



Selecting the Right Ophthalmic Image Analysis Platform

Buyer's Checklist

The critical need for better ocular biomarkers is driving innovations in 3D ophthalmic imaging. However, the analysis of these ophthalmic images has been hampered by imprecise and unusable measurements, inefficiencies, and sky-high costs. To combat these challenges, new OCT analysis platforms are emerging that leverage machine learning and advanced algorithms, and move beyond the constraints of OEM software to offer greater accuracies, efficiencies, and true compatibility across multiple ophthalmic devices and data formats.

Evaluating these new technologies to select the best solution for clinical trial analysis can be complex and time-consuming. At Voxeleron, we've helped sponsors, CROs, and reading centers configure the right ophthalmic image analysis platform to fit their unique needs. We created this checklist to provide some essential guidance for selecting a full-featured solution to speed up clinical trial read times, reduce costly errors and streamline workflows.

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Retinal Segmentation Capabilities

A key facet of effective ophthalmic image analysis software is comprehensive, accurate retinal segmentation. For the highest precision, an image analysis platform should provide:



Multi-Layer Retinal Segmentation

- As an established endpoint, accurate layer segmentation is critical. But look also for a tool that goes beyond basic two or three-layer segmentation and offers highly accurate multi-layer segmentation.



Editing Tools

- Since ocular pathologies are extremely complex, the best analysis software will provide intuitive editing tools or wizards to ensure a fast and accurate “read” of each retinal feature.



Compelling Biomarkers

- The need for compelling biomarkers requires more advanced analysis techniques. Measurements such as fluid quantification, ellipsoid zone area, and outer retinal atrophy are must-haves.

Image Analysis Compatibility Across Devices

Another critical step in evaluating ophthalmic image analysis platforms is to assess the compatibility of the software with all the devices and image formats to be used now and in the future.

An analysis platform should be versatile for present and future needs and include:



Compatibility Across Devices and Platforms

- Choosing a vendor-agnostic tool offers the key advantage of processing data from all major OCT scanners in any format – for much quicker read times.



Quick Onboarding

- The best image analysis software offers powerful functionality without requiring extensive additional training to learn how to access and use it.



Intuitive Editing

- The process of editing is time-intensive, but with easy-to-use measurement and editing tools, this task can be greatly accelerated.



Security & Compliance

- Compatibility should not come at the expense of data confidentiality and integrity. Insist upon a platform that is SOC 2 certified with electronic records compliance (21 CFR Part 11) for peace of mind.

Automation of Measurements & Workflow

A final component of a comprehensive image analysis platform is the ability to streamline processes and workflows to ensure analysis is completed on time and within budget.

Look for a solution that offers:



Intuitive Custom Measurements

- OEM OCT software offers very little flexibility and makes it difficult or even impossible to edit or customize measurements. At best this slows down the reading - at worst it prevents a read entirely and reduces the subject yield. Choose an automated image analysis tool that incorporates an array of fast, flexible tools as a part of the workflow. Such tools can speed read times by 10x compared to OEM software.



Validated AI-Backed Algorithms

- Analysis can be further automated and accelerated with proven AI-backed measurements that leverage massive computational power to reduce human touchpoints and discrepancies for more accurate readings.



Accessible Anytime, From Anywhere

- Image analysis platforms should leverage the benefits of the cloud – offering affordable, secure storage, accessible from any device at any time. As an added bonus, cloud-based platforms simplify and facilitate post-hoc analyses.



Value

- All of the above capabilities and functionality must be balanced with price to ensure value for the short and long term. Verify that license fees will cover the users and needs for current clinical trials as well as for future analysis.

Ready to Explore What the Right Ophthalmic Image Analysis Platform Can Do?

Improve speed and accuracy, generate actionable results, and drive better patient outcomes.

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About Voxeleron

Voxeleron is the innovative leader in AI-backed ophthalmic image analysis, delivering a powerful platform that interprets millions of measurements across multiple formats to translate clinical research data into valid, actionable results. By optimizing all aspects of clinical eye research, from initial trial recruitment through post-hoc analysis, Voxeleron is bringing comprehensive eye health into focus and helping eradicate diseases affecting tens of millions. Learn more at voxeleron.com