# BINGHAM COUNTY CANCER PROFILE

A publication from the Cancer Data Registry of Idaho, Idaho Hospital Association.

# Cancer Incidence 2017–2021 Cancer Mortality 2018–2022 BRFSS 2011–2022

#### **RISK FACTORS AND INTERVENTIONS**

#### CANCER

Cancer is a group of over 100 different diseases, each characterized by the uncontrolled growth and spread of abnormal cells. Cancer risk increases with age and varies by gender and race. As the average age of the population increases, the incidence of cancer will increase as well.

An estimated 42% of all cancers in the United States are due to personal lifestyle factors, such as smoking and sedentary lifestyle, and are preventable (10.3322/caac.21440). Cancers are also attributable to environmental factors and geneenvironment interactions. Other non-modifiable factors, such as age, sex, and family history of specific cancers, are also associated with cancer risk and can help identify people at elevated risk for developing cancer.

For some cancers, early detection can save lives. For example, colorectal cancer screening reduces mortality in adults aged 50–75 years (10.1001/jama.2017.3332). Improved primary prevention, early detection, and effective treatment can reduce the burden of cancer in Idaho.

#### Aging:

As the population ages, the number of new cancer cases and cancer deaths that occur each year will continue to increase. This trend could be reversed through significant improvements in primary prevention, early detection, and treatment.

## **Smoking:**

Smoking and the use of smokeless tobacco are responsible for most cancers of the lung, trachea, bronchus, larynx, pharynx, oral cavity, and esophagus. Smoking is the leading cause of preventable death in the United States (PMID: 24455788).

#### Diet:

The U.S. Departments of Agriculture and Health and Human Services recommend the following dietary guidelines: eat a variety of foods; choose a diet with plenty of fruits, vegetables, and whole-grain products; limit the use of sugar, salt, and solid fats; and minimize alcoholic beverage consumption. For details, see <a href="https://www.dietaryguidelines.gov">https://www.dietaryguidelines.gov</a>

#### Screening:

Early detection through screening reduces morbidity and mortality for cancers that can be diagnosed early and treated.

FOR MORE INFORMATION

Cancer Data Registry of Idaho P.O. Box 1278 Boise, ID 83701 208-489-1380 https://www.idcancer.org National Cancer Institute
Cancer Information Services
1-800-4CANCER
<a href="https://www.cancer.gov/contact">https://www.cancer.gov/contact</a>

American Cancer Society <a href="https://www.cancer.org">https://www.cancer.org</a>

#### **CANCER INCIDENCE 2017–2021**

Nearly one in two Idahoans are estimated to develop cancer during their lifetime. During 2017–2021, 47,333 cases of invasive cancer were diagnosed among Idaho residents, and 1,094 cases of invasive cancer were diagnosed among Bingham County residents (Table 1).

**Table 1:** Incidence of All Cancers, Female Breast, Prostate, Lung and Bronchus, and Colorectal Cancers in Bingham County and the State of Idaho, 2017–2021

Cancer Incidence 2017–2021	Bingham County	State of Idaho		
All Sites/Types	1,094	47,333		
Female Breast	136	6,943		
Prostate	135	6,766		
Lung & Bronchus	100	4,959		
Colorectal	103	3,632		

Table 3 (Cancer Incidence 2017–2021, Comparison between Bingham County and the Remainder of the State of Idaho) shows the number of observed cases, person-years, crude rates, age- and sex-adjusted rates, expected number of cases based upon age- and sex-specific rates in the remainder of Idaho, and p-values for tests comparing the number of observed and expected cases in Bingham County. The table also shows the number of observed cases, person-

years, and crude rates for the remainder of the state of Idaho. Comparisons between the county and the remainder of the state were made for all cancers combined, 23 invasive cancer types, in situ breast cancer, non-malignant brain and other central nervous system tumors, and pediatric (0–19 years) cancer. Separate comparisons for males, females, and both sexes combined are included.

As shown in Table 3, the crude incidence rate of invasive cancer in Bingham County was 465.9 cases per 100,000 person-years per year during 2017–2021. Comparing this crude rate with the crude rate for the remainder of Idaho (528.0) gives an estimate of the relative burden of disease in Bingham County.

The age- and sex-adjusted incidence rate of invasive cancer in Bingham County, all sites combined, was 511.1 cases per 100,000 persons per year during 2017–2021. There were fewer cases of cancer in Bingham County (1,094) than expected (1,130.3) based upon rates in the remainder of the state, but the difference was not statistically significant.

There are many reasons why cancer incidence rates differ by county, such as the prevalence of smoking and other lifestyle factors, and access to healthcare.

#### **CANCER MORTALITY 2018–2022**

During 2018–2022, cancer was the second leading cause of death in Idaho; 15,233 Idaho residents and 362 Bingham County residents died from cancer during this period. Most cancer deaths are from five primary sites: lung, colon, pancreas, female breast, and prostate (Table 2).

**Table 2:** Overall and Cancer Mortality in Bingham County and the State of Idaho, 2018–2022

Mortality 2018–2022	Bingham County	State of Idaho
All Deaths	2,238	80,538
Cancer Deaths	362	15,233
% of All Deaths	16.2%	18.9%
Lung & Bronchus	65	2,937
Colorectal	39	1,332
Pancreas	20	1,190
Female Breast	30	1,111
Prostate	28	997

Table 4 (Cancer Mortality 2018–2022, Comparison between Bingham County and the Remainder of the State of Idaho) shows the number of observed deaths, person-years, crude rates, age- and sex-adjusted rates, expected number of deaths based upon age- and sex-specific rates in the remainder of Idaho, and p-values for tests comparing the number of observed and expected deaths for Bingham County. The table also shows the number of observed deaths, person-years, and crude rates for the remainder of the state of Idaho. Comparisons between the county and the remainder of the state were made for all deaths, all cancer deaths, and 21 specific cancer types. Separate comparisons for males, females, and both sexes combined are included.

The age- and sex-adjusted cancer mortality rate for Bingham County, all sites combined, was 168.0 deaths per 100,000 persons per year during 2018–2022, compared with 165.7 for the remainder of the state. There were more cancer deaths in Bingham County (362) than expected (357.1) based upon rates in the remainder of the state, but the difference was not statistically significant.

**Statistical Note:** Rates and percentages based upon 12 or fewer cases or deaths (numerator) should be interpreted with caution. **Data Note:** Mortality data may differ slightly from published official statistics from the Bureau of Vital Records and Health Statistics.

# TABLE 3: CANCER INCIDENCE 2017–2021 COMPARISON BETWEEN BINGHAM COUNTY AND THE REMAINDER OF THE STATE OF IDAHO

Cancer Site/Type         Sex         Observed Cases         Person Years         Crude Rate (1)         A.A.I. Rate (1,2)         Expected Cases (3)         P-Value (4)         Observed Cases         Person Years           All Sites Combined All Sites Combined All Sites Combined         Male Female         591 591 591 591 591 591 591 591 591 591	10.1 7.4 8.6
All Sites Combined         Total         1,094         234,814         465.9         511.1         1,130.3         0.287         46,239         8,757,292           All Sites Combined         Male         591         117,663         502.3         542.5         611.8         0.413         24,679         4,394,610           All Sites Combined         Female         503         117,151         429.4         475.8         522.5         0.408         21,560         4,362,682           Bladder         Total         49         234,814         20.9         23.2         52.5         0.696         2,171         8,757,292           Bladder         Male         42         117,663         35.7         38.7         42.7         0.995         1,731         4,394,610           Bladder         Female         7         117,151         6.0         6.7         10.5         0.360         440         4,362,682	528.0 561.6 494.2 24.8 39.4 10.1 7.4 8.6
All Sites Combined       Male       591       117,663       502.3       542.5       611.8       0.413       24,679       4,394,610         All Sites Combined       Female       503       117,151       429.4       475.8       522.5       0.408       21,560       4,362,682         Bladder       Total       49       234,814       20.9       23.2       52.5       0.696       2,171       8,757,292         Bladder       Male       42       117,663       35.7       38.7       42.7       0.995       1,731       4,394,610         Bladder       Female       7       117,151       6.0       6.7       10.5       0.360       440       4,362,682	561.6 494.2 24.8 39.4 10.1 7.4 8.6
All Sites Combined         Female         503         117,151         429.4         475.8         522.5         0.408         21,560         4,362,682           Bladder         Total         49         234,814         20.9         23.2         52.5         0.696         2,171         8,757,292           Bladder         Male         42         117,663         35.7         38.7         42.7         0.995         1,731         4,394,610           Bladder         Female         7         117,151         6.0         6.7         10.5         0.360         440         4,362,682	494.2 24.8 39.4 10.1 7.4 8.6
Bladder         Total         49         234,814         20.9         23.2         52.5         0.696         2,171         8,757,292           Bladder         Male         42         117,663         35.7         38.7         42.7         0.995         1,731         4,394,610           Bladder         Female         7         117,151         6.0         6.7         10.5         0.360         440         4,362,682	24.8 39.4 10.1 7.4 8.6
Bladder   Female   7   117,151   6.0   6.7   10.5   0.360   440   4,362,682	10.1 7.4 8.6
	7.4 8.6
	8.6
Brain - malignant Male 4 117,663 3.4 3.6 9.6 0.076 378 4,394,610	
Brain - malignant   Female   7   117,151   6.0   6.4   6.8   1.000   268   4,362,682	6.1
Brain and other CNS - non-malignant   Total   38   234,814   16.2   17.6   37.3   0.950   1,509   8,757,292	17.2
Brain and other CNS - non-malignant   Male   9   117,663   7.6   8.1   12.4   0.426   491   4,394,610   Brain and other CNS - non-malignant   Female   29   117,151   24.8   27.3   24.8   0.449   1,018   4,362,682	11.2 23.3
Breast Total 136 234,814 57.9 63.4 168.3 0.012 << 6,872 8,757,292	78.5
Breast Male - 117,663 - 1.6 0.398 65 4,394,610	1.5
Breast         Female         136         117,151         116.1         128.7         164.9         0.023         6,807         4,362,682           Breast - in situ         Total         23         234,814         9.8         10.7         33.0         0.087         1,346         8,757,292	156.0 15.4
Breast - in situ	0.1
Breast in situ   Female   23   117,155   19.6   21.7   32.6   0.101   1,342   4,362,682	30.8
Cervix Female 10 117,151 8.5 9.1 7.2 0.378 284 4,362,682	6.5
Colorectal         Total         103         234,814         43.9         48.0         86.5         0.092         3,529         8,757,292           Colorectal         Male         62         117.663         52.7         56.7         47.6         0.052         1.915         4.394.610	
Colorectal         Male         62         117,663         52.7         56.7         47.6         0.052         1,915         4,394,610           Colorectal         Female         41         117,151         35.0         38.8         39.1         0.799         1,614         4,362,682	43.6 37.0
Corpus Uteri Female 38 117,151 32.4 35.9 31.9 0.323 1,316 4,362,682	30.2
Esophagus Total 11 234,814 4.7 5.1 12.1 0.899 496 8,757,292	5.7
Esophagus   Male   9   117,663   7.6   8.2   10.5   0.805   420   4,394,610   Esophagus   Female   2   117,151   1.7   1.9   1.8   1.000   76   4,362,682	9.6
Esophagus         Female         2         117,151         1.7         1.9         1.8         1.000         76         4,362,682           Hodgkin Lymphoma         Total         3         234,814         1.3         1.3         5.6         0.387         219         8,757,292	1.7 2.5
Hodgkin Lymphoma Male 1 117,663 0.8 0.9 3.2 0.330 128 4,394,610	2.9
Hodgkin Lymphoma   Female   2   117,151   1.7   1.8   2.3   1.000   91   4,362,682	2.1
Kidney and Renal Pelvis Total 57 234,814 24.3 26.6 46.3 0.143 1,894 8,757,292	21.6
Kidney and Renal Pelvis         Male         33         117,663         28.0         30.2         31.7         0.865         1,277         4,394,610           Kidney and Renal Pelvis         Female         24         117,151         20.5         22.8         14.9         0.037 >>         617         4,362,682	29.1 14.1
Larynx Total 2 234,814 0.9 0.9 5.3 0.199 218 8,757,292	2.5
Larynx   Male   2   117,663   1.7   1.8   4.1   0.444   165   4,394,610	3.8
Larynx Female - 117,151 1.3 0.560 53 4,362,682	1.2
Leukemia         Total         54         234,814         23.0         24.9         41.4         0.068         1,673         8,757,292           Leukemia         Male         28         117,663         23.8         25.4         25.3         0.647         1,008         4,394,610	19.1 22.9
Leukemia Female 26 117,151 22.2 24.4 16.2 0.030 >> 665 4,362,682	15.2
Liver and Bile Duct Total 21 234,814 8.9 9.8 20.0 0.890 822 8,757,292	9.4
Liver and Bile Duct Male 15 117,663 12.7 13.8 14.4 0.934 579 4,394,610	
Liver and Bile Duct Female 6 117,151 5.1 5.7 5.9 1.000 243 4,362,682 Lung and Bronchus Total 100 234,814 42.6 47.3 117.3 0.115 4,859 8,757,292	5.6 55.5
Lung and Bronchus Male 60 117,663 51.0 55.5 59.9 1.000 2,435 4,394,610	55.4
Lung and Bronchus   Female   40   117,151   34.1   38.6   57.6   0.019 << 2,424   4,362,682	55.6
Melanoma of the Skin Total 56 234,814 23.8 26.1 75.7 0.022 << 3,088 8,757,292	35.3
Melanoma of the Skin         Male         41         117,663         34.8         37.6         46.0         0.517         1,854         4,394,610           Melanoma of the Skin         Female         15         117,151         12.8         14.0         30.2         0.003 <	42.2 28.3
Myeloma Total 15 234,814 6.4 7.1 17.3 0.690 713 8,757,292	8.1
Myeloma Male 9 117,663 7.6 8.3 10.8 0.716 438 4,394,610	10.0
Myeloma Female 6 117,151 5.1 5.8 6.6 1.000 275 4,362,682	6.3
Non-Hodgkin Lymphoma         Total         55         234,814         23.4         25.6         47.5         0.310         1,937         8,757,292           Non-Hodgkin Lymphoma         Male         28         117,663         23.8         25.6         27.9         1.000         1,118         4,394,610	22.1 25.4
Non-Hodgkin Lymphoma   Female   27   117,1551   23.0   25.6   19.8   0.140   819   4,362,682	18.8
Oral Cavity and Pharynx Total 24 234,814 10.2 11.2 31.6 0.197 1,291 8,757,292	14.7
Oral Cavity and Pharynx         Male         17         117,663         14.4         15.5         23.0         0.245         923         4,394,610           Oral Cavity and Pharynx         Female         7         117,151         6.0         6.7         8.9         0.678         368         4,362,682	21.0 8.4
Ovary Female 16 117,151 0.0 0.7 0.9 0.076 506 4,302,002	
Pancreas Total 28 234,814 11.9 13.2 35.4 0.239 1,460 8,757,292	
Pancreas Male 18 117,663 15.3 16.6 20.0 0.768 808 4,394,610	
Pancreas         Female         10         117,151         8.5         9.6         15.6         0.186         652         4,362,682           Prostate         Male         135         117,663         114.7         124.6         163.5         0.025 <	14.9 150.9
Stomach Total 13 234,814 5.5 6.1 11.2 0.676 461 8,757,292	
Stomach   Male   8   117,663   6.8   7.3   7.4   0.924   299   4,394,610	6.8
Stomach         Female         5         117,151         4.3         4.7         3.9         0.713         162         4,362,682	3.7
Testis Male 6 117,663 5.1 5.5 6.7 1.000 268 4,394,610	
Thyroid Total 58 234,814 24.7 26.5 28.1 0.000 >> 1,127 8,757,292 Thyroid Male 19 117,663 16.1 17.4 8.8 0.004 >> 353 4,394,610	
Thyroid Male 19 117,663 16.1 17.4 8.8 0.004 >> 353 4,394,610 Thyroid Female 39 117,151 33.3 35.6 19.4 0.000 >> 774 4,362,682	8.0 17.7
Pediatric Age 0 to 19 Total 15 77,578 19.3 19.6 13.0 0.644 410 2,421,746	
Pediatric Age 0 to 19 Male 7 39,475 17.7 17.8 6.6 0.972 207 1,234,846	16.8
Pediatric Age 0 to 19 Female 8 38,103 21.0 21.5 6.4 0.617 203 1,186,900	17.1

Notes: 1. Rates are expressed as the number of cases per 100,000 persons per year (person-years).

<sup>2.</sup> Age and sex-adjusted incidence (A.A.I.) rates for county use age and sex-specific crude rates for the remainder of the state as standard.

<sup>3.</sup> Expected cases are based upon age and sex-specific rates for the remainder of the state of Idaho (compare to observed).

<sup>4.</sup> P-values compare observed and expected cases, are two tailed, based upon the Poisson probability distribution.

<sup>&</sup>quot;<<" denotes significantly fewer cases observed than expected, ">>" denotes significantly more cases observed than expected (p=.05).

# **TABLE 4: CANCER MORTALITY 2018–2022** COMPARISON BETWEEN BINGHAM COUNTY AND THE REMAINDER OF THE STATE OF IDAHO

		Bingham County							Remainder of Idaho			
Cause of Death		Observed	Person	Crude	A.A.M.	Expected		Observed	Person	Crude		
Cancer Site/Type	Sex	Deaths	Years	Rate (1)	Rate (1,2)	Deaths (3)	P-Value (4)	Deaths	Years	Rate (1)		
All Causes of Death	Total	2,238	238,849	937.0	1,030.6	1,894.9	0.000 >>	78,297	8,972,545	872.6		
All Causes of Death	Male	1,208	119,875	1,007.7	1,086.9	1,025.1	0.000 >>	41,578	4,507,822	922.4		
All Causes of Death	Female	1,030	118,974	865.7	969.5	873.7	0.000 >>	36,719	4,464,723	822.4		
All Malignant Cancers	Total	362 194	238,849 119,875	151.6 161.8	168.0 175.8	357.1 196.8	0.808 0.879	14,871 8,041	8,972,545 4,507,822	165.7 178.4		
All Malignant Cancers All Malignant Cancers	Male Female	168	118,974	141.2	175.6	161.5	0.679	6,830	4,464,723	153.0		
Bladder	Total	15	238,849	6.3	7.0	11.3	0.330	470	8,972,545	5.2		
Bladder	Male	11	119,875	9.2	9.9	8.9	0.574	364	4,507,822	8.1		
Bladder	Female	4	118,974	3.4	3.8	2.5	0.477	106	4,464,723	2.4		
Brain and Other Nervous System	Total	8	238,849	3.3	3.6	12.5	0.251	510	8,972,545	5.7		
Brain and Other Nervous System	Male	4	119,875	3.3	3.6	7.1	0.331	285	4,507,822	6.3		
Brain and Other Nervous System	Female	4	118,974	3.4	3.7	5.4	0.733	225	4,464,723	5.0		
Breast Breast	Total Male	30	238,849 119,875	12.6	13.8	26.4 0.3	0.535 1.000	1,094 13	8,972,545	12.2		
Breast	Female	30	118,974	25.2	28.2	25.7	0.448	1,081	4,507,822 4,464,723	0.3 24.2		
Cervix	Female	5	118,974	4.2	4.5	2.0	0.446	83	4,464,723	1.9		
Colorectal	Total	39	238,849	16.3	18.0	31.3	0.202	1,293	8,972,545	14.4		
Colorectal	Male	23	119,875	19.2	20.7	17.5	0.236	709	4,507,822	15.7		
Colorectal	Female	16	118,974	13.4	15.1	13.9	0.638	584	4,464,723	13.1		
Corpus Uteri	Female	5	118,974	4.2	4.8	3.9	0.687	164	4,464,723	3.7		
Esophagus	Total	10	238,849	4.2	4.6	10.8	0.963	451	8,972,545	5.0		
Esophagus	Male Female	9	119,875 118,974	7.5 0.8	8.2 1.0	9.4 1.6	1.000 1.000	382 69	4,507,822 4,464,723	8.5 1.5		
Esophagus Hodgkin Lymphoma	Total	- '	238,849	U.0 -	1.0	0.6	1.000	25	8,972,545	0.3		
Hodgkin Lymphoma	Male	-	119,875	_	_	0.3	1.000	14	4,507,822	0.3		
Hodgkin Lymphoma	Female	_	118,974	_	_	0.3	1.000	11	4,464,723	0.2		
Kidney	Total	12	238,849	5.0	5.6	9.0	0.385	374	8,972,545	4.2		
Kidney	Male	9	119,875	7.5	8.2	5.8	0.264	237	4,507,822	5.3		
Kidney	Female	3	118,974	2.5	2.9	3.2	1.000	137	4,464,723	3.1		
Larynx	Total	-	238,849	-	-	1.8	0.319	76	8,972,545	0.8		
Larynx	Male	-	119,875	-	-	1.6	0.402	65	4,507,822	1.4		
Larynx Leukemia	Female Total	- 18	118,974 238,849	7.5	8.4	0.3 15.5	1.000 0.597	11 647	4,464,723 8,972,545	0.2 7.2		
Leukemia Leukemia	Male	8	119,875	6.7	7.2	9.5	0.397	389	4,507,822	8.6		
Leukemia	Female	10	118,974	8.4	9.5	6.1	0.180	258	4,464,723	5.8		
Liver and Bile Duct	Total	13	238,849	5.4	6.0	14.9	0.740	622	8,972,545	6.9		
Liver and Bile Duct	Male	8	119,875	6.7	7.3	10.1	0.633	415	4,507,822	9.2		
Liver and Bile Duct	Female	5	118,974	4.2	4.7	4.9	1.000	207	4,464,723	4.6		
Lung and Bronchus	Total	65	238,849	27.2	30.4	68.5	0.734	2,872	8,972,545	32.0		
Lung and Bronchus	Male	42	119,875	35.0	38.3	36.5	0.398	1,499	4,507,822	33.3		
Lung and Bronchus Melanoma of the Skin	Female Total	23	118,974 238,849	19.3 0.4	22.0 0.5	32.1 7.3	0.117 0.012 <b>&lt;&lt;</b>	1,373 300	4,464,723 8,972,545	30.8		
Melanoma of the Skin	Male	│ _ ' │	119,875	-	0.5	4.9	0.012 <<	200	4,507,822	3.3 4.4		
Melanoma of the Skin	Female	1	118,974	0.8	0.9	2.4	0.618	100	4,464,723	2.2		
Myeloma	Total	9	238,849	3.8	4.2	7.5	0.682	316	8,972,545	3.5		
Myeloma	Male	6	119,875	5.0	5.5	4.4	0.569	182	4,507,822	4.0		
Myeloma	Female	3	118,974	2.5	2.9	3.1	1.000	134	4,464,723	3.0		
Non-Hodgkin Lymphoma	Total	13	238,849	5.4	6.0	13.3	1.000	555	8,972,545	6.2		
Non-Hodgkin Lymphoma	Male	4	119,875	3.3	3.6	7.5	0.264	306	4,507,822	6.8		
Non-Hodgkin Lymphoma Oral Cavity and Pharynx	Female Total	9	118,974 238,849	7.6 2.5	8.6 2.8	5.8 6.4	0.273 1.000	249 269	4,464,723 8,972,545	5.6 3.0		
Oral Cavity and Pharynx	Male	4	119,875	3.3	3.6	4.6	1.000	188	4,507,822	4.2		
Oral Cavity and Pharynx	Female	2	118,974	1.7	1.9	1.9	1.000	81	4,464,723	1.8		
Ovary	Female	16	118,974	13.4	15.2	8.1	0.019 >>	345	4,464,723	7.7		
Pancreas	Total	20	238,849	8.4	9.3	27.9	0.148	1,170	8,972,545	13.0		
Pancreas	Male	13	119,875	10.8	11.9	15.5	0.637	637	4,507,822	14.1		
Pancreas	Female	7	118,974	5.9	6.7	12.5	0.137	533	4,464,723	11.9		
Prostate	Male	28	119,875	23.4	25.4	23.7	0.429	969	4,507,822	21.5		
Stomach	Total	5	238,849	2.1	2.3	4.6	0.967	189 115	8,972,545	2.1		
Stomach	Male	4	119,875	3.3	3.6	2.8	0.628	115	4,507,822	2.6		
Stomach	Female		118,974 ne number of cases i	8.0	0.9	1.8	0.932	74	4,464,723	1.7		

Notes: 1. Rates are expressed as the number of cases per 100,000 persons per year (person-years).

Statistical Notes: Rates based upon 12 or fewer cases (numerator) should be interpreted with caution.

Mortality statistics presented differ from BVRHS official statistics due to differences in methodology.

Data Source: Bureau of Vital Records and Health Statistics (BVRHS), Division of Public Health, Idaho Department of Health and Welfare, 2023.

<sup>2.</sup> Age and sex-adjusted mortality (A.A.M.) rates for county use age and sex-specific crude rates for the remainder of the state as standard.

<sup>3.</sup> Expected cases are based upon age and sex-specific rates for the remainder of the state of Idaho (compare to observed).

<sup>4.</sup> P-values compare observed and expected cases, are two tailed, based upon the Poisson probability distribution.

"<" denotes significantly fewer cases observed than expected, ">>" denotes significantly more cases observed than expected (p=.05).

# **Cancer Screening and Risk Factors**

The Division of Public Health (DPH), Idaho Department of Health and Welfare, under a cooperative agreement with the Centers for Disease Control and Prevention, has conducted telephone Behavioral Risk Factor Surveys since 1984. These surveys are conducted with randomly selected adult Idahoans to measure population prevalences of risk factors for major causes of death in the U.S., including cancer. DPH provided Behavioral Risk Factor Surveillance System (BRFSS) data from 2011 through 2022 to CDRI staff, who performed the analyses reported in these *County Profiles*. Analysis weights were post-stratified to 2022 population estimates by age group, sex, and county, beginning with the BRFSS raked weights. Not all questions were asked in all years. Crude prevalence estimates are presented herein; a minimum of 50 respondents was required to generate county-level statistics. Results may differ from IDHW reports due to differences in methods. Cancer screening and risk factor measures were selected to assist in monitoring *Comprehensive Cancer Alliance for Idaho* (CCAI) objectives. Wald log-linear chi-square statistics were used to test for independence of the selected measures and other variables, such as age and race, taking the complex survey design into account.

#### Cancer Screening and Risk Factor Prevalence Estimates, 2011–2022

	State of								Bingham
Measure	Idaho	HD 1	HD 2	HD 3	HD 4	HD 5	HD 6	HD 7	County
Access to Care									_
Have Health Insurance, Age < 65 (2021–2022)	90.0%	89.3%	87.8%	86.4%	92.6%	87.2%	89.1%	92.6%	89.7%
Not See Doctor Due to Cost in Past Year (2020–2022)	10.4%	9.5%	11.0%	11.0%	10.2%	10.2%	10.4%	11.3%	8.2%
Cancer Screening									
Mammogram Past 2 Years, Age 40–74 (2014–2022, even years)	62.9%	61.0%	70.0%	60.3%	66.1%	58.9%	61.0%	62.5%	57.6%
Pap Test Past 3 Years, Cervix Intact Age 21–65 (2018, 2020)	71.1%	73.7%	73.6%	70.9%	72.9%	69.4%	69.3%	65.5%	50.6%
Colorectal Cancer Screening, Age 45–75 (2022)	63.3%	61.0%	62.5%	60.8%	67.2%	65.0%	60.4%	60.2%	60.5%
Tobacco Use									
Current Tobacco User (2020–2022)	22.1%	24.3%	20.4%	24.8%	21.3%	22.5%	22.6%	18.1%	21.6%
Other Cancer-Related									
Healthy Weight by Body Mass Index, Age 20+ (2020–2022)	30.0%	30.0%	30.1%	26.5%	33.7%	27.5%	26.7%	30.2%	20.2%
Any Physical Activity Besides Job Past 30 Days (2018–2022)	79.1%	79.0%	78.0%	75.4%	82.7%	75.2%	76.7%	81.0%	76.2%
Meet Physical Activity Guidelines (2011, 2013, 2015, 2017, 2019)	22.0%	22.8%	19.2%	20.0%	25.2%	19.5%	20.4%	20.3%	18.9%
Home Ever Tested for Radon (2016, 2018, 2020)	22.9%	30.8%	18.3%	16.9%	25.2%	20.1%	23.0%	21.0%	24.1%

#### **Access to Care**

#### Have Health Insurance - 2021-2022

Statewide, 90.0% of adults aged 18–64 reported having health care coverage. Health care coverage differed significantly by race/ethnicity, with 91.4% of white non-Hispanics, compared to 81.5% of Hispanics and 90.5% of Native Americans, having health insurance. Spanish-speaking respondents were significantly less likely to be insured (46.0%) than English-speaking respondents (90.5%). Health care coverage differed significantly by age of respondent, with 87.2% of persons aged 18–29, and 93.4% of persons aged 50–64, having health insurance. Health care coverage differed significantly by county, with a range of 64.8% in Idaho County to 95.9% in Shoshone County having health insurance.

#### Not See Doctor Due to Cost in Past Year – 2020–2022

Statewide, 10.4% of adults aged 18+ reported they needed to see a doctor but could not because of cost sometime in the past 12 months. Inability to see a doctor due to cost differed significantly by race/ethnicity (9.2% of white non-Hispanics, 16.9% of Hispanics, and 15.7% of Native Americans). Inability to see a doctor due to cost differed significantly by annual household income (21.9% for less than \$15,000, 5.8% for greater than \$50,000).

#### **Cancer Screening**

#### Mammogram - 2014-2022, even years

Statewide, 62.9% of women aged 40–74 reported having a mammogram in the past 2 years. Insured women were about twice as likely to have had a mammogram in the past 2 years (66.3% versus 31.2%). Mammography rates differed significantly by county, with a range in screening of 41.6% in Owyhee County to 76.1% in Nez Perce County. In 2022, Idaho ranked 49<sup>th</sup> among states and the District of Columbia for mammography screening rates among women aged 40+.

# Pap Test - 2018, 2020

Statewide, 71.1% of women with an intact cervix and aged 21–65 reported having a Pap test in the past 3 years. Women with health insurance were significantly more likely to have timely Pap screening than uninsured women (75.0% versus 52.8% screened in the past 3 years). Pap screening differed significantly by county, with a range of 50.6% in Bingham County to 78.9% in Bannock County. In 2020, Idaho ranked 49<sup>th</sup> among states and the District of Columbia for Pap screening rate.

# <u>Colorectal Cancer Screening</u> – 2022

Statewide, 63.3% of adults aged 45–75 reported being current for colorectal cancer screening.\*\* Persons with health insurance were over twice as likely to be current for colorectal cancer screening. In 2022, Idaho ranked 42<sup>nd</sup> among states and the District of Columbia in the percentage of adults aged 45–75 and older who reported being up-to-date for colorectal cancer screening.

<sup>\*\*</sup> Current for colorectal cancer screening means a blood stool test in the past year, sigmoidoscopy in the past 5 years and blood stool test in the past 3 years, blood stool DNA test in the past 3 years, virtual colonoscopy in the past 5 years, or a colonoscopy in the past 10 years.

# **Cancer Screening and Risk Factors**

#### **Tobacco Use**

#### Current Tobacco Use - 2020-2022

Current tobacco use includes at least 1 form of cigarettes; cigars, cigarillos, filtered little cigars; regular pipes, water pipes, hookah; e-cigarettes; and/or smokeless tobacco products every day or some days. Statewide, 22.1% of adults aged 18 and older were current tobacco users. Tobacco use differed significantly by age of respondent, with 28.9% of persons aged 18–29, and 10.7% of persons aged 65 and older reporting current tobacco use. Tobacco use was lower among white non-Hispanics (21.5%) than among Native Americans (38.0%). Tobacco use differed significantly by county, with a range of 6.1% in Madison County to 33.5% in Elmore County. Counties with higher rates of tobacco use had significantly higher rates of lung cancer.

#### Other Cancer-Related

#### Healthy Weight by Body Mass Index - 2020-2022

Statewide, 30.0% of adults aged 20 and older were in the healthy weight range as measured by body mass index (BMI 18.5–24.9). BMI differed significantly by race/ethnicity, with 30.5% of white non-Hispanics, compared to 25.8% of Hispanics and 21.5% of Native Americans, being in the healthy weight range. Males (24.4%) were significantly less likely to be in the healthy weight range than females (35.7%). BMI differed significantly by age of respondent, with 41.1% of persons aged 18–29, and 23.4% of persons aged 50–64, being in the healthy weight range. BMI differed significantly by county, with a range of 11.7% in Power County to 44.3% in Blaine County of adults being in the healthy weight range.

## Any Physical Activity - 2018-2022

CCAI is measuring physical activity with two metrics: Any physical activity besides job in past 30 days and meeting aerobic and strength physical activity guidelines during the past month or week. Statewide, 79.1% of adults aged 18 and older reported physical activity besides their job in the past 30 days. Physical activity differed significantly by age of respondent, with 83.7% of persons aged 18–29, and 72.5% of persons aged 65+, reporting any physical activity besides their job. The percentage of adults reporting any physical activity differed significantly by county, with a range of 66.9% in Oneida County to 88.3% in Teton County. Counties with higher rates of physical activity had significantly lower rates of overall and colorectal cancer.

Physical Activity Guidelines – 2011, 2013, 2015, 2017, 2019 Statewide, 22.0% of adults aged 18 and older met aerobic and strength physical activity guidelines during the past month or week. Meeting physical activity guidelines differed significantly by age of respondent, with 26.2% of persons aged 18–29, and 19.2% of persons aged 50–64, meeting guidelines. The percentage of adults meeting physical activity guidelines differed significantly by county, with a range of 9.5% in Franklin County to 30.7% in Blaine County.

#### Home Radon Testing - 2016, 2018, 2020

Statewide, 22.9% of adults have ever tested their house for radon. Radon test usage varied significantly by race/ethnicity, with 25.1% of white non-Hispanics, 7.3% of Hispanics, and 25.4% of Native Americans having ever tested their house for radon. Radon test usage was higher for persons aged 50+ than for younger persons. Home radon testing differed significantly by county, with a range of 8.7% in Cassia County to 54.7% in Blaine County.

This project has been funded in whole or in part with Federal funds from the National Cancer Institute, National Institutes of Health, Department of Health and Human Services, under Contract No. HHSN261201800006I and the Centers for Disease Control and Prevention, Department of Health and Human Services, under Cooperative Agreement NU58DP007160. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention or the National Cancer Institute.



