

# Artery Disease Cost: Peripheral Exceeds Coronary

BY BRUCE JANCIN

ORLANDO — Peripheral artery disease is underdiagnosed and undertreated, possibly because in some quarters it is not considered as serious as other forms of atherosclerosis. Yet the mean patient costs for PAD are significantly higher than for coronary artery disease, according to a large study.

This cost-of-care difference is driven in part by the substantially greater health care costs for PAD in diabetic patients, Dr. Michael R. Jaff reported at the annual meeting of the American College of Cardiology.

However, the median cost of care for patients with CAD is higher than for PAD, implying the higher mean costs associated with PAD are due to more high-cost outliers, added Dr. Jaff of Massachusetts General Hospital, Boston.

He used the PharMetrics Patient-Cen-

tric Database to identify 3,301 patients who underwent revascularization for newly diagnosed PAD and 20,705 patients revascularized for CAD during January 2003–January 2008. The main purpose was to compare the two groups in terms of costs for revascularization and 1 year of follow-up care.

The mean total cost in the PAD group was \$56,583, compared with \$51,269 in the CAD group. In contrast, median total cost in the PAD patients was \$32,145 versus \$38,927 in the CAD group.

## Unlike CAD, Care of PAD Patients Widely Distributed Among Specialties

	PAD n = 3,301	CAD n = 20,705
Cardiology	14%	49%
Family medicine	11.1%	6.4%
Internal medicine	8.6%	6.5%
Emergency medicine	8.4%	6.6%
Hospital medicine	5.2%	5.8%
Cardiothoracic surgery	4.5%	4.0%
General surgery	3.4%	3.1%
Vascular surgery	2.8%	0.8%

Note: Based on data from the PharMetrics Patient-Centric Database. Source: Dr. Jaff

Mean total costs for PAD and CAD in nondiabetic patients were closely similar: \$47,764 versus \$47,359. In type 1 diabetic

patients, however, the mean 1-year cost was \$107,766 for patients with PAD and \$80,143 for those with CAD. In patients with type 2 diabetes, the mean cost was \$65,734 for PAD patients and \$56,782 for CAD patients, with median costs of \$36,618 and \$41,537, respectively, he continued.

Diagnosis of PAD in this commercially insured population increased at a greater rate during 2003-2007 than did CAD. The prevalence of PAD grew from 0.4% in 2003 to 0.6% in 2007, about 45% increase. The prevalence of CAD rose by 20%, from 1.4% to 1.7%.

Women comprised 40% of PAD patients but only 23% of CAD patients.

Cardiologists were the main providers of care for CAD. Care for PAD was much more widely distributed among various medical specialties. (See chart.)

Dr. Jaff reported having no conflicts of interest with regard to this study. ■

## CV Disease/Colorectal Ca Connection Being Missed

BY BRUCE JANCIN

DENVER — Physicians often miss the opportunity to recommend colorectal cancer screening in patients with cardiovascular risk factors, a national survey indicates.

Screening for colorectal cancer (CRC) in patients with cardiovascular risk factors is particularly important because many of the traditional cardiovascular risk factors are associated with an increased risk of the malignancy, which is the second-leading cause of cancer deaths in the United States, Dr. Omatayo Olatinwo said at the annual meeting of the American Association for Cancer Research.

She presented an analysis of data from the National Center for Health Statistics' 2005 National Health Interview Survey. Of 1,421 patients aged 50-79 years and considered to be at average risk for CRC and eligible for CRC screening, only 70% received a physician recommendation for it.

The only cardiovascular risk factor associated with an increased likelihood of a physician recommendation for CRC screening was dyslipidemia. Dyslipidemic patients were 44% more likely to be recommended for CRC screening than were nondyslipidemic individuals.

In contrast, diabetic patients were 27% less likely to be offered CRC screening, according to Dr. Olatinwo, a third-year general internal medicine resident at Morehouse School of Medicine, Atlanta. "Unfortunately, we physicians missed the opportunity to screen people who have diabetes, who smoke, and

who are obese," she commented in an interview.

Other key findings from the study were that patients who graduated from high school were 80% more likely than were less educated individuals to receive a physician recommendation for CRC screening, and patients with four or more office visits within a year were more likely to be offered screening than were those with three or fewer office visits.

In the next several years, much more widespread use of electronic medical records—featuring physician prompts and reminders—are expected, and this should greatly reduce these missed opportunities for CRC screening, Dr. Olatinwo said.

She also noted that solid evidence indicates CRC and cardiovascular disease are strongly associated through shared risk factors.

An example is a 621-patient study that was conducted by physicians at the University of Hong Kong. They found that the prevalence of colorectal neoplasms on screening colonoscopy was 34% in patients who had angiographic evidence of coronary artery disease, 19% in those with suspected CAD but negative angiography, and 21% in the general population (JAMA 2007; 298:1412-9).

The prevalence of advanced lesions was 18.4% in patients with angiographic CAD, 8.7% in those with negative angiography, and 5.8% in the general population. Moreover, CRC was found in 4.4% of the CAD group, 0.5% of those with negative angiography, and 1.4% of the general population. ■

## Restenosis After Drug-Eluting Stents Is Higher in Diabetics

BY MICHELE G. SULLIVAN

Patients with diabetes who receive drug-eluting stents are significantly more likely to experience restenosis than are nondiabetic patients, particularly if they get the Endeavor zotarolimus-eluting stent, a large Swedish registry study has found.

Cautioning that the finding should be prospectively evaluated, Dr. Ole Frobert and his colleagues wrote, "This study represents the first large-scale evaluation of the zotarolimus-eluting Endeavor stent in patients with diabetes and underlines the importance of continuous registry monitoring of new coronary stents."

Dr. Frobert of Orebro University Hospital, Sweden, and his coauthors analyzed data from the Swedish Coronary Angiography and Angioplasty Registry (SCAAR). The registry includes information on all patients who have undergone percutaneous coronary intervention at any of 26 Swedish centers.

The study included those patients who underwent the procedure from 2004 to 2008 and who received any of four different drug-eluting stents: Endeavor, the Cypher sirolimus-eluting stent, or the paclitaxel-eluting Taxus Express or Taxus Liberte stents (J. Am. Coll. Cardiol. 2009; 53:1660-7).

During the study period, 19,004 patients received 35,478 stents. The patients' mean age was 66 years. Those with diabetes (8,231) were significantly more likely to be women, and to have hypertension, hyperlipidemia, and previous coronary artery disease.

The mean follow-up duration was 29 months. Restenosis occurred in 3.5% of stents within 1 year, and in 5% within 2 years. Patients with diabetes were 23% more likely to experience restenosis than were those without diabetes, a significant

difference. Compared with patients without diabetes, those with diabetes who received the Endeavor stent were 77% more likely to experience restenosis.

Among patients who received the Cypher stent, those with diabetes were 25% more likely to have restenosis than were those without diabetes.

In patients receiving the Taxus Express stent, the restenosis rate was similar irrespective of diabetes status, while diabetic patients who received the Taxus Liberte stent were slightly, but not significantly, more likely to have restenosis than were their nondiabetic peers.

Among patients with diabetes, restenosis rates were not significantly different between the Taxus stents and the Cypher stent. However, patients receiving the Endeavor stent were twice as likely to have restenosis as were patients receiving the other types.

There were similar, but smaller, differences in restenosis rates among nondiabetic patients; restenosis was 20% more likely with the Endeavor stent and 30% more likely with the Taxus stents compared with the Cypher stent.

"It was also noteworthy that in patients without diabetes, the adjusted risk of restenosis was significantly higher with the Taxus Express than with the Taxus Liberte stent," the authors noted.

Beginning in 2005, the SCAAR database included diabetes treatment information. Neither insulin nor noninsulin treatment had any significant impact on restenosis rates among patients with diabetes. The doubled rate of restenosis among diabetic patients receiving the Endeavor stent remained regardless of treatment type.

However, the increased restenosis rates among patients with diabetes did not affect the rates of mortality or myocardial infarction, the authors said. ■