

## P-8

# Influence of Social Determinants of Health on Pancreatic Neuroendocrine Tumor Stage at Presentation

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### BACKGROUND

Tumor size and lymph node involvement (stage) have been utilized to prognosticate pancreatic neuroendocrine tumors (PNETs) but the influence of race and social vulnerability on these factors remains unexplored. Therefore we sought to explore this in a racially and socioeconomically diverse cohort.

### METHODS

We reviewed records of all patients who underwent surgical resection for PNETs from 2006-2022 at a single NCI-designated cancer center in the Deep American South. Patient demographics, including self-reported race, tumor characteristics, and contextual-level social determinants of health (SDOHs) were analyzed at the census tract/census block level (where available) including: percent of neighborhood below federal poverty level, median household income, educational attainment, percent of neighborhood without health insurance, Area Deprivation Index (ADI) percentile, and Social Vulnerability Index (SVI) percentile. SDOHs were determined using publicly available data from geocoding patient billing addresses at the time of surgery. Large tumor size ( $\geq 2$  cm) and lymph node involvement (LNI) at presentation were the primary outcomes. Data was analyzed using descriptive statistics as well as chi-square, t-, and wilcoxon signed rank tests.

### RESULTS

A total of 179 patients were included. The median age at diagnosis was 60y, 52% were female and 27% were Black. Compared to their White counterparts, Black patients were younger (median age 57y vs 60y,  $p<0.01$ ), and more likely to be female (69% vs 45%,  $p<0.01$ ). Overall, 121 (68%) patients presented with large tumors. Black patients were more likely to have larger tumors (4.1 vs 3.1cm,  $p<0.01$ ). There were no differences in SDOH between those with and without large tumors at presentation. Overall, 35 (20%) patients presented with LNI; Black patients were not more likely to present with LNI ( $p=0.83$ ). Compared to those without, those with LNI lived in neighborhoods characterized by less poverty (12% vs 16%,  $p=0.05$ ), similar median income (\$53K vs \$48K,  $p=0.32$ ), higher educational attainment (92% vs 87%  $p=0.04$ ), and lower uninsurance rates (14% vs 17%  $p=0.03$ ), but there was no difference in median SVI or ADI ( $p>0.05$ ).

### CONCLUSIONS

In our cohort, there were differences in SDOH between those with more aggressive tumor characteristics on presentation such as LNI being associated with less vulnerable neighborhoods. This may indicate a protective factor due to surgeon access or referral bias, indicating a need for targeted outreach among those diagnosing or caring for patients with PNETs.