GUIDELINE-DIRECTED STATIN THERAPY IN PERIPHERAL ARTERIAL DISEASE:
Do Health Providers Seize the Opportunity? Insights from the PORTRAIT Registry

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BACKGROUND

- Patients with acute exacerbations or a new diagnosis of peripheral arterial disease (PAD) present an opportunity for health professionals to optimize statin therapy.
- The 2013 ACC/AHA cholesterol guidelines have highlighted moderate to high intensity statins as a Class 1a recommendation for all patients with PAD.
- Statins remain under-prescribed in clinical practice, but it is unclear the extent to which patients with worsening or new symptoms of PAD are appropriately treated by a specialist upon initial evaluation.
- Our main objective was to examine rates of guideline-recommended statin therapy before and after initial visit with a health provider, with the hypothesis that there would be a significant improvement in patients with appropriate statin treatment following evaluation.

METHODS

- PORTRAIT is a multinational, prospective registry of patients with a new diagnosis or exacerbation of PAD (n = 1275).
- Patient demographic and clinical characteristics, PAD-related health status, and medication and invasive treatment records were obtained at initial PAD evaluation and at 12-month patient interviews.
- Patients intolerant to statins and those with missing statin records were excluded from our analysis.
- The proportion of patients on a guideline-recommended statin before and after initial PAD evaluation and at 12-month follow-up was assessed with summary statistics.
- A hierarchical multivariable logistic regression model was constructed to identify predictors of initiation on or intensification to guideline-recommended statin treatment after evaluation.
- Patient predictors based upon prior literature and clinical experience were considered for model inclusion: age, sex, race, insurance status, educational level, symptom presentation (typical versus atypical), PAD with proximal arterial involvement, depression, Peripheral Artery Questionnaire (PAQ) score, and country of enrollment.
- Variability across sites was explored using a median odds ratio (MOR), which estimates the average relative difference in two hypothetically identical patients receiving appropriate statin intensification when treated at two random sites.

RESULTS

Table 1: Patient Characteristics After Initial PAD Evaluation

	Guideline-Recommended Statin Therapy		
	No (n=293)	Yes (n=910)	P-Value
Male	174 (59.4%)	579 (63.6%)	0.191
Age	68.9 ± 9.8	67.4 ± 9.3	0.023
White	169 (57.7%)	481 (52.9%)	0.149
Insurance	232 (79.2%)	680 (74.7%)	0.121
High School or Higher Ed	207 (71.1%)	631 (70.1%)	0.739
Never Smoker	47 (16.0%)	84 (9.3%)	0.001
ABI	0.7±0.2	0.7±0.2	0.668
Typical Symptoms	227 (82.2%)	724 (86.6%)	0.074
History of PVI	16 (5.5%)	112 (12.3%)	< 0.001
History of CHF	29 (9.9%)	98 (10.8%)	0.672
History of Dyslipidema	187 (63.8%)	791 (86.9%)	< 0.001
History of Hypertension	231 (78.8%)	741 (81.4%)	0.327
History of MI	44 (15.0%)	192 (21.1%)	0.022
History of Diabetes	87 (29.7%)	323 (35.5%)	0.068
PAQ Summary Score	46.8±21.8	49.4±21.9	0.072
LDL-C Score	113.4±37.1	93.4±38.9	< 0.001

Values expressed as mean ± SD or n (%)

Figure 1: Statin Intensity Before and After Initial Visit

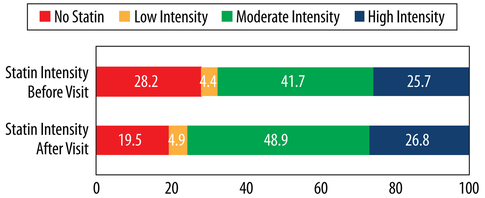


Figure 2a: 'No Statin' Patients After Initial Visit

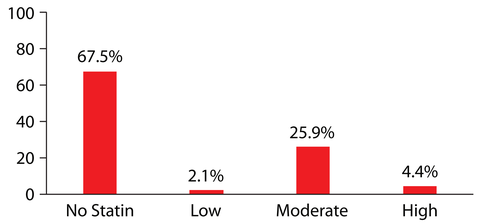


Figure 3: Predictors of Statin Intensification After Initial PAD Visit

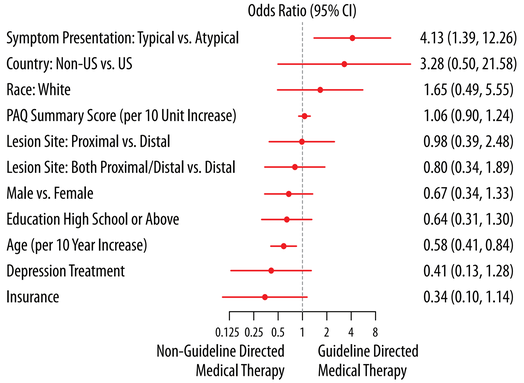


Figure 4: Site-Level Variability in Appropriate Statin Intensification After Initial PAD Visit

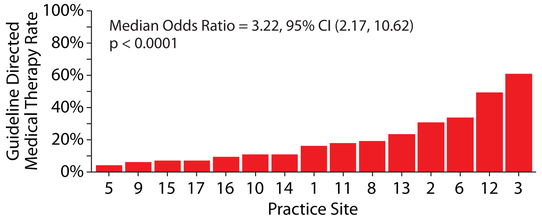
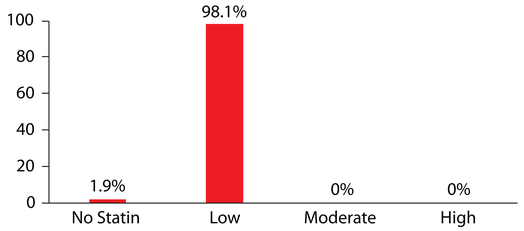


Figure 2b: Low Intensity Statin Patients After Initial Visit



DISCUSSION

- The majority of patients initially without statin therapy and on low-intensity statin therapy remained off guideline-recommended therapy after an initial PAD visit (67.5% and 98.1%, respectively)
- Only 21% of those patients experienced a delayed, guideline-recommended statin intensification when followed for an additional 12 months
- Older patients were observed to be less likely to be placed on guideline-recommended therapy when seen by a specialist, while those presenting with typical symptoms of PAD were more likely to be appropriately treated
- An exploratory analysis examining site-level variation in appropriate statin intensification practices demonstrated a three-fold average difference between any two random PORTRAIT sites

CONCLUSION

- When health providers are challenged with an initial opportunity to appropriately titrate statin therapy, they often do not take advantage to make appropriate treatment modifications
- There was significant heterogeneity of treatment between participating sites, reflecting marked discrepancies in how health providers manage atherosclerotic risk in the PAD population

LIMITATIONS

- Observational registry with non-randomized trial design
- Site selection bias
- Possible errors in statin misclassification as well as under-recognition of statin intolerance

DISCLOSURES

- **KSS:** Research reported in this presentation was funded through a Patient-Centered Outcomes Research Institute (PCORI) Award (CE-1304-6677). The statements in this presentation are solely the responsibility of the authors and do not necessarily represent the views of the PCORI, its Board of Governors or Methodology Committee
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