

Ovarian Cancer

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Ovarian cancer begins in the ovaries. Ovaries are reproductive glands found only in women. The ovaries are made up of three main kinds of cells. Each type of cell can develop into a different type of tumor. Most of these tumors are benign (non-cancerous) and never spread beyond the ovary. Malignant (cancerous) or low malignant potential ovarian tumors can spread (metastasize) to other parts of the body and can be fatal. Ovarian cancer is the fifth leading cause of cancer death among women in Indiana. In Indiana, during 2014, there were 419 new cases of ovarian cancer diagnosed, and 313 ovarian cancer related deaths [See Table 1]. Ovarian cancer causes more deaths than any other cancer of the female reproductive system.¹

Indiana's ovarian cancer incidence rate was 10.7 per 100,000 females in 2014, down from 12.9 in 2005. Mortality also decreased from 2005 to 2014 (9.3 to 7.5 per 100,000 females). However, neither decrease was statisti-

Fast Facts

- Ovarian cancer is rare in women younger than 40. Most ovarian cancer develop after menopause.¹
- Tobacco smoking increases the risk of mucinous ovarian cancer, or cancer that begins in the outer lining of the ovary.¹
- Women with a body mass index of at least 30 may have a higher risk of developing ovarian cancer.¹
- Women who have been pregnant and carried to term before age 26 have a lower risk of ovarian can-

Table 1. Burden of Ovarian Cancer—Indiana, 2010–2014

	Average number of cases per year (2010–2014)	Rate per 100,000* (2010–2014)	Number of cases (2014)	Rate per 100,000* 2014
Indiana Incidence	423	10.9	419	10.7
Indiana Deaths	313	7.8	313	7.6

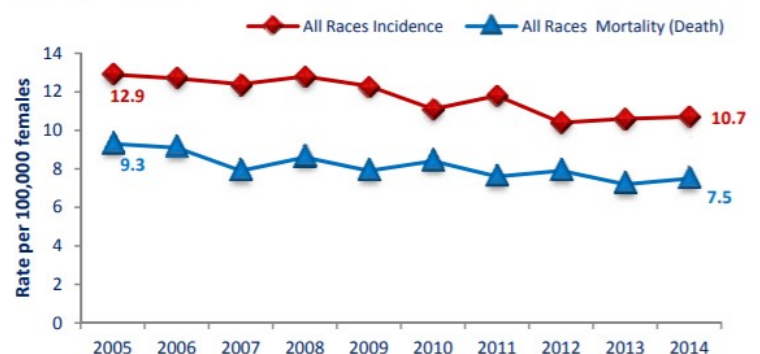
*Age-adjusted.

Source: Indiana State Cancer Registry.

Who Gets Ovarian Cancer Most Often?

The most important risk factor is a strong family history of breast cancer or ovarian cancer. Women who have had breast cancer, or who have tested positive for inherited mutations in *BRCA1* or *BRCA2* genes are at increased risk. Studies indicate that preventative surgery to remove the ovaries and fallopian tubes in these women can decrease the

Figure 1. Ovarian Cancer Incidence and Mortality (Death) Rates^{*}, Indiana, 2005–2014



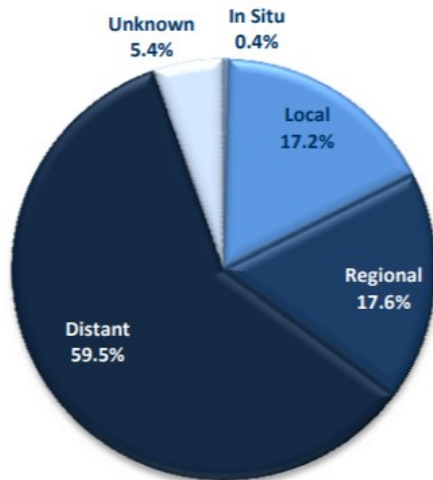
*Age-adjusted.

Source: Indiana State Cancer Registry.

Early Detection

In Indiana, 17.6 percent of ovarian cancers are found at an early stage. When ovarian cancer is found early at an in situ stage (meaning the cancer is at the earliest stage) or localized stage (meaning the cancer has not spread), about 92 percent of patients live longer than five years after diagnosis. Currently, there is no accurate test for early detection. Often, ovarian cancer detected during a routine pelvic examination is at an advanced stage (a regional or distant stage, meaning the tumor has spread to other parts of the body) [See Figure 2]. For women at high risk of ovarian cancer, or women with symptoms, a thorough pelvic examination in combination with a transvaginal ultrasound may be used. A blood test for the tumor marker CA125 may be offered, though this strategy has not yet been proven effective in reducing ovarian cancer mortality.

Figure 2. Percent of Ovarian Cancer Cases Diagnosed During Each Stage* — Indiana, 2010 – 2014



**Age-adjusted.*

Source: Indiana State Cancer Registry.

Numbers were rounded to the nearest tenth. Due to this, percentages add up to more than 100%.

Common Signs and Symptoms

Early stages of ovarian cancer usually have no obvious symptoms. Some women may experience persistent, nonspecific symptoms including:

- Bloating
- Pelvic or abdominal pain
- Difficulty eating or feeling full quickly
- Urinary urgency or frequency

The American Cancer Society suggests that women who experience these types of symptoms on a daily basis for more than a few weeks should seek prompt medical evaluation. The most common sign of ovarian

Get Involved: Join the Indiana Cancer Consortium (ICC)

- The ICC is a statewide network of over 100 agencies including the Indiana Department of Health.
- ICC seeks to reduce the cancer burden in Indiana through the development, implementation and evaluation of a comprehensive plan that addresses cancer across the continuum from prevention through palliation.
- Become a member at: www.indianacancer.org.

References

1. American Cancer Society. Cancer Facts and Figures 2016. Atlanta: American Cancer Society, 2016. Available online at <http://www.cancer.org/research/cancerfactsstatistics/cancerfactsfigures2016/index>.

For additional information on ovarian cancer:
www.chronicdisease.isdh.in.gov

