Supplementary



**Figure S1** Forest plots of PTC and NHT based on the US, CEUS, and TIC features. Determined with multivariate analysis. PTC, papillary thyroid carcinoma; NHT, nodular Hashimoto's thyroiditis; US, ultrasound; CEUS, contrast-enhanced ultrasound; TIC, time-intensity curve; PI, peak intensity; AUC, area under the curve; OR, odds ratio; CI, confidence interval.



**Figure S2** Forest plots of PTL and NHT based on the US, CEUS, and TIC features. Determined with multivariate analysis. PTL, primary thyroid lymphoma; NHT, nodular Hashimoto's thyroiditis; US, ultrasound; CEUS, contrast-enhanced ultrasound; TIC, time-intensity curve; PI, peak intensity; TTP, time to peak; AUC, area under the curve; TPH, time from peak to one-half; OR, odds ratio; CI, confidence interval.

Parameters	≥20 mm (n=40)	10–<20 mm (n=114)	Р
Quantitative CEUS <sup>†</sup>			
PI (dB)			
Lesion	12.70±1.67	12.53±2.01	0.157
Parenchyma	13.72±1.55	13.69±1.92	0.204
Ratio	0.93±0.11	0.92±0.13	0.262
RT (s)			
Lesion	19.18±3.58	19.84±4.04	0.442
Parenchyma	20.63±4.09	20.42±3.88	0.815
Ratio	0.93±0.08	0.97±0.11	0.559
TTP (s)			
Lesion	30.31±5.82	29.89±6.40	0.605
Parenchyma	32.00±6.03	31.99±5.76	0.824
Ratio	0.95±0.08	0.99±0.17	0.492
TPH (s)			
Lesion	136.67±12.75	121.04±6.78	0.468
Parenchyma	119.26±8.18	118.95±7.08	0.335
Ratio	1.03±0.88	1.00±0.04	0.128
MTT (s)			
Lesion	23.81±4.33	25.19±6.16	0.435
Parenchyma	25.08±4.62	25.31±6.67	0.483
Ratio	0.96±0.11	1.01±0.20	0.536
AUC (dB sec)			
Lesion	1552.05±193.68	1537.41±249.19	0.077
Parenchyma	2022.87±310.77	1674.65±231.68	0.831
Ratio	0.94±0.12	0.93±0.15	0.901
Qualitative CEUS <sup>‡</sup>			
Enhancement direction			0.241
Scattered	5 (12.5)	6 (5.3)	
Centripetal/fugal	35 (87.5)	108 (94.7)	
Enhancement pattern			
Homogeneous	0	1 (0.9)	0.552
Heterogeneous	40 (100.0)	113 (99.1)	
Enhancement intensity			
Hypo-enhancement	36 (90.0)	107 (93.9)	0.309
Iso-enhancement	0	2 (1.8)	
Hyper-enhancement	4 (10.0)	5 (4.4)	

Table S1 Comparison of qualitative and quantitative CEUS parameters PTC nodule size

<sup>†</sup>, data were presented as median ± interquartile range. <sup>‡</sup>, data were numbers of patients, with percentages in parentheses. CEUS, contrast-enhanced ultrasound; PI, peak intensity; RT, rise time; TTP, time to peak; TPH, time from peak to one-half; MTT, mean transit time; AUC, area under the curve; PTC, papillary thyroid carcinoma.

Table 52 Comparison of quantative and quantitative	uve CECS parameters 1 1 E fr	odule size	
Parameters	≥50 mm (n=38)	10–<50 mm (n=14)	Р
Quantitative CEUS <sup>†</sup>			
PI (dB)			
Lesion	12.77±2.18	13.88±2.01	0.756
Parenchyma	15.74±2.35	13.34±1.53	0.211
Ratio	0.82±0.12	0.91±0.13	0.953
RT (s)			
Lesion	19.82±4.03	19.59±3.55	0.824
Parenchyma	22.38±5.22	21.75±3.02	0.301
Ratio	0.89±0.10	0.90±0.10	0.473
TTP (s)			
Lesion	30.28±6.22	30.26±4.51	0.678
Parenchyma	34.49±7.92	32.71±4.38	0.242
Ratio	0.88±0.10	0.92±0.07	0.119
TPH (s)			
Lesion	143.74±16.23	129.32±9.04	0.107
Parenchyma	129.50±16.21	126.86±8.23	0.335
Ratio	1.12±0.16	1.02±0.02	0.087
MTT (s)			
Lesion	24.62±5.00	23.97±3.32	0.487
Parenchyma	26.26±8.35	25.39±3.11	0.362
Ratio	0.96±0.15	0.95±0.07	0.536
AUC (dB s)			
Lesion	1676.76±310.25	1717.21±226.45	0.317
Parenchyma	2022.87±310.77	1674.65±231.68	0.214
Ratio	0.82±0.13	0.91±0.12	0.651
Qualitative CEUS <sup>‡</sup>			
Enhancement direction			0.110
Scattered	1 (2.6)	2 (14.3)	
Centripetal/fugal	37 (97.4)	12 (85.7)	
Enhancement pattern			
Homogeneous	0	1 (7.1)	0.096
Heterogeneous	38 (100.0)	13 (92.9)	
Enhancement intensity			
Hypo-enhancement	37 (97.4)	12 (85.7)	0.110
lso-enhancement	1 (2.6)	2 (14.3)	
Hyper-enhancement	0	0	

Table S2 Comparison of qualitative and quantitative CEUS parameters PTL nodule size

<sup>†</sup>, data were presented as median ± interquartile range. <sup>‡</sup>, data were numbers of patients, with percentages in parentheses. CEUS, contrast-enhanced ultrasound; PI, peak intensity; RT, rise time; TTP, time to peak; TPH, time from peak to one-half; MTT, mean transit time; AUC, area under the curve; PTL, primary thyroid lymphoma.

Parameters	>20 mm (n=15)	10-<20 mm (n=27)	Р
Quantitative CFUS <sup>†</sup>			· · ·
PI (dB)	12.77±2.18	13.88±2.01	0.064
Lesion	16.29±1.53	15.16±2.11	0.403
Parenchvma	0.94±0.10	0.97±0.10	0.784
Ratio			
RT (s)	21.19±4.20	20.36±3.83	0.824
Lesion	21.79±4.49	20.57±3.73	0.384
Parenchyma	0.98±0.10	0.99±0.07	0.177
Ratio			
TTP (s)	32.90±5.89	32.36±6.31	0.099
Lesion	33.76±7.25	32.28±5.64	0.458
Parenchyma	0.98±0.10	0.99±0.07	0.646
Ratio			
TPH (s)	119.16±5.93	120.06±7.27	0.107
Lesion	118.28±7.22	120.13±6.28	0.473
Parenchyma	1.00±0.03	1.01±0.02	0.412
Ratio			
MTT (s)	24.52±3.75	24.78±3.59	0.360
Lesion	24.61±4.01	25.65±5.76	0.362
Parenchyma	0.98±0.09	0.97±0.10	0.829
Ratio			
AUC (dB sec)	1901.54±182.36	1877.73±355.72	0.036*
Lesion	2031.59±239.71	1870.04±269.22	0.689
Parenchyma	0.95±0.12	0.97±0.11	0.664
Ratio			
Qualitative CEUS <sup>‡</sup>			
Enhancement direction			0.152
Scattered	6 (40.0)	17 (63.0)	
Centripetal/fugal	9 (60.0)	10 (37.0)	
Enhancement pattern			0.334
Homogeneous	6 (40.0)	15 (55.6)	
Heterogeneous	9 (60.0)	12 (44.4)	
Enhancement intensity			0.611
Hypo-enhancement	6 (40.0)	13 (48.1)	
lso-enhancement	9 (60.0)	14 (51.9)	
Hyper-enhancement	0	0	

Table S3 Comparison of qualitative and quantitative CEUS parameters NHT nodule size

\*, P<0.05 was considered statistically significant. <sup>†</sup>, data were presented as median ± interquartile range. <sup>‡</sup>, data were numbers of patients, with percentages in parentheses. CEUS, contrast-enhanced ultrasound; PI, peak intensity; RT, rise time; TTP, time to peak; TPH, time from peak to one-half; MTT, mean transit time; AUC, area under the curve; NHT, nodular Hashimoto's thyroiditis