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### Introduction

In this study, we aimed to evaluate impact of multifocality, tumor number and total tumor diameter on clinicopathological features of PTC.

### Methods

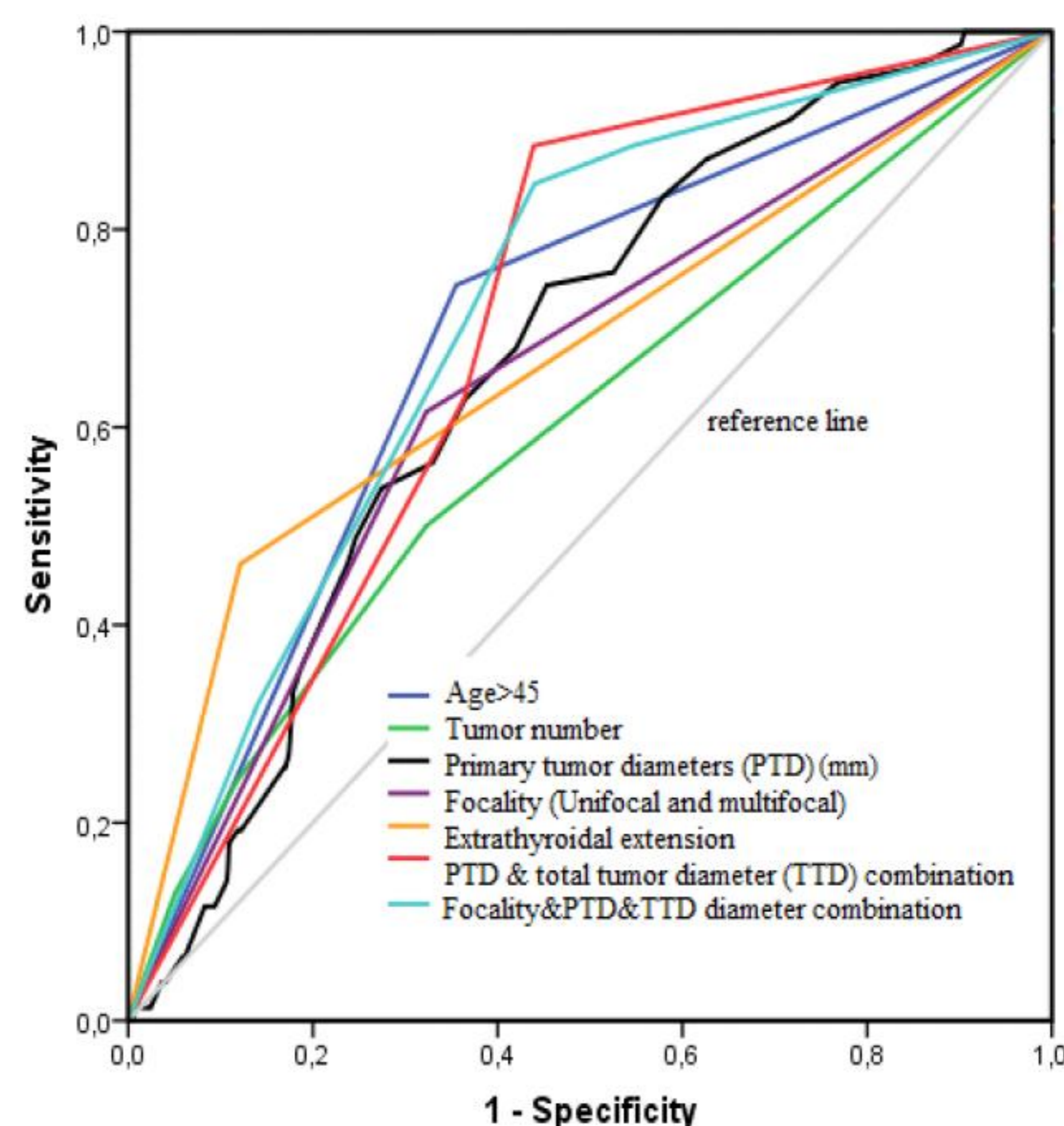
➤ Medical records of 912 patients who underwent thyroidectomy and diagnosed with PTC were reviewed retrospectively. Patients were grouped into 4 according to number of tumoral foci; N1 (1 focus), N2 (2 foci), N3 (3 foci) and N4 ( $\geq 4$  foci). The diameter of the largest tumor was considered as the primary tumor diameter (PTD) and total tumor diameter (TTD) was calculated as the sum of the maximal diameter of each lesion in multicentric tumors.

### Results

➤ Capsular invasion, extrathyroidal extension and lymph node metastasis were significantly higher in patients with multifocal tumors compared to patients with unifocal PTC. As the number of tumor increased, extrathyroidal extension and lymph node metastasis also increased ( $p=0.034$  and  $p=0.004$ , respectively).

➤ The risk of lymph node metastasis was 2.287 (OR=2.287,  $p=0.036$ ) times higher in N3 and 3.449 (OR=3.449,  $p=0.001$ ) times higher in N4 compared to N1. Capsular invasion, extrathyroidal extension and lymph node metastasis were significantly higher in multifocal patients with PTD  $\leq 10$  mm and TTD  $> 10$  mm than unifocal patients with tumor diameter  $\leq 10$  mm ( $p<0.001$ ,  $p<0.001$  and  $p=0.001$ , respectively).

➤ There was no significant difference in terms of these parameters in multifocal patients with PTD  $\leq 10$  mm and TTD  $> 10$  mm and unifocal patients with tumor diameter  $> 10$  mm (Figure 1).



Test Result Variable(s)	Area	Std. Error <sup>a</sup>	Asymptotic Sig. <sup>b</sup>	Asymptotic 95% Confidence Interval	
				Lower Bound	Upper Bound
Age > 45	0,694	0,030	0,000	0,635	0,754
Tumor number	0,600	0,036	0,004	0,530	0,669
PTD	0,668	0,028	0,000	0,613	0,724
Focality	0,646	0,033	0,000	0,581	0,712
Extrathyroidal extension	0,670	0,036	0,000	0,599	0,741
PTD&TTD	0,700	0,026	0,000	0,650	0,750
Focality&PTD&TTD	0,715	0,027	0,000	0,662	0,769

a. Under the nonparametric assumption  
b. Null hypothesis: true area = 0.5

### Conclusion

➤ In this study, increased tumor number was associated with higher rate of capsular invasion, extrathyroidal extension and lymph node metastasis. In a patient with multifocal papillary microcarcinoma, TTD  $> 10$  mm confers a similar risk of aggressive histopathological behavior with unifocal PTC greater than 10 mm.