Conclusions: In a contemporary PAD patient population, multiple PVI procedures occur commonly, but the majority are procedures in a different vascular bed. Repeat PVI in the same vessel occurs less often. Balloon angioplasty remains the dominant procedure for both the initial or repeat LE PVI, either as stand-alone therapy or in combination with stent or atherectomy.

TCT-536
Trends In Revascularization For Patients With Lower Extremity Peripheral Artery Disease: The Impact of Medicare Coverage Determination
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Background: Peripheral endovascular intervention (PVI) has changed the treatment landscape for patients with PAD. The primary aim of this analysis is to understand the trends and variation in PVI after changes in Medicare Coverage Determination (MCD) in 2008 that affect professional and technical reimbursement rates for PVI.

Methods: We utilized a 5% sample of Medicare beneficiaries from 2006 to 2011, and patients were required to have a procedure code for revascularization and a diagnosis code for PAD. Rates of revascularization were age- and sex-adjusted to the Medicare fee-for-service population. Rates by treatment location, year, and physician specialty were reported per 100,000 beneficiaries.

Results: 39,339 patients underwent revascularization for PAD and were included in the analysis. The PVI rate increased from 4,986 in 2006 to 5,548 in 2011, while the rate of surgical revascularization decreased from 1,562 in 2006 to 1,172 in 2011 [Panel A]. Surgeons (50%) and cardiologists (33%) performed the majority of PVI [Panel B]. The rate of PVI performed in outpatient hospital settings declined significantly while the rate of PVI performed in office-based clinics increased significantly [Panel C]. The use of atherectomy increased 50-fold in office-based clinics since 2006.

Conclusions: The overall rates of PVI increased by 10%, mostly performed by surgeons and cardiologists. PVI and especially atherectomy use in outpatient settings increased dramatically, highlighting possible unintended consequences of coverage decisions and need for studies demonstrating benefit for endovascular technologies.

TCT-537
12-Month Primary Patency Rates of Contemporary Endovascular Device Therapy for Femoro-Popliteal Occlusive Disease in 6024 Patients: Beyond Balloon Angioplasty
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Background: Endovascular approach to superficial femoral artery (SFA) disease, the most common cause of symptomatic PAD, remains fraught with high failure rates. Newer devices including second-generation nitinol stents, drug-coated stents, drug-coated balloons, covered stents, cryo-therapy, LASER and directional atherectomy, have shown promising results. Clinical equipoise still persists regarding the optimal selection of devices, largely attributable to the different inclusion criteria, study population, length of lesions treated, definition of “patency” and “restenosis” and follow-up methods in the pivotal trials.

Methods: A prospective protocol was developed. We performed a literature search using PubMed from January 2006 – November 2013. Published articles including endovascular interventions in SFA or popliteal arteries with reported 12-month “primary patency” or “binary restenosis” rates as endpoints were included.

Results: We identified 6024 patients in 61 trials reporting 12-month primary patency rates in patients with femoropopliteal disease. Primary patency rates were (weighted average) 78% for nitinol stents, 68.8% for Covered stents, 84% for Drug eluting stents, 78.2% for DEB, 60.7% for cryoballoon, 51.1% for LASER atherectomy, 63.5% for directional atherectomy and 70.2% with a combination of endovascular devices.

Conclusions: The most frequently used endovascular devices yielded various 12-month primary patency rates ranging from 51% to 85%. The increased variation in inclusion criteria, length and complexity of lesions between studies does not allow direct comparison between them. Larger randomized trials in specific patient populations comparing those modalities is needed before we can make safe recommendation of the superiority of one device over the other.

TCT-538
Lumivascular Approach To Crossing Chronic Total Occlusions Without Fluoroscopy
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Background: Case series where the use of optical coherence tomography (OCT) greatly reduced or eliminated fluoroscopy during the crossing of peripheral arterial chronic total occlusions (CTOs) when using the Ocelot catheter (Avanger Inc, CA).

Methods: Fifteen patients, with sixteen lesions (n=16) were successfully treated for peripheral arterial CTOs between January 2013 and June 2013. Ocelot imaging identifies arterial structures to guide catheter crossing within the true lumen. By placing the middle marker over arterial structures, the catheter tip is reflected in the opposite direction towards atheroma (Figure 1). Time measurements were recorded for diagnostic angiography, CTO crossing fluoroscopy, and therapeutic fluoroscopy times.