March 11, 2015

House Health Care Committee

From: Dr. Sancy Leachman, Chair, Department of Dermatology, OHSU

RE: Support for HB 3041

Dear Members of the House Health Care Committee:

The purpose of my testimony is to contribute substantive scientific and medical understanding and data to the discussion of HB 3041, which is designed to provide access to sun protection in Oregon's schools. It is my hope that a higher level of understanding about how skin cancer, and melanoma in particular, impacts the people of Oregon will lead to an informed (and better) decision-making process.

I am currently the Chair of the Department of Dermatology at OHSU and the Director of the Melanoma and Skin Cancer Research Program at Knight Cancer Institute, our state's nationally-designated cancer institute. I have MD and PhD degrees with specialty medical and laboratory training in the molecular genetics of skin cancer. I have been working in the field of melanoma for 20 years, both clinically and scientifically and lead several national and international efforts to prevent and detect this disease early.

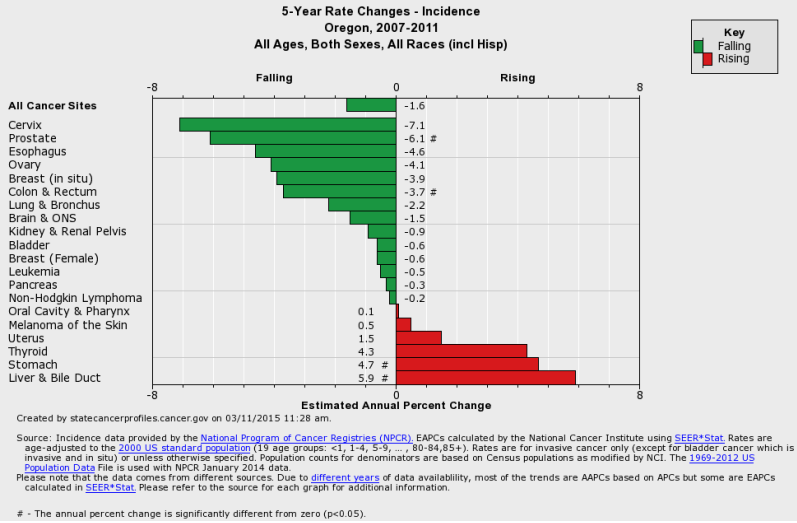
THE DATA

Melanoma skin cancer is deadly

- About 76,100 new melanomas will be diagnosed in the U.S.A. this year (about 43,890 in men and 32,210 in women). About 2500 of these are in Oregon.
- About 9,710 people are expected to die of melanoma in the U.S.A. this year (about 6,470 men and 3,240 women).
- Last year 182 Oregonians died of skin cancer, which is more than died of homicide (91 deaths), multiple sclerosis (57 deaths), and is about half of the number of deaths due to traffic accidents (360 deaths).

Melanoma is one of only 5 cancer diagnoses that is continuing to rise more than 1% each year

- The incidence of most cancer is falling or stabilizing with increases of less than 1% per year (http://progressreport.cancer.gov/trends-glance.asp). The cancers that are continuing to show increases of greater than 1% or more per year include: melanoma, kidney, liver, pancreas, and thyroid.
- Melanoma is the 5th most common cancer after prostate, breast, lung, and colon.
- The incidence of melanoma has doubled since 1973.



http://statecancerprofiles.cancer.gov/deathrates/deathrates.html

Melanoma skin cancer disproportionately targets younger and active individuals

- Invasive skin cancer is the most common cancer in young adults in the 25-29 year age group.
- Melanoma affects *and kills* more individuals under 35 years of age than any of the other top 5 cancers (prostate, breast, lung, colon, and melanoma, SEER Statistics from the NCI).

Melanoma incidence and death rates in Oregon are among the highest in the country, especially in women.

- Surveillance and End-Epidemiologic Results (SEER) Registries and State Registry Data are collected nationally every year to inform cancer policy decisions nationwide. (http://seer.cancer.gov/registries/)
- There is a lag time between the time of diagnosis of cancers and entry into the registries (to permit collection and verification of the data).
- Data from 2011 was just completed and therefore the most recent, relative trends can be obtained by looking at the 5-year rates of diagnosis and death from 2007-2011.
- (http://www.worldlifeexpectancy.com/oregon-cause-of-death-by-age-and-gender)
- In the time period between 2007-2011:
    - Oregon has the 5th highest incidence of melanoma in the country overall
    - Oregon has the 1st highest incidence of melanoma in women in the country
    - Oregon has the 6th highest death rate of melanoma in the country overall
    - Oregon has the 5th highest death rate of melanoma in the country in women

Ultraviolet light from sun and tanning salons causes melanoma, squamous cell carcinoma and basal cell carcinoma.

- Exposure to the ultroaviolet wavelength of energy from sun or tanning salons causes mutations in the DNA inside our skin cells. When enough of these mutations happen, the cells become cancerous – the more exposure, the greater the chance of cancer-causing mutations.
- When DNA damage happens inside melanocytes (the cells that make brown pigment to produce a tan), these cells respond to the DNA damage by trying to make more pigment.
- One of the most prominent, independent international working groups in the field of cancer is called the International Agency for Research on Cancer (IARC). This group has screened and evaluated the worldwide literature on the effect of sun and tanning salon exposures and classifies solar and tanning bed UVR as a carcinogen.
- The U.S. Department of Health and Human Services National Toxicology Program also classifies UV radiation as a carcinogen.
- One sunburn statistically doubles an individual's chances of getting melanoma (roughly from a 2% to a 4% chance in Caucasians).

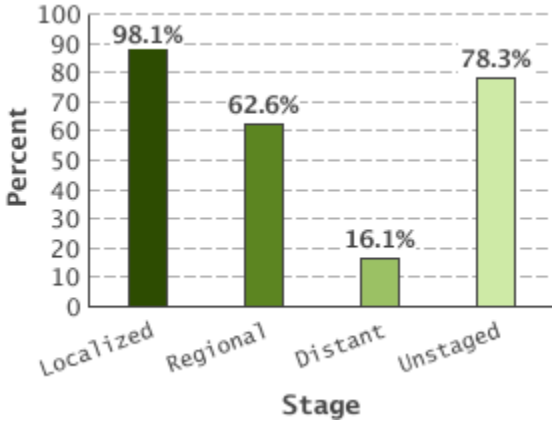
A substantial proportion of ultraviolet light exposure occurs prior to the age of 18.

- 23% of an individual's lifetime exposure to UV occurs by age 18, when they are in school. (Godar DE, et al. Photochem Photobiol 2003; 77(4):453-457)

If caught early, melanoma is curable, if caught late, it is extremely difficult and costly to treat.

- Cancer stage at diagnosis has a strong influence on the length of survival. In general, if the cancer is found only in the part of the body where it started it is *localized* (sometimes referred to as stage 1). If it has spread to a different part of the body, the stage is *regional* or *distant*.
- The earlier melanoma of the skin is caught, the better chance a person has of surviving five years after being diagnosed. Fortunately, for melanoma of the skin, 84.0% are diagnosed at the local stage. The 5-year survival for localized melanoma of the skin is 98.1%.
- If the melanoma has spread to the lymph nodes, the chances of being alive in 5-years is 62.6%
- If melanoma is not caught before it has spread to another organ, survival at 5 years is only 16.1%

5-Year Relative Survival



SEER 18 2004-2010, All Races, Both Sexes by SEER Summary Stage 2000

Relevance to this Bill

- OHSU and Knight Cancer Institute, under my leadership, has initiated a War on Melanoma, designed to reduce the mortality due to melanoma in Oregon by 50% over the next 5 years.
- This "War" is a grass-roots educational effort designed to educate lay people, patients, skin service industry members (e.g. tattoo artists, massage therapists, hairdressers, acupuncturists, etc.), and medical professionals about melanoma prevention and early detection methods.
- The "War" is being developed and will be implemented as a population-based experiment with measurable outcomes before and after the educational intervention.
- This Bill can play a major role in supporting the efforts of our "War on Melanoma" and in reducing the risk for developing (and ultimately dying) from melanoma in our population over time.
- Changing attitudes regarding sun exposure in the schools is an effective mechanism for enhancing overall awareness in our community (e.g. cigarette smoking campaigns in schools were an effective outreach to the community at large).

SUMMARY

Taken together, these data support a causal relationship between ultraviolet light exposure (sun and tanning salon) and melanoma that, if minimized, can lead to reduced death from the disease.

A positive vote on this bill will favorably impact our community, families, children, and grandchildren and will establish our state as a proactive and preventative. Please continue the Oregon tradition of facilitating healthy choices, particularly in young individuals who are vulnerable.

Please contact me if you have any further questions, concerns, or comments about this information.

Thank you.

Sancy Leachman, M.D., Ph.D.
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