Pancreatic Cancer in Young Adults Aged 18-39: Insights from National Inpatient Sample (NIS) 2016-2020

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Received: 2024-07-10

Accepted: 2024-09-08

Published: 2025-06-30

Background: This study aimed to investigate the number and demographic characteristics of pancreatic cancer patients aged 18-39.

Methods: Data from the National Inpatient Sample (NIS) for 2016-2020 were analyzed using STATA 15 to identify pancreatic cancer cases among young adults aged 18-39 using the International Classification of Diseases, 10th Revision (ICD-10). Descriptive statistics summarized patient demographics and clinical characteristics, while regression analysis assessed associated risk factors. Multivariate analysis was adjusted for age, type of insurance, race, smoking status, alcohol overuse, income, year of diagnosis, gender, hospital location, and region.

Results: A total of 1,124 pancreatic cancer patients aged 18-39 were identified, with a mean age of 33.8 years, representing 1.08% of all pancreatic cancer cases in the dataset. Among these, 20.28% (228) had cancer in the head of the pancreas, 10.32% (116) in the tail, 5.78% (65) in the body, and 1.33% (15) in the duct. Of these patients, 51.51% (579) were female, 52.40% (589) were White, and 20.55% (231) were Hispanic. Age distribution showed 7.8% were 18-25 years old and 82.3% were 30-39 years old. Regarding insurance status, 49.11% (552) had private insurance, and 35.68% (401) were on Medicaid. A total of 4.80% (54) died, with 90.7% (49) of deaths occurring in the 30-39 age group. Multivariate regression showed a significantly increased association with age, especially the 35-39 age group (OR: 9.67; 95% CI: 7.56-12.38; P < 0.0001), Hispanic ethnicity (OR: 1.83; 95% CI: 1.37-2.44; P < 0.0001), hospital location (OR: 1.73; 95% CI: 1.50-1.99; P < 0.0001), and region (OR: 1.13; 95% CI: 1.06-1.21; P < 0.0001).

https://dx.doi.org/10.46570/utjms-2025-1413

Conclusion: Pancreatic cancer in young adults predominantly affects those in the older segment of this age group. The higher prevalence among females and those with private insurance suggests areas for targeted interventions and further research into risk factors and healthcare access.

Keywords: Pancreatic Cancer, Clinical Characteristics, Risk Factors, Healthcare Disparities

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