

**[Original tables with all information including non-significant variables]**

**Table S1.** Univariate and multivariate analyses of recurrence risk factors in patients with T2 and T3b including non-significant variables.

	Univariate		Multivariate	
	HR (95% CI)	p-value	HR (95% CI)	p-value
<b>Age</b>	0.958(0.934-0.982)	0.001	0.968(0.944-0.993)	0.012
<b>Gender</b>				
Female	ref.			
Male	2.830 (1.445-5.544)	0.002	2.506(1.277-4.918)	0.008
<b>Extent of surgery</b>				
Lobectomy	ref.			
TT and/or mRND	1.016( 0.495-2.084)	0.966		
<b>Tumor size</b>	1.656 (1.206-2.275)	0.002	1.434(1.036-1.984)	0.030
<b>Multifocality</b>	1.081(0.551-2.119)	0.821		
<b>Bilaterality</b>	1.314(0.650-2.655)	0.447		
<b>Lymphatic invasion</b>	6.129(2.372-15.833)	<0.001	4.822(1.851-12.562)	0.001
<b>Vascular invasion</b>	0.737(0.177-3.076)	0.676		
<b>BRAF<sup>V600E</sup> positivity</b>	0.674(0.282-1.614)	0.376		
<b>T stage</b>				
T2	ref.			
T3b	1.185 (0.604-2.324)	0.621		
<b>N stage</b>		<0.001		
N0	ref.		Ref.	0.175
N1a	8.219 (1.927-35.053)	0.004	3.588(0.728-17.672)	0.116
N1b	8.592 (1.904-39.764)	0.005	2.260(0.416-12.275)	0.345

Data are expressed as hazard ratio (HR) and 95% confidence interval (CI). A statistically significant difference was defined as  $p < 0.05$ . Abbreviations: TT, total thyroidectomy; mRND, modified radical neck dissection; T, tumor; N, node.

**Table S2.** Univariate and multivariate analyses of recurrence risk factors in patients with T2 and T3b-1 including non-significant variables.

	Univariate		Multivariate	
	HR (95% CI)	p-value	HR (95% CI)	p-value
<b>Age</b>	0.938(0.907-0.969)	<0.001	0.955(0.923-0.988)	0.008
<b>Gender</b>				
Female	ref.			
Male	2.290 (0.989-5.301)	0.053		
<b>Extent of surgery</b>				
Lobectomy	ref.			
TT and/or mRND	0.606(0.263-1.397)	0.240		
<b>Tumor size</b>	1.626(1.000-2.646)	0.050	1.574(0.923-2.682)	0.096
<b>Multifocality</b>	0.476(0.186-1.217)	0.121		
<b>Bilaterality</b>	0.428(0.127-1.446)	0.172		
<b>Lymphatic invasion</b>	5.599(1.895-16.544)	0.002	2.653(0.839-8.385)	0.097
<b>Vascular invasion</b>	0.611(0.082-4.539)	0.630		
<b>BRAF<sup>V600E</sup> positivity</b>	0.876(0.282-2.716)	0.818		
<b>T stage</b>				
T2	ref.			
T3b	0.556 (0.218-1.422)	0.221		
<b>N stage</b>				
N0	ref.	0.001		0.093
N1a	12.957 (1.718-97.707)	0.013	6.581(0.778-55.638)	0.084
N1b	11.026 (1.288-94.378)	0.028	4.332(0.441-42.599)	0.209

Data are expressed as hazard ratio (HR) and 95% confidence interval (CI). A statistically significant difference was defined as  $p < 0.05$ . Abbreviations: TT, total thyroidectomy; mRND, modified radical neck dissection; T, tumor; N, node.

**Table S3.** Univariate and multivariate analyses of recurrence risk factors in patients with T2 and T3b-2 including non-significant variables.

	Univariate		Multivariate	
	HR (95% CI)	p-value	HR (95% CI)	p-value
<b>Age</b>	0.957(0.930-0.985)	0.003	0.959(0.932-0.987)	0.004
<b>Gender</b>				
Female	ref.			
Male	1.541 (0.708-3.357)	0.276		
<b>Extent of surgery</b>				
Lobectomy	ref.			
TT and/or mRND	1.146 (0.527-2.496)	0.731		
<b>Tumor size</b>	1.218 (0.592-2.508)	0.593		
<b>Multifocality</b>	1.207(0.558-2.609)	0.633		
<b>Bilaterality</b>	1.700(0.758-3.814)	0.198		
<b>Lymphatic invasion</b>	4.961(1.871-13.158)	0.001	3.208(1.159-8.882)	0.025
<b>Vascular invasion</b>	0.497(0.067-3.669)	0.497		
<b>BRAF<sup>V600E</sup> positivity</b>	0.913(0.329-2.535)	0.861		
<b>T stage</b>				
T2	ref.		ref	
T3b	2.640 (1.198-5.817)	0.016	2.659(1.159-6.099)	0.021
<b>N stage</b>				
N0	ref.	0.001	ref.	0.296
N1a	6.965 (1.593-30.460)	0.010	3.079(0.611-15.523)	0.173
N1b	8.412 (1.817-38.933)	0.006	2.051(0.337-12.488)	0.436

Data are expressed as hazard ratio (HR) and 95% confidence interval (CI). A statistically significant difference was defined as  $p < 0.05$ . Abbreviations: TT, total thyroidectomy; mRND, modified radical neck dissection; T, tumor; N, node.

**Table S4.** Comparison of recurrence rate between patients with T1 and T3b-1 disease.

	<b>T1 (n = 5280)</b>	<b>T3b-1 (n = 217)</b>	<b>p-value</b>
<b>Recurrence</b>	130(2.5%)	6(2.8%)	0.778

Data are expressed as hazard ratio (HR) and 95% confidence interval (CI). A statistically significant difference was defined as  $p < 0.05$ . Abbreviations: T, tumor.

**Table S5.** Univariate Cox regression analyses of T stage as a risk factor for recurrence in patients with T1 and T3b-1.

	<b>Univariate</b>	
	<b>HR (95% CI)</b>	<b>p-value</b>
<b>T stage</b>		
T1	ref.	
T3b-1	1.118(0.493-2.533)	0.790

Data are expressed as hazard ratio (HR) and 95% confidence interval (CI). A statistically significant difference was defined as  $p < 0.05$ . Abbreviations: T, tumor.