

Interpretation of Results from the Konan Specular Microscope

CD

Also referred to as Endothelial Cell Density (ECD) or Cell Count. Expressed as Cells / mm². Table 1 shows average Cell Density ranges by age.¹

CV

Coefficient of Variation represents the degree of variation in the sizes of the cells (Polymegethism). The literature suggests that a CV of less than 40 is considered normal.² Patients that have been wearing contact lenses causing a distressed condition for an extended period may have a CV of 40, 50, or higher.

HEX

HEX or “6A” is the percentage of six-sided (hexagon) cells. Hexagonality of above 50% is suggested to be normal.²

NUM

The actual number of cells used to calculate the results. Note that when using the “Center Method” of analysis, NUM is lower than the number marked. This is due to the cells on the perimeter create a boundary of which only cells within the boundary are counted.

Pachy

Optical pachymetry expressed in microns.

SD

Standard Deviation of the average cell area. This is used to calculate the Coefficient of Variation. Lower Standard Deviation results in lower Coefficient of Variation.

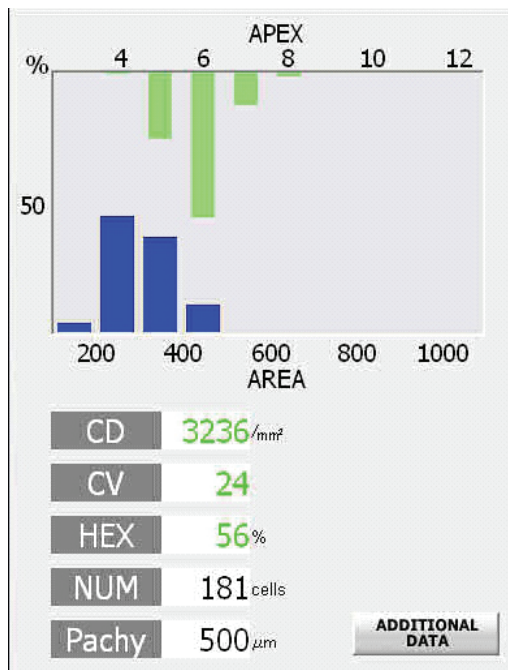


TABLE 1: AVERAGE ENDOTHELIAL CELL DENSITIES BY AGE

Age	Average ECD (cells/mm ²)
10-19	2,900 - 3,500
20-29	2,600 - 3,400
30-39	2,400 - 3,200
40-49	2,300 - 3,100
50-59	2,100 - 2,900
60-69	2,000 - 2,800
70-79	1,800 - 2,600
80-89	1,500 - 2,300

¹ Craig Thomas OD. Use Specular Microscopy to Diagnose Corneal Disease. Review of Optometry. June 15, 2009.

² Philips, C., Laing, R., and Yee, R. (2005). Specular Microscopy In J.H. Krachmer, M.J. Mannis, and E.J. Holland (Eds.) Cornea, Volume one: Fundamentals, Diagnosis, and Management, second edition. Elsevier Mosby publishing Inc. p. 268.