

Testicular Cancer In Ohio, 1996-2000



The Ohio Cancer Incidence Surveillance System (OCISS)

Testicular Cancer Incidence and Mortality in Ohio

Testicular cancer is a malignant tumor that occurs in one or both of the testicles in men. Testicular cancer, when detected in its early stages, is highly curable.

Testicular cancer made up less than one percent of the invasive cancers diagnosed among Ohio residents from 1996 to 2000 that were reported to the Ohio Cancer Incidence Surveillance System (OCISS) (Table 1). From 1996 to 2000, the average annual age-adjusted testicular cancer incidence rate was 5.2 cases per 100,000 male residents (289 cases per year on average), which is five percent less than the average annual age-adjusted U.S. (SEER¹) incidence rate of 5.5 per 100,000 male residents. The 1996-2000 Ohio age-adjusted mortality rate for testicular cancer of 0.3 deaths per 100,000 male residents is equal to the U.S. (NCHS²) mortality rate of 0.3 per 100,000 males. It is estimated that 95 percent of testicular cancers in the state of Ohio have been reported to the OCISS for the years 1996 to 2000 combined, meeting the 95 percent national standard for complete case ascertainment. Completeness estimates by year, however, vary considerably. The case counts and rates presented in this report should therefore be interpreted with caution.

Table 1: Average Annual Number and Percent of New Invasive Cancer Cases by Site/Type in Ohio, 1996 - 2000

	Avg Annual			Avg Annual	
	Number	Percent		Number	Percent
All Sites/Types	53,883				
Lung and Bronchus	8,800	16.3%	Ovary	962	1.8%
Breast (Female)	8,266	15.3%	Stomach	777	1.4%
Prostate	7,169	13.3%	Brain and Other Nervous System	759	1.4%
Colon and Rectum	6,672	12.4%	Thyroid	631	1.2%
Urinary Bladder	2,591	4.8%	Esophagus	613	1.1%
Non-Hodgkin's Lymphoma	2,173	4.0%	Multiple Myeloma	594	1.1%
Corpus Uterus	1,706	3.2%	Larynx	565	1.0%
Melanomas of the Skin	1,539	2.9%	Cervix	548	1.0%
Kidney and Renal Pelvis	1,318	2.4%	Liver and Intrahepatic Bile Duct	418	0.8%
Leukemias	1,235	2.3%	Hodgkin's Lymphoma	318	0.6%
Pancreas	1,170	2.2%	Testis	289	0.5%
Oral Cavity and Pharynx	1,102	2.0%	Other Sites/Types	3,669	6.8%

Technical Note: Testicular cancer cases were defined as follows: International Classification of Diseases for Oncology, Second Edition (ICD-O-2), codes C620-C629, excluding histology types 9590-9989.

[1] SEER: Surveillance, Epidemiology and End Results Program, National Cancer Institute.

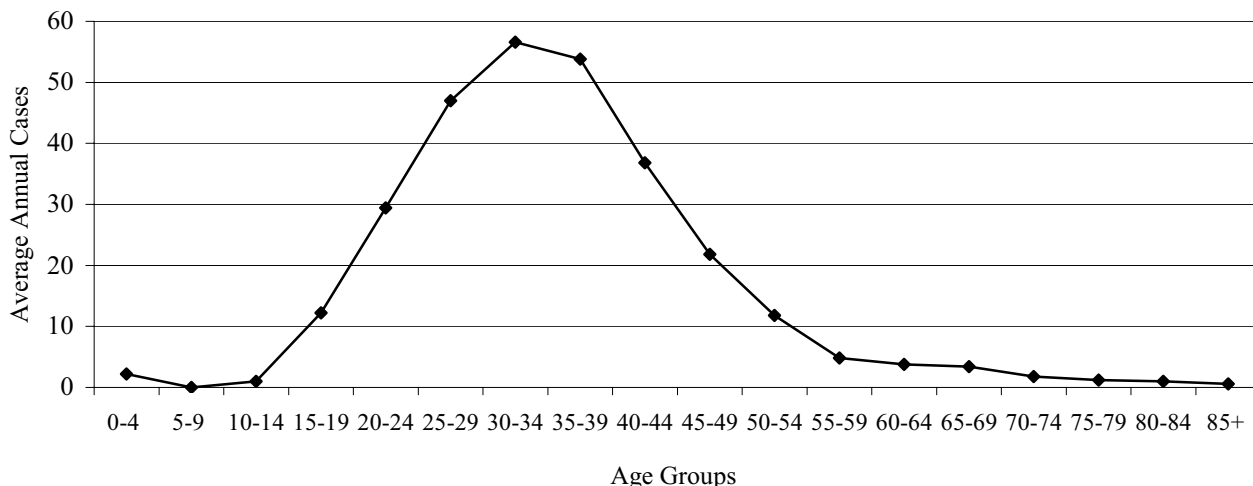
[2] NCHS: National Center for Health Statistics.

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*This Report
on Testicular
Cancer
Contains:*

- Invasive Cases by Age Group
- Invasive Cases by Race
- Cases by Stage at Diagnosis
- Survival Probabilities
- Risk Factors
- Sources of Additional Information

Figure 1:
Average Annual Number of Invasive Testicular Cancer Cases by Age Group, Ohio, 1996 - 2000



As seen in Figure 1, a greater number of invasive testicular cancers were diagnosed among Ohio males from ages 15 to 54 years, with the highest number diagnosed among males between the ages of 25 and 44 years. This finding is in contrast to the majority of cancer types, where the number of cases increases with advancing age. Invasive testicular cancer incidence in the U.S. follows a pattern similar to that shown in Figure 1.

Figure 2: Average Annual Age-Adjusted Testicular Cancer Incidence Rates, per 100,000 Males, by Race in Ohio, with Comparison to the U.S., 1996 - 2000

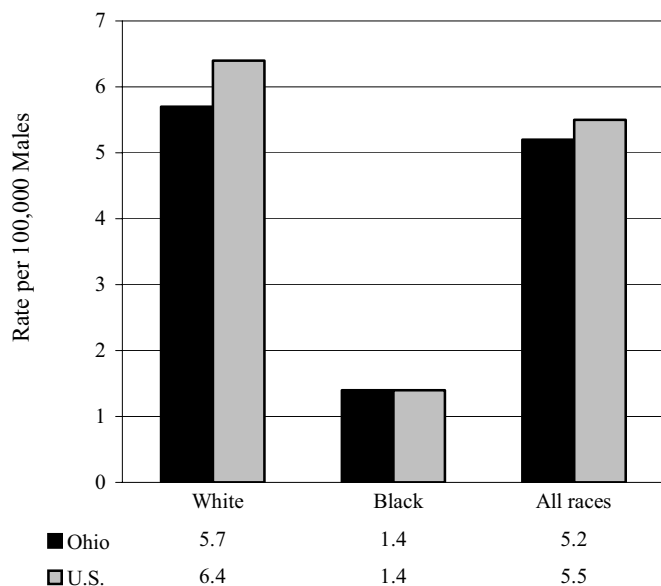


Figure 2 shows that the average annual age-adjusted testicular cancer incidence rates in Ohio and the U.S. (SEER) are higher among Whites as compared to Blacks. In Ohio, the rate among Whites is 5.7 cases per 100,000 males, which is over four times greater than the rate for Blacks (1.4 per 100,000 males). Among Whites, the average annual age-adjusted testicular cancer incidence rate is 11 percent lower in Ohio as compared to the U.S., whereas the rates among Blacks are equal in the two regions.

Testicular Cancer Cases by Stage at Diagnosis

The stage at diagnosis of testicular cancer is an important determinant of survival. For *in situ* cancers, the tumor has not invaded or penetrated surrounding tissue. In the localized stage, the tumor is confined to the organ in which it originated. In the regional stage, the tumor has spread to surrounding tissues. In the distant stage, the malignancy has spread, or metastasized, to other organs. Figure 4 shows the distribution of testicular cancer cases in Ohio by stage at diagnosis. *In situ* and localized tumors are known as early stage cancers, whereas regional and distant stage tumors are known as late stage cancers. For testicular cancers reported to the OCISS for 1996 to 2000, 69 percent were diagnosed at the *in situ* or localized stage. Sixteen percent of testicular cancer cases were diagnosed at the regional stage and eight percent were diagnosed at the distant stage. Eight percent of cases were reported to the OCISS unstaged or with an unknown stage at diagnosis.

Figure 4: Testicular Cancer Cases by Stage at Diagnosis in Ohio, 1996 - 2000

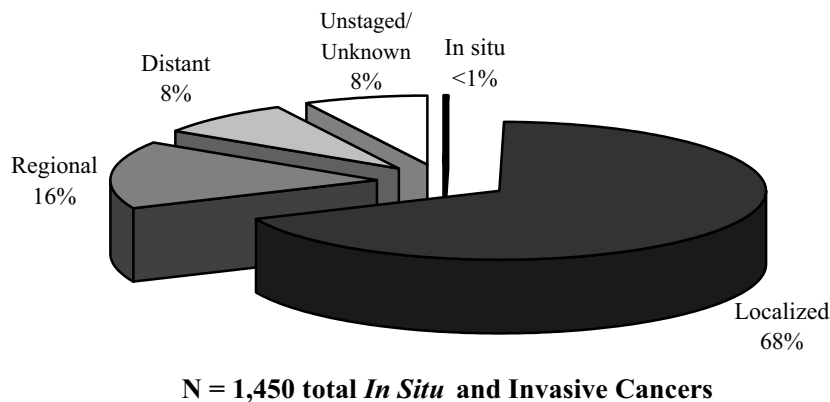
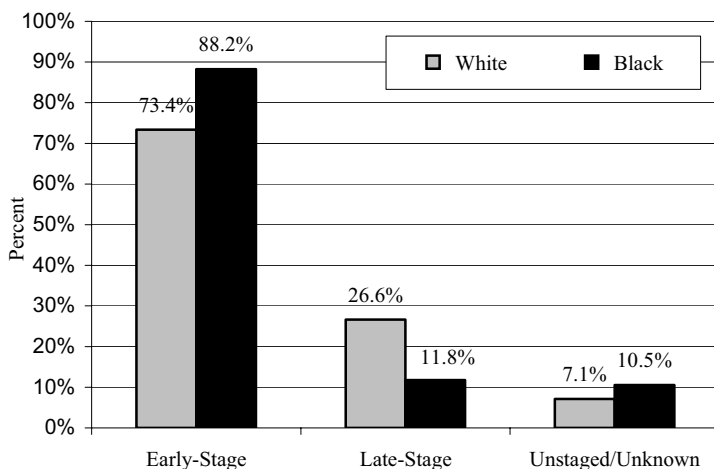


Figure 5: Testicular Cancer Cases by Stage at Diagnosis and Race in Ohio, 1996 - 2000



Stage at diagnosis of testicular cancer differs according to race. As shown in Figure 5, among the testicular cancer cases reported to the OCISS for 1996-2000, more than twice as many white males (26.6 percent) were diagnosed at a late stage compared to black males (11.8 percent). However, stage at diagnosis is unstaged/unknown for a greater percentage of black males (10.5 percent) as compared to white males (7.1 percent).

N = 1,378 White and 38 Black *In Situ* and Invasive Cancers

Ohio Cancer Incidence Surveillance System

Ohio Department of Health

and

The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute at The Ohio State University

To address comments and information requests:

Ohio Cancer Incidence Surveillance System
Ohio Department of Health
246 North High Street
P.O. Box 118
Columbus, OH 43216-0118

PHONE:
(614) 752-2689

FAX:
(614) 644-1909

E-MAIL:
ociss@gw.odh.state.oh.us

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Testicular Cancer Survival by Stage at Diagnosis

Based on the follow-up of males diagnosed with invasive testicular cancer in the U.S. (SEER) during the years 1992-1999, survival five years after diagnosis was approximately 95.5 percent. Among males diagnosed with testicular cancer at the localized stage, 99.1 percent survived at least five years. Ninety-five percent of testicular cancers diagnosed at the regional stage survived at least five years, and, among those diagnosed with testicular cancer at the distant stage, 73.1 percent survived at least five years. Despite the finding that the incidence rate among black males is lower as compared to the rate for white males, the five-year survival probability for all stages combined was lower among Blacks (86.9 percent) compared to Whites (95.8 percent).

Risk Factors for Testicular Cancer

- Age: The majority of testicular cancers occur between the ages of 15 and 40 but can affect males of any age.
- Race: The risk for white males is five to 10 times the risk for African-American males, and two times the risk for Asian-American males.
- Undescended testicles (cryptorchidism): A condition where one or both testicles in a fetus do not descend into the scrotum before birth. The condition may remain a risk factor even if corrected over time or with surgery/treatment.
- Abnormal testicular development.
- Klinefelter's syndrome: A sex chromosome disorder that may be characterized by low levels of male hormones, sterility, breast enlargement and small testes.
- Personal history of testicular cancer increases risk of cancer in the other testicle.
- Family history of testicular cancer.
- Carcinoma *in situ* in the testicles increases the risk of invasive cancer.

Sources: National Cancer Institute and American Cancer Society

For More Information

- Ohio Cancer Incidence Surveillance System:
http://www.odh.state.oh.us/ODHPrograms/CI_SURV/ci_surv1.htm
- National Cancer Institute:
<http://www.nci.nih.gov/cancerinfo/types/testicular/>
- American Cancer Society:
http://www.cancer.org/docroot/lrn/lrn_0.asp