# Scleral Lens Prescribing Trends – 12 Month Lab Data

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## Introduction

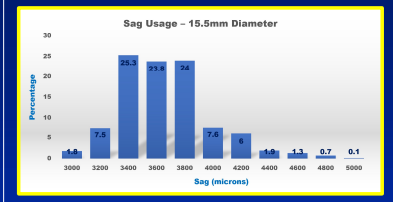
The modern scleral lens has evolved to be the principle specialty contact lens option for a wide range of conditions.[1] Although the fitting method and procedures are well understood for an individual patient, how well do we know the macro picture and how commonly we should be employing specific parameters? For instance, what sag height, diameter and haptic toricity should be prescribed for most patients? This study set out to understand scleral prescribing trends across a broad cross section of practices and patients.

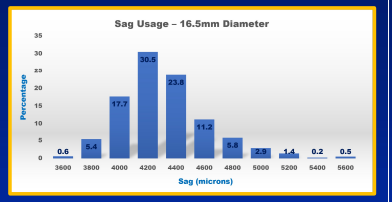
## Methods

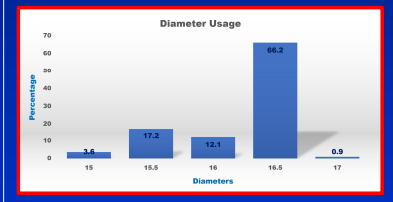
This retrospective study compiled and assessed the Ampleye scleral lens orders placed between January 1, 2020 and December 31, 2020 (Art Optical, Grand Rapids, MI). Although the number of patients and units remains confidential, this study can be assumed to provide perspective on the prescribing habits of hundreds of practitioners on thousands of patients across the USA.

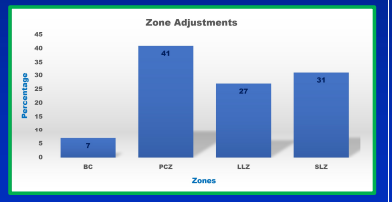
The following parameter data was collected through the study period and is presented on the six graphs to the right:

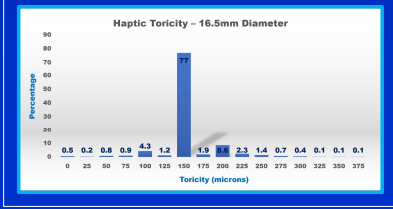
- Sagittal (Sag) Usage: 15.5mm diameter - range and percentage
- Sagittal (Sag) Usage: 16.5mm diameter - range and percentage
- Diameter Usage - range and percentage
- Zone Adjustments - percentage
- Haptic Toricity - range and percentage
- Front Toric Prescribing - percentage

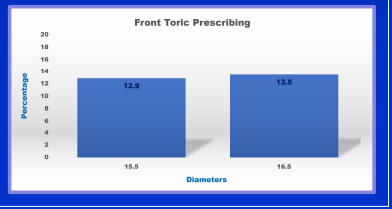



## Discussion

Although the distribution of eye depths in the population is broad, >72% of patients fit were within a 400 micron sagittal height range, while >88% fit within 800 microns of depth. Relative to lens diameter, this study found practitioners favored a ≥16mm diameter 79.2% of the time. In terms of zone modifications, base curve was the least modified (7%) while the outer 3 sections of the lens were customized in 27-41% of orders depending on the specific zone. The standard toric haptic of 150 microns was employed in 77% of the orders with 93% of fits between 100-200 microns of landing toricity. Finally, front toric lenses were required in approximately 13% of lenses.

A limitation of this study is it did not seek to determine the ideal scleral parameters for most patients. However, it does provide insight on the more commonly employed specifications, and therefore, what might be best tolerated in the majority of fits.

## Conclusions

These findings suggest that a high percentage of patients can be fit within a narrow range of sagittal depths, diameters and haptic toricity, with spherical optics satisfying most patients. However, a significant degree of customization is required for the various zone parameters to satisfy the needs of the individual patient.

## References

1. van der Worp, E., A Guide to Scleral Lens Fitting (2 ed.), 2, 2015, https://commons.pacificu.edu/