

Supplementary Table 1: Comparison of clinical and VISIA® red area patterns between rosacea and sensitive skin patients

Items	Rosacea	Sensitive Skin	<i>P</i> -value
N	201	74	
Age (years)	25.0 (22.0–33.0)	26.0 (22.0–30.0)	0.772
Categorized age, <i>n</i> (%)			0.630
<25 years	88 (43.8)	30 (40.5)	
≥25 years	113 (56.2)	44 (59.5)	
Course (months)	24.0 (12.0–48.0)	12.0 (6.0–24.0)	0.004
Categorized course, <i>n</i> (%)			<0.001
<20 months	72 (35.8)	45 (60.8)	
≥20 months	129 (64.2)	29 (39.2)	
Gender			0.095
Female	184 (91.5)	72 (97.3)	
Male	17 (8.5)	2 (2.7)	
Family history			0.008
Negative	183 (91.0)	74 (100.0)	
Positive	18 (9.0)	0	
Improper skincare			<0.001
Negative	118 (58.7)	12 (16.2)	
Positive	83 (41.3)	62 (83.8)	
Clinical manifestation			
Erythema			0.004
Negative	0	3 (4.1)	
Positive	201 (100.0)	71 (95.9)	
Papules and pustules			0.138
Negative	116 (57.7)	50 (67.6)	
Positive	85 (42.3)	24 (32.4)	
Phymatous changes			0.801
Negative	199 (99.0)	73 (98.6)	
Positive	2 (1.0)	1 (1.4)	
Transient erythema outside face			0.294
Negative	199 (99.0)	72 (97.3)	
Positive	2 (1.0)	2 (2.7)	
Burning			0.067
Negative	105 (52.5)	48 (64.9)	
Positive	95 (47.5)	26 (35.1)	
Edema			0.978
Negative	193 (96.0)	71 (95.9)	
Positive	8 (4.0)	3 (4.1)	
Pain			0.222
Negative	197 (98.0)	74 (100.0)	
Positive	4 (2.0)	0	

Itching			0.476
Negative	180 (89.6)	64 (86.5)	
Positive	21 (10.4)	10 (13.5)	
VISIA® red area patterns			
Peace sigh pattern			<0.001
Negative	91 (45.3)	63 (85.1)	
Positive	110 (54.7)	11 (14.9)	
Wing shape pattern			<0.001
Negative	161 (80.1)	74 (100.0)	
Positive	40 (19.9)	0 (0.0)	
Dots/globular pattern			0.543
Negative	200 (99.5)	74 (100.0)	
Positive	1 (0.5)	0	
Earlobe pattern			<0.001
Negative	99 (49.3)	65 (87.8)	
Positive	102 (50.7)	9 (12.2)	

Supplementary Table 2: Single factor regression analysis of clinical features related to rosacea diagnosis

Items	Statistics	Single factor regression analysis	P-value
Age (years)	28.2 ± 8.4	1.0 (1.0, 1.0)	0.771
Categorized Age, <i>n</i> (%)			
<25 years	118 (42.9)	1	
≥25 years	157 (57.1)	0.9 (0.5, 1.5)	0.630
Course (months)	34.8 ± 39.7	1.0 (1.0, 1.0)	0.006
Categorized course, <i>n</i> (%)			
<20 months	117 (42.5)	1	
≥20 months	158 (57.5)	2.8 (1.6–4.8)	<0.001
Gender			
Female	256 (93.1)	1	
Male	19 (6.9)	3.3 (0.7, 14.8)	0.114
Family history			
Negative	257 (93.5)	1	
Positive	18 (6.5)	inf. (0.0, Inf)	0.986
Improper skin care			
Negative	130 (47.3)	1	
Positive	145 (52.7)	0.1 (0.1, 0.3)	<0.001
Clinical manifestation			
Erythema			
Negative	3 (1.1)	1	
Positive	272 (98.9)	inf. (0.0, Inf)	0.984

Papules and pustules				
Negative	166 (60.4)	1		
Positive	109 (39.6)	1.5 (0.9, 2.7)		0.140
Phymatous changes				
Negative	272 (98.9)	1		
Positive	3 (1.1)	0.7 (0.1, 8.2)		0.802
Transient erythema of the face				
Negative	271 (98.5)	1		
Positive	4 (1.5)	0.4 (0.1, 2.6)		0.314
Burning				
Negative	153 (55.8)	1		
Positive	121 (44.2)	1.7 (1.0, 2.9)		0.069
Edema				
Negative	264 (96.0)	1		
Positive	11 (4.0)	1.0 (0.3, 3.8)		0.978
Pain				
Negative	271 (98.5)	1		
Positive	4 (1.5)	2162833.3 (0.0, Inf)		0.984
Itching				
Negative	244 (88.7)	1		
Positive	31 (11.3)	0.7 (0.3, 1.7)		0.477
VISIA® red area patterns				
Peace sigh pattern				
Negative	154 (56.0)	1		
Positive	121 (44.0)	6.9 (3.4, 13.9)		<0.001
Wing shape pattern				
Negative	235 (85.5)	1		
Positive	40 (14.5)	inf. (0.0, Inf)		0.986
Dots/globular pattern				
Negative	274 (99.6)	1		
Positive	1 (0.4)	783726.6 (0.0, Inf)		0.988
Earlobe pattern				
Negative	164 (59.6)	1		
Positive	111 (40.4)	7.4 (3.5, 15.8)		<0.001

Supplementary Table 3: Multivariate regression analysis of clinical features related to the diagnosis of rosacea

Items	Multivariate regression analysis	P-value
Categorized age		
<25 years	1	
≥25 years	2.7 (1.4–5.3)	0.004
Improper skin care		
Negative	1	
Positive	0.1 (0.1–0.3)	<0.001
Peace sign pattern		
Negative	1	
Positive	3.4 (1.6–7.4)	0.002
Earlobe pattern		
Negative	1	
Positive	7.4 (3.2–17.2)	<0.001

Supplementary Table 4: Sensitivity, specificity, positive and negative likelihood ratio (LR) of four clinical factors for the diagnosis of rosacea

Test	Sensitivity	Specificity	Positive LR	Negative LR
Peace sign pattern	0.547	0.879	4.527	0.515
Earlobe pattern	0.508	0.879	4.198	0.560
Improper skincare	0.413	0.187	0.508	3.143
Categorized disease course	0.642	0.593	1.579	0.604

Supplementary Figure 1: The ROC curve (A) and DCA curve (B) of rosacea diagnosis for model 1 (including four factors: disease course, improper skincare, and peace sign and earlobe patterns) and model 2 (including peace sign and earlobe patterns).

