

Introduction

- Anal cancer (AC) represents 2.7% of all gastrointestinal tract malignancies according to the American Cancer Society.
- Most AC are squamous cell cancer that arise from the transitional or squamous mucosa lining of the anal canal.
- The data in the literature regarding the epidemiology of AC are limited.

Aim

We aim to describe the epidemiology of AC using a large US population database.

Methods

- A multi-institutional database (Explorys Inc., Cleveland, OH, USA) was surveyed.
- A cohort of patients with a primary malignant neoplasm of anal cancer between 1999–2022 was identified.
- The prevalence rate was calculated and age-, race-, and sex-based distributions were described.

Of the 70,330,250 individuals in the database, 10,800 individuals with AC were identified with a prevalence rate of 15.4 per 100,000. Patients with AC were also more likely to be elderly, Caucasian, females, smokers, have a history of alcohol abuse, obesity, and diabetes. They were also more likely to have HIV and family history of malignant neoplasm of gastrointestinal tract.

Results

	Anal canal cancer n=10,800 (%)	No anal canal cancer n=70,330,250 (%)	OR (CI)	p-value
Age				
>65	6810 (63%)	21231370 (30%)	3.95 (3.79 to 4.10)	<0.0001
Sex				
Female	6160 (57%)	38434840 (55%)	1.10 (1.06 to 1.15)	< 0.0001
Risk factors				
			22.06 (20.28 to 23.99)	< 0.0001
HIV	580 (5%)	180490 (0.3%)		< 0.0001
T2DM	2550 (24%)	5644550 (8%)	3.54 (3.39 to 3.70)	< 0.0001
Obesity	2030 (19%)	5434470 (8%)	2.76 (2.63 to 2.90)	< 0.0001
Tobacco	2600 (24%)	6485500 (9%)	3.12 (2.99 to 3.26)	< 0.0001
Alcohol abuse	460 (4%)	1089430 (2%)	2.83 (2.58 to 3.10)	< 0.0001
Family hx of malignant neoplasm of GI tract	770 (7%)	594590 (1%)	9.00 (8.37 to 9.69)	< 0.0001

Discussion

This is one of the largest US population studies to date evaluating the epidemiology of AC. The prevalence rate of AC was 15.4 per 100,000. Patients with AC were more likely to be elderly, Caucasian, females, obese, diabetic, and have HIV.