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## Cancer Risk and Cancer Screening in a Pacific Northwest Tribe

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### Abstract

**Objectives.** American Indians and Alaskan Natives (AI/ANs) in the Northwest United States have different cancer rates, risks, and screening-related behavior when compared to Non-Hispanic Whites (NHW) in this region. However, few tribes have had adequate assessments related to cancer risks and cancer screenings.

**Design.** We conducted a survey among Cow Creek tribal members using a modified Behavioral Risk Factor Surveillance System (BRFSS) questionnaire.

**Participants.** Working in partnership with the Cow Creek Band of Umpqua tribe, we assessed the health status, behavioral risk factors, and use of cancer screenings for this Pacific Northwest AI Tribe.

**Main Outcome Measures.** Using data from the 2012 National BRFSS, we compared the prevalence of cancer risk factors and screening for Cow Creek Tribal members to NHWs in Oregon.

**Results.** Compared with NHWs, Cow Creek tribal members were less likely to self-report their health status as excellent/very good (47.1% vs. 59.2%,  $p<0.001$ ), have no health insurance (70.3% vs. 84.0%,  $p<0.001$ ), BMI as obese (34.3% vs. 25.9%,  $p<0.001$ ), and be a current smoker (34.3% vs. 25.9%,  $p<0.001$ ). Cow Creek tribal members were more likely to have taken a fecal occult blood test (18.7% vs. 9.0%,  $p<0.001$ ) and a clinical breast exam

(65.7% vs. 50.2%,  $p<0.001$ ) within the past year than NHWs.

**Conclusions.** Although disparities were observed in some cancer risk factors and cancer screening among AI/ANs, the Cow Creek Band of Umpqua tribe shows satisfactory levels of cancer screening when compared to NHWs in Oregon.

### Introduction

Cancer remains one of the leading causes of death for American Indians and Alaskan Natives nationwide.<sup>1, 2, 3</sup> However, cancer incidence and mortality rates differ widely among American Indian/Alaskan Native (AI/AN) populations within geographic regions and by tribal groups throughout the United States.<sup>4, 5, 6</sup> Consistent with the disparate cancer incidence and mortality data in different regions of the country and among different tribes, cancer risk factor prevalence data show great variability among tribes by geographic area. Furthermore, screening for cancer by site shows widely divergent patterns by tribe, and often are low compared to non-Hispanic Whites (NHWs) in the same geographic areas.<sup>7, 8</sup> Depending on region in the United States, gender-specific cancer screening data for AI/ANs reveal that both genders had lower prevalence of screening than their NHW counterparts.<sup>9</sup>

Federal efforts to implement nationwide surveillance for cancer incidence were broadened over the previous decade, and with the advent of data linkage studies to

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improve identification of American Indian and Alaska Native racial/ethnic status in various statewide registries and other data bases, tribal cancer incidence data by state and by region have much improved.<sup>7, 10, 11</sup> In a similar vein, cancer mortality rates among tribal people are also more accurate as a result of data linkages. With many tribes operating their own health care clinics, cancer screening and reporting of cancer cases is often implemented at a tribe-specific level.

Tribal health planners address various risk factors for cancer at the local level. For these reasons, tribes need their own tribe-specific data to guide and evaluate their efforts. Tribes would benefit from surveys like the CDC-initiated, nationwide Behavioral Risk Factor Surveillance System (BRFSS) that addresses health issues within particular populations. However, very few tribes have been able to implement cancer risk factor surveys to help illuminate health priorities and tailor interventions to decrease cancer risks and incidence and mortality rates. Among Northwest tribes, we earlier (1998-2001) conducted a series of tribal behavioral risk factor surveys based on the CDC risk factor survey model, but to date, have collected and analyzed data from only eight of the 43 federally recognized tribes in this region. Before this study, Northwest tribes utilized the data from the BRFSS project 1998-2001; however, the report is over a decade old. At the request of the Cow Creek Band of Umpqua tribe, we initiated another tribal BRFSS in 2011-2012 to help the tribe define health priorities and allow tribal health leaders to implement interventions to address cancer-related risk factors among tribal members. This report summarizes key data that we found from this tribal telephone survey.

## Methods

**Setting.** We surveyed members from the Cow Creek Band of Umpqua tribe, located primarily in Oregon, using an adapted CDC BRFSS telephone-administered questionnaire in 2011-2012 (Cow Creek BRFSS Project 2010-2012). Cow Creek is a non-reservation based tribe that recently regained federal recognition and had 1,169 enrolled members at the time of initiation of our survey. Cow Creek provides health care to AI/ANs in the Northwest through Direct Care Services, a type of health care model offered through the Indian Health Service (IHS). Sixty-three percent (63%) of the tribe's population lives in Oregon and the remaining 37% live in various parts of the US. The study was supported by the Northwest Portland Area Indian Health Board (NPAIHB) and Oregon Health and Science University (OHSU). The protocol was approved by Institutional Review Boards at NPAIHB and OHSU, and by tribal leadership. Researchers were committed to following the principles of community-based participatory research and involved the Cow Creek Health & Wellness Center at

each step of the project. Tribal health officials approved this manuscript before submission.

**Data collection.** Eligibility for study participation included being an enrolled member of Cow Creek with a working telephone number, and participants had to be at least 18 years of age. We attempted to reach all adult tribal members via telephone to arrange phone BRFSS interviews at a scheduled time. Tribal staff members were instructed to contact all adult tribal members to schedule telephone interviews at a later date. Interviews were then conducted by trained research assistants at the NPAIHB after tribal staff members scheduled the interviews. A maximum of three calls and one telephone message were attempted. Only 20 eligible tribal members who were successfully contacted by the Cow Creek staff refused to participate in the phone BRFSS interviews. After survey personnel successfully contacted potential respondents, all agreed to participate in the interviews. Thus, the response proportion was 100% among tribal members who had earlier agreed to participate in the survey via the introductory phone invitation per tribal staff.

Telephone interviews were conducted by trained personnel following a pre-approved script. Interviews ranged between 20-60 minutes in duration. Rights as a participant and privacy were reviewed before obtaining verbal consent. We sent information forms to participants at the completion of the interview, as well as a 15 dollar gift card for compensation for their time. Telephone interviews were randomly monitored for quality and adherence to the script, and paper surveys were reviewed by another member of the interview team during the months of active interviewing to address inconsistencies or missed questions. We recorded responses on paper copies of the survey that were later entered into Access software.

**Questionnaire.** The questionnaire utilized in this study had 22 sections. We used 10 core sections from the CDC's 2012 BRFSS form. Twelve more modules were created for the use in this study. Survey format and questions were approved by the NPAIHB, Institutional Review Board, and tribal administration. Overall, the questionnaire consisted of 193 questions.

**Measurement.** Demographic variables included age, sex, marital status, employment status, education level, state of residence, and annual household income. Health status variables included self-reported health status, healthcare coverage, type of healthcare coverage, private vs. public insurance, and usual place of health care. We included four behavioral risk factors that have been strongly associated with cancer of various sites, including: obesity, smoking, alcohol consumption, lack of physical activity, and lack of screening.<sup>9, 12</sup> We also assessed the use of cancer screening tests at recommended age of screening and different time

frames by cancer site: respondents aged 50 years and older who have had a fecal occult blood test within the past year; respondents aged 50 years and older who have had a sigmoidoscopy or colonoscopy within the past five years; females aged 40 years and older who have had a mammogram within the past year; females aged 40 years and older who have had a mammogram within the past two years; females aged 40 years and older who have had a clinical breast exam with the past year; females aged 50 years and older who have had a mammogram within the past year; females aged 50 years and older who have had a mammogram within the past two years; females aged 50 years and older who have had a clinical breast exam within the past year; females aged 50 years and older who have had a clinical breast exam with the past two years; males aged 40 years and older who have had a prostate specific antigen within the past two years; females aged 21 to 64 years old who have had a pap smear within the past years; and females aged 21 to 64 years old who have had a pap smear within three years.

**Analysis.** For our descriptive analyses, we included all tribal members age 18 years and older (N= 283) whom we could contact by phone. Weighted proportions from the Oregon State BRFSS 2012 survey were used to compare the raw proportions from the Cow Creek Tribal BRFSS survey for demographics, health status variables, behavioral risk factors, and screenings.

For comparison purposes, we accessed on-line data for the weighted Oregon State BRFSS 2012 via the CDC website for each state.<sup>14</sup> All NHW respondents from the 2012 BRFSS Questionnaire were residents of Oregon. We examined similar demographic and cancer-related variables and compared findings using chi-square tests between tribal and non-Hispanic white groups. All quantitative analysis was conducted using SAS.

## Results

**Demographics.** Demographic characteristics for Cow Creek tribal members and Oregon Non-Hispanic Whites are presented in Table 1.

Our Cow Creek sample included 128 men and 155 women, with 59.7% aged 18 to 49 years and 40.2 % aged 50 years and older. The NHW comparison group included 1736 men and 2667 women, with 28.5% aged 18 to 49 years and 71.6% aged 50 years and older. Because of the age differences in these populations, we report both crude and age-adjusted percentages for various risk factor data. When compared with AI/AN, NHWs had a significantly greater percentage for being widowed, retired or unable to work, and a higher percent reported additional years of higher education compared to AI/ANs. Cow Creek respondents lived in different states across the nation with the highest

percentage in Oregon, but for the analysis they were stratified as either Oregon or other (62.9% vs. 37.1%, respectively).

**Health status.** Crude and age-adjusted percentages for health status variables among Cow Creek tribal members and Oregon NHW participants are shown in Table 2 and are summarized briefly.

After adjusting for age, AI/ANs participants reported significantly lower in Excellent/Very Good health than NHWs (47.1% vs. 59.2%,  $p<0.001$ ). In addition, a smaller proportion of AI/AN participants also reported having healthcare coverage than NHWs (70.3% vs. 84.0%,  $p<0.001$ ). Variables, “type of healthcare coverage” and “healthcare source for Cow Creek tribal members”, are provided for descriptive purposes with no comparisons to Oregon NHW because our questions were tailored for the tribe’s use.

**Behavioral risk factors.** Crude and age-adjusted percentages for behavior risk factors associated with cancer for Cow Creek tribal members and Oregon Non-Hispanic White participants are shown in Table 3.

We compared body mass index and former/current smoker status between the two groups. The age-adjusted proportion of obese tribal members was significantly higher when compared to NHWs (34.3% vs. 25.9%,  $p<0.001$ ). In addition, tribal members were more likely to report as being current smokers than NHWs (25.7% vs. 16.1%,  $p<0.001$ ). When compared with NHWs in Oregon, no significant differences were noted between overweight, former smoker, binge drinking, and any physical activity.

**Cancer screening.** Crude and age-adjusted percentages for prevalence of Cow Creek tribal members and Oregon Non-Hispanic White participants who report selected cancer screenings are shown in Table 4 and are summarized briefly.

Results are presented with the appropriate sex and age for each recommended cancer screening, including the appropriate intent for screening. Among respondents aged 50 years and older, AI/ANs were more likely to have taken a fecal occult blood test within the past year than Oregon NHWs. In addition, Cow Creek female respondents aged 50 years and older were more likely to have a clinical breast exam within the past year than Oregon NHW female respondents.

## Discussion

This study is the first to be tailored to Cow Creek Band of Umpqua Tribe of Indians and compared with NHWs within the state of Oregon. Our study’s most important findings included: Cow Creek tribal members self-reported poorer health, had a higher proportion of obesity, and were

more likely to be current smokers than NHWs in Oregon. However, Cow Creek tribal members had favorable cancer screening histories when compared to NHWs in Oregon. Of note, two out of 14 cancer screening practices were statistically significantly different between groups, with more favorable data observed for the tribe. Overall, we did not observe substantial health disparities or risk behaviors among tribal participants compared to NHWs in Oregon.

Our behavioral risk factor data do show major differences compared to three Northwest tribes that surveyed randomly selected respondents from their respective tribal enrollment rosters ten years earlier as reported by the Northwest Tribal BRFSS 2003 by NPAIHB.<sup>14</sup> When compared with this current study, tribal data from the NW Tribal BRFSS in 2003 were generally less favorable compared to Cow Creek tribal data. Modifiable risk factors for cancer observed in our Cow Creek data that were statistically significant included obesity and cigarette smoking. As reported in the earlier NW Tribal BRFSS 2003 report, obesity (47.4%) and current smoking (41.8%) figures from three randomly selected tribes were much higher than Cow Creek tribal members and NHWs. These comparisons suggest that tribes such as Cow Creek may have developed and implemented health promotion programs over the past decade to improve cancer risk factor prevalence compared to the 2003 figures.

Recent incidence and mortality data for Oregon tribes (nine federally recognized tribes total) showed excesses compared to NHWs for lung and bronchus, colorectal, pancreas, and liver cancers.<sup>15</sup> Our risk factor data show that cigarette use, in particular, must be addressed as a public health priority for Cow Creek tribal members. Approximately one fourth of Cow Creek adults were current smokers, and about one third were former smokers. The NPAIHB collaborates with all NW tribes and has a Northwest Tribal Comprehensive Cancer Control (NTCCC) grant with Centers for Diseases Control and Prevention (CDC) that is addressing this disparity, as well as other cancer disparities among tribes.

Cancer screening data for Cow Creek tribal members revealed that tribal members had favorable screening statistics for fecal occult blood tests, sigmoidoscopy, colonoscopy, as well as for mammograms, clinical breast exams, pap smears and PSA tests compared to NHW's; although, only two screening sites were statistically significantly different than for NHWs. Our data are encouraging and suggest that the Cow Creek Tribe and hopefully, the broader NTCCC program are having success in improvement of cancer screening among tribal people.

## Limitations

Several potential limitations in this study may have influenced our results and our data interpretation. We were

only able to contact a limited number of adult tribal members, despite repeated attempts to make contact to schedule and administer the interviews. However, the number of potential respondents who clearly refused to participate was small (n=20). We may have sampled Cow Creek tribal members who were more economically advantaged to have telephone service. We were not able to access medical records or other data sources to validate the responses to questions that we asked of study participants. Furthermore, tribal members may not have wanted to release personal information to outsiders. We reassured respondents that their answers were confidential and that publication of their responses would not be linked to their data. Respondents who did agree to the questionnaire may not have provided accurate information due to modesty and reluctance to discuss their personal health. We used several different interviewers to collect questionnaire data; however, all were trained by the same two key investigators involved in the study and the interviewers were required to perform at a high standard before they began collecting data from respondents. In addition, the introduction to the survey was scripted as were all of the questions asked of the participants, so that inter-observer variability would be minimized. The population structures between the Cow Creek Tribe and Oregon non-Hispanic whites differed, with the tribe showing higher proportions of younger respondents. Thus, any crude prevalence of chronic conditions would be influenced by age as a confounding factor.

## Conclusions

The purpose of this study was to gain a better perspective of Cow Creek tribal health by utilizing tribally modified BRFSS data to evaluate the prevalence of modifiable behavioral factors associated with cancer and their prevalence estimates for cancer screenings. A few disparities persist in cancer screening, but the Cow Creek Band of Umpqua tribe has achieved satisfactory levels of screening success when compared to NHWs. Despite some excesses in behavioral risks that influence cancer occurrence, Cow Creek provides a good example for other regional tribes related to cancer risk factor prevalence and cancer prevention. Such favorable results can be attributed to the efforts of the Cow Creek Tribal Clinic, the Northwest Tribal Comprehensive Cancer Program, and other cancer prevention programs within the tribe. Programs that improve cancer screening and other prevention and control efforts will remain imperative to this tribe's success.

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**Table 1. Demographic Characteristics for Cow Creek Tribal Members and Oregon State Non-Hispanic Whites (NHW), Cow Creek Tribal BRFSS 2011-2012 and Oregon State BRFSS 2012.**

	Total Surveyed Population	
	Cow Creek Tribe	NHW
	(n = 283)	(n=4403)
<b>Demographic Characteristic</b>	N (Percent)	N (Percent)
<b>Age (in years)</b>		
18-29	63 (22.4%)	343 (7.9%)
30-39	58 (20.6)	400 (9.2)
40-49	47 (16.7)	497 (11.4)
50-59	54 (19.2)	868 (19.9)
60-69	32 (11.4)	1145 (26.3)
≥70	27 (9.6)	1107 (25.4)
<b>Sex</b>		
Male	128 (45.4%)	1736 (39.4%)
Female	155 (54.6)	2667 (60.6)
<b>Marital Status</b>		
Married or Living with a Partner or Member of an Unmarried Couple	183 (64.9%)	2552 (58.4%)
Separated or Divorced	50 (17.7)	728 (16.7)
Widowed	7 (2.5)	574 (13.1)
Never Married or Lived with a Partner	42 (14.9)	516 (11.8)
<b>Employment Status</b>		
Employed or Self-Employed	142 (50.4%)	1918 (43.6%)
Unemployed	26 (9.2)	263 (6.0)
Homemaker or Student	31 (11.0)	419 (9.6)
Retired or Unable to Work	83 (29.4)	1784 (40.7)
<b>Education Level</b>		
<High School	42 (15.0%)	196 (4.5%)
High School Graduate	83 (29.5)	1082 (24.7)
Additional Years of Higher Education	156 (55.5)	3112 (70.9)
<b>State</b>		
Oregon	180 (62.9%)	4403 (100.0%)
Other	106 (37.1)	0 (0)

Some categories do not equal to a full 100% due to rounding, missing and/or refusal/don't know answers.  
BRFSS = Behavioral Risk Factor Surveillance System

**Table 2. Health Status Variables for Cow Creek Tribal Members and Oregon State Non-Hispanic Whites (NHW), Cow Creek Tribal BRFSS 2011-2012 and Oregon State BRFSS 2012**

	Total Surveyed Population				P-value
	Cow Creek Tribe (Crude)	Cow Creek Tribe (Age-Adjusted) <sup>a</sup>	NHW (Crude)	NHW (Age-Adjusted) <sup>a</sup>	
	(n = 283)		(n=4403)		
Health Variable	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Self-Reported Health Status</b>					
Excellent/Very Good	135 (47.9%)	(47.1%)	2444 (55.7%)	(59.2%)	<0.001
Good	93 (33.0)	(34.1)	1210 (27.6)	(26.3)	
Fair/Poor	54 (19.2)	(18.8)	735 (16.8)	(14.4)	
<b>Healthcare Coverage</b>					
Yes	196 (69.8%)	(70.3%)	3934 (89.4%)	(84.0%)	<0.001
No	83 (29.5)	(29.0)	454 (10.3)	(15.4)	
Don't know/Not Sure	2 (0.7)	(0.7)	11 (0.3)	(0.6)	
<b>Type of Healthcare Coverage of 196 Respondents Covered</b>					
Private Insurance <sup>b</sup>	161 (81.7%)	NA	NA	NA	
Public Insurance <sup>c</sup>	36 (18.3)	NA	NA	NA	
<b>Healthcare Source</b>					
Cow Creek Tribal Clinic <sup>d</sup>	76 (27.7%)	NA	NA	NA	
Other Tribal Health Center/Clinic	24 (8.8)	NA	NA	NA	
Private Physician/Clinic	141 (51.5)	NA	NA	NA	
Other	33 (12.0)	NA	NA	NA	

Some categories do not equal to a full 100% due to rounding, missing and/or refusal/don't know answers.

<sup>a</sup> Age adjusted to the 2000 Standard U.S. Population.

<sup>b</sup> Private insurance is comprised of Nesika Health Group and other private insurance.

<sup>c</sup> Public insurance is comprised of Medicaid, Medicare/Medicare-Plus, and VA.

<sup>d</sup> Cow Creek Health & Wellness Center

**Table 3. Behavioral Risk Factors Associated with Cancer for Cow Creek Tribal Members and Oregon State Non-Hispanic Whites (NHW), Creek Tribal BRFSS 2011-2012 and Oregon State BRFSS 2012.**

	Total Surveyed Population				P-value
	Cow Creek Tribe (Crude)	Cow Creek Tribe (Age-Adjusted) <sup>a</sup>	NHW (Crude)	NHW (Age-Adjusted) <sup>a</sup>	
	(n = 283)		(n=4403)		
Behavioral Risk Factor	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Overweight<sup>b</sup></b>	96 (34.5%)	(35.6%)	1475 (35.0%)	(32.0%)	0.310
<b>Obese<sup>c</sup></b>	97 (34.9)	(34.3)	1099 (26.1)	(25.9)	<0.001
<b>Former Smoker<sup>d</sup></b>	88 (31.5)	(31.0)	1459 (34.0)	(26.6)	0.062
<b>Current Smoker</b>	73 (26.2)	(25.7)	550 (12.8)	(16.1)	<0.001
<b>Binge Drinker<sup>e</sup></b>	43 (15.4)	(15.5)	481 (10.9)	(17.3)	0.405
<b>Physical Activity (Any)<sup>f</sup></b>	226 (83.1)	(83.6)	3679 (83.6)	(86.8)	0.098

<sup>a</sup> Age adjusted to the 2000 Standard U.S. Population.

<sup>b</sup> Overweight is defined as a body mass index of 25.0 to 29.9 kg/m<sup>2</sup>.

<sup>c</sup> Obese is defined as a body mass index of 30.0 kg/m<sup>2</sup> or higher.

<sup>d</sup> Former smoker is defined as an individual who has smoked over 100 cigarettes in his/her lifetime but no longer smokes cigarettes.

<sup>e</sup> Binge Drinking is defined as consuming 5 or more drinks on one occasion within the past month for men and 4+ drinks on one occasion for women for NHW; the Cow Creek questionnaire asked for the frequency of consuming 5 or more drinks on one occasion for both sexes during the past month.

<sup>f</sup> Physical activity is defined as doing physical activity or exercise during the past 30 days other than their regular job



**Table 4. Prevalence of Cow Creek Tribal Members and Oregon State Non-Hispanic Whites (NHW) Who Report Selected Cancer Screenings, Cow Creek Tribal BRFSS 2011-2012 and Oregon State BRFSS 2012.**

<b>Surveyed Population, Respondents age ≥ 50 years</b>					
	Cow Creek (Crude)	Cow Creek (Age-Adjusted) <sup>a</sup>	NHW (Crude)	NHW (Age-Adjusted) <sup>a</sup>	P-value
	(n=113)		(N=3120)		
Fecal Occult Blood Test within the past year	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Yes</b>	20 (18.0%)	(18.7%)	284 (9.5%)	(9.0%)	<0.001
<b>No</b>	84 (75.7)	(75.5)	2571 (86.2)	(87.1)	
<b>Don't Know/Not Sure/Refused</b>	7 (6.3)	(5.9)	128 (4.3)	(3.9)	
Sigmoidoscopy or Colonoscopy within the past five years	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Yes</b>	55 (49.6%)	(50.3%)	1485 (49.9%)	(48.7%)	0.549
<b>No</b>	55 (49.6)	(48.3)	1412 (47.5)	(48.8)	
<b>Don't Know/Not Sure/Refused</b>	1 (0.9)	(1.3)	79 (2.7)	(2.5)	
<b>Surveyed Population, Females age ≥ 40 years</b>					
	Cow Creek (Crude)	Cow Creek (Age-Adjusted) <sup>a</sup>	NHW (Crude)	NHW (Age-Adjusted) <sup>a</sup>	P-value
	(n=87)		(n=2233)		
Mammogram within the past year	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Yes</b>	54 (62.1%)	(60.4%)	1217 (56.5%)	(53.1%)	0.245
<b>No</b>	32 (36.8)	(38.5)	900 (41.8)	(45.5)	
<b>Don't Know/Not Sure/Refused</b>	1 (1.2)	(1.1)	38 (1.8)	(1.4)	
Mammogram within the past two years	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Yes</b>	66 (75.9%)	(73.4%)	1579 (70.7%)	(68.2%)	0.175
<b>No</b>	20 (23.0)	(25.5)	538 (24.1)	(27.5)	
<b>Don't Know/Not Sure/Refused</b>	1 (1.2)	(1.1)	116 (5.2)	(4.4)	
Clinical Breast Exam within the past year	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Yes</b>	55 (65.5%)	(65.5%)	1103 (51.3%)	(55.8%)	0.074
<b>No</b>	29 (34.5)	(34.5)	956 (44.4)	(44.2)	
<b>Surveyed Population, Females age ≥ 50 years</b>					
	Cow Creek (Crude)	Cow Creek (Age-Adjusted) <sup>a</sup>	NHW (Crude)	NHW (Age-Adjusted) <sup>a</sup>	P-value
	(n=65)		(n=1936)		
Mammogram within the past year	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Yes</b>	44 (67.7%)	(68.7%)	1082 (58.1%)	(57.1%)	0.223
<b>No</b>	20 (30.8)	(29.6)	747 (40.1)	(41.2)	

<b>Don't Know/Not Sure/Refused</b>	1 (1.5)	(1.7)	35 (1.9)	(1.7)	
Mammogram within the past two years	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Yes</b>	53 (81.5%)	(81.8%)	1393 (74.7%)	(73.8%)	0.357
<b>No</b>	11 (16.9)	(16.5)	436 (23.4)	(24.5)	
<b>Don't Know/Not Sure/Refused</b>	1 (1.5)	(1.7)	35 (1.9)	(1.7)	
Clinical Breast Exam within the past year	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Yes</b>	43 (66.2%)	(65.7%)	929 (49.9%)	(50.2%)	0.030
<b>No</b>	19 (29.2)	(28.0)	843 (45.3)	(45.3)	
<b>Don't Know/Not Sure/Refused</b>	3 (4.6)	(6.2)	89 (4.8)	(4.5)	
<b>Surveyed Population, Males age ≥ 40 years</b>					
	Cow Creek (Crude)	Cow Creek (Age-Adjusted) <sup>a</sup>	NHW (Crude)	NHW (Age-Adjusted) <sup>a</sup>	P-value
	(n=73)		(n=1384)		
Prostate Specific Antigen within the past two years	N (Percent)	(Percent)	N (Percent)	(Percent)	P
<b>Yes</b>	30 (41.7%)	(34.1%)	589 (43.6%)	(33.8%)	0.227
<b>No</b>	36 (50.0)	(56.5)	641 (47.5)	(59.9)	
<b>Don't Know/Not Sure/Refused</b>	6 (8.3)	(9.4)	102 (8.9)	(6.3)	

Some categories do not equal to a full 100% due to rounding, missing and/or refusal/don't know answers.

<sup>a</sup> Age adjusted to the 2000 Standard U.S. Population.

<sup>b</sup> Excluded females who had had a hysterectomy.

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