Chemotherapy agents - Anthracyclines and antibiotics: All cancers

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**23716**	**3733**	**15.9**	**8534**	**36.4**	**197**	**0.8**	**3**	**0.0**	**145**	**0.6**	**4104**	**17.5**	**1558**	**6.6**
	Age at baseline	<18	5295	1011	19.2	1713	32.5	61	1.2	1	0.0	35	0.7	1071	20.3	56	1.1
		18-19	1964	316	16.2	656	33.7	23	1.2	.	.	7	0.4	412	21.2	46	2.4
		20-24	5511	823	15.1	1903	34.8	47	0.9	2	0.0	25	0.5	1103	20.2	280	5.1
		25-29	5150	818	16.0	1920	37.7	36	0.7	.	.	15	0.3	840	16.5	425	8.3
		30-34	3566	500	14.2	1484	42.2	21	0.6	.	.	30	0.9	432	12.3	442	12.5
		35+	2230	265	12.0	858	39.0	9	0.4	.	.	33	1.5	246	11.2	309	14.1
	Years since diagnosis	5-9	2391	527	22.3	938	39.7	20	0.8	2	0.1	6	0.3	425	17.9	196	8.3
		10-14	7681	1284	16.8	2915	38.3	114	1.5	.	.	45	0.6	1286	16.9	579	7.6
		15-19	7592	1083	14.4	2857	38.1	53	0.7	1	0.0	73	1.0	1287	17.1	424	5.6
		20+	6052	839	14.0	1824	30.5	10	0.2	.	.	21	0.4	1106	18.5	359	6.0
	Age at diagnosis	<1	1789	180	10.1	483	27.2	17	1.0	1	0.1	11	0.6	365	20.5	5	0.3
		1-4	7646	1409	18.6	2333	30.7	61	0.8	1	0.0	35	0.5	1777	23.4	52	0.7
		5-9	5313	802	15.2	1747	33.2	44	0.8	.	.	24	0.5	901	17.1	206	3.9
		10-14	5026	901	18.1	2165	43.6	40	0.8	1	0.0	24	0.5	607	12.2	620	12.4
		15-20	3942	441	11.4	1806	46.7	35	0.9	.	.	51	1.3	454	11.7	675	17.4
Males	**All cases**		**12555**	**2076**	**16.7**	**4604**	**37.1**	**108**	**0.9**	**1**	**0.0**	**78**	**0.6**	**2056**	**16.5**	**813**	**6.5**
	Age at baseline	<18	2844	568	20.1	947	33.5	26	0.9	.	.	22	0.8	562	19.9	38	1.3
		18-19	1013	181	18.0	349	34.7	14	1.4	.	.	2	0.2	189	18.8	32	3.2
		20-24	2866	427	15.0	1006	35.4	26	0.9	1	0.0	10	0.4	520	18.3	156	5.5
		25-29	2820	463	16.6	1044	37.5	26	0.9	.	.	6	0.2	419	15.0	217	7.8
		30-34	1889	278	14.9	814	43.7	11	0.6	.	.	19	1.0	237	12.7	236	12.6
		35+	1123	159	14.3	444	40.1	5	0.5	.	.	19	1.7	129	11.7	134	12.1
	Years since diagnosis	5-9	1331	310	23.6	527	40.1	10	0.8	1	0.1	3	0.2	220	16.7	103	7.8
		10-14	4084	719	17.7	1574	38.9	59	1.5	.	.	23	0.6	664	16.4	301	7.4
		15-19	3944	571	14.6	1517	38.9	32	0.8	.	.	43	1.1	609	15.6	226	5.8
		20+	3196	476	15.1	986	31.2	7	0.2	.	.	9	0.3	563	17.8	183	5.8
	Age at diagnosis	<1	907	86	9.6	249	27.7	7	0.8	.	.	5	0.6	178	19.8	2	0.2
		1-4	3967	772	19.6	1233	31.3	33	0.8	.	.	25	0.6	879	22.3	35	0.9
		5-9	2975	476	16.2	1000	34.0	26	0.9	.	.	7	0.2	448	15.2	142	4.8
		10-14	2625	466	17.9	1167	44.9	20	0.8	1	0.0	8	0.3	309	11.9	314	12.1
		15-20	2081	276	13.5	955	46.7	22	1.1	.	.	33	1.6	242	11.8	320	15.6
Females	**All cases**		**11161**	**1657**	**15.0**	**3930**	**35.6**	**89**	**0.8**	**2**	**0.0**	**67**	**0.6**	**2048**	**18.5**	**745**	**6.7**
	Age at baseline	<18	2451	443	18.1	766	31.4	35	1.4	1	0.0	13	0.5	509	20.9	18	0.7
		18-19	951	135	14.3	307	32.7	9	1.0	.	.	5	0.5	223	23.7	14	1.5
		20-24	2645	396	15.1	897	34.2	21	0.8	1	0.0	15	0.6	583	22.2	124	4.7
		25-29	2330	355	15.4	876	38.0	10	0.4	.	.	9	0.4	421	18.3	208	9.0
		30-34	1677	222	13.4	670	40.6	10	0.6	.	.	11	0.7	195	11.8	206	12.4
		35+	1107	106	9.7	414	38.0	4	0.4	.	.	14	1.3	117	10.7	175	16.1
	Years since diagnosis	5-9	1060	217	20.6	411	39.1	10	1.0	1	0.1	3	0.3	205	19.5	93	8.8
		10-14	3597	565	15.8	1341	37.6	55	1.5	.	.	22	0.6	622	17.4	278	7.8
		15-19	3648	512	14.1	1340	37.1	21	0.6	1	0.0	30	0.8	678	18.8	198	5.5
		20+	2856	363	12.8	838	29.7	3	0.1	.	.	12	0.4	543	19.2	176	6.2
	Age at diagnosis	<1	882	94	10.7	234	26.7	10	1.1	1	0.1	6	0.7	187	21.3	3	0.3
		1-4	3679	637	17.4	1100	30.2	28	0.8	1	0.0	10	0.3	898	24.6	17	0.5
		5-9	2338	326	14.0	747	32.1	18	0.8	.	.	17	0.7	453	19.5	64	2.8
		10-14	2401	435	18.3	998	42.1	20	0.8	.	.	16	0.7	298	12.5	306	12.9
		15-20	1861	165	9.0	851	46.6	13	0.7	.	.	18	1.0	212	11.6	355	19.4

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**7302**	**3205**	**44.3**	**2119**	**29.3**	**189**	**2.6**	**.**	**.**	**111**	**1.5**	**64**	**0.9**	**2**	**0.0**
	Age at baseline	<18	2099	935	44.9	571	27.4	60	2.9	.	.	35	1.7	13	0.6	.	.
		18-19	769	270	35.4	245	32.1	22	2.9	.	.	7	0.9	5	0.7	.	.
		20-24	1799	707	39.6	522	29.2	44	2.5	.	.	24	1.3	11	0.6	.	.
		25-29	1471	679	46.5	428	29.3	36	2.5	.	.	14	1.0	16	1.1	1	0.1
		30-34	779	391	51.4	232	30.6	20	2.6	.	.	19	2.5	4	0.5	.	.
		35+	385	223	58.5	121	31.8	7	1.8	.	.	12	3.2	15	3.9	1	0.3
	Years since diagnosis	5-9	906	481	53.6	268	29.8	20	2.2	.	.	6	0.7	3	0.3	.	.
		10-14	2444	1090	45.0	725	29.9	113	4.7	.	.	39	1.6	25	1.0	.	.
		15-19	2246	917	41.2	724	32.5	46	2.1	.	.	55	2.5	8	0.4	1	0.0
		20+	1706	717	42.5	402	23.8	10	0.6	.	.	11	0.7	28	1.7	1	0.1
	Age at diagnosis	<1	233	172	75.1	41	17.8	17	7.4	.	.	11	4.8	1	0.4	.	.
		1-4	3449	1301	38.0	919	26.8	57	1.7	.	.	35	1.0	22	0.6	.	.
		5-9	1767	646	37.0	522	29.9	43	2.5	.	.	22	1.3	18	1.0	1	0.1
		10-14	1216	729	60.3	413	34.2	40	3.3	.	.	23	1.9	8	0.7	.	.
		15-20	637	357	57.2	224	35.9	32	5.1	.	.	20	3.2	15	2.4	1	0.2
Males	**All cases**		**3855**	**1739**	**45.7**	**1206**	**31.6**	**104**	**2.7**	**.**	**.**	**57**	**1.5**	**43**	**1.1**	**1**	**0.0**
	Age at baseline	<18	1137	520	46.2	327	29.0	26	2.3	.	.	22	1.9	10	0.9	.	.
		18-19	410	150	36.9	142	34.8	14	3.4	.	.	2	0.5	4	1.0	.	.
		20-24	895	353	39.8	284	32.0	24	2.7	.	.	10	1.1	7	0.8	.	.
		25-29	788	368	47.2	242	31.0	26	3.3	.	.	5	0.6	11	1.4	.	.
		30-34	411	214	53.8	134	33.7	10	2.5	.	.	12	3.0	3	0.8	.	.
		35+	214	134	63.2	77	36.3	4	1.9	.	.	6	2.8	8	3.8	1	0.5
	Years since diagnosis	5-9	510	275	54.5	162	32.0	10	2.0	.	.	3	0.6	2	0.4	.	.
		10-14	1300	593	46.1	420	32.6	58	4.5	.	.	20	1.5	18	1.4	.	.
		15-19	1138	468	41.6	398	35.4	29	2.6	.	.	30	2.7	3	0.3	1	0.1
		20+	907	403	45.1	226	25.2	7	0.8	.	.	4	0.4	20	2.2	.	.
	Age at diagnosis	<1	111	83	76.9	17	15.7	7	6.4	.	.	5	4.6	.	.	.	.
		1-4	1822	708	39.2	509	28.1	32	1.8	.	.	25	1.4	18	1.0	.	.
		5-9	942	372	40.1	299	32.2	25	2.7	.	.	6	0.6	11	1.2	.	.
		10-14	596	353	59.7	240	40.6	20	3.4	.	.	8	1.4	6	1.0	.	.
		15-20	384	223	59.3	141	37.5	20	5.3	.	.	13	3.4	8	2.1	1	0.3
Females	**All cases**		**3447**	**1466**	**42.8**	**913**	**26.7**	**85**	**2.5**	**.**	**.**	**54**	**1.6**	**21**	**0.6**	**1**	**0.0**
	Age at baseline	<18	962	415	43.3	244	25.5	34	3.5	.	.	13	1.4	3	0.3	.	.
		18-19	359	120	33.8	103	29.0	8	2.3	.	.	5	1.4	1	0.3	.	.
		20-24	904	354	39.5	238	26.5	20	2.2	.	.	14	1.6	4	0.4	.	.
		25-29	683	311	45.7	186	27.3	10	1.5	.	.	9	1.3	5	0.7	1	0.1
		30-34	368	177	48.8	98	27.1	10	2.7	.	.	7	1.9	1	0.3	.	.
		35+	171	89	52.7	44	26.0	3	1.8	.	.	6	3.6	7	4.1	.	.
	Years since diagnosis	5-9	396	206	52.4	106	27.0	10	2.5	.	.	3	0.8	1	0.3	.	.
		10-14	1144	497	43.8	305	26.8	55	4.8	.	.	19	1.7	7	0.6	.	.
		15-19	1108	449	40.7	326	29.6	17	1.5	.	.	25	2.3	5	0.5	.	.
		20+	799	314	39.6	176	22.3	3	0.4	.	.	7	0.9	8	1.0	1	0.1
	Age at diagnosis	<1	122	89	73.6	24	19.7	10	8.2	.	.	6	4.9	1	0.8	.	.
		1-4	1627	593	36.7	410	25.4	25	1.5	.	.	10	0.6	4	0.2	.	.
		5-9	825	274	33.4	223	27.2	18	2.2	.	.	16	2.0	7	0.9	1	0.1
		10-14	620	376	60.9	173	28.1	20	3.2	.	.	15	2.4	2	0.3	.	.
		15-20	253	134	54.0	83	33.5	12	4.8	.	.	7	2.8	7	2.8	.	.

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**6109**	**2375**	**39.2**	**1936**	**32.0**	**86**	**1.4**	**.**	**.**	**23**	**0.4**	**59**	**1.0**	**2**	**0.0**
	Age at baseline	<18	1814	723	40.1	529	29.3	24	1.3	.	.	6	0.3	12	0.7	.	.
		18-19	666	197	29.8	222	33.6	14	2.1	.	.	2	0.3	4	0.6	.	.
		20-24	1532	512	33.7	480	31.6	23	1.5	.	.	2	0.1	10	0.7	.	.
		25-29	1217	498	41.1	389	32.1	18	1.5	.	.	2	0.2	15	1.2	1	0.1
		30-34	604	280	47.5	206	35.0	7	1.2	.	.	5	0.8	4	0.7	.	.
		35+	276	165	60.4	110	40.3	.	.	.	.	6	2.2	14	5.1	1	0.4
	Years since diagnosis	5-9	778	407	52.7	246	31.9	17	2.2	.	.	4	0.5	3	0.4	.	.
		10-14	2048	801	39.4	668	32.8	44	2.2	.	.	1	0.0	23	1.1	.	.
		15-19	1853	634	34.5	649	35.3	18	1.0	.	.	15	0.8	8	0.4	1	0.1
		20+	1430	533	37.6	373	26.4	7	0.5	.	.	3	0.2	25	1.8	1	0.1
	Age at diagnosis	<1	128	90	72.0	23	18.1	3	2.4	.	.	3	2.4	.	.	.	.
		1-4	3055	1006	33.1	861	28.4	31	1.0	.	.	3	0.1	20	0.7	.	.
		5-9	1545	485	31.7	486	31.8	20	1.3	.	.	4	0.3	17	1.1	1	0.1
		10-14	949	543	57.3	378	40.0	23	2.4	.	.	9	1.0	8	0.8	.	.
		15-20	432	251	59.8	188	44.8	9	2.1	.	.	4	1.0	14	3.3	1	0.2
Males	**All cases**		**3252**	**1315**	**40.9**	**1104**	**34.3**	**53**	**1.6**	**.**	**.**	**12**	**0.4**	**41**	**1.3**	**1**	**0.0**
	Age at baseline	<18	982	406	41.7	302	30.9	10	1.0	.	.	3	0.3	10	1.0	.	.
		18-19	358	112	31.5	131	36.8	10	2.8	.	.	.	.	4	1.1	.	.
		20-24	762	253	33.5	259	34.2	13	1.7	.	.	2	0.3	6	0.8	.	.
		25-29	665	283	42.8	226	34.2	16	2.4	.	.	1	0.2	11	1.7	.	.
		30-34	324	158	50.5	116	37.1	4	1.3	.	.	3	1.0	3	1.0	.	.
		35+	161	103	64.4	70	43.8	.	.	.	.	3	1.9	7	4.4	1	0.6
	Years since diagnosis	5-9	439	232	53.3	145	33.3	8	1.8	.	.	1	0.2	2	0.5	.	.
		10-14	1098	449	41.3	384	35.2	26	2.4	.	.	1	0.1	18	1.6	.	.
		15-19	950	331	35.3	364	38.8	14	1.5	.	.	9	1.0	3	0.3	1	0.1
		20+	765	303	40.0	211	27.8	5	0.7	.	.	1	0.1	18	2.4	.	.
	Age at diagnosis	<1	64	48	77.4	10	15.9	2	3.2	.	.	1	1.6	.	.	.	.
		1-4	1603	542	34.0	478	30.0	19	1.2	.	.	3	0.2	17	1.1	.	.
		5-9	833	291	35.4	279	33.9	14	1.7	.	.	2	0.2	11	1.3	.	.
		10-14	483	275	57.1	221	45.9	10	2.1	.	.	3	0.6	6	1.2	.	.
		15-20	269	159	60.9	116	44.4	8	3.1	.	.	3	1.1	7	2.7	1	0.4
Females	**All cases**		**2857**	**1060**	**37.4**	**832**	**29.3**	**33**	**1.2**	**.**	**.**	**11**	**0.4**	**18**	**0.6**	**1**	**0.0**
	Age at baseline	<18	832	317	38.2	227	27.4	14	1.7	.	.	3	0.4	2	0.2	.	.
		18-19	308	85	27.9	91	29.8	4	1.3	.	.	2	0.7	.	.	.	.
		20-24	770	259	33.9	221	28.9	10	1.3	.	.	.	.	4	0.5	.	.
		25-29	552	215	39.1	163	29.6	2	0.4	.	.	1	0.2	4	0.7	1	0.2
		30-34	280	122	44.0	90	32.7	3	1.1	.	.	2	0.7	1	0.4	.	.
		35+	115	62	54.9	40	35.4	.	.	.	.	3	2.7	7	6.2	.	.
	Years since diagnosis	5-9	339	175	51.9	101	30.1	9	2.7	.	.	3	0.9	1	0.3	.	.
		10-14	950	352	37.3	284	30.1	18	1.9	.	.	.	.	5	0.5	.	.
		15-19	903	303	33.7	285	31.7	4	0.4	.	.	6	0.7	5	0.6	.	.
		20+	665	230	34.9	162	24.7	2	0.3	.	.	2	0.3	7	1.1	1	0.2
	Age at diagnosis	<1	64	42	66.7	13	20.3	1	1.6	.	.	2	3.1	.	.	.	.
		1-4	1452	464	32.1	383	26.6	12	0.8	.	.	.	.	3	0.2	.	.
		5-9	712	194	27.4	207	29.3	6	0.8	.	.	2	0.3	6	0.8	1	0.1
		10-14	466	268	57.6	157	33.9	13	2.8	.	.	6	1.3	2	0.4	.	.
		15-20	163	92	57.9	72	45.3	1	0.6	.	.	1	0.6	7	4.4	.	.

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**882**	**721**	**82.9**	**125**	**14.3**	**98**	**11.2**	**.**	**.**	**80**	**9.2**	**4**	**0.5**	**.**	**.**
	Age at baseline	<18	225	191	86.4	27	12.1	36	16.1	.	.	28	12.5	1	0.4	.	.
		18-19	82	63	77.8	19	23.5	8	9.9	.	.	5	6.2	1	1.2	.	.
		20-24	193	164	85.9	24	12.6	19	9.9	.	.	20	10.4	1	0.5	.	.
		25-29	188	162	87.1	32	17.1	17	9.1	.	.	11	5.9	.	.	.	.
		30-34	121	92	77.3	17	14.3	12	10.1	.	.	12	10.1	.	.	.	.
		35+	73	49	68.1	6	8.3	6	8.3	.	.	4	5.6	1	1.4	.	.
	Years since diagnosis	5-9	81	66	83.5	14	17.5	3	3.8	.	.	2	2.5	.	.	.	.
		10-14	307	262	86.2	40	13.1	68	22.3	.	.	34	11.1	2	0.7	.	.
		15-19	304	240	79.5	55	18.2	25	8.3	.	.	38	12.5	.	.	.	.
		20+	190	153	82.7	16	8.6	2	1.1	.	.	6	3.2	2	1.1	.	.
	Age at diagnosis	<1	90	74	83.1	15	16.9	14	15.7	.	.	8	9.0	1	1.1	.	.
		1-4	301	255	86.4	38	12.7	26	8.7	.	.	31	10.4	2	0.7	.	.
		5-9	166	141	85.5	20	12.2	21	12.7	.	.	16	9.7	.	.	.	.
		10-14	186	159	87.4	26	14.3	16	8.8	.	.	13	7.1	.	.	.	.
		15-20	139	92	66.2	26	18.7	21	15.1	.	.	12	8.7	1	0.7	.	.
Males	**All cases**		**430**	**353**	**83.8**	**61**	**14.4**	**46**	**10.8**	**.**	**.**	**41**	**9.6**	**2**	**0.5**	**.**	**.**
	Age at baseline	<18	122	101	85.6	15	12.4	16	13.2	.	.	19	15.7	.	.	.	.
		18-19	42	32	76.2	8	19.0	4	9.5	.	.	2	4.8	.	.	.	.
		20-24	92	79	86.8	14	15.4	9	9.8	.	.	7	7.6	1	1.1	.	.
		25-29	82	73	91.3	12	14.8	9	11.1	.	.	4	5.0	.	.	.	.
		30-34	58	44	77.2	10	17.5	5	8.8	.	.	7	12.3	.	.	.	.
		35+	34	24	72.7	2	6.1	3	9.1	.	.	2	6.1	1	3.0	.	.
	Years since diagnosis	5-9	47	37	80.4	11	23.4	2	4.3	.	.	2	4.3	.	.	.	.
		10-14	152	131	87.9	23	15.3	31	20.7	.	.	18	12.0	.	.	.	.
		15-19	141	109	77.9	22	15.7	12	8.5	.	.	19	13.5	.	.	.	.
		20+	90	76	88.4	5	5.7	1	1.1	.	.	2	2.3	2	2.3	.	.
	Age at diagnosis	<1	39	31	81.6	6	15.8	5	13.2	.	.	4	10.5	.	.	.	.
		1-4	165	139	86.9	19	11.5	13	7.9	.	.	22	13.4	1	0.6	.	.
		5-9	76	66	88.0	8	10.8	9	12.0	.	.	3	4.0	.	.	.	.
		10-14	75	64	87.7	11	15.1	9	12.3	.	.	5	6.8	.	.	.	.
		15-20	75	53	70.7	17	22.7	10	13.3	.	.	7	9.3	1	1.3	.	.
Females	**All cases**		**452**	**368**	**82.0**	**64**	**14.3**	**52**	**11.6**	**.**	**.**	**39**	**8.7**	**2**	**0.4**	**.**	**.**
	Age at baseline	<18	103	90	87.4	12	11.7	20	19.4	.	.	9	8.7	1	1.0	.	.
		18-19	40	31	79.5	11	28.2	4	10.3	.	.	3	7.7	1	2.6	.	.
		20-24	101	85	85.0	10	10.0	10	10.0	.	.	13	13.0	.	.	.	.
		25-29	106	89	84.0	20	18.9	8	7.5	.	.	7	6.6	.	.	.	.
		30-34	63	48	77.4	7	11.3	7	11.3	.	.	5	8.1	.	.	.	.
		35+	39	25	64.1	4	10.3	3	7.7	.	.	2	5.3	.	.	.	.
	Years since diagnosis	5-9	34	29	87.9	3	9.1	1	3.0	.	.	.	.	.	.	.	.
		10-14	155	131	84.5	17	11.0	37	23.9	.	.	16	10.3	2	1.3	.	.
		15-19	163	131	80.9	33	20.4	13	8.0	.	.	19	11.7	.	.	.	.
		20+	100	77	77.8	11	11.1	1	1.0	.	.	4	4.1	.	.	.	.
	Age at diagnosis	<1	51	43	84.3	9	17.6	9	17.6	.	.	4	7.8	1	2.0	.	.
		1-4	136	116	85.9	19	14.1	13	9.6	.	.	9	6.7	1	0.7	.	.
		5-9	90	75	83.3	12	13.3	12	13.3	.	.	13	14.4	.	.	.	.
		10-14	111	95	87.2	15	13.8	7	6.4	.	.	8	7.3	.	.	.	.
		15-20	64	39	60.9	9	14.1	11	17.2	.	.	5	7.9	.	.	.	.

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**4211**	**2**	**0.0**	**33**	**0.8**	**3**	**0.1**	**.**	**.**	**.**	**.**	**77**	**1.9**	**8**	**0.2**
	Age at baseline	<18	891	.	.	4	0.5	.	.	.	.	.	.	27	3.1	2	0.2
		18-19	349	1	0.3	.	.	1	0.3	.	.	.	.	8	2.4	1	0.3
		20-24	1103	1	0.1	11	1.0	2	0.2	.	.	.	.	19	1.7	3	0.3
		25-29	1029	.	.	9	0.9	.	.	.	.	.	.	15	1.5	2	0.2
		30-34	586	.	.	8	1.4	.	.	.	.	.	.	7	1.2	.	.
		35+	253	.	.	1	0.4	.	.	.	.	.	.	1	0.4	.	.
	Years since diagnosis	5-9	430	1	0.2	4	0.9	.	.	.	.	.	.	11	2.6	3	0.7
		10-14	1427	1	0.1	8	0.6	.	.	.	.	.	.	26	1.8	3	0.2
		15-19	1335	.	.	16	1.2	3	0.2	.	.	.	.	21	1.6	1	0.1
		20+	1019	.	.	5	0.5	.	.	.	.	.	.	19	1.9	1	0.1
	Age at diagnosis	<1	206	.	.	1	0.5	.	.	.	.	.	.	13	6.4	2	1.0
		1-4	1231	.	.	5	0.4	2	0.2	.	.	.	.	37	3.0	.	.
		5-9	1331	1	0.1	12	0.9	1	0.1	.	.	.	.	13	1.0	1	0.1
		10-14	1005	1	0.1	9	0.9	.	.	.	.	.	.	11	1.1	5	0.5
		15-20	438	.	.	6	1.4	.	.	.	.	.	.	3	0.7	.	.
Males	**All cases**		**2292**	**2**	**0.1**	**19**	**0.8**	**1**	**0.0**	**.**	**.**	**.**	**.**	**45**	**2.0**	**6**	**0.3**
	Age at baseline	<18	494	.	.	3	0.6	.	.	.	.	.	.	15	3.1	1	0.2
		18-19	177	1	0.6	.	.	.	.	.	.	.	.	5	2.9	1	0.6
		20-24	590	1	0.2	7	1.2	1	0.2	.	.	.	.	10	1.7	2	0.3
		25-29	584	.	.	5	0.9	.	.	.	.	.	.	11	1.9	2	0.3
		30-34	312	.	.	4	1.3	.	.	.	.	.	.	4	1.3	.	.
		35+	135	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	244	1	0.4	2	0.8	.	.	.	.	.	.	7	2.9	2	0.8
		10-14	768	1	0.1	6	0.8	.	.	.	.	.	.	14	1.8	2	0.3
		15-19	726	.	.	9	1.3	1	0.1	.	.	.	.	10	1.4	1	0.1
		20+	554	.	.	2	0.4	.	.	.	.	.	.	14	2.6	1	0.2
	Age at diagnosis	<1	121	.	.	1	0.8	.	.	.	.	.	.	8	6.7	1	0.8
		1-4	652	.	.	1	0.2	.	.	.	.	.	.	20	3.1	.	.
		5-9	741	1	0.1	9	1.2	1	0.1	.	.	.	.	9	1.2	1	0.1
		10-14	531	1	0.2	5	1.0	.	.	.	.	.	.	6	1.1	4	0.8
		15-20	247	.	.	3	1.3	.	.	.	.	.	.	2	0.8	.	.
Females	**All cases**		**1919**	**.**	**.**	**14**	**0.7**	**2**	**0.1**	**.**	**.**	**.**	**.**	**32**	**1.7**	**2**	**0.1**
	Age at baseline	<18	397	.	.	1	0.3	.	.	.	.	.	.	12	3.0	1	0.3
		18-19	172	.	.	.	.	1	0.6	.	.	.	.	3	1.8	.	.
		20-24	513	.	.	4	0.8	1	0.2	.	.	.	.	9	1.8	1	0.2
		25-29	445	.	.	4	0.9	.	.	.	.	.	.	4	0.9	.	.
		30-34	274	.	.	4	1.5	.	.	.	.	.	.	3	1.1	.	.
		35+	118	.	.	1	0.8	.	.	.	.	.	.	1	0.8	.	.
	Years since diagnosis	5-9	186	.	.	2	1.1	.	.	.	.	.	.	4	2.2	1	0.5
		10-14	659	.	.	2	0.3	.	.	.	.	.	.	12	1.8	1	0.2
		15-19	609	.	.	7	1.2	2	0.3	.	.	.	.	11	1.8	.	.
		20+	465	.	.	3	0.6	.	.	.	.	.	.	5	1.1	.	.
	Age at diagnosis	<1	85	.	.	.	.	.	.	.	.	.	.	5	6.0	1	1.2
		1-4	579	.	.	4	0.7	2	0.3	.	.	.	.	17	3.0	.	.
		5-9	590	.	.	3	0.5	.	.	.	.	.	.	4	0.7	.	.
		10-14	474	.	.	4	0.8	.	.	.	.	.	.	5	1.1	1	0.2
		15-20	191	.	.	3	1.6	.	.	.	.	.	.	1	0.5	.	.

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**2528**	**1**	**0.0**	**5**	**0.2**	**2**	**0.1**	**.**	**.**	**.**	**.**	**57**	**2.3**	**3**	**0.1**
	Age at baseline	<18	493	.	.	.	.	.	.	.	.	.	.	25	5.1	2	0.4
		18-19	202	.	.	.	.	.	.	.	.	.	.	8	4.1	.	.
		20-24	668	1	0.2	5	0.8	2	0.3	.	.	.	.	13	2.0	1	0.2
		25-29	636	.	.	.	.	.	.	.	.	.	.	10	1.6	.	.
		30-34	360	.	.	.	.	.	.	.	.	.	.	1	0.3	.	.
		35+	169	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	220	.	.	2	0.9	.	.	.	.	.	.	9	4.1	.	.
		10-14	840	1	0.1	2	0.2	.	.	.	.	.	.	21	2.5	2	0.2
		15-19	784	.	.	1	0.1	2	0.3	.	.	.	.	12	1.6	.	.
		20+	684	.	.	.	.	.	.	.	.	.	.	15	2.2	1	0.1
	Age at diagnosis	<1	145	.	.	.	.	.	.	.	.	.	.	12	8.3	2	1.4
		1-4	748	.	.	.	.	1	0.1	.	.	.	.	35	4.7	.	.
		5-9	753	1	0.1	2	0.3	1	0.1	.	.	.	.	7	0.9	1	0.1
		10-14	603	.	.	1	0.2	.	.	.	.	.	.	2	0.3	.	.
		15-20	279	.	.	2	0.7	.	.	.	.	.	.	1	0.4	.	.
Males	**All cases**		**1315**	**1**	**0.1**	**3**	**0.2**	**1**	**0.1**	**.**	**.**	**.**	**.**	**32**	**2.5**	**2**	**0.2**
	Age at baseline	<18	258	.	.	.	.	.	.	.	.	.	.	13	5.1	1	0.4
		18-19	102	.	.	.	.	.	.	.	.	.	.	5	5.1	.	.
		20-24	329	1	0.3	3	0.9	1	0.3	.	.	.	.	6	1.8	1	0.3
		25-29	356	.	.	.	.	.	.	.	.	.	.	8	2.3	.	.
		30-34	181	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		35+	89	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	118	.	.	.	.	.	.	.	.	.	.	6	5.1	.	.
		10-14	438	1	0.2	2	0.5	.	.	.	.	.	.	9	2.1	1	0.2
		15-19	396	.	.	1	0.3	1	0.3	.	.	.	.	6	1.5	.	.
		20+	363	.	.	.	.	.	.	.	.	.	.	11	3.0	1	0.3
	Age at diagnosis	<1	81	.	.	.	.	.	.	.	.	.	.	7	8.6	1	1.2
		1-4	378	.	.	.	.	.	.	.	.	.	.	19	5.1	.	.
		5-9	397	1	0.3	2	0.5	1	0.3	.	.	.	.	5	1.3	1	0.3
		10-14	304	.	.	1	0.3	.	.	.	.	.	.	.	.	.	.
		15-20	155	.	.	.	.	.	.	.	.	.	.	1	0.7	.	.
Females	**All cases**		**1213**	**.**	**.**	**2**	**0.2**	**1**	**0.1**	**.**	**.**	**.**	**.**	**25**	**2.1**	**1**	**0.1**
	Age at baseline	<18	235	.	.	.	.	.	.	.	.	.	.	12	5.1	1	0.4
		18-19	100	.	.	.	.	.	.	.	.	.	.	3	3.1	.	.
		20-24	339	.	.	2	0.6	1	0.3	.	.	.	.	7	2.1	.	.
		25-29	280	.	.	.	.	.	.	.	.	.	.	2	0.7	.	.
		30-34	179	.	.	.	.	.	.	.	.	.	.	1	0.6	.	.
		35+	80	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	102	.	.	2	2.0	.	.	.	.	.	.	3	3.0	.	.
		10-14	402	.	.	.	.	.	.	.	.	.	.	12	3.0	1	0.3
		15-19	388	.	.	.	.	1	0.3	.	.	.	.	6	1.6	.	.
		20+	321	.	.	.	.	.	.	.	.	.	.	4	1.3	.	.
	Age at diagnosis	<1	64	.	.	.	.	.	.	.	.	.	.	5	7.9	1	1.6
		1-4	370	.	.	.	.	1	0.3	.	.	.	.	16	4.4	.	.
		5-9	356	.	.	.	.	.	.	.	.	.	.	2	0.6	.	.
		10-14	299	.	.	.	.	.	.	.	.	.	.	2	0.7	.	.
		15-20	124	.	.	2	1.7	.	.	.	.	.	.	.	.	.	.

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**983**	**1**	**0.1**	**24**	**2.5**	**.**	**.**	**.**	**.**	**.**	**.**	**16**	**1.7**	**1**	**0.1**
	Age at baseline	<18	233	.	.	2	0.9	.	.	.	.	.	.	1	0.4	.	.
		18-19	77	1	1.4	.	.	.	.	.	.	.	.	.	.	1	1.4
		20-24	276	.	.	5	1.8	.	.	.	.	.	.	5	1.8	.	.
		25-29	236	.	.	8	3.4	.	.	.	.	.	.	3	1.3	.	.
		30-34	127	.	.	8	6.3	.	.	.	.	.	.	6	4.8	.	.
		35+	34	.	.	1	3.1	.	.	.	.	.	.	1	3.1	.	.
	Years since diagnosis	5-9	120	1	0.9	1	0.9	.	.	.	.	.	.	1	0.9	1	0.9
		10-14	334	.	.	5	1.5	.	.	.	.	.	.	3	0.9	.	.
		15-19	325	.	.	13	4.1	.	.	.	.	.	.	8	2.5	.	.
		20+	204	.	.	5	2.5	.	.	.	.	.	.	4	2.0	.	.
	Age at diagnosis	<1	23	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		1-4	280	.	.	4	1.4	.	.	.	.	.	.	2	0.7	.	.
		5-9	402	.	.	9	2.3	.	.	.	.	.	.	6	1.5	.	.
		10-14	220	1	0.5	7	3.2	.	.	.	.	.	.	6	2.8	1	0.5
		15-20	58	.	.	4	7.3	.	.	.	.	.	.	2	3.6	.	.
Males	**All cases**		**600**	**1**	**0.2**	**13**	**2.2**	**.**	**.**	**.**	**.**	**.**	**.**	**10**	**1.7**	**1**	**0.2**
	Age at baseline	<18	141	.	.	1	0.7	.	.	.	.	.	.	1	0.7	.	.
		18-19	44	1	2.4	.	.	.	.	.	.	.	.	.	.	1	2.4
		20-24	178	.	.	4	2.3	.	.	.	.	.	.	4	2.3	.	.
		25-29	145	.	.	4	2.8	.	.	.	.	.	.	1	0.7	.	.
		30-34	71	.	.	4	5.7	.	.	.	.	.	.	4	5.7	.	.
		35+	21	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	73	1	1.4	1	1.4	.	.	.	.	.	.	1	1.4	1	1.4
		10-14	197	.	.	3	1.5	.	.	.	.	.	.	3	1.5	.	.
		15-19	207	.	.	7	3.4	.	.	.	.	.	.	3	1.5	.	.
		20+	123	.	.	2	1.7	.	.	.	.	.	.	3	2.5	.	.
	Age at diagnosis	<1	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		1-4	168	.	.	1	0.6	.	.	.	.	.	.	1	0.6	.	.
		5-9	256	.	.	6	2.4	.	.	.	.	.	.	4	1.6	.	.
		10-14	125	1	0.8	3	2.5	.	.	.	.	.	.	4	3.3	1	0.8
		15-20	35	.	.	3	9.4	.	.	.	.	.	.	1	3.1	.	.
Females	**All cases**		**383**	**.**	**.**	**11**	**2.9**	**.**	**.**	**.**	**.**	**.**	**.**	**6**	**1.6**	**.**	**.**
	Age at baseline	<18	92	.	.	1	1.1	.	.	.	.	.	.	.	.	.	.
		18-19	33	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		20-24	98	.	.	1	1.0	.	.	.	.	.	.	1	1.0	.	.
		25-29	91	.	.	4	4.4	.	.	.	.	.	.	2	2.2	.	.
		30-34	56	.	.	4	7.1	.	.	.	.	.	.	2	3.6	.	.
		35+	13	.	.	1	7.7	.	.	.	.	.	.	1	7.7	.	.
	Years since diagnosis	5-9	47	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		10-14	137	.	.	2	1.5	.	.	.	.	.	.	.	.	.	.
		15-19	118	.	.	6	5.2	.	.	.	.	.	.	5	4.3	.	.
		20+	81	.	.	3	3.7	.	.	.	.	.	.	1	1.2	.	.
	Age at diagnosis	<1	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		1-4	112	.	.	3	2.7	.	.	.	.	.	.	1	0.9	.	.
		5-9	146	.	.	3	2.1	.	.	.	.	.	.	2	1.4	.	.
		10-14	95	.	.	4	4.3	.	.	.	.	.	.	2	2.1	.	.
		15-20	23	.	.	1	4.3	.	.	.	.	.	.	1	4.3	.	.

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**2839**	**6**	**0.2**	**1346**	**48.2**	**1**	**0.0**	**.**	**.**	**28**	**1.0**	**3**	**0.1**	**1081**	**38.7**
	Age at baseline	<18	55	.	.	35	64.8	.	.	.	.	.	.	1	1.8	28	51.9
		18-19	54	.	.	32	59.3	.	.	.	.	.	.	.	.	25	46.3
		20-24	330	1	0.3	197	60.8	.	.	.	.	.	.	.	.	172	53.1
		25-29	734	2	0.3	405	55.9	.	.	.	.	.	.	.	.	315	43.4
		30-34	867	2	0.2	422	49.6	.	.	.	.	9	1.1	.	.	326	38.3
		35+	799	1	0.1	255	32.4	1	0.1	.	.	19	2.4	2	0.3	215	27.4
	Years since diagnosis	5-9	222	1	0.5	127	58.3	.	.	.	.	.	.	1	0.5	114	52.3
		10-14	866	2	0.2	488	57.1	.	.	.	.	4	0.5	.	.	406	47.5
		15-19	933	2	0.2	430	47.0	1	0.1	.	.	15	1.6	.	.	313	34.2
		20+	818	1	0.1	301	37.3	.	.	.	.	9	1.1	2	0.2	248	30.7
	Age at diagnosis	1-4	70	.	.	31	44.9	.	.	.	.	.	.	.	.	22	31.9
		5-9	356	1	0.3	187	53.0	.	.	.	.	.	.	2	0.6	151	42.8
		10-14	1029	2	0.2	560	55.1	.	.	.	.	.	.	.	.	431	42.4
		15-20	1384	3	0.2	568	41.9	1	0.1	.	.	28	2.1	1	0.1	477	35.2
Males	**All cases**		**1468**	**3**	**0.2**	**694**	**47.9**	**.**	**.**	**.**	**.**	**17**	**1.2**	**2**	**0.1**	**561**	**38.7**
	Age at baseline	<18	42	.	.	28	68.3	.	.	.	.	.	.	1	2.4	22	53.7
		18-19	43	.	.	25	58.1	.	.	.	.	.	.	.	.	20	46.5
		20-24	210	1	0.5	122	59.5	.	.	.	.	.	.	.	.	108	52.7
		25-29	402	1	0.3	204	51.5	.	.	.	.	.	.	.	.	158	39.8
		30-34	433	1	0.2	217	50.6	.	.	.	.	6	1.4	.	.	167	38.9
		35+	338	.	.	98	29.3	.	.	.	.	11	3.3	1	0.3	86	25.8
	Years since diagnosis	5-9	127	1	0.8	70	56.5	.	.	.	.	.	.	1	0.8	65	52.4
		10-14	440	.	.	243	56.0	.	.	.	.	2	0.5	.	.	202	46.4
		15-19	495	2	0.4	230	47.2	.	.	.	.	11	2.3	.	.	164	33.7
		20+	406	.	.	151	37.5	.	.	.	.	4	1.0	1	0.2	130	32.3
	Age at diagnosis	1-4	52	.	.	23	45.1	.	.	.	.	.	.	.	.	15	29.4
		5-9	261	1	0.4	137	53.1	.	.	.	.	.	.	2	0.8	113	43.8
		10-14	525	1	0.2	290	55.9	.	.	.	.	.	.	.	.	227	43.7
		15-20	630	1	0.2	244	39.4	.	.	.	.	17	2.7	.	.	206	33.2
Females	**All cases**		**1371**	**3**	**0.2**	**652**	**48.4**	**1**	**0.1**	**.**	**.**	**11**	**0.8**	**1**	**0.1**	**520**	**38.6**
	Age at baseline	<18	13	.	.	7	53.8	.	.	.	.	.	.	.	.	6	46.2
		18-19	11	.	.	7	63.6	.	.	.	.	.	.	.	.	5	45.5
		20-24	120	.	.	75	63.0	.	.	.	.	.	.	.	.	64	53.8
		25-29	332	1	0.3	201	61.1	.	.	.	.	.	.	.	.	157	47.7
		30-34	434	1	0.2	205	48.6	.	.	.	.	3	0.7	.	.	159	37.7
		35+	461	1	0.2	157	34.7	1	0.2	.	.	8	1.8	1	0.2	129	28.5
	Years since diagnosis	5-9	95	.	.	57	60.6	.	.	.	.	.	.	.	.	49	52.1
		10-14	426	2	0.5	245	58.3	.	.	.	.	2	0.5	.	.	204	48.6
		15-19	438	.	.	200	46.7	1	0.2	.	.	4	0.9	.	.	149	34.8
		20+	412	1	0.2	150	37.0	.	.	.	.	5	1.2	1	0.2	118	29.1
	Age at diagnosis	1-4	18	.	.	8	44.4	.	.	.	.	.	.	.	.	7	38.9
		5-9	95	.	.	50	52.6	.	.	.	.	.	.	.	.	38	40.0
		10-14	504	1	0.2	270	54.3	.	.	.	.	.	.	.	.	204	41.0
		15-20	754	2	0.3	324	44.0	1	0.1	.	.	11	1.5	1	0.1	271	36.8

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**1933**	**498**	**26.0**	**1016**	**52.9**	**4**	**0.2**	**.**	**.**	**4**	**0.2**	**19**	**1.0**	**72**	**3.8**
	Age at baseline	<18	200	70	35.4	92	46.2	1	0.5	.	.	.	.	.	.	6	3.0
		18-19	119	43	36.4	57	48.3	.	.	.	.	.	.	1	0.8	2	1.7
		20-24	409	109	26.7	229	56.1	1	0.2	.	.	.	.	1	0.2	8	2.0
		25-29	533	132	25.1	287	54.6	.	.	.	.	.	.	7	1.3	13	2.5
		30-34	443	106	24.0	235	53.2	1	0.2	.	.	2	0.5	7	1.6	26	5.9
		35+	229	38	16.8	116	51.3	1	0.4	.	.	2	0.9	3	1.3	17	7.6
	Years since diagnosis	5-9	132	41	31.1	65	49.6	.	.	.	.	.	.	1	0.8	7	5.3
		10-14	608	184	30.5	341	56.5	1	0.2	.	.	1	0.2	5	0.8	22	3.6
		15-19	665	159	24.1	361	54.7	3	0.5	.	.	3	0.5	8	1.2	20	3.0
		20+	528	114	21.8	249	47.5	.	.	.	.	.	.	5	1.0	23	4.4
	Age at diagnosis	<1	12	4	33.3	4	33.3	.	.	.	.	.	.	.	.	.	.
		1-4	320	102	32.4	158	49.8	2	0.6	.	.	.	.	.	.	7	2.2
		5-9	588	148	25.3	297	50.8	.	.	.	.	.	.	3	0.5	13	2.2
		10-14	604	166	27.6	312	51.9	.	.	.	.	1	0.2	6	1.0	16	2.7
		15-20	409	78	19.3	245	60.6	2	0.5	.	.	3	0.7	10	2.5	36	8.9
Males	**All cases**		**1304**	**319**	**24.6**	**675**	**52.1**	**3**	**0.2**	**.**	**.**	**3**	**0.2**	**14**	**1.1**	**43**	**3.3**
	Age at baseline	<18	138	44	32.4	64	46.7	.	.	.	.	.	.	.	.	4	2.9
		18-19	87	29	33.7	42	48.8	.	.	.	.	.	.	1	1.2	2	2.3
		20-24	268	69	25.7	149	55.6	1	0.4	.	.	.	.	.	.	5	1.9
		25-29	372	91	24.7	197	53.5	.	.	.	.	.	.	5	1.4	7	1.9
		30-34	291	62	21.4	155	53.4	1	0.3	.	.	1	0.3	6	2.1	18	6.2
		35+	148	24	16.3	68	46.3	1	0.7	.	.	2	1.4	2	1.4	7	4.8
	Years since diagnosis	5-9	99	30	30.3	49	50.0	.	.	.	.	.	.	.	.	4	4.0
		10-14	412	121	29.6	223	54.4	1	0.2	.	.	1	0.2	4	1.0	15	3.7
		15-19	433	98	22.7	235	54.5	2	0.5	.	.	2	0.5	6	1.4	14	3.2
		20+	360	70	19.7	168	47.1	.	.	.	.	.	.	4	1.1	10	2.8
	Age at diagnosis	<1	3	.	.	1	33.3	.	.	.	.	.	.	.	.	.	.
		1-4	215	61	28.9	108	50.7	1	0.5	.	.	.	.	.	.	7	3.3
		5-9	411	99	24.3	212	52.0	.	.	.	.	.	.	2	0.5	6	1.5
		10-14	412	110	26.7	204	49.5	.	.	.	.	.	.	5	1.2	8	1.9
		15-20	263	49	18.8	150	57.7	2	0.8	.	.	3	1.1	7	2.7	22	8.5
Females	**All cases**		**629**	**179**	**28.8**	**341**	**54.7**	**1**	**0.2**	**.**	**.**	**1**	**0.2**	**5**	**0.8**	**29**	**4.7**
	Age at baseline	<18	62	26	41.9	28	45.2	1	1.6	.	.	.	.	.	.	2	3.2
		18-19	32	14	43.8	15	46.9	.	.	.	.	.	.	.	.	.	.
		20-24	141	40	28.6	80	57.1	.	.	.	.	.	.	1	0.7	3	2.1
		25-29	161	41	26.1	90	57.0	.	.	.	.	.	.	2	1.3	6	3.8
		30-34	152	44	28.9	80	52.6	.	.	.	.	1	0.7	1	0.7	8	5.3
		35+	81	14	17.7	48	60.8	.	.	.	.	.	.	1	1.3	10	12.8
	Years since diagnosis	5-9	33	11	33.3	16	48.5	.	.	.	.	.	.	1	3.0	3	9.1
		10-14	196	63	32.5	118	60.8	.	.	.	.	.	.	1	0.5	7	3.6
		15-19	232	61	26.6	126	55.0	1	0.4	.	.	1	0.4	2	0.9	6	2.6
		20+	168	44	26.5	81	48.5	.	.	.	.	.	.	1	0.6	13	7.8
	Age at diagnosis	<1	9	4	44.4	3	33.3	.	.	.	.	.	.	.	.	.	.
		1-4	105	41	39.4	50	48.1	1	1.0	.	.	.	.	.	.	.	.
		5-9	177	49	27.8	85	48.0	.	.	.	.	.	.	1	0.6	7	4.0
		10-14	192	56	29.6	108	57.1	.	.	.	.	1	0.5	1	0.5	8	4.2
		15-20	146	29	20.1	95	66.0	.	.	.	.	.	.	3	2.1	14	9.8

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**2087**	**2**	**0.1**	**952**	**45.8**	**.**	**.**	**.**	**.**	**1**	**0.0**	**1964**	**94.7**	**2**	**0.1**
	Age at baseline	<18	762	.	.	374	49.1	.	.	.	.	.	.	721	94.7	1	0.1
		18-19	276	1	0.4	135	49.1	.	.	.	.	.	.	258	93.8	.	.
		20-24	616	1	0.2	267	43.6	.	.	.	.	.	.	576	94.1	1	0.2
		25-29	347	.	.	137	39.7	.	.	.	.	1	0.3	331	97.1	.	.
		30-34	69	.	.	32	47.1	.	.	.	.	.	.	63	92.6	.	.
		35+	17	.	.	7	41.2	.	.	.	.	.	.	15	93.8	.	.
	Years since diagnosis	5-9	168	.	.	90	53.6	.	.	.	.	.	.	161	95.8	.	.
		10-14	674	1	0.1	342	50.8	.	.	.	.	.	.	636	94.6	1	0.1
		15-19	685	1	0.1	322	47.3	.	.	.	.	.	.	637	93.5	1	0.1
		20+	560	.	.	198	35.5	.	.	.	.	1	0.2	530	96.0	.	.
	Age at diagnosis	<1	305	.	.	72	23.8	.	.	.	.	.	.	266	87.8	.	.
		1-4	1270	.	.	599	47.3	.	.	.	.	.	.	1217	96.4	2	0.2
		5-9	436	2	0.5	233	53.6	.	.	.	.	1	0.2	415	95.6	.	.
		10-14	56	.	.	37	68.5	.	.	.	.	.	.	48	90.6	.	.
		15-20	20	.	.	11	55.0	.	.	.	.	.	.	18	90.0	.	.
Males	**All cases**		**924**	**.**	**.**	**408**	**44.2**	**.**	**.**	**.**	**.**	**1**	**0.1**	**877**	**95.4**	**1**	**0.1**
	Age at baseline	<18	370	.	.	177	47.8	.	.	.	.	.	.	353	95.4	1	0.3
		18-19	111	.	.	49	44.1	.	.	.	.	.	.	103	92.8	.	.
		20-24	255	.	.	106	41.7	.	.	.	.	.	.	240	94.9	.	.
		25-29	152	.	.	57	37.5	.	.	.	.	1	0.7	145	97.3	.	.
		30-34	29	.	.	16	55.2	.	.	.	.	.	.	29	100.0	.	.
		35+	7	.	.	3	42.9	.	.	.	.	.	.	7	100.0	.	.
	Years since diagnosis	5-9	75	.	.	39	52.0	.	.	.	.	.	.	72	96.0	.	.
		10-14	306	.	.	147	48.0	.	.	.	.	.	.	293	95.8	1	0.3
		15-19	292	.	.	128	43.8	.	.	.	.	.	.	273	93.8	.	.
		20+	251	.	.	94	37.6	.	.	.	.	1	0.4	239	96.8	.	.
	Age at diagnosis	<1	152	.	.	36	23.8	.	.	.	.	.	.	132	87.4	.	.
		1-4	567	.	.	266	46.9	.	.	.	.	.	.	546	96.8	1	0.2
		5-9	177	.	.	87	49.2	.	.	.	.	1	0.6	172	97.7	.	.
		10-14	20	.	.	16	80.0	.	.	.	.	.	.	19	95.0	.	.
		15-20	8	.	.	3	37.5	.	.	.	.	.	.	8	100.0	.	.
Females	**All cases**		**1163**	**2**	**0.2**	**544**	**47.1**	**.**	**.**	**.**	**.**	**.**	**.**	**1087**	**94.2**	**1**	**0.1**
	Age at baseline	<18	392	.	.	197	50.3	.	.	.	.	.	.	368	94.1	.	.
		18-19	165	1	0.6	86	52.4	.	.	.	.	.	.	155	94.5	.	.
		20-24	361	1	0.3	161	45.0	.	.	.	.	.	.	336	93.6	1	0.3
		25-29	195	.	.	80	41.5	.	.	.	.	.	.	186	96.9	.	.
		30-34	40	.	.	16	41.0	.	.	.	.	.	.	34	87.2	.	.
		35+	10	.	.	4	40.0	.	.	.	.	.	.	8	88.9	.	.
	Years since diagnosis	5-9	93	.	.	51	54.8	.	.	.	.	.	.	89	95.7	.	.
		10-14	368	1	0.3	195	53.1	.	.	.	.	.	.	343	93.7	.	.
		15-19	393	1	0.3	194	49.9	.	.	.	.	.	.	364	93.3	1	0.3
		20+	309	.	.	104	33.9	.	.	.	.	.	.	291	95.4	.	.
	Age at diagnosis	<1	153	.	.	36	23.7	.	.	.	.	.	.	134	88.2	.	.
		1-4	703	.	.	333	47.6	.	.	.	.	.	.	671	96.0	1	0.1
		5-9	259	2	0.8	146	56.6	.	.	.	.	.	.	243	94.2	.	.
		10-14	36	.	.	21	61.8	.	.	.	.	.	.	29	87.9	.	.
		15-20	12	.	.	8	66.7	.	.	.	.	.	.	10	83.3	.	.

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**1811**	**10**	**0.6**	**748**	**41.8**	**.**	**.**	**1**	**0.1**	**.**	**.**	**19**	**1.1**	**2**	**0.1**
	Age at baseline	<18	890	4	0.5	408	46.2	.	.	.	.	.	.	8	0.9	2	0.2
		18-19	216	1	0.5	86	40.2	.	.	.	.	.	.	2	0.9	.	.
		20-24	511	3	0.6	197	38.9	.	.	1	0.2	.	.	2	0.4	.	.
		25-29	154	1	0.7	44	29.7	.	.	.	.	.	.	4	2.7	.	.
		30-34	34	1	3.1	10	31.3	.	.	.	.	.	.	3	9.4	.	.
		35+	6	.	.	3	50.0	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	152	2	1.3	89	59.3	.	.	.	.	.	.	2	1.3	.	.
		10-14	559	2	0.4	253	45.4	.	.	.	.	.	.	5	0.9	2	0.4
		15-19	594	2	0.3	242	41.2	.	.	1	0.2	.	.	4	0.7	.	.
		20+	506	4	0.8	164	33.1	.	.	.	.	.	.	8	1.6	.	.
	Age at diagnosis	<1	917	4	0.4	330	36.2	.	.	.	.	.	.	3	0.3	1	0.1
		1-4	713	5	0.7	334	47.5	.	.	1	0.1	.	.	9	1.3	1	0.1
		5-9	137	1	0.7	64	48.1	.	.	.	.	.	.	5	3.7	.	.
		10-14	27	.	.	11	42.3	.	.	.	.	.	.	2	7.7	.	.
		15-20	17	.	.	9	52.9	.	.	.	.	.	.	.	.	.	.
Males	**All cases**		**876**	**7**	**0.8**	**388**	**44.7**	**.**	**.**	**.**	**.**	**.**	**.**	**11**	**1.3**	**1**	**0.1**
	Age at baseline	<18	441	3	0.7	216	49.3	.	.	.	.	.	.	5	1.1	1	0.2
		18-19	94	1	1.1	43	45.7	.	.	.	.	.	.	1	1.1	.	.
		20-24	259	2	0.8	98	38.3	.	.	.	.	.	.	1	0.4	.	.
		25-29	66	.	.	24	37.5	.	.	.	.	.	.	2	3.1	.	.
		30-34	14	1	7.1	6	42.9	.	.	.	.	.	.	2	14.3	.	.
		35+	2	.	.	1	50.0	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	72	2	2.8	44	62.0	.	.	.	.	.	.	1	1.4	.	.
		10-14	275	1	0.4	133	48.4	.	.	.	.	.	.	3	1.1	1	0.4
		15-19	284	2	0.7	126	44.8	.	.	.	.	.	.	3	1.1	.	.
		20+	245	2	0.8	85	35.3	.	.	.	.	.	.	4	1.7	.	.
	Age at diagnosis	<1	472	3	0.6	177	37.7	.	.	.	.	.	.	2	0.4	1	0.2
		1-4	320	3	0.9	164	52.1	.	.	.	.	.	.	4	1.3	.	.
		5-9	68	1	1.5	38	56.7	.	.	.	.	.	.	4	6.0	.	.
		10-14	10	.	.	5	50.0	.	.	.	.	.	.	1	10.0	.	.
		15-20	6	.	.	4	66.7	.	.	.	.	.	.	.	.	.	.
Females	**All cases**		**935**	**3**	**0.3**	**360**	**39.0**	**.**	**.**	**1**	**0.1**	**.**	**.**	**8**	**0.9**	**1**	**0.1**
	Age at baseline	<18	449	1	0.2	192	43.1	.	.	.	.	.	.	3	0.7	1	0.2
		18-19	122	.	.	43	35.8	.	.	.	.	.	.	1	0.8	.	.
		20-24	252	1	0.4	99	39.4	.	.	1	0.4	.	.	1	0.4	.	.
		25-29	88	1	1.2	20	23.8	.	.	.	.	.	.	2	2.3	.	.
		30-34	20	.	.	4	22.2	.	.	.	.	.	.	1	5.6	.	.
		35+	4	.	.	2	50.0	.	.	.	.	.	.	.	.	.	.
	Years since diagnosis	5-9	80	.	.	45	57.0	.	.	.	.	.	.	1	1.3	.	.
		10-14	284	1	0.4	120	42.6	.	.	.	.	.	.	2	0.7	1	0.4
		15-19	310	.	.	116	37.9	.	.	1	0.3	.	.	1	0.3	.	.
		20+	261	2	0.8	79	31.0	.	.	.	.	.	.	4	1.6	.	.
	Age at diagnosis	<1	445	1	0.2	153	34.7	.	.	.	.	.	.	1	0.2	.	.
		1-4	393	2	0.5	170	43.8	.	.	1	0.3	.	.	5	1.3	1	0.3
		5-9	69	.	.	26	39.4	.	.	.	.	.	.	1	1.5	.	.
		10-14	17	.	.	6	37.5	.	.	.	.	.	.	1	6.3	.	.
		15-20	11	.	.	5	45.5	.	.	.	.	.	.	.	.	.	.

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**1596**	**5**	**0.3**	**642**	**40.6**	**.**	**.**	**1**	**0.1**	**1**	**0.1**	**1198**	**76.0**	**53**	**3.3**
	Age at baseline	<18	313	2	0.6	147	47.1	.	.	1	0.3	.	.	264	85.4	6	1.9
		18-19	115	.	.	43	37.7	.	.	.	.	.	.	99	86.8	4	3.5
		20-24	383	1	0.3	143	37.6	.	.	.	.	1	0.3	313	82.6	8	2.1
		25-29	354	2	0.6	145	41.5	.	.	.	.	.	.	267	76.3	13	3.7
		30-34	267	.	.	102	38.3	.	.	.	.	.	.	177	66.8	15	5.6
		35+	164	.	.	62	38.3	.	.	.	.	.	.	78	48.8	7	4.3
	Years since diagnosis	5-9	165	1	0.6	95	58.6	.	.	1	0.6	.	.	124	76.1	4	2.4
		10-14	473	3	0.6	197	41.9	.	.	.	.	1	0.2	351	75.0	20	4.2
		15-19	499	1	0.2	198	39.8	.	.	.	.	.	.	383	77.5	15	3.0
		20+	459	.	.	152	33.5	.	.	.	.	.	.	340	75.2	14	3.1
	Age at diagnosis	<1	108	.	.	29	27.1	.	.	1	0.9	.	.	79	73.8	2	1.9
		1-4	513	1	0.2	216	42.4	.	.	.	.	.	.	452	89.3	12	2.4
		5-9	361	2	0.6	127	35.3	.	.	.	.	1	0.3	304	84.7	5	1.4
		10-14	313	1	0.3	143	46.3	.	.	.	.	.	.	215	70.0	17	5.5
		15-20	301	1	0.3	127	42.8	.	.	.	.	.	.	148	49.7	17	5.7
Males	**All cases**		**853**	**3**	**0.4**	**344**	**40.6**	**.**	**.**	**.**	**.**	**.**	**.**	**660**	**78.2**	**30**	**3.5**
	Age at baseline	<18	179	1	0.6	90	50.3	.	.	.	.	.	.	156	88.1	2	1.1
		18-19	58	.	.	20	34.5	.	.	.	.	.	.	53	91.4	4	6.9
		20-24	214	1	0.5	76	35.8	.	.	.	.	.	.	170	80.6	4	1.9
		25-29	182	1	0.6	70	39.1	.	.	.	.	.	.	145	80.1	9	5.0
		30-34	141	.	.	53	37.9	.	.	.	.	.	.	96	69.1	8	5.7
		35+	79	.	.	35	44.3	.	.	.	.	.	.	40	51.3	3	3.8
	Years since diagnosis	5-9	89	1	1.1	55	63.2	.	.	.	.	.	.	71	80.7	.	.
		10-14	264	2	0.8	114	43.3	.	.	.	.	.	.	202	77.1	15	5.7
		15-19	253	.	.	95	37.8	.	.	.	.	.	.	199	79.9	9	3.6
		20+	247	.	.	80	32.5	.	.	.	.	.	.	188	76.7	6	2.4
	Age at diagnosis	<1	44	.	.	14	31.8	.	.	.	.	.	.	34	77.3	.	.
		1-4	298	.	.	125	42.1	.	.	.	.	.	.	266	90.5	8	2.7
		5-9	203	1	0.5	64	31.7	.	.	.	.	.	.	169	84.1	3	1.5
		10-14	167	1	0.6	80	48.5	.	.	.	.	.	.	115	70.1	12	7.2
		15-20	141	1	0.7	61	43.9	.	.	.	.	.	.	76	53.9	7	5.0
Females	**All cases**		**743**	**2**	**0.3**	**298**	**40.5**	**.**	**.**	**1**	**0.1**	**1**	**0.1**	**538**	**73.4**	**23**	**3.1**
	Age at baseline	<18	134	1	0.8	57	42.9	.	.	1	0.8	.	.	108	81.8	4	3.0
		18-19	57	.	.	23	41.1	.	.	.	.	.	.	46	82.1	.	.
		20-24	169	.	.	67	39.9	.	.	.	.	1	0.6	143	85.1	4	2.4
		25-29	172	1	0.6	75	44.1	.	.	.	.	.	.	122	72.2	4	2.4
		30-34	126	.	.	49	38.9	.	.	.	.	.	.	81	64.3	7	5.6
		35+	85	.	.	27	32.5	.	.	.	.	.	.	38	46.3	4	4.8
	Years since diagnosis	5-9	76	.	.	40	53.3	.	.	1	1.3	.	.	53	70.7	4	5.3
		10-14	209	1	0.5	83	40.1	.	.	.	.	1	0.5	149	72.3	5	2.4
		15-19	246	1	0.4	103	41.9	.	.	.	.	.	.	184	75.1	6	2.4
		20+	212	.	.	72	34.6	.	.	.	.	.	.	152	73.4	8	3.8
	Age at diagnosis	<1	64	.	.	15	23.8	.	.	1	1.6	.	.	45	71.4	2	3.2
		1-4	215	1	0.5	91	42.7	.	.	.	.	.	.	186	87.7	4	1.9
		5-9	158	1	0.6	63	39.9	.	.	.	.	1	0.6	135	85.4	2	1.3
		10-14	146	.	.	63	43.8	.	.	.	.	.	.	100	69.9	5	3.5
		15-20	160	.	.	66	41.8	.	.	.	.	.	.	72	45.9	10	6.3

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**1937**	**5**	**0.3**	**1678**	**87.7**	**.**	**.**	**1**	**0.1**	**.**	**.**	**760**	**39.5**	**338**	**17.5**
	Age at baseline	<18	85	.	.	82	97.6	.	.	.	.	.	.	37	44.0	11	12.9
		18-19	66	.	.	58	87.9	.	.	.	.	.	.	39	59.1	14	21.2
		20-24	360	.	.	337	94.1	.	.	1	0.3	.	.	181	50.4	88	24.5
		25-29	528	2	0.4	465	89.6	.	.	.	.	.	.	200	38.2	81	15.5
		30-34	521	.	.	443	86.2	.	.	.	.	.	.	171	32.9	75	14.5
		35+	377	3	0.8	293	78.8	.	.	.	.	.	.	132	35.5	69	18.5
	Years since diagnosis	5-9	216	.	.	200	93.0	.	.	1	0.5	.	.	122	56.7	68	31.6
		10-14	630	1	0.2	561	90.3	.	.	.	.	.	.	238	38.1	125	20.0
		15-19	635	1	0.2	564	89.8	.	.	.	.	.	.	226	35.8	73	11.6
		20+	456	3	0.7	353	78.6	.	.	.	.	.	.	174	38.4	72	15.9
	Age at diagnosis	<1	8	.	.	6	75.0	.	.	.	.	.	.	3	37.5	.	.
		1-4	80	.	.	71	91.0	.	.	.	.	.	.	40	50.6	8	10.0
		5-9	337	1	0.3	305	90.8	.	.	.	.	.	.	141	41.8	35	10.4
		10-14	776	2	0.3	680	88.9	.	.	1	0.1	.	.	317	41.2	151	19.6
		15-20	736	2	0.3	616	84.8	.	.	.	.	.	.	259	35.5	144	19.7
Males	**All cases**		**983**	**3**	**0.3**	**870**	**89.4**	**.**	**.**	**1**	**0.1**	**.**	**.**	**404**	**41.4**	**170**	**17.4**
	Age at baseline	<18	43	.	.	42	97.7	.	.	.	.	.	.	22	51.2	7	16.3
		18-19	33	.	.	28	84.8	.	.	.	.	.	.	22	66.7	5	15.2
		20-24	175	.	.	164	94.3	.	.	1	0.6	.	.	92	52.9	37	21.3
		25-29	274	2	0.7	245	90.7	.	.	.	.	.	.	100	36.8	41	15.1
		30-34	258	.	.	229	89.8	.	.	.	.	.	.	97	37.7	43	16.7
		35+	200	1	0.5	162	81.8	.	.	.	.	.	.	71	35.9	37	18.6
	Years since diagnosis	5-9	115	.	.	106	93.0	.	.	1	0.9	.	.	66	57.9	32	28.1
		10-14	319	1	0.3	288	91.4	.	.	.	.	.	.	130	41.0	65	20.5
		15-19	323	1	0.3	296	92.2	.	.	.	.	.	.	115	35.8	37	11.5
		20+	226	1	0.4	180	80.7	.	.	.	.	.	.	93	41.3	36	16.0
	Age at diagnosis	<1	4	.	.	3	75.0	.	.	.	.	.	.	2	50.0	.	.
		1-4	41	.	.	37	90.2	.	.	.	.	.	.	25	61.0	4	9.8
		5-9	172	1	0.6	154	90.1	.	.	.	.	.	.	79	45.9	19	11.0
		10-14	364	.	.	327	90.8	.	.	1	0.3	.	.	157	43.5	63	17.5
		15-20	402	2	0.5	349	87.9	.	.	.	.	.	.	141	35.3	84	21.0
Females	**All cases**		**954**	**2**	**0.2**	**808**	**86.0**	**.**	**.**	**.**	**.**	**.**	**.**	**356**	**37.6**	**168**	**17.7**
	Age at baseline	<18	42	.	.	40	97.6	.	.	.	.	.	.	15	36.6	4	9.5
		18-19	33	.	.	30	90.9	.	.	.	.	.	.	17	51.5	9	27.3
		20-24	185	.	.	173	94.0	.	.	.	.	.	.	89	48.1	51	27.6
		25-29	254	.	.	220	88.4	.	.	.	.	.	.	100	39.7	40	15.9
		30-34	263	.	.	214	82.6	.	.	.	.	.	.	74	28.2	32	12.2
		35+	177	2	1.1	131	75.3	.	.	.	.	.	.	61	35.1	32	18.4
	Years since diagnosis	5-9	101	.	.	94	93.1	.	.	.	.	.	.	56	55.4	36	35.6
		10-14	311	.	.	273	89.2	.	.	.	.	.	.	108	35.1	60	19.4
		15-19	312	.	.	268	87.3	.	.	.	.	.	.	111	35.8	36	11.6
		20+	230	2	0.9	173	76.5	.	.	.	.	.	.	81	35.5	36	15.8
	Age at diagnosis	<1	4	.	.	3	75.0	.	.	.	.	.	.	1	25.0	.	.
		1-4	39	.	.	34	91.9	.	.	.	.	.	.	15	39.5	4	10.3
		5-9	165	.	.	151	91.5	.	.	.	.	.	.	62	37.6	16	9.7
		10-14	412	2	0.5	353	87.2	.	.	.	.	.	.	160	39.1	88	21.5
		15-20	334	.	.	267	81.2	.	.	.	.	.	.	118	35.6	60	18.1

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**686**	**1**	**0.1**	**614**	**90.8**	**.**	**.**	**.**	**.**	**.**	**.**	**424**	**62.2**	**29**	**4.2**
	Age at baseline	<18	54	.	.	52	98.1	.	.	.	.	.	.	26	49.1	.	.
		18-19	33	.	.	30	90.9	.	.	.	.	.	.	24	72.7	2	6.1
		20-24	157	.	.	149	96.1	.	.	.	.	.	.	90	57.7	5	3.2
		25-29	193	1	0.5	175	91.6	.	.	.	.	.	.	120	62.2	6	3.1
		30-34	154	.	.	129	86.0	.	.	.	.	.	.	97	63.4	5	3.3
		35+	95	.	.	79	84.0	.	.	.	.	.	.	67	71.3	11	11.6
	Years since diagnosis	5-9	91	.	.	84	93.3	.	.	.	.	.	.	52	57.8	3	3.3
		10-14	231	.	.	223	97.4	.	.	.	.	.	.	119	51.7	7	3.0
		15-19	214	1	0.5	192	91.9	.	.	.	.	.	.	149	70.3	9	4.2
		20+	150	.	.	115	77.7	.	.	.	.	.	.	104	69.3	10	6.7
	Age at diagnosis	<1	4	.	.	3	75.0	.	.	.	.	.	.	2	50.0	.	.
		1-4	50	.	.	44	91.7	.	.	.	.	.	.	30	61.2	1	2.0
		5-9	169	1	0.6	156	92.3	.	.	.	.	.	.	104	61.5	4	2.4
		10-14	258	.	.	222	87.7	.	.	.	.	.	.	164	63.8	9	3.5
		15-20	205	.	.	189	93.6	.	.	.	.	.	.	124	61.1	15	7.4
Males	**All cases**		**354**	**1**	**0.3**	**326**	**92.9**	**.**	**.**	**.**	**.**	**.**	**.**	**234**	**66.5**	**14**	**4.0**
	Age at baseline	<18	24	.	.	23	95.8	.	.	.	.	.	.	15	62.5	.	.
		18-19	17	.	.	15	88.2	.	.	.	.	.	.	16	94.1	1	5.9
		20-24	79	.	.	77	98.7	.	.	.	.	.	.	52	66.7	2	2.6
		25-29	99	1	1.0	92	92.9	.	.	.	.	.	.	60	60.6	2	2.0
		30-34	83	.	.	76	92.7	.	.	.	.	.	.	56	67.5	4	4.8
		35+	52	.	.	43	84.3	.	.	.	.	.	.	35	68.6	5	9.6
	Years since diagnosis	5-9	49	.	.	46	95.8	.	.	.	.	.	.	33	68.8	1	2.1
		10-14	109	.	.	106	97.2	.	.	.	.	.	.	66	60.6	2	1.8
		15-19	116	1	0.9	111	96.5	.	.	.	.	.	.	77	67.0	5	4.3
		20+	80	.	.	63	79.7	.	.	.	.	.	.	58	72.5	6	7.5
	Age at diagnosis	<1	2	.	.	1	50.0	.	.	.	.	.	.	1	50.0	.	.
		1-4	26	.	.	24	92.3	.	.	.	.	.	.	20	76.9	1	3.8
		5-9	83	1	1.2	77	92.8	.	.	.	.	.	.	58	69.9	3	3.6
		10-14	136	.	.	122	91.0	.	.	.	.	.	.	95	70.4	4	3.0
		15-20	107	.	.	102	96.2	.	.	.	.	.	.	60	56.6	6	5.6
Females	**All cases**		**332**	**.**	**.**	**288**	**88.6**	**.**	**.**	**.**	**.**	**.**	**.**	**190**	**57.6**	**15**	**4.5**
	Age at baseline	<18	30	.	.	29	100.0	.	.	.	.	.	.	11	37.9	.	.
		18-19	16	.	.	15	93.8	.	.	.	.	.	.	8	50.0	1	6.3
		20-24	78	.	.	72	93.5	.	.	.	.	.	.	38	48.7	3	3.8
		25-29	94	.	.	83	90.2	.	.	.	.	.	.	60	63.8	4	4.3
		30-34	71	.	.	53	77.9	.	.	.	.	.	.	41	58.6	1	1.4
		35+	43	.	.	36	83.7	.	.	.	.	.	.	32	74.4	6	14.0
	Years since diagnosis	5-9	42	.	.	38	90.5	.	.	.	.	.	.	19	45.2	2	4.8
		10-14	122	.	.	117	97.5	.	.	.	.	.	.	53	43.8	5	4.1
		15-19	98	.	.	81	86.2	.	.	.	.	.	.	72	74.2	4	4.1
		20+	70	.	.	52	75.4	.	.	.	.	.	.	46	65.7	4	5.7
	Age at diagnosis	<1	2	.	.	2	100.0	.	.	.	.	.	.	1	50.0	.	.
		1-4	24	.	.	20	90.9	.	.	.	.	.	.	10	43.5	.	.
		5-9	86	.	.	79	91.9	.	.	.	.	.	.	46	53.5	1	1.2
		10-14	122	.	.	100	84.0	.	.	.	.	.	.	69	56.6	5	4.1
		15-20	98	.	.	87	90.6	.	.	.	.	.	.	64	66.0	9	9.3

CCSS data from the March 2026 freeze; % based on nonmissing values.
Participants had medical record abstraction, a completed baseline questionnaire, and treatment within 5 years of diagnosis.
Drugs with unclear pre-entry start dates were excluded.

				Daunorubicin		Doxorubicin		Idarubicin		Epirubicin		Mitoxantrone		Actinomycin-D		Bleomycin	
			All cases	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Both sexes	**All cases**		**1154**	**4**	**0.3**	**1009**	**88.5**	**.**	**.**	**1**	**0.1**	**.**	**.**	**309**	**27.0**	**308**	**26.9**
	Age at baseline	<18	25	.	.	25	100.0	.	.	.	.	.	.	11	44.0	11	44.0
		18-19	27	.	.	24	88.9	.	.	.	.	.	.	12	44.4	12	44.4
		20-24	184	.	.	173	94.0	.	.	1	0.5	.	.	84	45.7	82	44.6
		25-29	317	1	0.3	279	90.0	.	.	.	.	.	.	73	23.3	75	24.0
		30-34	340	.	.	300	89.0	.	.	.	.	.	.	69	20.4	70	20.6
		35+	261	3	1.2	208	80.9	.	.	.	.	.	.	60	23.3	58	22.6
	Years since diagnosis	5-9	119	.	.	112	94.1	.	.	1	0.8	.	.	67	56.3	65	54.6
		10-14	362	1	0.3	314	88.5	.	.	.	.	.	.	113	31.6	117	32.7
		15-19	392	.	.	355	91.0	.	.	.	.	.	.	69	17.7	64	16.4
		20+	281	3	1.1	228	82.6	.	.	.	.	.	.	60	21.6	62	22.3
	Age at diagnosis	1-4	21	.	.	20	95.2	.	.	.	.	.	.	7	33.3	7	33.3
		5-9	151	.	.	140	93.3	.	.	.	.	.	.	33	21.9	31	20.5
		10-14	492	2	0.4	438	90.1	.	.	1	0.2	.	.	139	28.5	141	29.0
		15-20	490	2	0.4	411	85.1	.	.	.	.	.	.	130	26.7	129	26.5
Males	**All cases**		**581**	**2**	**0.3**	**518**	**90.2**	**.**	**.**	**1**	**0.2**	**.**	**.**	**157**	**27.2**	**156**	**27.0**
	Age at baseline	<18	18	.	.	18	100.0	.	.	.	.	.	.	7	38.9	7	38.9
		18-19	12	.	.	11	91.7	.	.	.	.	.	.	4	33.3	4	33.3
		20-24	86	.	.	79	91.9	.	.	1	1.2	.	.	36	41.9	35	40.7
		25-29	165	1	0.6	148	91.9	.	.	.	.	.	.	37	22.7	39	23.9
		30-34	161	.	.	146	91.8	.	.	.	.	.	.	39	24.4	39	24.4
		35+	139	1	0.7	116	84.1	.	.	.	.	.	.	34	24.6	32	23.2
	Years since diagnosis	5-9	64	.	.	59	92.2	.	.	1	1.6	.	.	32	50.0	31	48.4
		10-14	191	1	0.5	169	90.4	.	.	.	.	.	.	60	31.7	63	33.3
		15-19	192	.	.	178	93.2	.	.	.	.	.	.	35	18.3	32	16.8
		20+	134	1	0.8	112	84.8	.	.	.	.	.	.	30	22.6	30	22.6
	Age at diagnosis	1-4	11	.	.	11	100.0	.	.	.	.	.	.	3	27.3	3	27.3
		5-9	76	.	.	70	93.3	.	.	.	.	.	.	17	22.4	16	21.1
		10-14	221	.	.	200	91.3	.	.	1	0.5	.	.	59	26.9	59	26.9
		15-20	273	2	0.7	237	88.1	.	.	.	.	.	.	78	28.8	78	28.8
Females	**All cases**		**573**	**2**	**0.4**	**491**	**86.7**	**.**	**.**	**.**	**.**	**.**	**.**	**152**	**26.8**	**152**	**26.8**
	Age at baseline	<18	7	.	.	7	100.0	.	.	.	.	.	.	4	57.1	4	57.1
		18-19	15	.	.	13	86.7	.	.	.	.	.	.	8	53.3	8	53.3
		20-24	98	.	.	94	95.9	.	.	.	.	.	.	48	49.0	47	48.0
		25-29	152	.	.	131	87.9	.	.	.	.	.	.	36	24.0	36	24.0
		30-34	179	.	.	154	86.5	.	.	.	.	.	.	30	16.8	31	17.3
		35+	122	2	1.7	92	77.3	.	.	.	.	.	.	26	21.8	26	21.8
	Years since diagnosis	5-9	55	.	.	53	96.4	.	.	.	.	.	.	35	63.6	34	61.8
		10-14	171	.	.	145	86.3	.	.	.	.	.	.	53	31.4	54	32.0
		15-19	200	.	.	177	88.9	.	.	.	.	.	.	34	17.1	32	16.1
		20+	147	2	1.4	116	80.6	.	.	.	.	.	.	30	20.7	32	22.1
	Age at diagnosis	1-4	10	.	.	9	90.0	.	.	.	.	.	.	4	40.0	4	40.0
		5-9	75	.	.	70	93.3	.	.	.	.	.	.	16	21.3	15	20.0
		10-14	271	2	0.7	238	89.1	.	.	.	.	.	.	80	29.9	82	30.6
		15-20	217	.	.	174	81.3	.	.	.	.	.	.	52	24.2	51	23.7

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