Ultrasound glaucoma treatment
A non-invasive alternative
**UCP - Ultrasound Ciliary Plasty**

The UCP procedure, treatment of glaucoma utilizing ultrasound, is an innovative alternative to control intraocular pressure. **Fast and non-invasive**, it is performed using a **sterile, single-use** procedure pack composed of a therapy probe and a positioning cone. The latter are connected to the EyeOP1® control unit in order to program and monitor the treatment parameters.

**UCP is the only medical procedure that addresses all patients with uncontrolled glaucoma irrespective of their prior treatment history**

Simple, accurate and reproducible, the treatment is performed in just under three minutes, without incisions

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### The procedure pack

**The therapy probe** is composed of six piezoelectric transducers spread around the circumference. The **device comes in three sizes to account for differences in ocular anatomy** thereby enabling accurate targeting. The dose of ultrasound thus delivered **preserves adjacent tissues**.

**The design of the positioning cone allows for optimal centration and positioning on the eye.**

### The EyeOP1® control unit

**Compact, user-friendly** and very **simple to use**, the EyeOP1® module generates the ultrasound energy during the procedure. **The touch-screen user interface** enables the operator to **safely** parameter and monitor the treatment. The simple tree structure allows for **intuitive use**.

#### EYEOP-PACK - Single-use procedure pack

<table>
<thead>
<tr>
<th>THERAPY PROBE</th>
<th>POSITIONING CONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six piezoelectric transducers Sizes available: 11, 12 and 13 mm (Product SKU Nos.: ETC0911, ETC0912 and ETC0913)</td>
<td>Transparent and biocompatible PMMA Two suction points Target vacuum level: 225 mmHg (external)</td>
</tr>
</tbody>
</table>

#### EyeOP1® - Control unit

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Acoustic power</th>
<th>Compact control unit</th>
<th>Mains supply</th>
<th>Command pedal</th>
<th>Touch screen</th>
<th>Built-in thermal printer</th>
<th>Dimensions (cm)</th>
<th>Weight without/with transport case (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 MHz</td>
<td>3 watts</td>
<td>Vacuum and ultrasound generation functions</td>
<td>110 – 230 V, 50/60 Hz, 150 VA</td>
<td>Dual function: suction and firing</td>
<td>Intuitive user interface</td>
<td>Automatic print out of the treatment report. Additional prints on request</td>
<td>36 [L] x 32 [W] x 24 [H], portable</td>
<td>7/14</td>
</tr>
</tbody>
</table>

**Carefully read the instructions before using this product**

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Set up of the probe and cone

Schematic cross section view

Ultrasound focused into the ciliary body
Therapeutic Ultrasound

A transformation in glaucoma care

Gentle, safe, swift, effective
A new vision in glaucoma care

EYE TECH CARE is a dynamic medical device company that aims at transforming glaucoma care in an innovative way with the use of Therapeutic Ultrasound. The company is passionate in the belief that Therapeutic Ultrasound has far-reaching benefits to offer for both clinicians and patients.

The condition

GLAUCOMA affects 3% of the world’s population over the age of forty⁴. GLAUCOMA is the 2nd leading cause of blindness worldwide⁵.

11 million people worldwide will be blind due to glaucoma by 2020⁶. Due to its silent progression, up to 50% of affected people in developed countries and 90% in emerging countries are not aware they have glaucoma.⁶

The innovative solution

High-intensity focused ultrasound (HIFU) creates varying levels of focused energy. The technology is commonly used in numerous other medical specialties, including treatment of certain cancerous tissues and tumours.

EYE TECH CARE has adapted this technology to the field of ophthalmology and gone several steps further by developing specialised and unique miniaturised transducers that can deliver HIFU in the eye with high precision for glaucoma treatment.

HIFU waves emitted from a circular array of 6 miniaturized transducers at a frequency of 21 Mhz targeting less than 40% of the ciliary body.

Transforming patient care

UCP Ultrasound Cyclo Plasty

- Adaptable to a broad spectrum of patients, from moderate stage patients under maximal hypotensive medication when surgery is at risk, to more advanced-stage patients¹ ².
- Can be used in the care of open angle and angle closure glaucoma³.
- Allows patients a swift return to their functioning daily lives with light follow-up¹.

STAGES OF GLAUCOMA

MILD  MODERATE  ADVANCED

TREATMENT SPECTRUM OF UCP

2nd GLAUCOMA is the leading cause of blindness worldwide⁵.

11 million people worldwide will be blind due to glaucoma by 2020⁶.

Due to its silent progression, up to 50% of affected people in developed countries and 90% in emerging countries are not aware they have glaucoma.⁶
Main mechanisms of action

**UCP Ultrasound Cyclo Plasty**

1. Reshaping of the ciliary body structure, decreasing aqueous humour inflow\(^7\).

2. Local opening of the uveoscleral pathway increasing aqueous humour outflow\(^7,8\).

Contributing to a lowering of the intraocular pressure.

CILIARY BODY RESHAPING

**UNTREATED**

Secretion of aqueous humor via epithelial cells in the ciliary body\(^9\)

**TREATED**

Epithelial cells removed but blood-aqueous barrier preserved\(^9\)

LOCAL OPENING OF THE UVEOSCLERAL PATHWAY

**UNTREATED**

After UCP treatment an opening is observed between sclera and ciliary body\(^10\)

**TREATED**
The clinical results

UCP Ultrasound Cyclo Plasty

has been used worldwide to treat more than 4000 patients\(^1\). A metaanalysis, including 7 peer-reviewed clinical papers and 251 patients, highlights the good safety profile and efficacy\(^1\).

Efficacy results

**AVERAGE IOP REDUCTION AT 6 MONTHS\(^1\)**

\[\text{35\%} \]

**DISTRIBUTION OF IOP VARIATION\(^1\)**

**RESPONSE LEVELS AT 6 MONTHS\(^12\)**

- 27%: \(>40\%\)
- 51%: \(>30\%\)
- 64%: \(>20\%\)

Without additional hypotensive treatment - 110 patients after 1 UCP treatment - 8 patients lost to follow-up

Safety results

No phthisis bulbi, induced cataract, or persistent hypotony were recorded across 7 clinical studies\(^1\).
The difference

UCP Ultrasound Cyclo Plasty

- UCP utilises computer-assisted technology resulting in a controlled treatment with high reproducibility and quick learning curve.
- UCP is a non-invasive procedure, limiting risks of infection.
- UCP can address patients with uncontrolled glaucoma, irrespective of their prior treatment history.
- A second UCP treatment or other treatment options are still possible if needed after an initial UCP procedure.

The benefits

- High reproducibility
- Short learning curve
- Good tolerance profile
- Quick recovery time
- Eased postoperative care
References


3. Indications/User manual


5. www.who.int/bulletin/volumes/82/11

6. www.iapb.org/vision-2020


11. Internal database - updated Feb 17

12. Internal metaanalysis database - Dec 15