

## 27-Gauge Vitrectomy

### *Smaller Incisions... Faster Recovery*

23 and 25 gauge trans-conjunctival micro-incisional vitrectomy surgery (MIVS) has been widely accepted by retinal surgeons worldwide. The race for miniaturizing the vitrectomy instruments has reached a new level with the introduction of 27 gauge vitrectomy sets. 27 gauge systems have pushed forward the advantages of minimally-invasive instruments further by allowing faster wound healing, earlier visual recovery, decreased operative time and elimination of vitrectomy induced astigmatism. Highly miniaturized 27-gauge instruments decrease the surgically-induced trauma and postoperative inflammation leading to significant improvement in patient's comfort level. The most striking advantage of the 27 gauge vitrectomy over 25 gauge surgery is the better self-sealing of the sclerotomy wounds which in turn decreases the rate wound leaks, conjunctival swelling, post-operative hypotony and choroidal effusion.

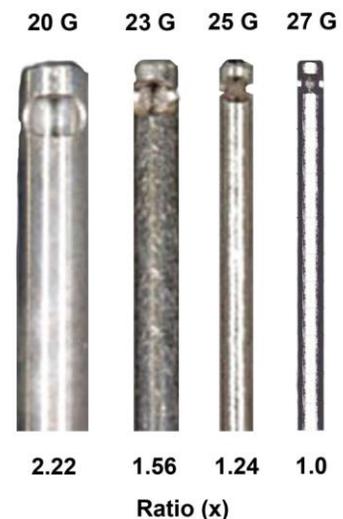
Currently, there are two commercially available 27 gauge vitrectomy sets from Dutch Ophthalmic (DORC, Zuidland, Netherlands) and

Synergetics, Inc. (St. Charles, MO). Alcon is in the process of developing 27 gauge vitrectomy sets as well. At *Kentucky Lions Eye Center* we had the privilege of testing both DORC and Synergetics 27 gauge vitrectomy systems a year before they become available in the US. Both systems can be used with a vented gas forced infusion (VGFI) system such as Alcon's Accurus machine. Our initial cohort consisted of 4 eyes with macular pucker, 3 eyes with non-resolving vitreous hemorrhage, 1 eye with macular hole and 1 eye with visually significant asteroid hyalosis. We used a dual 27-gauge chandelier illumination source to enhance the panoramic viewing through the AVI lens system. We accomplished all basic vitrectomy procedures such as core vitrectomy, posterior hyaloid removal and membrane peeling without any difficulty. No major perioperative complication was noticed and patient's recovery was surprisingly fast. You may see the surgical videos at <http://louisvilleeyedocs.com/surgicalVideos.html>

We believe that 27-gauge vitrectomy is another step towards achieving anatomic success, early visual rehabilitation and patient comfort. The list of vitreoretinal pathologies that can

be addressed with 27 gauge vitrectomy has been increasing along with the list of 27 gauge instruments. Currently, most of the tractional retinal detachments due to proliferative diabetic retinopathy can be treated with 27 gauge vitrectomy. For this reason, we have been offering our patients 27 gauge vitrectomy for more than a year. Please, consider this minimally invasive vitrectomy for a fast recovery and a better surgery experience for your patients.

by: *Tongalp H. Tezel, M.D*  
Associate Professor, Kentucky Lions Endowed Chair



*To schedule an appointment at the Kentucky Lions Eye Center, please call 502-852-5466.*

### Providing the Highest Level of Care for your Patients

Eye Specialists of Louisville/University of Louisville Ophthalmology has been a center of excellence for clinical eye care, treating a broad range of eye disorders from pediatric eye diseases to age-related macular degeneration. As the largest multi-specialty team of ophthalmologists in Louisville, we are at the forefront of leading-edge treatments and research in subspecialties including Retina, Uveitis, Glaucoma, Oculoplastics, Pediatrics, Cornea, Neuro-Ophthalmology and Low Vision.

### Office Locations:

**Kentucky Lions Eye Center**  
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