groups, with regard to total death (EES vs. ZES, OR 0.952, 95%CI 0.922-1.000, p = 0.087) and cardiac death (OR 0.960, 95% CI 0.914-2.042, p = 0.841), for myocardial infarction (OR 1.426, 95% CI 1.622-3.076, p = 0.368), repeated revascularization (OR 0.992, 95% CI 0.667-1.474, p = 0.967), and stent thrombosis (OR 1.212, 95% CI 0.997-1.471, p = 0.074). However, in diabetics subgroup analysis, there was significant reduction of repeated revascularization in EES versus ZES (OR 0.474, 95% CI 0.235-0.977, p = 0.044), and in bifurcation lesion (OR 0.242, 95% CI 0.070-0.856, p = 0.029), and in calcified lesion (OR 0.211, 95% CI 0.054-0.834, p = 0.026). There were no significant differences in total death, cardiac death, MI, and stent thrombosis between EES and ZES in diabetics.

**CONCLUSION** ZES and EES showed similar safety and efficacy during 3-year follow-up in patients with different type of lesions in all comers. However, in diabetic patients, EES was associated with lower incidence of repeated revascularization rate compared to ZES, especially in patients with bifurcation or calcified lesions.

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The Changes and Clinical Outcomes of Peri-Contrast Staining (PSS) in First Generation DES Era to Second Generation DES Era

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**BACKGROUND** Several studies showed peri-contrast staining (PSS) after DES deployment is associated with target-lesion revascularization (TLR) and very late stent thrombosis. However, the changes of PSS after first generation DES to second generation DES are unclear, so we retrospectively compare the clinical outcomes.

**METHODS** This study consisted of de novo 5154 lesions in 4155 patients that were treated with first generation DES (defined as sirolimus-eluting stent and paclitaxel-eluting stent) or second generation DES (defined as zotarolimus-eluting stent, everolimus-eluting stent, and biolimus-eluting stent). They were evaluated by follow-up angiography within 12 months after stent implantation, from April 2007 to December 2012. We divided into PSS of first generation DES group and PSS of second generation DES group and compared the two groups in clinical and angiographical outcomes.

**RESULTS** We had obtained 4400 lesions follow-up angiography. (85.4%) Total late acquired PSS was observed in 90 lesions (2.0%), of which 17 lesions was observed in the second generation DES. Baseline clinical and angiographic characteristics were similar between the two groups. (N.S.) The rate of PSS was higher in first generation DES group. (3.2% vs. 0.9%, p = 0.0001) Smooth-contour PSS was highest of first generation DES group and mono-focal PSS was highest of second generation DES group. (smooth contour:37.9% vs. 16.7%, mono-focal stent (EES) vs. 61.1%, p = 0.03) There was no significant difference in target lesion revascularization (TLR) and stent thrombosis (ST) between two groups. (N.S.) But cumulative incidence of TLR and ST in smooth contour PSS was higher than in non-smooth contour PSS group. (57.1% versus 21.2 %, p = 0.018 and 14.3% versus 0%, p = 0.025).

**CONCLUSION** The occurrence of PSS decreases in second generation DES era. Smooth contour PSS was frequently observed in the first generation DES and appeared to be associated with TLR and ST.