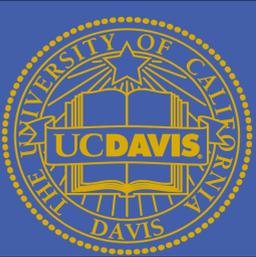


# Timing of Arterial Testing Affects Outcomes for Patients with Lower Extremity Wounds

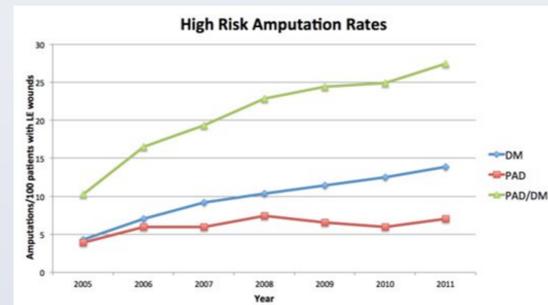


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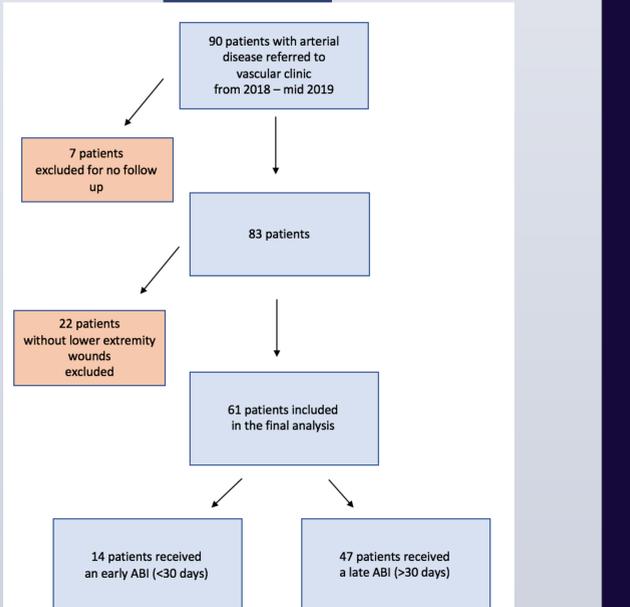
## Intro

Patients with critical limb ischemia and concurrent wounds suffer higher rates of amputation. An ankle brachial index (ABI) is the standard practice for screening peripheral artery disease in patients. Our study goal was to determine if high risk patients who received an earlier ABI were less likely to receive an amputation later in life.



Amputation rates in patients from 2005 - 2011

## Methods



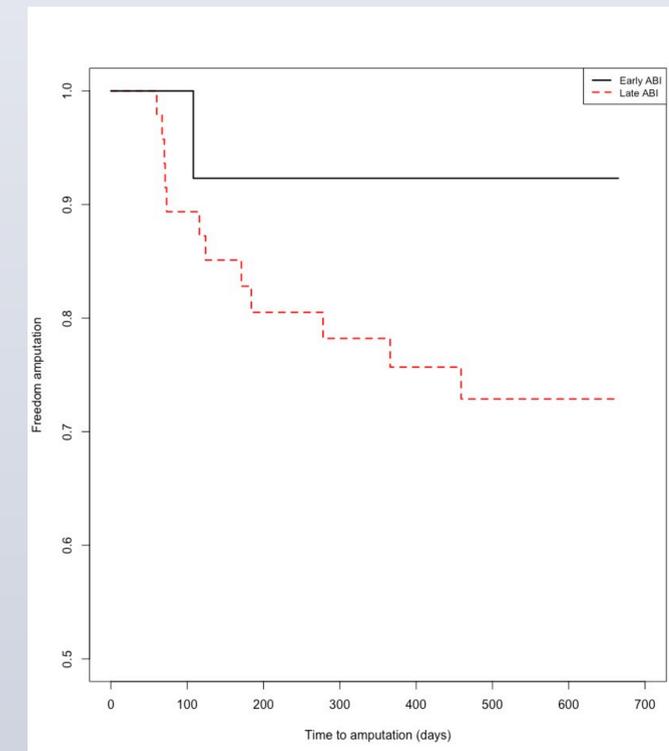
## Results

- 26 of the 61 patients had no pulse exam performed by the Primary Care provider when the wound was identified.
- Patients in the Early ABI group were more likely to have a pulse exam done at the time of diagnosis 11(78%) than patients in the late ABI group 23 (49%), p =0.13.
- Patients in the Early ABI group had faster time to referral, revascularization, and wound healing. (Table 1)
- Patients in the Early ABI group also had decreased risk of major amputation, although this did not reach statistical significance (p=0.2). (Figure 1)

(Table 1) Patient Characteristics and outcomes

Patient Characteristics	Early ABI n=14	Late ABI n=47	p-value
Age (Mean and SD)	69 years	70 years	0.93
Male Gender	11	27	0.26
Diabetes	10	33	0.87
Coronary Artery Disease	6	16	0.82
COPD	3	8	0.97
Mean Time to Vascular Referral	17 days	165 days	0.0001
Mean Time to Revascularization	48 days	101 days	0.02
Mean Time to Wound Healing	141 days	349 days	0.005

(Figure 1) Time to amputation in patients with early vs late ABI



## Conclusions

- Many patients with lower extremity wounds do not have appropriate pulse exams performed in the primary care setting
- Early ABI testing can identify patients that benefit from revascularization and expedite specialty referral
- Larger cohort studies are needed to determine if early ABI testing can decrease major amputation rates

## Further Directions

- Expand years of cohort to include more patients
- Use of Medicare or All Payer data to determine affect of ABI testing

## References

- Humphries MD, Brunson A, Li CS, Melnikow J, Romano PS. Amputation trends for patients with lower extremity ulcers due to diabetes and peripheral artery disease using statewide data. J Vasc Surg. 2016