

# Endoscopic CycloPhotocoagulation

The future of laser  
microendoscopy has  
a 20 year history.

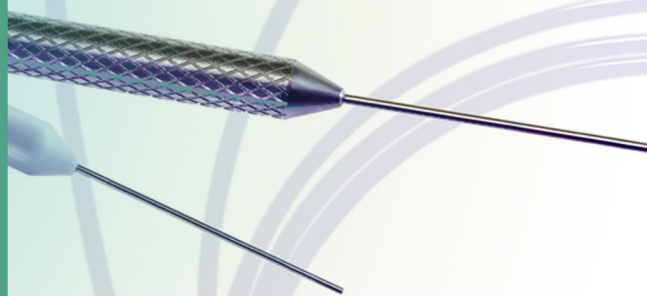


*...making a difference!*



ECP transcends prior technical limitations and offers a bright, new solution for the treatment of glaucoma.

# Empowerment



Endoscopic CycloPhotocoagulation (ECP) is a surgical approach to glaucoma management that employs light, endoscopy and visualized laser application. High-res video imaging is delivered through a 20Ga microendoscope. The result is the selective ablation of pigmented, ciliary epithelium tissue, with minimal impact to surrounding, non-targeted anatomy.

Remarkably, all forms of glaucoma can be effectively treated with this technology. With continuous, direct imaging of the ciliary processes, controlled laser energy is delivered; IOP is lowered and aqueous production is controlled with superior long-term results.

The comprehensive armamentarium of endoscopes, span the need from simple illumination, to laser-imaging fibers - for anterior ECP applications as well as posterior PRP delivery.

This powerful technology has been embraced by ophthalmologists across specialities.

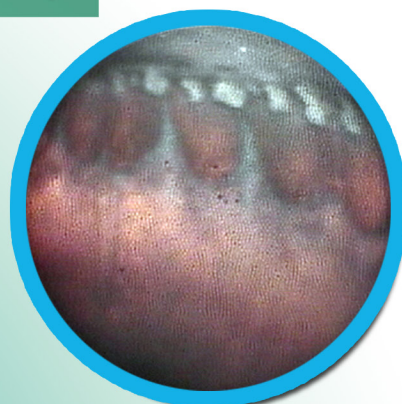
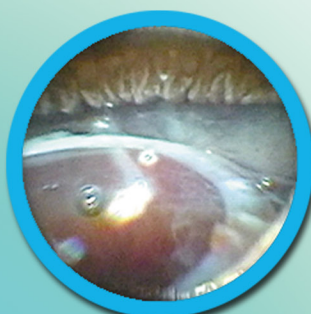
**Cataract**

**Glaucoma**

**Retina**

**Pediatric**

The compact E2 system contains a video camera, xenon light source, and a semi-conductor diode laser tuned to 810nm wavelength. This power console features adjustable laser output, pulse width, light and aiming beam intensity.



*"ECP's greatest worth is its ability to reduce or eliminate glaucoma medications and thereby improve compliance."*

Richard J Mackool, MD  
Cataract Surgeon

*"...you can use the endoscope to visualize the angle directly and treat it."*

Stanley J Berke, MD, FACS  
Glaucoma Specialist

*"The advantage of being able to see each individual ciliary process, as they are treated, is tremendous."*

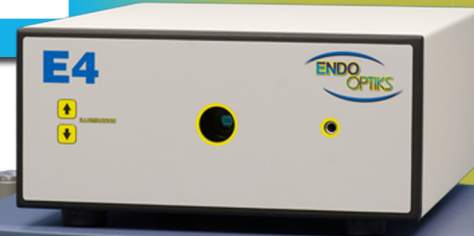
David A Plager, MD  
Pediatric Ophthalmologist

*"ECP employs a triple function micro endoscope to provide heretofore impossible intraocular visualization."*

Martin Uram, MD, MPH  
Retina Specialist



The E4 Endoscopy Sysytem can be integrated with an external laser for triple-function capability.



140° panoramic wide field illumination delivers maximum intraocular visibility with a 175Watt Xenon light source.

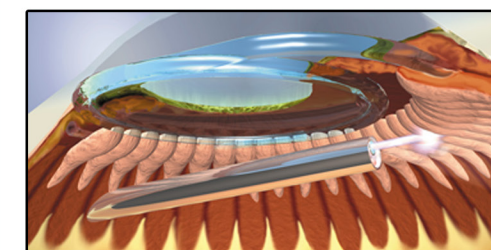
High-resolution allows clear imaging of tissues from the anterior or posterior segment.

Precise, 810nm, 2.0Watt diode laser energy, in pulsed or continuous mode, is delivered to the targeted intraocular tissues.

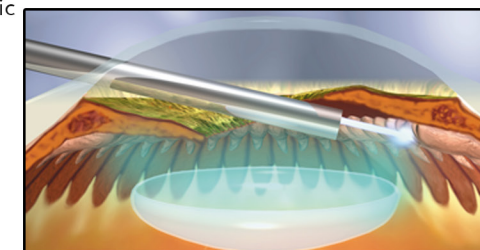
# Control & Versatility

In a combined phacoemulsification/ECP procedure, an existing clear corneal or limbal incision is sufficient to accomodate the 20Ga endoprobe. In a standalone ECP case, the ciliary processes may be approached from a limbal or pars plana incision. From a single entry, anatomy is clearly identified, and from 180° to 200° of ciliary processes can effectively be reached; a secondary incision will accomodate a full 270° to 360° treatment.

Direct, continuously-monitored visualization, with aiming beam precision, produces repeatable, titratable shrinkage of targeted tissues. Most impressive beyond the incremental benefits of the ECP procedure, endoscopy allows for the accurate assessment of: zonular dehescence, capsular bag integrity, residual cortical material, intended haptic placement, and anterior hemorrhage. Clearly, this capability should only enhance clinical outcomes.



Pars plana approach may be employed, combined with vitreous surgery, for Pseudo-phakic or aphakic patients.



Clear corneal entry, throught the existing phaco wound, allows treatment of Phakic, Pseudo-phakic or Aphakic eyes. Laser delivery occurs either over or through the capsular bag.

*"Anyone who can do Phaco can do ECP in a heartbeat. You can learn to use the probe to "paint" the ciliary processes in a continuous motion. Combined with phaco, ECP takes an extra 2 to 5 minutes."*

RJ Mackool, MD

*"In our patients with controlled glaucoma and cataracts, combined ECP with IOL insertion is my treatment of choice."*

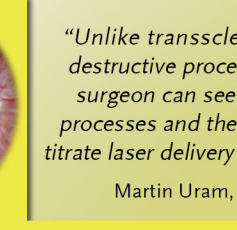
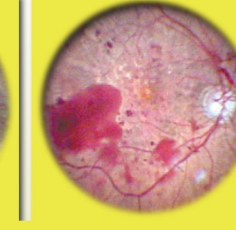
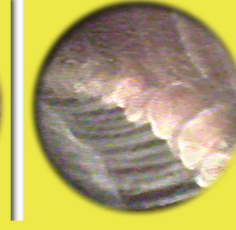
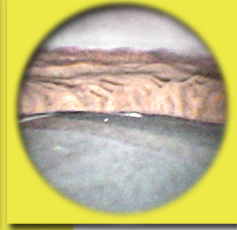
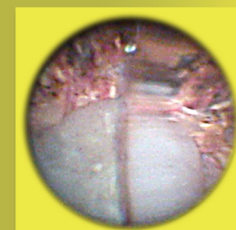
Stephen B Wiles, MD  
Cataract Surgeon

*"Combined with phaco, ECP takes an extra two minutes. The endoscope is also a great teaching tool... providing a virtual tour of the*

Alan B Aker, MD  
Cataract Surgeon

*"Unlike transscleral cyclo-destructive procedures, the surgeon can see the ciliary processes and therefore can titrate laser delivery properly."*

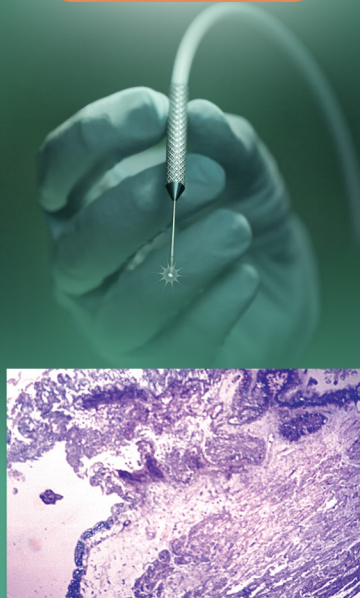
Martin Uram, MD, MPH



- Visible results are achieved from 180 - 360 as processes blanch and shrink.
- Continuous laser mode allows for rapid ablation in a "painting" technique.
- Proper IOL and lens haptic placement is easily confirmed.
- Diagnostic assessment via a wide field view providing a virtual tour of the eye.
- Posterior segment views provide clear imaging of the macula and optic nerve head.
- Endoscopic vitrectomy, PRP, lensectomy and various posterior segment applications.



# Measured Results



Histology showing selective ablation of the ciliary epithelium

(Clinical studies and scientific data are available upon request.)

Without the high failure rates associated with transscleral techniques, ECP is not reserved for end-stage glaucoma. Treatments have proven far superior in accurately isolating ciliary processes, discretely ablating ciliary epithelium, and achieving desired results - without missing, or over/under treating the target tissue.

Further, devastating complication rates are lowest following ECP, and postoperative patient management is facilitated relative to traditional glaucoma procedures.

When compared to all other surgical techniques for glaucoma management, ECP meets and exceeds the long-term goal for reduced IOP and topical medications. Even in studies that compared 'phaco alone' to 'phaco with ECP' the combined procedure showed no higher complication rates, while intended, long-term, positive results were significantly elevated.

Relative to traditional transscleral "cyclodestructive" approaches, intraocular ECP has repeatedly earned marked distinction.



*Without incidence of CME or major complications, ECP reduced IOP 38% further than Phaco surgery alone. In addition, 87% of these patients benefited from reduced medications, while more than 60% no longer needed any pharmaceutical management. You can't do phaco expecting that pressures will be lowered."*

SJ Berke, MD, FACS

*180° ablation resulted in a 15% decrease in IOP and 68% reduction in medications, without visual loss or major*

Berke, SJ., et al.  
J Glaucoma 2000; 9:1

	ECP mean f/u = 25 mo	CONTROL mean f/u = 44mo	Ps
Mean change in IOP (mmHg)	-3.3	-2.4	.48
Decreased Meds (%)	87	9	.01
Same (%)	13	73	.01
Increased Meds (%)	0	18	.001
No meds (%)	61	5	.01
CME (%)	0	0	
Major complications (%)	0	0	

	OAG	OAG with Failed Surgery	CACG	CACG with Failed Surgery	NVG	PED GL	Phaco & Uncontrolled Glaucoma Surgery	Phaco & Controlled Glaucoma Surgery
TRAB	90%	50%	50%	30%	NA	< 50%	70%	NA
TUBE	NA	50-70%	50-70%	50-70%	50-70%	< 50%	NA	NA
TSCPC	NA	NA	30-50%	30-50%	30-50%	< 50%	NA	NA
ECP	90%	90%	90%	90%	90%	> 50%	90%	+ 90%

	25 eyes, mean f/u 11 months
Mean Ablation	180°
Mean Decrease IOP	15%
Mean Reduction Meds	68%
Postop Visual Loss	0%
Major Complications	0

	Minor Complications	Devastating Complications	Visual Acuity Loss	Endophthalmitis	Delayed Failures	Operative Time (1-4)	Intensity of Post Op Care (1-4)
TRAB	10-50%	5-10%	5-10%	1%/yr	> 50%	3	4
TUBE	30-50%	30%	~10%	1%	~10-30%	4	3
TSCPC	> 50%	30%	> 40%	NA	~ 40%	2	2
ECP	3-8%	< 1%	< 1%	0%	0-5%	1	1

ECP proves more efficacious in reducing IOP, over 24 months, than trabeculectomy, tube implants, and transscleral treatments.

Relative to these same procedures, ECP produced the smallest percentage of minor complications, visual acuity loss, or devastating complications.

**ENDO  
OPTIKS**

39 Sycamore Ave  
Little Silver, NJ 07739 USA

www.endooptiks.com  
info@endooptiks.com

1 (800) 756-3636  
1 (732) 530-6762  
Fax: (732) 530-5344