tissue loss (Table). The 30-day major adverse cardiac and leg events were equivalent in OPEN and ENDO. However, patients undergoing ENDO had a higher 30-day amputation rate. Clinical efficacy, amputation-free survival, and long-term major adverse leg events were equivalent between the groups, with few patients surviving 5 years. Critical limb ischemia, diabetes, end-stage renal disease, and poor tibial runoff were predictors of outcomes in both groups.

Conclusions: Patients aged ≥80 years offered OPEN or ENDO based on the operator's clinical opinion have equivalent perioperative and long-term patient-centered outcomes.

Table.

	OPEN	*ENDO*	P *value*
Number limbs at risk (n)	204	149	
Male gender (%)	40%	48%	.36
Age (years ± SD)	84 ± 4	85 ± 4	.02
Modified Cardiac Risk Index	3.0 ± 1.6	3.4 ± 1.8	.03
Rest pain/tissue loss	68%	68%	.01
30-day MACE	10%	7%	.09
30-day MALE	10%	8%	.2
30-day amputation	1%	5%	.17
5-year MALE (mean ± SEM)	64 ± 4%	64 ± 5%	.74
5-year amputation free survival (mean ± SEM)	45 ± 4%	37 ± 5%	.09
5-year clinical efficacy (mean ± SEM)	62 ± 4%	47 ± 6%	.051

Endoscopic Versus Open Saphenous Vein Graft Harvest for Lower Extremity Bypass in Critical Limb Ischemia (CLI)

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Objective(s): Endoscopic vein harvest (EVH) has been demonstrated to improve early morbidity compared with conventional open vein harvest (OVH) technique for infrainguinal bypass surgery. Recent literature, however, suggests conflicting results regarding long-term patency between these techniques. The purpose of this study was to compare outcomes and graft patency in patients with critical limb ischemia (CLI).

Table. Outcomes among patients undergoing OVH versus EVH

Variable	*OVH*	*EVH*	P
Procedures, n	49	39	
Length of hospital stay	6.05 ± 3.3	7.14 ± 9.7	.26
Postoperative leg wound infection (surgical site + vein harvest site)	11 (22.9%)	6 (16.2%)	.31
Major amputations (BKA/AKA)	4 (8.1%)	1 (2.5%)	.34
Discharge disposition			
Home	29 (59.1%)	26 (70.3%)	.40
Nursing facility	20 (40.8%)	11 (29.7%)	.57
Primary patency at one year	69.4%	43.2%	.007
Loss of primary patency:	15 (30.6%)	23 (58.9%)	
Anastomotic stenosis	23%	18%	
Graft occlusion	61%	22.7%	
Vein body stenosis	0%	54.5%	
Average # of interventions/graft	0.37 ± 0.85	1.28 ± 1.59	<.001

Methods: This retrospective study compared 39 EVH patients and 49 OVH patients undergoing lower extremity revascularization from January 2009 to December 2011. Outcome measures included patency rates, postoperative complications, and wound infection. Graft patency was assessed using Kaplan-Meier estimation and Cox proportional hazards models.

Results: Both groups were matched demographically and for indications for bypass (CLI). Median follow-up was 22.8 months. There were differences in postoperative complications between the two groups. The incidence of wound infection at the vein harvest site was 0% in EVH vs 20% in OVH; nevertheless, the difference was not significant when all surgical sites were included (22.9% OVH, 16.2% EVH). Length of hospital stay was comparable between the two groups, although the EVH group had tendency toward quicker recovery. Primary patency rate at 1 year was 43.2% in the EVH group and 69.4% in the OVH group ($P = .007$). The most common reason for loss of primary patency was graft occlusion (61.5%) in the OVH group and vein body stenosis (54.5%) in the EVH group. The average number of vascular reinterventions per bypass graft was significantly lower in the OVH group (0.37) than in the EVH group (1.28; $P < .001$; Table).

Conclusions: Our findings demonstrate an inferior patency, higher rates of reinterventions, with a different mode of failure in patients undergoing EVH compared with OVH. Short-term benefits of EVH, including a trend towards quicker recovery and lower rate of vein harvest site infection, appear maintained.

Clinical Outcomes of Tibial Artery Endovascular Interventions in End-Stage Renal Disease Patients on Hemodialysis

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Objective(s): Over the last decade, there has been a significant increase in primary tibial endovascular interventions for critical limb ischemia (CLI; rest pain and tissue loss) of the lower extremity. This study examines the outcomes of end-stage renal disease (ESRD) patients on hemodialysis with tissue loss.

Methods: A prospective database of patients undergoing tibial intervention for CLI between 2000 and December 2011 was queried. Patients with ESRD on hemodialysis with tissue loss were selected. Patient-centered outcomes were evaluated, including clinical efficacy, defined as absence of recurrent symptoms, maintenance of ambulation and absence of major amputation; amputation-free survival (AFS), defined as survival without major amputation; and freedom from major adverse limb events (MALE), defined as above ankle amputation of the index limb or major reintervention (repeat endoluminal intervention, new bypass graft, jump/interposition graft revision).

Results: A total of 52 limbs in 46 hemodialysis patients (59% male, age 66 ± 12 years) underwent tibial artery interventions for CLI presenting with tissue loss (Rutherford classification 5 and 6). Of these, 69% had isolated tibial interventions and 31% had SFA and tibial interventions. Tibial Trans-Atlantic Inter-Society Consensus lesions were A and B in 46% and C and D in 54%. Mean pedal runoff was 5 (range, 2-8). Technical success was 96%. The overall major adverse cardiac event rate was 6% and MALE was 38% at 30 days. Outcomes at 5 years were (mean ± standard error of the mean) clinical efficacy, 29% ± 1%; amputation-free survival, 29% ± 1%, and MALE, 31% ± 1%.

Conclusions: Tibial intervention for tissue loss in ESRD patients requiring hemodialysis is associated with a very high MALE rate. Longer-term outcomes remain relatively poor, with <30% success in patient-centered outcomes at 5 years.

The Role of Ultrasound to Identify Nonthrombotic Lower Extremity Pathology

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Objective(s): Accreditation in peripheral venous testing can be obtained based on femoropopliteal duplex ultrasound evaluation, and many laboratories limit their examination to this segment only. This simplified protocol detects acute femoropopliteal deep venous thrombosis (DVT) but misses calf vein DVT, superficial venous thrombosis, chronic DVT, venous reflux, and other nonvenous findings potentially responsible for pateints' presenting conditions. A protocol limited to the femoropopliteal segment results in additional unnecessary testing and can create patient dissatisfaction. We evaluated the differences in the diagnosis between a limited femoropopliteal vs a complete approach to the venous ultrasound evaluation of the lower extremities in patients examined in an outpatient vascular laboratory.

Methods: A database with the complete ultrasound examinations of the lower extremity, including the common femoral, deep femoral, popliteal, tibial and peroneal veins, calf musclar veins, and great and small saphenous veins, performed in 1208 consecutive patients from July 2009 to February 2010 was queried.

Results: Of the 1208 patients, acute femoropopliteal DVT was found in 20 (1.66%), acute infrapopliteal DVT in 36 (2.98%), chronic femoropop-