Diffuse In-Stent [BMS] Restenosis in Diabetes Mellitus is a Preventable "Malignant" Disease

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Background: Diabetes mellitus [DM] is a powerful predictor of adverse events in patients undergoing percutaneous coronary intervention. Bare metal instent restenosis [ISR] can be focal or diffuse.
Objectives: compare the clinical outcomes of BMS ISR according to ISR type [Focal versus Diffuse] in patients with DM treated with DES.
Methods: A series of 189 consecutive DM patients with ISR lesions treated with DES implantation were evaluated. Major adverse cardiac events (MACE) were defined as death, myocardial infarction, and the need for target lesion revascularization were analyzed at 24 months.
Results: The mean age was 64±10 years and 66% were males. 25% were insulin treated DM, and 63% presented as acute coronary syndrome. The clinical outcomes were compared according to ISR type.

Outcome	Focal ISR [n=71]	Diffuse ISR [n=118]	P-value
12 month death	1.5%	3.9%	0.4
12 month MI	0%	6.8%	0.02
12 month Stent thrombosis	0%	1.7%	0.5
12 month TVR	2.8%	16%	0.003
12 month CABG	1.4%	5.1%	0.2
12 month MACE	5.6%	19.5%	0.005

Conclusions: Diffuse BMS ISR in DM patients is associated with worst one year clinical outcomes even if treated successfully with DES. This worst outcome can be prevented by the use of DES during the index (i.e. first) PCI.