

Skin Cancer in Wyoming



State of Wyoming Department of Health

Skin Cancer in Wyoming Data Brief

The “Skin Cancer in Wyoming” data brief is published by the
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Introduction

Skin cancer is the most common form of cancer in the United States. More than 3.5 million skin cancers in over two million people are diagnosed annually.¹ One in five Americans will develop skin cancer in the course of a lifetime.³ Each year there are more new cases of skin cancer than the combined incidence of cancers of the breast, prostate, lung and colon.² About 90 percent of nonmelanoma skin cancers are associated with exposure to ultraviolet (UV) radiation from the sun.⁴

Skin cancers are named for the type of cells that become malignant or cancerous. The three most common types are basal cell, squamous cell and melanoma. Unlike moles, skin cancer can spread to nearby normal tissue. Basal and squamous cell skin cancer is highly curable.

Basal cell carcinoma is the most common form of skin cancer; an estimated 2.8 million are diagnosed annually in the U.S. Basal cell carcinomas are rarely fatal, but can be highly disfiguring if allowed to grow.⁵ The face is the most common place to find basal cell skin cancer, as it usually occurs in places that have been exposed to the sun. Basal cell skin cancer rarely spreads to nearby tissue or other parts of the body.

Squamous cell carcinoma is the second most common form of skin cancer. An estimated 700,000 cases of squamous cell carcinoma are diagnosed each year in the U.S.^{6,7} Squamous cell skin cancer is the most common type of skin cancer for people with dark skin, and it is usually found in places that are not constantly exposed to the sun, such as the legs and feet. However, fair-skinned people will see squamous cell skin cancer on parts of the skin that have been in the sun, such as the head, face, neck and ears. This type of skin cancer sometimes spreads to other parts of the body.

Melanoma is the most dangerous form of skin cancer because, in an advanced stage, it can spread to internal organs and can cause serious illness and death. Melanoma accounts for less than five percent of skin cancer cases but the vast majority of skin cancer deaths.² From 1970 to 2009, the incidence of melanoma

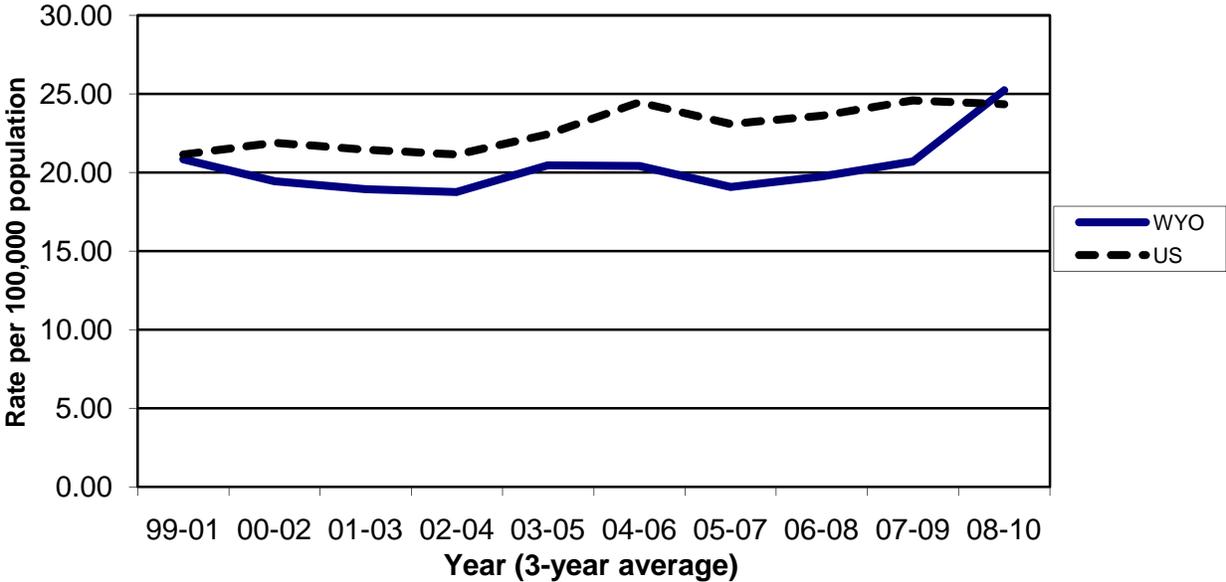
increased by 800 percent among young women and 400 percent among young men.⁸ Melanoma is the most common form of cancer for young adults 25-29 years of age and the second most common form of cancer for young people 15-29 years of age.⁹ There are almost always warning signs for melanoma that can be used to detect this skin cancer at an early stage when it is almost 100 percent curable.

Skin Cancer Incidence Data

The number of basal cell and squamous cell skin cancers (nonmelanoma skin cancers) is difficult to estimate because these cases are not required to be reported to cancer registries. It is estimated that 3.5 million cases were diagnosed and 2.2 million people were treated for these skin cancers in 2006, with some patients having multiple diagnoses.¹⁰

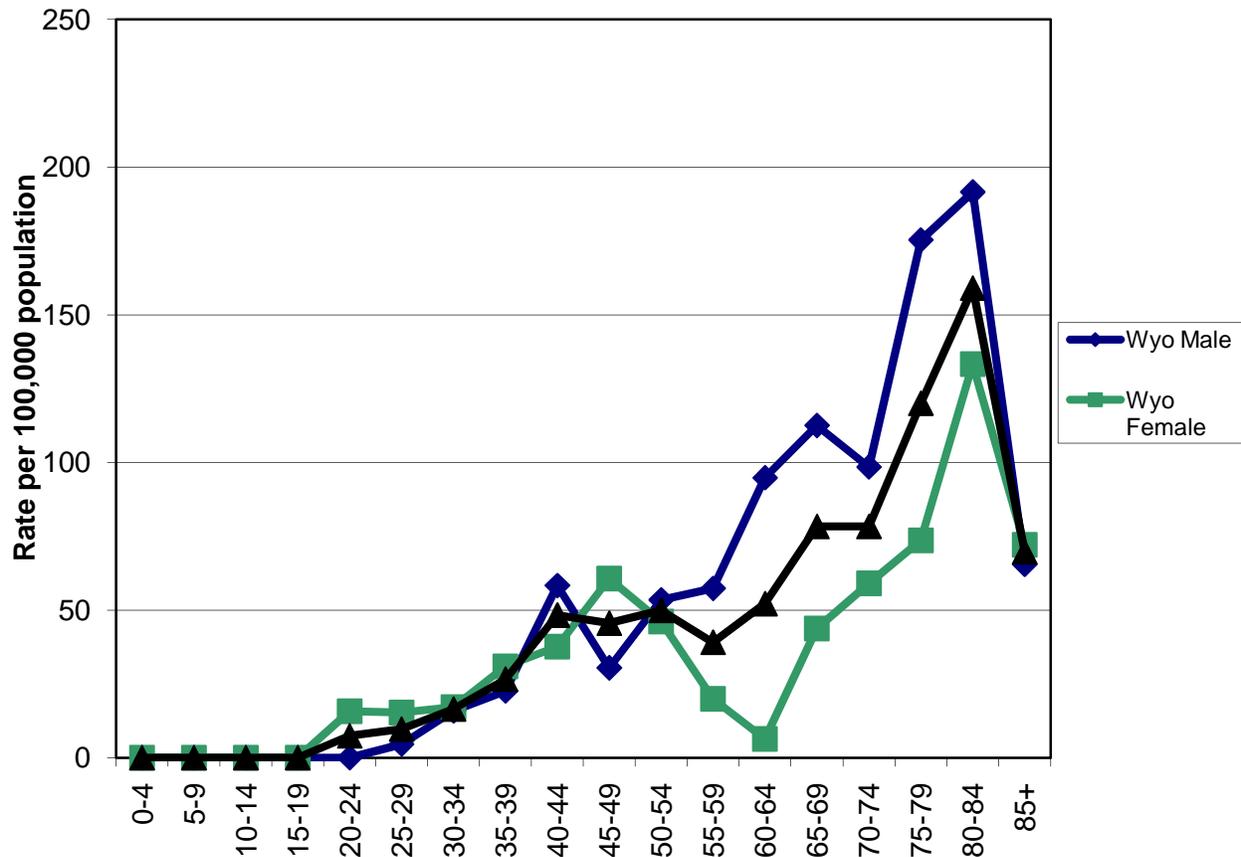
Nationally, the American Cancer Society estimates that melanoma will be diagnosed in about 76,250 persons in 2012.¹⁰ Melanoma is ten times more common in whites than in African Americans.¹⁰ Before age 40, incidence rates are higher in women than in men. After age 40, rates are almost twice as high in men as in women.¹⁰ Melanoma incidence rates have been increasing for at least 30 years. Since 2004, incidence rates among whites have been increasing by almost 3% per year in both men and women.¹⁰

Figure 1 – Melanoma (of the skin) Incidence Rate, 1999 – 2010, Wyoming and U.S.



Source: Wyoming Cancer Surveillance Program

Figure 2 – Melanoma (of the skin) Incidence Rate by Age and Sex, 2010 Wyoming



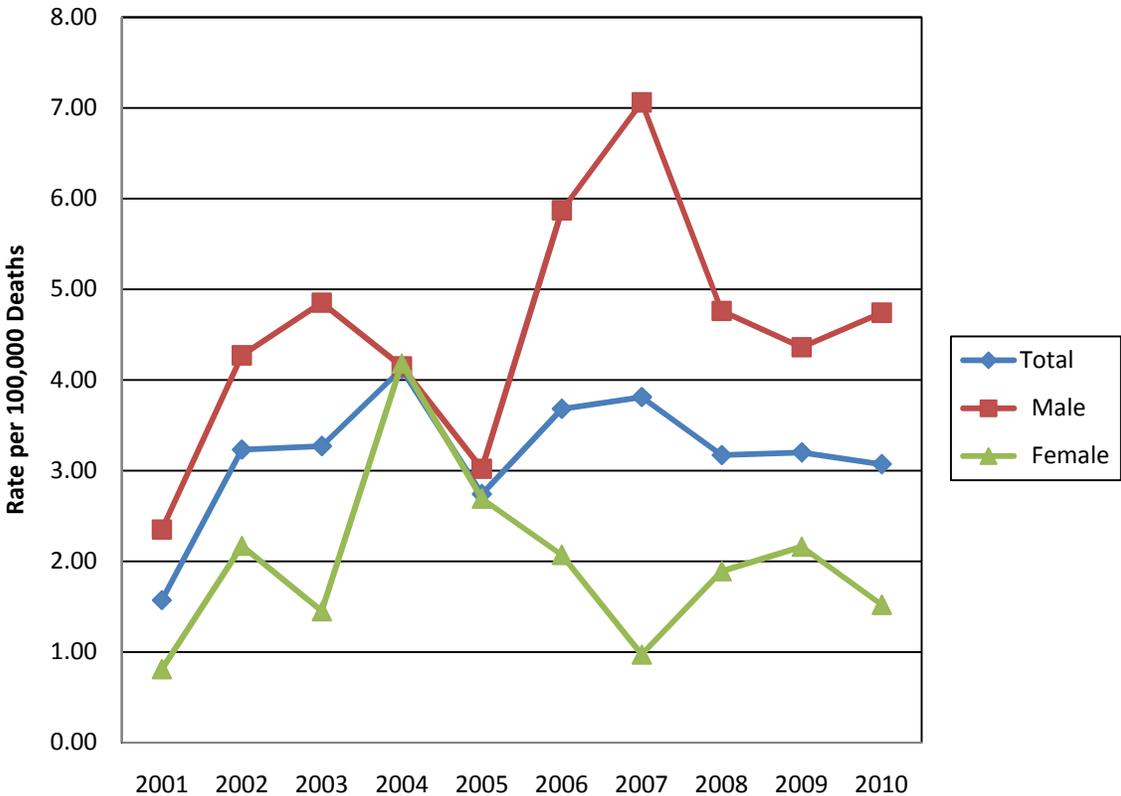
Source: Wyoming Cancer Surveillance Program

The rates in Wyoming have been increasing since 2005-2007, with quite an increase starting in 2007-2009 and continuing into 2008-2010. Wyoming males have the highest overall rates, but Wyoming females have higher rates at younger ages (e.g., 20-29 years of age). More cases in younger people have been identified in just ten years. In the year 2000, there were only four cases of melanoma (3 female, 1 male) diagnosed in people between the ages of 20-29 years of age. In 2010, that number had risen to ten cases (6 female, 4 male) in people age 20-29 years of age.

Skin Cancer Mortality Data

It is estimated that 12,190 deaths (9,180 from melanoma and 3,010 from other nonepithelial skin cancers) will occur in the U.S. in 2012.¹⁰ The death rate for melanoma has been declining rapidly in whites younger than 50 years of age. From 2004-2008, rates decreased by 2.9% per year in men and 2.3% per year in women. The death rates have increased by 1% in men and have stayed stable in women among whites 50 years of age and older for the same time period.¹⁰

Figure 3 – Melanoma (of the skin) Mortality Rate, Wyoming 2001 – 2010



Source: Wyoming Cancer Surveillance Program

While the rate of melanoma mortality is not as high as some other cancers, it is much more preventable and easier to detect than other cancers. Males are more likely to die from melanoma than females as evident in 2010 when thirteen (13) men and five (5) women died from melanoma in Wyoming.

Relative Survival Rates

The relative 5-year survival rate for melanoma is very good in Wyoming (88.40%), but it is even better when diagnosed early. If melanoma is detected early at the local stage, the 5-year survival rate is 98.8%, but when detected at the regional stage the 5-year survival rate drops to 54.0%. Even worse, if melanoma metastasizes and spreads to other areas of the body, the chances of only surviving 3 years drops to 11.2%. Prevention and early detection is crucial to surviving melanoma.

Relative Survival 2001-2010	12 months	24 months	36 months	48 months	60 months
All Sites	80.50%	73.60%	69.80%	67.20%	65.20%
Bladder w/in situ	90.70%	84.00%	80.70%	77.50%	75.60%
Brain/CNS	56.40%	41.20%	36.00%	32.70%	29.90%
Breast (Female)	96.70%	93.70%	91.10%	89.40%	86.80%
Colorectal	82.10%	72.60%	66.20%	61.60%	58.70%
Kidney	84.70%	77.20%	74.10%	71.10%	67.10%
Leukemia	75.40%	68.90%	65.00%	60.70%	57.70%
Lung	42.30%	25.90%	20.80%	17.90%	15.80%
Melanoma	96.10%	93.20%	91.40%	88.80%	88.40%
Non Hodgkin	83.20%	77.80%	74.60%	70.10%	68.20%
Oral Cavity	84.80%	75.50%	70.70%	65.10%	62.90%
Ovary	74.40%	64.30%	53.30%	47.50%	40.60%
Pancreas	26.40%	14.20%	6.80%	5.70%	3.50%
Prostate	99.90%	99.90%	99.80%	99.20%	99.00%
Thyroid	96.80%	96.60%	96.10%	95.60%	95.10%
Uterine	93.50%	88.20%	86.40%	86.40%	83.40%

Sun Exposure as Risk Factor

The Centers for Disease Control and Prevention (CDC) has identified exposure to UV radiation, either from sunlight or indoor tanning devices, as the most important and avoidable known risk factor for skin cancer. While anyone can get skin cancer, regardless of skin color, those with light skin are at greater risk. People are more likely to develop skin cancer if they have one or more of the following characteristics:

Fair skin	History of severe sunburn
Blue, green, hazel eyes	Have many moles (over 50)
Light colored hair	Personal/family history of skin cancer
Freckles	Work outdoors
Tendency to burn rather than tan	

UV radiation is more intense between the hours of 10 AM and 4 PM, when there is a lack of thick cloud cover and between mid-spring and mid-fall. Higher altitude means increased risk of sun-induced skin damage, since UV radiation exposure increases 4 to 5 percent with every 1,000 feet above sea level. At an altitude of 9,000 to 10,000 feet, UV radiation may be 35 to 45 percent more intense than at sea level. In addition, snow reflects up to 80 percent of the UV light from the sun meaning that individuals are often hit by the same rays twice. ¹¹

Because severe sunburns in childhood may greatly increase the risk of melanoma later in life, children in particular should be protected from the sun.

Tanning Bed Use

CDC's Morbidity and Mortality Weekly Report (MMWR) published on May 11, 2012 highlighted the use of indoor tanning devices by adults in the United States in 2010. The following are key points from that report.

- * The World Health Organization considers ultraviolet (UV) tanning devices to be a cause of cancer in humans.
- * Annually, skin cancer costs an estimated \$1.7 billion to treat and results in \$3.8 billion in lost productivity.

- * Reducing the proportions of adolescents and adults who reporting using artificial sources of UV light for tanning are *Healthy People 2020* objectives.
- * Continued public health efforts are needed to identify and implement effective strategies to reduce indoor tanning among adults in the United States, particularly among whites, women, and adults aged 18-25 years of age.
- * Current state-level policies to restrict indoor tanning are directed at youth less than 18 years of age.

The MMWR report outlined the following data analyzed from the 2010 National Health Interview Survey.

- * An estimated 5.6% of U.S. adults reported indoor tanning at least once in 2010.
- * The overall prevalence of indoor tanning is highest among adults aged 18-25 years, among women and among whites.
- * The highest rate was among white women aged 18-21 years (31.8%) and 22-25 years (29.6%).
- * Among white users, 57.7% of women and 40.0% of men reported indoor tanning more than 10 times in the past 12 months.

The report outlines evidence from a review of the U.S. Preventive Services Task Force that suggests strategies to impact this problem. Behavioral counseling in a primary-care setting can reduce UV exposure, including indoor tanning, among persons aged 10-24 years. In young women, the most likely group to indoor tan, appearance-focused behavioral interventions reduced indoor tanning behaviors by up to 35%.

The report noted that 33 states currently have laws restricting minors' access to indoor tanning under a certain age as an approach to reduce indoor tanning. Wyoming passed legislation in 2010 prohibiting the use of ultraviolet tanning devices by minors under fifteen (15) years of age unless a parent or legal guardian is present and requiring parental consent for use of ultraviolet tanning devices by minors between fifteen (15) and eighteen (18) years of age.

Wyoming Survey Data

According to the 2010 Wyoming Behavior Risk Factor Surveillance Survey (BRFSS) data, 49.0% of Wyoming adults reported having had at least one sunburn in the past year and 7.5% of Wyoming adults reported having had six or more sunburns in the past year. The 2011 Youth Risk Behavior Survey (YRBS) included a question about high school students' use of indoor tanning devices. Baseline results identified 20.9% of high school students have used an indoor tanning device one or more times in the past 12 months. The same tanning bed question has been added to the 2012 BRFSS survey to identify a baseline for the number of adults who use indoor tanning devices in Wyoming.

Skin Cancer Prevention Tips

Sunscreen alone cannot be depended on to prevent skin cancer. Rely as much as possible on a combination of all of the tips listed – summer or winter!

- * Seek shade (especially during mid day hours) under an umbrella, tree or other shelter before you need relief from the sun. Protect skin by using sunscreen or wearing protective clothing when outside, even in the shade.
- * Wear clothing to protect exposed skin. Loose-fitting long-sleeved shirts and long pants made from tightly woven fabric offer the best protection from UV rays. Dark colors offer more protection than light colors.
- * Wear a hat with a wide brim to shade the face, head, ears and neck. Tightly woven fabric works best for UV protection, as do darker colors.
- * Wear sunglasses that wrap around and block as close to 100% of both UVA and UVB rays as possible. This will help reduce the risk of cataracts and protect tender skin around the eyes from sun exposure.
- * Use sunscreen with sun protective factor (SPF) of 15 or higher and both UVA and UVB protection. Liberally apply sunscreen to exposed skin 15 minutes before going outdoors.

ABCDE of Melanoma

The Skin Cancer Foundation has used the first five letters of the alphabet as a guide to the early warning signs of melanoma.

A – Asymmetry: If an imaginary line is drawn through a mole and the two halves do not match, the mole is asymmetrical and this is a warning sign for melanoma.

B – Border: The borders of an early melanoma tend to be uneven and may be scalloped or notched.

C – Color: Having a variety of colors is another warning sign. A number of different shades of brown, tan or black could appear. A melanoma may also become red, white or blue.

D – Diameter: Melanomas usually are larger in diameter than the size of the eraser on a pencil (1/4 inch or 6mm), but they may be smaller when first detected.

E – Evolving: When a mole is evolving, see a doctor. Any change in size, shape, color, elevation or another trait, or any new symptom such as bleeding, itching or crusting points to a warning symptom.

Moles, brown spots and growths on the skin are usually harmless, but not always. It is important to know your skin well to identify early signs of changes and examine the skin all over the body once a month and see a physician for a skin cancer check once a year.

Program Information

Wyoming Comprehensive Cancer Control Consortium

The Wyoming Comprehensive Cancer Control Consortium, through the Wyoming Cancer Control Plan 2011-2015, addresses ultraviolet exposure prevention goals focused on reducing the incidence of skin cancer in Wyoming. The Consortium promotes programs, policies and practices that protect residents from ultraviolet exposure and artificial sources of UV light such as tanning beds and lamps. The Consortium's website provides access and information to the programs listed below.

Please visit www.fightcancerwy.com for more information.

Wyoming Early Childhood Sun Safe Curriculum

This curriculum is designed for use in child care settings and shares skin cancer prevention information and activities geared toward children ages 3-5 years and their parents. Its purpose is to assist in teaching young children why and how they should protect themselves from overexposure to sunlight. Ultraviolet radiation from the sun is the main cause of skin cancer, so it is critically important to train children to adopt sun-safe habits and lifestyles. Support from the Wyoming Cancer Surveillance Program allowed this curriculum to be provided to over 250 licensed child care providers in 2010.

Wyoming Sun Safe Schools of Distinction

The Wyoming Sun Safe Schools of Distinction project was created in 2008 to raise awareness of skin cancer and the preventable measures that can be taken by school age children and to enhance statewide school policies surrounding sun safety. It utilizes the SunWise Sun Safety Program developed by the U.S. Environmental Protection Agency. Schools that have been deemed a Sun Safe School of Distinction meet various sun safety criteria focusing on education and promotion/ implementation of sun safety measures by both students and school staff. This program is supported through the continuing work of the Wyoming Cancer Resource Services Program. As of October 2012, there are 116 Sun Safe Schools of Distinction in Wyoming.

Wyoming Outdoor Worker Sun Safety Toolkit

The Wyoming Outdoor Worker Sun Safety Toolkit was designed to increase knowledge regarding skin cancer and sun safety, with the goal of establishing safer sun practices and strategies, especially among outdoor workers in Wyoming. The toolkit provides training and educational materials that can be shared, displayed and presented to meet the needs of a variety of different business settings. Education about the toolkit and how it can be used is being supported statewide through the Wyoming Cancer Resource Services Program. As of October 2012, the toolkit has been distributed to 49 businesses in Wyoming.

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Definitions

Incidence: the number of newly diagnosed cancer cases that occur in the population per unit of time, usually one year.

Mortality: the number of deaths that occur in the population per unit of time, usually one year.

Rate: the proportion of the population affected during a specified time period (e.g., year) usually defined as per 100,000 persons in a population.