

## INTRODUCTION

- Despite the high prevalence of melanoma, mortality has decreased over the last decade due to improvements in diagnosis and effective therapies for advanced disease [1].
- A previous report linked patients of lower socioeconomic status with later-stage melanoma presentation and increased mortality [2]. The Center for Disease Control created the Social Vulnerability Index (SVI), a tool used to evaluate relationships of disease morbidity and mortality to SVI in underserved populations [3].
- High SVI has been correlated with increased disease morbidity. Given the importance of early melanoma identification, we hypothesized that high SVI would be related to delays in time of melanoma diagnosis and advanced pathologic stage.

## METHODS

- A retrospective study of 261 melanoma patients treated from 2016-2024 was performed.
- SVI is composed of five components: household composition, housing type, transport, minority status, and socioeconomic status.
- An overall SVI percentile from 1-100 was formulated combining these 5 components.
- SVI low-moderate group scored 0-59.
- SVI high group, our anticipated disadvantaged group, scored 60+.
- Time from the first concern of lesion to first clinical evaluation was divided into two groups, <90 days and >91 days.
- Pathologic stage was divided into three groups: Stage 1, Stage 2, and Stages 3/4.

**Table 1: Relationship of Time from Concern of Lesion to First Evaluation and Pathologic Stage at Diagnosis to SVI Overall Percentile**

SVI Overall Percentile	Time from Concern to First Evaluation			
	1-90 days	91+ days	Total	
Low-Moderate	87 50.00%	87 50.00%	174	
High	40 48.19%	43 51.81%	83	
Total	127	130	257	
p-value: 0.7864				
SVI Overall Percentile	Pathologic Stage			
	Stage 1	Stage 2	Stage 3/4	Total
Low-Moderate	98 64.90%	26 17.22%	27 17.88%	151
High	41 56.16%	21 28.77%	11 15.07%	73
Total	139	47	38	224
p-value: 0.1379				

## RESULTS

- There were 174 patients in the low-moderate SVI group.
- The time of patients' first concern to time of first clinical evaluation was 1-90 days for 50% and 91+ days for the other 50%.
- Of the 83 patients with high SVI, 48% were seen in 1-90 days, and 52% were seen in 91+ days (p-value: 0.7864).
- In the low-moderate SVI group, 64% of cancers were Stage 1, 17% were Stage 2, and 18% were Stages 3/4; while for patients in the high SVI group, 56% of cancers were Stage 1, 29% were Stage 2, and 15% were Stages 3/4 (p-value: 0.1379).

## CONCLUSION

- Unlike other SVI studies, we did not identify a relationship between SVI and delays in melanoma identification or initial cancer stage.
- As 98% of our patient population self-identified as white, race may have been an underlying contributor to delays in diagnosis or presentation at more advanced cancer stages noted in other studies.
- As most SVI studies use large national databases, our study may also be underpowered.

## REFERENCES

1. Saginala K, Barsouk A, Aluru JS, Rawla P, Barsouk A. Epidemiology of Melanoma. Med Sci (Basel). 2021 Oct 20;9(4):63. doi: 10.3390/medsci9040063. PMID: 34698235; PMCID: PMC8544364.
2. Jiang AJ, Rambhatla PV, Eide MJ. Socioeconomic and lifestyle factors and melanoma: a systematic review. Br J Dermatol. 2015 Apr;172(4):885-915. doi: 10.1111/bjd.13500. Epub 2015 Mar 4. PMID: 25354495.
3. Tran, T., Rousseau, M.A., Farris, D.P. et al. The social vulnerability index as a risk stratification tool for health disparity research in cancer patients: a scoping review. Cancer Causes Control 34, 407–420 (2023). <https://doi.org/10.1007/s10552-023-01683-1>