ARIZONA MELANOMA REPORTING

ARIZONA

No. 2017-1
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Purpose of the Arizona Melanoma Task Force

To identify barriers and develop strategies to improve melanoma reporting by physicians in Arizona.

This report provides physicians the latest information on melanoma counts, gender and age group, physician case reports, compares Arizona cancer rates to the SEER Registry and the U.S., and an article on melanoma and indoor tanning.

A message from the Task Force Chair:

Nancy Silvis, MD Tucson, AZ

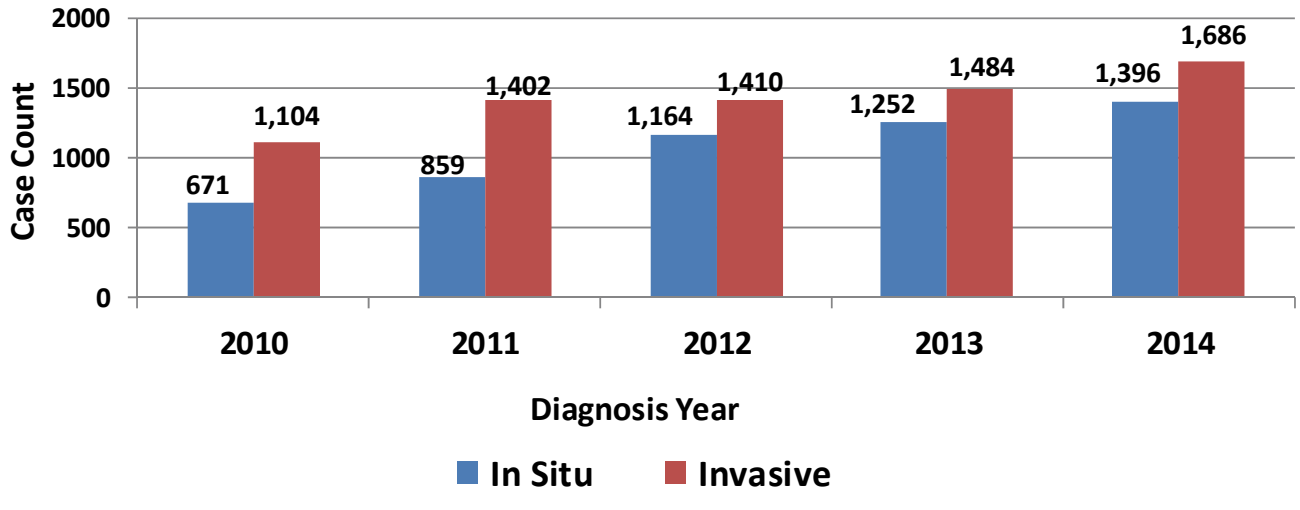
Exciting data in this newsletter continues to show increased reporting with a 36% increase in the number of cases of melanoma in 2014 compared to four years earlier when the Task Force was initiated (Figure 1). Physicians and clinics are the main sources of this increased reporting. In 2010 most cases were reported by hospitals. By 2014 this flips; physicians and clinics now are reporting 69% more cases than all other sources (Figure 3).

The **Arizona Skin Cancer Summit** will be held on **Saturday June 17, 2017** from 10 AM to 3 PM at Mayo Clinic Cancer Center, Mayo Blvd., Phoenix. This will be a working meeting to develop a plan for Arizona as a model for state partnership to identify and address gaps in skin cancer prevention, reporting and early detection. Please consider attending and giving your vital expertise on skin cancer in Arizona. To register for the summit go to: https://azdhs.wufoo.com/forms/skin-cancer-summit-registration/.

MELANOMA CASE COUNTS -

Figure 1: Case counts by year for invasive and in situ melanoma show the effect of active physician involvement in the reporting of melanoma. In 2011, the year the task force requested physicians to start reporting all their cases, 2,261 cases of in situ and invasive melanoma were reported. In 2014, four years after that initial request to the community dermatologists, 3,082 in situ and invasive melanoma cases were reported, an increase of 36 percent.

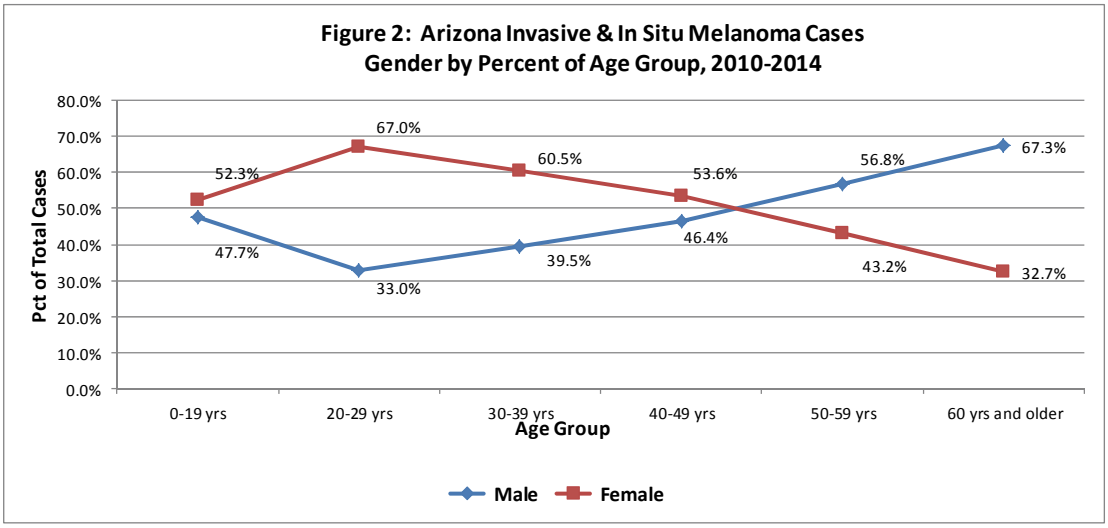
Figure 1: Arizona Invasive & In Situ Melanoma Case Counts by Diagnosis Year 2010 -2014



TRENDS IN REPORTING

BETWEEN THE AGES OF 20 AND 50 YEARS MORE WOMEN ARE DIAGNOSED WITH MELANOMA COMPARED TO MEN

GENDER / AGE GROUP - Figure 2: Age at diagnosis of melanoma differs between men and women. When all age groups are combined most cases of melanoma occur in men. However, between the ages of 20 and 50 years, more cases of melanoma are diagnosed in women. After the age of 50 years most cases of melanoma are diagnosed in men. Almost 1 in 5 melanoma cases among women occur between the ages of 20 and 50 years. In men only 1 in 10 cases occur in the 20 to 50 year age groups. Among women the median age at diagnosis is 64 years, while among men the median age is 69 years.



Note: 6 cases that were not classified as male or female or were unknown gender were excluded from Figure 2. 5 cases with an unknown age were also excluded from Figure 2.

AN UPDATE: COMPARING PHYSICIAN CASE REPORTS TO OTHER SOURCES

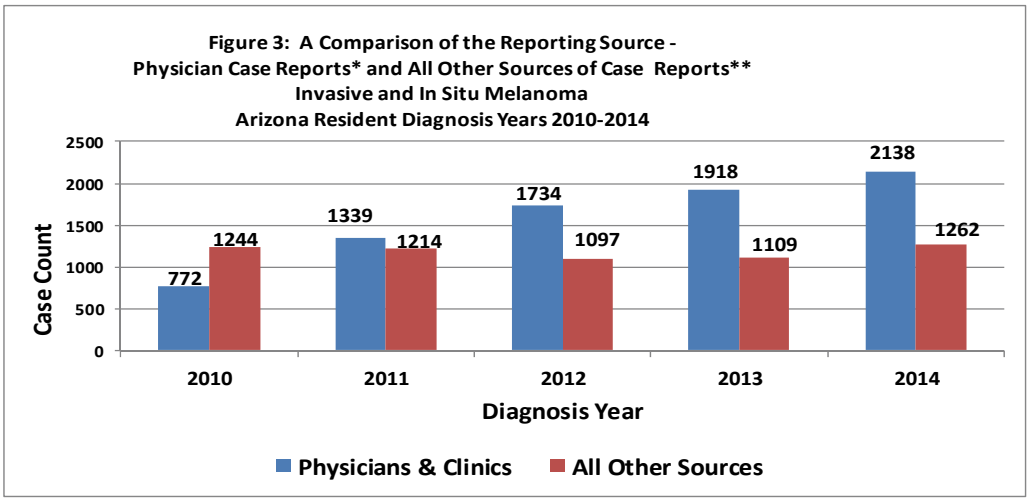


Figure 3: Demonstrates the important role physicians play in reporting melanoma to the Arizona Cancer Registry. In the 2011 diagnosis year, there is a transition to more melanoma cases reported by physicians than from other sources. In 2014, there were 69% more case reports received from physicians compared to other sources.

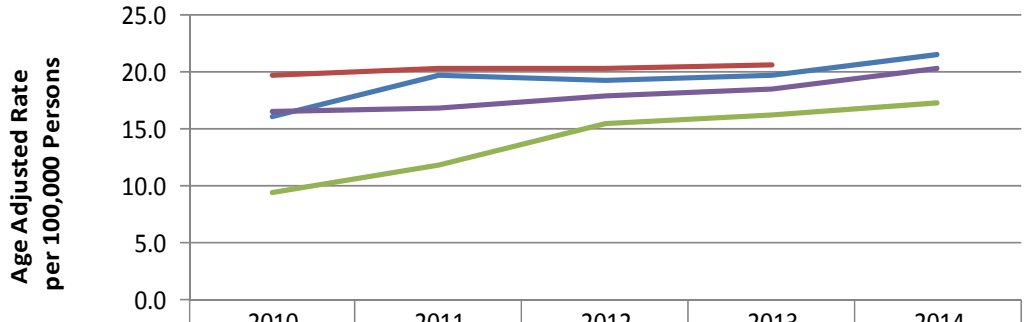
*Physician Case Reports = A case reported by a physician. More than one case report may be received for each new melanoma case. ** All other sources of case reports = Case reports received from hospitals, pathology laboratories, other state registries, etc. More than one case report may be received for each new melanoma case.
Note: Physicians also include Nurse Practitioners and Physicians Assistants that also reported case reports.

TRENDS IN REPORTING

Age Adjusted Melanoma rates —

Figure 4: Invasive melanoma age adjusted rates in Arizona have risen 33.5 percent from the year 2010 to year 2014 (from 16.1 to 21.5 cases per 100,000 persons). In this same time period (through year 2013) melanoma rates in the United States increased 4.5 percent. The sharp increase in age adjusted melanoma rates in Arizona likely reflects the more complete reporting by dermatologists. Comparing the in situ melanoma age adjusted rates, Arizona rates have risen 82 percent from the year 2010 to year 2014 (from 9.5 to 17.3 cases per 100,000 persons). Comparing the 2014 diagnosis year between Arizona and SEER for in situ melanoma (17.3 to 20.4), the SEER rate was 17.9% higher than the Arizona rate.

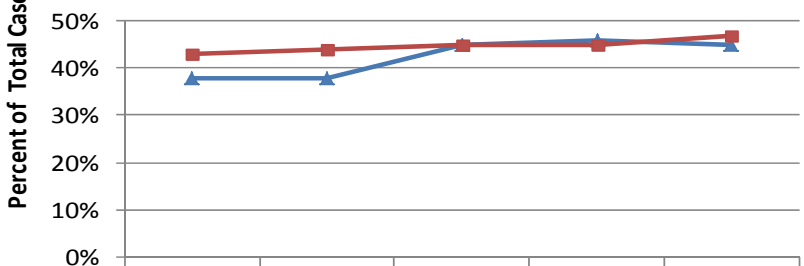
Figure 4: Arizona, U.S.*, and SEER Invasive & In Situ Age Adjusted Melanoma Rates For Diagnosis Years 2010 -2014**



	2010	2011	2012	2013	2014
AZ Invasive Melanoma	16.1	19.8	19.3	19.7	21.5
U.S Invasive Melanoma	19.8	20.4	20.4	20.7	***
AZ In situ Melanoma	9.5	11.9	15.5	16.3	17.3
SEER In situ Melanoma	16.5	16.9	17.9	18.6	20.4

Diagnosis Year

Figure 5: Comparison of Arizona and SEER Registry Percent of Total Melanoma In Situ Cases By Diagnosis Year 2010-2014**



	2010	2011	2012	2013	2014
AZ	38%	38%	45%	46%	45%
SEER	43%	44%	45%	45%	47%

Diagnosis Year

In Situ Comparison —

Figure 5: The proportion of total melanoma in situ cases for Arizona has risen 18 percent (from 38% in 2010 to 45% in 2014). In the SEER Registry the increase from 2010 to 2013 was 5 percent. The Arizona increase can be attributed to the rising number of in situ cases reported by community dermatologists. In 2013 the Arizona proportion of in situ has surpassed the SEER Registry in situ proportion. However, in 2014 the SEER proportion is 2% higher.

* United States Cancer Statistics: 1999 - 2013 Incidence, WONDER Online Database. United States Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2016. Accessed at http://wonder.cdc.gov/cancer-v2013.html on Mar 1, 2017.
** Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2016 Sub (2000-2014) <Katrina/Rita Population Adjustment> - Linked To County Attributes - Total U.S., 1969-2015 Counties, National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2017, based on the November 2016 submission. Accessed on April 14,2017.
***U.S. 2014 data not available.

MELANOMA—INDOOR TANNING

Potential impact of prohibiting indoor tanning Among youths in Arizona

The Arizona Cancer Registry has estimated the impact of prohibiting indoor tanning among persons less than age 18 years. These impacts are estimated over the lifetime of the 1.4 million youth age 14 years or younger in Arizona.

ARIZONA ESTIMATE	
Metric for tanning restriction among persons <18 y/o	Estimated Count
Number of melanoma cases averted	1,372
Number of melanoma deaths averted	149
Life-years saved	3,166
Treatment costs saved	$7,608,512

These impacts were generated using the recent article by Guy GP, et al: The potential impact of reducing indoor tanning on melanoma prevention and treatment costs in the United States: an economic analysis; *Journal of the American Academy of Dermatology*, 2016. http://dx.doi.org/10.1016/j.jaad.2016.09.029

For this estimate we applied the national figures in the article to the Arizona population. Arizonans comprised 2.2% of the nation's children age 0-14 years in 2010.

To estimate the impact, we used the following assumptions and methods:

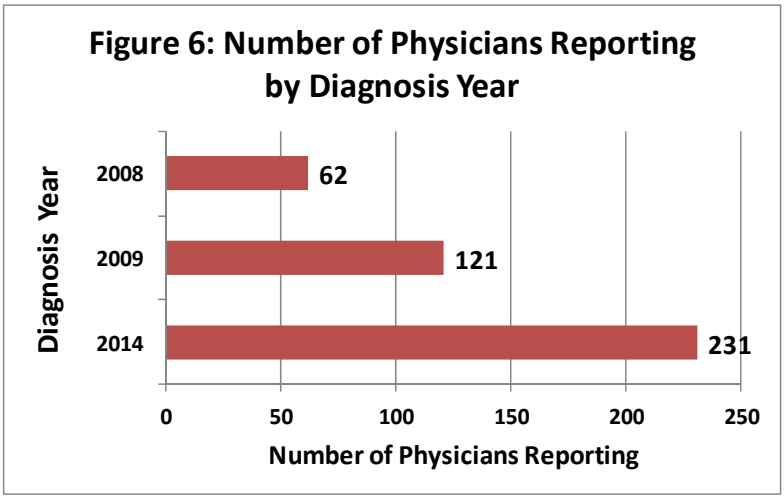
- Arizona's use of indoor tanning and melanoma rates are the same as that of the U.S.
- Individuals initiating tanning before age 35 years had a 59% higher risk of developing melanoma; persons age 35+ had a 20% higher risk.
- All costs were adjusted to 2014 dollars
- All future costs were discounted at an annual rate of 3%
- Estimates do not include the burden of melanoma in situ
- Estimates do not include the burden of basal or squamous cell carcinomas

Tim Flood, MD
ADHS ACR Medical Director

TRENDS IN REPORTING

The Number of Physicians Reporting by Diagnosis Year—Figure 6

shows the number of physicians that have reported cases by diagnosis year. The 2008 diagnosis year represents the year prior to the physician pilot project performed in 2009. In 2009, the Melanoma Task Force piloted a project requesting specific dermatologists to review their 2009 melanoma cases and report them to the Arizona Cancer Registry. After 2009 the Task Force reached out to all dermatologists. Comparing 2009 to 2014, we see a 91% increase in the number of physicians that have reported.



Note: Physicians also include Nurse Practitioners and Physicians Assistants that also reported cases.

Number of Melanoma Reports Submitted By Physician Offices—

The following table shows the number of melanoma cases reported by physician offices in 2016 grouped by Phoenix Area, Tucson Area, and those received from the rest of the state. The table does not include reports from a hospital cancer registry. Physicians interested in verifying if the registry has received reports from their office may contact Georgia Yee for more information at Georgia.Yee@azdhs.gov.

Arizona Population Areas - Melanoma Physician Reports Submitted	
Phoenix Area	2,221
Tucson Area	670
Rest of the State	450
Statewide Total	3,341

The Centers for Disease Control and Prevention (CDC) provide support to the Arizona Cancer Registry under cooperative agreement U58DP003858 (National Program of Cancer Registries Component). The contents of this report are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Forms for melanoma reporting can be found at http://www.azdhs.gov/cancer/MelanomaForm.pdf. Any questions about reporting can be directed to Georgia.yee@azdhs.gov at the state's Arizona Cancer Registry.