

# Understanding Adolescent/Young Adult (AYA) Cancers

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Delaware Cancer Consortium Retreat

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# DISCLOSURES

- Pfizer- Research Funding
- Quilt Health- Consultant
- Spark Healthcare- Consultant

# OBJECTIVES

Describe

Describe the current understanding of Adolescent/Young Adult (AYA) oncology

Discuss

Discuss the unique considerations for AYA oncology patients

Describe

Describe AYA oncology incidence and mortality in Delaware

**The alarming rise of cancer in young adults and steps that could lower the risk**  
 PBS NewsHour

1 PBS is an American public broadcast service.



**HORIZONS**  
 PBS NEWS

Watch on YouTube

**The alarming rise of cancer in young adults and steps that could lower the risk**

Apr 3, 2026 7:00 PM EDT

Joshua Jackson is joined by Gritty to take the body check off the ice.



The New York Times

**Nearly Half of Colorectal Cancers Now Occur in Younger Patients, Study Shows**

Nearly half of all new colorectal cancer cases now occur in adults under 65, signaling a major shift in the demographics of the disease,...



1 month ago

The New York Times

**Under 40 and Diagnosed With Cancer**

Hundreds of New York Times readers shared their experiences with early-onset cancers. Here are seven of their stories.

4 days ago

# Background



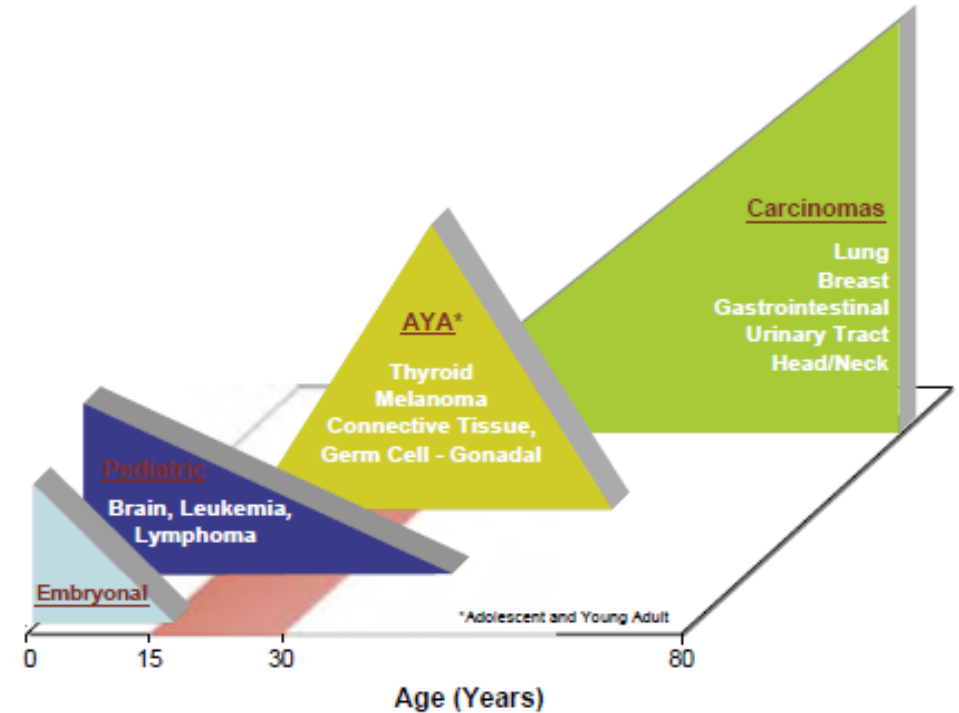
- Adolescent/young adult (AYA) patients ages 15-39 as defined by the National Cancer Institute (NCI) have unique needs and benefit from specialized treatment programs
- In 2025, NCI **estimates 85,480 AYA patients with be diagnosed with cancer (4.2% of all patients)**
- Overall incidence rates are increasing in AYA patients 0.3% each year over the last 10 years
- Survival rates are also increasing but still lag behind pediatric and older adult patients for some cancer types
- Prior to 2025, no statewide AYA incidence or mortality reports have been created

# Adolescent/Young Adult Oncology

National Cancer Institute: **(AYA) age 15-39**  
= vulnerable population

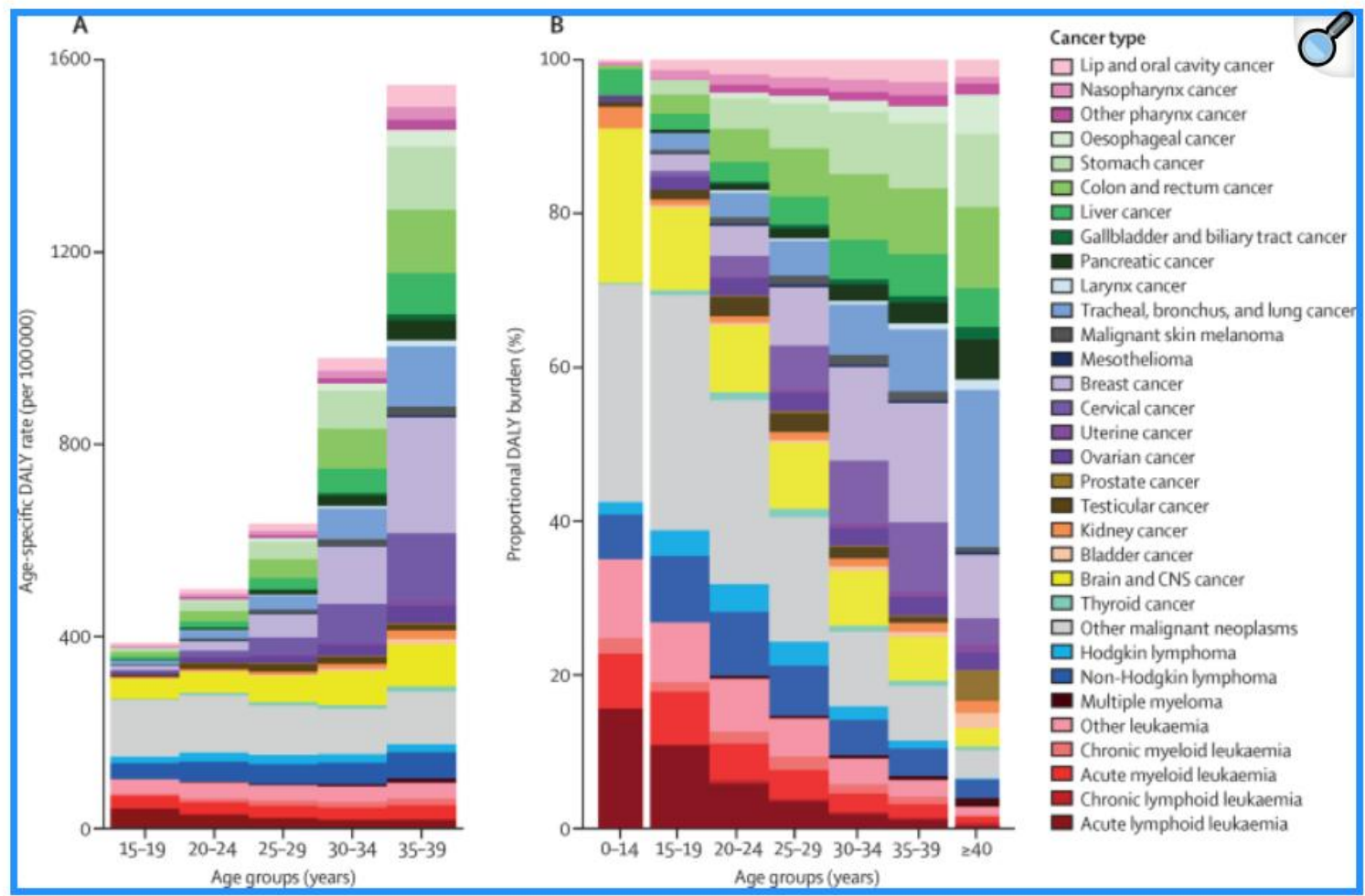
- Different biology/genetics of cancers
- Psychosocial needs
- Survivorship
- Survival differences

How do we approach and treat AYAs?  
-> Different answer for different diseases



**Figure 15.4:** The Interface Between Pediatric and Adult Oncology

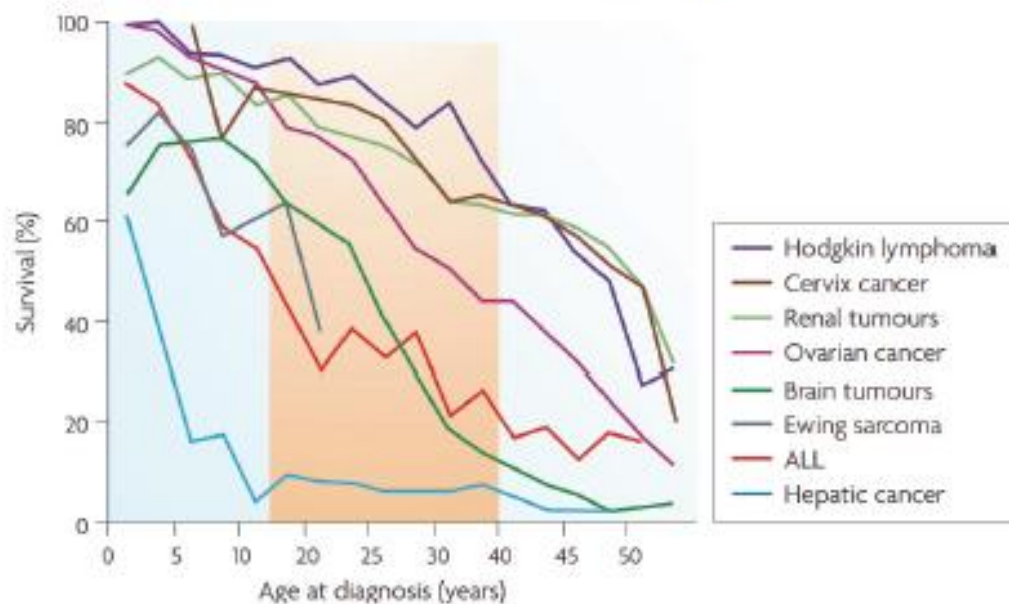
Figure 2.



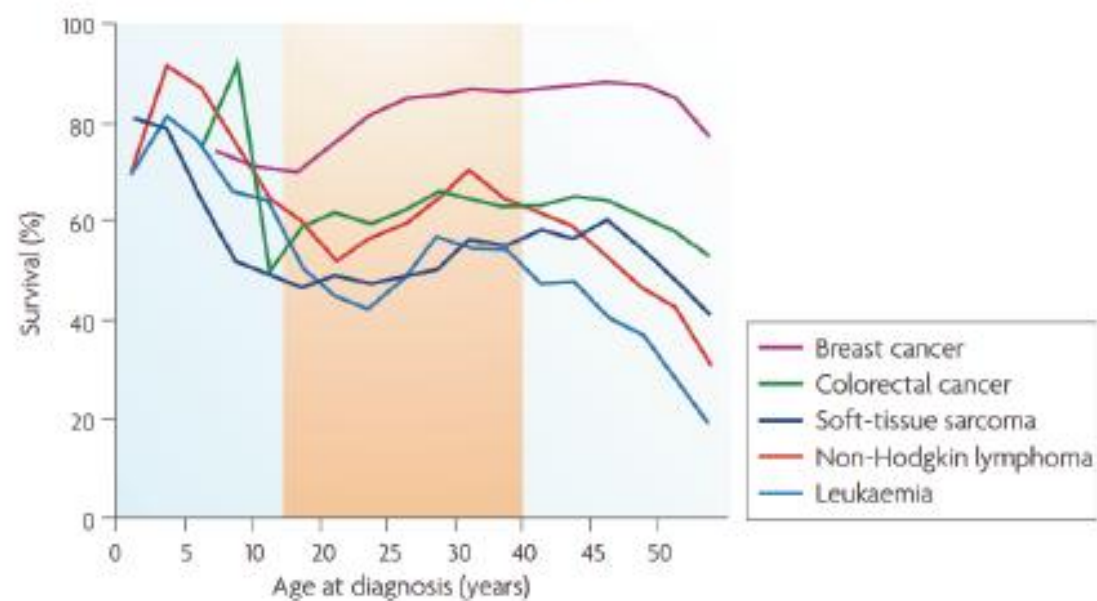
Global age-specific DALY rates (A) and proportional DALY burden (B) of adolescent and young adult cancer types by age group, in 2019, for both sexes combined

## Relative survival rates are lower in AYAs for some diseases

### Compared to younger patients



### Compared to younger & older patients

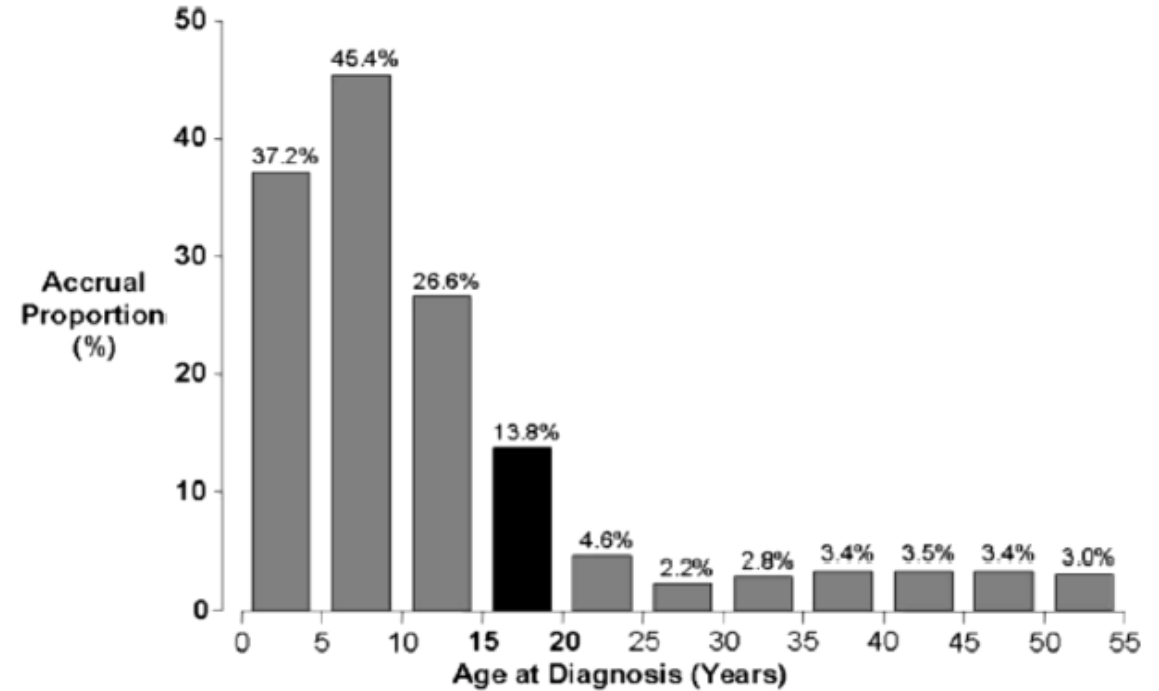
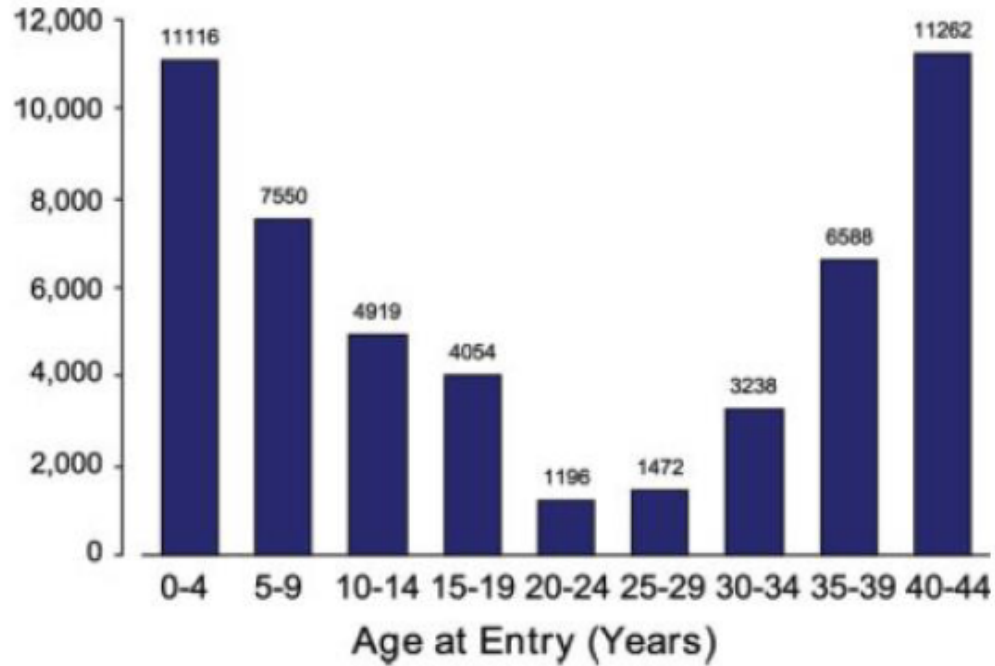


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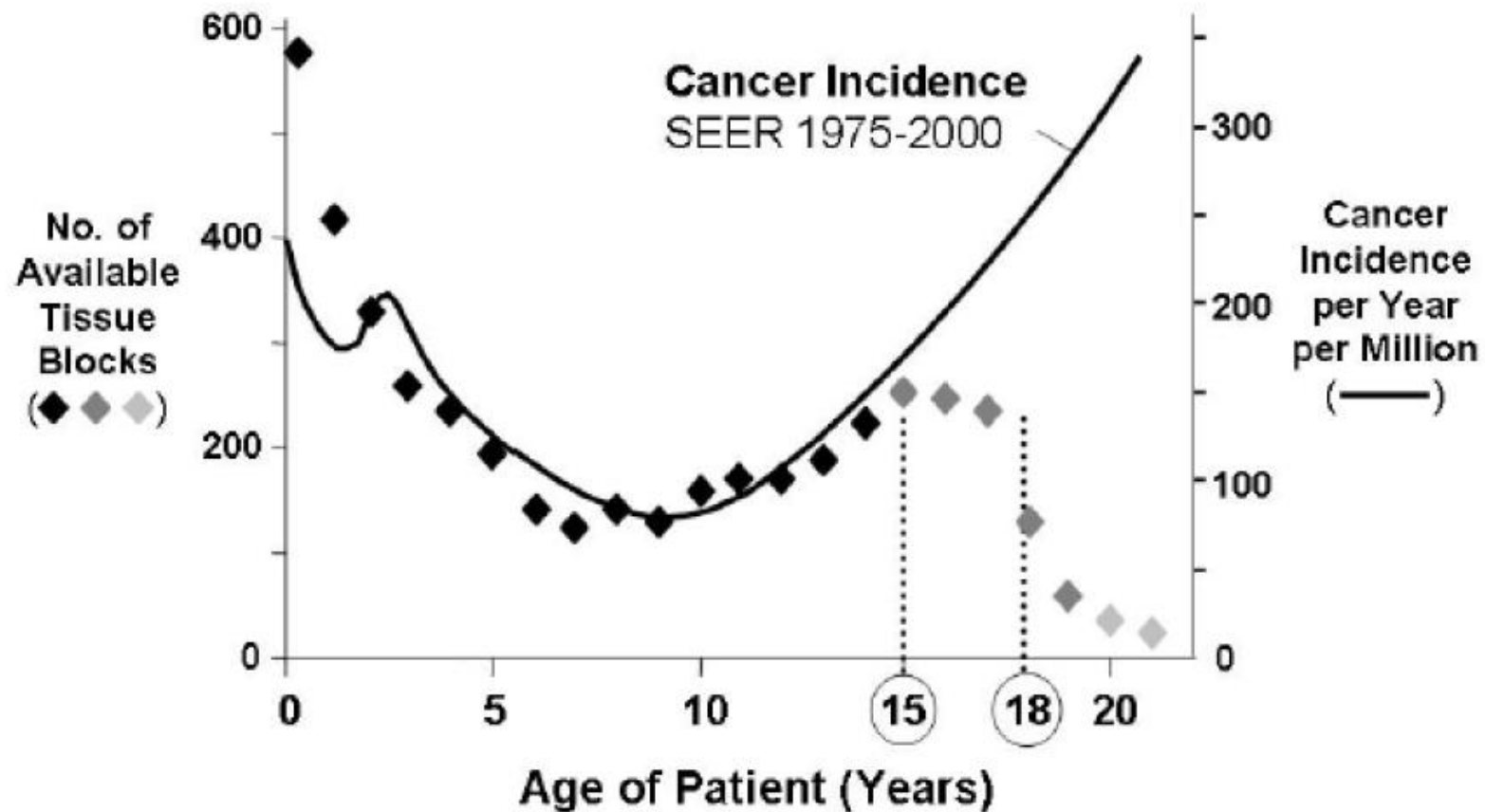
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# The Problem: Under-Enrollment of AYAs



# Under-Enrollment of AYAs → Lack of Biospecimens



# Delaware Incidence

**Table 1. Number of all-site cancer cases by sex and race/ethnicity; Delaware and Counties, 2012-2021**

|                          | All Races |      |        | Non-Hispanic White |      |        | Non-Hispanic Black |      |        | Hispanic |      |        |
|--------------------------|-----------|------|--------|--------------------|------|--------|--------------------|------|--------|----------|------|--------|
|                          | All       | Male | Female | All                | Male | Female | All                | Male | Female | All      | Male | Female |
| <b>Delaware</b>          | 2,303     | 811  | 1,492  | 1,483              | 583  | 945    | 467                | 147  | 320    | 222      | 86   | 136    |
| <b>Kent County</b>       | 494       | 158  | 336    | 338                | 109  | 229    | 108                | 32   | 76     | 34       | **   | 22     |
| <b>New Castle County</b> | 1,375     | 490  | 885    | 834                | 306  | 528    | 304                | 93   | 211    | 140      | 60   | 80     |
| <b>Sussex County</b>     | 432       | 162  | 270    | 309                | 122  | 187    | 55                 | 22   | 33     | 48       | **   | 34     |

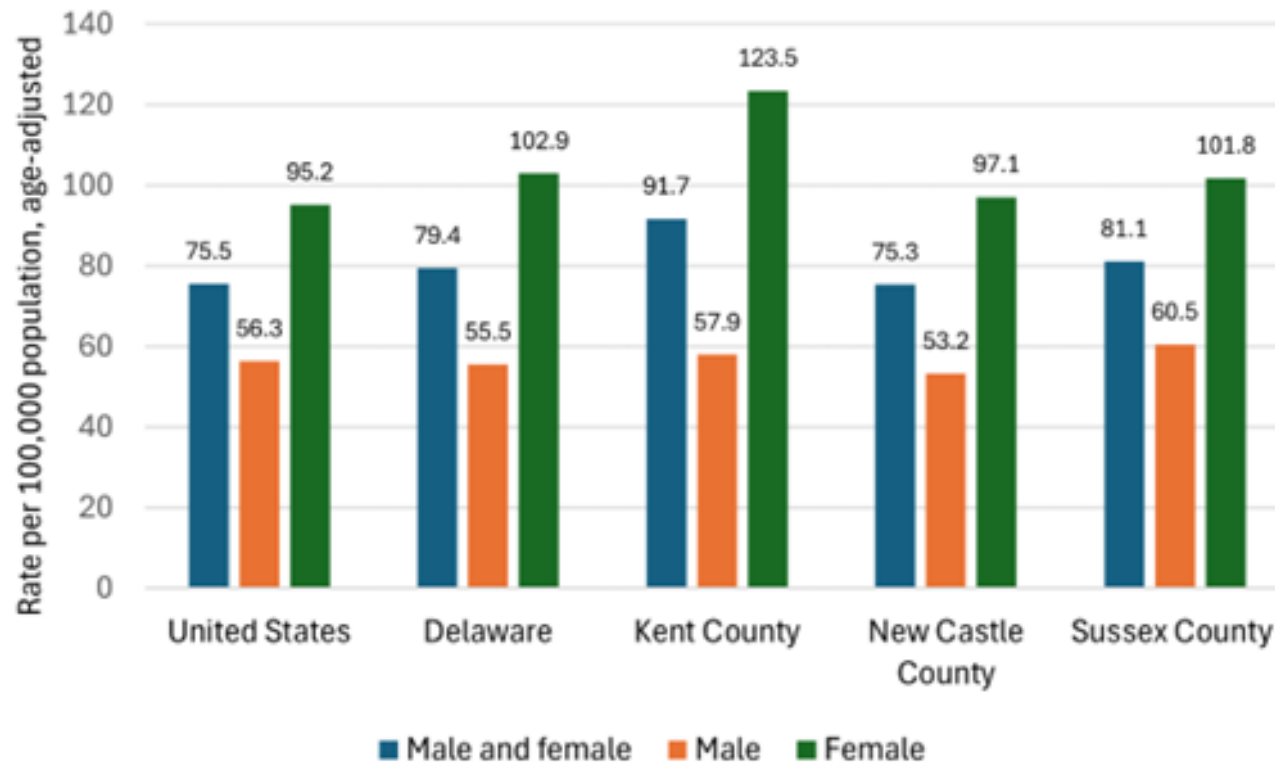
- Between 2012 and 2021, there were 2,303 AYA patients diagnosed in Delaware

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025

\*\*Cells with cases <16 are suppressed

# Five Year Age-Adjusted All-Site Incidence Rates

**Figure 1. Five-Year Age-Adjusted All-Site Cancer Incidence Rates Overall and by Sex; U.S., Delaware, and Counties, 2012-2021<sup>69</sup>**

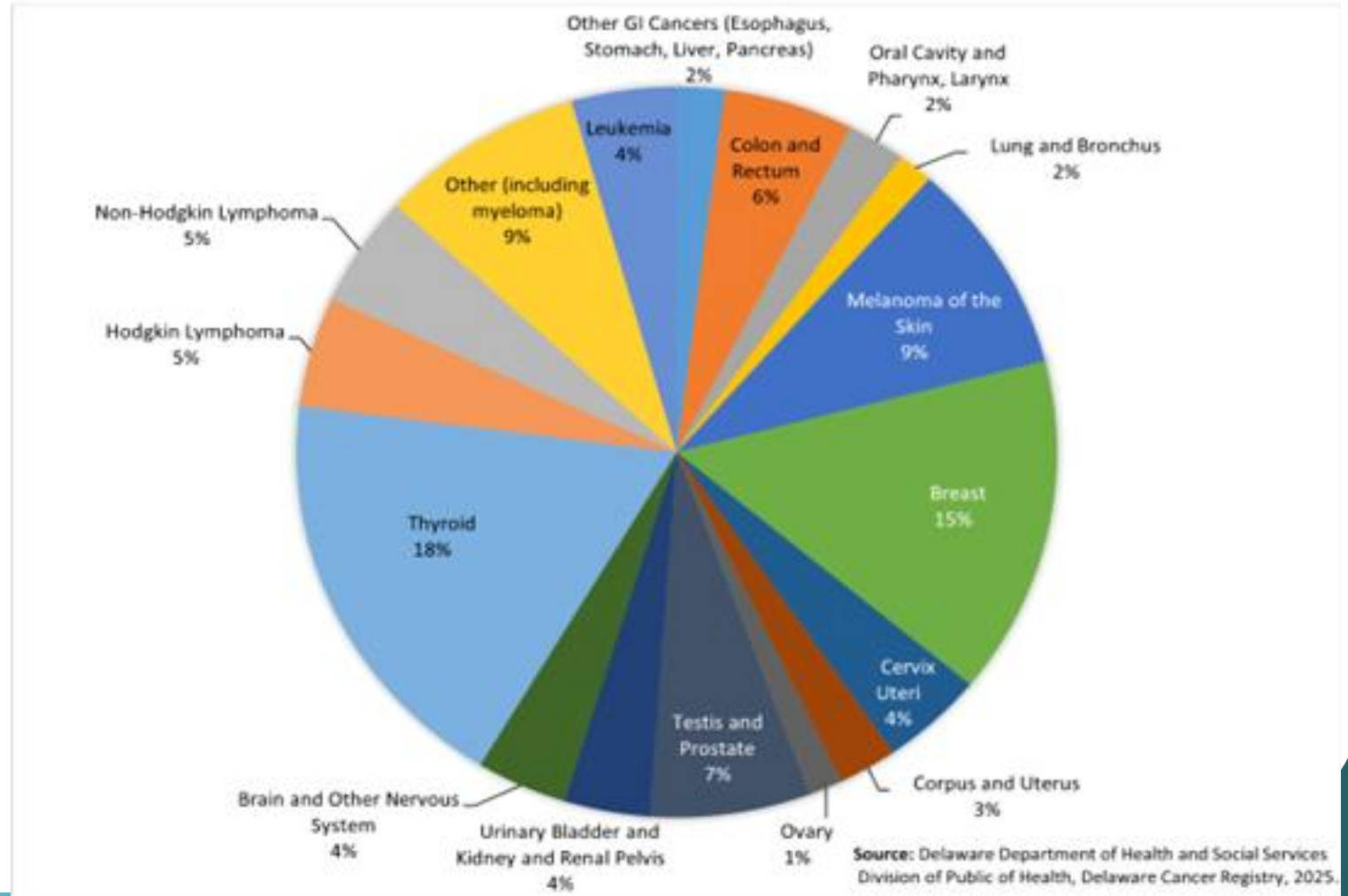


- Delaware - 79.4 cases per 100,000 population from 2012-2021
- United States- 75.5 cases per 100,000 population
- Delaware females had higher incidence rates compared to Delaware males.
- Kent County had the highest incidence rate compared to other counties for 2012-2021.

Source: (Delaware): Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2025 Source (U.S.): National Program of Cancer Registries and Surveillance, Epidemiology, and End Results Program SEER\*Stat Database: U.S. Cancer Statistics 2001-2021 Public Use Research Database, 2023 submission.

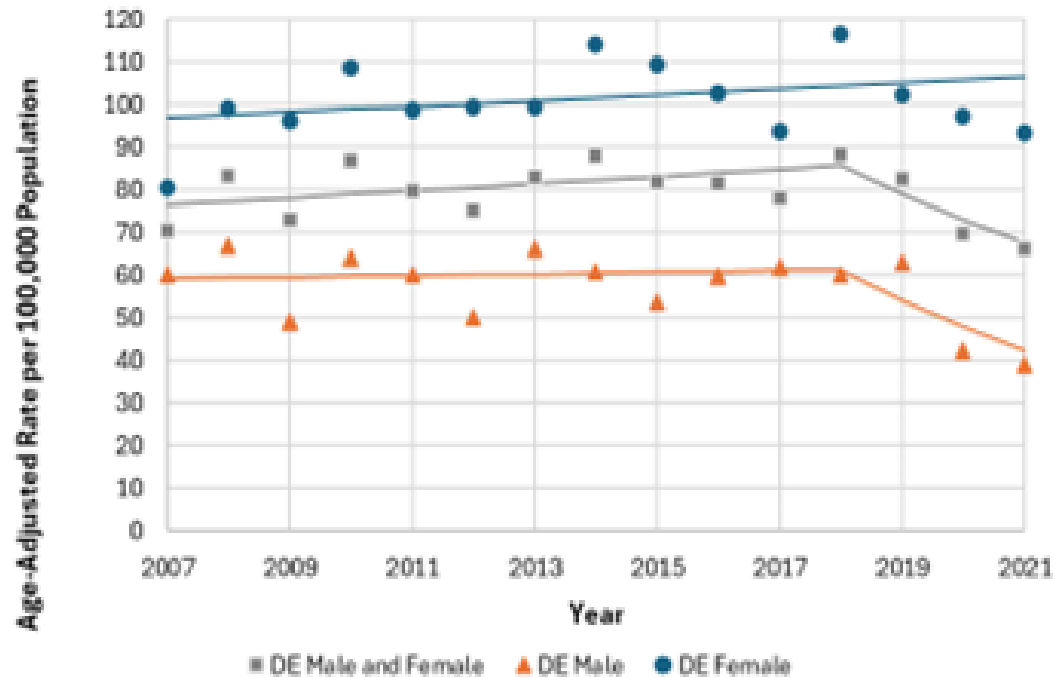
# Distribution by Cancer Type

Figure 2. Distribution of Cancer Cases by Cancer Site, Delaware, 2012-2021



# Incidence Trends

**Figure 3. Age-Adjusted AYA All-Site Cancer Incidence Rate Trend, Delaware, 2007-2021<sup>^</sup>**



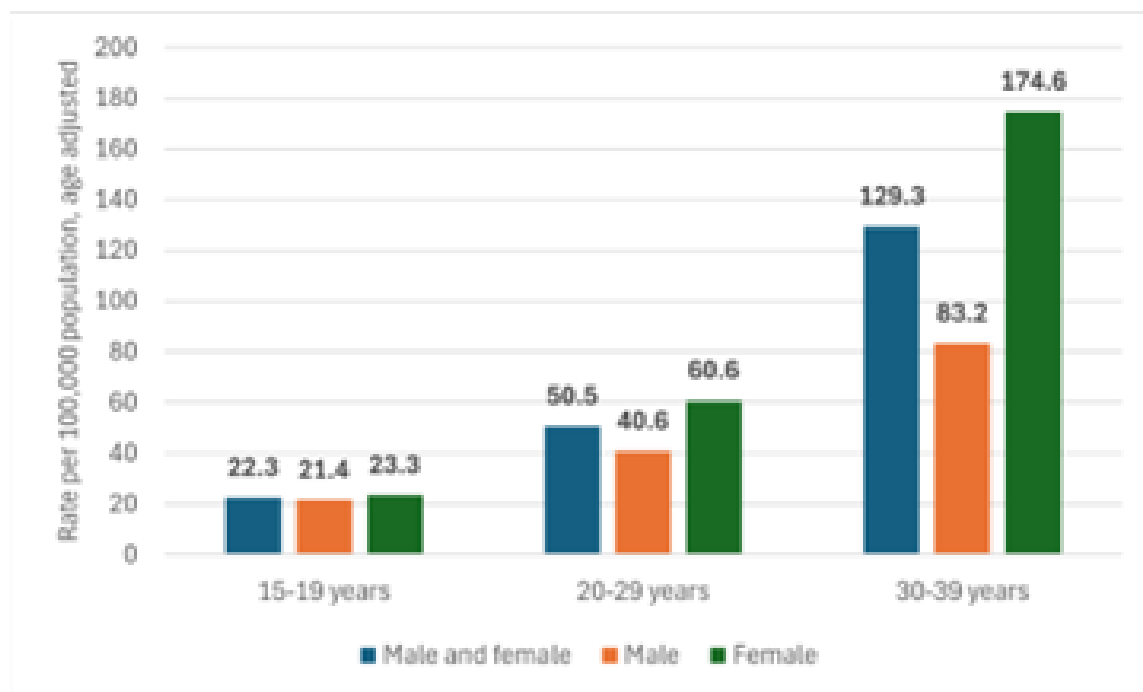
Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2024

- Rates overall stable in Delaware and the US between 2007 and 2021
- Overall, US rates were stable with slight increases in some time periods

<sup>^</sup> Incidence rates for year 2020 are plotted but were not used for the analysis of trends since 2020 was an anomaly and would bias estimates.

# AYA Age Adjusted All-Site Incidence Rates by Age Group

Figure 5. Age-Adjusted All-Site Cancer Incidence Rates by Age Group; Delaware, 2012-2021<sup>59</sup>

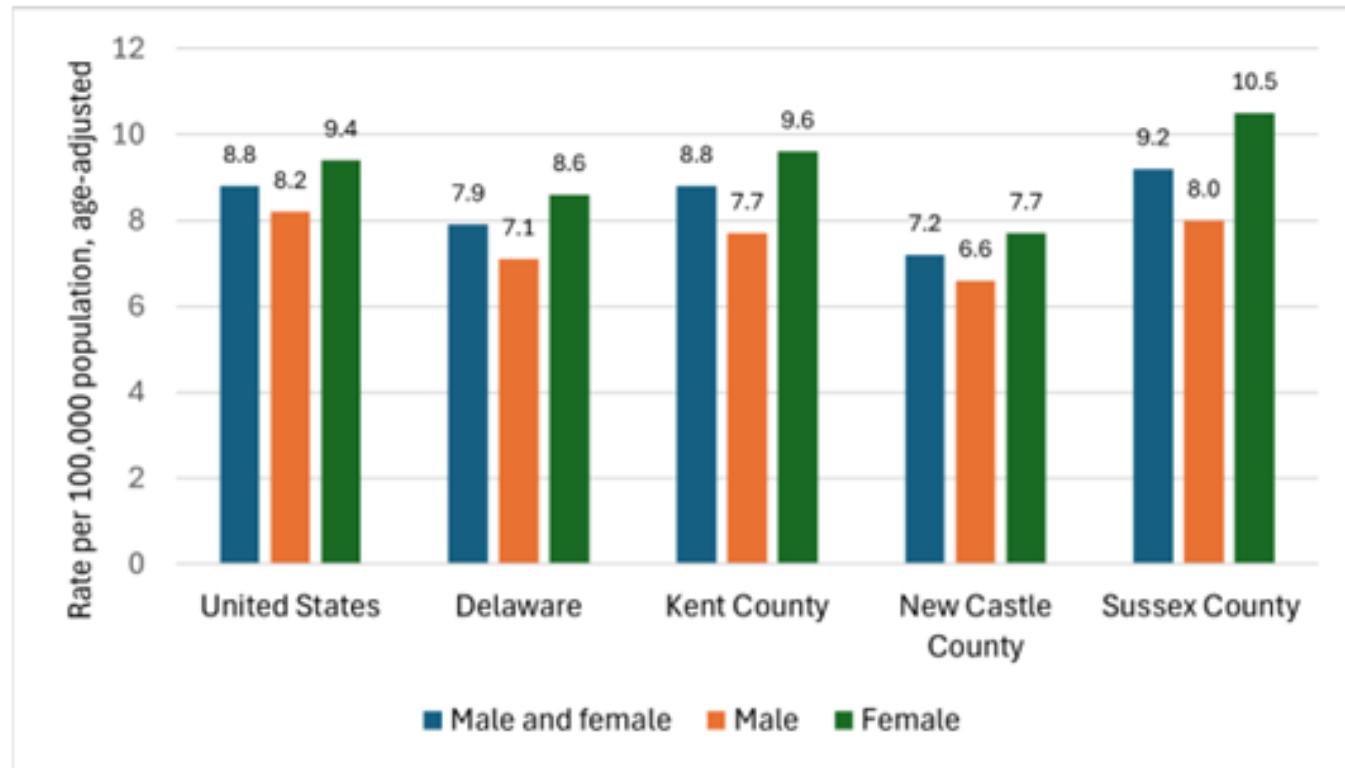


Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Cancer Registry, 2024

- Incidence increased across the AYA group, with the highest rates seen in the older AYA group aged 30 to 39 years old.
- In the 20- to 29-year-old age group and the 30- to 39-year-old age group, females had a higher incidence compared to males.

# AYA Mortality in Delaware

Figure 6. Age-Adjusted All-Site Mortality Rates Overall and by Sex; U.S., Delaware, and Counties, 2012-2021<sup>69</sup>



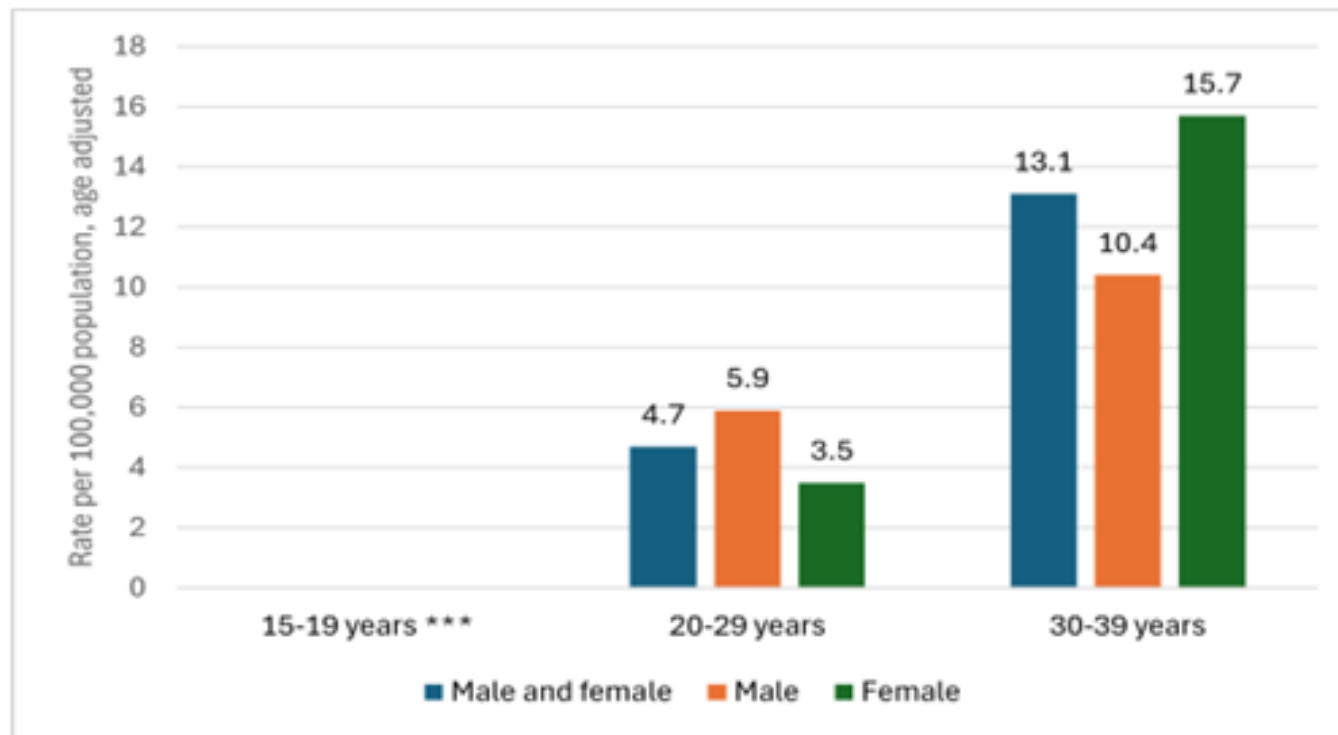
- 206 total AYA deaths in Delaware from cancer
- Delaware five-year age adjusted all site mortality rate of 7.9 deaths per 100,000 population
- Delaware females had higher incidence rates compared to Delaware males.
- Sussex County had the highest mortality rate compared to other counties for 2012-2021.

Source (Delaware): Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center, 2025

Source (U.S.): Surveillance, Epidemiology, and End Results (SEER) Program, SEER® Stat Database: Mortality - All COD, Aggregated With State, Total U.S. (1990-2022)

# Mortality by Age Group in Delaware

Figure 7. Age-specific All-Site Cancer Mortality Rates by Sex and Age Groups, AYA (15-39), DE 2012-2021



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center, 2025. \*\*\*Rates based on fewer than 16 deaths not individually calculated.

- Mortality rates for AYA all-site cancer increased in the older AYA age groups and were highest for patients aged 30-39 years old.
- Both male and female rates increased with age and females had higher rates compared to males.

How do we  
best care for  
AYA patients?



POWER  
MIGHT  
HELPFUL  
HEART  
INCREDIBLE  
MIGHT  
HOPE  
TEARS  
LIFE  
PROFESSIONAL  
CARING  
HOPE  
SACRIFICE  
LIFE  
HARD WORK  
PATIENCE  
COMMITMENT  
SWEAT  
HELPFUL  
MIGHT  
LIFE  
MIGHT  
PROFESSIONAL  
LIFE  
COMPASSION  
MIGHT

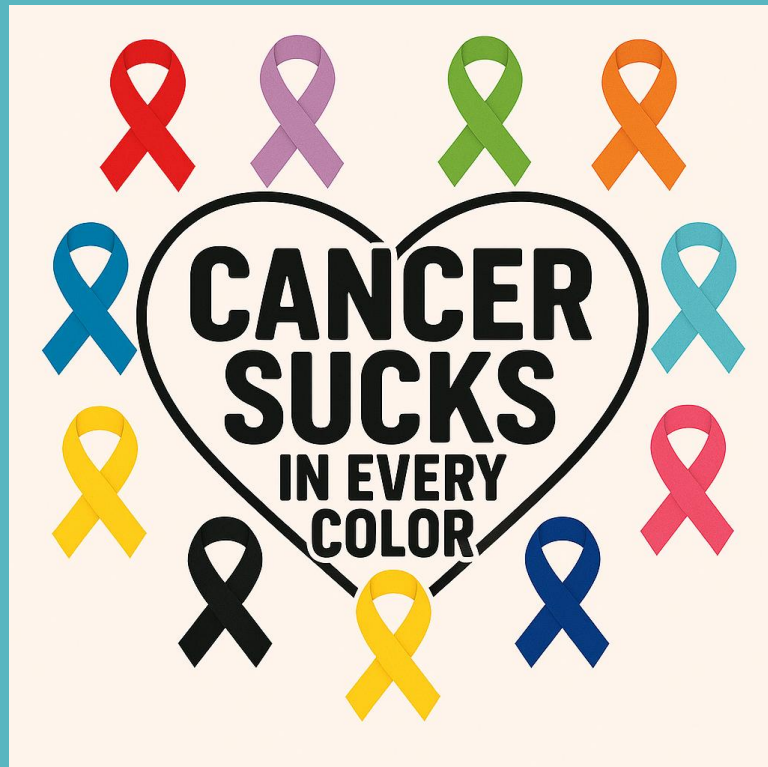




## What can we do in Delaware?

- Publish the AYA Incidence and Mortality Report on a biannual basis- continued data collection is crucial
- Support dedicated AYA programs and clinicians at our cancer programs
- Continue to build awareness around the unique needs of AYA patients

# Thank you



Sumitha Nagarajan

Diane Ng

Delaware Health and Social Services

Delaware Cancer Registry

Meghan Grier

Danielle Morley

All our clinicians, caregivers, patients  
and families