Endolaser Cyclophotocoagulation

Glaucoma is a disease in which fluid builds within the eye, causing irreversible damage to the retina and optic nerve. Glaucoma is one of the most common causes of blindness in dogs and cats and is painful when not controlled. Surgical treatments for glaucoma include attempts to increase aqueous humor outflow or decrease aqueous humor production. In order to decrease production, destruction of the structure of the eye that produces fluid, called the ciliary body, is necessary (termed cyclophotocoagulation). The mainstay of cyclophotocoagulation is the use of a diode laser. Historically, the laser was applied through the sclera (transscleral cyclophotocoagulation, or TSCPC), targeting the ciliary body without direct visualization. There is now a newer technique offered by many veterinary ophthalmologists using an endoscopic tool for laser application (termed endolaser cyclophotocoagulation, or ECP). The benefits of ECP include the direct visualization of the ciliary body, eliminating destruction of surrounding tissues with the use of minimal amount of laser energy. The amount of laser energy applied and the amount of cyclophotocoagulation are therefore calibrated to fit each patient's needs. Endolaser is often utilized in combination with lens removal to allow for better access to the ciliary body and to eliminate the chances of postoperative cataract formation. Patients are generally only considered candidates for endolaser if they are sighted (unless vision is compromised from a cataract), are currently being medically treated for glaucoma yet their intraocular pressure remains elevated, or are considered at high risk for developing glaucoma and are undergoing cataract or other intraocular surgery. A peer-reviewed retrospective veterinary study is currently under review for publication, but at the moment there are no published results in regards to this procedure. Abstracts1, 2 and anecdotal reports indicate success with this procedure for variable amounts of time, but there remains no cure for glaucoma in animals. Complications include, but are not limited to, anesthesia, persistent uveitis (inflammation), retinal detachment, hemorrhage, and recurrence of glaucoma despite having undergone the procedure. If your veterinary ophthalmologist is recommending endolaser, please speak to them about any risks specific to your pet and what the success rate is estimated to be.