US Cancer Prevalence: Change in the method to include people with multiple tumors

Introduction

Cancer prevalence measures the dimension of the cancer burden and is increasingly being used for planning and resources allocation and to quantify the cancer survivorship population. This year US cancer prevalence is estimated using a different method with respect to the inclusion of people with multiple tumors. The new method provides a better quantification of prevalence by cancer site.

Old method: first invasive tumor per person

In previous reports published from 2002 through 2016 that used data from 1975-1999 through 1975-2013, respectively, prevalence was calculated using the *first invasive tumor per person* inclusion criteria. This method is calculated by selecting only invasive cancers that are the first tumor diagnosed of a person between the span of the diagnosis years. In situ cancers and second-or-later primary cancers were not included. Thus, if a woman had a melanoma prior to a breast cancer diagnosis, her melanoma would contribute to the prevalence of melanoma and to the prevalence of all sites, but the breast cancer would not contribute to the prevalence of breast cancer. This method was initially chosen because it identified a person with only one tumor avoiding some ambiguity in prevalence counts, and the individual cancer sites prevalence would sum to the all sites prevalence. However, it underestimated prevalence by specific cancer sites, since the second and later tumors were not included even if they were of a site different than the first.

New method: First invasive tumor per cancer site for the total prevalence duration

If we are calculating the prevalence of people diagnosed between 1975-2013 we include people for their *first invasive tumor per cancer site between 1975-2013*. In the example above the woman would also be include in the breast cancer prevalence for her breast cancer. For more details of the method see below. The other methods remain the same as in previous reports and are described below.

Methods

Limited-duration prevalence (LDP)

In this report prevalence is calculated at 1/1/2014. Limited-duration prevalence is calculated using the counting method implemented in the SEER*Stat software. This method calculates the number or proportion of people alive at the prevalence date who had a diagnosis of the disease within the past x years (e.g., x = 5, 10, 20, or the full history of the registry). Because SEER has available information for the various racial/ethnic groups for different numbers of years, different years and registries were used to estimate limited-duration prevalence. Prevalence estimates for all races combined, for whites, and for blacks use cases from 1975 through 2013 from the SEER 9 registries (maximum of 39-year LDP); prevalence estimates for Asian Pacific Islanders and Hispanics use cases diagnosed from 1992 through 2013 from the SEER 11 areas and rural Georgia (maximum of 22-year LDP).

The LDP method includes a correction for people lost to follow-up. For each individual lost to follow-up, a probability of being alive at the prevalence date is estimated from an appropriate survival function stratified by age at diagnosis (0–59, 60–69, 70+), sex, cancer site, year of diagnosis, and race, conditional on being alive at the time of loss to follow-up. Year of diagnosis is stratified into 5-year groups from the prevalence date, with the least recent interval being of varying length (4-8 years), depending on the length of years used to calculate prevalence. Race is stratified into white, black, other (American Indian/Alaska Native, Asian/Pacific Islander), and unknown/other-unspecified. When we use the SEER 11 registries, the same stratification as before is used, with American Indian/Alaska Native separated from Asian/Pacific Islander. Prevalence calculations for Hispanics use race stratified into: white, non-white, and unknown.

Tumor inclusion criteria

Different methods can be used to determine which tumors are to be included for people diagnosed with multiple tumors. In previous reports published in 2016 and before a different method was used: 1st invasive tumor ever of a person. This method only includes people for their first tumor ever. Unless otherwise specified, prevalence calculations include the *first invasive tumor <u>per cancer site</u> for the total* prevalence duration. In this method, the first invasive tumor per cancer site diagnosed during the total prevalence duration can contribute to cancer prevalence statistics. For example, if a woman had a melanoma diagnosed in 1985, a breast cancer diagnosed in 2000 and a second breast cancer diagnosed in 2005, her melanoma will contribute to the prevalence of melanoma and to the prevalence of all sites, and the first breast cancer will contribute to the prevalence of breast cancer. However, if we are calculating 22-years prevalence including individual's first cancer per site between 1992-2013 the melanoma diagnosed in 1985 would not contribute to 22-year melanoma prevalence and the 2000 breast cancer will contribute to the all sites and breast prevalence. Because prevalence counts people and not tumors, the women is included once in the breast cancer prevalence for her first breast cancer. In the 1st invasive tumor ever the woman's melanoma cancer would contribute to the prevalence of melanoma and to the prevalence of all sites, but the breast cancer would not contribute to the prevalence of breast cancer.

This report includes a special Table (Table 35.1) comparing prevalence estimates using the *first invasive tumor ever* (old) and the *first invasive tumor per cancer site* (new). Comparison of the estimates from the two methods are discussed below. In addition, this report like previous reports, includes Table 1.22 in the Overview Chapter displaying 5-Year Limited Duration Prevalence using different selection criteria: A) 1st Invasive Tumor Ever, B) 1st Per Site in Previous 39 Years and C) 1st Per Site in Previous 5 years. A female breast cancer to be included in the 5-Year Limited Duration Prevalence needs to be diagnosed in the 5 years prior to the prevalence date and (A) be the first tumor ever of the woman; (B) the first breast cancer of the women in the prior 39 years, the women could not have had other breast cancers between 6 and 39 years prior to the prevalence date, and (C) be the first breast cancer in the prior 5 years, i.e., the women could have had other breast cancer 6 or more years prior to the prevalence date, and if she had 2 breast cancers between 2009 and 2013 only the first can be counted. For more information on tumor selection criteria refer to

https://surveillance.cancer.gov/prevalence/methods.html.

Complete prevalence of cancer diagnosed at childhood ages (0-19)

Complete prevalence estimates of the number of individuals in the US diagnosed with cancer as children (ages 0-19), including those surviving for more than 39 years, is calculated using a statistical method that estimates the number of childhood survivors diagnosed before 1975 (Simonetti et al., 2008; Mariotto et al., 2009). This method has also been implemented in the COMPREV software

<u>https://surveillance.cancer.gov/comprev/</u>. Limited-duration prevalence proportions by age at prevalence are not shown for childhood cancers (age at diagnosis 0-19) since many of these estimates are not informative. For example, the number of people diagnosed with childhood cancers in the last 25 years and who are currently age 50-59 is zero by definition. For more details on available prevalence estimates, see <u>https://surveillance.cancer.gov/prevalence/</u>.

Results: Comparison of 1st Ever Method vs. 1st Per Site

Table 35.1 reports US complete prevalence counts, at January 1, 2014 including the 1st invasive tumor per site in 1975-2013 (new) and 1st invasive tumor ever (old) methods. The table below show the comparisons for ages and both sexes combined. The prevalence for all cancer sites changed only slightly from 14,499,685 (old) to 14,738,719 (new). The difference is because although the earliest year we used for calculating prevalence in 1975 SEER also collects information if a cancer patient had a prior cancer before the reported cancer. The 1st invasive tumor ever does not include people who had a prior cancer, while the 1st invasive tumor per site looks only at the cancer diagnosed in 1975-2013. Cancer sites for which the new method increased the number of cancer survivors by more than 15% were: Lung & Bronchus (527,228 (new) vs. 422,581 (old)), pancreatic cancer (64,668 (new) vs. 53,745 (old)), Esophagus (45547 (new) vs. 38,431 (old)), Bladder (696,440 (new) vs. 592,402 (old)), Kidney (483,225 (new) vs. 413,332 (old)), Stomach (95,764 (new) vs. 82,770 (old)), Myeloma (118,539 (new) vs. 102,839 (old)). For Liver, Non-Hodgkin Lymphoma, Larynx, Ovary, Colon & Rectum, Oral Cavity & Pharynx and Leukemia the relative increase in prevalence counts was between 10% and 15%.

Discussion and Conclusions

Prevalence estimates have increased because of the change in method. People with multiple tumors can now contribute to different cancer site specific prevalence. Prevalence is still a count of survivors. Because people can contribute to more than one cancer specific prevalence the sum of the prevalence by cancer site is greater than the prevalence of people diagnosed with any cancer. However, the new estimates better represent the cancer survivorship for different cancer sites. Table 1. Summary for all ages and both sexes of Table 35.1 with the comparison U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2014

			Relative
	1st Ever	1st Per Site	Increase
Cancer site both sexes	Method(c)	Method(b)	(b-c)/c
Lung & Bronchus	422,581	527,228	25%
Pancreas	53,745	64,668	20%
Esophagus	38,431	45,547	19%
Urinary Bladder	592,402	696,440	18%
Kidney & Renal Pelvis	413,332	483,225	17%
Stomach	82,770	95,764	16%
Myeloma	102,839	118,539	15%
Liver & Intrahepatic Bile Duct	58,996	66,771	13%
Non-Hodgkin Lymphoma	588,976	661,996	12%
Larynx	88,973	99,914	12%
Ovary(b)	197,763	222,060	12%
Colon & Rectum	1,183,774	1,317,247	11%
Oral Cavity & Pharynx	312,098	346,902	11%
Leukemia	349,488	387,728	11%
Corpus & Uterus, NOS	648,625	710,228	9%
Melanoma of the Skin	1,076,306	1,169,351	9%
Prostate	2,897,570	3,085,209	6%
Breast	3,150,357	3,346,387	6%
Hodgkin Lymphoma	197,761	204,065	3%
Cervix	248,243	256,078	3%
All Sites	14,499,685	14,738,719	2%
Acute Lymphocytic Leukemia	80,799	81,837	1%

Table 35.1

U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2014^a

By Age at Prevalence

The Prevalence Estimates presented on this page illustrate the differences between the tumor selection criteria^b implemented in this year's CSR release compared to tumor selection criteria^c utilized in previous CSR releases. The estimates for '1st Ever Method' can be directly compared to the estimates from previous CSR releases.

	Age at Prevalence									
Site/Sex	All Ages ^d	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+	
All Sites										
Males										
lst Per Site Method ⁵	6,872,623	18,786	43,295	91,310	166,204	350,387	937,944	1,835,673	3,429,024	
lst Ever Method ^e	6,791,672	18,765	43,262	91,043	165,422	347,874	930,129	1,817,631	3,377,545	
Females										
lst Per Site Method ^D	7,866,096	17,222	37,437	93,801	242,346	639,430	1,424,917	1,995,951	3,414,992	
1st Ever Method $^{\circ}$	7,708,013	17,216	37,417	93,414	240,641	631,911	1,406,901	1,962,200	3,318,312	
Oral Cavity & Pharynx										
Males										
lst Per Site Method ^b	230,233	45	454	1,771	3,759	13,831	51,146	76,136	83,090	
lst Ever Method $^{\circ}$	208,733	45	449	1,692	3,596	13,197	48,744	70,129	70,881	
Females										
lst Per Site Method ^b	116,669	107	542	1,594	4,163	8,877	21,084	30,278	50,024	
1st Ever $Method^{c}$	103,365	107	543	1,566	3,975	8,308	19,594	26,907	42,366	
Esophagus										
Males										
lst Per Site Method ^b	35,460	0	0	29	181	1,003	5,067	12,194	16,986	
lst Ever Method $^{\circ}$	30,114	0	0	29	171	1,003	4,719	10,982	13,210	
Females										
lst Per Site Method ^b	10,087	0	0	0	44	190	1,441	2,846	5,566	
lst Ever Method $^{\rm c}$	8,317	0	0	0	44	178	1,248	2,403	4,445	
Stomach										
Males										
lst Per Site Method $^{ m b}$	55,180	0	11	168	589	2,749	8,310	14,682	28,670	
lst Ever Method $^\circ$	47,381	0	11	168	571	2,670	7,900	13,030	23,030	
Females										
lst Per Site Method $^{ m b}$	40,584	0	44	210	842	2,454	5,947	9,160	21,926	
lst Ever Method $^{\circ}$	35,389	0	44	204	799	2,375	5,433	8,030	18,503	

а U.S. 2014 cancer prevalence counts are based on 2014 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2014 U.S. population estimates based on the average of 2013 and 2014 population estimates from the U.S. Bureau of the Census. Cases diagnosed more than 39 years ago were estimated using the completeness index method (Capocaccia et. al. 1997,

Merrill et. al. 2000).

Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 39 years (1975-2013). Prevalence was calculated using the first invasive tumor ever for a person diagnosed during the previous 39 years (1975-2013).

Due to rounding, the sum of the age specific estimates may not equal the all ages estimate.

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U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2014^a

By Age at Prevalence

The Prevalence Estimates presented on this page illustrate the differences between the tumor selection criteria^b implemented in this year's CSR release compared to tumor selection criteria^c utilized in previous CSR releases. The estimates for '1st Ever Method' can be directly compared to the estimates from previous CSR releases.

	Age at Prevalence								
Site/Sex	All Ages ^d	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
Colon & Rectum									
Males									
1st Per Site Method ^b	653 863	22	146	1 263	6 349	26 922	91 558	156 306	371 297
1st Ever Method ^c	590,005	22	146	1,240	6,282	26,172	88,166	146.377	321,601
Females	550,005		110	1,110	0,202	20,272	00,200	110,077	522,002
1st Per Site Method ^b	663.384	0	261	1.482	6.650	24.542	80.676	130.589	419,183
lst Ever Method ^c	593,769	0	250	1,412	6,540	23,524	75,790	120,241	366,013
Liver & Intrahepatic Bile	Duct								
Males									
lst Per Site Method $^{ m b}$	46,895	611	536	603	632	1,608	11,275	19,864	11,766
lst Ever Method $^{\circ}$	41,925	611	536	603	622	1,585	10,510	18,296	9,161
Females									
lst Per Site Method $^{ m b}$	19,876	418	591	486	471	1,059	3,816	6,321	6,715
lst Ever Method $^{\circ}$	17,071	418	580	486	460	1,015	3,435	5,484	5,192
Pancreas									
Males									
lst Per Site Method ^b	31,986	23	35	117	493	1,812	5,719	9,976	13,812
lst Ever Method ^c	26,335	23	35	117	460	1,643	5,277	8,534	10,247
Females									
lst Per Site Method ^b	32,682	0	23	347	628	1,721	5,972	8,601	15,389
lst Ever Method $^{\circ}$	27,410	0	23	316	611	1,602	5,271	7,294	12,293
Larynx									
Males									
lst Per Site Method $^{ m b}$	80,249	0	0	80	285	1,810	10,178	23,304	44,592
lst Ever Method ^c	71,555	0	0	80	285	1,787	9,757	21,417	38,228
Females									
lst Per Site Method $^{ m b}$	19,665	0	0	17	142	859	3,485	5,914	9,247
lst Ever Method $^{\circ}$	17,418	0	0	17	143	792	3,302	5,376	7,788

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U.S. 2014 cancer prevalence counts are based on 2014 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2014 U.S. population estimates based on the average of 2013 and 2014 population estimates from the U.S. Bureau of the Census. Cases diagnosed more than 39 years ago were estimated using the completeness index method (Capocaccia et. al. 1997,

Merrill et. al. 2000).

Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 39 years (1975-2013). Prevalence was calculated using the first invasive tumor ever for a person diagnosed during the previous 39 years (1975-2013).

Due to rounding, the sum of the age specific estimates may not equal the all ages estimate.

U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2014^a

By Age at Prevalence

The Prevalence Estimates presented on this page illustrate the differences between the tumor selection criteria^b implemented in this year's CSR release compared to tumor selection criteria^c utilized in previous CSR releases. The estimates for '1st Ever Method' can be directly compared to the estimates from previous CSR releases.

	Age at Prevalence									
Site/Sex	All Ages ^d	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+	
Lung & Bronchus										
Males										
lst Per Site Method [®]	234,540	34	98	470	1,266	5,330	26,088	64,649	136,605	
lst Ever Method $^\circ$	186,476	34	98	470	1,204	4,968	23,818	54,820	101,064	
Females										
lst Per Site Method ^b	292,688	56	92	401	1,684	6,863	35,794	75,197	172,603	
lst Ever Method $^{\circ}$	236,105	56	92	401	1,623	6,186	31,717	62,477	133,554	
Melanoma of the Skin										
Males										
lst Per Site Method ^b	585,672	67	706	4,931	18,016	45,764	104,327	160,068	251,795	
lst Ever Method ^c	530,953	67	706	4,876	17,770	44,837	100,948	149,700	212,049	
Females										
lst Per Site Method ^b	583,679	107	813	10,439	36,175	74,208	129,434	142,681	189,821	
lst Ever Method $^{\circ}$	545,353	107	801	10,278	35,404	72,510	124,493	133,944	167,817	
Breast										
Males										
lst Per Site Method $^{ m b}$	18,835	0	0	11	76	672	2,123	5,001	10,951	
lst Ever Method $^{\circ}$	16,067	0	0	11	76	661	1,992	4,547	8,779	
Females										
lst Per Site Method $^{ m b}$	3,327,552	11	47	3,031	38,197	215,565	597,561	910,098	1,563,042	
lst Ever Method $^{\circ}$	3,134,290	11	47	2,922	37,248	208,954	575,801	867,361	1,441,945	
Cervix										
Females										
lst Per Site Method $^{ m b}$	256,078	0	81	2,075	14,495	40,908	60,284	61,931	76,305	
lst Ever Method $^{\circ}$	248,243	0	81	2,044	14,321	40,091	59,137	60,227	72,341	
Corpus & Uterus, NOS										
Females										
lst Per Site Method ^b	710,228	11	35	727	6,574	27,036	100,667	205,938	369,240	
lst Ever Method $^\circ$	648,625	11	35	706	6,266	25,166	93,178	189,571	333,693	

а U.S. 2014 cancer prevalence counts are based on 2014 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2014 U.S. population estimates based on the average of 2013 and 2014 population estimates from the U.S. Bureau of the Census. Cases diagnosed more than 39 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000). b

Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 39 years (1975-2013). Prevalence was calculated using the first invasive tumor ever for a person diagnosed during the previous 39 years (1975-2013).

Due to rounding, the sum of the age specific estimates may not equal the all ages estimate.

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U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2014^a

By Age at Prevalence

The Prevalence Estimates presented on this page illustrate the differences between the tumor selection criteria^b implemented in this year's CSR release compared to tumor selection criteria^c utilized in previous CSR releases. The estimates for '1st Ever Method' can be directly compared to the estimates from previous CSR releases.

	Age at Prevalence									
Site/Sex	All Ages ^d	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+	
Ovary ^b										
Females										
lst Per Site Method ^b	222,060	81	1,038	3,954	7,233	18,751	46,165	61,136	83,701	
lst Ever Method $^{\circ}$	197,763	81	1,027	3,896	7,015	17,457	41,920	54,170	72,197	
Prostate										
Males										
lst Per Site Method ^b	3,085,209	45	47	79	338	17,434	240,617	859,940	1,966,708	
1st Ever Method $^{\rm c}$	2,897,570	45	47	79	338	16,836	232,391	818,060	1,829,773	
Urinary Bladder										
Males										
lst Per Site Method ^b	521,201	68	117	524	2,521	9,466	44,105	118,578	345,823	
lst Ever Method ^c	442,417	68	117	513	2,417	9,192	41,988	107,479	280,643	
Females										
lst Per Site Method ^b	175,239	79	34	246	972	3,819	14,892	36,157	119,040	
lst Ever Method $^{\rm c}$	149,985	79	34	234	939	3,583	13,761	31,869	99,487	
Kidney & Renal Pelvis										
Males										
lst Per Site Method ^b	292,058	1,399	2,329	3,006	5,751	20,940	52,404	82,949	123,279	
lst Ever Method ^c	247,534	1,400	2,330	2,938	5,544	19,973	48,386	71,877	95,085	
Females										
lst Per Site Method ^b	191,167	1,616	2,455	3,238	5,310	13,603	33,033	47,535	84,377	
lst Ever Method $^{\rm c}$	165,798	1,606	2,433	3,182	5,212	12,787	29,934	41,591	69,053	
Hodgkin Lymphoma										
Males										
lst Per Site Method $^{ m b}$	105,489	209	2,301	9,666	16,550	23,334	24,766	18,035	10,629	
lst Ever Method $^{\circ}$	102,264	209	2,301	9,593	16,406	23,015	24,366	17,141	9,232	
Females										
lst Per Site Method ^b	98,576	45	2,147	9,466	16,634	22,567	23,051	14,306	10,361	
lst Ever Method $^{ m c}$	95,497	45	2,147	9,420	16,536	22,226	22,362	13,701	9,059	

U.S. 2014 cancer prevalence counts are based on 2014 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2014 U.S. population estimates based on the average of 2013 and 2014 population estimates from the U.S. Bureau of the Census. Cases diagnosed more than 39 years ago were estimated using the completeness index method (Capocaccia et. al. 1997,

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Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 39 years (1975-2013). Prevalence was calculated using the first invasive tumor ever for a person diagnosed during the previous 39 years (1975-2013).

Due to rounding, the sum of the age specific estimates may not equal the all ages estimate.

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U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2014^a

By Age at Prevalence

The Prevalence Estimates presented on this page illustrate the differences between the tumor selection criteria^b implemented in this year's CSR release compared to tumor selection criteria^c utilized in previous CSR releases. The estimates for '1st Ever Method' can be directly compared to the estimates from previous CSR releases.

Site/Sex All Ages ⁴ 0-9 10-19 20-29 30-39 40-49 50-59 60-69 70+ Non-Hodgkin Lymphoma Males		Age at Prevalence									
Non-Hodgkin Lymphoma Males 1st Per Site Method ^b 350,647 831 4,019 8,336 14,494 30,378 61,177 88,332 143,081 1st Ever Method ^c 311,184 825 3,997 8,224 14,289 29,494 58,498 80,866 114,991 Females 1st Per Site Method ^b 311,349 547 1,536 4,919 9,944 21,497 48,615 75,964 148,327 1st Ever Method ^c 277,792 536 1,525 4,850 9,802 20,711 45,317 68,747 126,305 Myeloma Males 1st Per Site Method ^b 65,283 0 18 87 605 3,537 10,446 19,742 30,849 1st Per Site Method ^b 53,256 0 0 69 480 2,374 8,379 15,856 26,099 1st Ever Method ^c 47,298 0 0 69 474 2,289 7,786 14,463 22,218 Leukemia Males 1st Per Site Method ^b 197,478 6,561 13,439 14,428 12,846 16,011 27,490 42,261 64,543 Females 1st Ever Method ^c 197,478 6,561 13,439 14,428 12,846 16,011 27,490 42,261 64,543 Pemales 1st Ever Method ^b 167,739 5,984 10,654 12,441 11,619 12,517 20,169 30,950 63,404 1st Ever Method ^c 152,010 5,951 10,624 12,441 11,619 12,517 20,169 30,950 63,404 1st Ever Method ^b 167,739 5,984 10,654 12,441 11,619 12,517 20,169 30,950 63,404 1st Ever Method ^c 43,980 5,557 11,184 11,145 7,205 5,011 2,295 1,096 732 1st Ever Method ^b 44,485 5,568 11,217 11,145 7,205 5,011 2,295 1,096 732 1st Ever Method ^b 43,980 5,557 11,184 11,146 7,265 4,951 2,206 962 608 Females 1st Per Site Method ^b 43,980 5,557 11,184 11,146 7,265 4,951 2,206 962 608 Females	Site/Sex	All Ages ^d	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+	
Males lst Per Site Method ^b 350,647 831 4,019 8,336 14,494 30,378 61,177 88,332 143,081 lst Ever Method ^c 311,184 825 3,997 8,224 14,289 29,494 58,498 80,866 114,991 Females lst Ever Method ^c 277,792 536 1,525 4,850 9,802 20,711 45,317 68,747 126,305 Myeloma Males 1st Ever Method ^c 55,541 0 18 87 605 3,537 10,446 19,742 30,849 lst Ever Method ^c 55,541 0 18 87 605 3,466 10,009 17,768 23,588 Pemales 1st Per Site Method ^b 53,256 0 0 69 480 2,374 8,379 15,856 26,099 lst Per Site Method ^b 53,256 0 0 69 474 2,289 7,786 14,463 22,218 Leukemia Males 1st Per Site Method ^b 197,478 6,551 13,439 14,328 12,981 16,40	Non-Hodakin Lymphoma										
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Ist Per Site Method ^b 311,349 547 1,536 4,919 9,944 21,497 48,615 75,964 148,327 Ist Ever Method ^c 277,792 536 1,525 4,850 9,802 20,711 45,317 68,747 126,305 Myeloma Males Ist Per Site Method ^b 65,283 0 18 87 605 3,537 10,446 19,742 30,849 Ist Ever Method ^c 55,541 0 18 87 605 3,466 10,009 17,768 23,588 Females Ist Per Site Method ^b 53,256 0 0 69 474 2,289 7,786 14,463 22,218 Leukemia Males Ist Per Site Method ^b 197,478 6,561 13,439 14,328 12,846 16,011 27,490 42,261 64,543 Females Ist Per Site Method ^b 167,739 5,984 10,654 12,441 11,619 12,517 20,169 30,950 63,404 Ist Per Site Method ^b 167,739 5,984 10,654 12,441 11,619 12,517	Females	511,101	025	5,551	0,221	11,200	20,101	50,190	00,000	111,001	
1 bit Fire Method ² 277,792 536 1,525 4,850 9,802 20,711 45,317 68,747 126,305 Myeloma Males 1st Per Site Method ² 65,283 0 18 87 605 3,537 10,446 19,742 30,849 Ist Per Site Method ² 55,541 0 18 87 605 3,466 10,009 17,768 23,588 Pemales 1st Per Site Method ² 47,298 0 0 69 480 2,374 8,379 15,856 26,099 1st Per Site Method ² 47,298 0 0 69 474 2,289 7,786 14,463 22,218 Leukemia Males 1st Per Site Method ⁶ 197,478 6,561 13,439 14,328 12,846 16,011 27,490 42,261 64,543 Females 1st Per Site Method ⁶ 167,739 5,984 10,654 12,441 11,619 12,517 20,169 30,950 63,404 1st Ever Method ⁶ 152,010 5,951 10,624 12,391 11,469 11,869 18,607<	let Der Site Method ^b	311 349	547	1 536	4 919	9 944	21 497	48 615	75 964	148 327	
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Females 1st Per Site Method ^b 53,256 0 0 69 480 2,374 8,379 15,856 26,099 1st Ever Method ^c 47,298 0 0 69 474 2,289 7,786 14,463 22,218 Leukemia Males 1st Per Site Method ^b 219,989 6,599 13,513 14,405 12,981 16,403 29,092 46,712 80,285 1st Ever Method ^c 197,478 6,561 13,439 14,328 12,846 16,011 27,490 42,261 64,543 Females 1st Per Site Method ^b 167,739 5,984 10,654 12,441 11,619 12,517 20,169 30,950 63,404 1st Ever Method ^c 152,010 5,951 10,624 12,391 11,469 11,869 18,607 27,904 53,194 Acute Lymphocytic Leuk Males 1st Per Site Method ^b 44,485 5,568 11,217 11,145 7,420 5,011 2,295 1,096 732 1st Per Site Method ^c 43,980 5,557 11,184 11,1	lst Ever Method ^c	55,541	0	18	87	605	3,466	10,009	17,768	23,588	
1st Per Site Method ^b 53,256 0 0 69 480 2,374 8,379 15,856 26,099 1st Ever Method ^c 47,298 0 0 69 474 2,289 7,786 14,463 22,218 Leukemia Males 1st Per Site Method ^b 219,989 6,599 13,513 14,405 12,981 16,403 29,092 46,712 80,285 1st Ever Method ^c 197,478 6,561 13,439 14,328 12,846 16,011 27,490 42,261 64,543 Females 1st Per Site Method ^b 167,739 5,984 10,654 12,441 11,619 12,517 20,169 30,950 63,404 1st Ever Method ^c 152,010 5,951 10,624 12,391 11,469 11,869 18,607 27,904 53,194 Acute Lymphocytic Leuk Males 1st Per Site Method ^b 44,485 5,568 11,217 11,145 7,420 5,011 2,295 1,096 732 1st Ever Method ^c 43,980 5,557 11,184 11,146 7,365 4,951 <t< td=""><td>Females</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Females										
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Leukemia Males Ist Per Site Method ^b 219,989 6,599 13,513 14,405 12,981 16,403 29,092 46,712 80,285 Ist Ever Method ^c 197,478 6,561 13,439 14,328 12,846 16,011 27,490 42,261 64,543 Females Ist Per Site Method ^b 167,739 5,984 10,654 12,441 11,619 12,517 20,169 30,950 63,404 Ist Ever Method ^c 152,010 5,951 10,624 12,391 11,469 11,869 18,607 27,904 53,194 Acute Lymphocytic Leuk Males Ist Per Site Method ^b 44,485 5,568 11,217 11,145 7,420 5,011 2,295 1,096 732 Ist Ever Method ^c 43,980 5,557 11,184 11,146 7,365 4,951 2,206 962 608 Females Ist Per Site Method ^b 37,352 5,088 9,067 8,947 6,522 3,972 1,798 1,285 672	lst Ever Method $^{\circ}$	47,298	0	0	69	474	2,289	7,786	14,463	22,218	
Males 1st Per Site Method ^b 219,989 6,599 13,513 14,405 12,981 16,403 29,092 46,712 80,285 1st Ever Method ^c 197,478 6,561 13,439 14,328 12,846 16,011 27,490 42,261 64,543 Females 1st Per Site Method ^b 167,739 5,984 10,654 12,441 11,619 12,517 20,169 30,950 63,404 1st Ever Method ^c 152,010 5,951 10,624 12,391 11,469 18,607 27,904 53,194 Acute Lymphocytic Leuk Males 1st Per Site Method ^b 44,485 5,568 11,217 11,145 7,420 5,011 2,295 1,096 732 1st Ever Method ^c 43,980 5,557 11,184 11,146 7,365 4,951 2,206 962 608 Females 1st Per Site Method ^b 37,352 5,088 9,067 8,947 6,522 3,972 1,798 1,285 672	Leukemia										
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Females 11,112 10,611 11,011	lst Ever Method ^c	197.478	6.561	13,439	14,328	12,846	16.011	27,490	42,261	64.543	
1st Per Site Method ^b 167,739 5,984 10,654 12,441 11,619 12,517 20,169 30,950 63,404 1st Ever Method ^c 152,010 5,951 10,624 12,391 11,469 11,869 18,607 27,904 53,194 Acute Lymphocytic Leuk Males 1st Per Site Method ^b 44,485 5,568 11,217 11,145 7,420 5,011 2,295 1,096 732 1st Per Site Method ^c 43,980 5,557 11,184 11,146 7,365 4,951 2,206 962 608 Females 1st Per Site Method ^b 37,352 5,088 9,067 8,947 6,522 3,972 1,798 1,285 672	Females	- , -	. ,	-,	,	,	- , -	,	, -		
1st Ever Method ^c 152,010 5,951 10,624 12,391 11,469 11,869 18,607 27,904 53,194 Acute Lymphocytic Leuk Males 1st Per Site Method ^b 44,485 5,568 11,217 11,145 7,420 5,011 2,295 1,096 732 1st Ever Method ^c 43,980 5,557 11,184 11,146 7,365 4,951 2,206 962 608 Females 1st Per Site Method ^b 37,352 5,088 9,067 8,947 6,522 3,972 1,798 1,285 672	lst Per Site Method ^b	167,739	5,984	10,654	12,441	11,619	12,517	20,169	30,950	63,404	
Acute Lymphocytic Leuk Males 1st Per Site Method ^b 44,485 5,568 11,217 11,145 7,420 5,011 2,295 1,096 732 1st Ever Method ^c 43,980 5,557 11,184 11,146 7,365 4,951 2,206 962 608 Females 1st Per Site Method ^b 37,352 5,088 9,067 8,947 6,522 3,972 1,798 1,285 672	lst Ever Method $^{\circ}$	152,010	5,951	10,624	12,391	11,469	11,869	18,607	27,904	53,194	
Males Ist Per Site Method ^b 44,485 5,568 11,217 11,145 7,420 5,011 2,295 1,096 732 Ist Ever Method ^c 43,980 5,557 11,184 11,146 7,365 4,951 2,206 962 608 Females Ist Per Site Method ^b 37,352 5,088 9,067 8,947 6,522 3,972 1,798 1,285 672	Acute Lymphocytic Leuk										
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1st Ever Method ^c 43,980 5,557 11,184 11,146 7,365 4,951 2,206 962 608 Females 1st Per Site Method ^b 37,352 5,088 9,067 8,947 6,522 3,972 1,798 1,285 672	1st Per Site Method ^b	44,485	5,568	11.217	11,145	7,420	5.011	2,295	1.096	732	
Females 1,11 1,21 <th1,21< th=""> 1,21 1,21 <</th1,21<>	lst Ever Method ^c	43,980	5,557	11,184	11,146	7,365	4,951	2,206	962	608	
1st Per Site Method ^b 37.352 5.088 9.067 8.947 6.522 3.972 1.798 1.285 672	Females	,	-,	,	,	.,	-,	_,			
	1st Per Site Method ^b	37,352	5,088	9,067	8,947	6,522	3,972	1,798	1,285	672	
lst Ever Method ^c 36,819 5,078 9,035 8,924 6,474 3,878 1,711 1,164 555	lst Ever Method ^c	36,819	5,078	9,035	8,924	6,474	3,878	1,711	1,164	555	

U.S. 2014 cancer prevalence counts are based on 2014 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2014 U.S. population estimates based on the average of 2013 and 2014 population estimates from the U.S. Bureau of the Census. Cases diagnosed more than 39 years ago were estimated using the completeness index method (Capocaccia et. al. 1997,

Merrill et. al. 2000).

Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 39 years (1975-2013). Prevalence was calculated using the first invasive tumor ever for a person diagnosed during the previous 39 years (1975-2013).

Due to rounding, the sum of the age specific estimates may not equal the all ages estimate.

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