

Background: Tumor satellites are defined as islands of tumor cells completely separated from the border of the main tumor (Figure 1). They are believed to be a sign of aggressive disease. However, the published literature regarding the incidence and significance of satellites in OSCC is scarce.

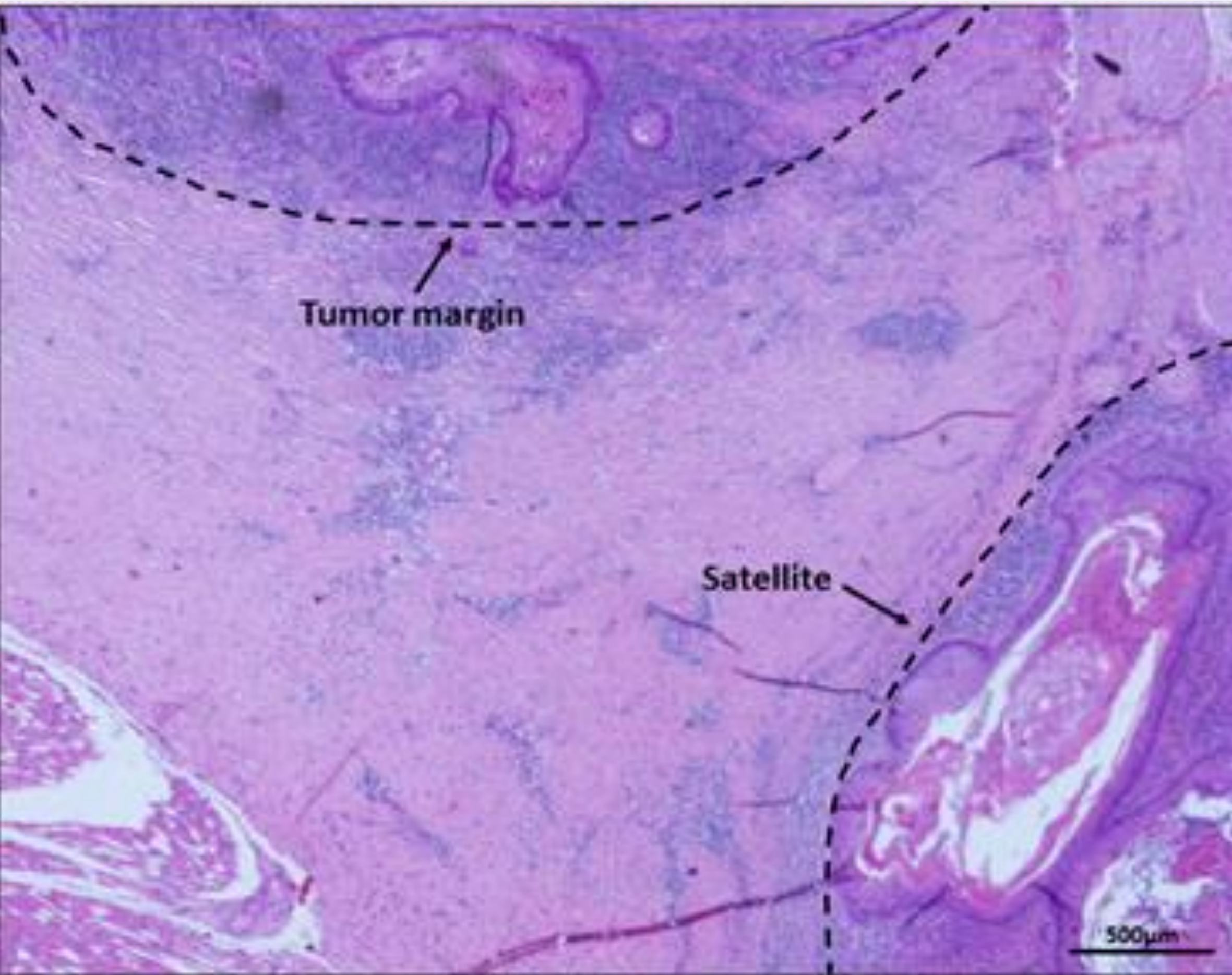


Fig. 1 Tumor satellite of a patient with floor of mouth SCC

Objectives: To investigate the association between tumor satellites, adverse features, and outcome in patients with oral squamous cell carcinoma (OSCC).

Methods: A retrospective analysis of all patients treated for OSCC at a university-affiliated tertiary care center between 2010 and 2018 was performed. Data collected included demographics, clinical and pathological features including tumor satellites, staging, treatment modalities and outcomes.

Results

Variable	No-satellites N=127 (%)	Satellites N=17 (%)	P value
Gender			
Female	63 (49.6)	8 (47.1)	P=0.84
Male	64 (50.4)	9 (52.9)	
Age, years	63.8	61.2	P=0.58
PNI			
Yes	36 (32.1)	12 (70.6)	P=0.002
No	76 (67.9)	5 (29.4)	
ENE			
Yes	14(11)	6 (35.3)	P=0.007
No	113 (89)	11 (64.7)	
Pathologic stage			
Early (1-2)	66(54.1)	3(18.8)	P=0.008
Advanced (3-4)	56(45.9)	13(81.3)	
Adjuvant Radiotherapy			
Yes	72 (59)	16 (94.1)	P=0.005
No	50 (41)	1 (5.9)	
Adjuvant Chemotherapy			
Yes	31 (27)	11 (68.8)	P=0.001
No	84 (73)	5 (31.2)	

Table 1. Clinical and pathological characteristics of 144 patients

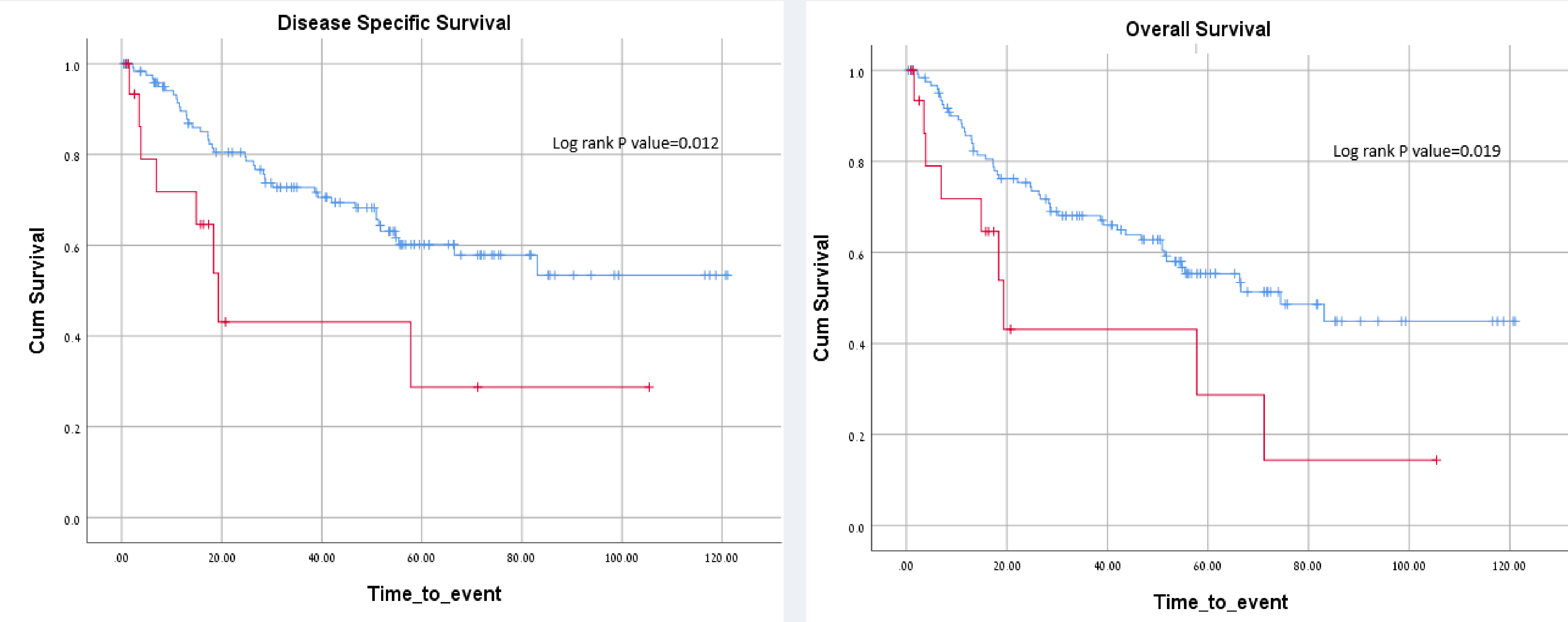


Fig. 2 Kaplan Meier comparing DSS and OS by presence of satellites

No satellites —————

Satellites —————

Conclusion

The presence of tumor satellites in OSCC is associated with several adverse features and advanced loco-regional disease. Patients with tumor satellites should be treated aggressively with combination of surgery aimed at achieving free surgical margins and adjuvant treatment, as they tend to have worse outcome compared to patients without satellites.