

# FLUOPTICS®

European leader in fluorescence imaging

[www.fluoptics.com](http://www.fluoptics.com)



The ultimate  
camera for  
thyroid and  
parathyroid  
surgery

# FLUOBELM LX®



# The most powerful parathyroid imaging solution

FLUOPTICS® is the world leader in fluorescence imaging for thyroid surgery. Our solutions combine autofluorescence and fluorescence perfusion imaging to provide surgeons with unprecedented understanding of parathyroid glands location and perfusion. Surgeons are guided with greater precision, efficiency and safety.

**FLUOBEAM® LX is an imaging device exclusively dedicated to thyroid and parathyroid surgery, offering surgeons optimal comfort during use throughout the procedure.**

Its ease of use and ability to analyze images make it a major asset for surgeons.

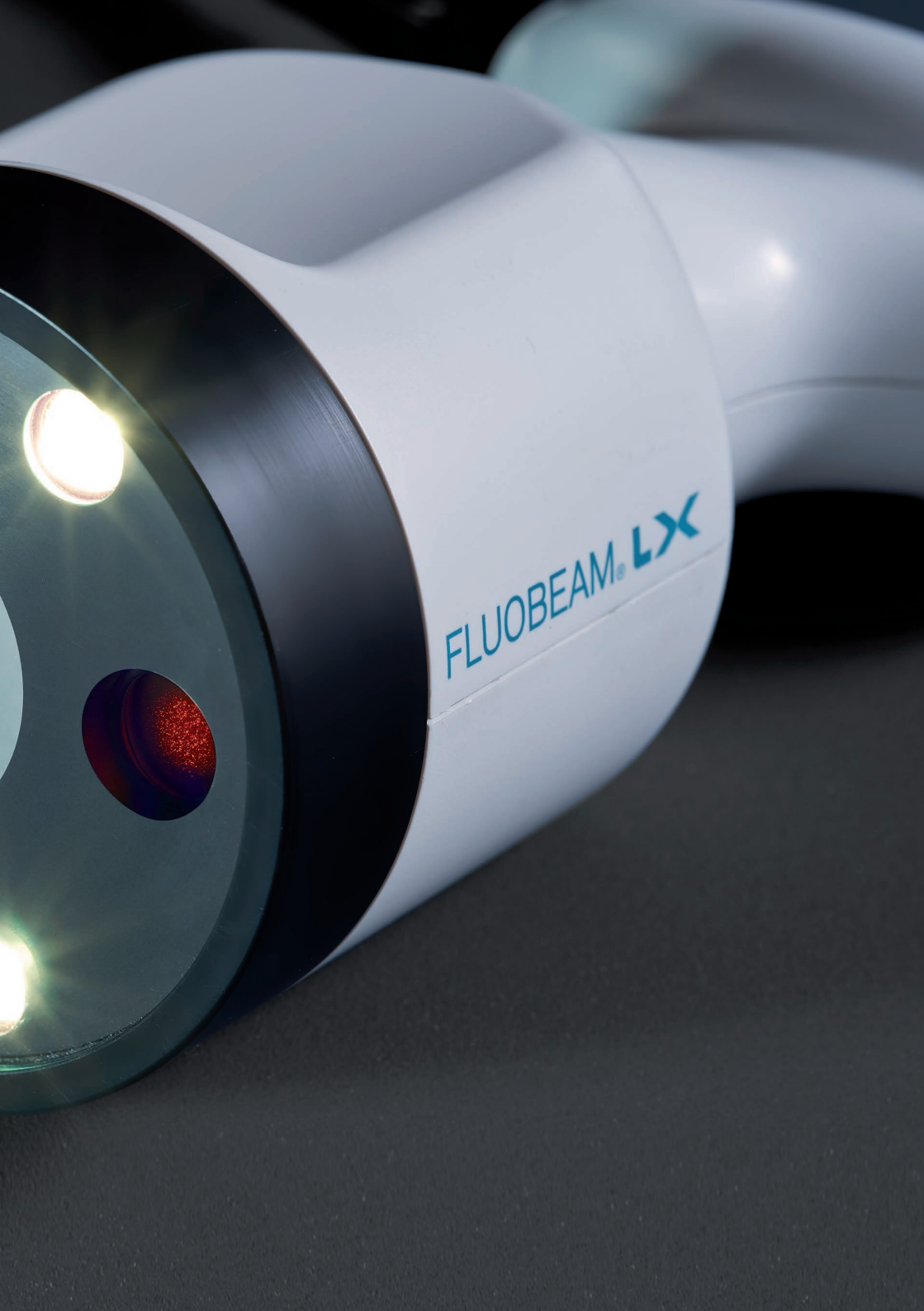
**FLUOBEAM® LX is the first imaging system FDA cleared and CE marked** for autofluorescence of parathyroid glands during surgery.





You will be sensitive to  
its sensitivity

**Highly sensitive**, FLUOBEAM® LX allows to  
detect parathyroid glands by autofluorescence  
with an optimized **real-time display**,  
**a high depth of field and a compatibility with  
ambient operating room lights.**



FLUOBREAM LX





# Joystick control: be the master of the game

Designed to be easily handheld and manipulated upon the surgical field, FLUOBEAM® LX offers an optimized ergonomics **with a joystick that simplifies the navigation and the selection of the software functionalities, directly by the surgeon.**



**Eren Berber, MD**

Associate Professor of Surgery, Director of Robotic Endocrine Surgery,

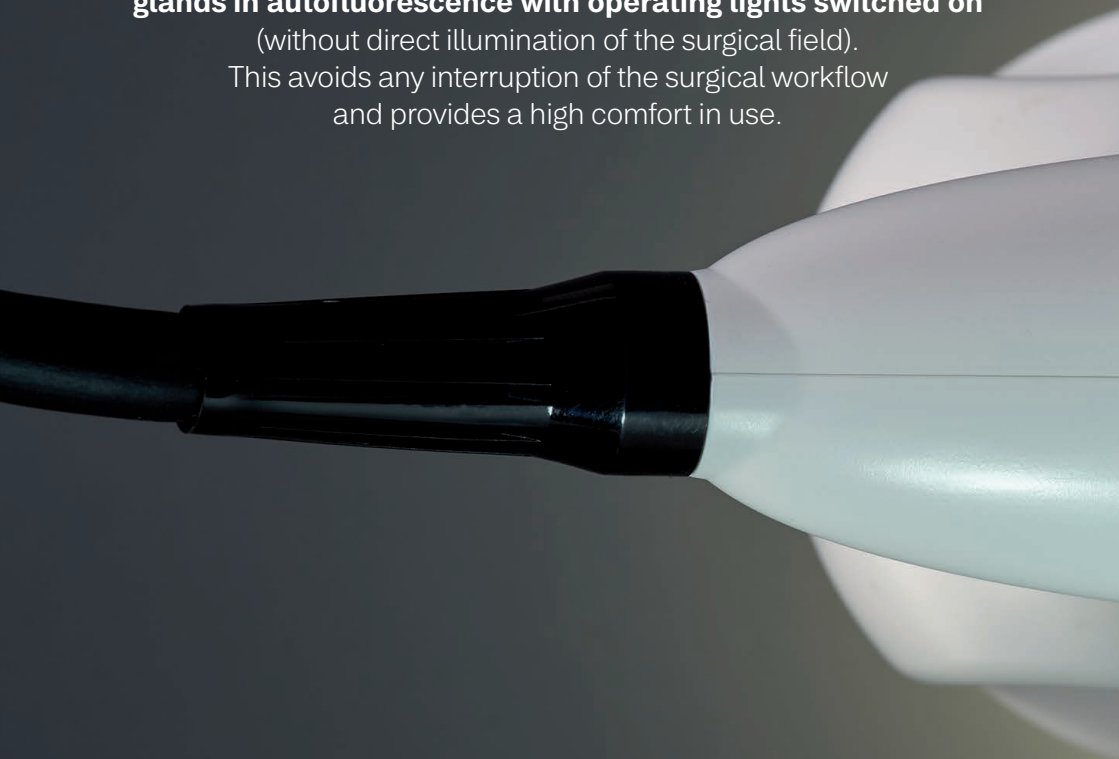
Co-director of Liver Tumor Ablation Program

"Identification of parathyroid glands is important to minimize hypocalcemia in thyroid surgery and to facilitate the parathyroidectomy procedures. Similar to using the neuromonitoring to identify the recurrent laryngeal nerve, I believe there is a value in using this technology in my cases."

# Step into the light

With the camera's significantly reduced sensitivity to ambient light, FLUOBEAM® LX allows **real-time visualization of parathyroid glands in autofluorescence with operating lights switched on** (without direct illumination of the surgical field).

This avoids any interruption of the surgical workflow and provides a high comfort in use.







**Dr Fares Benmiloud**

General Surgeon, European Hospital, Marseille, France

**"Near-infrared use during total thyroidectomy significantly reduced postoperative hypocalcemia, improved parathyroid identification and reduced their autotransplantation rate."**



FLUOPTICS®



FLUOPTICS





## Unrivaled images

With a high frame rate for **real-time display (25 frames/s)** in autofluorescence and a **high depth of field (> 5cm)**, with FLUOSOFT™ LX imaging software, FLUOBEAM® LX allows surgeons to work in optimized conditions with an easy interpretation of images and manipulation of the device.




**Dr Fernando Dip**

Maxillofacial surgery, otolaryngologists, University of Buenos Aires,  
Argentina and Cleveland Clinic, Florida, USA

**"NIR fluorescence imaging significantly increases the number of  
parathyroid glands identified during thyroid surgery."**







Parathyroid  
autofluorescence  
imaging,  
a breakthrough in  
thyroid surgery

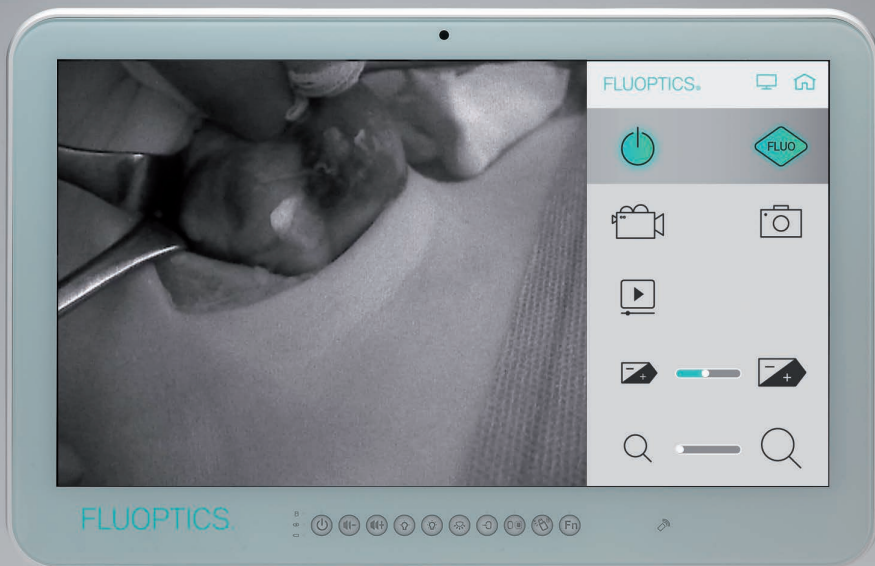
# Intraoperative fluorescence imaging, a precise and efficient method

**Parathyroid glands identification can be challenging even for skilled surgeons** due to their tiny size (a few mm) and that they are often buried in fat tissue or ectopic (located in atypical areas).

The unexpected excision of healthy parathyroid glands is a current complication of thyroidectomies. This can lead to hypoparathyroidism, most of the time transient, and might come with disruptions of calcium metabolism and notably hypocalcemia. **It is therefore critical to properly identify parathyroid glands during surgery.**

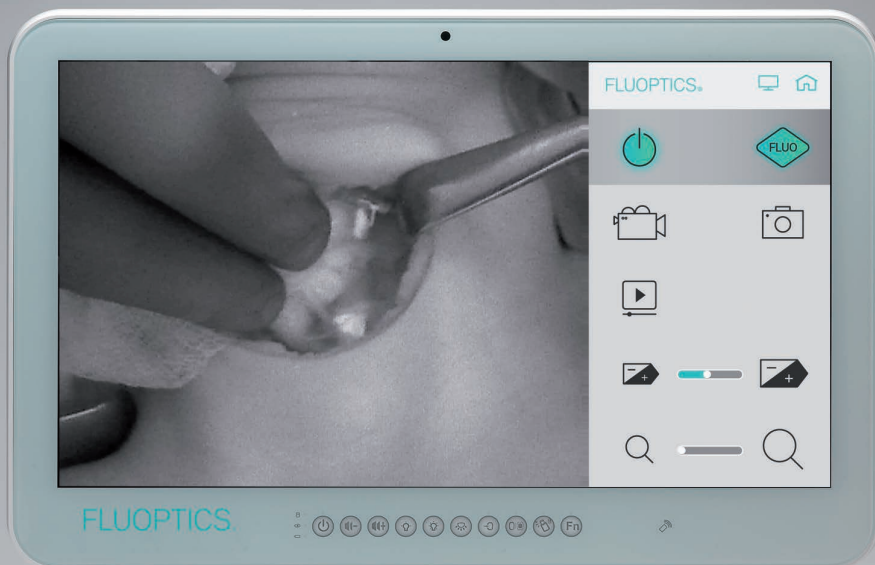






Parathyroid gland identification by autofluorescence

Parathyroid glands identification by autofluorescence



## FLUOBEAM® LX IN ACTION

# Parathyroid glands identification

Parathyroid glands naturally emit fluorescence in the near Infrared without any dye injection. This is called autofluorescence. FLUOBEAM® LX helps the surgeon to identify in real-time parathyroid glands and to preserve them during surgery.

FLUOBEAM® LX also helps surgeons to visualize parathyroid adenoma by autofluorescence. This detection guides the surgeon and makes resection easier.



**Sam Van Slycke, MD**

Endocrine Surgeon, OLV Clinic Aalst, Belgium.

**"Near infrared (autofluorescence) imaging in endocrine surgery is a helpful tool in confirming and visualization of parathyroid glands. It is an excellent teaching instrument for less experienced surgeons. In combination with ICG fluorescence it can change your intra-operative decision making!"**

## FLUOBEAM® LX IN ACTION

# Identification of vessels that vascularize parathyroid glands

By easily combining autofluorescence and indocyanine green angiography during the procedure, FLUOBEAM® LX allows a clear identification of vessels that vascularize parathyroid glands and their preservation during thyroid dissection.

The global information provided by FLUOBEAM® LX (localization and vascularization of parathyroid glands) should help to decrease significantly postoperative complications linked to damaged parathyroid glands during surgery.

# Checking the parathyroid gland vascularization

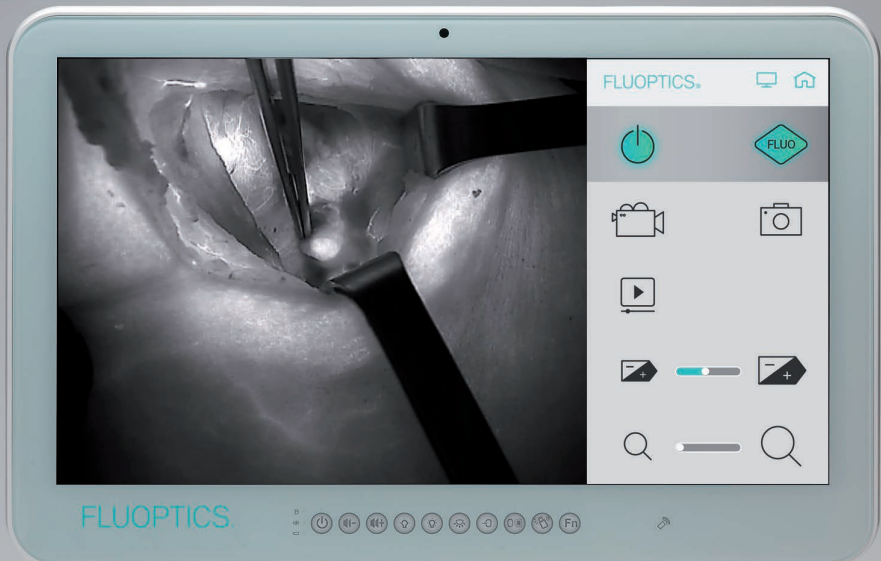
It is commonly known that complications such as transient hypocalcemia are linked to the unexpected excision of parathyroid glands or the alteration of the vascularization of these glands during thyroid surgery.

After intravenous injection of indocyanine green, FLUOBEAM® LX allows surgeons to clearly visualize the vascularization of the parathyroid glands and therefore to assess their viability at the end of the surgery.



Critical blood vessels identification

Vascularization assessment of parathyroid glands









# **FLUOBEAM® LX** integrated solution

**Thousands of procedures already performed  
for parathyroid glands detection  
by autofluorescence.**

# Installed Systems

The FLUOPTICS® technology is already used in:  
France, Germany, the UK, Switzerland, Belgium, Italy, Spain,  
Morocco, Denmark, Finland, Greece, the Netherlands, Poland,  
Singapore, the USA, Kuwait, Thailand, Taiwan, Hong Kong,  
Japan, Korea and India.

**150**  
machines

**20 000**  
procedures

**22**  
countries



**FLUOBEAM® is a Class IIa medical device,  
manufactured by Fluoptics.**

FLUOBEAM® LX is indicated to facilitate the visualization of parathyroid glands  
by auto-fluorescence (natural fluorescence without ICG injection)  
during thyroid and parathyroid surgeries.

FLUOBEAM® LX is also indicated to visualize on a screen the flow,  
the distribution and/or the accumulation of Indocyanine green (ICG) during thyroid  
and parathyroid surgery for blood flow visualization.



FLUOBEAM® LX is intended to assist in the imaging of parathyroid glands  
and can be used as an adjunctive method to assist in the location of  
parathyroid glands due to the auto-fluorescence of this tissue.

FLUOBEAM® LX is intended to provide real-time near infrared (NIR)  
fluorescence imaging of tissue during surgical procedures.

The Fluobeam® LX is indicated for use in capturing and viewing  
fluorescent images for the visual assessment of blood flow in adults  
as an adjunctive method for the evaluation of tissue perfusion.

Brochure\_FBLX\_10/2019\_EN\_v0

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life  
behind  
light



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