

Changes in sex-specific incidence of lymphoid neoplasms across the lifespan

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Supplementary Table 1. Male-to-female incidence rate ratios across age groups for lymphoid neoplasms, cases diagnosed between 2001 and 2017 from 16 registries of the Surveillance, Epidemiology, and End Results Program.

Lymphoid neoplasms	ICD-O-3 codes	Sex	0-4		5-9		10-14		15-19	
			No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)
Precursor lymphoid neoplasms										
B-ALL	9728, 9812, 9813, 9814, 9815, 9816, 9817, 9818, 9836	Female	1210	Ref	579	Ref	321	Ref	196	Ref
		Male	1368	1.08 (1.00-1.17)	618	1.02 (0.91-1.14)	367	1.09 (0.94-1.27)	372	1.80 (1.52-2.15)
T-ALL	9729, 9837	Female	104	Ref	136	Ref	138	Ref	86	Ref
		Male	213	1.96 (1.55-2.48)	349	2.45 (2.02-3.00)	360	2.47 (2.04-3.02)	321	3.51 (2.78-4.47)
Precursor, NOS	9727 ^a , 9811, 9820, 9835	Female	1606	Ref	819	Ref	545	Ref	345	Ref
		Male	1807	1.08 (1.01-1.15)	1020	1.19 (1.09-1.31)	703	1.23 (1.10-1.38)	680	1.86 (1.63-2.11)
Hodgkin lymphomas										
cHL	9650, 9651, 9652, 9653, 9654, 9655, 9661, 9663, 9664, 9665, 9666, 9667	Female			119	Ref	457	Ref	1418	Ref
		Male			295	2.39 (1.94-2.98)	551	1.14 (1.01-1.29)	1341	0.89 (0.83-0.96)
NSCHL	9663, 9664, 9665, 9666, 9667	Female			66	Ref	352	Ref	1146	Ref
		Male			154	2.24 (1.68-3)	381	1.03 (0.89-1.19)	944	0.78 (0.72-0.85)
MCCHL	9652	Female			18	Ref	32	Ref	50	Ref
		Male			74	3.51 (2.13-6.09)	59	1.73 (1.13-2.7)	113	1.96 (1.41-2.77)
LRHL	9651	Female								
		Male								
LDHL/cHL, NOS ^b	9650, 9653, 9654, 9655, 9661, 9662	Female			32	Ref	64	Ref	210	Ref
		Male			50	1.54 (0.99-2.44)	92	1.36 (0.99-1.88)	245	1.11 (0.92-1.33)
NLPHL	9659	Female							60	Ref
		Male							249	3.94 (2.99-5.27)
Mature B-cell lymphomas										
CLL/SLL	9670, 9823	Female								
		Male								
MCL	9673	Female								
		Male								
LPL/WM	9671, 9761	Female								
		Male								
DLBCL, NOS/Others ^c	9678, 9684, 9712, 9735, 9680, 9688, 9737, 9738	Female	24	Ref	28	Ref	111	Ref	234	Ref
		Male	29	1.16 (0.67-2)	69	2.36 (1.54-3.72)	151	1.3 (1.02-1.66)	342	1.38 (1.17-1.63)
PMBCL	9679	Female							32	Ref
		Male							26	0.78 (0.46-1.3)
BL	9687, 9826	Female	81	Ref	80	Ref	60	Ref	65	Ref
		Male	157	1.85 (1.42-2.43)	297	3.53 (2.77-4.55)	237	3.75 (2.84-5.02)	203	2.95 (2.24-3.93)
MZL	9689, 9760, 9764, 9699	Female							44	Ref
		Male							88	1.95 (1.37-2.84)
Extranodal MZL	9760, 9764, 9699 (sites: C000-C769, C780-C809)	Female							30	Ref
		Male							58	1.84 (1.2-2.9)
Nodal MZL	9699 (sites: C770-C779)	Female								
		Male								
Splenic MZL	9689	Female								
		Male								
FL	9675, 9690, 9691, 9695, 9698	Female							26	Ref
		Male							104	3.41 (2.25-5.38)
HCL	9940	Female								
		Male								
PCN	9731, 9732, 9733, 9734	Female								
		Male								
MM	9732, 9733	Female								
		Male								
Plasmacytoma	9731, 9734	Female								
		Male								
Mature T-cell lymphomas										
MF/SS	9700, 9701	Female			24	Ref	29	Ref	44	Ref
		Male			40	1.60 (0.97-2.68)	33	1.13 (0.68-1.88)	39	0.84 (0.54-1.29)
PTCL	9702, 9705, 9708, 9714, 9716, 9717, 9709, 9726, 9718	Female	25	Ref	45	Ref	75	Ref	107	Ref
		Male	30	1.15 (0.68-1.96)	80	1.74 (1.21-2.53)	127	1.62 (1.22-2.16)	167	1.48 (1.16-1.89)
PTCL, NOS/Others ^d	9702, 9708, 9716, 9717	Female							63	Ref
		Male							95	1.42 (1.04-1.97)
ALCL	9714	Female			36	Ref	44	Ref	59	Ref
		Male			69	1.88 (1.26-2.86)	79	1.71 (1.19-2.5)	102	1.64 (1.19-2.27)
AITL	9705	Female								
		Male								
CTCL	9709, 9726	Female							23	Ref
		Male							32	1.33 (0.78-2.29)
PCALCL	9718	Female								
		Male								
ATL	9827	Female								
		Male								
NK/T cell	9719, 9948	Female								
		Male								
LGLL	9831	Female								
		Male								
Others ^e /Lymphoid, NOS	9596, 9762, 9833, 9591, 9597, 9832, 9590, 9594, 9724, 9725, 9970, 9971	Female	27	Ref	34	Ref	43	Ref	60	Ref
		Male	41	1.45 (0.90-2.39)	48	1.32 (0.85-2.07)	59	1.27 (0.85-1.89)	124	1.96 (1.44-2.68)

Age groups													
20-24		25-29		30-34		35-39		40-44		45-49		50-54	
No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)
99	Ref	84	Ref	108	Ref	90	Ref	107	Ref	126	Ref	117	Ref
176	1.65 (1.29-2.12)	114	1.25 (0.95-1.67)	131	1.17 (0.91-1.51)	109	1.19 (0.90-1.58)	114	1.06 (0.82-1.39)	153	1.23 (0.97-1.56)	138	1.22 (0.95-1.56)
67	Ref	62	Ref	51	Ref	48	Ref	45	Ref	49	Ref	42	Ref
195	2.75 (2.09-3.65)	177	2.81 (2.11-3.78)	120	2.30 (1.67-3.22)	94	1.98 (1.40-2.82)	78	1.72 (1.20-2.51)	78	1.60 (1.12-2.31)	57	1.43 (0.96-2.14)
194	Ref	183	Ref	173	Ref	177	Ref	175	Ref	207	Ref	259	Ref
398	1.89 (1.59-2.24)	303	1.53 (1.28-1.85)	235	1.31 (1.07-1.59)	273	1.51 (1.25-1.83)	268	1.54 (1.27-1.87)	258	1.28 (1.06-1.54)	281	1.12 (0.94-1.32)
2037	Ref	1873	Ref	1596	Ref	1203	Ref	1025	Ref	863	Ref	738	Ref
1946	0.90 (0.85-0.96)	1806	0.93 (0.87-0.99)	1573	0.96 (0.90-1.03)	1314	1.08 (1.00-1.17)	1287	1.26 (1.16-1.36)	1119	1.31 (1.20-1.43)	1114	1.55 (1.42-1.71)
1581	Ref	1438	Ref	1198	Ref	864	Ref	698	Ref	508	Ref	405	Ref
1369	0.82 (0.76-0.88)	1208	0.81 (0.75-0.88)	1028	0.84 (0.77-0.91)	804	0.92 (0.84-1.02)	736	1.06 (0.95-1.17)	573	1.14 (1.01-1.28)	512	1.3 (1.14-1.48)
80	Ref	95	Ref	81	Ref	83	Ref	75	Ref	95	Ref	86	Ref
178	2.09 (1.61-2.74)	163	1.65 (1.28-2.13)	153	1.87 (1.43-2.46)	161	1.9 (1.46-2.49)	166	2.2 (1.68-2.9)	185	1.95 (1.53-2.51)	179	2.17 (1.68-2.82)
39	Ref	23	Ref	21	Ref	24	Ref	30	Ref	43	Ref	29	Ref
115	2.81 (1.97-4.08)	45	1.9 (1.16-3.19)	53	2.31 (1.41-3.93)	40	1.67 (1.01-2.81)	61	1.94 (1.26-3.06)	55	1.33 (0.89-1.99)	56	2.06 (1.32-3.28)
361	Ref	317	Ref	296	Ref	232	Ref	222	Ref	217	Ref	218	Ref
359	0.93 (0.81-1.08)	390	1.19 (1.03-1.38)	339	1.12 (0.96-1.31)	309	1.32 (1.12-1.57)	324	1.46 (1.24-1.74)	306	1.43 (1.2-1.7)	367	1.74 (1.47-2.06)
35	Ref	35	Ref	43	Ref	35	Ref	62	Ref	55	Ref	67	Ref
103	2.79 (1.92-4.14)	103	2.83 (1.95-4.21)	124	2.82 (2.01-4.03)	106	3.25 (2.22-4.87)	113	1.87 (1.38-2.57)	125	2.32 (1.70-3.21)	106	1.65 (1.22-2.25)
		40	Ref	51	Ref	153	Ref	404	Ref	968	Ref	1779	Ref
		69	1.65 (1.12-2.45)	112	2.16 (1.56-3.03)	261	1.68 (1.38-2.05)	693	1.71 (1.52-1.94)	1711	1.79 (1.65-1.93)	3231	1.86 (1.76-1.97)
						23	Ref	38	Ref	91	Ref	179	Ref
						67	2.81 (1.78-4.61)	139	3.68 (2.60-5.34)	291	3.21 (2.55-4.08)	553	3.17 (2.68-3.76)
						38	Ref	57	Ref	100	Ref	206	Ref
						32	0.81 (0.50-1.30)	50	0.87 (0.59-1.27)	128	1.30 (1.00-1.69)	292	1.47 (1.23-1.76)
352	Ref	504	Ref	653	Ref	899	Ref	1146	Ref	1778	Ref	2510	Ref
543	1.46 (1.27-1.67)	688	1.32 (1.18-1.48)	888	1.34 (1.21-1.48)	1245	1.38 (1.27-1.5)	1731	1.52 (1.41-1.64)	2526	1.44 (1.36-1.53)	3743	1.54 (1.46-1.62)
50	Ref	74	Ref	86	Ref	76	Ref	52	Ref	53	Ref	28	Ref
41	0.77 (0.51-1.16)	37	0.47 (0.31-0.69)	44	0.51 (0.35-0.72)	51	0.67 (0.47-0.95)	30	0.59 (0.37-0.93)	27	0.53 (0.33-0.84)	27	1.02 (0.61-1.74)
56	Ref	45	Ref	47	Ref	54	Ref	55	Ref	78	Ref	89	Ref
166	2.83 (2.10-3.87)	119	2.48 (1.77-3.53)	135	2.80 (2.02-3.94)	151	2.76 (2.03-3.80)	152	2.81 (2.07-3.87)	184	2.38 (1.83-3.11)	204	2.38 (1.86-3.08)
42	Ref	110	Ref	160	Ref	235	Ref	410	Ref	714	Ref	1116	Ref
55	1.23 (0.82-1.85)	107	0.94 (0.72-1.23)	147	0.90 (0.72-1.13)	229	0.98 (0.81-1.17)	345	0.85 (0.74-0.98)	599	0.85 (0.77-0.95)	953	0.88 (0.81-0.96)
34	Ref	87	Ref	123	Ref	178	Ref	287	Ref	520	Ref	738	Ref
46	1.27 (0.82-1.99)	89	0.99 (0.74-1.34)	122	0.98 (0.76-1.25)	178	1 (0.81-1.24)	242	0.85 (0.72-1.01)	389	0.76 (0.67-0.87)	576	0.81 (0.72-0.9)
22	Ref	20	Ref	30	Ref	46	Ref	102	Ref	151	Ref	292	Ref
39	1.77 (1.05-3.06)	16	0.6 (0.28-1.23)	23	0.76 (0.44-1.3)	42	0.91 (0.6-1.39)	84	0.84 (0.63-1.12)	167	1.13 (0.9-1.41)	279	0.99 (0.84-1.16)
								42	Ref	43	Ref	86	Ref
								32	0.74 (0.46-1.16)	43	1.01 (0.66-1.55)	98	1.17 (0.88-1.57)
42	Ref	115	Ref	263	Ref	589	Ref	972	Ref	1575	Ref	2407	Ref
65	1.45 (0.99-2.16)	136	1.13 (0.88-1.45)	311	1.15 (0.98-1.36)	644	1.08 (0.96-1.21)	1136	1.16 (1.07-1.27)	1797	1.15 (1.07-1.23)	2499	1.06 (1.00-1.12)
						63	Ref	75	Ref	93	Ref	108	Ref
						262	4.05 (3.10-5.39)	249	3.29 (2.56-4.29)	333	3.64 (2.90-4.61)	415	3.91 (3.18-4.86)
		72	Ref	122	Ref	328	Ref	854	Ref	1675	Ref	2752	Ref
		93	1.20 (0.88-1.64)	215	1.74 (1.40-2.18)	451	1.39 (1.21-1.60)	1094	1.31 (1.19-1.43)	2044	1.26 (1.18-1.34)	3563	1.35 (1.29-1.42)
		41	Ref	97	Ref	287	Ref	777	Ref	1564	Ref	2558	Ref
		55	1.28 (0.85-1.92)	147	1.51 (1.17-1.96)	350	1.23 (1.06-1.44)	948	1.24 (1.13-1.37)	1834	1.21 (1.13-1.29)	3249	1.33 (1.26-1.4)
		31	Ref	25	Ref	41	Ref	77	Ref	111	Ref	194	Ref
		38	1.10 (0.68-1.79)	68	2.65 (1.7-4.27)	101	2.45 (1.72-3.56)	146	1.91 (1.46-2.53)	210	1.91 (1.52-2.41)	314	1.68 (1.41-2.01)
57	Ref	106	Ref	126	Ref	161	Ref	180	Ref	233	Ref	319	Ref
61	1.00 (0.70-1.44)	79	0.72 (0.54-0.97)	125	0.99 (0.78-1.28)	197	1.24 (1.01-1.53)	242	1.36 (1.13-1.66)	306	1.35 (1.14-1.61)	365	1.19 (1.03-1.39)
105	Ref	140	Ref	201	Ref	206	Ref	298	Ref	377	Ref	510	Ref
188	1.67 (1.32-2.13)	203	1.41 (1.14-1.75)	250	1.23 (1.02-1.48)	319	1.56 (1.31-1.86)	396	1.35 (1.16-1.57)	557	1.52 (1.34-1.74)	764	1.56 (1.39-1.74)
26	Ref	40	Ref	73	Ref	76	Ref	106	Ref	130	Ref	180	Ref
63	2.28 (1.46-3.66)	77	1.85 (1.27-2.74)	86	1.18 (0.86-1.61)	109	1.47 (1.1-1.98)	156	1.51 (1.18-1.93)	214	1.7 (1.37-2.12)	324	1.87 (1.56-2.25)
49	Ref	47	Ref	63	Ref	44	Ref	57	Ref	91	Ref	92	Ref
90	1.7 (1.21-2.43)	75	1.58 (1.1-2.29)	83	1.28 (0.92-1.78)	99	2.23 (1.57-3.21)	99	1.79 (1.29-2.49)	107	1.21 (0.91-1.6)	138	1.54 (1.18-2.01)
										76	Ref	58	Ref
										124	1.59 (1.2-2.12)	80	1.45 (1.04-2.05)
16	Ref	27	Ref	32	Ref	55	Ref	80	Ref	85	Ref	122	Ref
20	1.19 (0.62-2.32)	30	1.09 (0.65-1.85)	55	1.7 (1.1-2.65)	58	1.05 (0.73-1.53)	84	1.07 (0.78-1.45)	130	1.61 (1.22-2.12)	165	1.4 (1.11-1.77)
		60	Ref	24	Ref	22	Ref	33	Ref	42	Ref	58	Ref
		50	0.86 (0.59-1.27)	19	0.79 (0.43-1.46)	40	1.84 (1.1-3.14)	29	0.97 (0.58-1.63)	43	1.05 (0.69-1.62)	57	1.02 (0.71-1.48)
										43	Ref	25	Ref
										89	2.03 (1.42-2.94)	21	0.91 (0.50-1.62)
		35	Ref	20	Ref	36	Ref	29	Ref	28	Ref	34	Ref
		88	2.21 (1.50-3.32)	43	2.16 (1.28-3.80)	52	1.26 (0.82-1.97)	58	1.99 (1.29-3.15)	65	2.45 (1.58-3.89)	62	1.99 (1.31-3.06)
										119	Ref	61	Ref
										92	0.76 (0.57-0.99)	60	1.05 (0.73-1.50)
103	Ref	139	Ref	170	Ref	227	Ref	306	Ref	475	Ref	790	Ref
140	1.28 (0.99-1.65)	173	1.21 (0.97-1.52)	216	1.25 (1.02-1.53)	314	1.39 (1.17-1.65)	476	1.57 (1.36-1.81)	704	1.51 (1.34-1.69)	1076	1.41 (1.28-1.54)

55-59		60-64		65-69		70-74		75-79		80-84		85+	
No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)	No.	IRR (95% CI)
135	Ref	110	Ref	105	Ref	77	Ref	67	Ref	52	Ref	36	Ref
128	1.00 (0.79-1.28)	114	1.13 (0.87-1.47)	98	1.06 (0.81-1.40)	80	1.25 (0.91-1.71)	73	1.49 (1.07-2.09)	31	0.89 (0.57-1.38)	16	0.89 (0.48-1.57)
28	Ref	36	Ref	30	Ref	35	Ref	17	Ref	33	Ref		
59	2.21 (1.42-3.51)	53	1.64 (1.08-2.52)	55	2.09 (1.35-3.29)	42	1.43 (0.91-2.25)	42	3.31 (1.92-5.97)	46	2.42 (1.55-3.82)		
312	Ref	305	Ref	273	Ref	233	Ref	202	Ref	176	Ref	207	Ref
286	0.97 (0.83-1.14)	322	1.15 (0.99-1.35)	283	1.17 (0.99-1.38)	247	1.27 (1.06-1.52)	204	1.33 (1.09-1.61)	163	1.40 (1.13-1.73)	150	1.45 (1.18-1.79)
690	Ref	712	Ref	690	Ref	666	Ref	637	Ref	469	Ref	409	Ref
1069	1.63 (1.48-1.79)	966	1.47 (1.34-1.62)	943	1.54 (1.39-1.70)	809	1.45 (1.31-1.61)	694	1.43 (1.29-1.60)	486	1.56 (1.37-1.77)	319	1.56 (1.35-1.81)
304	Ref	283	Ref	263	Ref	225	Ref	201	Ref	165	Ref	136	Ref
441	1.5 (1.3-1.74)	383	1.46 (1.26-1.71)	334	1.43 (1.21-1.68)	298	1.57 (1.32-1.87)	228	1.49 (1.23-1.8)	172	1.57 (1.27-1.95)	77	1.12 (0.85-1.48)
103	Ref	114	Ref	124	Ref	132	Ref	127	Ref	81	Ref	71	Ref
187	1.91 (1.51-2.44)	161	1.53 (1.21-1.95)	181	1.64 (1.3-2.06)	144	1.32 (1.04-1.67)	120	1.23 (0.95-1.57)	93	1.73 (1.28-2.33)	70	1.98 (1.42-2.75)
37	Ref	45	Ref	34	Ref	41	Ref	38	Ref	31	Ref		
59	1.65 (1.1-2.52)	45	1.08 (0.71-1.64)	46	1.52 (0.98-2.38)	34	0.99 (0.63-1.56)	22	0.81 (0.47-1.36)	18	1.02 (0.56-1.81)		
246	Ref	270	Ref	269	Ref	268	Ref	271	Ref	204	Ref	190	Ref
382	1.64 (1.39-1.92)	377	1.55 (1.33-1.82)	382	1.6 (1.37-1.87)	333	1.49 (1.27-1.75)	324	1.6 (1.36-1.88)	212	1.56 (1.29-1.89)	163	1.76 (1.43-2.17)
56	Ref	57	Ref	59	Ref	46	Ref	27	Ref	22	Ref		
110	2.08 (1.51-2.89)	92	1.76 (1.27-2.46)	88	1.72 (1.24-2.40)	46	1.16 (0.76-1.75)	28	1.38 (0.81-2.35)	24	1.89 (1.06-3.40)		
2868	Ref	3756	Ref	4485	Ref	4579	Ref	4891	Ref	4348	Ref	4807	Ref
5070	1.85 (1.76-1.93)	6537	1.87 (1.79-1.94)	7498	1.87 (1.80-1.94)	7281	1.89 (1.82-1.96)	6952	1.86 (1.79-1.93)	5437	1.88 (1.81-1.95)	4529	1.92 (1.84-1.99)
314	Ref	384	Ref	482	Ref	489	Ref	478	Ref	417	Ref	392	Ref
869	2.89 (2.54-3.29)	1090	3.05 (2.72-3.43)	1212	2.81 (2.53-3.12)	1166	2.83 (2.55-3.15)	1048	2.86 (2.57-3.19)	761	2.73 (2.43-3.08)	591	3.04 (2.68-3.46)
297	Ref	451	Ref	525	Ref	553	Ref	626	Ref	567	Ref	453	Ref
449	1.59 (1.37-1.84)	632	1.50 (1.33-1.70)	803	1.70 (1.53-1.90)	909	1.94 (1.74-2.15)	926	1.93 (1.74-2.14)	729	1.94 (1.74-2.16)	555	2.47 (2.19-2.80)
3395	Ref	4291	Ref	4989	Ref	5550	Ref	5954	Ref	5324	Ref	5225	Ref
4695	1.46 (1.4-1.52)	5593	1.41 (1.36-1.47)	6137	1.39 (1.33-1.44)	6236	1.34 (1.3-1.39)	6277	1.38 (1.34-1.43)	5321	1.5 (1.44-1.55)	4229	1.61 (1.55-1.68)
52	Ref												
39	0.87 (0.57-1.32)												
83	Ref	94	Ref	115	Ref	80	Ref	103	Ref	90	Ref	90	Ref
202	2.57 (2.00-3.33)	179	2.06 (1.61-2.66)	189	1.86 (1.48-2.35)	168	2.51 (1.93-3.29)	163	2.08 (1.63-2.67)	108	1.80 (1.37-2.39)	75	1.70 (1.24-2.31)
1438	Ref	1694	Ref	1989	Ref	1835	Ref	1869	Ref	1491	Ref	1354	Ref
1298	0.95 (0.88-1.03)	1527	0.98 (0.91-1.05)	1757	0.99 (0.93-1.06)	1715	1.12 (1.05-1.19)	1561	1.10 (1.02-1.17)	1210	1.22 (1.13-1.31)	1003	1.49 (1.37-1.61)
942	Ref	1046	Ref	1205	Ref	1076	Ref	1086	Ref	852	Ref	782	Ref
733	0.82 (0.75-0.91)	884	0.92 (0.84-1)	1028	0.96 (0.89-1.05)	974	1.09 (1-1.18)	880	1.06 (0.97-1.16)	672	1.18 (1.07-1.31)	567	1.45 (1.3-1.62)
369	Ref	501	Ref	595	Ref	572	Ref	607	Ref	493	Ref	452	Ref
438	1.25 (1.09-1.43)	486	1.05 (0.93-1.19)	561	1.06 (0.94-1.19)	565	1.18 (1.05-1.32)	516	1.11 (0.99-1.25)	410	1.24 (1.09-1.41)	340	1.52 (1.32-1.74)
127	Ref	147	Ref	189	Ref	187	Ref	176	Ref	146	Ref	120	Ref
127	1.05 (0.82-1.34)	157	1.14 (0.91-1.43)	168	0.98 (0.79-1.21)	176	1.12 (0.91-1.37)	165	1.22 (0.98-1.5)	128	1.32 (1.04-1.67)	96	1.61 (1.23-2.1)
2881	Ref	3153	Ref	3318	Ref	3090	Ref	2717	Ref	2156	Ref	1715	Ref
3108	1.13 (1.07-1.19)	3312	1.13 (1.07-1.18)	3398	1.14 (1.09-1.20)	2999	1.15 (1.10-1.21)	2538	1.22 (1.16-1.29)	1860	1.29 (1.21-1.37)	1168	1.37 (1.27-1.47)
88	Ref	73	Ref	66	Ref	67	Ref	77	Ref	75	Ref	95	Ref
453	5.36 (4.29-6.78)	377	5.50 (4.31-7.12)	342	5.76 (4.46-7.57)	271	4.77 (3.68-6.29)	230	3.89 (3.02-5.07)	190	3.79 (2.91-4.98)	160	3.44 (2.67-4.44)
3850	Ref	4656	Ref	5541	Ref	5564	Ref	5453	Ref	4636	Ref	3878	Ref
5132	1.42 (1.37-1.49)	6470	1.53 (1.48-1.59)	7480	1.55 (1.50-1.60)	7384	1.62 (1.56-1.68)	6709	1.65 (1.59-1.71)	5141	1.70 (1.63-1.76)	3755	1.98 (1.89-2.07)
3636	Ref	4415	Ref	5271	Ref	5337	Ref	5220	Ref	4423	Ref	3712	Ref
4754	1.4 (1.34-1.46)	6020	1.5 (1.45-1.56)	7035	1.53 (1.48-1.59)	6975	1.6 (1.54-1.65)	6384	1.64 (1.58-1.7)	4881	1.69 (1.62-1.76)	3567	1.96 (1.88-2.06)
214	Ref	241	Ref	270	Ref	227	Ref	233	Ref	213	Ref	166	Ref
378	1.89 (1.6-2.23)	450	2.03 (1.74-2.38)	445	1.88 (1.61-2.18)	409	2.18 (1.86-2.57)	325	1.85 (1.56-2.19)	260	1.85 (1.54-2.22)	188	2.29 (1.86-2.83)
350	Ref	307	Ref	333	Ref	238	Ref	197	Ref	157	Ref	133	Ref
445	1.35 (1.17-1.55)	474	1.68 (1.46-1.94)	519	1.75 (1.53-2.01)	427	2.14 (1.83-2.52)	355	2.38 (2.00-2.84)	255	2.45 (2.01-3.00)	171	2.60 (2.08-3.27)
587	Ref	654	Ref	669	Ref	658	Ref	681	Ref	615	Ref	516	Ref
871	1.58 (1.42-1.75)	1016	1.69 (1.53-1.86)	1058	1.79 (1.62-1.97)	1006	1.84 (1.67-2.04)	896	1.74 (1.58-1.92)	663	1.63 (1.46-1.82)	512	1.99 (1.76-2.25)
223	Ref	262	Ref	267	Ref	276	Ref	277	Ref	284	Ref	234	Ref
331	1.59 (1.35-1.89)	424	1.77 (1.52-2.06)	414	1.77 (1.52-2.07)	441	1.94 (1.67-2.26)	375	1.8 (1.54-2.11)	271	1.45 (1.23-1.72)	214	1.84 (1.53-2.21)
99	Ref	106	Ref	101	Ref	75	Ref	84	Ref	66	Ref	62	Ref
164	1.73 (1.35-2.22)	157	1.59 (1.24-2.04)	144	1.6 (1.24-2.07)	149	2.35 (1.79-3.12)	117	1.82 (1.38-2.42)	98	2.25 (1.65-3.09)	72	2.34 (1.66-3.29)
78	Ref	93	Ref	109	Ref	129	Ref	151	Ref	118	Ref	87	Ref
128	1.73 (1.31-2.3)	135	1.59 (1.22-2.07)	177	1.84 (1.46-2.35)	145	1.35 (1.06-1.71)	149	1.3 (1.04-1.63)	104	1.32 (1.01-1.72)	65	1.5 (1.08-2.06)
130	Ref	152	Ref	134	Ref	125	Ref	132	Ref	112	Ref	98	Ref
184	1.5 (1.2-1.88)	213	1.52 (1.23-1.87)	233	1.96 (1.59-2.43)	179	1.73 (1.38-2.18)	181	1.82 (1.46-2.28)	132	1.78 (1.38-2.29)	100	2.05 (1.55-2.71)
57	Ref	41	Ref	58	Ref	53	Ref	37	Ref	35	Ref	35	Ref
64	1.17 (0.82-1.67)	87	2.31 (1.6-3.37)	90	1.74 (1.26-2.44)	92	2.12 (1.52-3)	74	2.7 (1.83-4.06)	58	2.49 (1.64-3.82)	61	3.91 (2.54-6.15)
23	Ref	23	Ref	20	Ref	25	Ref	29	Ref	47	Ref		
21	0.99 (0.55-1.80)	24	1.16 (0.65-2.07)	23	1.10 (0.58-2.06)	22	1.09 (0.61-1.94)	22	1.10 (0.62-1.94)	30	1.08 (0.67-1.70)		
44	Ref	43	Ref	35	Ref	29	Ref	23	Ref	37	Ref		
76	1.88 (1.30-2.74)	65	1.66 (1.13-2.45)	41	1.53 (0.96-2.46)	46	1.95 (1.23-3.14)	40	2.35 (1.40-4.02)	60	2.67 (1.78-4.06)		
95	Ref	114	Ref	130	Ref	116	Ref	88	Ref	76	Ref	62	Ref
89	0.99 (0.74-1.32)	109	1.03 (0.79-1.34)	144	1.25 (0.98-1.58)	116	1.20 (0.93-1.55)	136	2.05 (1.57-2.68)	100	1.89 (1.40-2.56)	85	2.83 (2.04-3.95)
1114	Ref	1351	Ref	1783	Ref	1974	Ref	2233	Ref	2406	Ref	2958	Ref
1347	1.27 (1.18-1.38)	1858	1.49 (1.39-1.60)	2138	1.35 (1.27-1.44)	2282	1.38 (1.30-1.46)	2496	1.46 (1.38-1.55)	2170	1.35 (1.27-1.43)	2365	1.61 (1.52-1.70)

- a Cases reported with the 9727 code were included from 2001 to 2009 in the precursor, NOS category.
- b LDHL cases were combined with cHL, NOS because of limited case counts across age groups.
- d Others include subcutaneous panniculitis-like T-cell lymphoma; enteropathy-type T-cell lymphoma; hepatosplenic T-cell lymphoma.
- e Others include polymorphocytic B- or T-cell leukemia, heavy chain disease, and composite Hodgkin lymphoma and non-Hodgkin lymphoma.

Incidence rate ratios adjusted for race and ethnicity. Because of low counts, we combined age groups as follows: ages 0-9 years for ALCL, LDHL/NOS, MCCHL, MFS/SS, NSCHL, T-ALL; ages 0-19 years for NLPHL, DLBCL, NOS, PMBCL, extranodal MZL, FL, PTCL, NOS/Others, CTCL; ages 0-24 years for LRHL, nodal MZL; ages 0-29 years for CLL/SLL, MM, NK/T cell, Plasmacytoma, PCALCL; ages 0-39 years for MCL, LPL/WM, HCL; ages 0-44 years for splenic MZL; ages 0-49 years for AITL, ATL, LGLL; ages 55-85+ for PMBCL; ages ≥80 years for T-ALL, LRHL, NLPHL, ATL, NK/T cell.

Abbreviations: AITL, angioimmunoblastic T-cell lymphoma; ALCL, anaplastic large cell lymphoma; ATL, adult T-cell leukemia/lymphoma; B-ALL, B-cell lymphoblastic leukemia/lymphoma; BL, Burkitt leukemia/lymphoma; cHL, classical Hodgkin lymphoma; CLL/SLL, chronic lymphocytic leukemia/small lymphocytic lymphoma; CTCL, cutaneous T-cell lymphoma, NOS; DLBCL, diffuse large B-cell lymphoma; FL, follicular lymphoma; HCL, hairy cell leukemia; ICD-O-3, International Classification of Diseases for Oncology, third edition; LDHL, lymphocyte-depleted Hodgkin lymphoma; LGLL, T-cell large granular lymphocytic leukemia; LPL/WM, lymphoplasmacytic lymphoma/Waldenström macroglobulinemia; LRHL, lymphocyte-rich Hodgkin lymphoma; MCCHL, mixed cellularity Hodgkin lymphoma; MCL, mantle cell lymphoma; MF/SS, mycosis fungoides/Sézary syndrome; MM, multiple myeloma; MZL, marginal zone lymphoma; NK/T cell, NK/T cell lymphoma; NLPHL, nodular lymphocyte predominant Hodgkin lymphoma; NOS, not otherwise specified; NSCHL, nodular sclerosis Hodgkin lymphoma; PCALCL, primary cutaneous anaplastic large cell lymphoma; PCN, plasma cell neoplasms; PMBCL, primary mediastinal large B-cell lymphoma; PTCL, peripheral T-cell lymphoma; SEER, Surveillance, Epidemiology, and End Results; T-ALL, T-cell lymphoblastic leukemia/lymphoma.

Supplementary Table 2. Joinpoint analysis of the male-to-female incidence rate ratio and the male and female incidence rates by lymphoid neoplasms, cases diagnosed between 2001 and 2017 from 16 registries of the Surveillance, Epidemiology, and End Results Program.

Lymphoid neoplasms	Male-to-female incidence rate ratio		Males		Females	
	Age groups (years)	APC of the incidence rate ratio by age group (95% CI)	Age groups (years)	APC of the incidence rates by age group (95% CI)	Age groups (years)	APC of the incidence rates by age group (95% CI)
Precursor lymphoid neoplasms						
B-ALL	0-4 to 85+	0.5 (-1.9, 2.9)	0-4 to 25-29 25-29 to 85+	-39.3 (-44.6, -33.5)* 7.1 (0.6, 14)*	0-4 to 20-24 20-24 to 85+	-48.1 (-51.4, -44.5)* 5.9 (3, 8.8)*
T-ALL	0-4 to 15-19 15-19 to 45-49 45-49 to 80+	19.9 (2.3, 40.5)* -11.8 (-20.8, -1.8)* 8.3 (-1.3, 18.8)	0-4 to 10-14 10-14 to 45-49 45-49 to 80+	22.9 (-0.9, 52.3) -23.2 (-26.8, -19.4)* 13.7 (6.5, 21.5)*	0-4 to 40-44 40-44 to 80+	-14.9 (-20.3, -9.1)* 4.6 (-4.9, 15.1)
Precursor, NOS	0-4 to 20-24 20-24 to 55-59 55-59 to 85+	15.8 (9.2, 22.7)* -8 (-13.6, -2.1)* 5.8 (-0.9, 12.9)	0-4 to 30-34 30-34 to 85+	-30.1 (-33.8, -26.3)* 15.3 (10.9, 19.9)*	0-4 to 20-24 20-24 to 40-44 40-44 to 60-64 60-64 to 85+	-41.7 (-44.7, -38.4)* -3.3 (-18.2, 14.3) 26.5 (9.9, 45.7)* 9.1 (2.1, 16.6)*
Hodgkin lymphomas						
cHL						
NSCHL	0-9 to 15-19 15-19 to 60-64 60-64 to 85+	-41.9 (-56.6, -22)* 8.8 (6.4, 11.3)* -0.5 (-7.6, 7.1)	0-9 to 20-24 20-24 to 50-54 50-54 to 85+	106.5 (64.7, 158.8)* -16 (-21.2, -10.4)* 8.4 (0.5, 16.9)*	0-9 to 15-19 15-19 to 30-34 30-34 to 50-54 50-54 to 85+	382.2 (178.3, 735.7)* -2.7 (-16.2, 13) -27.3 (-35.1, -18.6)* 6.1 (0.6, 12)*
MCCHL	0-9 to 15-19 15-19 to 50-54 50-54 to 75-79 75-79 to 85+	-25.3 (-55.4, 25) 1.9 (-3.6, 7.6) -9.8 (-19.9, 1.6) 28 (-16.5, 96.4)	0-9 to 20-24 20-24 to 40-44 40-44 to 85+	63.3 (35.6, 96.8)* -1.7 (-14.4, 13) 14.9 (11.6, 18.3)*	0-9 to 20-24 20-24 to 50-54 50-54 to 75-79 75-79 to 85+	83.8 (31.4, 157.2)* 0.1 (-8, 8.9) 33.3 (19.9, 48.2)* -21.7 (-48.3, 18.6)
LRHL	<25 to 80+	-7.6 (-10.4, -4.7)*	<25 to 30-34 30-34 to 80+	48.2 (-8.6, 140.4) 5.3 (-0.1, 10.9)	<25 to 80+	18.5 (12.3, 25)*
LDHL/cHL, NOS	0-9 to 20-24 20-24 to 50-54 50-54 to 70-74 70-74 to 85+	-13.2 (-27, 3.1) 9.2 (4.7, 13.9)* -2.9 (-9.8, 4.6) 4.5 (-3.9, 13.7)	0-9 to 20-24 20-24 to 45-49 45-49 to 75-79 75-79 to 85+	110.3 (81.1, 144.2)* -4.9 (-9.5, 0) 25 (20.6, 29.4)* -3.6 (-22.5, 19.9)	0-9 to 20-24 20-24 to 45-49 45-49 to 75-79 75-79 to 85+	137.6 (109, 170.3)* -13.6 (-17.2, -10)* 25.6 (21.8, 29.5)* -7.7 (-20.8, 7.5)
NLPHL	<20 to 80+	-7.7 (-10, -5.4)*	<20 to 25-29 25-29 to 65-69 65-69 to 80+	28.2 (1.2, 62.5)* 4.3 (0.5, 8.2)* -20.5 (-38.1, 2.2)	<20 to 70-74 70-74 to 80+	15.7 (10.5, 21.1)* -41 (-78.1, 58.9)
Mature B-cell lymphomas						
CLL/SLL	<30 to 85+	0.5 (0.1, 0.9)*	<30 to 45-49 45-49 to 65-69 65-69 to 85+	199.1 (88.6, 374.5)* 68.5 (45.6, 95)* 19.1 (9.7, 29.3)*	<30 to 45-49 45-49 to 65-69 65-69 to 85+	194.9 (77.4, 390.3)* 67.4 (42.7, 96.3)* 18.6 (10.1, 27.7)*
MCL	20-39 to 85+	-1.2 (-2.7, 0.3)	20-39 to 60-64 60-64 to 85+	100.6 (57.9, 154.9)* 18.5 (4.7, 34.2)*	20-39 to 65-69 65-69 to 85+	84.9 (52.2, 124.7)* 9.7 (-7.1, 29.6)
LPL/WM	<40 to 85+	7.7 (5.2, 10.2)*	<40 to 65-69 65-69 to 85+	102.3 (56.3, 162)* 22.3 (-0.9, 50.9)	<40 to 65-69 65-69 to 85+	91.2 (46.7, 149.1)* 13.3 (-10.9, 44.2)
DLBCL, NOS/Others	0-4 to 75-79 75-79 to 85+	-0.8 (-1.9, 0.4) 8.1 (-1.7, 18.9)	0-4 to 15-19 15-19 to 75-79 75-79 to 85+	112.5 (27.4, 254.4)* 43.7 (42, 45.5)* 9.1 (-2.8, 22.4)	0-4 to 75-79 75-79 to 85+	44.9 (42.4, 47.5)* 0.2 (-13.6, 16.2)
PMBCL	<20 to 55+	3.6 (-3.4, 11.1)	<20 to 25-29 25-29 to 55+	147 (-8.6, 567.8) -18 (-29.6, -4.6)*	<20 to 25-29 25-29 to 55+	217.4 (7.2, 839.9)* -24.2 (-34.6, -12)*
BL	0-4 to 85+	-3.3 (-4.8, -1.9)*	0-4 to 30-34 30-34 to 85+	-12.2 (-21.1, -2.4)* 16.2 (10.9, 21.7)*	0-4 to 30-34 30-34 to 85+	-11.5 (-18, -4.5)* 21.1 (17.8, 24.4)*
MZL						
Extranodal MZL	<20 to 45-49 45-49 to 85+	-12.6 (-18.9, -5.8)* 8.2 (6, 10.4)*	<20 to 25-29 25-29 to 70-74 70-74 to 85+	132.7 (70.2, 218.1)* 47.9 (46, 49.8)* 10.1 (5.5, 14.9)*	<20 to 25-29 25-29 to 65-69 65-69 to 85+	230.1 (-37.6, 1645.3) 48.9 (39.4, 59.1)* 6.5 (-3.5, 17.5)
Nodal MZL	<25 to 85+	2.4 (-0.6, 5.4)	<25 to 55-59 55-59 to 70-74 70-74 to 85+	83.3 (77.3, 89.5)* 43.5 (31.2, 56.9)* 14.4 (8.8, 20.3)*	<25 to 60-64 60-64 to 75-79 75-79 to 85+	71.5 (57, 87.4)* 31.2 (-0.7, 73.3) -5.6 (-30.7, 28.7)
Splenic MZL	<45 to 85+	5.4 (1.9, 8.9)*	45-49 to 55-59 55-59 to NA	399.6 (37.8, 1712)* 31.2 (19.5, 44.1)*	45-49 to 55-59 55-59 to 85+	370.8 (-21.8, 2733.1) 24.5 (8.8, 42.5)*
FL	<20 to 25-29 25-29 to 70-74 70-74 to 85+	-42.5 (-59.9, -17.5)* 0.5 (-0.8, 1.8) 6.2 (1.8, 10.8)*	<20 to 40-44 40-44 to 70-74 70-74 to 85+	115.7 (89.9, 144.9)* 37.3 (32.5, 42.3)* -1.6 (-10.7, 8.5)	<20 to 45-49 45-49 to 70-74 70-74 to 85+	94.8 (61.1, 135.4)* 33.1 (23, 44)* -6 (-18.6, 8.5)
HCL	<40 to 65-69 65-69 to 85+	9 (1.8, 16.7)* -13.5 (-25.1, -0.1)*	20-39 to 45-49	117.8 (84.9, 156.6)*	20-39 to 85+	21.4 (12.5, 31.1)*
PCN						
MM	<30 to 85+	4.8 (3.7, 5.8)*	45-49 to 85+ <30 to 45-49 45-49 to 70-74 70-74 to 85+	13.6 (11.6, 15.6)* 172.8 (71.4, 334)* 55.9 (41.8, 71.3)* 6.8 (-8.2, 24.2)	<30 to 45-49 45-49 to 70-74 70-74 to 85+	172.3 (61, 360.7)* 49.4 (34.5, 66)* 0.8 (-13.4, 17.5)
Plasmacytoma	<30 to 85+	0.2 (-2.3, 2.8)	<30 to 35-39 35-39 to 65-69 65-69 to 85+	219.9 (100.7, 410)* 42.9 (36.6, 49.5)* 10.2 (3.6, 17.2)*	<30 to 35-39 35-39 to 65-69 65-69 to 85+	206.9 (-29.6, 1238.2) 44.2 (24.4, 67.1)* 7.4 (-9.8, 27.9)
Mature T-cell lymphomas						
MF/SS	0-9 to 50-54 50-54 to 85+	1.7 (-3.8, 7.5) 11.6 (8.4, 14.9)*	0-9 to 65-69 65-69 to 85+	36.4 (33.2, 39.7)* 6.4 (-2.3, 15.8)	0-9 to 25-29 25-29 to 65-69 65-69 to 85+	60 (29.3, 98.1)* 23.9 (19.3, 28.6)* -4.8 (-13.5, 4.8)
PTCL						
PTCL, NOS/Others	<20 to 85+	0.5 (-1.3, 2.4)	<20 to 70-74 70-74 to 85+	39.4 (35.7, 43.2)* 7.5 (-7.6, 25)	<20 to 75-79 75-79 to 85+	35.7 (32.7, 38.7)* -1 (-21.8, 25.3)

ALCL	0-9 to 85+	1.8 (-0.1, 3.8)	0-9 to 15-19 15-19 to 30-34 30-34 to 85+	58.8 (-3, 160.2) -10.3 (-43.8, 43.3) 21.2 (17.8, 24.7)*	0-9 to 85+	14.1 (11.3, 16.9)*
AITL	<50 to 85+	-2.5 (-6.6, 1.8)	<50 to 55-59 55-59 to 85+	266.6 (30.8, 927.6)* 22.3 (3.5, 44.5)*	<50 to 55-59 55-59 to 85+	259.5 (-27.7, 1687.9) 24.9 (0, 56)
CTCL	<20 to 85+	3.8 (1.8, 5.9)*	<20 to 25-29 25-29 to 65-69 65-69 to 85+	101.4 (-3.8, 321.5) 38.4 (31.9, 45.3)* 13.1 (2.4, 25)*	<20 to 35-39 35-39 to 75-79 75-79 to 85+	67.5 (33.8, 109.5)* 25.7 (19.9, 31.8)* -5.4 (-33.6, 34.8)
PCALCL	<30 to 85+	12.3 (7.3, 17.6)*	<30 to 85+	35.6 (29.8, 41.6)*	<30 to 50-54 50-54 to 85+	39.1 (20.5, 60.6)* 12.1 (2.6, 22.6)*
ATL	<50 to 55-59 55-59 to 80+	-29.2 (-34.8, -23.1)* 2.4 (0.5, 4.3)*	<50 to 55-59 55-59 to 80+	76.4 (40.9, 120.8)* 25.5 (18.5, 32.9)*	<50 to 80+	43.2 (21.9, 68.2)*
NK/T cell	<30 to 80+	1.3 (-2, 4.6)	<30 to 35-39 35-39 to 80+	85.4 (25.5, 173.7)* 12.9 (8.8, 17)*	<30 to 35-39 35-39 to 80+	122.3 (14.6, 331.2)* 9.4 (3.6, 15.7)*
LGLL	<50 to 85+	18.5 (12.3, 24.9)*	<50 to 55-59 55-59 to 85+	262.4 (56.9, 736.6)* 30.1 (15.5, 46.5)*	<50 to 55-59 55-59 to 85+	236.6 (49.3, 658.7)* 11.1 (-2.6, 26.8)
Others/Lymphoid, NOS	0-4 to 85+	0.6 (-0.7, 1.9)	0-4 to 35-39 35-39 to 70-74 70-74 to 85+	32.9 (24.5, 41.9)* 54.5 (50.8, 58.4)* 34.3 (28.1, 40.7)*	0-4 to 40-44 40-44 to 70-74 70-74 to 85+	35.6 (27.6, 44)* 56.5 (51.2, 61.9)* 28.8 (22.9, 34.9)*

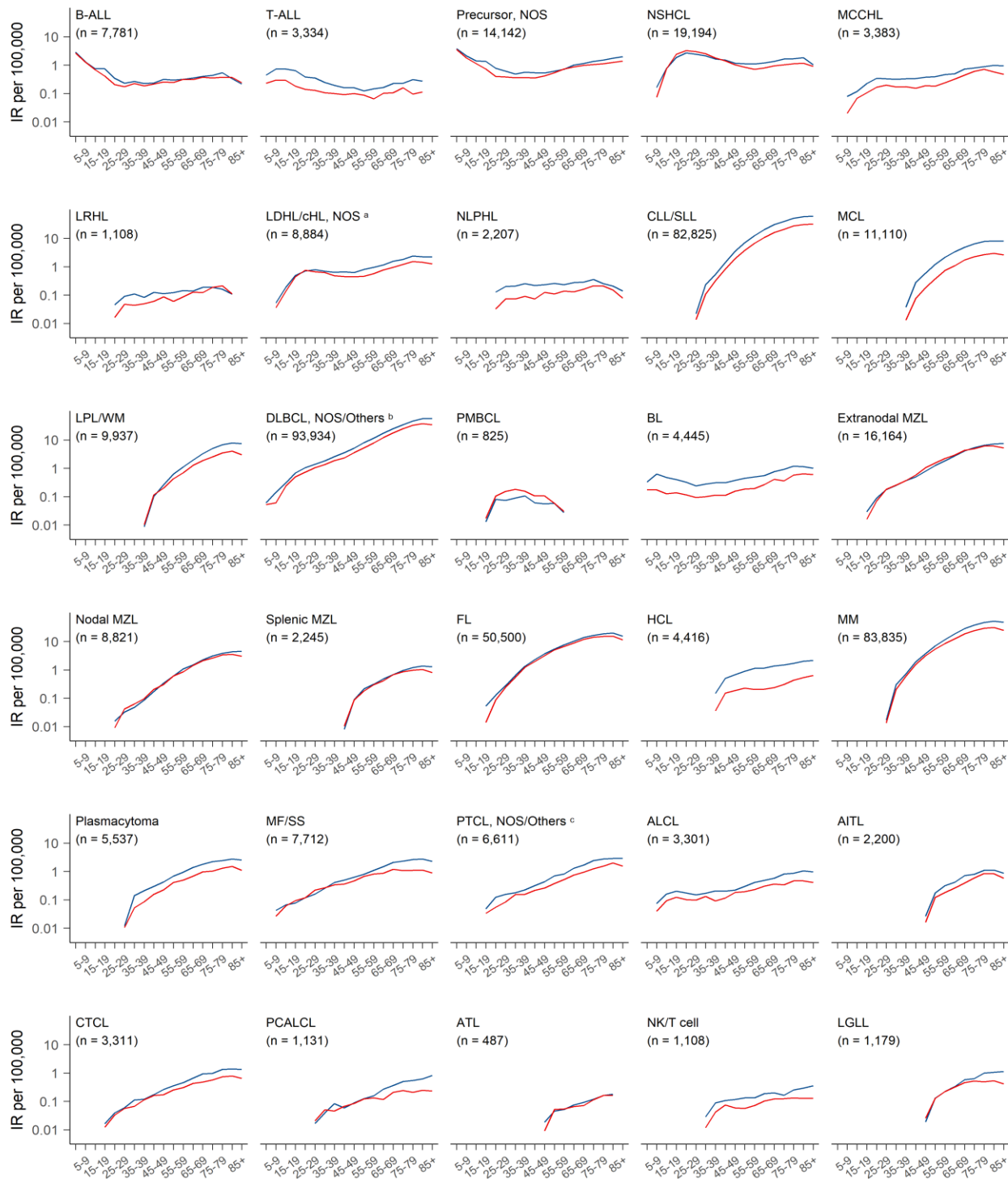
* Denotes statistically significant APC changes at p-value < 0.05.

APC reflect the Joinpoint analyses across age groups for the incidence rates for each sex independetly.

Because of low counts, we combined age groups as follows: ages 0-9 years for ALCL, LDHL/NOS, MCCHL, MFS/SS, NSCHL, T-ALL; ages 0-19 years for NLPHL, DLBCL, NOS, PMBCL, extranodal MZL, FL, PTCL, NOS/Others, CTCL; ages 0-24 years for LRHL, nodal MZL; ages 0-29 years for CLL/SLL, MM, NK/T cell, Plasmacytoma, PCALCL; ages 0-39 years for MCL, LPL/WM, HCL; ages 0-44 years for splenic MZL; ages 0-49 years for AITL, ATL, LGLL; ages 55-85+ for PMBCL; ages ≥80 years for T-ALL, LRHL, NLPHL, ATL, NK/T cell.

Abbreviations: APC, Average percent change; CI, Confidence interval.

● Male ● Female



Supplementary Figure 1. Male and female incidence rates across 5-year age groups for lymphoid neoplasms. Cases diagnosed between 2001 and 2017 from 16 registries of the Surveillance, Epidemiology, and End Results Program.

a LDHL cases were combined with cHL, NOS because of limited case counts across age groups.

b Others include intravascular large B-cell lymphoma, primary effusion lymphoma, and plasmablastic lymphoma. Cases were combined because of low counts across age groups.

c Others include subcutaneous panniculitis-like T-cell lymphoma, enteropathy-type T-cell lymphoma, and hepatosplenic T-cell lymphoma. Cases were combined because of low counts across age groups.

Abbreviations: AITL, angioimmunoblastic T-cell lymphoma; ALCL, anaplastic large cell lymphoma; ATL, adult T-cell leukemia/lymphoma; B-ALL, B-cell lymphoblastic leukemia/lymphoma; BL, Burkitt leukemia/lymphoma; cHL, classical Hodgkin lymphoma; CLL/SLL, chronic lymphocytic leukemia/small lymphocytic lymphoma; CTCL, cutaneous T-cell lymphoma, NOS; DLBCL, diffuse large B-cell lymphoma; FL, follicular lymphoma; HCL, hairy cell leukemia; IR, incidence rate; LDHL, Lymphocyte-depleted Hodgkin lymphoma; LGLL, T-cell large granular lymphocytic leukemia; LPL/WM, lymphoplasmacytic lymphoma/Waldenström macroglobulinemia; LRHL, lymphocyte-rich Hodgkin lymphoma; MCCHL, mixed cellularity Hodgkin lymphoma; MCL, mantle cell lymphoma; MF/SS, mycosis fungoides/Sézary syndrome; MM, multiple myeloma; MZL, marginal zone lymphoma; NK/T cell, NK/T cell lymphoma; NLPHL, nodular lymphocyte predominant Hodgkin lymphoma; NOS, not otherwise specified; NSCHL, nodular sclerosis Hodgkin lymphoma; PCALCL, primary cutaneous anaplastic large cell lymphoma; PCN, plasma cell neoplasms; PMBCL, primary mediastinal large B-cell lymphoma; PTCL, peripheral T-cell lymphoma; T-ALL, T-cell lymphoblastic leukemia/lymphoma.