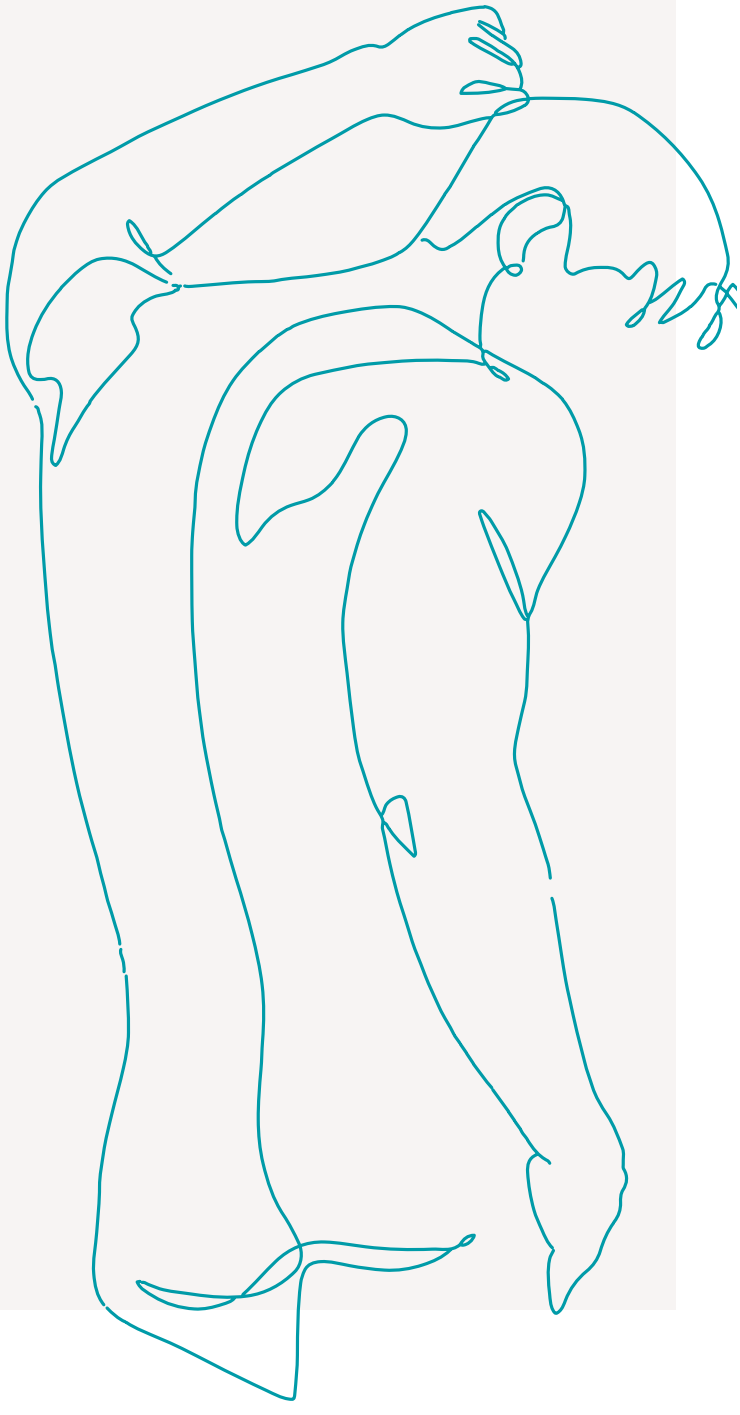
SamanTree
Medical SA

Histolog® Scanner

Cancer cells at your fingertips



Prostate brochure 2022

Robot-assisted radical prostatectomy (RARP) allows surgeons to remove the prostate with precision, making conservative treatment possible. Nerve-bundles preservation is now often offered to patients to maximize their chance of remaining continent for urine and maintaining erectile function.

The Clinical Need

The absence of adequate intra-operative margin assessment (IOA) makes nerve-sparing surgeries prone to recurrences, with up to 40% of patients detected with positive margins[1].

Neurovascular structure-adjacent frozen-section examination (NeuroSAFE) was introduced in 2005 to enable assessment of posterolateral margins adjacent to the neurovascular bundles. This technique enables a precise IOA, however, it is an elaborated procedure requiring trained resources and taking up to 1 hour. Only a few centers have set up this procedure as their clinical routine.

Prerequisites to standardization of nerve-sparing approach :

- Accurate IOA
- Cost-effective technique
- Technology usable by both surgeons and pathologist

[1]Jeong et al., 2022, Izard et al., 2015, Iczkowski et al., 2011

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.

	1	2	3
	ENSURE SUPERIOR PATIENT CARE	SAVE PRECIOUS TIME AND RESOURCES	STANDARDIZATION OF NERVE-SPARING APPROACH
	Nerve-sparing approach is associated with an increased risk that tumour will be left on the surface of the resected specimen (positive margins).	Frozen section analysis is performed to evaluate the nerve-bundles. It requires at least a technician and a pathologist, resulting in a approx. 1 hour procedure.	The risk of recurrence and IOA complex logistics make nerve-sparing available for only a subset of patients.
PROBLEM	High rate of positive margins associated to nerve-sparing approach	Frozen section analysis is time/ resource consuming	Nerve-sparing associated to IOA is proposed to only a subset of patients
SOLUTION	Real-time morphology information of the whole prostate, including areas adjacent to the neurovascular bundles.	Easy-to-use digital microscope for fresh tissue imaging in less than a minute. Minimal ressources utilization (1 clinician), compatible with current workflow (not damaging)	Providing a cost-effective solution to standardize the practice

Our solution
The Histolog® Scanner

Global mapping of the prostate 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 RARP, an initial feasibility study showed that the Histolog Scanner enabled NeuroSAFE-like procedure with similar outcomes, however with > 80% time reduction and used by a pathologist alone.

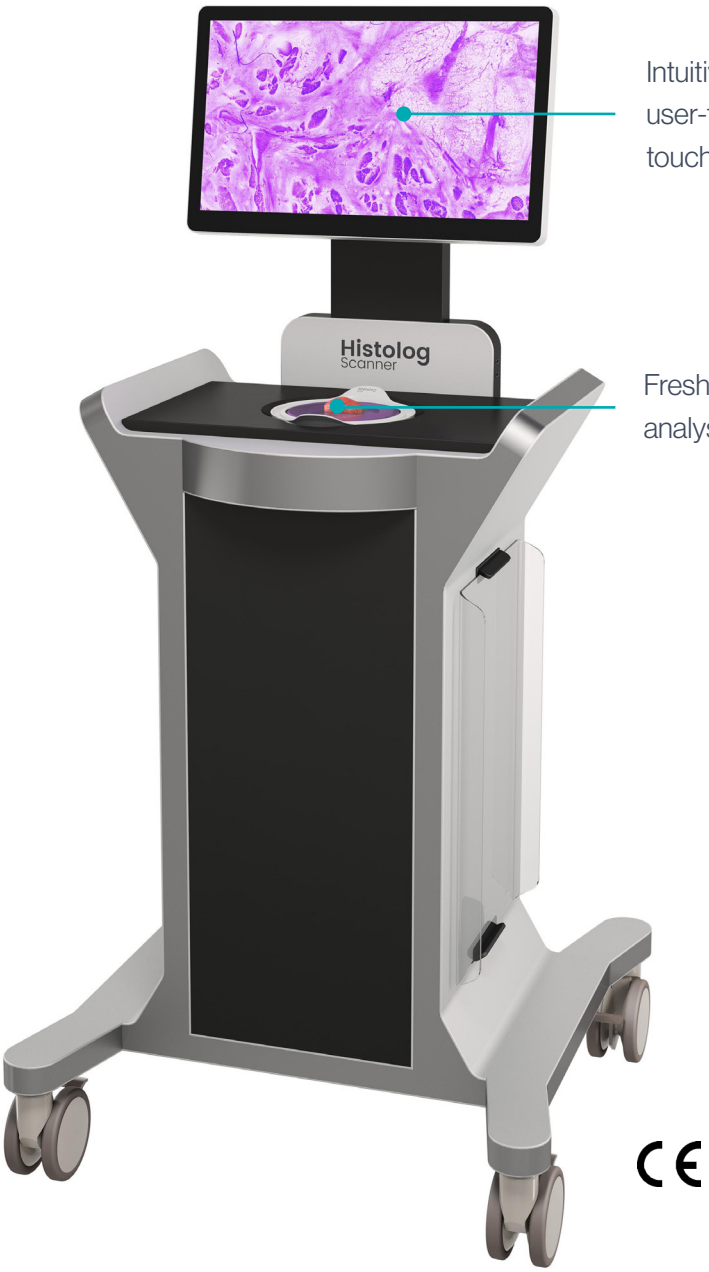
A cost-efficient technique that provides real time morphology information

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



QUICK & CLEAN

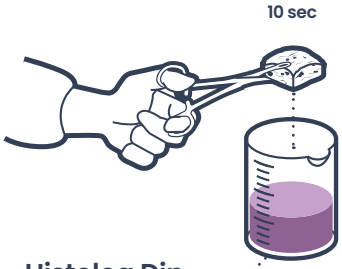
4-steps procedure for
accurate margin assessment
immediately in the OR

1 Excision

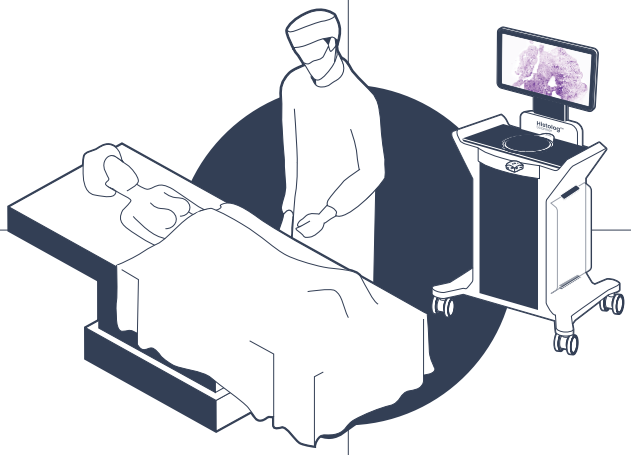
Excise the tumor from the patient.

2 Preparation

Immerse the excision in Histolog Dip and rinse it.



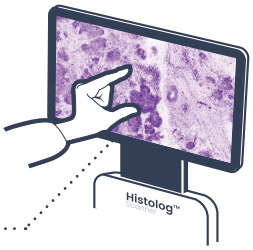
Histolog Dip
Histological stain



4 Evaluation

With this additional information, return to patient in confidence.

Excision is sent for standard post-surgical pathology assessment.

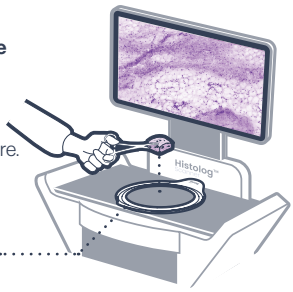


Touchscreen interface
Instant access to special features such as reporting & annoting tools

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 under evaluation by leading centers in Europe for its application in breast, pathology and prostate.

An initial feasibility study was performed with Canisius Wilhelmina Hospital (Netherlands), showing that the Histolog Scanner had similar performances as NeuroSAFE, however with drastic time savings (80%).

These promising data raised the possibility to having a cost-efficient technique for IOA in nerve-sparing surgery. The Histolog® Scanner is currently under evaluation in the course of the NeuroSAFE PROOF clinical trial initiated by the medical team of University College London (UCL) led by Mr Greg Shaw.

Reference centers

Canisius Wilhelmina Hospital, Netherlands

University College London, United-Kingdom


King's College Hospital
Imperial College Hospital
University College London Hospital
Erasmus Hospital
Canisius Wilhelmina Hospital
St. Vincenz Hospital
Heidelberg University Hospital
University Hospital rechts der Isar
Brust Centrum Zürich
Gustave Roussy Institute
Institut Cancer de Lorraine
Valais Hospital
Institut Bergonié
Reggio Emilia Hospital

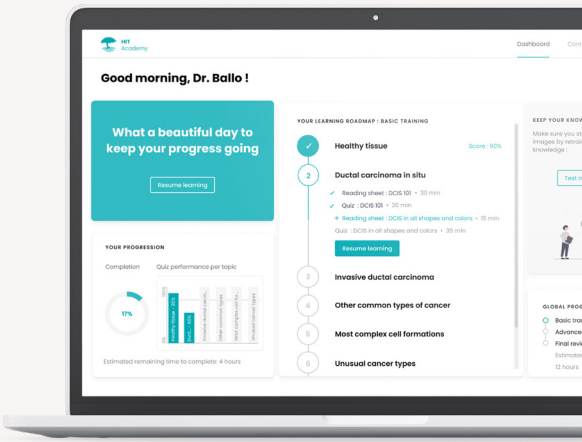
Learn to use Histolog images in no-time

Histolog Image Training program (HIT)

Short. Flexible. Simple.

A learning program designed for clinicians.

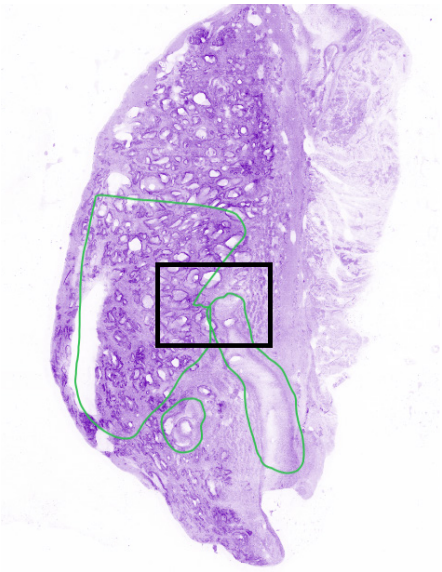
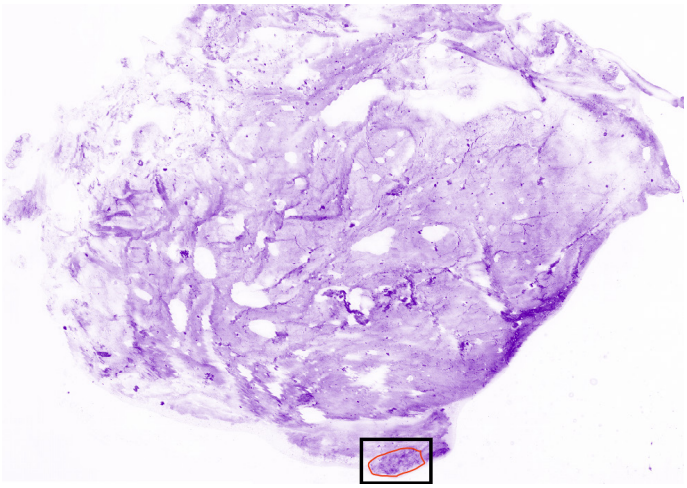
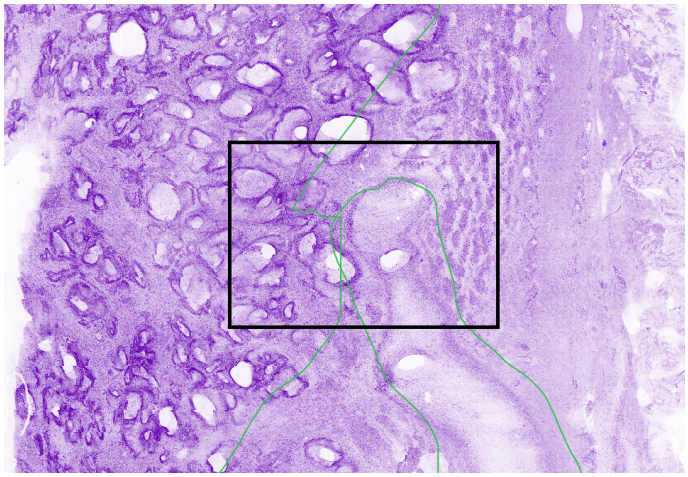
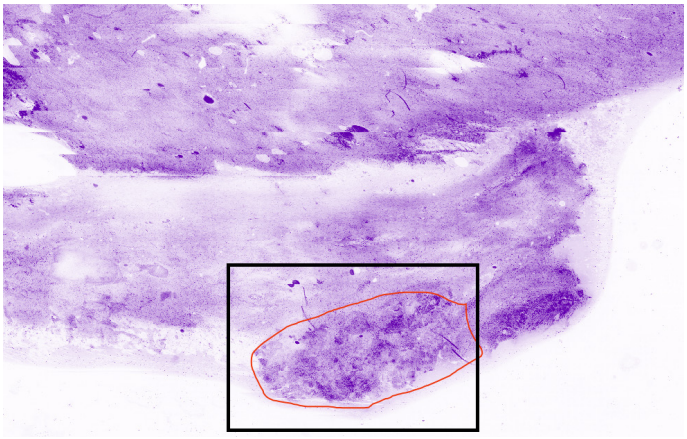
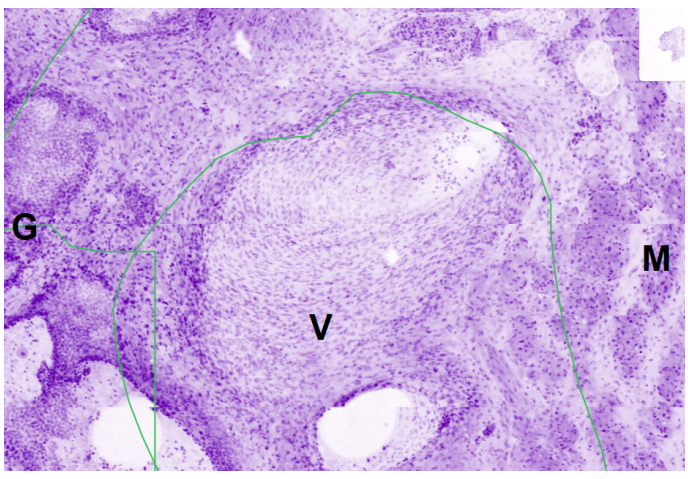
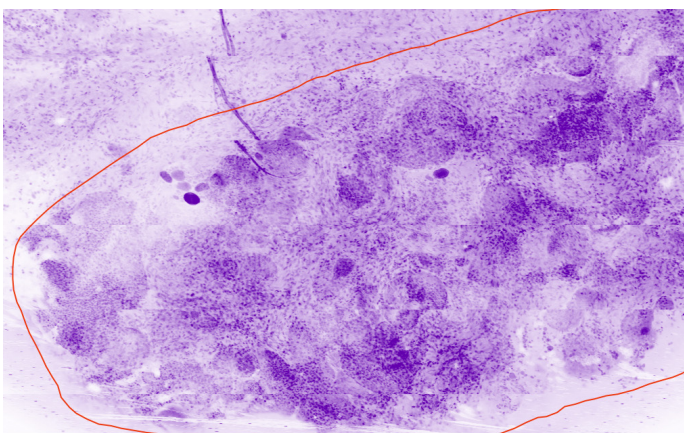
The Histolog Image Training (HIT) was developed with our community of pathologists and experts to provide a simple and efficient way of getting familiar with Histolog image. Designed for both beginners and experienced morphology content readers, the HIT is accessible to all and allows for flexible learning. In and out of the operating theatre, you set the pace and we keep it.



THE GOLD STANDARD IN THE OR

Once resected, the full excision is simply dipped in a contrast agent and placed on a disposable dish over the imaging window. Within 1 minute, the specimen is ready for imaging. There is no need for fixing, nor embedding, nor glass mounting of the excision. Then, within a few seconds, a digital image of the excision surface is displayed on a touch screen which allows to zoom and move around in the image. Surgeon can visualize suspicious lesion at a glance. Importantly, the excision remains intact for later final assessment.

Examples of peripheral area images close to neurovascular bundles

	Tissue Sections with Vessel, Muscle and Normal Glands	Prostate cancer at the periphery
5% Zoom level (Full Field of View) of Histolog Scanner	 Large normal glands can be identified at this magnification. A large vessel is seen within a green annotation. The black frame indicates the area that is shown at the highest magnification on the right.	 Large normal glands can be identified at this magnification. A large vessel is seen within a green annotation. The black frame indicates the area that is shown at the highest magnification on the right.
25% Zoom level (Full Field of View) of Histolog Scanner	 Peripheral area close to neurovascular bundles. Large normal glands on the left, large vessel in the center and muscular fibers with connective tissue on the right.	 Small suspicious glandular structures are seen on the border of the specimen (artefact of organ dissection exposing inner structures on the surface of the specimen that should not be considered as positive margin implying intraoperative actions).
100% Zoom level (Full Field of View) of Histolog Scanner	 Large normal glands on the left (**G**) Large vessel in the center (**V**) and Muscular fibers (**M**).	 Cancerous glands are seen in the image. They are small roundish histological structures presenting an epithelial texture surrounded by stroma.

Distributed by:

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