

Table S1 Treatment modalities and time to treatment analysis

Characteristics	Levels	Total patients (N=81,565)	T1a surgery patients (N=50,014)	T1b surgery patients (N=31,551)	P value
Radiation therapy	No radiation	54,679 (67.0)	39,186 (78.4)	15,493 (49.1)	<0.001
	RAI	26,276 (32.2)	10,551 (21.1)	15,725 (49.7)	
	Beam radiation	350 (0.4)	166 (0.3)	184 (0.6)	
	Radioactive implants	359 (0.4)	144 (0.3)	215 (0.7)	
Systematic therapy	Positive	37,830 (46.4)	21,292 (42.6)	16,538 (52.4)	<0.001
Time to treatment	<1 month	54,183 (66.4)	38,260 (76.5)	15,923 (50.5)	<0.001
	1–3 months	24,709 (30.3)	10,530 (21.1)	14,179 (44.9)	
	4–6 months	2,109 (2.6)	966 (1.9)	1,143 (3.6)	
	>6 months	564 (0.7)	258 (0.5)	306 (1.0)	

Data is presented as count (percentage). RAI, radioactive iodine.

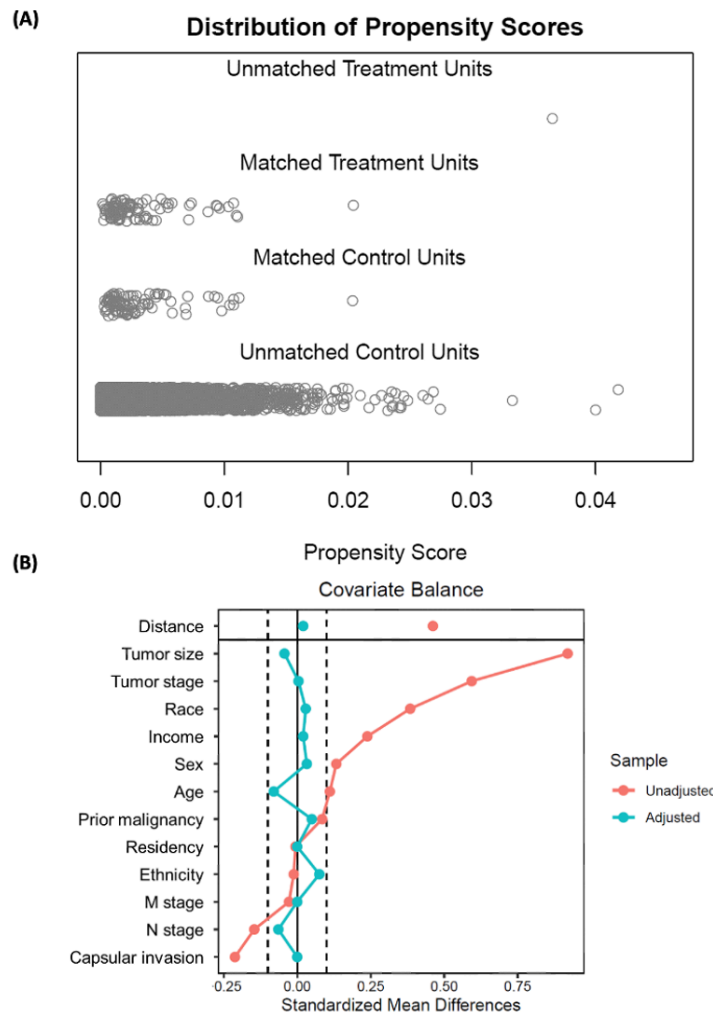


Figure S1 Patient distribution before and after propensity matching. A nearest neighbor matching with a control-to-treatment ratio of 4:1 was employed. (A) Dot plot for the distribution of propensity scores. (B) Covariate balance measured by standard mean difference. The figure illustrates the mean difference in all variables between the group of the those who underwent surgery and the group of those who refused, including tumor size, tumor stage, race, income, sex, age, prior malignancy, residency, ethnicity, M stage, N stage, and capsular invasion. As such proper matching was obtained via a balanced covariate measured by standard mean difference with the two dashed vertical lines indicating the threshold within which the balance is achieved.