Cervical Cancer

What is the Impact on Hoosiers?

<table>
<thead>
<tr>
<th></th>
<th>Average number of cases per year (2004–2008)</th>
<th>Rate per 100,000 females* (2004–2008)</th>
<th>Number of cases (2008)</th>
<th>Rate per 100,000 females* (2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana Incidence</td>
<td>258</td>
<td>7.9</td>
<td>242</td>
<td>7.2</td>
</tr>
<tr>
<td>Indiana Deaths</td>
<td>85</td>
<td>2.5</td>
<td>71</td>
<td>2.0</td>
</tr>
</tbody>
</table>

*Age-adjusted

Source: Indiana State Cancer Registry
Cervical Cancer

Bottom Line
Cervical cancer is almost 100% preventable through regular routine screening, avoidance of controllable risk factors, and vaccination against the human papillomavirus (HPV). In the United States, an estimated 12,710 cases of invasive cervical cancer cases were diagnosed in 2011 and 4,290 deaths occurred. Mainly because of improved screening, incidence rates have decreased over most of the past several decades among both white and African American females. In Indiana, approximately 250 new cases of cervical cancer and 85 cervical cancer-related deaths occur annually among females.

Who Gets Cervical Cancer?
- Infection with HPV is the single greatest risk factor for cervical cancer. HPV is passed person-to-person through sexual contact. Delaying first sexual activity, limiting sexual partners, using condoms during sex, and being vaccinated can reduce the risk of contracting HPV. The CDC recommends that all girls and young women ages 11 through 26 should get all three doses of either brand of the HPV vaccine (Cervarix or Gardasil) to protect against cervical cancer. Gardasil is also licensed, safe, and effective for males ages 9 through 26.
- Indiana females are most often diagnosed with cervical cancer during their middle adult years. During 2008, 83% of cervical cancer cases occurred among Indiana females less than age 65, including 34% of cases occurring among women ages 25 to 44 and 47% among women ages 45 to 64.
- During 1999–2008, in Indiana, African American females, compared to white females, had a 24% higher cervical cancer incidence rate (10.2 versus 8.2 cases per 100,000 females) and a 67% higher mortality rate (4.0 versus 2.4 deaths per 100,000 females) [Figure 13]. While many factors are probably impacting this disparity, one apparent issue is that African American females tend to be diagnosed more often after the cervical cancer is no longer localized [Figure 14].

Figure 13. Cervical Cancer Incidence and Mortality Rates by Race*—Indiana, 1999–2008

*Age-adjusted
†Rate among African American females is significantly higher (P<.05) than the rate among white females
Source: Indiana State Cancer Registry

---

---
**Can Cervical Cancer Be Detected Early?**

- In the United States, the cervical cancer death rate declined by almost 70% between 1955 and 1992, mainly because of the effectiveness of Pap smear screening. Pap screenings allow for early identification and treatment of abnormal cervical cells before they become cancerous. This is important, because, typically, the pre-cancerous conditions do not cause pain or other symptoms and are only detected through Pap screenings.
- According to the American Cancer Society, all females should begin cervical cancer screening about **three years after they begin having vaginal intercourse, but no later than age 21**. Screening should be done every year with the regular Pap test or every two years using the newer liquid-based Pap test. Women, ages 30 or older, who have had three normal test results in a row may switch to being screened every two or three years.
- In 2010, 80.2% of Indiana women age 18 and older reported having had a Pap screen during the past three years. This rate was similar for all racial and ethnic groups.

**What Factors Influence Cervical Cancer Survival?**

- Figure 15 provides the percent of Indiana females diagnosed during each stage of cervical cancer during 2004–2008.
- During 1999–2006, in the United States, 49% of cervical cancer cases were diagnosed during the local stage and those females’ five-year survival rate was 91%. In comparison, the five-year survival rate for all stages combined was 71%.
- During 1999–2008, in Indiana, the incidence of cervical cancer has decreased, but the mortality rate has remained constant [Figure 16]. There is no clear reason for this finding; however, it might be because, while routine screening is catching most cases of cervical cancer prior to it becoming invasive, there still remains a consistent group of females who are not being screened and are diagnosed after the cancer has spread. These females are at increased risk for poor health outcomes.
During 2004–2008, of the 1,291 Indiana residents who received a diagnosis of invasive cervical cancer, 559 (43.3%) were diagnosed in the local stage, 653 (50.6%) were diagnosed in the regional or distant stage, and 79 (6.1%) had unknown staging.

Figure 16. Changes in Cervical Cancer Incidence and Mortality (Death) Rates among Indiana Females between the Five-year Periods of 1999–2003 and 2004–2008*

*Age-adjusted  
†Incidence rate during 2004–2008 was significantly lower (P<.05) than the rate during 1999–2003

Source: Indiana State Cancer Registry

Take Charge!—What You Can Do to Help Prevent Cervical Cancer

- Get vaccinated—Protecting yourself from HPV decreases your risk for cervical and other cancers
- Practice safe sex
- Be smoke-free—Visit: www.in.gov/quitline for free smoking cessation assistance
- Have routine Pap screenings
- Ask for an HPV test with your Pap smear if you are 30 or older
- Watch for abnormal vaginal discharge and bleeding

References