

# vitra810™ for SubCyclo®



SUBLIMINAL®  
CYCLOPHOTOCOAGULATION



Glaucoma Treatment



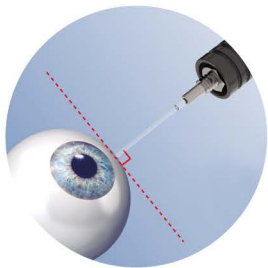
# vitra 810™ for SubCycl<sup>®</sup>

## ● SubLiminal Cyclophotocoagulation

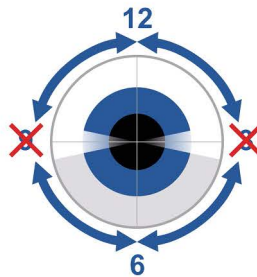
SubCyclo is a new nondestructive laser procedure for the treatment of glaucoma.

Based on the transcleral cyclophotocoagulation principle, it relies on the 810 nm SubLiminal stimulation of the ciliary body, producing the aqueous humour, and the uveoscleral pathway, secondary route of the aqueous outflow.

This procedure can be performed thanks to the combined use of the Quantel Medical Vitra 810 laser and the Quantel Medical SubCyclo probe.



*Tip of the probe in contact with the sclera and positioned over the identified treatment area. Probe perpendicular to the eyeball.*



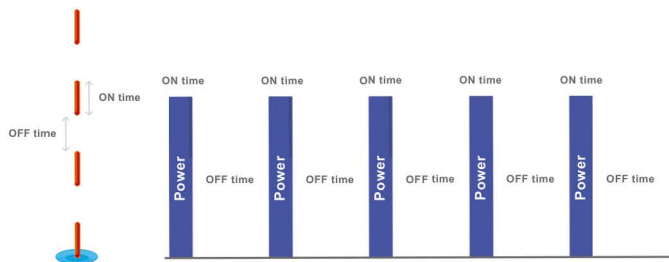
*Laser treatment is delivered by moving the tip of the probe in a continuous sliding motion:*

**- Superior quadrants:  
From 9:30 to 12:00 and from 12:00 to 2:30**

**- Inferior quadrants:  
From 3:30 to 6:00 and from 6:00 to 8:30**

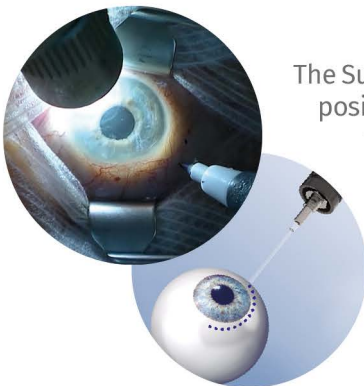
*The 3 and 9 o'clock meridians must be avoided.*

## ● Vitra 810 - SubLiminal Technology



Composed of a train of extremely short microsecond pulses of which the duration and the intervals are fully adjustable, this subthreshold treatment mode allows a precise management of the thermal effect on the targeted tissues and preserves the structures of the ciliary body.

## ● SubCyclo Laser Probe



The SubCyclo laser probe features a unique needle design allowing a perfect and accurate probe positioning during the treatment which can be enhanced thanks to the transillumination technique.<sup>(1)</sup>

The tip of the needle also features a glass sphere ensuring an easy and comfortable sweeping motion.

*Image courtesy of Dr. Pascale Hamard*



# Glaucoma Treatment

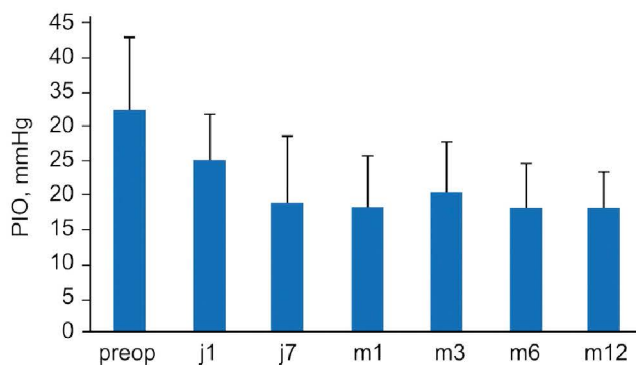
## ● SubCyclo Clinical Data

### A new treatment for advanced and end-stage glaucoma

Primary angle glaucoma, primary angle closure glaucoma, pseudo-exfoliation, neovascular glaucoma, glaucoma associated with steroid uses, uveitis and after keratoplasty surgery<sup>(2,3)</sup>

### An efficient treatment procedure leading to a reduction in the medication regimen<sup>(2,4)</sup>

Significant and persistent reduction in IOP at 12 months<sup>(2)</sup>



Mean number of medication<sup>(2)</sup>

- Before treatment:  $3.4 \pm 1.7$
- After treatment:  $2.9 \pm 1.6$

30% decrease from baseline and less than 21 mmHg

### SubCyclo preserves the structures of the ciliary body (no destructive effects) and improves the uveoscleral drainage

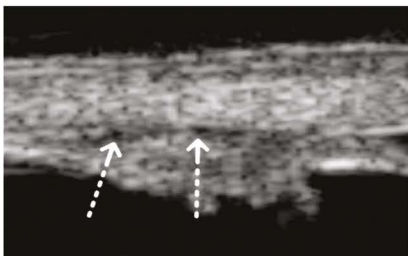


Image courtesy of Dr. Nassima Benhatchi

After treatment:

- No anatomical damage or visible lesion have been observed by UBM<sup>(2)</sup>
- UBM shows a thin space between sclera and ciliary body which may correspond to the presence of suprachoroidal fluid<sup>(2)</sup>

### SubCyclo avoids the side effects of the thermal cyclophotocoagulation procedure

No serious side effects such as intraocular inflammation after treatment<sup>(2)</sup>

No severe complications such as phthisis bulbi, persistent hypotony, or cystoid macular edema<sup>(2)</sup>

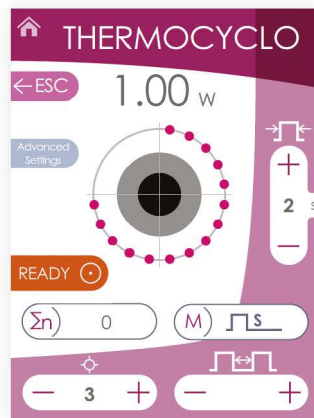
### A repeatable treatment<sup>(2,4)</sup>

### A safe treatment potentially allowing for earlier laser interventions

## ● Vitra 810: A versatile laser

### One single laser probe: Two glaucoma treatments

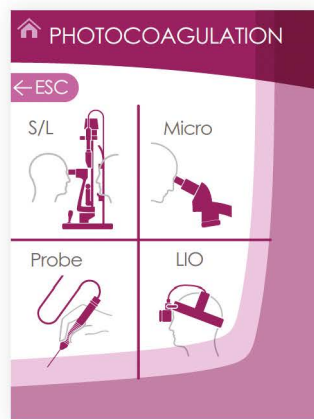
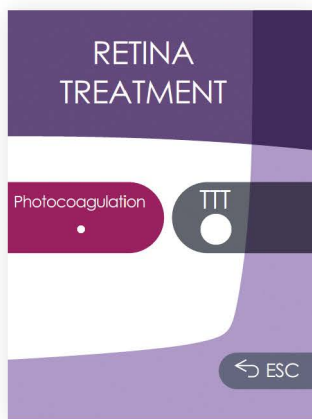
Quantel Medical SubCyclo laser probe is uniquely designed with a removable footplate allowing implementing both SubLiminal and thermal treatment procedures.



### One laser: Two clinical applications

Although designed for the SubCyclo laser therapy, Vitra 810 can also be used to perform all the usual 810 nm glaucoma and retina treatments.

When used in Retina treatment mode, Vitra 810 can be connected to various delivery systems, such as slit lamp, LIO, operating microscope and laser probes.





vitra810

Quantel  
medical

SUBCYCLO

2.00 W

timer

40 s

40 s (reset)

duty cycle

31,3%

READY

STOP

# vitra 810™ for SubCyclo®

## TECHNICAL SPECIFICATIONS

### VITRA 810 nm

Laser Source:	Solid State Technology
Wavelength:	810 nm
Power at tissue up to:	3W
Pulse duration:	0.01 s to continuous
Aiming beam:	635 - 650 nm
Repeat interval:	0.1 – 0.2 – 0.3 – 0.5 – 0.7 s
Emission modes:	Single, repeat, continuous, painting SubLiminal Mode (duty cycle from 5% to 35%)
Size:	18 (H) x 19.5 (W) x 30 (D) cm 7.1" (H) x 7.7"(W) x 11.8"(D)
Weight:	5.6 kg – 12.3 lbs
Cooling:	by Peltier effect
Power requirements:	100 to 240 VAC, 250 VA, 50/60 Hz

### DELIVERY SYSTEMS

#### Slit lamp adapters

Slit lamp compatibility: Quantel Medical slit lamp, Haag Streit 900 BM & BQ and clones Zeiss 30SL, Zeiss 120SL, Zeiss 130SL & CSO 980

Spot size: 100 µ to 1000 µm

#### Laser indirect ophthalmoscope

Keeler Vantage Plus (external laser adaptor)

#### Laser probes

Straight 20, 23, 25 G  
Curved 20 G  
Flexible curved 23, 25 G  
Illuminated flexible curved 23, 25 G  
Steerable 23, 25 G  
SubCyclo probe

#### OR microscope adapters

Zeiss type  
Leica type

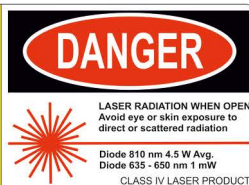
### BIBLIOGRAPHY

- 1- Agrawal P, Martin KR. Ciliary body position variability in glaucoma patients assessed by scleral transillumination. Eye. 2008;22:1499-1503.
- 2- Benhatchi N, Bensmail D, Lachkar Y. Benefits of SubCyclo laser therapy guided by high frequency ultrasound biomicroscopy in patients with refractory glaucoma. J Glaucoma 2019 Jun;28(6):535-539.
- 3- Keilani C, Benhatchi N, Bensmail D, Abitbol O, Amara A, Bluwol E, Graber M, Lachkar Y. Comparative effectiveness and tolerance of subliminal subthreshold transscleral cyclophotocoagulation with a duty factor of 25% versus 31.3% for advanced glaucoma. J Glaucoma. 2020 Feb;29(2):97-103.
- 4- Lutic I, Dragne C, Filip M, Filip A, Nicolae M, Moisescu R, Ungureanu I, Triantafyllidis G, Antonescu C. Subcyclo laser procedure results in patients with glaucoma. Rom J Ophthalmol. 2018 Oct-Dec;62(4):296-299.



© 2020. Quantel Medical. Vitra 810, SubLiminal® and SubCyclo® are trademarks of Quantel Medical. All rights reserved.

[www.quantel-medical.com](http://www.quantel-medical.com)



**Headquarters**  
Quantel Medical  
Rue du Bois Joli - CS40015  
63808 Cournon d'Auvergne – FRANCE  
Tel: +33 (0)4 73 745 745  
Email: [contact@quantelmedical.fr](mailto:contact@quantelmedical.fr)



ISO 9001 : 2015 – ISO 13485 : 2016