

Supplemental Table S1. Hazard Ratios of Subsequent Primary Cancer Risk in Patients with Thyroid Cancer according to Levothyroxine Dosage (*n*=342,920)

Variable	Total no.	Non-levothyroxine		Levothyroxine		Levothyroxine dosage							
		No.	HR	No.	HR (95% CI) ^a	Q1 (<100 µg/day)		Q2 (100–123 µg/day)		Q3 (124–149 µg/day)		Q4 (≥ 150 µg/day)	
						No.	HR (95% CI) ^a	No.	HR (95% CI) ^a	No.	HR (95% CI) ^a	No.	HR (95% CI) ^a
Total	17,410	849	1.00	16,561	1.06 (0.99–1.14)	2,738	0.90 (0.84–0.98)	4,121	1.08 (1.00–1.17)	4,636	1.14 (1.05–1.24)	5,066	1.26 (1.17–1.37)
Head and neck (C00–C14, C30–C32)	847	49	1.00	798	0.89 (0.66–1.19)	97	0.63 (0.44–0.90)	184	0.87 (0.62–1.24)	246	1.09 (0.77–1.54)	271	1.23 (0.88–1.72)
Digestive system (C15–C26)	5,536	230	1.00	5,306	1.28 (1.12–1.46)	782	1.00 (0.86–1.16)	1,279	1.21 (1.04–1.41)	1,487	1.47 (1.26–1.71)	1,758	1.68 (1.45–1.95)
GI tract (C15–C20)	3,454	150	1.00	3,304	1.22 (1.03–1.44)	523	1.06 (0.88–1.27)	793	1.17 (0.97–1.42)	932	1.37 (1.13–1.65)	1,056	1.42 (1.18–1.72)
Esophagus (C15)	104	10	1.00	94	0.64 (0.33–1.27)	15	0.58 (0.25–1.33)	17	0.70 (0.29–1.65)	22	0.48 (0.19–1.19)	40	0.90 (0.42–1.94)
Stomach (C16)	1,670	75	1.00	1,595	1.18 (0.93–1.49)	249	1.05 (0.80–1.37)	381	1.12 (0.85–1.47)	440	1.31 (1.01–1.72)	525	1.31 (1.00–1.71)
Colon and rectum (C18–C20)	1,623	63	1.00	1,560	1.35 (1.04–1.74)	253	1.14 (0.86–1.51)	384	1.30 (0.98–1.74)	450	1.51 (1.14–2.01)	473	1.60 (1.20–2.12)
Hepato-biliary-pancreatic (C22–C25)	1,533	58	1.00	1,475	1.41 (1.08–1.84)	205	1.05 (0.78–1.42)	347	1.22 (0.90–1.65)	397	1.57 (1.17–2.11)	526	2.06 (1.54–2.74)
Liver and biliary tract (C22–C24)	1,099	44	1.00	1,055	1.34 (0.99–1.83)	148	1.01 (0.71–1.43)	232	1.15 (0.81–1.63)	293	1.62 (1.15–2.27)	382	1.93 (1.38–2.68)
Pancreas (C25)	466	15	1.00	451	1.59 (0.94–2.68)	63	1.23 (0.69–2.20)	123	1.45 (0.82–2.56)	109	1.42 (0.80–2.54)	156	2.44 (1.41–4.25)
Lung (C34)	2,127	109	1.00	2,018	0.93 (0.76–1.13)	310	0.79 (0.63–0.98)	507	0.95 (0.75–1.19)	525	0.92 (0.73–1.16)	676	1.10 (0.87–1.37)
Skin (C43–C44)	463	32	1.00	431	0.72 (0.50–1.04)	80	0.70 (0.45–1.07)	115	0.77 (0.51–1.18)	111	0.59 (0.37–0.93)	125	0.82 (0.53–1.27)
Breast (C50)	4,351	211	1.00	4,140	1.07 (0.93–1.23)	819	0.97 (0.83–1.13)	1,155	1.14 (0.98–1.33)	1,229	1.09 (0.93–1.29)	937	1.13 (0.96–1.33)
Female genital system (C51–C58)	1,284	55	1.00	1,229	1.09 (0.83–1.44)	219	0.96 (0.71–1.30)	322	0.98 (0.72–1.34)	363	1.22 (0.89–1.66)	325	1.44 (1.06–1.97)
Cervix (C53)	428	19	1.00	409	1.13 (0.70–1.80)	69	0.83 (0.49–1.41)	110	1.05 (0.62–1.77)	127	1.40 (0.83–2.35)	103	1.55 (0.92–2.63)
Uterus (C54–C55)	449	16	1.00	433	1.29 (0.78–2.14)	75	1.13 (0.65–1.96)	114	1.27 (0.73–2.20)	124	1.36 (0.77–2.38)	120	1.57 (0.89–2.77)
Ovary (C56–C57)	459	22	1.00	437	0.95 (0.61–1.47)	83	0.95 (0.59–1.54)	113	0.78 (0.47–1.30)	128	1.01 (0.61–1.66)	113	1.20 (0.73–1.99)
Male genital system (C60–C63)	608	41	1.00	567	0.94 (0.68–1.31)	73	1.05 (0.71–1.55)	88	1.00 (0.67–1.51)	151	0.91 (0.61–1.36)	255	0.86 (0.60–1.25)
Prostate (C61)	597	40	1.00	557	0.94 (0.68–1.31)	70	1.04 (0.70–1.53)	87	1.01 (0.67–1.52)	149	0.94 (0.63–1.40)	251	0.86 (0.59–1.25)
Urinary system (C64–C68)	994	48	1.00	946	1.07 (0.80–1.44)	159	1.09 (0.78–1.53)	205	1.11 (0.79–1.57)	255	1.00 (0.70–1.42)	327	1.13 (0.81–1.58)
Kidney (C64)	652	25	1.00	627	1.35 (0.90–2.03)	105	1.31 (0.83–2.04)	141	1.49 (0.94–2.36)	168	1.14 (0.71–1.84)	213	1.49 (0.95–2.34)
Bladder (C67)	297	18	1.00	279	0.85 (0.52–1.40)	44	0.96 (0.54–1.71)	52	0.76 (0.42–1.40)	76	0.93 (0.53–1.66)	107	0.85 (0.48–1.51)
Brain, CNS (C70–C72)	321	13	1.00	308	1.14 (0.65–2.01)	40	0.83 (0.44–1.58)	56	1.05 (0.55–2.01)	83	1.09 (0.57–2.08)	129	1.74 (0.94–3.23)
Brain (C71)	263	12	1.00	251	1.04 (0.58–1.89)	30	0.72 (0.36–1.43)	46	0.98 (0.49–1.93)	69	0.98 (0.49–1.95)	106	1.67 (0.87–3.18)
Hematologic system (C81–C96)	1,138	69	1.00	1,069	0.85 (0.66–1.09)	169	0.71 (0.53–0.95)	255	0.99 (0.75–1.32)	291	0.92 (0.69–1.24)	354	0.84 (0.63–1.13)
Non-Hodgkin's lymphoma (C82–C86)	492	40	1.00	452	0.72 (0.52–1.01)	80	0.58 (0.39–0.86)	123	0.94 (0.64–1.38)	133	0.82 (0.55–1.22)	116	0.61 (0.40–0.93)
Multiple myeloma (C90)	153	6	1.00	147	1.38 (0.60–3.16)	22	0.90 (0.36–2.28)	36	1.55 (0.64–3.78)	38	1.25 (0.49–3.21)	51	1.52 (0.61–3.80)
Leukemia (C91–C95)	377	14	1.00	363	0.97 (0.56–1.69)	34	0.67 (0.35–1.30)	71	0.89 (0.47–1.69)	99	1.29 (0.70–2.38)	159	1.20 (0.65–2.23)

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, cumulative doses of radioactive iodine therapy, and Charlson comorbidity index.