

# INTEGRATED DIAGNOSTIC IMAGING SOLUTIONS STREAMLINE WORK FLOW



Appreciating the value of the Structure-Function Report.

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The following case exemplifies the value of the Integrated Diagnostic Imaging (IDI) platform through FORUM (ZEISS) for data-driven glaucoma diagnosis and management. With this platform, we can store all diagnostic tests in a single computer and view reports that integrate both structure (OCT, fundus photos) and function (visual fields), enhancing efficiency in the clinic.

## CASE: GLAUCOMA EVALUATION

- 61-year-old male referred for glaucoma evaluation because optic nerves appeared abnormal
- BCVA: 20/20
- IOPs: 18 mm Hg OD, 15 mm Hg OS
- Central corneal thickness: 542  $\mu\text{m}$  OD, 557  $\mu\text{m}$  OS
- Gonioscopy and pachymetry: normal
- Average retinal nerve fiber layer (RNFL): 107  $\mu\text{m}$  OD, 121  $\mu\text{m}$  OS
- Optic nerves: large

Diagnostic testing included fundus photographs, OCT, and visual fields. Individually these test results are important, but I find real benefit in interpreting them all together, and that is the value of the Integrated Diagnostic Imaging platform with Structure-Function Report (Figure 1).

Looking at the RNFL TSNIT curve, with the right RNFL superimposed on the left, you can see that, even though

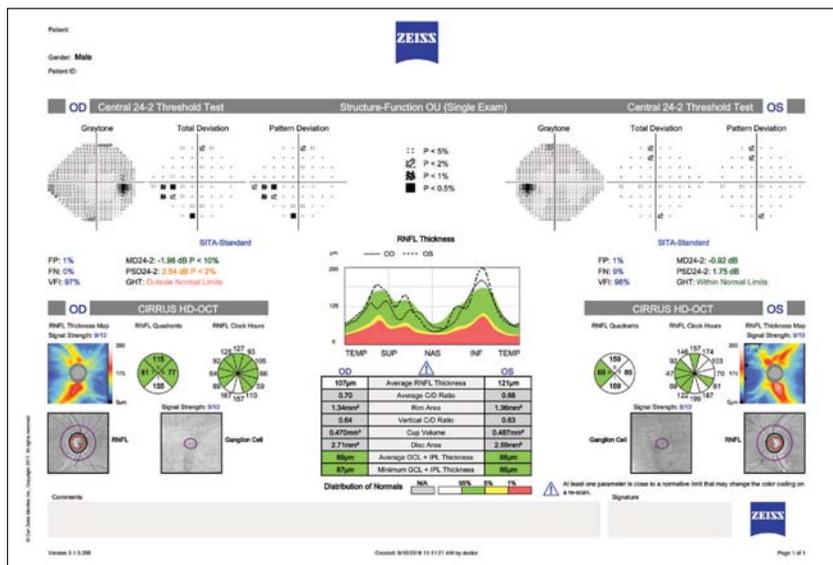


Figure 1. While individual test results are important, the FORUM IDI Structure-Function Report is valuable for interpreting them all together.

the superior RNFL is thick, the RNFL of the right eye is substantially thinner than that of the left eye. On the RNFL thickness map, a small slit in the superior RNFL correlates well with the inferior nasal step on the visual field. If you were to look at the OCT and see greens and whites on the quadrants and clock hours, you would think this patient is golden, but the Structure-Function Report presents a more complete picture.

Looking at the optic nerve photograph (Figure 2), you can see a tiny disc hemorrhage, as well as a subtle defect in the RNFL. The defect looks

almost like a blood vessel, but it is real and visible on OCT. I think this is the type of OCT that could lead some clinicians to say, "Oh, this looks great," but in fact, the patient has early glaucoma.

## DISCUSSION

If we look at any one piece of this patient's data—his IOP, his initial OCT, even his initial visual fields—nothing is diagnostic of glaucoma at first glance. Silos of data are difficult and inefficient to organize, compare, and correlate. FORUM enables us to create structure-function plots so we



Figure 2. The optic nerve photograph shows a tiny disc hemorrhage and a subtle defect in the RNFL.

can view OCTs, visual fields, and photographs on a single screen and start to put the pieces together.

One of my favorite features of Integrated Diagnostic Imaging platform is being able to see all of the data together instead of having four windows open at one time on my computer or needing to move from one instrument to another

within the building to view the tests. I also appreciate that once I enter a patient's data, essentially linking all of my instruments in FORUM, every test I have ever performed for that patient is imported into the program.

FORUM performs some functions in terms of disease progression that would be much more difficult to do without it. Although progression software is available on the individual instruments, it is also included in Integrated Diagnostic Imaging platform. If a patient completed a visual field test today, I do not have to go to the instrument to use the progression analysis. It is in Integrated Diagnostic Imaging platform already. I can adjust progression analysis to reflect clinical instances that occurred, or remove outliers from a bad test. Let's say a visual field from 2 years ago is an outlier and is skewing the progression information. I can remove it from the analysis in Integrated Diagnostic Imaging platform, and, if necessary, I can undo what I just did.

Having these options at my fingertips improves my efficiency.

## CONCLUSION

The ZEISS FORUM—Integrated Diagnostic Imaging platform enables clinical decision-making with more data, fluidity in data access, and seamless management of disease over time, thus streamlining our workflow. ■

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