

 #WCD2019

# AEDV

## HIGHLIGHTS

24<sup>th</sup> World Congress of Dermatology (WCD)

10-15  
JUNIO  
2019

*Milán*



Patrocina:

janssen  Immunology  
PHARMACEUTICAL COMPANIES OF 

Organiza:



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*Milán*



## Diagnostic imaging in dermatology: confocal microscopy- implications in surgery and daily clinical practice

**Dr. Azael Freites Martinez**

Dermatologist. Clinica IVALIA- Gran Canaria

Fellow in Oncodermatology at MSKCC, New York

Patrocina:



Organiza:





24<sup>TH</sup> WORLD CONGRESS  
OF DERMATOLOGY

**Ex vivo confocal microscopy of the skin-  
prospective**  
Susana Puig  
Melanoma Unit, Dermatology Department, Hospital Clínic  
Barcelona

[www.wcd2019milan.org](http://www.wcd2019milan.org)



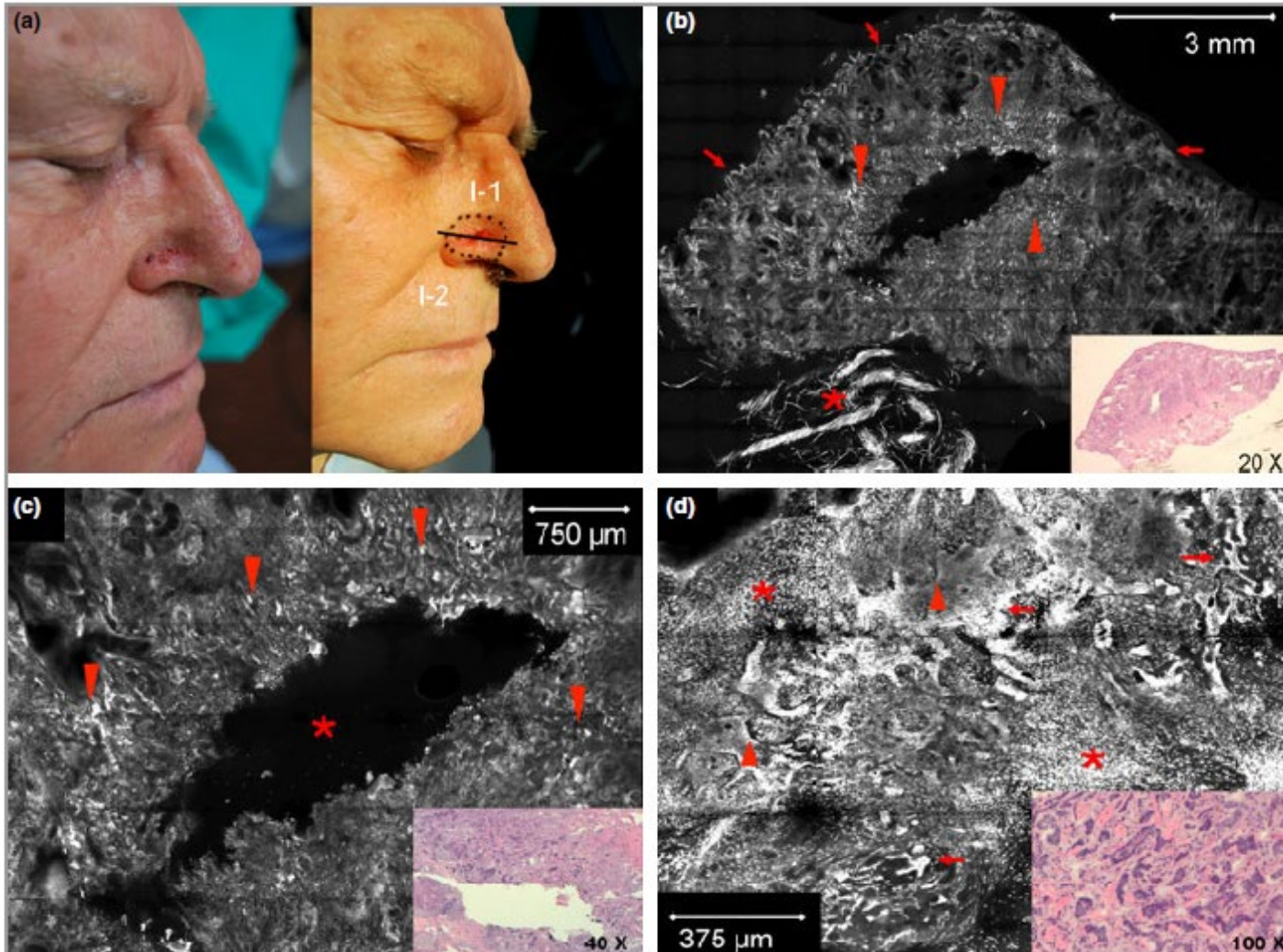
International League  
of Dermatological Societies  
*Skin Health for the World*

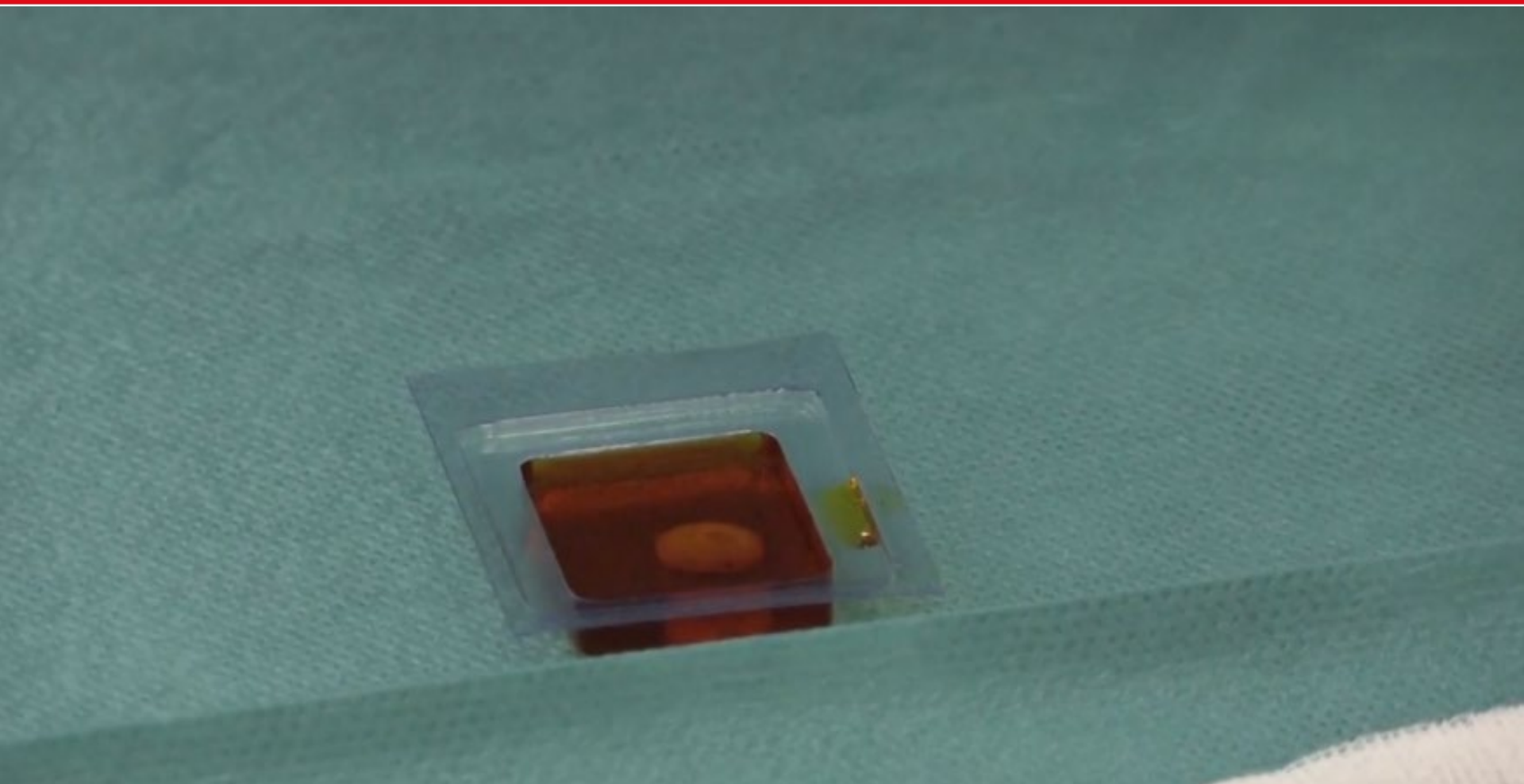




## Ex vivo fluorescence confocal microscopy for fast evaluation of tumour margins during Mohs surgery

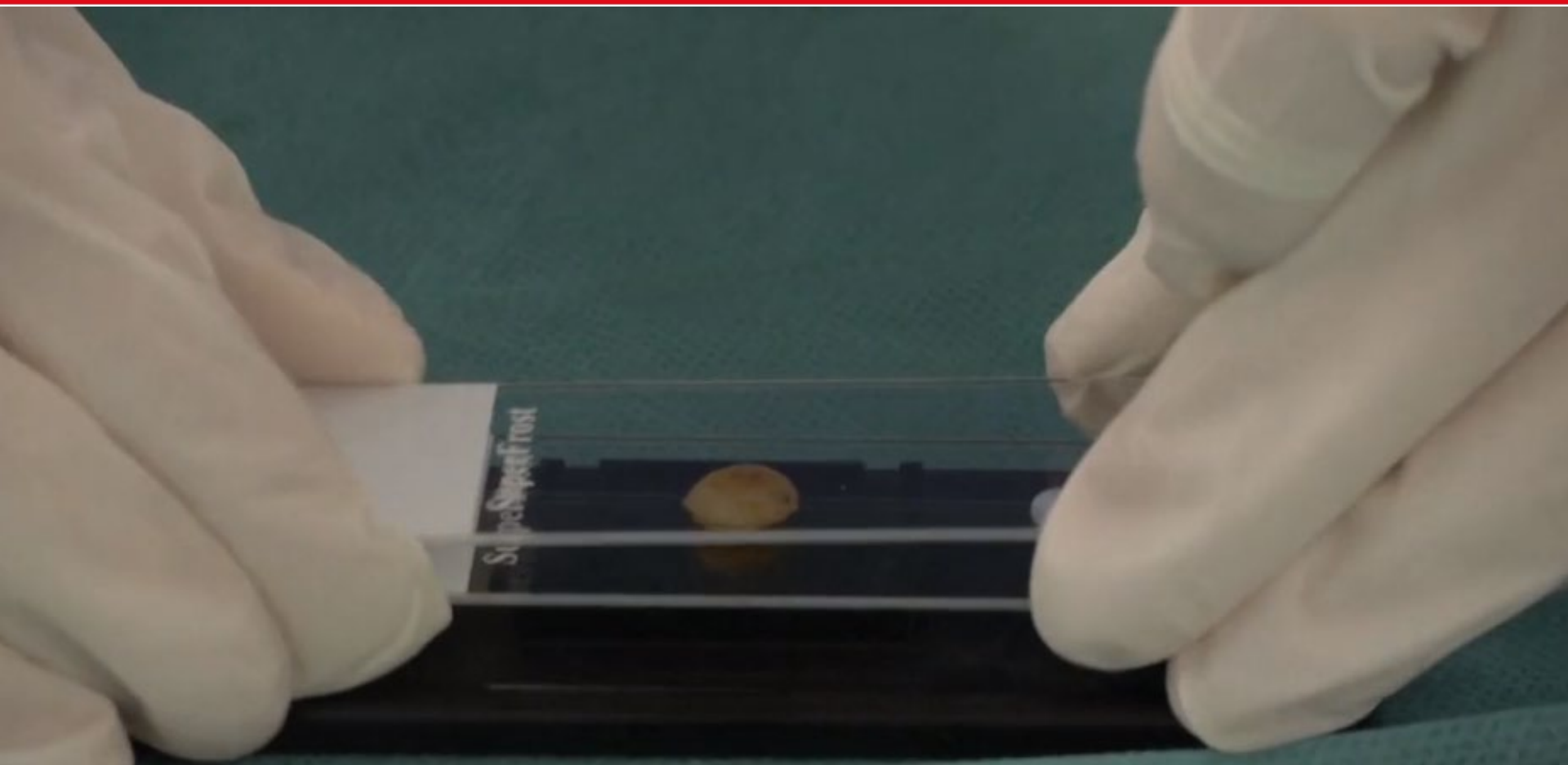
A. Bennàssar,<sup>1</sup> A. Vilata,<sup>1</sup> S. Puig<sup>1,2</sup> and J. Malvehy<sup>1,2</sup>





Tissue is stained for 30 seconds in Acridine Orange



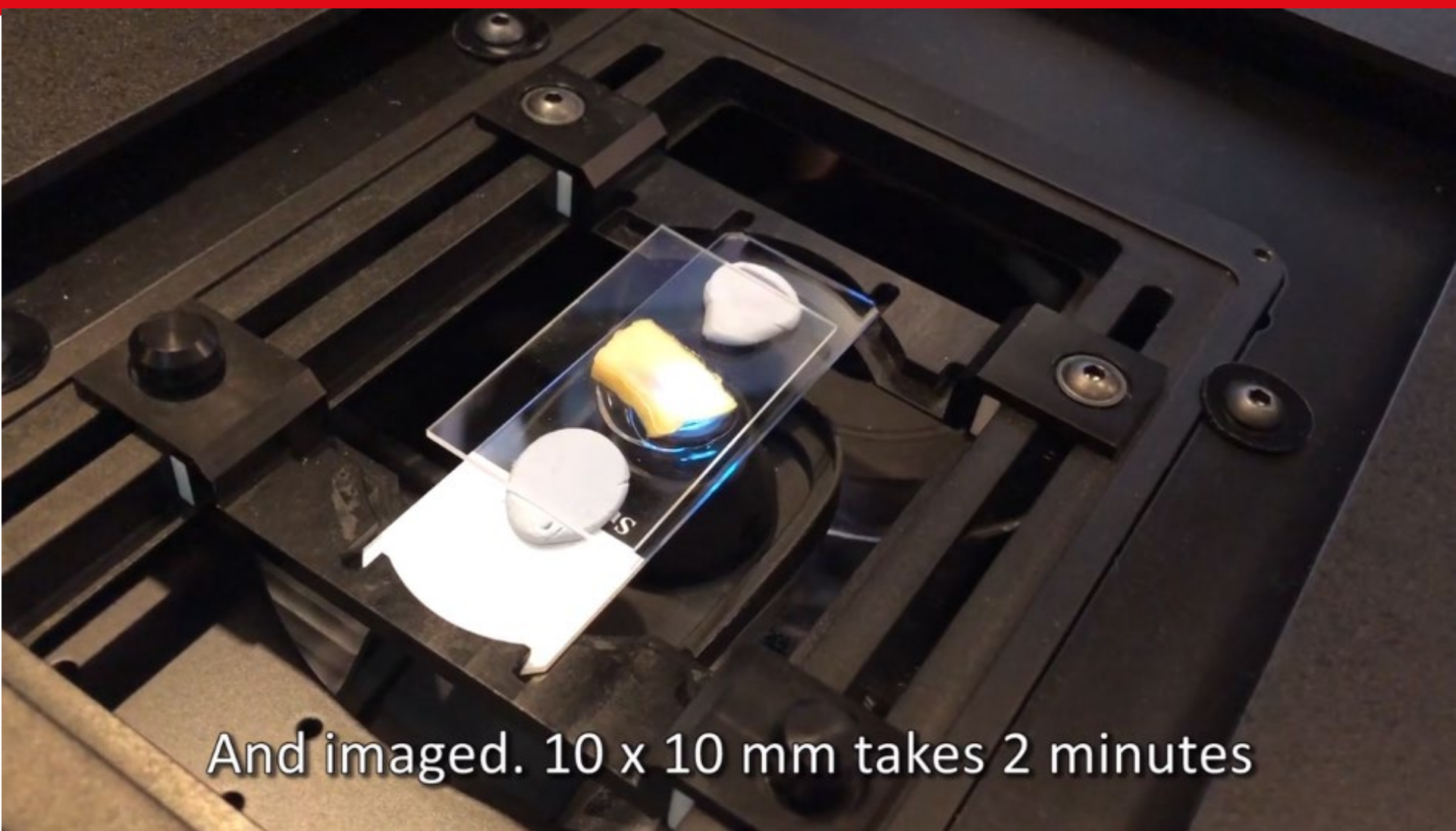


Mounted on a glass slide

Milàn

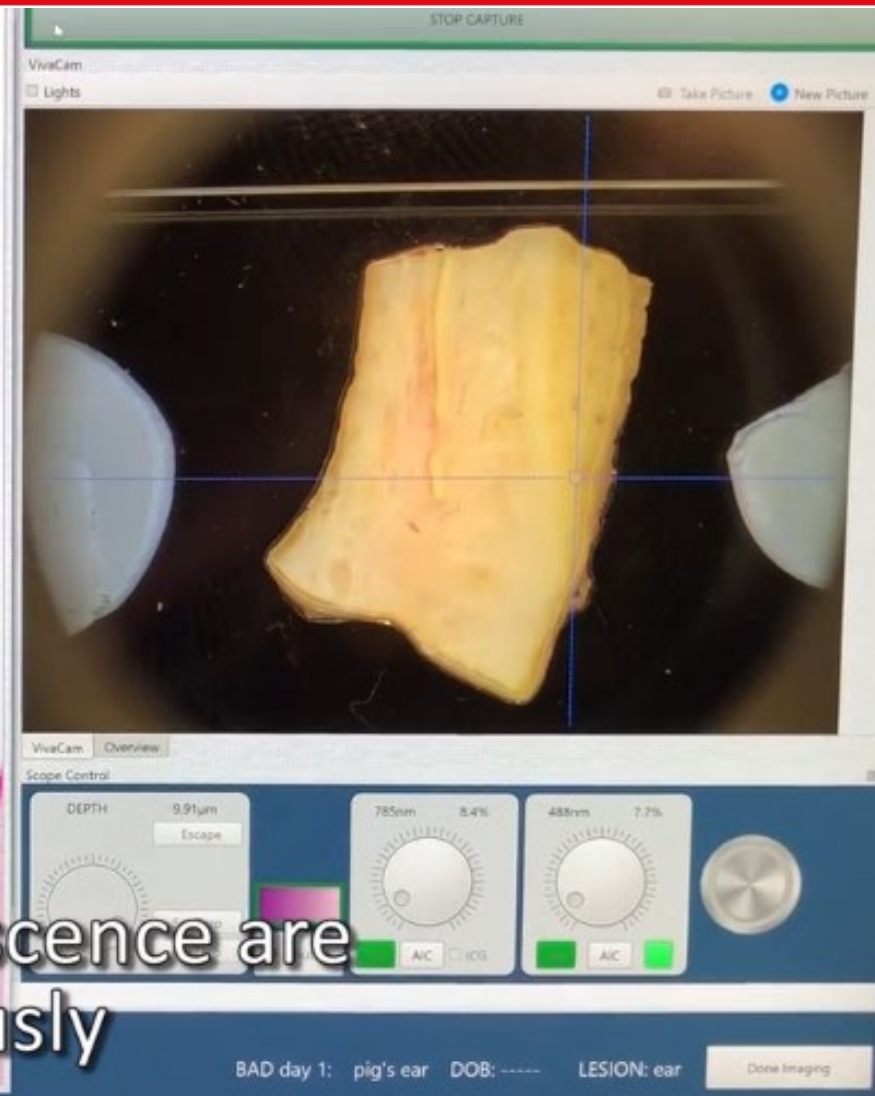
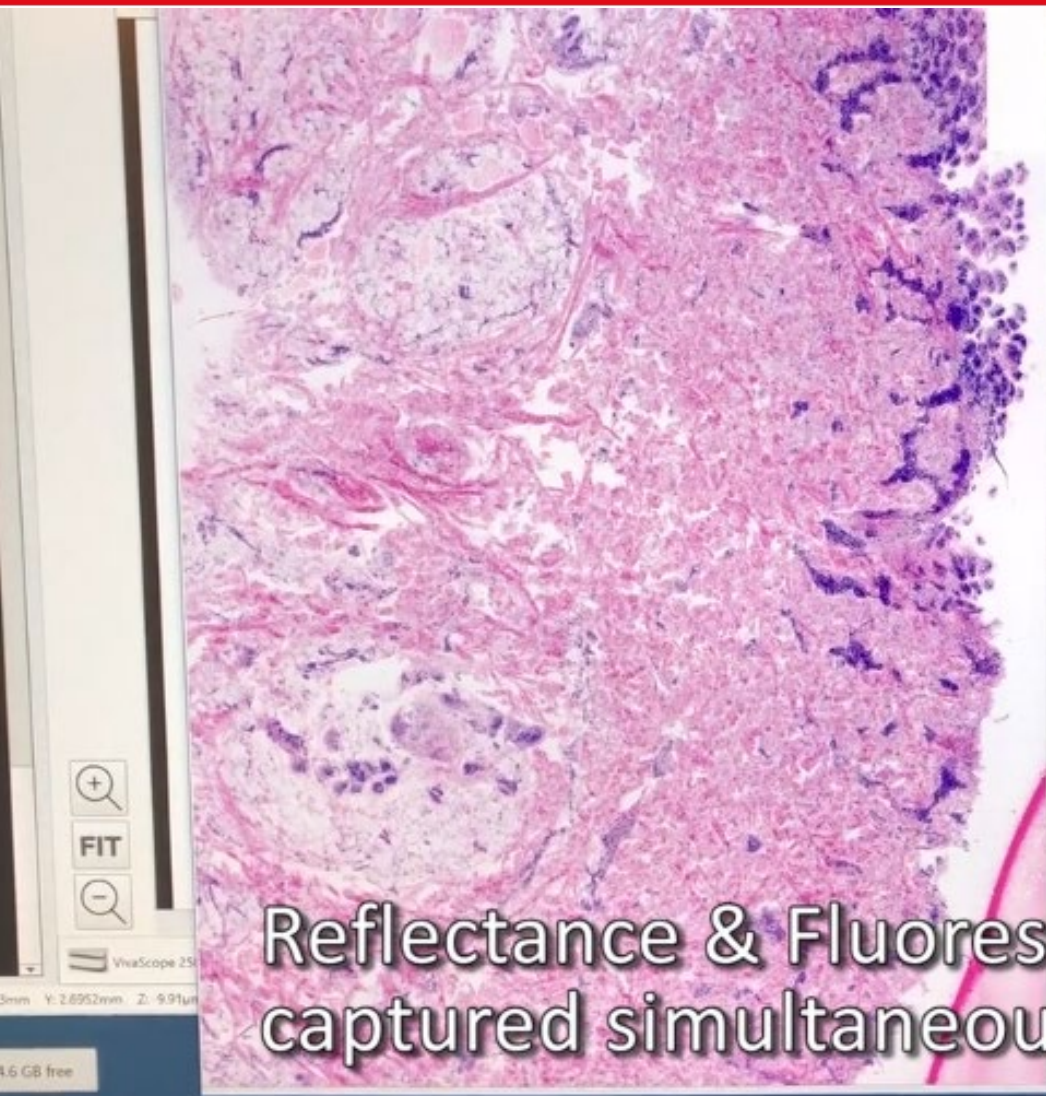






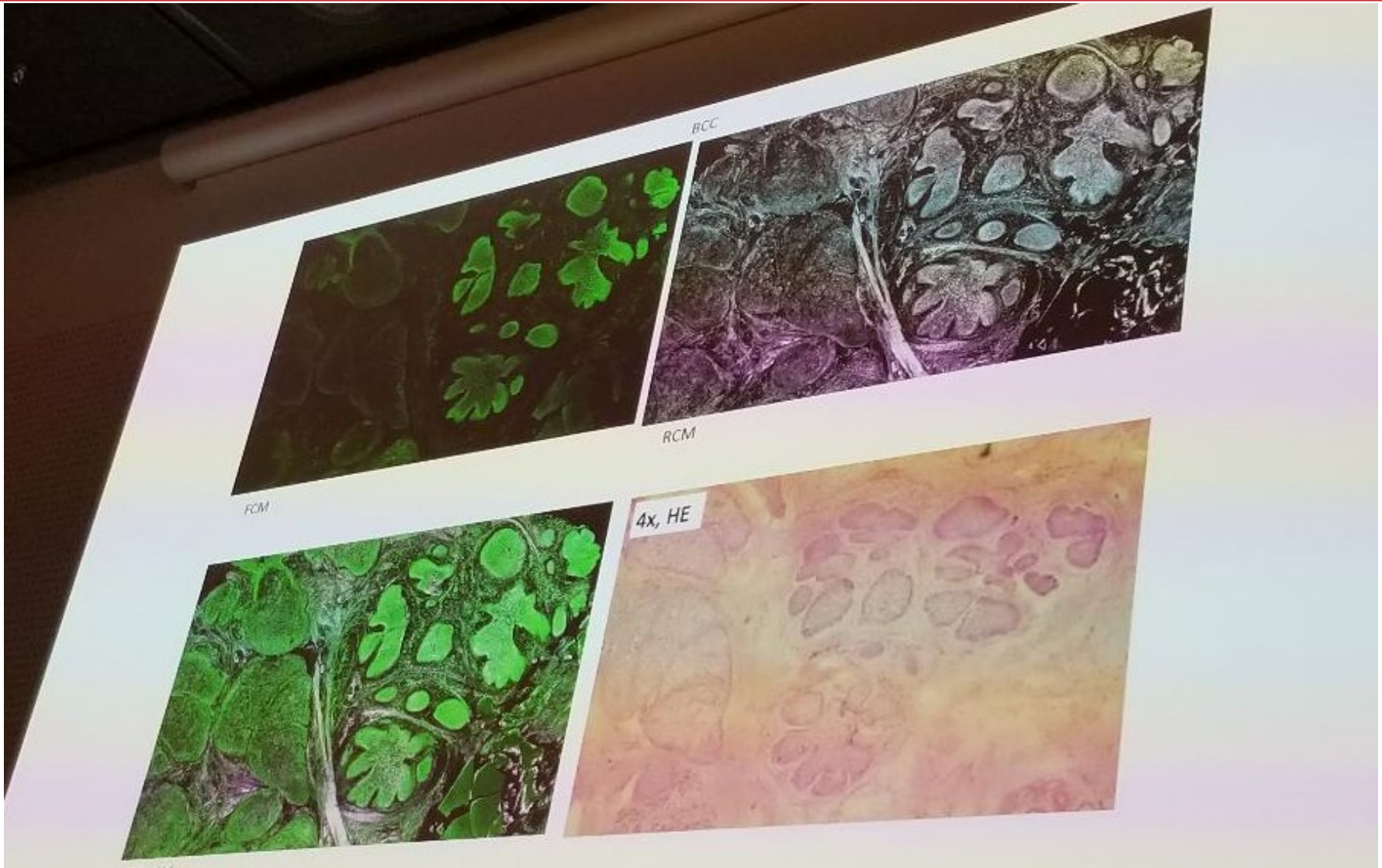
And imaged. 10 x 10 mm takes 2 minutes



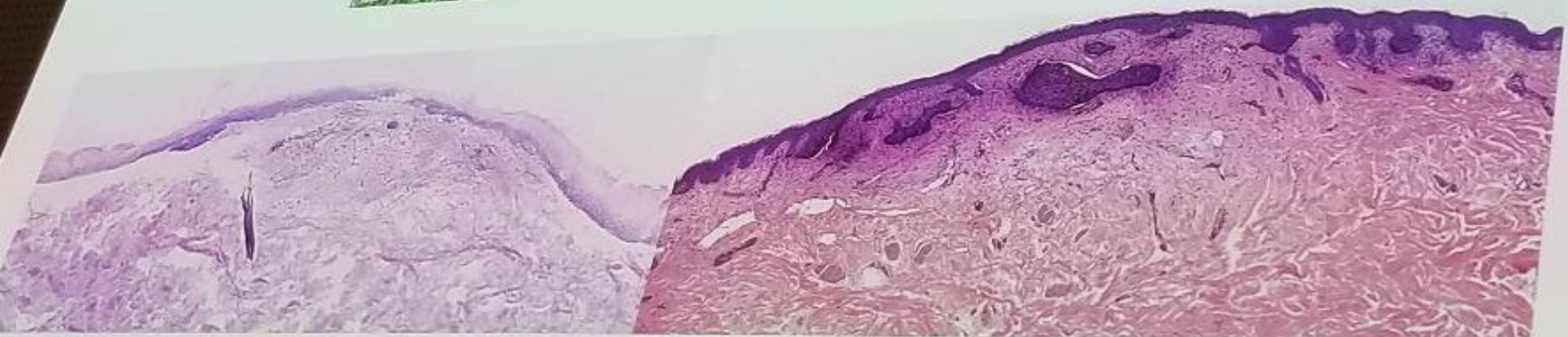
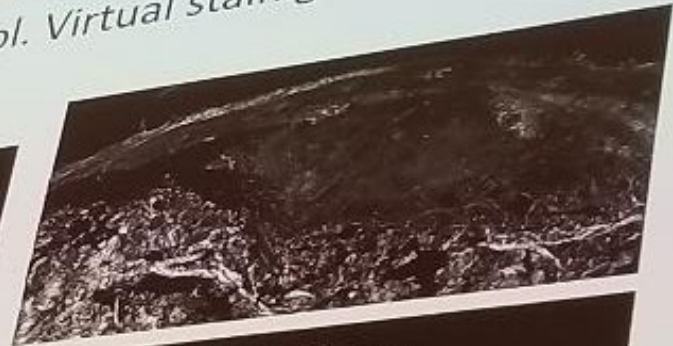
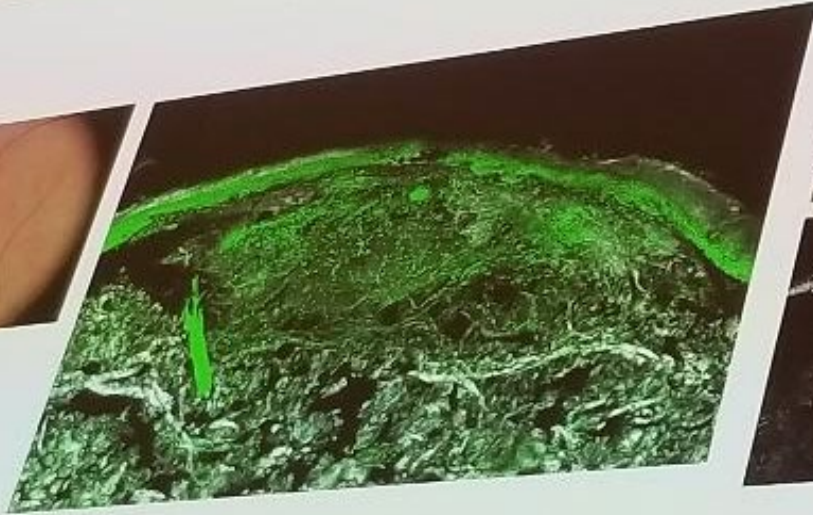


Reflectance & Fluorescence are captured simultaneously





*Fusion CM. New stain protocol. Virtual staining*



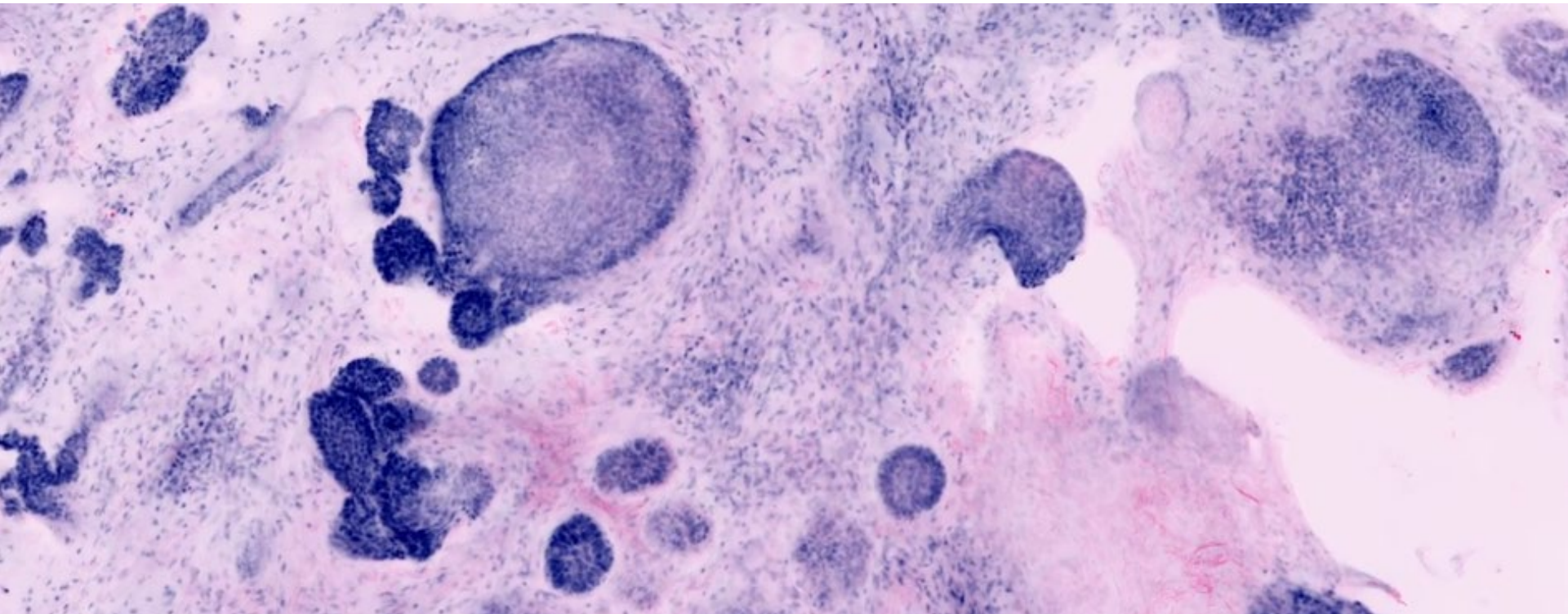
Milano











## Diagnostic accuracy of ex vivo fluorescence confocal microscopy in Mohs surgery of basal cell carcinomas: a prospective study on 753 margins.

Longo C<sup>1,2</sup>, Pampena R<sup>2</sup>, Bombonato C<sup>2</sup>, Gardini S<sup>2</sup>, Piana S<sup>3</sup>, Mirra M<sup>2</sup>, Raucci M<sup>2</sup>, Kyrgidis A<sup>1</sup>, Pellacani G<sup>1</sup>, Ragazzi M<sup>3</sup>.

### ⊕ Author information

#### Abstract

**BACKGROUND:** Frozen histological sections are used for intraoperative margin assessment during Mohs surgery. Fluorescence confocal microscopy (FCM) is a new tool that offers a promising and faster alternative to frozen histology.

**OBJECTIVES:** To evaluate prospectively in a clinical setting the accuracy of FCM vs. frozen sections in margin assessment of basal cell carcinoma (BCC).

**METHODS:** Patients with BCC scheduled for Mohs surgery were prospectively enrolled. Freshly excised surgical specimens were examined by FCM and then frozen sections were evaluated. Permanent sections were obtained, in order to validate the sample technique. A blind re-evaluation was also performed for discordant cases. Sensitivity and specificity levels, as well as positive and negative predictive values (PPV and NPV, respectively), were calculated and receiver-operating characteristic curves generated.

**RESULTS:** We enrolled 127 BCCs in as many patients (40.2% females). Seven hundred and fifty-three sections were examined. All BCCs were located in the head and neck area. In evaluating the performance of FCM vs. frozen sections, sensitivity was 79.8%, specificity was 95.8%, PPV was 80.5% and NPV was 95.7% [area under the curve 0.88, 95% confidence interval 0.84-0.92 ( $P < 0.001$ )]. Forty-nine discordant cases were re-evaluated; 24 were false positive and 25 false negative. The performance of FCM and frozen sections was also evaluated according to the final histopathological assessment.

**CONCLUSIONS:** We found high levels of accuracy for FCM vs. frozen section evaluation in intraoperative BCC margin assessment during Mohs surgery. Some technical issues prevent the wide use of this technique, but new devices promise to overcome these limitations.

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## Mohs Surgery for BCC and RCM

### Advantages

- BCC is easy to be identify ex-vivo (MMS)
- Fast (~5') per tissue "section" vs ~15' classic frozen section
- High sensibility (85%) and specificity (99%)
- Strong inter-observer correlation
- Easy learning curve (tissue processing)

### Limitations

- Learning curve needed to identify similar structures (eg. eccrine glands)
- Artefacts needs to be highly avoided (eg. bubbles, folded epidermis)
- Price (aprox € 250.000)



Salvador González

11.58

**SESSION: CONFOCAL MICROSCOPY**

**TIPS TO INTEGRATE RCM IN THE PRACTICE FLOW & WHEN IT IS WORTH THE TIME: NON MELANOCYTIC TUMORS**

24<sup>th</sup> WORLD CONGRESS OF DERMATOLOGY MILAN 2019

International League of Dermatological Societies

ILDS

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## Tips to integrate RCM on daily practice

- **Defining histological subtype for optimal management**
- Deciphering collisions and mimickers
- Monitoring tumor response to minimally invasive treatment
- Managing and defining solitary pink lesions

### ORIGINAL ARTICLE

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## Classifying distinct basal cell carcinoma subtype by means of dermatoscopy and reflectance confocal microscopy

Caterina Longo, MD, PhD,<sup>a</sup> Aimilios Lallas, MD,<sup>a</sup> Athanassios Kyrgidis, PhD,<sup>a</sup>  
Harold Rabinovitz, MD,<sup>c</sup> Elvira Moscarella, MD,<sup>a</sup> Silvana Ciardo, BS,<sup>b</sup> Iris Zalaudek, MD,<sup>a,d</sup>  
Margaret Oliviero, ARNP,<sup>c</sup> Amanda Losi, MD,<sup>b</sup> Salvador Gonzalez, MD,<sup>c</sup> Pascale Guitera, MD, PhD,<sup>f</sup>  
Simonetta Piana, MD,<sup>g</sup> Giuseppe Argenziano, MD,<sup>a</sup> and Giovanni Pellacani, MD<sup>b</sup>  
*Reggio Emilia and Modena, Italy; Plantation, Florida; Graz, Austria;  
New York, New York; and Sydney, Australia*

*J Eur Acad Dermatol Venereol.* 2017 Oct;31(10):1641-1648. doi: 10.1111/jdv.14253. Epub 2017 Aug 11.

### Diagnostic accuracy of confocal microscopy imaging vs. punch biopsy for diagnosing and subtyping basal cell carcinoma.

Kadouch DJ<sup>1</sup>, Leeftang MM<sup>2</sup>, Elishot YS<sup>1,3</sup>, Longo C<sup>4</sup>, Ulrich M<sup>5</sup>, van der Wal AC<sup>6</sup>, Wolkerstorfer A<sup>1</sup>, Bekkenk MW<sup>1,7</sup>, de Rie MA<sup>1,7</sup>.

⊕ Author information

#### Abstract

**BACKGROUND:** In vivo reflectance confocal microscopy (RCM) is a promising non-invasive skin imaging technique that could facilitate early diagnosis of basal cell carcinoma (BCC) instead of routine punch biopsies. However, the clinical value and utility of RCM vs. a punch biopsy in diagnosing and subtyping BCC is unknown.

**OBJECTIVE:** To assess diagnostic accuracy of RCM vs. punch biopsy for diagnosing and subtyping clinically suspected primary BCC



## Tips to integrate RCM on daily practice

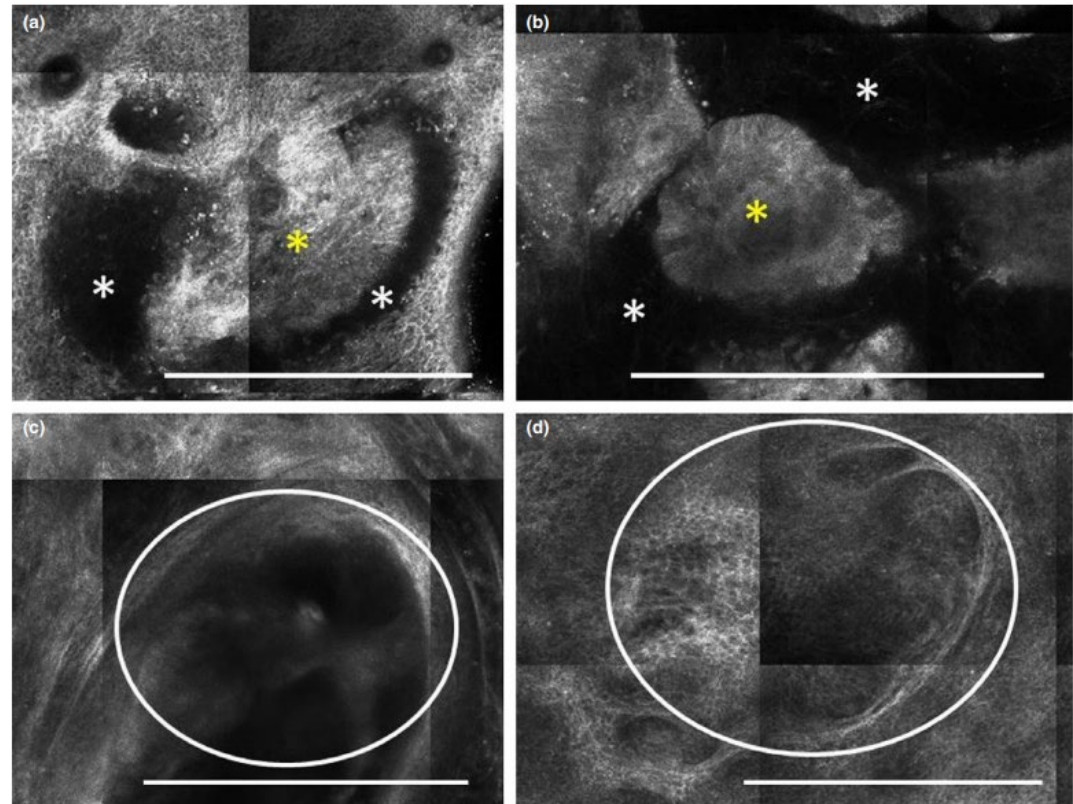
- Defining histological subtype for optimal management
- **Deciphering collisions and mimickers**
- Monitoring tumor response to minimally invasive treatment
- Managing and defining solitary pink lesions





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*Int J Dermatol.* 2019 Feb;58(2):e30-e32. doi: 10.1111/ijd.14301. Epub 2018 Nov 19.

**Cryosurgical management of basal cell carcinoma: in vivo follow-up using reflectance confocal microscopy.**

[Pasquali P](#)<sup>1</sup>, [Segurado-Miravalles G](#)<sup>2</sup>, [Freites-Martínez A](#)<sup>3</sup>, [González-Rodríguez S](#)<sup>3,4</sup>.

⊕ Author information

PMID: 30456878 DOI: [10.1111/ijd.14301](https://doi.org/10.1111/ijd.14301)



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