

Ovarian Cancer in Connecticut

FACT SHEET

August 2016

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Disease Basics

Ovarian cancers develop in the ovaries, two paired, almond-sized organs on either side of the uterus in the female pelvic cavity. They can develop in the tissue surrounding the ovaries (85-90% of all cases), the cells that produce eggs within the ovaries, or structural tissues of the ovaries.

Key Points*

- Ovarian cancer is the 5th-leading cause of cancer deaths, and the 8th most common type of cancer, in CT women.
- Incidence rates of ovarian cancer in CT have been declining since 1983, alongside declines in mortality rates since 1975.
- Incidence, mortality, and relative survival rates of ovarian cancer in CT are similar to those observed at the national level.
- Differences in reproductive risk factors between generations likely influence declining trends in incidence and mortality.

*For the years: 2008-2012

Incidence

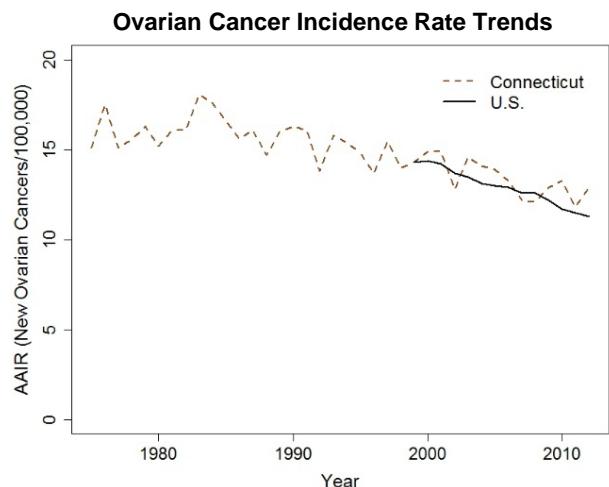
Incidence rates, which take into account population size in assessing disease burden, are defined as the number of new disease cases per 100,000 population at risk per year. (The age-adjusted incidence rates – AAIRs – are reported throughout this fact sheet to allow for comparison across populations that have different age structures.) In CT, the ovarian cancer AAIR for 2008 to 2012 was 12.6. This rate was the eighth-highest U.S. state ovarian cancer incidence rate during this time period but not significantly different from the overall U.S. rate (11.8).

Similar to national trends, ovarian cancer incidence rates in CT are declining. In CT, they have been declining since 1983, seven years earlier than declines observed at the national scale began to be recorded. The introduction of oral contraceptives (i.e. the birth control pill) in 1960 may be important to declines observed nationally and in

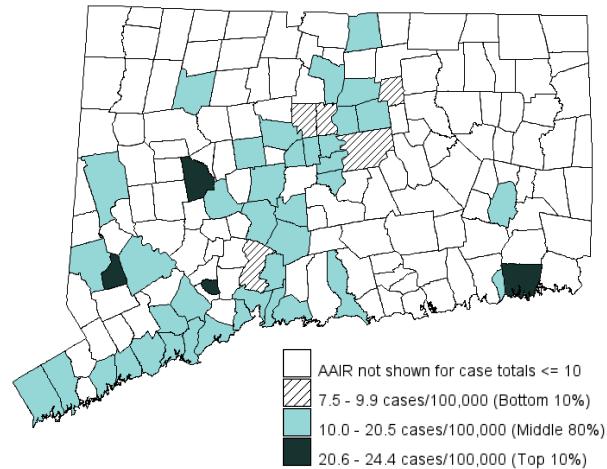
CT. Use of oral contraceptives offer a 25% reduction in risk of ovarian cancer compared to no history of use in women, and is the most important protective factor associated with this type of cancer. Age is also an important risk factor for ovarian cancer, similar to almost all cancer types, with post-menopausal women over 55 being at the greatest risk for ovarian cancer.

Incidence Quick Stats (2008-2012)

- Average number of new ovarian cancers diagnosed in CT annually: **284**
- CT Ovarian cancer incidence rate (AAIR): **12.6**
- CT state ranking for ovarian cancer incidence rate: **8th**



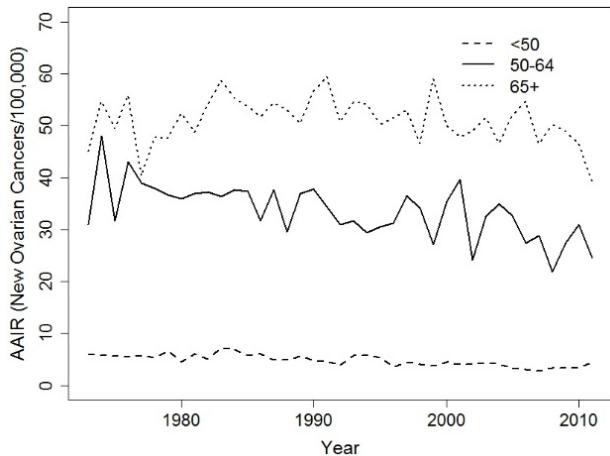
Ovarian Cancer Age-adjusted Incidence Rates by CT Town, 2008-2012



As greater proportions of women with history of oral contraceptive use age into older age groups where ovarian cancer is most likely to develop, rates have been declining in those age groups. Having more children, breastfeeding, and tubal ligation are also protective. Non-Hispanic (NH) white female populations in CT had a significantly higher ovarian cancer incidence rate (13.1), compared to NH black female populations (8.3) from 2008 to 2012. Hispanic incidence rates (12.3) were intermediary to, but not significantly different from, those of white and black female populations (12.3). Statewide incidence rates were similar to the rates observed nationally for each race/ethnicity group.

The stage of a cancer describes how far it has spread at the time of diagnosis and is an important prognostic factor. In CT, as across the U.S., the majority of new (incident) ovarian cancers diagnosed annually are at the

Ovarian Cancer Incidence Rate Trends by Age Group



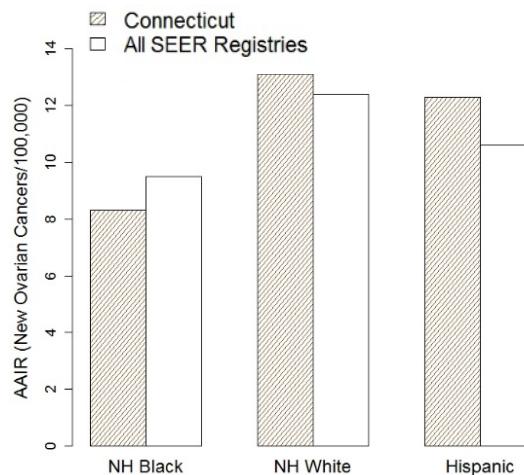
Mortality

Ovarian cancer was the fifth-leading cause of cancer death in CT females from 2008-2012, based on age-adjusted mortality rates (AAMRs). This mortality rank is higher than the #9 ranking associated with incidence rate of ovarian cancer in CT women for the same time period. This overrepresentation of ovarian cancer deaths relative to incident ovarian cancer cases annually is consistent with the low relative survival (see next page) associated with an ovarian cancer diagnosis. Nationally, ovarian cancer is the

Mortality Quick Stats (2008-2012)

- Average number of ovarian cancer deaths annually in CT: **175**
- CT Ovarian cancer AAMR: **7.3**
- CT state ranking for ovarian cancer AAMR: **37th**

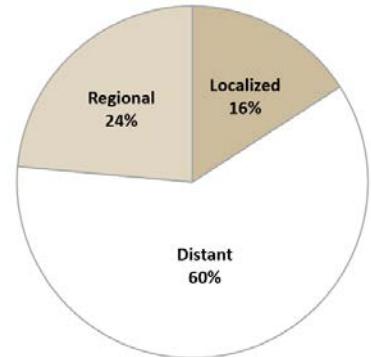
Ovarian Cancer Incidence Rates by Race-Ethnicity, 2008-2012



distant stage, having extended beyond the pelvic tissues. Approximately a quarter of new ovarian cancers diagnosed in CT each year are at the regional stage, while only 16% of them are localized, i.e. confined to the ovaries. The high proportion of tumors diagnosed at later stages reflects the absence of a reliable screening test for ovarian cancer.

Incident Ovarian Cancers in CT 2008-2012 by Stage at Diagnosis

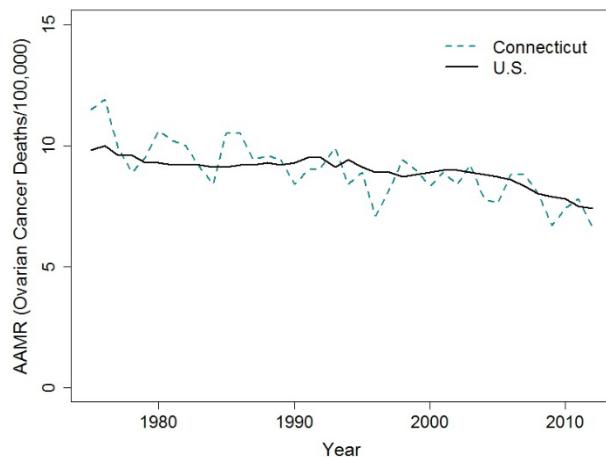
N = 1,340 tumors



fifth-leading cause of cancer death in women and ranks eighth amongst cancers for incidence rates in female populations.

Ovarian cancer mortality rates in CT have been declining since 1975. This trend is consistent with declining national trends for ovarian cancer mortality rates that also have been declining since 1975. Declining incidence rates

Ovarian Cancer Mortality Rate Trends



have been invoked to explain declining mortality rates on the national level; declines in incidence explain part, but not all, of the declining ovarian cancer mortality rate in CT.

The majority of ovarian cancer deaths occur in the NH white female population in CT, which had a mortality rate of 7.7 from 2008 to 2012. The Hispanic population in CT had a significantly lower ovarian cancer mortality rate (4.0) during this same period; the ovarian cancer mortality rate associated with NH black populations was between that of, and not significantly different from, white and Hispanic rates (6.1). Ovarian cancer mortality rates by race-ethnicity did not differ significantly from national rates for the same population subgroups. The overall ovarian cancer mortality rate (7.3) for CT from 2008 to 2012 ranked 37th among U.S. states and was similar to the national rate.

Relative Survival

Relative survival is the ratio of a patient's chance of surviving a given time interval after disease diagnosis to that of a person of the same age and sex in the general U.S. population. Hence a cohort of cancer patients with 5-year relative survival rate approaching 100% indicates that they are just as likely to survive 5 years as people of the same age and sex in the general population without ovarian cancer.

The majority of ovarian cancers in CT from 2000 to 2012 were diagnosed at the distant stage. Five-year age-standardized relative survival for this stage was low (26.4%), with similar rates observed and across the U.S. (26.3%). Five-year relative survival for regional and localized stages of ovarian cancer in CT were more than double that associated with the distant stage (70.5% and 82.8%, respectively). These five-year relative survival rates were also similar to national rates (65.0% for regional stage and 88.7% for localized stage). Ovarian cancer relative survival rates were highest in NH white populations in CT (41.3%), lowest in NH black populations (36.7%), with rates among Hispanics in between (38.4%), but differences were not statistically significant. Relative survival rates for each major race-ethnicity subgroup are similar to respective

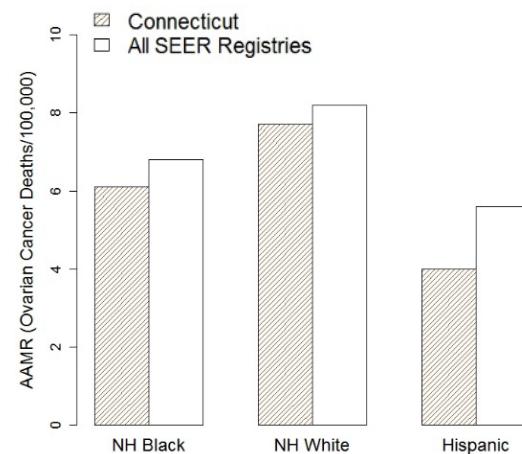
Ovarian Cancer Age-Std Relative Survival (2000-2012)

	1-year	2-year	3-year	4-year	5-year
Connecticut	77.0%	64.5%	55.1%	46.5%	41.3%
All U.S. SEER Registries	71.3%	59.6%	50.9%	44.4%	39.7%

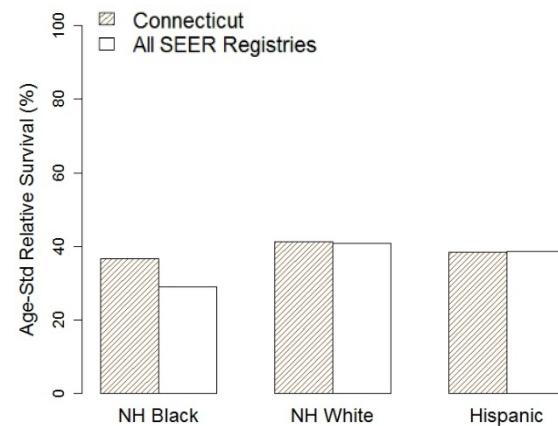
Learn More

The Connecticut Tumor Registry, phone: 860-509-7163,
<http://www.ct.gov/dph/tumorregistry>

Ovarian Cancer Mortality Rates 2008 – 2012 by Race/Ethnicity



Ovarian Cancer Relative Survival Rates 2000 – 2012 by Race/Ethnicity



rates at the national level*.

Both chemotherapy and debulking surgery, which aims to remove as much of the tumor as possible, are used to treat ovarian cancer. Advances in effective chemotherapy treatments in 1978 (cisplatin) and 1992 (paclitaxel) contributed to increases in five-year relative survival across the U.S., and effects in CT are likely similar. Nationally, however, 12-year survival remains low, suggesting that advances in chemotherapy, and transference of those effects to reductions in five-year relative survival have plateaued, while survival due to other causes has improved. (Note: All relative survival rates presented here were age-standardized and calculated using the Net (Pohar-Perme) method.)

*National relative survival rates are not available; the rate for all U.S. SEER registries combined is used as a proxy.

<http://seer.cancer.gov/statfacts/html/ovary.html>

<http://www.cancer.org/cancer/ovariancancer/detailedguide/ovarian-cancer-key-statistics>