CORNEAT ESHUNT | GLAUCOMA SHUNT

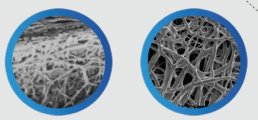
A revolutionary solution for those who suffer from glaucoma

CorNeat eShunt

The CorNeat eShunt (glaucoma shunt) is poised to revolutionize the treatment of glaucoma. It is designed to regulate the intraocular pressure and addresses the shortcomings of existing solutions. Using advanced materials, the CorNeat eShunt inlet, which is placed in the anterior chamber angle, mimics the trabecular meshwork's function in terms of flow resistance. The CorNeat eShunt outlet is uniquely positioned in the intraconal space, an area that does not scar and clog and can absorb the drained aqueous humor. The CorNeat eShunt tube, which is covered by a synthetic Extra Cellular Matrix (ECM) layer, seamlessly integrates with the ocular tissue as it traverses the subconjunctival space, significantly shortening the surgical procedure.

Features

INLET
(Regulating Pressure)
Provides deterministic IOP – Electrospun inlet mimics trabecular meshwork's adaptive pressure regulation as flow increases with pressure elevation



Trabecular mesh | Inlet microstructure

TUBE
(Ocular Integration)
Physiologically integrates with neighboring tissue – electrospun, biocompatible, non-degradable polymers mimicking human tissue

OUTLET
(Location)
Prolonged patency – Outlet uniquely positioned deep in the orbit where there is only fat and no scar tissue (fibroblasts)

CorNeat eShunt Advantages

Everlasting

- The outlet of the CorNeat eShunt is placed in the intraconal space, a space with minimal fibrotic potential
- Scarring is the major cause of failure of any surgical approach to glaucoma and until the arrival of the CorNeat eShunt no attempt has been made to drain the excess fluid to this deep orbital space

Bio-Integrating

- Covered with a synthetic, non-degradable, ECM-like material that stimulates cellular growth - integrating the tube into the subconjunctival space
- Eliminates the need for using a tissue patch
- Shortens the procedure and secures the device to the eye wall permanently

Ease of Implantation

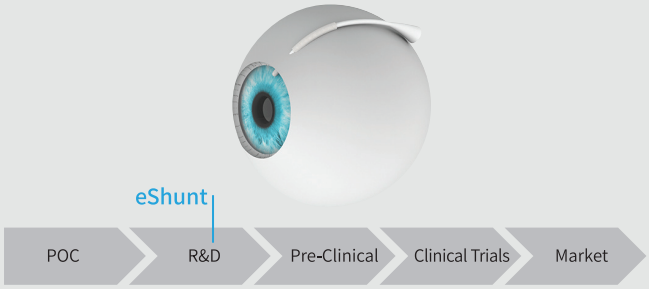
- Implantation procedure can be completed in under 15 minutes
- Does not require additional, processed, tissue
- Will probably not require an introducer or a dedicated tool

Physiological Approach

- Engineered to imitate our own, physiologic, drainage pathways
- Reacts to the changes in intraocular pressure and drains only the amount needed

Development Phase

The CorNeat eShunt has successfully passed initial bench tests and animal trials demonstrating seamless integration and the ability to reduce and regulate intraocular pressure. The R&D and pre-clinical phases are expected to take 12-15 months. CorNeat eShunt device marketing is pending regulatory approvals.



corneat VISION

Biomimetic Implants and Technology | www.corneat.com | info@corneat.com