This online patient advisory is intended to provide you with general information. It is not a substitute for advice from your ophthalmologist. You are encouraged to discuss the benefits and risks of treatment with your ophthalmologist. This is an abridged version of the RANZCO patient education pamphlet: “Surgical treatment of glaucoma - a guide for patients”. The complete pamphlet is available from your ophthalmologist.

Glaucoma is the name given to a group of eye diseases that damage the optic nerve that links the retina to the brain. Often, glaucoma is associated with too much pressure inside the eyeball. It is a leading cause of damage to vision or blindness in people over 40 but can affect people of any age. If glaucoma is detected early, treatment can prevent or reduce vision loss in most patients.

Types of glaucoma
The aqueous humour is a fluid produced by the ciliary body. It drains out of the eye through a sieve-like structure called the trabecular meshwork. Glaucoma occurs when the rate of aqueous humour pumped into the eye by the ciliary body is greater than the rate of aqueous humour flowing out through the trabecular meshwork. Types of glaucoma include:

- Open-angle glaucoma – aqueous humour cannot drain properly; develops slowly
- Angle-closure glaucoma – flow of aqueous humour is blocked; progresses rapidly within 24 hours
- Normal pressure glaucoma – occurs despite average intraocular pressure
- Childhood glaucoma – rare and often hereditary
- Congenital glaucoma – present at birth
- Secondary glaucoma – due to other conditions of the eye.

Your medical history
Your ophthalmologist needs to know your medical history to plan the best treatment for you. Tell your ophthalmologist about any health problems you have. Some may interfere with treatment, surgery, anaesthesia, recovery and ongoing medical treatment following recovery.

A decision about surgery
As you make the decision whether to have surgery, make sure that you understand the risks, benefits and limitations of surgery. If you do not have surgery, your symptoms and condition may continue to worsen.

Only you can decide if surgery is right for you. If you have any questions, ask your ophthalmologist.

Anaesthesia
Glucoma surgery may be performed under local or general anaesthesia.

Treatment options
Treatement with eye drops or tablets is usually tried before surgery, unless surgery is urgent. Various surgical procedures are available.

- Laser surgery techniques include, among others:
  - Selective laser trabeculoplasty or SLT – small areas of the trabecular meshwork are treated to improve drainage.
  - Laser iridotomy – a small hole made in the iris allows aqueous humour to flow more freely; for angle-closure glaucoma.
  - Cyclophotocoagulation – parts of the ciliary body are destroyed so that less aqueous humour is produced.

The most common incisional surgery is called a filtering procedure. In a filtering procedure called a trabeculectomy, the ophthalmologist creates a channel through the wall of the eyeball to drain aqueous fluid.

Cyclocryosurgery uses liquid nitrogen to reduce the ability of the ciliary body to produce fluid.

Also, tiny implants (called iStent and Xen, among others) can help to drain aqueous fluid from inside the eye and lower eye pressure. A range of such minimally invasive glaucoma surgery (MIGS) devices have been developed in recent years.

Possible risks and complications
Glaucoma surgery is safe and effective, but does have risks of complications. These are more fully outlined in the complete RANZCO patient education pamphlet and should be discussed with your ophthalmologist.