

Chemotherapy agents - Anthracyclines and antibiotics: All cancers

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				Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		12596	1686	13.4	4038	32.1	10	0.1	2527	20.1	738	5.9
	Age at baseline	<18	3606	753	20.9	1209	33.5	4	0.1	797	22.1	53	1.5
		18-19	1112	170	15.3	367	33.0	1	0.1	253	22.8	39	3.5
		20-24	2665	345	13.0	901	33.8	3	0.1	604	22.7	196	7.4
		25-29	2406	260	10.8	738	30.7	.	.	479	19.9	208	8.7
		30-34	1697	117	6.9	557	32.9	1	0.1	265	15.6	172	10.2
		35+	1110	41	3.7	266	24.1	1	0.1	129	11.7	70	6.3
	Years since diagnosis	5-9	1932	501	25.9	819	42.4	6	0.3	400	20.7	191	9.9
		10-14	4649	724	15.6	1665	35.8	3	0.1	942	20.3	345	7.4
		15-19	3456	315	9.1	1107	32.1	1	0.0	696	20.2	150	4.3
		20+	2559	146	5.7	447	17.5	.	.	489	19.2	52	2.0
	Age at diagnosis	<1	882	53	6.0	195	22.1	.	.	219	24.9	3	0.3
		1-4	4186	738	17.6	1201	28.7	2	0.0	1005	24.0	28	0.7
		5-9	2777	403	14.5	870	31.4	4	0.1	549	19.8	91	3.3
		10-14	2531	332	13.1	916	36.3	1	0.0	416	16.5	272	10.8
		15-20	2220	160	7.2	856	38.7	3	0.1	338	15.3	344	15.6
	Treatment	Chemotherapy, no radiation	3091	481	15.6	1170	37.9	2	0.1	879	28.4	304	9.8
		Chemotherapy and radiation	7024	1202	17.1	2860	40.7	8	0.1	1644	23.4	433	6.2
Males	All cases		6650	975	14.7	2196	33.1	7	0.1	1274	19.2	419	6.3
	Age at baseline	<18	1919	442	23.0	671	35.0	3	0.2	408	21.3	37	1.9
		18-19	606	110	18.2	215	35.5	1	0.2	124	20.5	27	4.5
		20-24	1380	181	13.1	469	34.0	3	0.2	288	20.9	103	7.5
		25-29	1331	155	11.7	400	30.1	.	.	248	18.7	112	8.4
		30-34	886	66	7.5	310	35.0	.	.	145	16.4	104	11.8
		35+	528	21	4.0	131	25.0	.	.	61	11.6	36	6.9
	Years since diagnosis	5-9	1073	305	28.4	469	43.7	5	0.5	201	18.7	104	9.7
		10-14	2495	426	17.1	927	37.2	2	0.1	481	19.3	200	8.0
		15-19	1764	163	9.3	576	32.7	.	.	336	19.1	86	4.9
		20+	1318	81	6.2	224	17.1	.	.	256	19.5	29	2.2
	Age at diagnosis	<1	446	23	5.2	99	22.2	.	.	114	25.6	1	0.2
		1-4	2174	425	19.5	650	29.9	2	0.1	511	23.5	21	1.0
		5-9	1548	251	16.2	495	32.0	3	0.2	273	17.7	63	4.1
		10-14	1315	174	13.3	475	36.2	1	0.1	200	15.2	142	10.8
		15-20	1167	102	8.8	477	41.0	1	0.1	176	15.1	192	16.5
	Treatment	Chemotherapy, no radiation	1570	257	16.4	613	39.0	1	0.1	455	29.0	160	10.2
		Chemotherapy and radiation	3810	715	18.8	1581	41.5	6	0.2	816	21.4	258	6.8
Females	All cases		5946	711	12.0	1842	31.0	3	0.1	1253	21.1	319	5.4
	Age at baseline	<18	1687	311	18.4	538	31.9	1	0.1	389	23.1	16	0.9
		18-19	506	60	11.9	152	30.1	.	.	129	25.5	12	2.4

		20-24	1285	164	12.8	432	33.6	.	.	316	24.6	93	7.2
		25-29	1075	105	9.8	338	31.5	.	.	231	21.5	96	8.9
		30-34	811	51	6.3	247	30.5	1	0.1	120	14.8	68	8.4
		35+	582	20	3.5	135	23.3	1	0.2	68	11.7	34	5.9
	Years since diagnosis	5-9	859	196	22.8	350	40.8	1	0.1	199	23.2	87	10.1
		10-14	2154	298	13.8	738	34.3	1	0.0	461	21.4	145	6.7
		15-19	1692	152	9.0	531	31.4	1	0.1	360	21.3	64	3.8
		20+	1241	65	5.3	223	18.0	.	.	233	18.8	23	1.9
	Age at diagnosis	<1	436	30	6.9	96	22.0	.	.	105	24.1	2	0.5
		1-4	2012	313	15.6	551	27.4	.	.	494	24.6	7	0.3
		5-9	1229	152	12.4	375	30.6	1	0.1	276	22.5	28	2.3
		10-14	1216	158	13.0	441	36.3	.	.	216	17.8	130	10.7
		15-20	1053	58	5.5	379	36.1	2	0.2	162	15.4	152	14.5
	Treatment	Chemotherapy, no radiation	1521	224	14.7	557	36.6	1	0.1	424	27.9	144	9.5
		Chemotherapy and radiation	3214	487	15.2	1279	39.8	2	0.1	828	25.8	175	5.4

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: All leukemias

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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		4276	1413	33.0	1315	30.8	8	0.2	64	1.5	5	0.1
	Age at baseline	<18	1636	696	42.5	533	32.6	3	0.2	20	1.2	1	0.1
		18-19	503	138	27.4	164	32.6	1	0.2	5	1.0	.	.
		20-24	999	290	29.0	317	31.7	3	0.3	14	1.4	.	.
		25-29	714	193	27.0	186	26.1	.	.	12	1.7	2	0.3
		30-34	309	72	23.3	83	26.9	.	.	4	1.3	1	0.3
		35+	115	24	20.9	32	27.8	1	0.9	9	7.8	1	0.9
	Years since diagnosis	5-9	784	462	58.9	295	37.6	5	0.6	8	1.0	.	.
		10-14	1679	604	36.0	542	32.3	2	0.1	27	1.6	1	0.1
		15-19	1096	236	21.5	357	32.6	1	0.1	8	0.7	2	0.2
		20+	717	111	15.5	121	16.9	.	.	21	2.9	2	0.3
	Age at diagnosis	<1	87	48	55.2	31	35.6	.	.	1	1.1	.	.
		1-4	2204	684	31.0	603	27.4	2	0.1	27	1.2	1	0.0
		5-9	1109	324	29.2	359	32.4	3	0.3	19	1.7	2	0.2
		10-14	592	245	41.4	202	34.1	1	0.2	6	1.0	1	0.2
		15-20	284	112	39.4	120	42.3	2	0.7	11	3.9	1	0.4
	Treatment	Chemotherapy, no radiation	1302	391	30.0	195	15.0	2	0.2	20	1.5	.	.
		Chemotherapy and radiation	2955	1020	34.5	1116	37.8	6	0.2	44	1.5	5	0.2
Males	All cases		2221	794	35.7	754	33.9	7	0.3	38	1.7	4	0.2
	Age at baseline	<18	882	405	45.9	322	36.5	3	0.3	12	1.4	1	0.1
		18-19	268	85	31.7	101	37.7	1	0.4	4	1.5	.	.
		20-24	485	144	29.7	170	35.1	3	0.6	8	1.6	.	.
		25-29	383	109	28.5	102	26.6	.	.	9	2.3	1	0.3
		30-34	153	40	26.1	46	30.1	.	.	3	2.0	1	0.7
		35+	50	11	22.0	13	26.0	.	.	2	4.0	1	2.0
	Years since diagnosis	5-9	441	277	62.8	185	42.0	5	1.1	3	0.7	.	.
		10-14	888	345	38.9	323	36.4	2	0.2	19	2.1	1	0.1
		15-19	534	114	21.3	189	35.4	.	.	3	0.6	2	0.4
		20+	358	58	16.2	57	15.9	.	.	13	3.6	1	0.3
	Age at diagnosis	<1	38	21	55.3	14	36.8	.	.	.	.	.	.
		1-4	1149	390	33.9	350	30.5	2	0.2	18	1.6	1	0.1
		5-9	583	194	33.3	210	36.0	3	0.5	12	2.1	1	0.2
		10-14	278	114	41.0	105	37.8	1	0.4	4	1.4	1	0.4
		15-20	173	75	43.4	75	43.4	1	0.6	4	2.3	1	0.6
	Treatment	Chemotherapy, no radiation	598	200	33.4	95	15.9	1	0.2	10	1.7	.	.
		Chemotherapy and radiation	1611	592	36.7	659	40.9	6	0.4	28	1.7	4	0.2
Females	All cases		2055	619	30.1	561	27.3	1	0.0	26	1.3	1	0.0
	Age at baseline	<18	754	291	38.6	211	28.0	.	.	8	1.1	.	.

		18-19	235	53	22.6	63	26.8	.	.	1	0.4	.	.
		20-24	514	146	28.4	147	28.6	.	.	6	1.2	.	.
		25-29	331	84	25.4	84	25.4	.	.	3	0.9	1	0.3
		30-34	156	32	20.5	37	23.7	.	.	1	0.6	.	.
		35+	65	13	20.0	19	29.2	1	1.5	7	10.8	.	.
	Years since diagnosis	5-9	343	185	53.9	110	32.1	.	.	5	1.5	.	.
		10-14	791	259	32.7	219	27.7	.	.	8	1.0	.	.
		15-19	562	122	21.7	168	29.9	1	0.2	5	0.9	.	.
		20+	359	53	14.8	64	17.8	.	.	8	2.2	1	0.3
	Age at diagnosis	<1	49	27	55.1	17	34.7	.	.	1	2.0	.	.
		1-4	1055	294	27.9	253	24.0	.	.	9	0.9	.	.
		5-9	526	130	24.7	149	28.3	.	.	7	1.3	1	0.2
		10-14	314	131	41.7	97	30.9	.	.	2	0.6	.	.
		15-20	111	37	33.3	45	40.5	1	0.9	7	6.3	.	.
	Treatment	Chemotherapy, no radiation	704	191	27.1	100	14.2	1	0.1	10	1.4	.	.
		Chemotherapy and radiation	1344	428	31.8	457	34.0	.	.	16	1.2	1	0.1

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: ALL
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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		3657	1111	30.4	1105	30.2	7	0.2	58	1.6	4	0.1
	Age at baseline	<18	1428	564	39.5	463	32.4	3	0.2	19	1.3	1	0.1
		18-19	436	106	24.3	136	31.2	1	0.2	3	0.7	.	.
		20-24	863	228	26.4	271	31.4	3	0.3	13	1.5	.	.
		25-29	600	144	24.0	151	25.2	.	.	11	1.8	2	0.3
		30-34	248	53	21.4	62	25.0	.	.	4	1.6	.	.
		35+	82	16	19.5	22	26.8	.	.	8	9.8	1	1.2
	Years since diagnosis	5-9	649	378	58.2	254	39.1	5	0.8	8	1.2	.	.
		10-14	1456	463	31.8	469	32.2	2	0.1	24	1.6	1	0.1
		15-19	937	182	19.4	282	30.1	.	.	8	0.9	2	0.2
		20+	615	88	14.3	100	16.3	.	.	18	2.9	1	0.2
	Age at diagnosis	<1	51	24	47.1	14	27.5	.	.	.	.	.	.
		1-4	1949	565	29.0	525	26.9	2	0.1	25	1.3	1	0.1
		5-9	998	266	26.7	317	31.8	3	0.3	17	1.7	1	0.1
		10-14	464	180	38.8	163	35.1	1	0.2	6	1.3	1	0.2
		15-20	195	76	39.0	86	44.1	1	0.5	10	5.1	1	0.5
	Treatment	Chemotherapy, no radiation	1069	261	24.4	123	11.5	1	0.1	18	1.7	.	.
		Chemotherapy and radiation	2573	849	33.0	978	38.0	6	0.2	40	1.6	4	0.2
Males	All cases		1914	639	33.4	638	33.3	7	0.4	35	1.8	3	0.2
	Age at baseline	<18	774	332	42.9	280	36.2	3	0.4	12	1.6	1	0.1
		18-19	238	69	29.0	88	37.0	1	0.4	3	1.3	.	.
		20-24	418	114	27.3	144	34.4	3	0.7	7	1.7	.	.
		25-29	326	86	26.4	86	26.4	.	.	9	2.8	1	0.3
		30-34	121	30	24.8	32	26.4	.	.	3	2.5	.	.
		35+	37	8	21.6	8	21.6	.	.	1	2.7	1	2.7
	Years since diagnosis	5-9	366	226	61.7	159	43.4	5	1.4	3	0.8	.	.
		10-14	780	275	35.3	280	35.9	2	0.3	18	2.3	1	0.1
		15-19	457	92	20.1	153	33.5	.	.	3	0.7	2	0.4
		20+	311	46	14.8	46	14.8	.	.	11	3.5	.	.
	Age at diagnosis	<1	24	12	50.0	8	33.3	.	.	.	.	.	.
		1-4	1023	327	32.0	306	29.9	2	0.2	17	1.7	1	0.1
		5-9	525	160	30.5	183	34.9	3	0.6	11	2.1	.	.
		10-14	220	89	40.5	86	39.1	1	0.5	4	1.8	1	0.5
		15-20	122	51	41.8	55	45.1	1	0.8	3	2.5	1	0.8
	Treatment	Chemotherapy, no radiation	495	140	28.3	61	12.3	1	0.2	9	1.8	.	.
		Chemotherapy and radiation	1410	498	35.3	577	40.9	6	0.4	26	1.8	3	0.2
Females	All cases		1743	472	27.1	467	26.8	.	.	23	1.3	1	0.1
	Age at baseline	<18	654	232	35.5	183	28.0	.	.	7	1.1	.	.

		18-19	198	37	18.7	48	24.2	.	.	.	.	.	.
		20-24	445	114	25.6	127	28.5	.	.	6	1.3	.	.
		25-29	274	58	21.2	65	23.7	.	.	2	0.7	1	0.4
		30-34	127	23	18.1	30	23.6	.	.	1	0.8	.	.
		35+	45	8	17.8	14	31.1	.	.	7	15.6	.	.
	Years since diagnosis	5-9	283	152	53.7	95	33.6	.	.	5	1.8	.	.
		10-14	676	188	27.8	189	28.0	.	.	6	0.9	.	.
		15-19	480	90	18.8	129	26.9	.	.	5	1.0	.	.
		20+	304	42	13.8	54	17.8	.	.	7	2.3	1	0.3
	Age at diagnosis	<1	27	12	44.4	6	22.2	.	.	.	.	.	.
		1-4	926	238	25.7	219	23.7	.	.	8	0.9	.	.
		5-9	473	106	22.4	134	28.3	.	.	6	1.3	1	0.2
		10-14	244	91	37.3	77	31.6	.	.	2	0.8	.	.
		15-20	73	25	34.2	31	42.5	.	.	7	9.6	.	.
	Treatment	Chemotherapy, no radiation	574	121	21.1	62	10.8	.	.	9	1.6	.	.
		Chemotherapy and radiation	1163	351	30.2	401	34.5	.	.	14	1.2	1	0.1

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: AML

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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		322	225	69.9	116	36.0	1	0.3	4	1.2	.	.
	Age at baseline	<18	103	86	83.5	26	25.2	.	.	1	1.0	.	.
		18-19	40	27	67.5	20	50.0	.	.	1	2.5	.	.
		20-24	62	45	72.6	23	37.1	.	.	1	1.6	.	.
		25-29	66	45	68.2	27	40.9	.	.	.	.	.	.
		30-34	35	16	45.7	15	42.9	.	.	.	.	.	.
		35+	16	6	37.5	5	31.3	1	6.3	1	6.3	.	.
	Years since diagnosis	5-9	70	60	85.7	16	22.9	.	.	.	.	.	.
		10-14	127	103	81.1	39	30.7	.	.	2	1.6	.	.
		15-19	86	44	51.2	52	60.5	1	1.2	.	.	.	.
		20+	39	18	46.2	9	23.1	.	.	2	5.1	.	.
	Age at diagnosis	<1	28	20	71.4	13	46.4	.	.	1	3.6	.	.
		1-4	106	79	74.5	34	32.1	.	.	2	1.9	.	.
		5-9	57	41	71.9	19	33.3	.	.	.	.	.	.
		10-14	74	54	73.0	26	35.1	.	.	.	.	.	.
		15-20	57	31	54.4	24	42.1	1	1.8	1	1.8	.	.
	Treatment	Chemotherapy, no radiation	166	117	70.5	59	35.5	1	0.6	2	1.2	.	.
		Chemotherapy and radiation	155	107	69.0	57	36.8	.	.	2	1.3	.	.
Males	All cases		153	106	69.3	59	38.6	.	.	2	1.3	.	.
	Age at baseline	<18	52	42	80.8	14	26.9	.	.	.	.	.	.
		18-19	19	13	68.4	8	42.1	.	.	.	.	.	.
		20-24	32	22	68.8	15	46.9	.	.	1	3.1	.	.
		25-29	27	20	74.1	11	40.7	.	.	.	.	.	.
		30-34	18	7	38.9	9	50.0	.	.	.	.	.	.
		35+	5	2	40.0	2	40.0	.	.	1	20.0	.	.
	Years since diagnosis	5-9	41	35	85.4	11	26.8	.	.	.	.	.	.
		10-14	58	47	81.0	23	39.7	.	.	.	.	.	.
		15-19	39	16	41.0	21	53.8	.	.	.	.	.	.
		20+	15	8	53.3	4	26.7	.	.	2	13.3	.	.
	Age at diagnosis	<1	11	8	72.7	4	36.4	.	.	.	.	.	.
		1-4	52	37	71.2	19	36.5	.	.	1	1.9	.	.
		5-9	29	21	72.4	9	31.0	.	.	.	.	.	.
		10-14	27	19	70.4	11	40.7	.	.	.	.	.	.
		15-20	34	21	61.8	16	47.1	.	.	1	2.9	.	.
	Treatment	Chemotherapy, no radiation	71	50	70.4	26	36.6	.	.	1	1.4	.	.
		Chemotherapy and radiation	81	55	67.9	33	40.7	.	.	1	1.2	.	.
Females	All cases		169	119	70.4	57	33.7	1	0.6	2	1.2	.	.
	Age at baseline	<18	51	44	86.3	12	23.5	.	.	1	2.0	.	.

		18-19	21	14	66.7	12	57.1	.	.	1	4.8	.	.
		20-24	30	23	76.7	8	26.7	.	.	.	.	.	.
		25-29	39	25	64.1	16	41.0	.	.	.	.	.	.
		30-34	17	9	52.9	6	35.3	.	.	.	.	.	.
		35+	11	4	36.4	3	27.3	1	9.1	.	.	.	.
	Years since diagnosis	5-9	29	25	86.2	5	17.2	.	.	.	.	.	.
		10-14	69	56	81.2	16	23.2	.	.	2	2.9	.	.
		15-19	47	28	59.6	31	66.0	1	2.1	.	.	.	.
		20+	24	10	41.7	5	20.8	.	.	.	.	.	.
	Age at diagnosis	<1	17	12	70.6	9	52.9	.	.	1	5.9	.	.
		1-4	54	42	77.8	15	27.8	.	.	1	1.9	.	.
		5-9	28	20	71.4	10	35.7	.	.	.	.	.	.
		10-14	47	35	74.5	15	31.9	.	.	.	.	.	.
		15-20	23	10	43.5	8	34.8	1	4.3	.	.	.	.
	Treatment	Chemotherapy, no radiation	95	67	70.5	33	34.7	1	1.1	1	1.1	.	.
		Chemotherapy and radiation	74	52	70.3	24	32.4	.	.	1	1.4	.	.

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: All CNS

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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		1663	1	0.1	11	0.7	1	0.1	39	2.4	7	0.4
	Age at baseline	<18	503	.	.	5	1.0	1	0.2	23	4.6	1	0.2
		18-19	142	.	.	.	.	.	.	7	5.0	1	0.7
		20-24	381	1	0.3	5	1.3	.	.	2	0.5	2	0.5
		25-29	339	.	.	1	0.3	.	.	4	1.2	3	0.9
		30-34	209	.	.	.	.	.	.	3	1.4	.	.
		35+	89	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	298	.	.	4	1.3	1	0.3	8	2.7	2	0.7
		10-14	663	1	0.2	4	0.6	.	.	19	2.9	4	0.6
		15-19	408	.	.	3	0.7	.	.	7	1.7	1	0.2
		20+	294	.	.	.	.	.	.	5	1.7	.	.
	Age at diagnosis	<1	87	.	.	1	1.1	.	.	10	11.5	.	.
		1-4	485	.	.	2	0.4	.	.	18	3.7	.	.
		5-9	496	1	0.2	4	0.8	1	0.2	5	1.0	2	0.4
		10-14	412	.	.	2	0.5	.	.	6	1.5	4	1.0
		15-20	183	.	.	2	1.1	.	.	.	.	1	0.6
	Treatment	Chemotherapy, no radiation	29	.	.	.	.	.	.	12	41.4	.	.
		Chemotherapy and radiation	472	1	0.2	11	2.3	1	0.2	27	5.7	7	1.5
Males	All cases		912	1	0.1	7	0.8	.	.	23	2.5	5	0.6
	Age at baseline	<18	275	.	.	3	1.1	.	.	12	4.4	1	0.4
		18-19	79	.	.	.	.	.	.	4	5.1	.	.
		20-24	203	1	0.5	3	1.5	.	.	1	0.5	1	0.5
		25-29	192	.	.	1	0.5	.	.	4	2.1	3	1.6
		30-34	115	.	.	.	.	.	.	2	1.7	.	.
		35+	48	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	169	.	.	2	1.2	.	.	5	3.0	1	0.6
		10-14	361	1	0.3	3	0.8	.	.	10	2.8	3	0.8
		15-19	226	.	.	2	0.9	.	.	4	1.8	1	0.4
		20+	156	.	.	.	.	.	.	4	2.6	.	.
	Age at diagnosis	<1	51	.	.	1	2.0	.	.	6	11.8	.	.
		1-4	255	.	.	.	.	.	.	8	3.1	.	.
		5-9	275	1	0.4	4	1.5	.	.	5	1.8	1	0.4
		10-14	228	.	.	2	0.9	.	.	4	1.8	3	1.3
		15-20	103	.	.	.	.	.	.	.	.	1	1.0
	Treatment	Chemotherapy, no radiation	16	.	.	.	.	.	.	8	50.0	.	.
		Chemotherapy and radiation	284	1	0.4	7	2.5	.	.	15	5.3	5	1.8
Females	All cases		751	.	.	4	0.5	1	0.1	16	2.1	2	0.3
	Age at baseline	<18	228	.	.	2	0.9	1	0.4	11	4.8	.	.

		18-19	63	.	.	.	.	.	.	3	4.8	1	1.6
		20-24	178	.	.	2	1.1	.	.	1	0.6	1	0.6
		25-29	147	.	.	.	.	.	.	.	.	.	.
		30-34	94	.	.	.	.	.	.	1	1.1	.	.
		35+	41	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	129	.	.	2	1.6	1	0.8	3	2.3	1	0.8
		10-14	302	.	.	1	0.3	.	.	9	3.0	1	0.3
		15-19	182	.	.	1	0.6	.	.	3	1.7	.	.
		20+	138	.	.	.	.	.	.	1	0.7	.	.
	Age at diagnosis	<1	36	.	.	.	.	.	.	4	11.1	.	.
		1-4	230	.	.	2	0.9	.	.	10	4.3	.	.
		5-9	221	.	.	.	.	1	0.5	.	.	1	0.5
		10-14	184	.	.	.	.	.	.	2	1.1	1	0.5
		15-20	80	.	.	2	2.5	.	.	.	.	.	.
	Treatment	Chemotherapy, no radiation	13	.	.	.	.	.	.	4	30.8	.	.
		Chemotherapy and radiation	188	.	.	4	2.1	1	0.5	12	6.4	2	1.1

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: Astrocytomas

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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		1055	1	0.1	4	0.4	1	0.1	29	2.8	1	0.1
	Age at baseline	<18	305	.	.	.	.	1	0.3	20	6.6	1	0.3
		18-19	89	.	.	.	.	.	.	6	6.7	.	.
		20-24	247	1	0.4	4	1.6	.	.	.	.	.	.
		25-29	217	.	.	.	.	.	.	2	0.9	.	.
		30-34	135	.	.	.	.	.	.	1	0.7	.	.
		35+	62	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	164	.	.	1	0.6	1	0.6	6	3.7	.	.
		10-14	427	1	0.2	2	0.5	.	.	16	3.8	1	0.2
		15-19	247	.	.	1	0.4	.	.	4	1.6	.	.
		20+	217	.	.	.	.	.	.	3	1.4	.	.
	Age at diagnosis	<1	62	.	.	.	.	.	.	8	12.9	.	.
		1-4	325	.	.	.	.	.	.	16	4.9	.	.
		5-9	295	1	0.3	2	0.7	1	0.3	4	1.4	1	0.3
		10-14	262	.	.	1	0.4	.	.	1	0.4	.	.
		15-20	111	.	.	1	0.9	.	.	.	.	.	.
	Treatment	Chemotherapy, no radiation	17	.	.	.	.	.	.	9	52.9	.	.
		Chemotherapy and radiation	200	1	0.5	4	2.0	1	0.5	20	10.0	1	0.5
Males	All cases		561	1	0.2	3	0.5	.	.	14	2.5	1	0.2
	Age at baseline	<18	161	.	.	.	.	.	.	9	5.6	1	0.6
		18-19	51	.	.	.	.	.	.	3	5.9	.	.
		20-24	121	1	0.8	3	2.5	.	.	.	.	.	.
		25-29	128	.	.	.	.	.	.	2	1.6	.	.
		30-34	68	.	.	.	.	.	.	.	.	.	.
		35+	32	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	90	.	.	.	.	.	.	4	4.4	.	.
		10-14	230	1	0.4	2	0.9	.	.	7	3.1	1	0.4
		15-19	127	.	.	1	0.8	.	.	1	0.8	.	.
		20+	114	.	.	.	.	.	.	2	1.8	.	.
	Age at diagnosis	<1	33	.	.	.	.	.	.	4	12.1	.	.
		1-4	169	.	.	.	.	.	.	6	3.6	.	.
		5-9	158	1	0.6	2	1.3	.	.	4	2.6	1	0.6
		10-14	140	.	.	1	0.7	.	.	.	.	.	.
		15-20	61	.	.	.	.	.	.	.	.	.	.
	Treatment	Chemotherapy, no radiation	8	.	.	.	.	.	.	5	62.5	.	.
		Chemotherapy and radiation	122	1	0.8	3	2.5	.	.	9	7.4	1	0.8
Females	All cases		494	.	.	1	0.2	1	0.2	15	3.0	.	.
	Age at baseline	<18	144	.	.	.	.	1	0.7	11	7.6	.	.

		18-19	38	.	.	.	.	.	.	3	7.9	.	.
		20-24	126	.	.	1	0.8	.	.	.	.	.	.
		25-29	89	.	.	.	.	.	.	.	.	.	.
		30-34	67	.	.	.	.	.	.	1	1.5	.	.
		35+	30	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	74	.	.	1	1.4	1	1.4	2	2.7	.	.
		10-14	197	.	.	.	.	.	.	9	4.6	.	.
		15-19	120	.	.	.	.	.	.	3	2.5	.	.
		20+	103	.	.	.	.	.	.	1	1.0	.	.
	Age at diagnosis	<1	29	.	.	.	.	.	.	4	13.8	.	.
		1-4	156	.	.	.	.	.	.	10	6.4	.	.
		5-9	137	.	.	.	.	1	0.7	.	.	.	.
		10-14	122	.	.	.	.	.	.	1	0.8	.	.
		15-20	50	.	.	1	2.0	.	.	.	.	.	.
	Treatment	Chemotherapy, no radiation	9	.	.	.	.	.	.	4	44.4	.	.
		Chemotherapy and radiation	78	.	.	1	1.3	1	1.3	11	14.1	.	.

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: Medulloblastoma/PNET

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				Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		344	.	.	2	0.6	.	.	3	0.9	.	.
	Age at baseline	<18	123	.	.	1	0.8	.	.	1	0.8	.	.
		18-19	27	.	.	.	.	.	.	.	.	.	.
		20-24	85	.	.	1	1.2	.	.	.	.	.	.
		25-29	69	.	.	.	.	.	.	.	.	.	.
		30-34	33	.	.	.	.	.	.	2	6.1	.	.
		35+	7	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	74	.	.	2	2.7	.	.	1	1.4	.	.
		10-14	127	.	.	.	.	.	.	.	.	.	.
		15-19	107	.	.	.	.	.	.	.	.	.	.
		20+	36	.	.	.	.	.	.	2	5.6	.	.
	Age at diagnosis	<1	10	.	.	.	.	.	.	.	.	.	.
		1-4	103	.	.	.	.	.	.	.	.	.	.
		5-9	137	.	.	1	0.7	.	.	1	0.7	.	.
		10-14	70	.	.	.	.	.	.	2	2.9	.	.
		15-20	24	.	.	1	4.2	.	.	.	.	.	.
	Treatment	Chemotherapy, no radiation	6	.	.	.	.	.	.	.	.	.	.
		Chemotherapy and radiation	196	.	.	2	1.0	.	.	3	1.5	.	.
Males	All cases		203	.	.	1	0.5	.	.	3	1.5	.	.
	Age at baseline	<18	76	.	.	1	1.3	.	.	1	1.3	.	.
		18-19	15	.	.	.	.	.	.	.	.	.	.
		20-24	50	.	.	.	.	.	.	.	.	.	.
		25-29	38	.	.	.	.	.	.	.	.	.	.
		30-34	20	.	.	.	.	.	.	2	10.0	.	.
		35+	4	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	48	.	.	1	2.1	.	.	1	2.1	.	.
		10-14	68	.	.	.	.	.	.	.	.	.	.
		15-19	67	.	.	.	.	.	.	.	.	.	.
		20+	20	.	.	.	.	.	.	2	10.0	.	.
	Age at diagnosis	<1	9	.	.	.	.	.	.	.	.	.	.
		1-4	59	.	.	.	.	.	.	.	.	.	.
		5-9	83	.	.	1	1.2	.	.	1	1.2	.	.
		10-14	38	.	.	.	.	.	.	2	5.3	.	.
		15-20	14	.	.	.	.	.	.	.	.	.	.
	Treatment	Chemotherapy, no radiation	3	.	.	.	.	.	.	.	.	.	.
		Chemotherapy and radiation	124	.	.	1	0.8	.	.	3	2.4	.	.
Females	All cases		141	.	.	1	0.7	.	.	.	.	.	.
	Age at baseline	<18	47	.	.	.	.	.	.	.	.	.	.

		18-19	12	.	.	.	.	.	.	.	.	.	.
		20-24	35	.	.	1	2.9	.	.	.	.	.	.
		25-29	31	.	.	.	.	.	.	.	.	.	.
		30-34	13	.	.	.	.	.	.	.	.	.	.
		35+	3	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	26	.	.	1	3.8	.	.	.	.	.	.
		10-14	59	.	.	.	.	.	.	.	.	.	.
		15-19	40	.	.	.	.	.	.	.	.	.	.
		20+	16	.	.	.	.	.	.	.	.	.	.
	Age at diagnosis	<1	1	.	.	.	.	.	.	.	.	.	.
		1-4	44	.	.	.	.	.	.	.	.	.	.
		5-9	54	.	.	.	.	.	.	.	.	.	.
		10-14	32	.	.	.	.	.	.	.	.	.	.
		15-20	10	.	.	1	10.0	.	.	.	.	.	.
	Treatment	Chemotherapy, no radiation	3	.	.	.	.	.	.	.	.	.	.
		Chemotherapy and radiation	72	.	.	1	1.4	.	.	.	.	.	.

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: Hodgkin

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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		1675	.	.	413	24.7	.	.	3	0.2	358	21.4
	Age at baseline	<18	44	.	.	25	56.8	.	.	1	2.3	23	52.3
		18-19	38	.	.	19	50.0	.	.	1	2.6	16	42.1
		20-24	226	.	.	102	45.3	.	.	.	.	92	40.9
		25-29	422	.	.	123	29.1	.	.	.	.	109	25.8
		30-34	474	.	.	106	22.4	.	.	.	.	84	17.8
		35+	471	.	.	38	8.1	.	.	1	0.2	34	7.3
	Years since diagnosis	5-9	193	.	.	110	57.0	.	.	2	1.0	106	54.9
		10-14	523	.	.	177	34.0	.	.	.	.	168	32.2
		15-19	492	.	.	81	16.5	.	.	.	.	62	12.6
		20+	467	.	.	45	9.7	.	.	1	0.2	22	4.7
	Age at diagnosis	1-4	47	.	.	10	21.3	.	.	.	.	5	10.6
		5-9	211	.	.	57	27.0	.	.	1	0.5	45	21.3
		10-14	577	.	.	171	29.7	.	.	1	0.2	123	21.4
		15-20	840	.	.	175	20.9	.	.	1	0.1	185	22.1
	Treatment	Chemotherapy, no radiation	98	.	.	55	56.1	.	.	.	.	49	50.0
		Chemotherapy and radiation	1024	.	.	358	35.0	.	.	3	0.3	309	30.2
Males	All cases		891	.	.	239	26.9	.	.	1	0.1	211	23.7
	Age at baseline	<18	34	.	.	21	61.8	.	.	1	2.9	19	55.9
		18-19	31	.	.	16	51.6	.	.	.	.	13	41.9
		20-24	144	.	.	62	43.4	.	.	.	.	58	40.6
		25-29	244	.	.	67	27.5	.	.	.	.	58	23.8
		30-34	237	.	.	60	25.3	.	.	.	.	47	19.8
		35+	201	.	.	13	6.5	.	.	.	.	16	8.0
	Years since diagnosis	5-9	115	.	.	66	57.4	.	.	1	0.9	63	54.8
		10-14	281	.	.	104	37.1	.	.	.	.	98	35.0
		15-19	270	.	.	51	18.9	.	.	.	.	36	13.3
		20+	225	.	.	18	8.0	.	.	.	.	14	6.3
	Age at diagnosis	1-4	36	.	.	9	25.0	.	.	.	.	5	13.9
		5-9	156	.	.	44	28.2	.	.	1	0.6	38	24.4
		10-14	297	.	.	94	31.8	.	.	.	.	73	24.7
		15-20	402	.	.	92	22.9	.	.	.	.	95	23.7
	Treatment	Chemotherapy, no radiation	52	.	.	29	55.8	.	.	.	.	28	53.8
		Chemotherapy and radiation	552	.	.	210	38.0	.	.	1	0.2	183	33.2
Females	All cases		784	.	.	174	22.3	.	.	2	0.3	147	18.8
	Age at baseline	<18	10	.	.	4	40.0	.	.	.	.	4	40.0
		18-19	7	.	.	3	42.9	.	.	1	14.3	3	42.9
		20-24	82	.	.	40	48.8	.	.	.	.	34	41.5

		25-29	178	.	.	56	31.5	.	.	.	.	51	28.7
		30-34	237	.	.	46	19.5	.	.	.	.	37	15.7
		35+	270	.	.	25	9.3	.	.	1	0.4	18	6.7
	Years since diagnosis	5-9	78	.	.	44	56.4	.	.	1	1.3	43	55.1
		10-14	242	.	.	73	30.3	.	.	.	.	70	29.0
		15-19	222	.	.	30	13.6	.	.	.	.	26	11.8
		20+	242	.	.	27	11.2	.	.	1	0.4	8	3.3
	Age at diagnosis	1-4	11	.	.	1	9.1	.	.	.	.	.	.
		5-9	55	.	.	13	23.6	.	.	.	.	7	12.7
		10-14	280	.	.	77	27.5	.	.	1	0.4	50	17.9
		15-20	438	.	.	83	19.1	.	.	1	0.2	90	20.7
	Treatment	Chemotherapy, no radiation	46	.	.	26	56.5	.	.	.	.	21	45.7
		Chemotherapy and radiation	472	.	.	148	31.4	.	.	2	0.4	126	26.7

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: NHL

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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		925	262	28.4	294	31.8	.	.	22	2.4	56	6.1
	Age at baseline	<18	144	54	37.5	47	32.6	.	.	2	1.4	7	4.9
		18-19	76	31	40.8	24	31.6	.	.	2	2.6	3	3.9
		20-24	198	53	26.8	68	34.3	.	.	2	1.0	8	4.0
		25-29	227	64	28.2	75	33.0	.	.	7	3.1	11	4.8
		30-34	182	44	24.2	58	31.9	.	.	7	3.8	20	11.0
		35+	98	16	16.5	22	22.7	.	.	2	2.1	7	7.2
	Years since diagnosis	5-9	110	38	34.5	48	43.6	.	.	5	4.5	11	10.0
		10-14	358	115	32.1	143	39.9	.	.	6	1.7	21	5.9
		15-19	278	78	28.1	72	25.9	.	.	8	2.9	15	5.4
		20+	179	31	17.4	31	17.4	.	.	3	1.7	9	5.1
	Age at diagnosis	<1	8	2	25.0	2	25.0	.	.	.	.	.	.
		1-4	150	52	34.7	38	25.3	.	.	.	.	6	4.0
		5-9	280	76	27.1	85	30.4	.	.	8	2.9	9	3.2
		10-14	282	87	30.9	80	28.4	.	.	3	1.1	13	4.6
		15-20	205	45	22.1	89	43.6	.	.	11	5.4	28	13.7
	Treatment	Chemotherapy, no radiation	276	86	31.2	93	33.7	.	.	5	1.8	14	5.1
		Chemotherapy and radiation	598	175	29.3	201	33.6	.	.	17	2.8	42	7.0
Males	All cases		645	173	26.9	200	31.1	.	.	13	2.0	35	5.4
	Age at baseline	<18	101	35	34.7	34	33.7	.	.	1	1.0	5	5.0
		18-19	61	24	39.3	19	31.1	.	.	1	1.6	3	4.9
		20-24	136	36	26.5	47	34.6	.	.	1	0.7	5	3.7
		25-29	162	44	27.2	51	31.5	.	.	3	1.9	6	3.7
		30-34	122	25	20.5	39	32.0	.	.	6	4.9	14	11.5
		35+	63	9	14.5	10	16.1	.	.	1	1.6	2	3.2
	Years since diagnosis	5-9	84	27	32.1	38	45.2	.	.	2	2.4	8	9.5
		10-14	254	77	30.3	95	37.4	.	.	4	1.6	14	5.5
		15-19	177	48	27.1	44	24.9	.	.	4	2.3	9	5.1
		20+	130	21	16.3	23	17.8	.	.	3	2.3	4	3.1
	Age at diagnosis	<1	3	.	.	1	33.3	.	.	.	.	.	.
		1-4	103	35	34.0	27	26.2	.	.	.	.	6	5.8
		5-9	204	54	26.5	64	31.4	.	.	4	2.0	4	2.0
		10-14	202	60	29.7	54	26.7	.	.	2	1.0	7	3.5
		15-20	133	24	18.2	54	40.9	.	.	7	5.3	18	13.6
	Treatment	Chemotherapy, no radiation	205	55	26.8	74	36.1	.	.	3	1.5	10	4.9
		Chemotherapy and radiation	401	117	29.2	126	31.4	.	.	10	2.5	25	6.2
Females	All cases		280	89	31.8	94	33.6	.	.	9	3.2	21	7.5
	Age at baseline	<18	43	19	44.2	13	30.2	.	.	1	2.3	2	4.7

		18-19	15	7	46.7	5	33.3	.	.	1	6.7	.	.
		20-24	62	17	27.4	21	33.9	.	.	1	1.6	3	4.8
		25-29	65	20	30.8	24	36.9	.	.	4	6.2	5	7.7
		30-34	60	19	31.7	19	31.7	.	.	1	1.7	6	10.0
		35+	35	7	20.0	12	34.3	.	.	1	2.9	5	14.3
	Years since diagnosis	5-9	26	11	42.3	10	38.5	.	.	3	11.5	3	11.5
		10-14	104	38	36.5	48	46.2	.	.	2	1.9	7	6.7
		15-19	101	30	29.7	28	27.7	.	.	4	4.0	6	5.9
		20+	49	10	20.4	8	16.3	.	.	.	.	5	10.2
	Age at diagnosis	<1	5	2	40.0	1	20.0	.	.	.	.	.	.
		1-4	47	17	36.2	11	23.4	.	.	.	.	.	.
		5-9	76	22	28.9	21	27.6	.	.	4	5.3	5	6.6
		10-14	80	27	33.8	26	32.5	.	.	1	1.3	6	7.5
		15-20	72	21	29.2	35	48.6	.	.	4	5.6	10	13.9
	Treatment	Chemotherapy, no radiation	71	31	43.7	19	26.8	.	.	2	2.8	4	5.6
		Chemotherapy and radiation	197	58	29.4	75	38.1	.	.	7	3.6	17	8.6

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: Wilms

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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		1088	1	0.1	453	41.6	.	.	1064	97.8	2	0.2
	Age at baseline	<18	523	1	0.2	267	51.1	.	.	511	97.7	1	0.2
		18-19	131	.	.	62	47.3	.	.	130	99.2	.	.
		20-24	249	.	.	86	34.5	.	.	243	97.6	1	0.4
		25-29	149	.	.	28	18.8	.	.	147	98.7	.	.
		30-34	28	.	.	8	28.6	.	.	26	92.9	.	.
		35+	8	.	.	2	25.0	.	.	7	87.5	.	.
	Years since diagnosis	5-9	145	.	.	81	55.9	.	.	142	97.9	.	.
		10-14	436	1	0.2	226	51.8	.	.	429	98.4	1	0.2
		15-19	279	.	.	108	38.7	.	.	274	98.2	1	0.4
		20+	228	.	.	38	16.7	.	.	219	96.1	.	.
	Age at diagnosis	<1	162	1	0.6	32	19.8	.	.	148	91.4	.	.
		1-4	659	.	.	284	43.1	.	.	652	98.9	2	0.3
		5-9	225	.	.	111	49.3	.	.	224	99.6	.	.
		10-14	30	.	.	19	63.3	.	.	29	96.7	.	.
		15-20	12	.	.	7	58.3	.	.	11	91.7	.	.
	Treatment	Chemotherapy, no radiation	369	.	.	57	15.4	.	.	368	99.7	1	0.3
		Chemotherapy and radiation	701	1	0.1	396	56.5	.	.	695	99.1	1	0.1
Males	All cases		502	1	0.2	197	39.2	.	.	490	97.6	1	0.2
	Age at baseline	<18	253	1	0.4	121	47.8	.	.	246	97.2	1	0.4
		18-19	58	.	.	24	41.4	.	.	57	98.3	.	.
		20-24	105	.	.	36	34.3	.	.	103	98.1	.	.
		25-29	75	.	.	12	16.0	.	.	73	97.3	.	.
		30-34	9	.	.	3	33.3	.	.	9	.	.	.
		35+	2	.	.	1	50.0	.	.	2	.	.	.
	Years since diagnosis	5-9	62	.	.	33	53.2	.	.	60	96.8	.	.
		10-14	207	1	0.5	99	47.8	.	.	204	98.6	1	0.5
		15-19	122	.	.	44	36.1	.	.	119	97.5	.	.
		20+	111	.	.	21	18.9	.	.	107	96.4	.	.
	Age at diagnosis	<1	87	1	1.1	15	17.2	.	.	80	92.0	.	.
		1-4	309	.	.	132	42.7	.	.	304	98.4	1	0.3
		5-9	90	.	.	38	42.2	.	.	90	.	.	.
		10-14	12	.	.	10	83.3	.	.	12	.	.	.
		15-20	4	.	.	2	50.0	.	.	4	.	.	.
	Treatment	Chemotherapy, no radiation	179	.	.	22	12.3	.	.	178	99.4	.	.
		Chemotherapy and radiation	315	1	0.3	175	55.6	.	.	311	98.7	1	0.3
Females	All cases		586	.	.	256	43.7	.	.	574	98.0	1	0.2
	Age at baseline	<18	270	.	.	146	54.1	.	.	265	98.1	.	.

		18-19	73	.	.	38	52.1	.	.	73	.	.	.
		20-24	144	.	.	50	34.7	.	.	140	97.2	1	0.7
		25-29	74	.	.	16	21.6	.	.	74	.	.	.
		30-34	19	.	.	5	26.3	.	.	17	89.5	.	.
		35+	6	.	.	1	16.7	.	.	5	83.3	.	.
	Years since diagnosis	5-9	83	.	.	48	57.8	.	.	82	98.8	.	.
		10-14	229	.	.	127	55.5	.	.	225	98.3	.	.
		15-19	157	.	.	64	40.8	.	.	155	98.7	1	0.6
		20+	117	.	.	17	14.5	.	.	112	95.7	.	.
	Age at diagnosis	<1	75	.	.	17	22.7	.	.	68	90.7	.	.
		1-4	350	.	.	152	43.4	.	.	348	99.4	1	0.3
		5-9	135	.	.	73	54.1	.	.	134	99.3	.	.
		10-14	18	.	.	9	50.0	.	.	17	94.4	.	.
		15-20	8	.	.	5	62.5	.	.	7	87.5	.	.
	Treatment	Chemotherapy, no radiation	190	.	.	35	18.4	.	.	190	.	1	0.5
		Chemotherapy and radiation	386	.	.	221	57.3	.	.	384	99.5	.	.

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: Neuroblastoma

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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		833	4	0.5	225	27.1	.	.	12	1.4	2	0.2
	Age at baseline	<18	480	.	.	167	34.9	.	.	3	0.6	2	0.4
		18-19	96	1	1.0	21	21.9	.	.	2	2.1	.	.
		20-24	177	1	0.6	27	15.3	.	.	2	1.1	.	.
		25-29	59	1	1.7	6	10.2	.	.	2	3.4	.	.
		30-34	19	1	5.6	3	16.7	.	.	3	16.7	.	.
		35+	2	.	.	1	50.0	.	.	.	.	.	.
	Years since diagnosis	5-9	98	.	.	43	43.9	.	.	2	2.0	.	.
		10-14	296	.	.	106	35.8	.	.	2	0.7	2	0.7
		15-19	249	1	0.4	56	22.6	.	.	2	0.8	.	.
		20+	190	3	1.6	20	10.6	.	.	6	3.2	.	.
	Age at diagnosis	<1	457	2	0.4	108	23.7	.	.	2	0.4	1	0.2
		1-4	301	1	0.3	94	31.2	.	.	5	1.7	1	0.3
		5-9	57	1	1.8	14	25.0	.	.	3	5.4	.	.
		10-14	12	.	.	6	50.0	.	.	2	16.7	.	.
		15-20	6	.	.	3	50.0	.	.	.	.	.	.
	Treatment	Chemotherapy, no radiation	220	3	1.4	118	53.6	.	.	3	1.4	1	0.5
		Chemotherapy and radiation	273	1	0.4	106	38.8	.	.	9	3.3	1	0.4
Males	All cases		388	2	0.5	105	27.1	.	.	6	1.6	1	0.3
	Age at baseline	<18	223	.	.	74	33.3	.	.	1	0.5	1	0.5
		18-19	43	1	2.3	14	32.6	.	.	1	2.3	.	.
		20-24	84	.	.	12	14.3	.	.	1	1.2	.	.
		25-29	26	.	.	2	7.7	.	.	1	3.8	.	.
		30-34	11	1	9.1	3	27.3	.	.	2	18.2	.	.
		35+	1	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	45	.	.	19	42.2	.	.	1	2.2	.	.
		10-14	140	.	.	46	32.9	.	.	.	.	1	0.7
		15-19	111	1	0.9	29	26.4	.	.	2	1.8	.	.
		20+	92	1	1.1	11	12.0	.	.	3	3.3	.	.
	Age at diagnosis	<1	232	1	0.4	57	24.7	.	.	1	0.4	1	0.4
		1-4	123	.	.	38	30.9	.	.	2	1.6	.	.
		5-9	24	1	4.2	5	20.8	.	.	2	8.3	.	.
		10-14	6	.	.	3	50.0	.	.	1	16.7	.	.
		15-20	3	.	.	2	66.7	.	.	.	.	.	.
	Treatment	Chemotherapy, no radiation	101	1	1.0	58	57.4	.	.	1	1.0	1	1.0
		Chemotherapy and radiation	126	1	0.8	47	37.3	.	.	5	4.0	.	.
Females	All cases		445	2	0.5	120	27.0	.	.	6	1.4	1	0.2
	Age at baseline	<18	257	.	.	93	36.2	.	.	2	0.8	1	0.4

		18-19	53	.	.	7	13.2	.	.	1	1.9	.	.
		20-24	93	1	1.1	15	16.1	.	.	1	1.1	.	.
		25-29	33	1	3.0	4	12.1	.	.	1	3.0	.	.
		30-34	8	.	.	.	.	.	.	1	14.3	.	.
		35+	1	.	.	1	.	.	.	.	.	.	.
	Years since diagnosis	5-9	53	.	.	24	45.3	.	.	1	1.9	.	.
		10-14	156	.	.	60	38.5	.	.	2	1.3	1	0.6
		15-19	138	.	.	27	19.6	.	.	.	.	.	.
		20+	98	2	2.1	9	9.3	.	.	3	3.1	.	.
	Age at diagnosis	<1	225	1	0.4	51	22.7	.	.	1	0.4	.	.
		1-4	178	1	0.6	56	31.5	.	.	3	1.7	1	0.6
		5-9	33	.	.	9	28.1	.	.	1	3.1	.	.
		10-14	6	.	.	3	50.0	.	.	1	16.7	.	.
		15-20	3	.	.	1	33.3	.	.	.	.	.	.
	Treatment	Chemotherapy, no radiation	119	2	1.7	60	50.4	.	.	2	1.7	.	.
		Chemotherapy and radiation	147	.	.	59	40.1	.	.	4	2.7	1	0.7

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: STS

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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		1092	3	0.3	471	43.3	1	0.1	781	71.7	47	4.3
	Age at baseline	<18	229	2	0.9	120	52.6	.	.	198	86.8	6	2.6
		18-19	83	.	.	40	48.2	.	.	75	90.4	5	6.0
		20-24	224	.	.	100	44.6	.	.	179	79.9	7	3.1
		25-29	230	1	0.4	92	40.0	.	.	162	70.4	10	4.3
		30-34	191	.	.	74	38.9	1	0.5	111	58.4	13	6.8
		35+	135	.	.	45	33.6	.	.	56	41.8	6	4.5
	Years since diagnosis	5-9	152	1	0.7	95	62.9	.	.	115	76.2	4	2.6
		10-14	337	2	0.6	160	47.5	1	0.3	236	70.0	21	6.2
		15-19	323	.	.	148	45.8	.	.	248	76.8	14	4.3
		20+	280	.	.	68	24.5	.	.	182	65.5	8	2.9
	Age at diagnosis	<1	80	.	.	21	26.3	.	.	57	71.3	2	2.5
		1-4	305	1	0.3	138	45.2	.	.	278	91.1	8	2.6
		5-9	223	1	0.4	91	40.8	.	.	187	83.9	6	2.7
		10-14	231	.	.	110	48.0	.	.	148	64.6	14	6.1
		15-20	253	1	0.4	111	44.0	1	0.4	111	44.0	17	6.7
	Treatment	Chemotherapy, no radiation	230	.	.	119	51.7	.	.	197	85.7	14	6.1
		Chemotherapy and radiation	631	3	0.5	351	55.6	1	0.2	583	92.4	33	5.2
Males	All cases		563	2	0.4	249	44.3	.	.	415	73.8	28	5.0
	Age at baseline	<18	127	1	0.8	73	57.5	.	.	113	89.0	2	1.6
		18-19	42	.	.	21	50.0	.	.	39	92.9	5	11.9
		20-24	124	.	.	49	39.5	.	.	96	77.4	4	3.2
		25-29	112	1	0.9	45	40.2	.	.	84	75.0	7	6.3
		30-34	96	.	.	38	40.0	.	.	56	58.9	7	7.4
		35+	62	.	.	23	37.1	.	.	27	43.5	3	4.8
	Years since diagnosis	5-9	80	1	1.3	54	67.5	.	.	64	80.0	.	.
		10-14	176	1	0.6	90	51.1	.	.	127	72.2	16	9.1
		15-19	157	.	.	69	43.9	.	.	125	79.6	8	5.1
		20+	150	.	.	36	24.2	.	.	99	66.4	4	2.7
	Age at diagnosis	<1	34	.	.	11	32.4	.	.	26	76.5	.	.
		1-4	183	.	.	81	44.3	.	.	166	90.7	6	3.3
		5-9	120	1	0.8	49	40.8	.	.	99	82.5	4	3.3
		10-14	114	.	.	56	49.6	.	.	73	64.6	11	9.7
		15-20	112	1	0.9	52	46.4	.	.	51	45.5	7	6.3
	Treatment	Chemotherapy, no radiation	127	.	.	60	47.2	.	.	109	85.8	5	3.9
		Chemotherapy and radiation	331	2	0.6	189	57.1	.	.	306	92.4	23	6.9
Females	All cases		529	1	0.2	222	42.1	1	0.2	366	69.4	19	3.6
	Age at baseline	<18	102	1	1.0	47	46.5	.	.	85	84.2	4	4.0

		18-19	41	.	.	19	46.3	.	.	36	87.8	.	.
		20-24	100	.	.	51	51.0	.	.	83	83.0	3	3.0
		25-29	118	.	.	47	39.8	.	.	78	66.1	3	2.5
		30-34	95	.	.	36	37.9	1	1.1	55	57.9	6	6.3
		35+	73	.	.	22	30.6	.	.	29	40.3	3	4.2
	Years since diagnosis	5-9	72	.	.	41	57.7	.	.	51	71.8	4	5.6
		10-14	161	1	0.6	70	43.5	1	0.6	109	67.7	5	3.1
		15-19	166	.	.	79	47.6	.	.	123	74.1	6	3.6
		20+	130	.	.	32	24.8	.	.	83	64.3	4	3.1
	Age at diagnosis	<1	46	.	.	10	21.7	.	.	31	67.4	2	4.3
		1-4	122	1	0.8	57	46.7	.	.	112	91.8	2	1.6
		5-9	103	.	.	42	40.8	.	.	88	85.4	2	1.9
		10-14	117	.	.	54	46.6	.	.	75	64.7	3	2.6
		15-20	141	.	.	59	42.1	1	0.7	60	42.9	10	7.1
	Treatment	Chemotherapy, no radiation	103	.	.	59	57.3	.	.	88	85.4	9	8.7
		Chemotherapy and radiation	300	1	0.3	162	54.0	1	0.3	277	92.3	10	3.3

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: All bone

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			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		1044	2	0.2	856	82.0	.	.	542	51.9	261	25.0
	Age at baseline	<18	47	.	.	45	95.7	.	.	39	83.0	12	25.5
		18-19	43	.	.	37	86.0	.	.	31	72.1	14	32.6
		20-24	211	.	.	196	92.9	.	.	162	76.8	86	40.8
		25-29	266	1	0.4	227	85.3	.	.	145	54.5	73	27.4
		30-34	285	.	.	225	78.9	.	.	111	38.9	54	18.9
		35+	192	1	0.5	126	65.6	.	.	54	28.1	22	11.5
	Years since diagnosis	5-9	152	.	.	143	94.1	.	.	118	77.6	68	44.7
		10-14	357	1	0.3	307	86.0	.	.	223	62.5	127	35.6
		15-19	331	.	.	282	85.2	.	.	149	45.0	55	16.6
		20+	204	1	0.5	124	60.8	.	.	52	25.5	11	5.4
	Age at diagnosis	<1	1	.	.	.	.	.	.	1	.	.	.
		1-4	35	.	.	32	91.4	.	.	25	71.4	5	14.3
		5-9	176	.	.	149	84.7	.	.	102	58.0	27	15.3
		10-14	395	.	.	326	82.5	.	.	221	55.9	117	29.6
		15-20	437	2	0.5	349	79.9	.	.	193	44.2	112	25.6
	Treatment	Chemotherapy, no radiation	567	1	0.2	533	94.0	.	.	274	48.3	225	39.7
		Chemotherapy and radiation	370	1	0.3	321	86.8	.	.	266	71.9	35	9.5
Males	All cases		528	2	0.4	445	84.3	.	.	288	54.5	134	25.4
	Age at baseline	<18	24	.	.	23	95.8	.	.	22	91.7	7	29.2
		18-19	24	.	.	20	83.3	.	.	18	75.0	6	25.0
		20-24	99	.	.	90	90.9	.	.	78	78.8	35	35.4
		25-29	137	1	0.7	120	87.6	.	.	74	54.0	37	27.0
		30-34	143	.	.	121	84.6	.	.	67	46.9	35	24.5
		35+	101	1	1.0	71	70.3	.	.	29	28.7	14	13.9
	Years since diagnosis	5-9	77	.	.	72	93.5	.	.	65	84.4	32	41.6
		10-14	188	1	0.5	167	88.8	.	.	117	62.2	66	35.1
		15-19	167	.	.	148	88.6	.	.	79	47.3	30	18.0
		20+	96	1	1.0	58	60.4	.	.	27	28.1	6	6.3
	Age at diagnosis	<1	1	.	.	.	.	.	.	1	.	.	.
		1-4	16	.	.	13	81.3	.	.	13	81.3	2	12.5
		5-9	96	.	.	81	84.4	.	.	60	62.5	15	15.6
		10-14	178	.	.	151	84.8	.	.	104	58.4	47	26.4
		15-20	237	2	0.8	200	84.4	.	.	110	46.4	70	29.5
	Treatment	Chemotherapy, no radiation	292	1	0.3	275	94.2	.	.	146	50.0	116	39.7
		Chemotherapy and radiation	190	1	0.5	168	88.4	.	.	140	73.7	17	8.9
Females	All cases		516	.	.	411	79.7	.	.	254	49.2	127	24.6
	Age at baseline	<18	23	.	.	22	95.7	.	.	17	73.9	5	21.7

		18-19	19	.	.	17	89.5	.	.	13	68.4	8	42.1
		20-24	112	.	.	106	94.6	.	.	84	75.0	51	45.5
		25-29	129	.	.	107	82.9	.	.	71	55.0	36	27.9
		30-34	142	.	.	104	73.2	.	.	44	31.0	19	13.4
		35+	91	.	.	55	60.4	.	.	25	27.5	8	8.8
	Years since diagnosis	5-9	75	.	.	71	94.7	.	.	53	70.7	36	48.0
		10-14	169	.	.	140	82.8	.	.	106	62.7	61	36.1
		15-19	164	.	.	134	81.7	.	.	70	42.7	25	15.2
		20+	108	.	.	66	61.1	.	.	25	23.1	5	4.6
	Age at diagnosis	1-4	19	.	.	19	.	.	.	12	63.2	3	15.8
		5-9	80	.	.	68	85.0	.	.	42	52.5	12	15.0
		10-14	217	.	.	175	80.6	.	.	117	53.9	70	32.3
		15-20	200	.	.	149	74.5	.	.	83	41.5	42	21.0
	Treatment	Chemotherapy, no radiation	275	.	.	258	93.8	.	.	128	46.5	109	39.6
		Chemotherapy and radiation	180	.	.	153	85.0	.	.	126	70.0	18	10.0

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: Ewings

[Click here to see the Medical Records Abstraction Form for Survivors](#)

			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		360	.	.	311	86.4	.	.	294	81.7	25	6.9
	Age at baseline	<18	31	.	.	30	96.8	.	.	27	87.1	1	3.2
		18-19	23	.	.	22	95.7	.	.	19	82.6	3	13.0
		20-24	94	.	.	92	97.9	.	.	78	83.0	6	6.4
		25-29	91	.	.	77	84.6	.	.	78	85.7	6	6.6
		30-34	81	.	.	62	76.5	.	.	60	74.1	4	4.9
		35+	40	.	.	28	70.0	.	.	32	80.0	5	12.5
	Years since diagnosis	5-9	67	.	.	65	97.0	.	.	51	76.1	6	9.0
		10-14	126	.	.	121	96.0	.	.	105	83.3	7	5.6
		15-19	107	.	.	93	86.9	.	.	98	91.6	9	8.4
		20+	60	.	.	32	53.3	.	.	40	66.7	3	5.0
	Age at diagnosis	<1	1	.	.	.	.	.	.	1	.	.	.
		1-4	23	.	.	21	91.3	.	.	21	91.3	1	4.3
		5-9	95	.	.	84	88.4	.	.	75	78.9	4	4.2
		10-14	132	.	.	106	80.3	.	.	109	82.6	9	6.8
		15-20	109	.	.	100	91.7	.	.	88	80.7	11	10.1
	Treatment	Chemotherapy, no radiation	70	.	.	64	91.4	.	.	54	77.1	5	7.1
		Chemotherapy and radiation	288	.	.	247	85.8	.	.	240	83.3	20	6.9
Males	All cases		186	.	.	164	88.2	.	.	161	86.6	12	6.5
	Age at baseline	<18	15	.	.	14	93.3	.	.	14	93.3	.	.
		18-19	14	.	.	13	92.9	.	.	13	92.9	2	14.3
		20-24	50	.	.	49	98.0	.	.	44	88.0	3	6.0
		25-29	44	.	.	38	86.4	.	.	40	90.9	2	4.5
		30-34	42	.	.	36	85.7	.	.	34	81.0	3	7.1
		35+	21	.	.	14	66.7	.	.	16	76.2	2	9.5
	Years since diagnosis	5-9	38	.	.	37	97.4	.	.	33	86.8	3	7.9
		10-14	62	.	.	60	96.8	.	.	55	88.7	2	3.2
		15-19	56	.	.	52	92.9	.	.	51	91.1	5	8.9
		20+	30	.	.	15	50.0	.	.	22	73.3	2	6.7
	Age at diagnosis	<1	1	.	.	.	.	.	.	1	.	.	.
		1-4	12	.	.	10	83.3	.	.	12	.	1	8.3
		5-9	50	.	.	44	88.0	.	.	43	86.0	2	4.0
		10-14	68	.	.	58	85.3	.	.	61	89.7	4	5.9
		15-20	55	.	.	52	94.5	.	.	44	80.0	5	9.1
	Treatment	Chemotherapy, no radiation	39	.	.	36	92.3	.	.	35	89.7	4	10.3
		Chemotherapy and radiation	146	.	.	128	87.7	.	.	126	86.3	8	5.5
Females	All cases		174	.	.	147	84.5	.	.	133	76.4	13	7.5
	Age at baseline	<18	16	.	.	16	.	.	.	13	81.3	1	6.3

		18-19	9	.	.	9	.	.	.	6	66.7	1	11.1
		20-24	44	.	.	43	97.7	.	.	34	77.3	3	6.8
		25-29	47	.	.	39	83.0	.	.	38	80.9	4	8.5
		30-34	39	.	.	26	66.7	.	.	26	66.7	1	2.6
		35+	19	.	.	14	73.7	.	.	16	84.2	3	15.8
	Years since diagnosis	5-9	29	.	.	28	96.6	.	.	18	62.1	3	10.3
		10-14	64	.	.	61	95.3	.	.	50	78.1	5	7.8
		15-19	51	.	.	41	80.4	.	.	47	92.2	4	7.8
		20+	30	.	.	17	56.7	.	.	18	60.0	1	3.3
	Age at diagnosis	1-4	11	.	.	11	.	.	.	9	81.8	.	.
		5-9	45	.	.	40	88.9	.	.	32	71.1	2	4.4
		10-14	64	.	.	48	75.0	.	.	48	75.0	5	7.8
		15-20	54	.	.	48	88.9	.	.	44	81.5	6	11.1
	Treatment	Chemotherapy, no radiation	31	.	.	28	90.3	.	.	19	61.3	1	3.2
		Chemotherapy and radiation	142	.	.	119	83.8	.	.	114	80.3	12	8.5

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.

Chemotherapy agents - Anthracyclines and antibiotics: Osteosarcoma

[Click here to see the Medical Records Abstraction Form for Survivors](#)

			Daunorubicin		Doxorubicin		Idarubicin		Actinomycin-D		Bleomycin		
			All cases	N	%	N	%	N	%	N	%	N	%
Both sexes	All cases		638	2	0.3	537	84.2	.	.	238	37.3	235	36.8
	Age at baseline	<18	14	.	.	14	.	.	.	12	85.7	11	78.6
		18-19	18	.	.	15	83.3	.	.	12	66.7	11	61.1
		20-24	110	.	.	100	90.9	.	.	80	72.7	79	71.8
		25-29	166	1	0.6	147	88.6	.	.	63	38.0	67	40.4
		30-34	192	.	.	163	84.9	.	.	50	26.0	50	26.0
		35+	138	1	0.7	98	71.0	.	.	21	15.2	17	12.3
	Years since diagnosis	5-9	79	.	.	74	93.7	.	.	64	81.0	62	78.5
		10-14	215	1	0.5	182	84.7	.	.	115	53.5	119	55.3
		15-19	213	.	.	189	88.7	.	.	49	23.0	46	21.6
		20+	131	1	0.8	92	70.2	.	.	10	7.6	8	6.1
	Age at diagnosis	1-4	10	.	.	10	.	.	.	4	40.0	4	40.0
		5-9	72	.	.	64	88.9	.	.	25	34.7	23	31.9
		10-14	254	.	.	217	85.4	.	.	107	42.1	107	42.1
		15-20	302	2	0.7	246	81.5	.	.	102	33.8	101	33.4
	Treatment	Chemotherapy, no radiation	492	1	0.2	466	94.7	.	.	216	43.9	219	44.5
		Chemotherapy and radiation	74	1	1.4	69	93.2	.	.	20	27.0	15	20.3
Males	All cases		320	2	0.6	279	87.2	.	.	123	38.4	122	38.1
	Age at baseline	<18	9	.	.	9	.	.	.	8	88.9	7	77.8
		18-19	8	.	.	7	87.5	.	.	5	62.5	4	50.0
		20-24	46	.	.	40	87.0	.	.	33	71.7	32	69.6
		25-29	88	1	1.1	81	92.0	.	.	32	36.4	35	39.8
		30-34	94	.	.	85	90.4	.	.	32	34.0	32	34.0
		35+	75	1	1.3	57	76.0	.	.	13	17.3	12	16.0
	Years since diagnosis	5-9	37	.	.	34	91.9	.	.	31	83.8	29	78.4
		10-14	119	1	0.8	106	89.1	.	.	61	51.3	64	53.8
		15-19	104	.	.	96	92.3	.	.	27	26.0	25	24.0
		20+	60	1	1.7	43	71.7	.	.	4	6.7	4	6.7
	Age at diagnosis	1-4	3	.	.	3	.	.	.	1	33.3	1	33.3
		5-9	39	.	.	36	92.3	.	.	15	38.5	13	33.3
		10-14	108	.	.	93	86.1	.	.	43	39.8	43	39.8
		15-20	170	2	1.2	147	86.5	.	.	64	37.6	65	38.2
	Treatment	Chemotherapy, no radiation	251	1	0.4	238	94.8	.	.	109	43.4	112	44.6
		Chemotherapy and radiation	41	1	2.4	39	95.1	.	.	12	29.3	9	22.0
Females	All cases		318	.	.	258	81.1	.	.	115	36.2	113	35.5
	Age at baseline	<18	5	.	.	5	.	.	.	4	80.0	4	80.0
		18-19	10	.	.	8	80.0	.	.	7	70.0	7	70.0
		20-24	64	.	.	60	93.8	.	.	47	73.4	47	73.4

		25-29	78	.	.	66	84.6	.	.	31	39.7	32	41.0
		30-34	98	.	.	78	79.6	.	.	18	18.4	18	18.4
		35+	63	.	.	41	65.1	.	.	8	12.7	5	7.9
	Years since diagnosis	5-9	42	.	.	40	95.2	.	.	33	78.6	33	78.6
		10-14	96	.	.	76	79.2	.	.	54	56.3	55	57.3
		15-19	109	.	.	93	85.3	.	.	22	20.2	21	19.3
		20+	71	.	.	49	69.0	.	.	6	8.5	4	5.6
	Age at diagnosis	1-4	7	.	.	7	.	.	.	3	42.9	3	42.9
		5-9	33	.	.	28	84.8	.	.	10	30.3	10	30.3
		10-14	146	.	.	124	84.9	.	.	64	43.8	64	43.8
		15-20	132	.	.	99	75.0	.	.	38	28.8	36	27.3
	Treatment	Chemotherapy, no radiation	241	.	.	228	94.6	.	.	107	44.4	107	44.4
		Chemotherapy and radiation	33	.	.	30	90.9	.	.	8	24.2	6	18.2

CCSS data from February 2006 data freeze-all % based on denominator with non-missing values

Data for patients with medical records abstraction

Chemotherapy initiated more than 5 years post-diagnosis is not included.