Neoretina is pleased to introduce Digitally Assisted Vitrectomy Surgery (DAVS) to our patients, providing access to world class technology for Retina, Vitreous and Macular Surgeries in an affordable manner as per our vision and mission statement. We are happy to announce that we are the first in the city of Hyderabad and state of Telangana to acquire the latest Ngenuity 1.5 version 3D visualization system and have been using this technology to treat all our patients since April 2025.

What is Ngenuity or 3D Visualization System?

The Ngenuity 3D visualization System is a breakthrough technology in eye surgery. Instead of viewing through the eyepiece of a traditional microscope, surgeons operate heads up while viewing the patient's eye on a 3D high-definition digital screen. This technology offers 3 dimensional view of the operating field on an OLED monitor proving better stereopsis and depth of field, enhanced field of view, better resolution and improved ergonomics.

Ngenuity Benefits

The enhanced OLED surgical display provides:

- 4K OLED resolution (3840×2160p)
- 55-inch screen size
- 60 fps for each eye
- More immersive 3D viewing with better contrast, higher brightness and a wider color range.
- The technology allows the entire operating room team to see what the surgeon sees for better surgical team coordination.

Surgeons can:

- See deeper with up to 5x extended depth of field
- See more with up to 48% increased magnification
- See clearer with up to 42% increased depth of resolution

Digital Detection

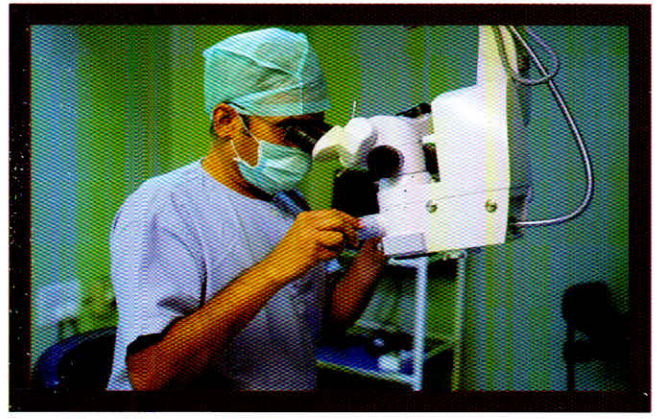
- Digital image processing provides the surgeon with the ability to operate under low lighting conditions for patient's safety: 10% illumination as compared to 35% in conventional microscopes without any decrease in quality.
- Customised color settings enable surgeons to use lesser concentrations of dyes like ICG and brilliant blue.
- With 3D visualization, filters can be used to enhance the visibility of certain tissues like vitreous and ILM, a great tool for better outcomes in macular surgery.
- The following enhancement modes allow vitrectomy, macular surgeries, microincision cataract surgery and microincision glaucoma surgery to be performed with superior precision:

01 MIGS Mode
02 Tissue Detail Mode (TDM)
03 Capsule Clarity Mode (CCM)
04 Blue Boost Mode (BBM)
05 Performance Green Mode (PFG)
06 ILM Enhanced

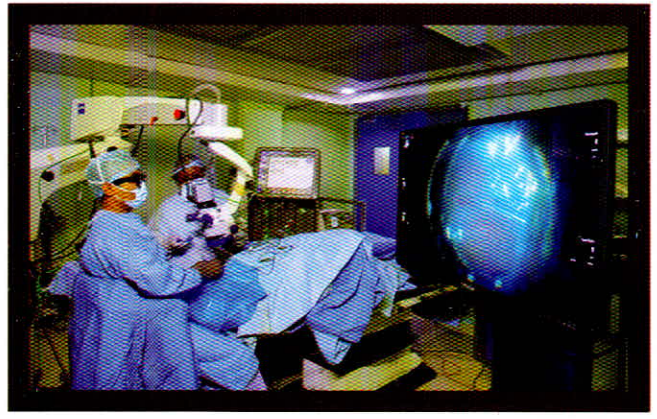
Unparalleled Benefits to the Patient

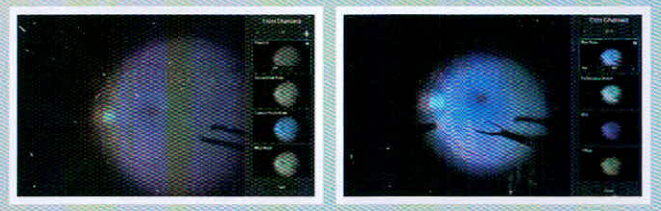
- More precise, more efficient and safer surgery for better visual outcomes.
- Electronic amplification provides enhanced brightness in surgical field without exposing the retina to more light.
- Less light exposure reduces retinal phototoxicity.
- Better patient safety.

Standard



3D Based





Intraoperative images showing the difference in performing macular surgery in the standard conventional microscope and blue boost mode on Ngenuity 1.5 3D visualization.

The Retina Team



Dr. Raja Rami Reddy P.
MD FRCS FASRS
Founder, Medical Director,
Chief Retina Surgeon



Dr. Abhilasha Baharani
DNB FRCS FICO
Uvea Specialist



Dr. K. Prabhu Nissi
MS FVRS
Vitreo-Retina Surgeon



Dr. P. Divya
MS FVRS
Vitreo-Retina Surgeon



Dr. K. Jyothi
DO FMR
Medical Retina Specialist

Neoretina Eyecare Institute, Hyderabad, is a leading Eye Hospital specialising in diseases of Retina, Vitreous, Macula and Uvea.

The Institute was founded and is led by Dr. Raja Rami Reddy P., a highly accomplished Vitreoretinal Surgeon with over 20 years in the field.

He is a fellow of the American Society of Retina Specialists (FASRS) and a recipient of the ASRS Senior Honor Award for his contributions to retinal surgery. In 2023, he was honoured with the Rhett Buckler Award for his innovative surgical work on macular holes with proliferative diabetic retinopathy.

Dr. Reddy continues to be a pioneer in retinal care, contributing to both academic and clinical advancements, while leading one of India's premier retina centers.

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NEORETINA®
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3D Visualization System

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