

Table S1 Pairwise comparisons of different antibody statuses on tumor size ≥ 4 cm

Antibody statuses	Groups	χ^2	Adjusted significance
TAb ⁺	TgAb ⁺	0.750	0.39
	TPOAb ⁺	0.028	0.87
	TAbs ⁻	6.947	0.008 *
TgAb ⁺	TPOAb ⁺	1.205	0.27
	TAbs ⁻	1.738	0.19
TPOAb ⁺	TAbs ⁻	4.953	0.03*

*, $P < 0.05$. TAb⁻, TgAb and TPOAb double-negative; TAb⁺, TgAb and TPOAb double-positive; TgAb, thyroglobulin antibody; TgAb⁺, TgAb single-positive; TPOAb, thyroid peroxidase antibody; TPOAb⁺, TPOAb single-positive; χ^2 , chi-squared test.

Table S2 Post-hoc test of different antibody statuses on NCLNM

Sample 1 vs. Sample 2	Test statistic	Standard error	Standard test statistic	Significance	Adjusted significance
TPOAb ⁺ vs. TAb ⁺	3.619	9.591	0.377	0.706	>0.99
TPOAb ⁺ vs. TgAb ⁺	4.823	10.372	0.465	0.642	>0.99
TPOAb ⁺ vs. TAb ⁻	-29.753	10.745	-2.769	0.006	0.03*
TAbs ⁺ vs. TgAb ⁺	-1.204	8.531	-0.141	0.888	>0.99
TAbs ⁺ vs. TAb ⁻	-26.134	8.981	-2.910	0.004	0.02*
TgAb ⁺ vs. TAb ⁻	-24.930	9.811	-2.541	0.011	0.07

*, $P < 0.05$. NCLNM, number of central lymph nodes metastasis; TAb⁻, TgAb and TPOAb double-negative; TAb⁺, TgAb and TPOAb double-positive; TgAb, thyroglobulin antibody; TgAb⁺, TgAb single-positive; TPOAb, thyroid peroxidase antibody; TPOAb⁺, TPOAb single-positive.

Table S3 Post-hoc test of different antibody statuses on CLNMR

Sample 1 vs. Sample 2	Test statistic	Standard error	Standard test statistic	Significance	Adjusted significance
TPOAb ⁺ vs. TAb ⁺	15.357	10.619	1.446	0.148	0.89
TPOAb ⁺ vs. TgAb ⁺	16.978	9.819	1.729	0.084	0.053
TPOAb ⁺ vs. TAb ⁻	-32.835	11.002	-2.985	0.003	0.02*
TAbs ⁺ vs. TgAb ⁺	1.621	8.734	0.186	0.853	>0.99
TAbs ⁺ vs. TAb ⁻	-17.478	10.045	-1.740	0.082	0.49
TgAb ⁺ vs. TAb ⁻	-15.857	9.195	-1.725	0.085	0.51

*, $P < 0.05$. CLNMR, central lymph node metastasis ratio; TAb⁻, TgAb and TPOAb double-negative; TAb⁺, TgAb and TPOAb double-positive; TgAb, thyroglobulin antibody; TgAb⁺, TgAb single-positive; TPOAb, thyroid peroxidase antibody; TPOAb⁺, TPOAb single-positive.

Table S4 Post-hoc test of different antibody statuses on LLNMR

Sample 1 vs. Sample 2	Test statistic	Standard error	Standard test statistic	Significance	Adjusted significance
TPOAb ⁺ vs. TAb ⁺	3.083	5.679	0.543	0.587	>0.99
TPOAb ⁺ vs. TgAb ⁺	7.667	6.221	1.232	0.218	>0.99
TPOAb ⁺ vs. TAb ⁻	-14.667	5.865	-2.501	0.012	0.07
TAb ⁺ vs. TgAb ⁺	-4.583	4.399	-1.042	0.297	>0.99
TAb ⁺ vs. TAb ⁻	-11.583	3.879	-2.986	0.003	0.02*
TgAb ⁺ vs. TAb ⁻	-7.000	4.637	-1.510	0.131	0.79

*, P<0.05. LLNMR, lateral lymph node metastasis ratio; TAb⁻, TgAb and TPOAb double-negative; TAb⁺, TgAb and TPOAb double-positive; TgAb, thyroglobulin antibody; TgAb⁺, TgAb single-positive; TPOAb, thyroid peroxidase antibody; TPOAb⁺, TPOAb single-positive.