

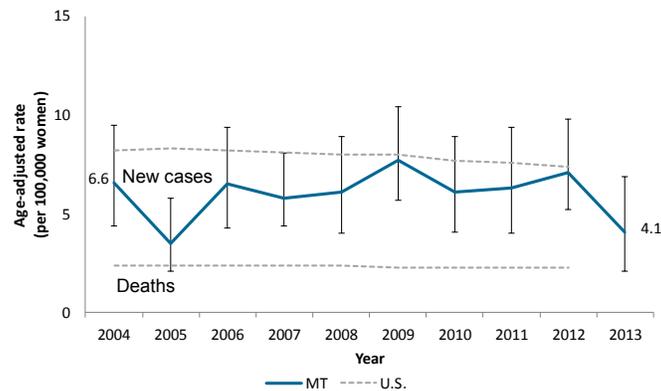
Cervical Cancer in Montana

Until the mid-1900s cervical cancer was a leading cause of cancer death for women in Montana and the U.S.¹ Presently, cervical cancer accounts for less than 1% of cancer-related deaths among Montana women. Cervical cancer deaths can be decreased even more with vaccination and screening.

Risk Factors

- Chronic human papilloma virus (HPV) infection
- Smoking
- Suppressed immune system (e.g., HIV infection)
- Long-term birth control use (5 or more years)
- Multiple full term pregnancies (3 or more)
- Multiple sexual partners

Figure 1. 10-year trends of cervical cancer incidence (new cases) and mortality (deaths) rates in Montana have **REMAINED THE SAME.**



Data Source: Montana Central Tumor Registry, 2004-2013; Montana Death Records, 2004-2013; United States Cancer Statistics, 2004-2012

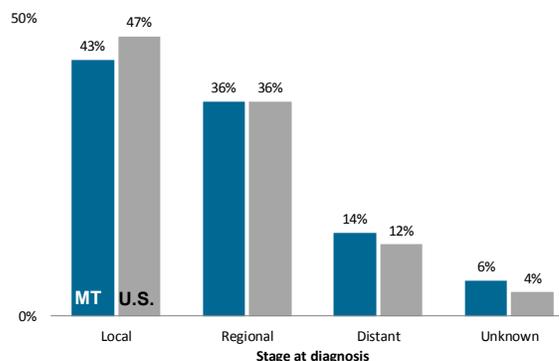
- From 2004 - 2013, there were 31 women diagnosed with cervical cancer and 10 cervical cancer deaths each year, on average. Cervical cancer ranked 14th and 17th in terms of cancer incidence and mortality, respectively, among Montana women.
- The incidence rate in Montana was similar to the cervical cancer incidence rate in the U.S. (Figure 1).
- There were too few cervical cancer deaths in Montana to calculate a stable mortality rate for each year from 2004 - 2013 (Figure 1). However, from 2009 - 2013 the mortality rate was 1.8 deaths per 100,000 women.
- In Montana, 43% of cervical cancers were diagnosed at the local stage when treatment is most effective (Figure 2).

Montana Cancer Control Programs

1400 E Broadway
Helena, Montana 59620-2951
(406) 444-5442

<http://dphhs.mt.gov/publichealth/cancer>

Figure 2. **TWO IN FIVE** cervical cancer cases were diagnosed at the local stage

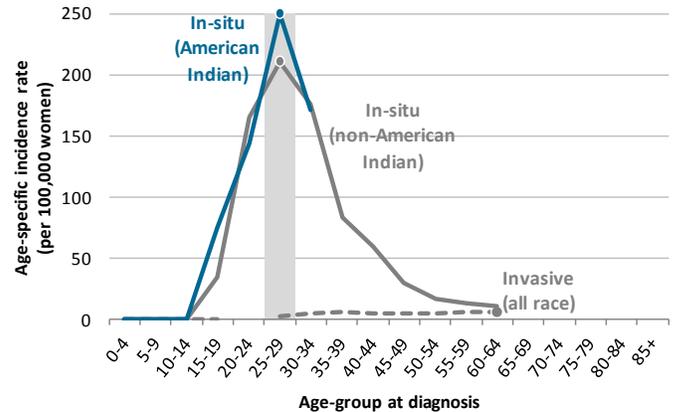


Data Source: Montana Central Tumor Registry, 2009-2013; SEER, 2004-2010

Incidence of pre-cancer (in-situ)

- From 2004-2013, there were a total of 2,492 pre-cancer (in-situ) cases reported in Montana for an average of 250 cases each year.
- In-situ cervical cancer occurred among younger women; the median age at diagnosis was 29 years. From 2004-2013, the incidence rates for American Indians and non-American Indians in Montana peaked among the 25-29 year age group with 249.9 and 210.9 cases per 100,000 women, respectively (Figure 3).
- Invasive cervical cancer occurred at later ages compared to in-situ where the median age at diagnosis was 53 years. From 2004-2013, the incidence rate of invasive cervical cancer was highest among the 60-64 year age group with 5.8 cases per 100,000 women (Figure 3).

Figure 3. **YOUNG ADULTS**, aged 25-29 years, had the **HIGHEST INCIDENCE RATE OF IN-SITU CERVICAL CANCER**. Meanwhile, most invasive cervical cancer occurred at later ages with the highest rate among the 60-64 year age group.

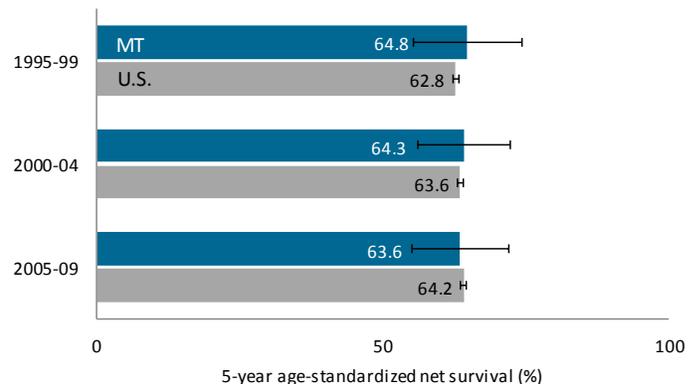


Data Source: Montana Central Tumor Registry, 2004-2013

Survival

- In 2005-2009, 63.6% of cervical cancer patients in Montana were still alive 5-years after diagnosis. Survival was statistically the same in Montana as the U.S. (Figure 4).

Figure 4. **NEARLY TWO OUT OF THREE** cervical cancer patients were still alive 5-years after diagnosis.



Data Source: Allemani C, Weir HK, Carreira H, Harewood R, Spika D, Wang XS, et al. Global surveillance of cancer survival 1995-2009: analysis of individual data for 25,676,887 patients from 279 population-based registries in 67 countries (CONCORD-2). *Lancet*; 385(9972): 977-1010.

Cervical Cancer is Preventable

As many as 93% of cervical cancer can be prevented.² Prevention measures include :

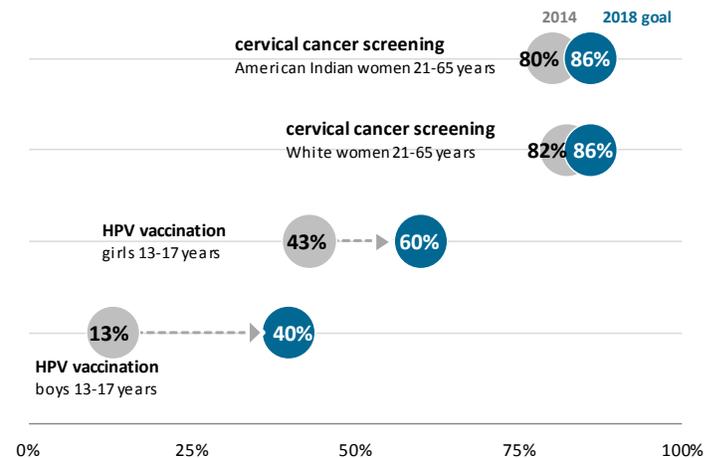
- HPV vaccination
- Cervical cancer screening.

Almost all cervical cancers are caused by human papilloma virus (HPV).³ HPV infection is very common; most women and men have a HPV infection at some time in their lives. There are many types of HPV. HPV infections usually go away on their own. For HPV infections that do not go away on their own, the infection may cause cervical cancer over time. Two HPV types, HPV 16 and HPV 18, are responsible for an estimated 70% of cervical cancers.³ Vaccines are available to protect against these specific types of HPV.

Regular screening can help prevent cervical cancer or find it early. The Pap test detects cell changes in the cervix that might become cervical cancer if they are not treated properly.

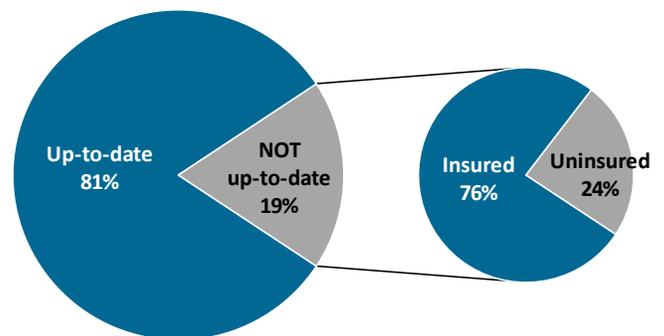
- In 2014, 80% of American Indian women and 82% of White women in Montana reported being up-to-date with cervical cancer screening (Figure 5).
- 3 out of 4 women (76%) who were not up-to-date with screening had health insurance (Figure 6).
- 43% of girls aged 13-17 years were fully immunized against HPV (Figure 5).

Figure 5. Cervical cancer screening in Montana was close to the 2018 goal while HPV vaccination among adolescents was low. **43%** of girls and **13%** of boys in Montana of have been vaccinated for HPV.



Data source: [Montana Behavioral Risk Factor Surveillance System 2014](#); Montana National Immunization Survey - Teen, 2014

Figure 6. **THREE OUT OF FOUR** Montana women who have not been screened for cervical cancer **HAVE HEALTH INSURANCE**.



Up-to-date was defined as women aged 21 to 65 years who have an intact uterus who also report having had a pap test in the last 3 years. Insured was defined as respondents who report having any type of healthcare coverage. Data Source: Montana Behavioral Risk Factor Surveillance System, 2014

Vaccination & Screening Recommendations

The Advisory Committee for Immunization Practices recommends girls and boys aged 11 to 12 years be vaccinated for HPV.⁴

The United States Preventive Services Task Force recommends that average risk women, with a cervix, aged 21 to 65 years be screened for cervical cancer.⁵

Recommendations for Clinicians²

- Help women understand which screening tests are best for them and when to get them.
- Screen or refer all women as recommended at any visit.
- Make sure patients get their screening results and the right follow-up care quickly.
- Use reminder-recall systems to help doctors, nurses, and patients remember when screening and HPV vaccination are due.
- Strongly recommend that preteens and teens get vaccinated against HPV.

References

1. Centers for Disease Control and Prevention, Cervical Cancer Statistics. Last updated September 2, 2014. Accessed at: <http://www.cdc.gov/cancer/cervical/statistics/>
2. Centers for Disease Control and Prevention, [Vital Signs: Cervical Cancer is Preventable](#), November 2014
3. Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report, [Human Papillomavirus- Associated Cancers-- United States, 2004-2008](#), April 20, 2012
4. Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report, [Use of 9-Valent Human Papillomavirus \(HPV\) Vaccine: Updated HPV Vaccination Recommendations of the advisory Committee on Immunization Practices](#), March 27, 2015.
5. [Cervical Cancer: Screening](#), March 2012. U.S. Preventive Services Task Force. Last updated: July 2015. Access date: May 5, 2016

HPV Vaccination ⁴		
	Age	How many doses?
Routine	Girls and boys aged 11 to 12 years	3 doses
Catch-up	Girls aged 13 to 26 years	3 doses
	Boys aged 13 to 21 years	
Cancer Screening ⁵		
Age	Test	How Often?
Women 21 to 29 years	Cytology (Pap smear)	Every 3 years
	<i>Option 1:</i> Cytology (Pap smear)	Every 3 years
Women 30 to 65 years	<i>Option 2:</i> Cytology (Pap smear) combined with Human papillomavirus (HPV) testing	Every 5 years

Report Highlights

- **Mortality due to cervical cancer was low, but there is opportunity to lower it even more.**
- **Only 43% of girls and 13% of boys completed their HPV vaccination; the goal is to have 60% and 40% vaccinated, respectively.**
- **1 in 5 women of screening age have not been screened for cervical cancer.**
- **76% of women who have not been screened have health insurance.**