

Supplemental Table S4. Hazard Ratios of Subsequent Primary Cancer Risk in Patients with Thyroid Cancer, Comparing the Lowest Quartile with the Higher Quartiles of Levothyroxine Dosage per Body Weight ($n=260,567$)

Variable	Total no.	Non-levothyroxine no.	Levothyroxine no.	Levothyroxine dosage							
				Q1 (<100 µg/day)		Q2 (100–123 µg/day)		Q3 (124–149 µg/day)		Q4 (≥150 µg/day)	
				No.	HR	No.	HR (95% CI) ^a	No.	HR (95% CI) ^a	No.	HR (95% CI) ^a
Total	12,974	625	12,349	2,161	1.00	2,986	1.06 (1.00–1.12)	3,401	1.17 (1.11–1.25)	3,801	1.24 (1.17–1.32)
Head and neck (C00–C14, C30–C32)	571	32	539	60	1.00	116	1.63 (1.16–2.29)	164	2.34 (1.69–3.25)	199	2.54 (1.85–3.50)
Digestive system (C15–C26)	4,115	163	3,952	611	1.00	933	1.19 (1.07–1.33)	1,122	1.42 (1.27–1.59)	1,286	1.57 (1.41–1.75)
GI tract (C15–C20)	2,628	106	2,522	435	1.00	602	1.09 (0.96–1.25)	707	1.25 (1.10–1.44)	778	1.28 (1.12–1.46)
Esophagus (C15)	72	6	66	14	1.00	12	0.82 (0.36–1.90)	14	1.06 (0.47–2.41)	26	1.84 (0.91–3.74)
Stomach (C16)	1,276	51	1,225	209	1.00	285	1.08 (0.89–1.31)	336	1.21 (0.99–1.47)	395	1.30 (1.08–1.57)
Colon and rectum (C18–C20)	1,241	46	1,195	205	1.00	303	1.14 (0.94–1.38)	340	1.28 (1.05–1.55)	347	1.22 (1.01–1.48)
Hepato-biliary-pancreatic (C22–C25)	1,139	45	1,094	162	1.00	258	1.14 (0.92–1.40)	312	1.35 (1.09–1.67)	362	1.73 (1.41–2.12)
Liver and biliary tract (C22–C24)	795	34	761	113	1.00	175	1.14 (0.88–1.47)	216	1.4 (1.08–1.80)	257	1.72 (1.35–2.19)
Pancreas (C25)	368	12	356	52	1.00	86	1.09 (0.76–1.58)	103	1.24 (0.86–10.8)	115	1.80 (1.27–2.56)
Lung (C34)	1,626	76	1,550	254	1.00	368	1.03 (0.87–1.22)	420	1.14 (0.96–1.37)	508	1.35 (1.14–1.60)
Skin (C43–C44)	361	24	337	58	1.00	96	1.14 (0.80–1.61)	90	1.08 (0.75–1.56)	93	1.02 (0.71–1.46)
Breast (C50)	3,199	166	3,033	612	1.00	780	0.98 (0.87–1.09)	812	0.96 (0.85–1.09)	829	0.89 (0.79–1.01)
Female genital system (C51–C58)	937	42	895	161	1.00	198	0.77 (0.61–0.97)	260	0.99 (0.79–1.24)	276	1.05 (0.84–1.30)
Cervix (C53)	293	15	278	44	1.00	55	0.83 (0.54–1.29)	78	1.10 (0.72–1.68)	101	1.42 (0.96–2.12)
Uterus (C54–C55)	328	13	315	67	1.00	77	0.69 (0.48–0.99)	91	0.8 (0.55–1.15)	80	0.64 (0.44–0.94)
Ovary (C56–C57)	352	16	336	55	1.00	69	0.84 (0.57–1.24)	102	1.17 (0.81–1.69)	110	1.25 (0.87–1.79)
Male genital system (C60–C63)	475	28	447	97	1.00	101	0.84 (0.61–1.14)	125	0.93 (0.68–1.27)	124	0.76 (0.55–1.05)
Prostate (C61)	464	27	437	94	1.00	99	0.84 (0.61–1.15)	122	0.93 (0.68–1.28)	122	0.75 (0.54–1.03)
Urinary system (C64–C68)	776	35	741	141	1.00	199	0.97 (0.77–1.23)	200	0.98 (0.76–1.26)	201	0.92 (0.71–1.18)
Kidney (C64)	500	18	482	92	1.00	135	1.04 (0.78–1.40)	129	0.91 (0.67–1.25)	126	0.96 (0.71–1.32)
Bladder (C67)	243	13	230	41	1.00	58	0.95 (0.61–1.47)	65	1.20 (0.77–1.85)	66	0.90 (0.57–1.41)
Brain, CNS (C70–C72)	227	8	219	33	1.00	45	1.09 (0.67–1.78)	55	0.99 (0.6–1.62)	86	1.37 (0.87–2.15)
Brain (C71)	184	7	177	27	1.00	37	1.13 (0.66–1.94)	46	1.12 (0.65–1.93)	67	1.35 (0.81–2.24)
Hematologic system (C81–C96)	866	52	814	145	1.00	213	1.15 (0.91–1.44)	193	1.03 (0.80–1.31)	263	1.16 (0.92–1.47)
Non-Hodgkin's lymphoma (C82–C86)	375	31	344	69	1.00	103	1.34 (0.96–1.85)	82	1.12 (0.78–1.61)	90	1.01 (0.71–1.45)
Multiple myeloma (C90)	122	4	118	22	1.00	28	0.97 (0.54–1.75)	30	0.99 (0.54–1.83)	38	1.36 (0.77–2.41)
Leukemia (C91–C95)	282	9	273	32	1.00	63	1.14 (0.71–1.81)	64	1.14 (0.70–1.86)	114	1.70 (1.10–2.64)

HR, hazard ratio; CI, confidence interval; C, diagnostic code by International Classification of Diseases (ICD)-10; GI, gastrointestinal; CNS, central nervous system.

^aHR estimated by Cox proportional hazard models adjusted for age, sex, and cumulative doses of radioactive iodine therapy.