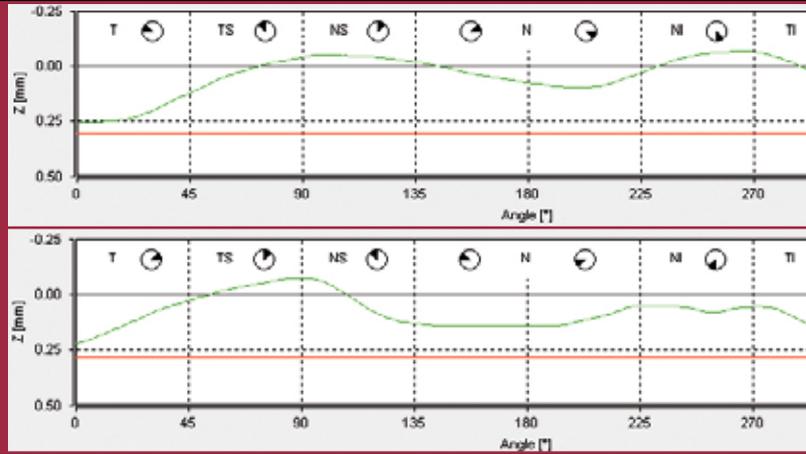


Interpreting the Baseline Examination in 60 seconds

HRT





**Interpreting the baseline examination in 60 seconds –
Intelligent combination of HRT information substantially
enhances the sensitivity and specificity of the diagnostics**

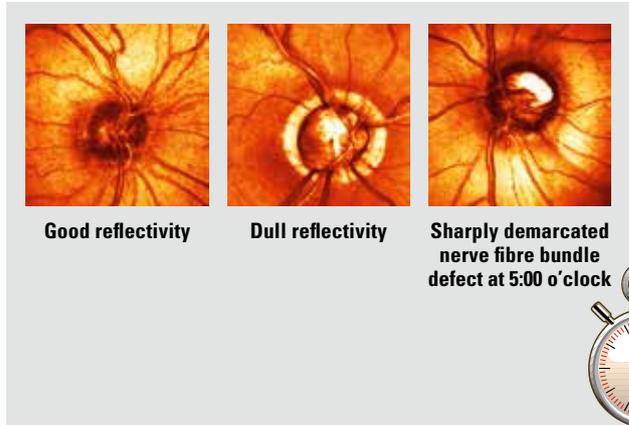


Reflectivity

A healthy nerve fibre layer demonstrates good reflectivity with striped radially emanating patterns.

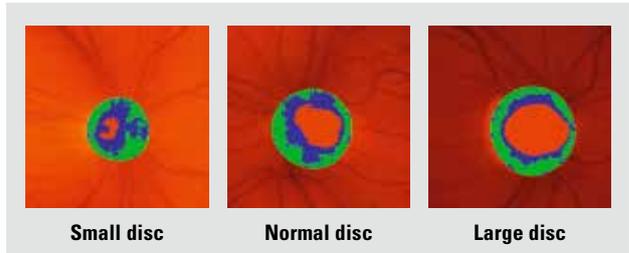
If the picture quality and illumination are good, the damaged nerve fibre layer stands out due to its dull reflectivity.

Nerve fibre bundle defects present as sharply demarcated stripes compared to the healthy adjacent tissue with reduced reflectivity (dark) and usually emanate away from the temporal rim in a radial pattern.



Disc size

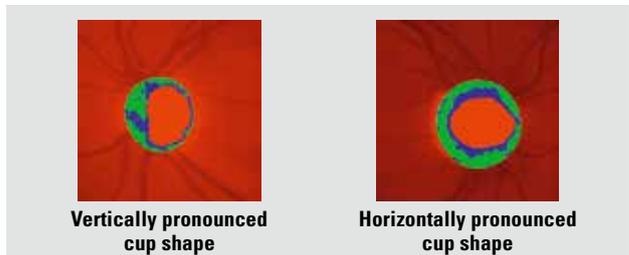
The disc is classified as small (less than approx. 2 mm²), normal or large (above approx. 3 mm²). Striking size differences between the right and the left eye are often interpreted as a risk factor (asymmetry).



Cup shape

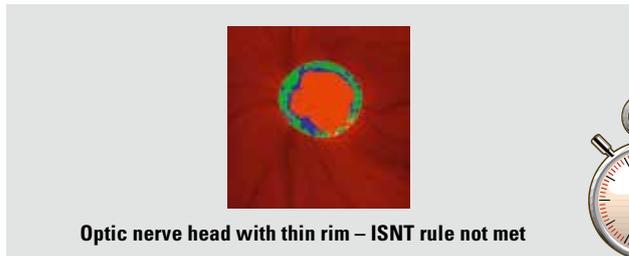
A vertically pronounced cup shape poses an additional risk factor.

Large discs with a horizontally pronounced cup tend to indicate a physiologically large optic nerve head and physiologic cupping.



Rim configuration

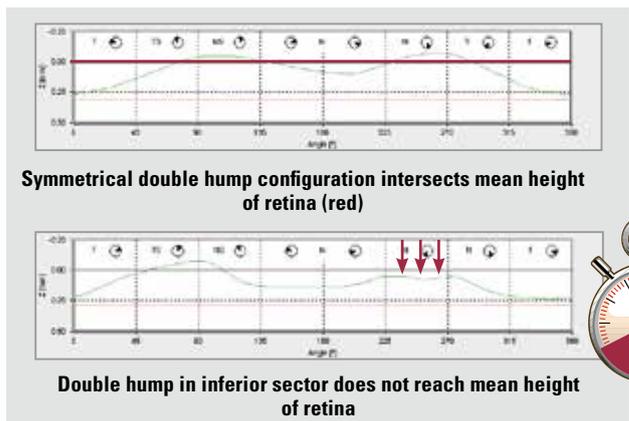
The ISNT rule for healthy optic nerve heads: The rim area of a healthy optic nerve head varies by sector, with the inferior being thickest, followed by the superior, nasal and temporal regions. Does the optic nerve head have a pathologically thin rim in the temporal sector?



Assessing the RNFL height profile along the contour line

There should be a symmetrical double hump configuration of the height profile along the contour line at the disc margin. This is the height profile of the retinal nerve fibre layer. The height profile should intersect the mean height of the retina (0.00 line).

With large discs, the nerve fibres are distributed across a larger surface, and the height profile often does not reach the mean height of the retina.





Rim volume

The rim volume should be at least 0.3 mm³, regardless of disc size.

As with all stereometric parameters, in this case too, the p-value of the regression analysis is calculated and assessed using green, yellow and red symbols (Premium Edition only).

Parameters	global	normal range	p-value
disc area [mm ²]	2.46	1.63 - 2.43	-
cup area [mm ²]	1.05	0.11 - 0.68	0.03
rim area [mm ²]	1.41	1.31 - 1.96	0.03
cup/disc area ratio []	0.43	0.07 - 0.30	0.05
rim/disc area ratio []	0.57	0.70 - 0.93	> 0.5
cup volume [mm ³]	0.29	-0.01 - 0.18	0.05
rim volume [mm ³]	0.18	0.30 - 0.61	< 0.001
mean cup depth [mm]	0.24	0.10 - 0.27	> 0.5
maximum cup depth [mm]	0.75	0.32 - 0.76	> 0.5
height variation contour [mm]	0.23	0.31 - 0.49	0.03
cup shape measure []	-0.24	-0.28 - -0.15	> 0.5

Cup Shape Measure (CSM)

The parameter for describing the cup shape (CSM) should be at least -0.2 for small and average discs or -0.1 (often larger or even slightly positive) for large discs. The more negative the value, the less suspicious the shape of the optic nerve head.

As with all stereometric parameters, in this case too, the p-value of the regression analysis is calculated and assessed using green, yellow and red symbols (Premium Edition only).

Parameters	global	normal range	p-value
disc area [mm ²]	2.29	1.63 - 2.43	-
cup area [mm ²]	0.23	0.11 - 0.68	> 0.5
rim area [mm ²]	2.06	1.31 - 1.96	> 0.5
cup/disc area ratio []	0.10	0.07 - 0.30	> 0.5
rim/disc area ratio []	0.90	0.70 - 0.93	> 0.5
cup volume [mm ³]	0.01	-0.01 - 0.18	> 0.5
rim volume [mm ³]	0.67	0.30 - 0.61	> 0.5
mean cup depth [mm]	0.13	0.10 - 0.27	> 0.5
maximum cup depth [mm]	0.39	0.32 - 0.76	> 0.5
height variation contour [mm]	0.43	0.31 - 0.49	> 0.5
cup shape measure []	-0.22	-0.28 - -0.15	> 0.5

FSM and RB discriminant functions

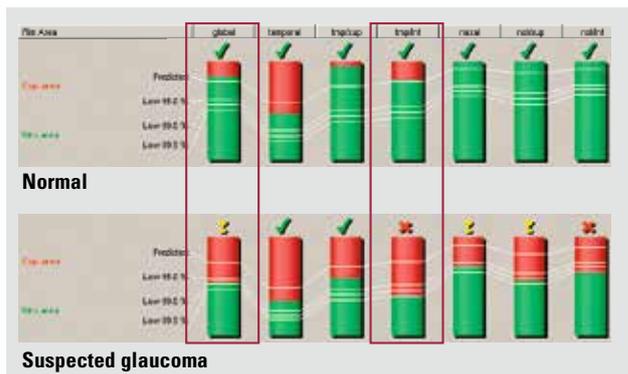
The FSM (Frederik S. Mikelberg) and RB (Reinhard Burk) discriminant functions must be positive. In the case of large discs, if the FSM discriminant function is negative while the RB discriminant function remains positive, this frequently indicates a physiologically large optic nerve head and physiologic cupping.

Normal			
average variability (SD) [µm]	9	-	-
reference height [µm]	418	-	-
FSM discriminant function value []	4.76	-	-
RB discriminant function value []	2.40	-	-
Pathological			
average variability (SD) [µm]	19	-	-
reference height [µm]	316	-	-
FSM discriminant function value []	-3.09	-	-
RB discriminant function value []	-1.28	-	-



Moorfields Regression Analysis (MRA)

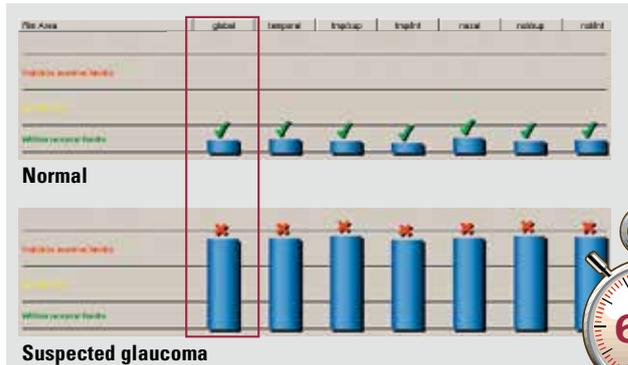
The MRA assesses the health of the rim relative to disc size. If the temporal, and specifically, the temporal inferior sector and the global MRA classification results are outside the normal limits (red x), this means that there is a substantially higher risk of glaucoma (OHTS Study). In the case of large or small discs, the correlation is less reliable.



Glaucoma Probability Score (GPS)

(Premium Edition only)

The GPS automatically calculates the slope, size and depth of the optic nerve head and the curvature of the peripapillary retina. If the global result of the GPS analysis is outside the normal limits (red x), this means an elevated risk of glaucoma. In the case of large or small discs, the correlation is less reliable.



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