

Tumor microRNA profile and prognostic value for lymph node metastasis in oral squamous cell carcinoma patients

SUPPLEMENTARY MATERIALS

Supplementary Table 1: miRNAs significantly associated with nodal disease-free survival by cox-proportional hazard analysis on low or high miRNA expression

miRNA name and accession	cut-point (log ₁₀ RPM)	FDR ^a	Log-rank <i>P</i> ^b	Univariate		Multivariate with cT stage, tumor grade, DOI	
				HR (95% CI)	Log-rank <i>P</i>	HR (95% CI)	Log-rank <i>P</i>
hsa.mir.106a.MIMAT0000103	3.102	0.03711	0.00098633	3.4 (1.9–6)	2.60E-05	2.3 (1.2–4.4)	1.00E-13
hsa.mir.107.MIMAT0000104	6.802	0.00005	0.00000015	2.7 (1.6–4.4)	1.40E-09	8.8e8 (0–Inf)	9.00E-16
hsa.mir.146b.MIMAT0004766	6.224	0.00764	0.00010158	1.9 (1.4–2.7)	7.80E-05	4.1 (1.8–9.5)	7.00E-14
hsa.mir.181b.1.MIMAT0022692	3.264	0.00082	0.00000821	1.7 (1.3–2.3)	2.50E-07	7.2 (2.5–21.3)	2.00E-14
hsa.mir.200c.MIMAT0000617	12.974	0.02905	0.00067568	0.29 (0.15–0.53)	2.60E-05	0.24 (0.13–0.47)	6.00E-16
hsa.mir.203a.MIMAT0000264	17.879	0.00778	0.00014545	0.12 (0.038–0.39)	1.60E-06	0.11 (0.034–0.39)	1.00E-14
hsa.mir.21.MIMAT0000076	17.859	0.00011	0.00000073	8 (3.2–20)	1.90E-08	8.3 (3.2–22)	6.00E-16
hsa.mir.32.MIMAT0000090	4.159	0.00778	0.00015514	8.2 (2.5–26)	1.60E-06	8.7 (2.6–29)	3.00E-15

^a*P* values were corrected for multiple testing at determining cut-point at false discovery rate (FDR) threshold of 0.05.

^b*P* values were corrected for multiple testing at determining association with nodal-disease free survival across 301 miRNAs.

Abbreviation(s): RPM, reads per million; HR, hazard ratio; CI, confidence intervals.

Supplementary Table 2: Patient and baseline clinical-pathological characteristics between low and high score groups in Discovery (training), Discovery (test), and validation cohorts

	miRNA score group based on Penalized Cox PH regression model											
	Discovery (training) cohort	Discovery (test) cohort	Discovery (training) cohort		Discovery (test) cohort			Validation cohort				
	(n = 68)	(n = 23)	P	Low (25)	High (43)	P	Low (13)	High (10)	P	Low (46)	High (21)	P
Age, yrs (mean ± SD)	63.7 ± 14.4	63.6 ± 15.8	0.98	66.7 ± 13.6	62.0 ± 14.7	0.18	58.2 ± 15.8	70.7 ± 13.3	0.05	63.1 ± 13.1	58.0 ± 11.7	0.12
Sex			1			0.16			0.61			1
Male	43 (63)	14 (61)		19 (76)	24 (56)		4 (31)	5 (50)		18 (39)	8 (38)	
Female	25 (37)	9 (39)		6 (24)	19 (44)		9 (69)	5 (50)		28 (61)	13 (62)	
Smoking History			0.92			0.73			0.56			0.41
Never	27 (40)	9 (39)		11 (44)	16 (37)		5 (38)	4 (40)		20 (43)	12 (57)	
Ever	41 (60)	14 (61)		14 (56)	27 (63)		8 (62)	6 (60)		26 (57)	9 (43)	
Primary tumor site			0.83			0.53			1			0.61
Buccal mucosa/Gingiva/ Hard Palate	6 (9)	3 (13)		1 (4)	5 (12)		2 (15)	1 (10)		5 (11)	2 (10)	
Soft Palate/Retromolar trigone/Soft Palate Complex	2 (3)	0 (0)		1 (4)	1 (2)					2 (4)	0 (0)	
Tongue/Floor of Mouth	60 (88)	20 (87)		23 (92)	37 (86)		11 (85)	9 (90)		39 (85)	19 (90)	
Clinical T Stage			0.75			0.82			0.16			0.54
T1/T2	58 (85)	19 (83)		21 (84)	37 (86)		12 (92)	7 (70)		38 (83)	16 (76)	
T3/T4	10 (15)	4 (17)		4 (16)	6 (14)		1 (8)	3 (30)		8 (17)	5 (24)	
Clinical N Stage			0.56			0.86			0.38			0.69
N0	62 (91)	20 (87)		23 (92)	39 (91)		12 (92)	8 (80)		39 (85)	17 (81)	
N+	6 (9)	3 (13)		2 (8)	4 (9)		1 (8)	2 (20)		7 (15)	4 (19)	
Tumor Grade			0.62						0.98			0.06
I/II	50 (74)	15 (65)		8 (32)	8 (19)		9 (69)	6 (60)		41 (89)	14 (67)	
III	18 (26)	8 (35)		14 (56)	20 (47)		4 (31)	4 (40)		5 (11)	7 (33)	
Tumor DOI (mean ± SD)	7.97 ± 7.24	7.83 ± 5.30	0.92	6.3 ± 8.2	8.9 ± 6.6	0.19	6.3 ± 3.9	9.9 ± 6.3	0.14	4.7 ± 3.5	8.3 ± 5.1	0.005
Tumor DOI (4 mm cut-off)			0.64			0.19			0.79			0.008
< 4 mm	17 (25)	4 (17)		9 (36)	8 (19)		3 (23)	1 (10)		24 (52)	3 (14)	
≥ 4 mm	51 (75)	19 (83)		16 (64)	35 (81)		10 (77)	9 (90)		22 (48)	18 (86)	
Tumor DOI (5 mm cut-off)			0.67			0.11			1			0.04
< 5 mm	23 (34)	6 (26)		12 (48)	11 (26)		3 (23)	3 (30)		27 (59)	6 (29)	
≥ 5 mm	45 (66)	17 (74)		13 (52)	32 (74)		10 (77)	7 (70)		19 (41)	15 (71)	

Abbreviation(s): DOI, depth of invasion.