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Anterior chamber inflammation grading with automatized image processing software

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Halil İbrahim Aydoğdu & Fatime Nilüfer Yalçindağ

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Table 1. Clinical and Optical coherence tomography(OCT)-based quantitative parameters across The Standardization of Uveitis Nomenclature (SUN) grades
(Values are presented as Mean ± SD or Median (IQR), unless otherwise specified. P values calculated using Kruskal–Wallis test.)

SUN Grade	Diagnosis	Images (n)	Total (n)	Anterior Chamber Area (Mean ± SD)	p value	Cell Count Median (IQR)	p value	Cell Density Median (IQR)	p value	Cell Area Median (IQR)	p value	Eccentr Medi (IQR
0	Control	103	103	62.25+6.82		0(0)	***<0.001***	0(0)	***<0.001***	2(3.5)	*0.43*	0(0.7
1	Infectious	30	125	62.12+6.11		2(3)		5.30(7.71)		3.66(3.92)		0.55(0
	Non-infectious	95					***<0.001***		***<0.001***		*0.63*	
2	Infectious	20	100	62.61+6.62		6(5)		15.05(14.36)		4.5(2.14)		0.57(0.
	Non-infectious	80			*p=0.06*		***<0.005***		***<0.01***		*0.63*	
3	Infectious	10	57	60.73+6.18		15(22)		38.32(59.1)		3.58(1.80)		0.55(0.
	Non-infectious	47					***<0.005***		***<0.01***		***<0.001***	
4	Infectious	15	65	63.75+5.49		101(98)		229.6(204.81)		4.84(2.96)		0.59(0.
	Non-infectious	50										
Total			450									

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Table 2. Test-retest repeatability of quantitative measurements

Variable	ICC (A,1)	95% Confidence Interval	Interpretation
Cell count	1.000	Could not be calculated†	Excellent (perfect agreement)
Cell density	1.000	Could not be calculate†	Excellent (perfect agreement)
ARI index	0.951	0.941 – 0.959	Excellent
Cell area	0.888	0.863 – 0.908	Good
Eccentricity	0.913	0.894 – 0.929	Excellent

Table 2. Test–retest repeatability of quantitative measurements obtained by image processing algorithm. Reliability was assessed using a two-way mixed-effects intraclass correlation coefficient (ICC) with absolute agreement (single measures, ICC[A,1]), based on repeated analysis of the same AS-OCT images. ICC values were interpreted as good (0.75–0.90) or excellent (>0.90) reliability. †Confidence intervals could not be calculated for cell count and cell density due to zero within-subject variability, reflecting identical outputs on repeated analyses (perfect agreement).

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