

# FLUOPTICS®

European leader in fluorescence imaging

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



**The most gifted  
camera of  
its generation**

# **FLUOBEM®** ENDOCRINE SURGERY

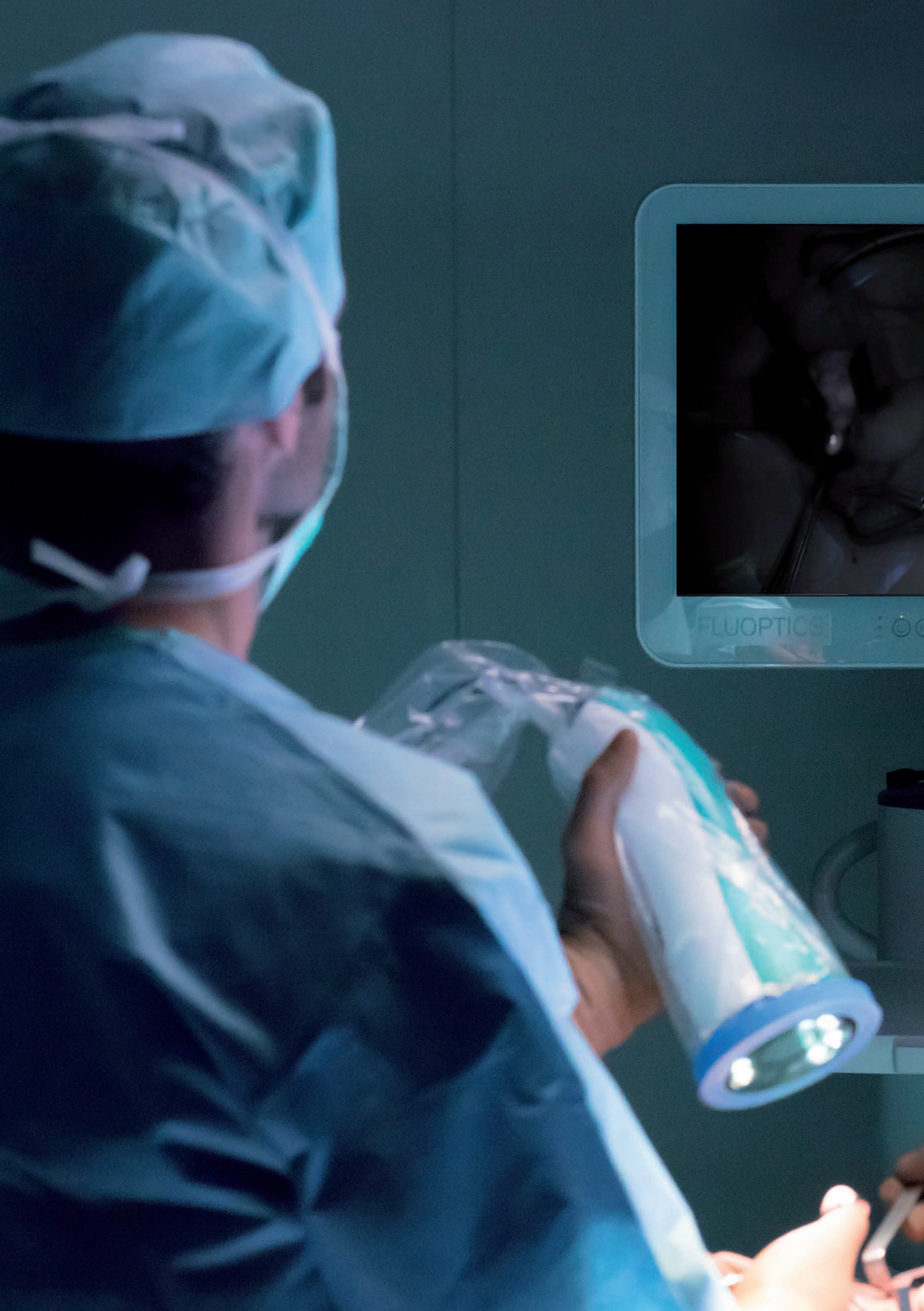


# Parathyroid glands real-time identification

Thanks to several years of development in collaboration with international clinical teams, FLUOBEAM® was designed to fit in the operating room environment.

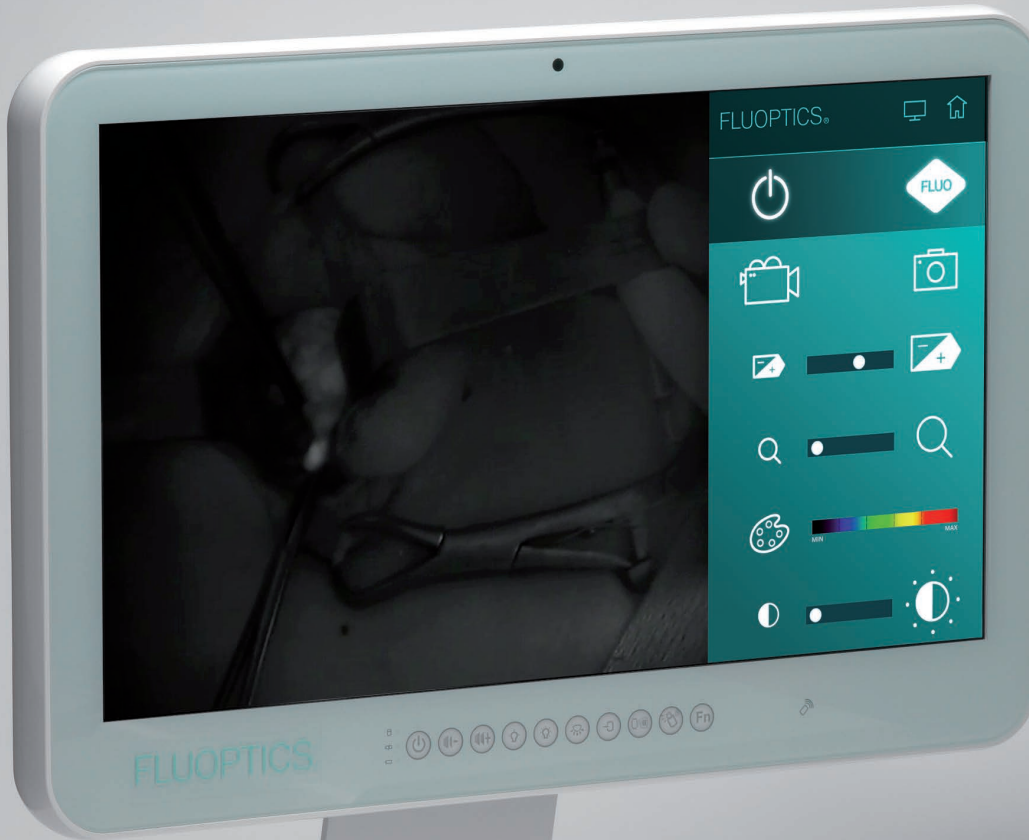
**FLUOBEAM® is an integrated fluorescence imaging solution providing the surgeon with a real-time image of the fluorescence in the operative field.**

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





Fluorescence  
imaging,  
a disruptive  
technology



# Intraoperative fluorescence imaging: a precise and efficient method

**Parathyroid gland 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.**



## FLUOBEAM® IN ACTION

# Parathyroid glands identification

**Unique to parathyroid glands emit fluorescence in the near Infrared without any dye injection. This is called auto-fluorescence. FLUOBEAM® allows the surgeon to identify in real-time parathyroid glands and to preserve them during surgery.**

FLUOBEAM® also allows surgeons to visualize parathyroid adenoma using auto-fluorescence. This detection guides the surgeon and makes resection easier.



**Fernando Dip, MD**

Maxilo-facial and ENT surgery, University of Buenos Aires,  
Argentina & Cleveland Clinic, Florida, USA

**"Fluorescence imaging in the near infrared significantly increases the number of parathyroid glands that are identified during thyroid surgery."**

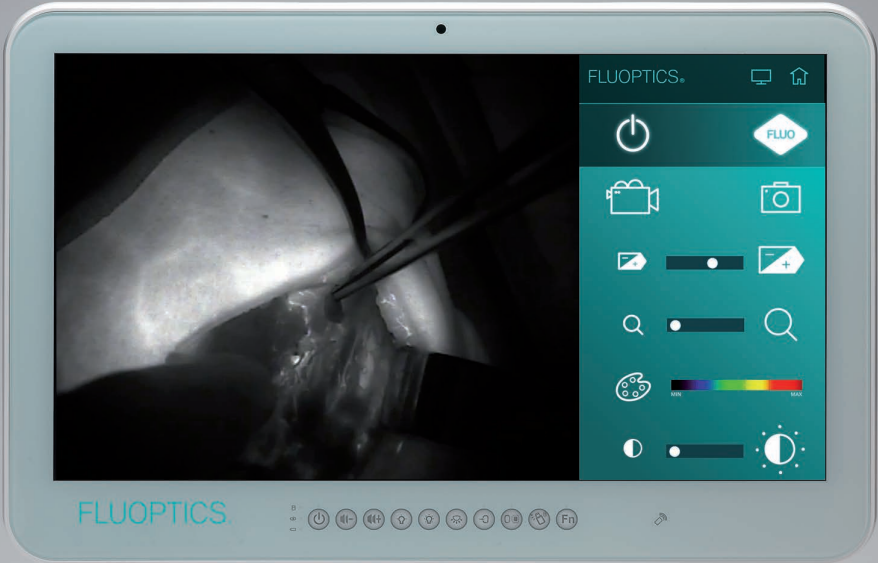




Both parathyroid glands identification by autofluorescence.

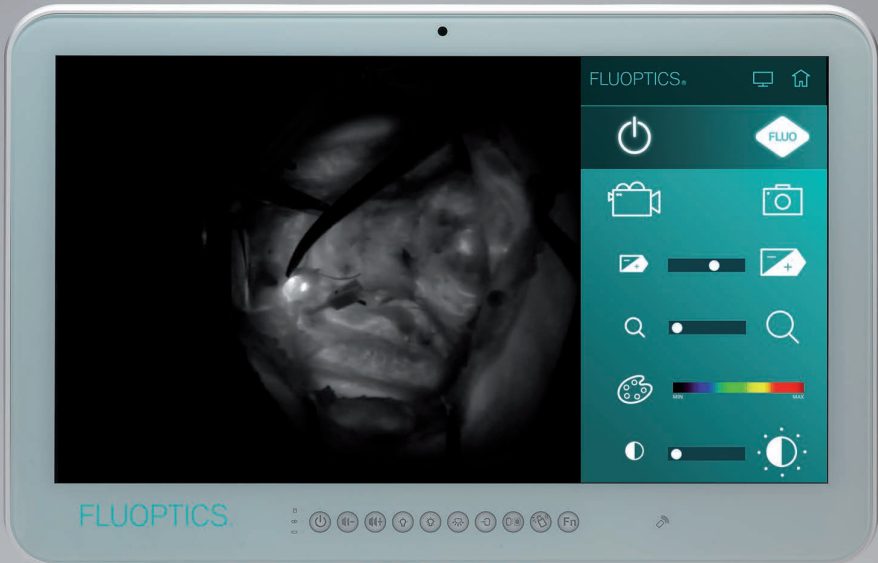
Parathyroid adenoma visualization by autofluorescence.





A non-perfused parathyroid gland visualization.

Well-vascularized parathyroid gland visualization.



## FLUOBEAM® IN ACTION

# 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® allows surgeons to clearly visualize the vascularization of the parathyroid glands and therefore to assess their viability during the surgery.**



**Fares Benmiloud, MD**

General Surgeon, Hôpital Européen, Marseille, France.

**"Near infrared imaging used during total thyroidectomies significantly reduces post-operative hypocalcemia, improves parathyroid identification and reduces the rate of auto-transplantation."**



# FLUOBEAM<sup>®</sup>

## integrated solution

**Thousands of procedures already done.**

Plastic and reconstructive surgery.

Parathyroid detection by autofluorescence  
and perfusion assessment.

Lymphedema, wound care.

Partial hepatectomy and liver transplantation.

Sentinel lymph node biopsy for breast cancer and melanoma.



# 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 US, Kuwait, Thailand, Taiwan, Hong Kong and India.

**100**  
machines

**10 000**  
procedures

**20**  
countries



**FLUOBEAM® is a Class IIa medical device,  
manufactured by Fluoptics – CE N°0197.**

FLUOBEAM® is indicated to visualize on a screen the flow, the distribution and/or the accumulation of Indocyanine green (ICG) before, during and after surgery for the indications such as: visualization of the blood flow, visualization of the lymphatic flow, visualization and identification of the bile ducts during hepatobiliary surgery, visualization and detection of primary liver tumors and/or hepatic metastases. FLUOBEAM® is also indicated to facilitate the visualization of parathyroid glands by auto-fluorescence (natural fluorescence without ICG injection) during thyroid and parathyroid surgeries.

Before the first use, user must read the medical device instructions for use and its label.

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life  
behind  
light



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