

CANCER IN IDAHO – 2019 Preliminary

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PREFACE

"Cancer in Idaho, 2019, Preliminary Data" provides a provisional assessment of cancer in Idaho. This preliminary report is published by the Cancer Data Registry of Idaho (CDRI) when estimated completeness exceeds 90%. These data are preliminary and subject to change. This report is a precursor to "Cancer in Idaho – 2019," which will be the forty-third annual report of the Cancer Data Registry of Idaho (CDRI) and describe the state of cancer among Idaho residents, with a focus on cancer cases diagnosed during 2019. The data can be used by public health officials, hospital administrators, physicians, the Comprehensive Cancer Alliance for Idaho, and others to effectively plan services, appropriately allocate health resources, develop and measure prevention and intervention strategies, and identify high-risk populations in Idaho.

ACKNOWLEDGMENTS

The Idaho Hospital Association (IHA) contracts with, and receives funding from, the Idaho Department of Health and Welfare, Division of Public Health, to provide a statewide cancer surveillance system.

The statewide cancer registry database is a product of collaboration among many report sources, including hospitals, physicians, surgery centers, pathology laboratories, and other states in which Idaho residents are diagnosed or treated for cancer. Their cooperation in reporting timely, accurate, and complete cancer data is acknowledged and sincerely appreciated.

CDRI also thanks the Division of Public Health, Idaho Department of Health and Welfare, and the Comprehensive Cancer Alliance for Idaho for their continued partnership and for using CDRI data as a tool in cancer control and prevention.

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Introduction to the Cancer Data Registry of Idaho (CDRI)

Purpose of the Registry

Population-based cancer registries are essential for assessing the extent of cancer burden in a specified geographic area. The Cancer Data Registry of Idaho (CDRI) is a population-based cancer registry that collects incidence and survival data on all cancer patients who are Idaho residents or patients who are diagnosed or treated for cancer in the state of Idaho. The goals of CDRI are to:

- ◆ determine the incidence of cancer in the state of Idaho with respect to geographic, demographic, and community characteristics;
- ◆ monitor trends and patterns of cancer incidence over time;
- ◆ identify high-risk populations;
- ◆ serve as a resource for conducting epidemiologic studies; and
- ◆ provide data to assist public health officials, hospital administrators, and physicians to effectively plan services, appropriately allocate health resources, and develop and measure prevention and intervention strategies.

CDRI works closely with the Comprehensive Cancer Alliance for Idaho (CCAI), the Idaho Comprehensive Cancer Control Program, and other organizations to lessen the burden of cancer in Idaho.

History and Funding of the Registry

CDRI was established in 1969 and became population-based in 1971. The Idaho State Legislature has provided guidelines for the establishment, requirements, and funding of the statewide cancer registry. The operations of the registry are mandated by Idaho Code 57-1703 through 57-1707. Funding is appropriated in Idaho Code 57-1701 and 63-2520, which delineates that a portion (less than one percent) of the cigarette tax be dedicated to fund the statewide cancer registry. Through the National Program of

Cancer Registries (NPCR), additional funding has been awarded to CDRI from the Centers for Disease Control and Prevention (CDC) to enhance timely, complete, and accurate data collection, computerization, and reporting of reliable data. In May 2018, the National Cancer Institute (NCI) awarded the Idaho Hospital Association (IHA) a contract to operate CDRI as part of the Surveillance, Epidemiology, and End Results (SEER) Program.

Collection of Data

Each Idaho hospital, outpatient surgery center, and pathology laboratory is responsible for the complete ascertainment and reporting of all data on cancer diagnoses and treatments provided in its facility within six months of diagnosis. Sources for identifying eligible cases include:

- ◆ hospitals;
- ◆ outpatient surgery centers;
- ◆ private pathology laboratories;
- ◆ free-standing radiation centers;
- ◆ physicians (for patients not receiving cancer diagnoses or treatment in the above sources);
- ◆ death certificates; and
- ◆ other state cancer registries reporting an Idaho resident with cancer (as negotiated).

When a cancer case is reported from more than one source, the information is consolidated into one record.

Reported cases contain the following data:

- ◆ patient demographics (including geographic place of residence at time of cancer diagnosis);
- ◆ description of cancer (including date of diagnosis, primary site, metastatic sites, histology, extent of disease, etc.);
- ◆ first course of treatment; and
- ◆ follow-up data for purpose of calculating survival rates.

Primary site, behavior, grade, and histology were coded according to the *International Classification of Diseases for Oncology, 3rd edition*.¹ Stage of disease variables were coded using SEER's *Summary Staging Manual 2018* and the *AJCC Manual for Staging of Cancer, 8th edition*.^{2,3} All other variables were coded following the rules of the North American Association of Central Cancer Registries (NAACCR), the National Cancer Institute's SEER program, and the American College of Surgeons Commission on Cancer.⁴⁻⁶ Rules for coding multiple primary cases and hematopoietic and lymphoid neoplasms were applied based on the year of diagnosis.^{7,8}

Reportable Cases

All in situ and malignant neoplasms are reportable to CDRI. The database includes all cases of carcinoma, sarcoma, melanoma, lymphoma, and leukemia diagnosed by histology/cytology, radiology, laboratory testing, clinical observation, and autopsy.

Benign tumors of the brain, meninges, spinal cord, any other part of the central nervous system, pineal gland, and pituitary gland are also reportable.

Basal and squamous cell carcinomas of the skin are excluded except when occurring on a mucous membrane.

Under Idaho Code and as recommended by NAACCR, cervix in situ cases are not currently reportable.

Confidentiality of Data

Idaho state law ensures the protection of confidential data and restricts the release of identifying data. Only aggregate data are published. The same law protects report sources from any liability for reporting confidential data to CDRI. Persons with access to confidential data are required to sign a pledge of confidentiality and are subject to penalty if they, through negligence or willful misconduct, disclose confidential data.

Quality Assurance

To assure validity and reliability of data presented, CDRI has many mechanisms in place to check data for quality and completeness. CDRI uses SEER*DMS, SEER*Edits, and GenEDITS Plus software, which apply algorithms that check the values of data fields against an encoded set of acceptable possible values and flags the acceptability of coded data. Edits include field edits, inter-field edits, and inter-record edits. Edits check for unlikely sex/site, site/histology, and site/age combinations. Records are also routinely checked for duplicate entries using manual and probabilistic record linkage methods.

CDRI has met SEER and NPCR program standards and is recognized as a "gold standard registry" for data quality, completeness, and timeliness as designated by NAACCR. These designations allow Idaho data to be included in *United States Cancer Statistics* and all NAACCR volumes of *"Cancer Incidence in North America."* Idaho data have been included in SEER-21 statistics published by NCI since April 2019.

2019 Idaho Cancer Incidence Rates by Sex (Preliminary)

Primary Site	Total			Male			Female		
	Rate	Cases	Pop	Rate	Cases	Pop	Rate	Cases	Pop
All Sites	414.4	8,784	1,787,065	441.8	4,558	895,928	394.0	4,226	891,137
Bladder	19.8	424	1,787,065	35.1	347	895,928	6.7	77	891,137
Brain - malignant	6.9	138	1,787,065	8.3	83	895,928	5.5	55	891,137
Brain and other CNS - non-malignant	15.3	310	1,787,065	10.5	102	895,928	19.8	208	891,137
Breast	63.6	1,323	1,787,065	1.6	15	895,928	122.7	1,308	891,137
Breast - in situ	11.7	244	1,787,065	0.1	1	895,928	22.9	243	891,137
Cervix	--	--	--	--	--	--	7.6	67	891,137
Colorectal	32.6	678	1,787,065	35.4	358	895,928	29.9	320	891,137
Corpus Uteri	--	--	--	--	--	--	23.7	261	891,137
Esophagus	4.4	97	1,787,065	7.7	80	895,928	1.5	17	891,137
Hodgkin Lymphoma	2.7	48	1,787,065	2.6	24	895,928	2.9	24	891,137
Kidney and Renal Pelvis	19.2	398	1,787,065	25.5	253	895,928	13.2	145	891,137
Larynx	1.7	41	1,787,065	2.7	31	895,928	0.8	10	891,137
Leukemia	15.3	315	1,787,065	19.4	190	895,928	11.6	125	891,137
Liver and Bile Duct	6.8	151	1,787,065	9.0	99	895,928	4.7	52	891,137
Lung and Bronchus	42.5	942	1,787,065	42.4	445	895,928	42.8	497	891,137
Melanoma of the Skin	28.0	570	1,787,065	32.8	326	895,928	24.0	244	891,137
Myeloma	5.7	121	1,787,065	7.1	72	895,928	4.4	49	891,137
Non-Hodgkin Lymphoma	17.9	370	1,787,065	20.8	208	895,928	15.2	162	891,137
Oral Cavity and Pharynx	10.8	237	1,787,065	16.1	169	895,928	5.8	68	891,137
Ovary	--	--	--	--	--	--	9.3	107	891,137
Pancreas	12.8	280	1,787,065	14.4	151	895,928	11.4	129	891,137
Prostate	--	--	--	107.7	1,199	895,928	--	--	--
Stomach	3.7	78	1,787,065	4.9	51	895,928	2.5	27	891,137
Testis	--	--	--	5.7	50	895,928	--	--	--
Thyroid	12	217	1,787,065	6.7	61	895,928	17.4	156	891,137
Pediatric Age 0 to 19	15.3	76	496,173	15.8	40	253,202	14.9	36	242,971

Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard.

All Sites category includes additional primary sites not listed.

Cases include malignant behavior for all ages besides the three highlighted rows.

Bladder includes malignant and in situ behavior.

2019 Idaho Cancer Incidence Counts by Behavior (Preliminary)

Primary Site	In situ	Malignant
All Sites	1,098	8,597
Bladder	187	237
Brain	0	138
Breast	244	1,323
Cervix	0	67
Colorectal	7	678
Corpus Uteri	1	261
Esophagus	1	97
Hodgkin Lymphoma	0	370
Kidney and Renal Pelvis	11	398
Larynx	0	41
Leukemia	0	315
Liver and Bile Duct	0	151
Lung and Bronchus	4	942
Melanoma of the Skin	614	570
Myeloma	0	121
Non-Hodgkin Lymphoma	0	370
Oral Cavity and Pharynx	9	237
Ovary	1	107
Pancreas	5	280
Prostate	0	1,199
Stomach	0	78
Testis	0	50
Thyroid	3	217
Pediatric Age 0 to 19	0	76

All Sites category includes additional primary sites not listed.

2019 Idaho Cancer Incidence Counts by SEER Summary Stage (Preliminary)

Primary Site	In situ	Localized	Regional	Distant	Unstaged
All Sites	1,098	4,186	1,775	2,156	480
Bladder	187	162	31	33	11
Brain	0	108	23	3	4
Breast	244	876	350	82	15
Cervix	0	31	26	9	1
Colorectal	7	217	271	146	44
Corpus Uteri	1	181	45	16	19
Esophagus	1	25	25	40	7
Hodgkin Lymphoma	0	88	53	202	27
Kidney and Renal Pelvis	11	290	45	59	4
Larynx	0	20	14	5	2
Leukemia	0	1	0	301	13
Liver and Bile Duct	0	70	43	23	15
Lung and Bronchus	4	268	166	467	41
Melanoma of the Skin	614	489	46	22	13
Myeloma	0	6	0	111	4
Non-Hodgkin Lymphoma	0	88	53	202	27
Oral Cavity and Pharynx	9	77	127	14	19
Ovary	1	19	16	63	9
Pancreas	5	58	67	140	15
Prostate	0	875	172	87	65
Stomach	0	21	23	28	6
Testis	0	28	21	1	0
Thyroid	3	127	85	5	0
Pediatric Age 0 to 19	0	26	10	36	4

All Sites category includes additional primary sites not listed.

2019 Idaho Malignant Cancer Incidence Rates by Age (Preliminary)

Age at Diagnosis	Rate	Cases	Pop
00-04	23.2	27	116,200
05-09	8.9	11	123,317
10-14	11.4	15	131,471
15-19	18.4	23	125,185
20-24	41.2	48	116,434
25-29	51.8	63	121,631
30-34	89.7	103	114,859
35-39	145.5	172	118,233
40-44	230.4	251	108,939
45-49	304.5	313	102,792
50-54	438.5	434	98,974
55-59	755.9	828	109,541
60-64	1,004.4	1,093	108,819
65-69	1,472.2	1,441	97,884
70-74	1,849.1	1,442	77,982
75-79	2,194.9	1,162	52,941
80-84	2,405.8	772	32,089
85+	1,968.2	586	29,774

Rates are per 100,000.

Bladder cases included in these statistic are malignant and in situ.

2019 Idaho Cancer Mortality Rates by Sex (Final)

Cause of Death	Total			Male			Female		
	Rate	Deaths	Pop	Rate	Deaths	Pop	Rate	Deaths	Pop
All Causes of Death	716.8	14,430	1,787,065	811.2	7,537	895,928	628.6	6,893	891,137
All Malignant Cancers	138.3	2,928	1,787,065	161.8	1,595	895,928	119.1	1,333	891,137
Bladder	5.3	108	1,787,065	9.7	86	895,928	1.9	22	891,137
Brain and Other Nervous System	5.6	117	1,787,065	6.9	71	895,928	4.4	46	891,137
Breast	10.0	206	1,787,065	0.3	4	895,928	18.5	202	891,137
Cervix	--	--	--	--	--	--	1.8	18	891,137
Colorectal	12.3	252	1,787,065	14.6	141	895,928	10.2	111	891,137
Corpus Uteri	--	--	--	--	--	--	2.5	30	891,137
Esophagus	4.1	89	1,787,065	7.4	78	895,928	1.1	11	891,137
Hodgkin Lymphoma	0.3	5	1,787,065	0.2	2	895,928	0.3	3	891,137
Kidney	3.0	65	1,787,065	3.3	35	895,928	2.7	30	891,137
Larynx	0.7	14	1,787,065	1.3	13	895,928	0.1	1	891,137
Leukemia	6.2	126	1,787,065	8.2	78	895,928	4.5	48	891,137
Liver and Bile Duct	5.1	118	1,787,065	6.8	74	895,928	3.6	44	891,137
Lung and Bronchus	26.3	572	1,787,065	29.5	303	895,928	23.6	269	891,137
Melanoma of the Skin	2.9	59	1,787,065	4.0	37	895,928	2.2	22	891,137
Myeloma	2.7	56	1,787,065	3.4	32	895,928	2.2	24	891,137
Non-Hodgkin Lymphoma	5.0	105	1,787,065	5.5	54	895,928	4.6	51	891,137
Oral Cavity and Pharynx	2.5	55	1,787,065	3.6	37	895,928	1.6	18	891,137
Ovary	--	--	--	--	--	--	5.8	65	891,137
Pancreas	10.2	225	1,787,065	11.0	114	895,928	9.5	111	891,137
Prostate	--	--	--	19.6	182	895,928	--	--	--
Stomach	1.7	35	1,787,065	2.2	22	895,928	1.2	13	891,137
Testis	--	--	--	0.1	1	895,928	--	--	--
Thyroid	0.5	12	1,787,065	0.6	6	895,928	0.5	6	891,137

Data source: Bureau of Vital Records and Health Statistics (BVRHS), Idaho Department of Health and Welfare, 2020. Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard. Cause of death categories are based on SEER cause of death recodes (<http://seer.cancer.gov/codrecode/>), which differ from official BVRHS cancer mortality categories. Death counts may differ from official BVRHS statistics due to late filings.

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