

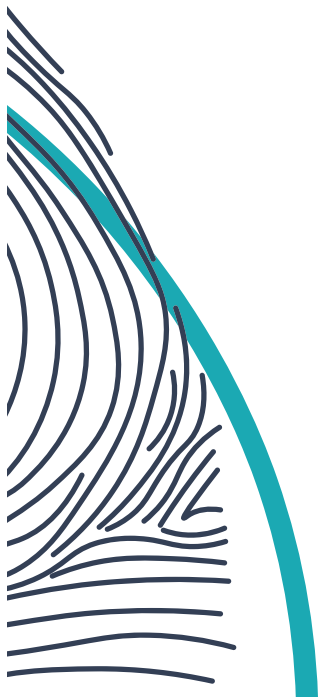


SamanTree  
Medical SA

# Histolog<sup>®</sup> Scanner

Cancer cells  
at your fingertips

— Dermatology brochure - April 2023





# The Clinical Need

When surgically excising a tumor, the challenge for the surgeon is to remove all the cancerous tissue while preserving as much healthy surrounding tissue as possible.

In the context of Mohs or slow Mohs surgery, frozen section analysis provides an accurate method to examine the surgical specimen and make sure that no cancer cells are left in the patient. However, slide preparation takes time and requires a complex organization and workflow. The patient will have to wait for the results in the hospital (Mohs) or at home (slow Mohs) with an open wound for up to 24 hours before the surgery can be finalized. This represents a burden for both patients and healthcare centers.<sup>1</sup>

Furthermore, some tumor excisions can present atypical topology or size preventing them to qualify for Mohs or slow Mohs procedures as there is currently no intraoperative assessment method compatible with these specimens.<sup>2</sup>

## **Unmet medical need :**

- Fast intraoperative assessment
- Imaging method compatible with diverse specimens
- Simplified organizational procedure

<sup>1</sup>Bittner, Guilherme Canho et al. "Mohs micrographic surgery: a review of indications, technique, outcomes, and considerations." *Anais brasileiros de dermatologia* vol. 96,3 (2021): 263-277. doi:10.1016/j.abd.2020.10.004

<sup>2</sup>Ingraffea, Adam A. MD1; Neal, Kenneth W. MD2; Godsey, Tonja HT1; Gloster, Hugh M. Jr. MD1. Time-Saving Tips for Processing Large, Fatty Mohs Specimens. *Dermatologic Surgery* 38(9):p 1540-1541, September 2012. | DOI: 10.1111/j.1524-4725.2012.02521.x

# Our mission

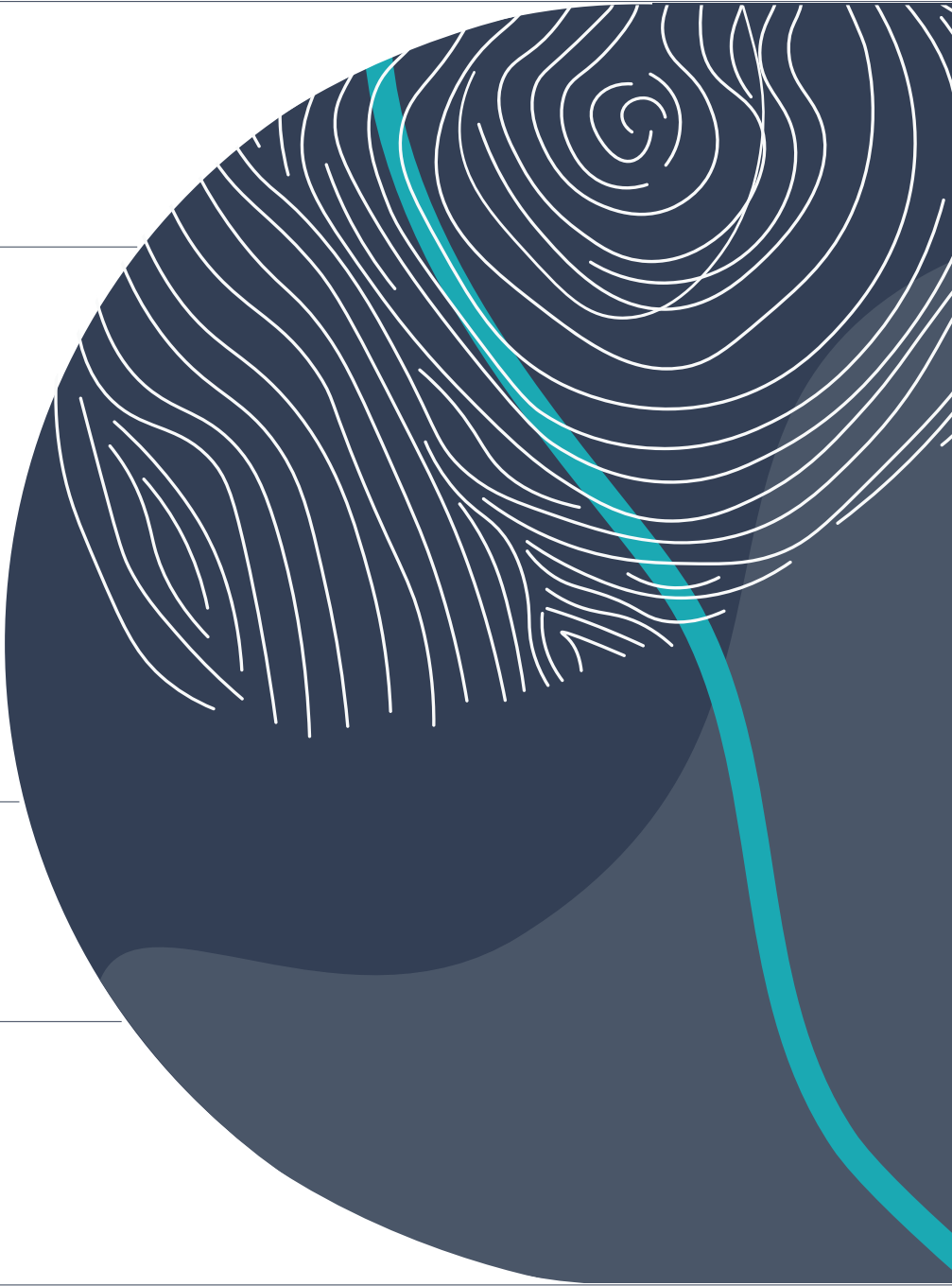
SamanTree Medical aims to be a game changer in the era of clinical workflow digitalization. We are committed to improving the journey of patients suffering from cancer by enabling fresh tissue analysis in real time to drastically reduce delays in establishing and executing the treatment plan.

	PROBLEM	SOLUTION	1	2	3
			SAVE PRECIOUS TIME AND RESOURCES	STANDARDIZE CONSERVING MOHS SURGERY	ENABLE DIGITAL AND REMOTE WORKFLOW
4	Frozen section is time and resource consuming (technician for Mohs or pathology lab for slow Mohs).	Real-time assessment of fresh tissue providing morphology information of the whole specimen. Minimal resources needed (1 clinician), compatible with current workflow (not damaging) <sup>3</sup>	A morphologic assessment is necessary in order to ensure complete tumor removal in Mohs surgery. This is performed with frozen section analysis (FSA), which requires extensive time and resources. <sup>1</sup>	Specimen which are too large or have an atypical topology usually can't benefit from Mohs surgery as they would require multiple FSA and therefore demand excessive resources.	In the case of slow Mohs, the specimen is sent to pathology laboratory during surgery, resulting in a complex workflow. In addition, second opinions are hardly accessible when performing Mohs surgery.

<sup>1</sup>Bittner, Guilherme Canho et al. 2021 (cf p. 3)

<sup>3</sup>Grizzetti, L., & Kuonen, F. (2022). Ex vivo confocal microscopy for surgical margin assessment: A histology compared study on 109 specimens. Skin Health and Disease, September 2021, 1–8. <https://doi.org/10.1002/ski2.91>

<sup>4</sup>Kechrid, N., Tonello, L., Monnier, S., Rossi, S. A., Ulrich, F., & Kuonen, F. (2022). Ex vivo confocal microscopy for the intraoperative assessment of deep margins in giant basal cell carcinoma. JAAD Case Reports, 27, 41–45. <https://doi.org/10.1016/j.jdc.2022.07.008>



# Our solution The Histolog® Scanner

## Global mapping of the specimen immediately during surgery

The Histolog® Scanner is a breakthrough medical imaging modality based on a novel ultra-fast confocal microscopy technology invented in 2010.

Its innovative design makes it highly practical for quick assessment during surgery, bringing the clinician one touch-on-the-screen away from visualizing cancerous cells immediately on a surgical specimen.

In Mohs surgery, it takes on average 6 minutes to process the specimen and review the image, giving similar detection performances as frozen section analysis. Basal Cell Carcinoma (BCC), the most common type of skin cancer, can be detected with high sensitivity and specificity of >80% and 100%, respectively.<sup>3</sup>

<sup>3</sup>Grizzetti, L., & Kuonen, F. (2022) (cf p.5)



A cost-efficient technique that provides real time morphology information



Easy-to-use platform: plug and play device with quick learning, usable by clinicians or OR staff



Digital images, enabling digital and remote workflows



Result in minutes : 15s for specimen preparation (10s fluorescent dye + 2s rinsing in saline solution) and ~50s for full-resolution image (large field of view 4.8cm x 3.6cm)



A dedicated team and network to support you in the implementation



Intuitive and user-friendly touch screen

Open top architecture for fresh tissue analysis



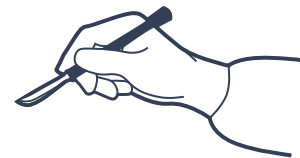


# QUICK & CLEAN

4-steps procedure for morphology assessment within 5 minutes.

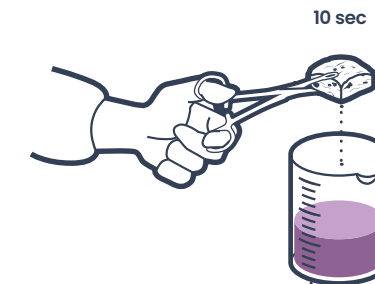
## 1 Excision

Excise the tumor from the patient.

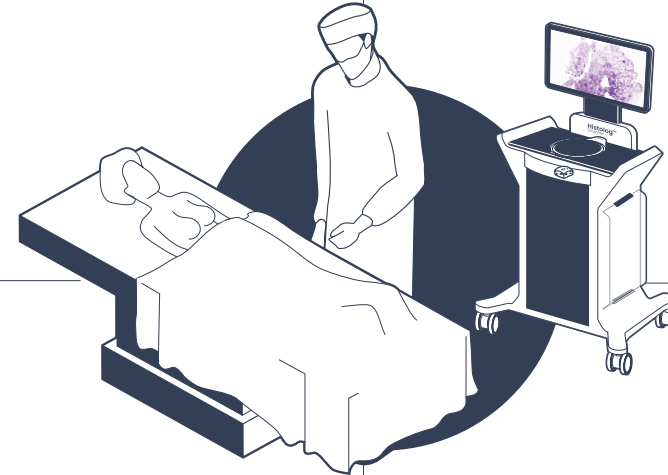


## 2 Preparation

Immerse the excision in Histolog Dip and rinse it.



**Histolog Dip**  
Histological stain



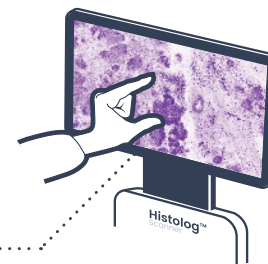
## 4 Evaluation

With this additional information, return to patient in confidence.

Excision is sent for standard post-surgical pathology assessment.

### Touchscreen interface

Instant access to special features such as reporting & annotating tools



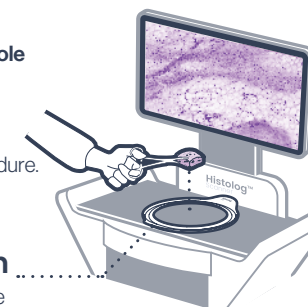
## 3 Imaging

Map in minutes the whole excision surface.

Excision remains visible and accessible during the entire imaging procedure.

### Histolog Dish

Single use receptacle



# Our partners

## Clinical partners

The Histolog Scanner is a game changing approach installed in leading centers in Europe for its application in breast, pathology, prostate and skin.

The first utilization of the Histolog Scanner in the context of Mohs surgery was at Tübingen University by Prof. M. Möhrle. He showed that the Histolog Scanner was a valid alternative to frozen section analysis.

These data were later confirmed by Dr. Kuonen (CHUV, Switzerland) who obtained high performances with >80% time gain compared to FSA.<sup>3</sup>

<sup>3</sup>Grizzetti, L., & Kuonen, F. (2022) (cf p.5)



# Clinical evidences

## LARGE SPECIMENS SCANNING

### Ex vivo confocal microscopy for the intraoperative assessment of deep margins in giant basal cell carcinoma

JAAD case report, 2022

N. Kechrid, L.Tonello, S. Monnier, S. A. Rossi, F. Ulrich, F. Kuonen

#### Evaluation of the Histolog Scanner on giant skin surgical specimens : case report on giant BCC

- Successful scanning and identification of cancer lesion with the Histolog Scanner
- Make IOA for giant specimens possible
- Allow direct reconstruction

## MOHS SURGERY

### Ex vivo confocal microscopy for surgical margin assessment: A histology compared study on 109 specimens

Skin Health and Disease, 2022

L. Grizzetti, F. Kuonen

#### Evaluation of the Histolog Scanner as an alternative for H&E in Mohs surgery: prospective study on 109 specimens

- Drastic time saving
- Basal Cell Carcinoma: Sensitivity >80% and specificity 100%
- Realistic approach for Mohs surgery
- Development of dermatology image Atlas

## MOHS SURGERY

### Diagnostic accuracy of a new ex vivo confocal laser scanning microscope (CLSM) compared to H&E-stained paraffin slides for micrographic surgery of basal cell carcinoma

JEADV 2018

N.Peters, M. Schubert, G. Metzler, J.-P. Geppert, M. Moehrle

#### Evaluation of the process to generate and analyse CLSM images and assessment of the accuracy to detect basal cell carcinoma (BCC) tissue : prospective study on 544 fresh specimens

- Time-saving and very effective alternative to classical paraffin-embedded or frozen section
- BCC detection performance: sensitivity >70% & specificity 96%

# Morphology images in 5 minutes

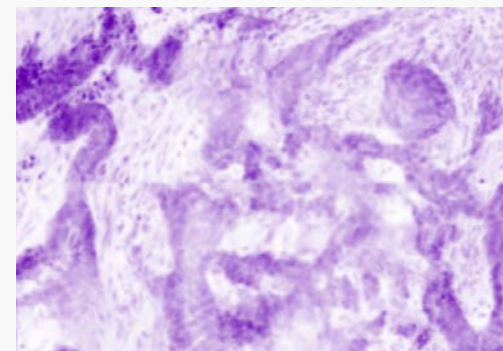
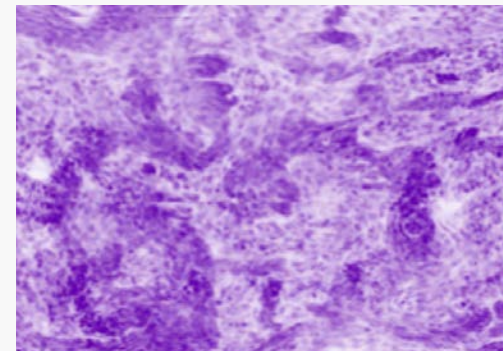
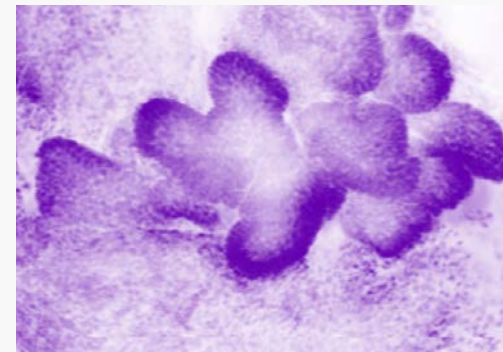
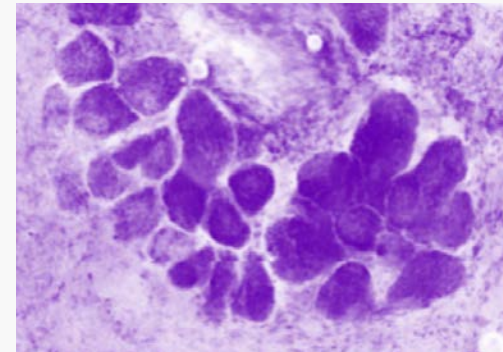
## Gold standard information minus the waiting

The Histolog® Scanner provides morphology images immediately during surgery, skipping the steps of FSA.

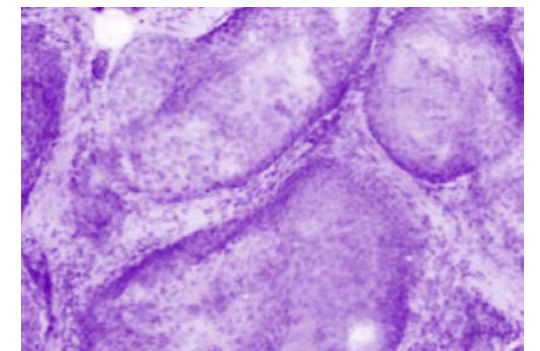
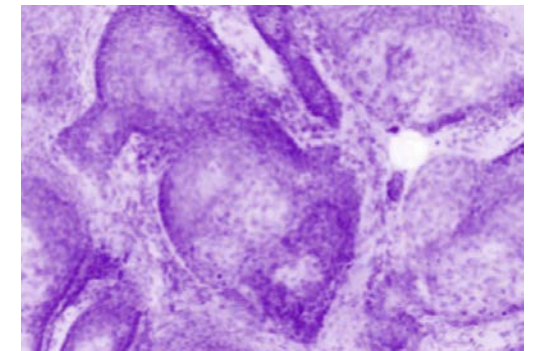
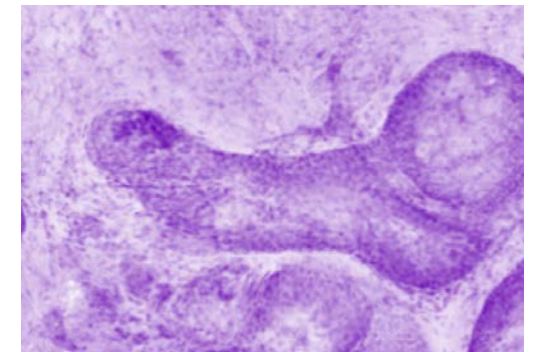
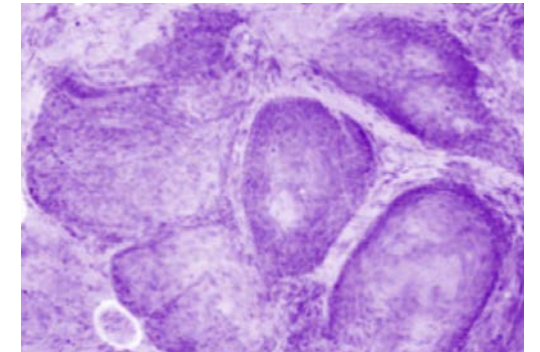
Assessment is performed using the criteria you are experienced with:

- Higher nuclear density
- Peripheral palisading
- Clefting
- Increased nuclear/cytoplasm ratio

BASAL CELL CARCINOMA



SEBACEOUS GLAND







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Medical SA

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