01. Differences in Mohs Preoperative and Postoperative Lesion and Defect Sizes for Patients with Squamous Cell Carcinomas Living in Suburban and Urban Communities

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Background: Addressing imbalances in health literacy, education level and income earnings among individuals in urban versus suburban populations may help bridge gaps in healthcare delivery. Residents in suburban communities compared to urban core communities have been found to have higher household incomes and greater educational attainment [1]. Higher income levels and educational attainment have been linked to earlier skin cancer diagnosis [2]. The primary objective of this paper was to assess patient morbidity among urban and suburban patients with squamous cell carcinomas removed with Mohs Micrographic Surgery by identify differences in preoperative lesion size, postoperative wound size and number of layers.

Methods: We performed a retrospective review of 274 patient charts that received Mohs Micrographic Surgeries for patients with positive biopsy results for squamous cell carcinomas (SCCs) for a single physician at a single academic hospital in Miami. We collected data for the zip codes of the patient's primary address, size of the lesion prior to surgery, the number of layers removed during the surgery, and the size of the wound after the surgery. We then used the pew research system for categorizing zip codes as primarily suburban or urban which synthesizes multiple federal classification systems that defined urban as less than twelve miles from the nearest city with a household density of greater than 1,314 households per square mile and suburban as less than twelve miles from the nearest city with a household density of equal or lesser than 1,314 households per square mile but greater than 106 households per square mile. We cross-referenced the zip codes with census data finding 154 were suburban and 117 were urban. We then computed the means for the lesion size, number of layers removed, and wound sizes for patients with either suburban and urban zip-codes and computed p-values using a two tailed t-test comparing these parameters between suburban and urban patients to determine if there were statistically significant differences ($P<0.05$).

Results: The average preoperative lesion size, postoperative wound size, and number of layers removed during surgery were 1.71 cm2, 3.40 cm2, and 1.79 layers, respectively for urban patients. For suburban patients the average preoperative lesion size, postoperative wound size, and number of layers removed during surgery were 1.81 cm2, 3.77 cm2, and 1.58 layers, respectively. The p-values comparing suburban and urban patients for average preoperative lesion size, postoperative wound size, and number of layers removed during surgery were 0.71, 0.47, 0.02, respectively.

Conclusion: We determined that there was no statistical difference between urban and suburban patients for preoperative lesion size or postoperative wound size, despite there being a statistical difference between number of layers removed during the surgery for the two cohorts (p-value of 0.02). However, considering that the average number of layers removed rounded to a whole number of layers was 2-layers demonstrates that there is no practical clinical significance. The study was limited to patients with SCCs at a single academic center and single physician as well as did not factor in rural patients due to the small patient population.

Table 1: Suburban vs Urban Mean PreOp Lesion Sizes, PostOp Wound Sizes, & # of Removed Layers

Patient Home Location	Mean PreOp Lesion Sizes	Mean PostOp Wound Sizes	Mean # of Removed Layers
Urban	1.71 cm^2	3.40 cm^2	1.79
Suburban	1.81 cm^2	3.77 cm^2	1.58

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