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Do Diabetic Patients Undergoing Stent Implantation Have Different Lesion Characteristics than Nondiabetic Patients? *J*

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Background The purpose of this analysis is to examine differences in lesion characteristics of diabetic versus nondiabetic patients with coronary artery disease undergoing revascularization with stent implantation in cardiac catheterization laboratories (CCL)

Method Our study collected information concerning the lesion characteristics of 3,540 consecutive patients undergoing a coronary intervention with stent implantation in 1 of 5 community hospitals from the second quarter of 1999 through the first quarter of 2000. A total of 847 of these patients (23.9%) had a history of diabetes. A total of 1,045 lesions were treated in the 847 diabetic patients, and 3,245 lesions were treated in nondiabetic patients.

Results Overall, the reference vessel diameter of lesions treated with stent implantation was significantly smaller ($p < 0.001$) among diabetic patients than nondiabetic patients (3.06 mm vs 3.14 mm). In addition, the distribution of lesion locations among all lesions treated in diabetic patients was significantly different ($p = 0.021$) than the distribution of lesion locations treated among nondiabetic patients. Statistically significant differences ($p < 0.10$) between diabetic and nondiabetic patients were found in only 2 of the 7 lesion characteristics examined in this study. Diabetic patients were significantly more likely to have lesions with moderate or severe calcification ($p = 0.007$) than nondiabetic patients, whereas nondiabetic patients were more likely to have moderate or severe thrombus than diabetic patients ($p = 0.072$).

Conclusions Our study finds no significant differences between diabetic and nondiabetic patients in the type of lesion treated, the contour of the lesion treated, the lesion length, the angle of the lesion, or the tortuosity of the lesion. However, diabetic patients are more likely to be female, have smaller reference vessel diameter, and more calcium in diabetic lesions than nondiabetic patients. This confirms 3 known predictors of poor long-term outcomes among diabetic patients.