On-site and digital.
Our training program for you.

From basic knowledge to expert.

Further information on
our website www.vivascope.com

Introductory training – on-site

The training after device installation conveys the basic knowledge for the daily routine that users need for safe handling of the VivaScope. To support the training, presentations, manuals, guidance on optimal imaging and publications are provided.

Expert training

In a clinical setting, users are trained by renowned experts. The course focuses on staining protocols, tissue handling tips, and the rapid and accurate interpretation of the VivaScope images.

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www.vivascope.com

EX VIVO IMAGING

VIVASCOPE

Instant Digital Pathology

Rapid on-site evaluation workflow.
H&E-like optical sections. **In less than 5 minutes.**

with the **VivaScope 2500**

180+
publications

Devices
Worldwide

Germany
Austria
Poland
Spain
Italy
France
Belgium
Switzerland
United Kingdom
South America
United States
Australia
Sweden
Brazil
Turkey
India
more

Prof. Dr. Anna Crescenzi
Associate professor of Pathology
University Sapienza Rome, Italy

★★★★★

"The VivaScope 2500 offers excellent correlation with final histological results."

Prof. Dr. Jan Gutermuth
Chair and Prinicple Investigator
of the Department of Dermatology
at University Hospital Brussels

★★★★★

“Twice as many patients at half the cost. An innovation in mohs surgery.”

180+
Publications

See all locations
on our webpage

Less than **5 minutes**

The VivaScope 2500 is a confocal laser scanning microscope specifically designed for the examination of freshly excised tissue.

Speed up.
Save costs.

Prof. Dr. Jan Gutermuth
Chair and Prinicple Investigator of the Department of Dermatology at University Hospital Brussels

★★★★★

“Twice as many patients at half the cost. An innovation in mohs surgery.”

Major advantages:

Minimal preparation
Tissue preparation takes only a few minutes, enabling fast image acquisition.

Direct assessment
The images show the morphology at subcellular resolution and can be assessed immediately after scanning.

Remote evaluation / telemedicine
The pathologist can evaluate the images both, on-site and remotely via telemedicine.

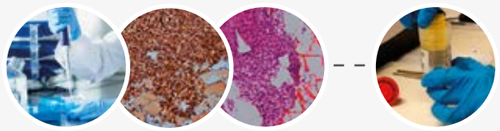
Significant time saving
Compared to conventional frozen or paraffin sections, the evaluation time can be dramatically reduced.

Tissue integrity
The examined tissue remains unharmed by the procedure and can be preserved for later histopathological analysis.

Workflow for **rapid on-site** evaluation of **fresh tissue**. In less than **5 minutes**.

Fresh tissue can be examined immediately after an excision without lengthy procedures. This allows for the direct assessment of the specimen in the operating room. Based on the acquired images, decisions concerning the continuation of the surgery or the taking of further biopsies can be made.

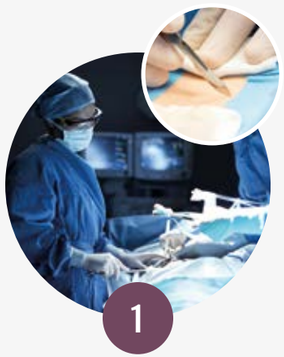
Standard analysis possible
after using the VivaScope 2500:



molecular analysis | IHC | H&E staining | formalin fixation

Full preservation

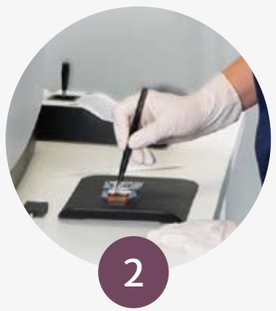
The examined tissue remains unharmed by the procedure and can be processed for histopathological and integrative analysis later on.



1

Tissue removal

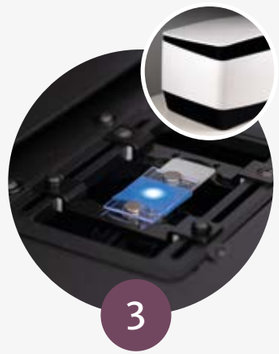
The tissue is processed directly after excision without fixation.



2

Staining procedure

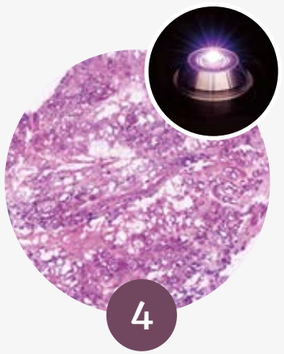
The specimen is then quickly and easily stained with a fluorescent dye and mounted on a glass slide.



3

Tissue mounting

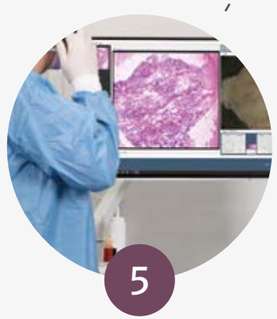
The glass slide is subsequently inserted into the VivaScope 2500.



4

Confocal imaging

The VivaScope 2500 rapidly scans the excised tissue and reveals the cellular morphology.



5

Evaluation & telemedicine

During the surgical intervention, the specimens can be evaluated microscopically and the procedure adapted accordingly.

6

Direct molecular analysis possible

Medical **imaging**

VivaScope technology is based on confocal microscopy and acquires images of superb optical resolution and contrast. VivaScope images allow for direct pathological analysis during surgery. Like H&E staining, VivaScope images are generated from two components. **Two lasers** of different wavelengths create two distinct images, a fluorescence image and a reflectance image. Both signals are scanned simultaneously and are used to create pseudo-colored images. The device's software uses an algorithm to translate the acquired image information into colors that resemble H&E.

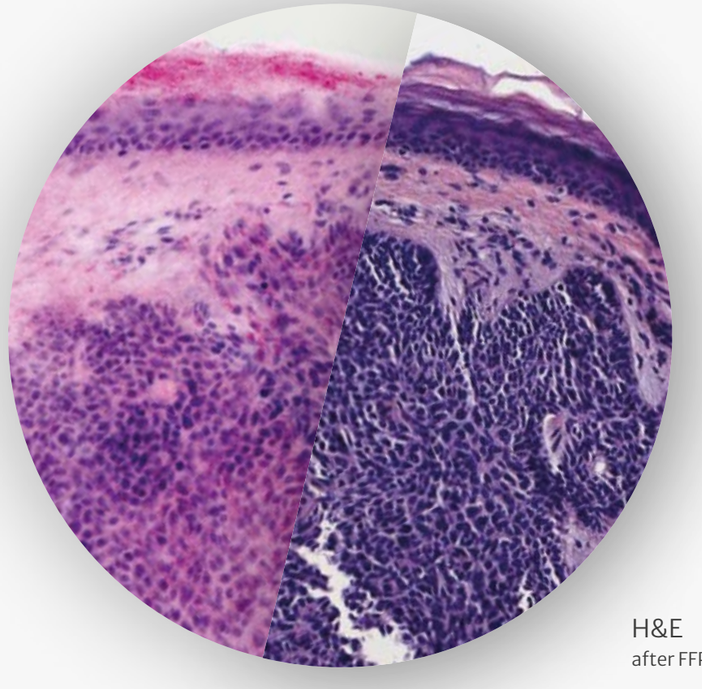
LEARN MORE:

Instant Digital Pathology

High resolution images of unfixed tissue **without sectioning**

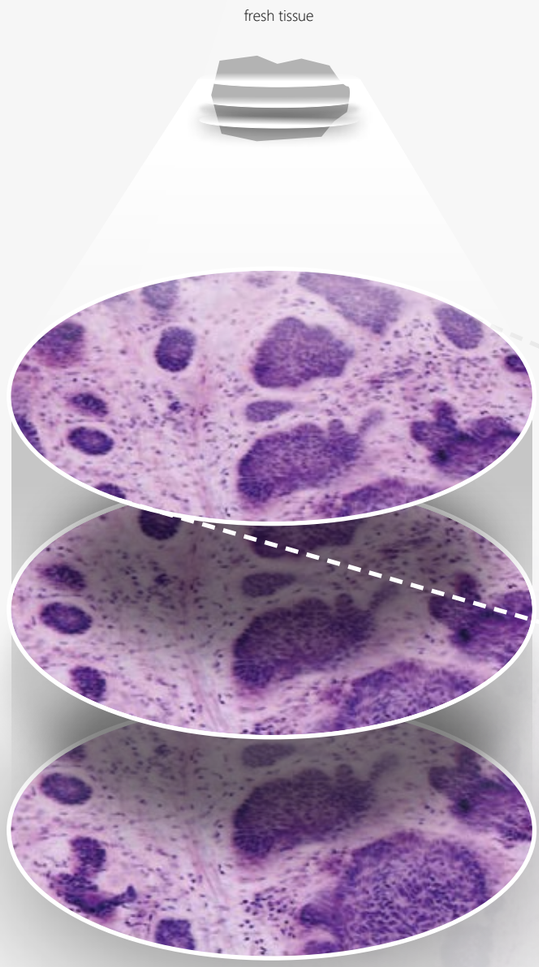
Comparison

VivaScope 2500



H&E
after FFPE

Images courtesy of Dr Javiera Pérez-Anker.
Basal cell carcinoma; imaged with the VivaScope 2500 (left) and after H&E staining (right).



Seamless zoom+ multiple optical sections

subcellular resolution with up to > 1.000x magnification

Multiple optical sections up to max. depth 100 to 150 µm (tissue dependend)

Image courtesy of Dr Javiera Pérez-Anker, Hospital Clinic of Barcelona.

Great sample size
up to 32 mm x 24 mm

Multiple **applications**

The **VivaScope 2500** enables intraoperative assessment of tumor margins as well as immediate examination of biopsies. Surgical workflows and patient management can thus be significantly improved. The acquired images show subcellular details of the examined tissue and provide information **similar to H&E staining.**

1. FNA/FNB and small tissue fragments
2. Intraoperative margin control
3. Core biopsies

LEARN MORE:

Multiple applications

Prof. Dr. Anna Crescenzi
Associate professor of Pathology
University Sapienza Rome, Italy

★★★★★

"The VivaScope 2500 offers excellent correlation with final histological results."

1. FNA / FNB and small tissue fragments

CytoMatrix is a novel, patented technology for the collection and preservation of FNA/FNB samples and small tissue fragments. In combination with the VivaScope 2500, it revolutionizes the handling and analysis of cytological and microhistological specimens. The diagnostic and adequacy assessment of these samples can be rapidly performed while maintaining the integrity of the specimen for subsequent histological, immunohistochemical and molecular analysis.

VIVASCOPE + CytoMatrix

1 Sample
1 For instant assessment + conservative histo-logical evaluation

3 min
Between tissue removal and assessment

Patented
VivaScope patented solution for small biopsies

Advantages:

1. Minimal preparation
no need for an on-site pathologist or specialized cytotechnician

2. Remote evaluation
in real-time, possible via telemedicine

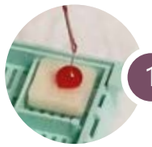
3. Full tissue preservation
for further postoperative analyses, without damage or loss

4. Advanced patient care
by reducing the number of needle passes and associated risk of adverse events

5. Optimized ressource allocation
by minimizing the necessity of re-biopsy

6. Efficient patient managment
by immediately initiating the treatment schedule

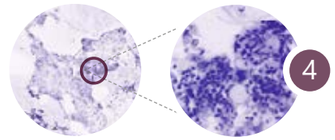
Image courtesy of Dr Anna Crescenzi, University Hospital Campus Bio-Medico, Rome



1 Biopsy
Deposit the (EUS-) FNA/FNB specimen in the center of the CytoMatrix.

2 Staining
Then stain the sample directly on the CytoMatrix.

3 Imaging
Start imaging with the VivaScope 2500 microscope.

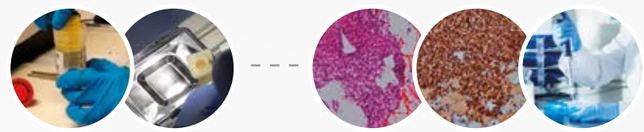


4 Your result:
High-contrast images in subcellular resolution.

Direct molecular analysis possible
within 4 hours instead of weeks/months

+ Preservation
Continue with the preserved specimens for the conventional histopathological procedures (H&E staining, IHC and molecular analysis).

Standard analysis possible after VivaScope 2500:

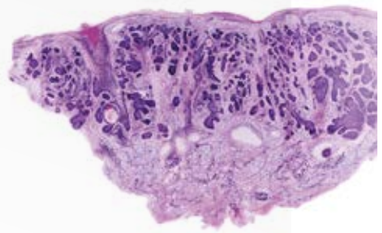


formalin fixation | paraffin embedding | H&E staining | IHC | molecular analysis

2. Intraoperative margin control

The VivaScope 2500 technology offers many advantages over frozen section analysis for microscopically controlled surgery. The time needed to complete a surgery can be reduced significantly. Integrated into a surgical workflow, VivaScope scans provide information comparable to H&E images derived from FFPE or frozen sections. The examination can be performed without a laboratory.

Advantages:



1. No laboratory required

2. Remote evaluation
by telemedicine and reduction of organizational problems

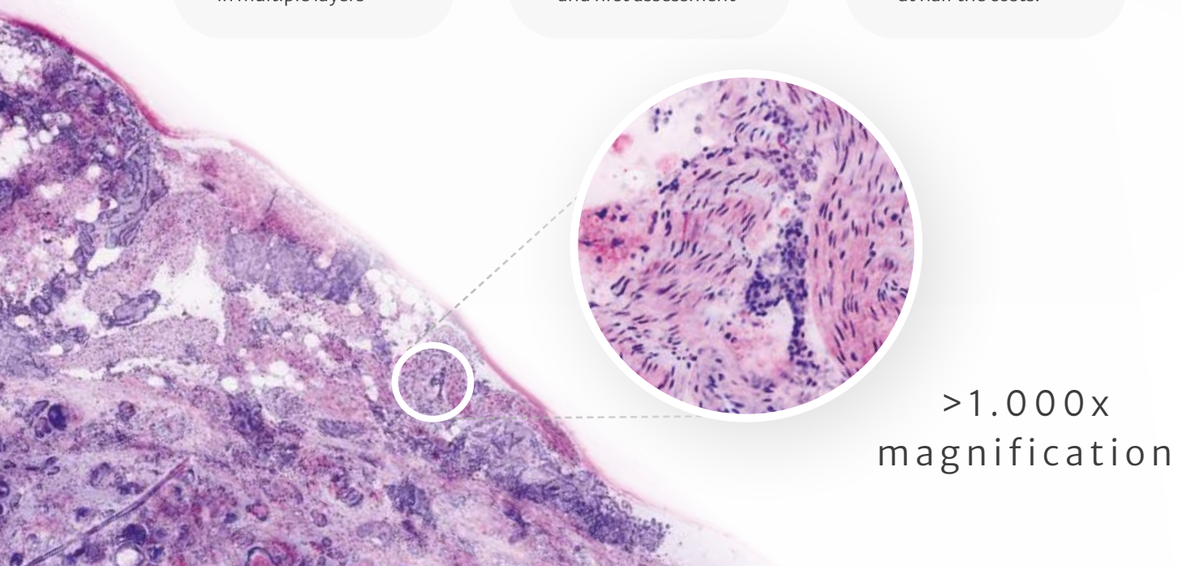
3. Advanced patient care
by optimizing surgical strategy and reducing surgery duration

4. Improved patient turnaround time

Sectioning
Optical sectioning in multiple layers

5 min
Between tissue removal and first assessment

Save Costs
Twice as many patients at half the costs.[1]

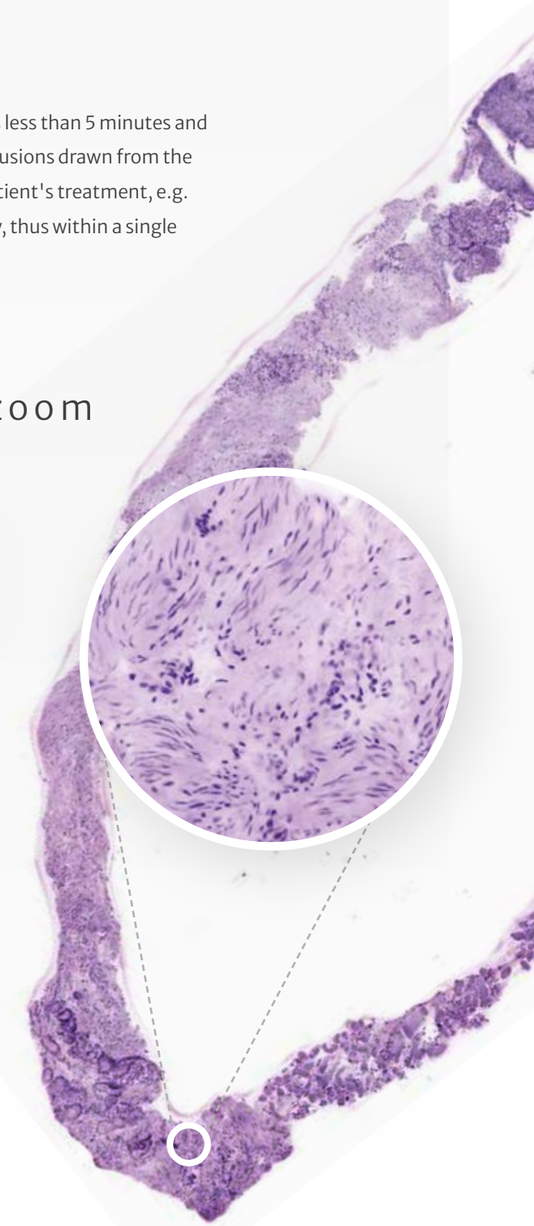


>1.000x magnification

3. Core biopsies

The processing and imaging of core biopsies takes less than 5 minutes and the results can be evaluated instantly. The conclusions drawn from the examination can have a direct impact on the patient's treatment, e.g. enabling therapy to be scheduled immediately, thus within a single hospital stay.

zoom



Optimized
Instant confirmation to avoid unnessesary biopies

3 min
Between tissue removal and first assessment

Cellular Details
Analyze tissue with sub-cellular resolution

Advantages:

1. Rapid evaluation at the bedside

2. Optimize biopsy acquisition

3. Reduce biopsies or avoid re-biopsies

4. Immediately initiate the therapy

Image courtesy of Dr Anna Crescenzi, Unit University Hospital Campus Bio-Medico, Rome (left)
Image courtesy of Dr Javiera Pérez-Anker, Hospital Clinic of Barcelona. (left)
Image courtesy of Dr Stefano Puliatti, Dr Laura Bertoni, Dr Paola Azzoni, University of Modena and Reggio Emilia (right)

[1] Leemans G., Wollenberg A., Gutermuth J. (2023),doi: 10.1111/jdv.19651

Application fields **& publications**

Dermatology

Urology

EUS / EBUS
FNA / FNB

Organ
Transplantation

Gastro-
enterology

Interventional
Radiology

+ **Further application fields are constantly being developed.**

See all **+180 publications**
and **other application fields:**

www.vivascope.com**/publications**

Visit library

The **VivaScope 2500** and the **technology** behind:

488 nm
& 638 nm
operating wavelengths

32 mm
x 24 mm
max. sample size

more than
1.000x
magnification

5 min
scan time for 32x24 mm
(fast scan with overview mode)

The core

Scan times

8 x 8 mm 0:50 min

16 x 12 mm 2:10 min

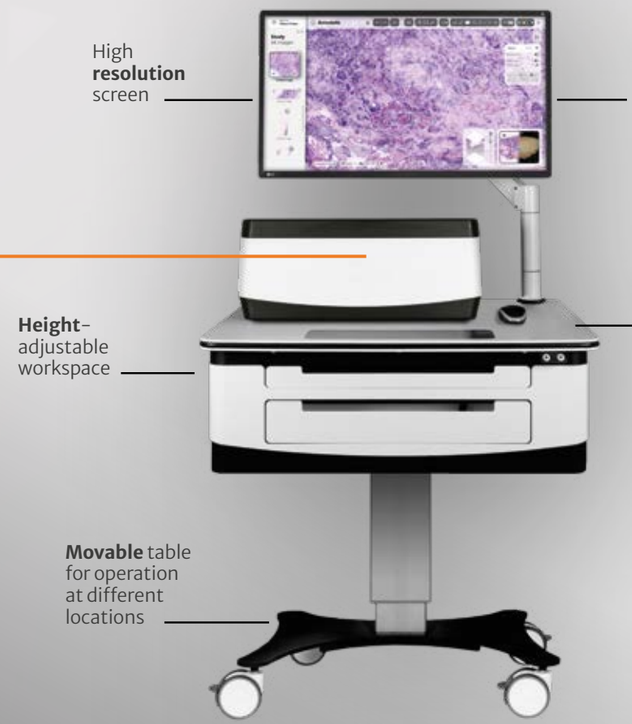
20 x 20 mm 4:25 min

DICOM + HL7

The device is capable of working within a hospital's DICOM environment to enable storage, search, viewing, scheduling and backup of acquired images. It also provides an optional HL7 communication with HIS (hospital information system) allowing for an even smoother integration into the hospital's environment.

The VivaScope 2500

Samples can be examined directly after excision. Preparation and staining of the tissue takes only a few minutes. For easy portability, the VivaScope 2500 can be installed on a movable table and thus be used in different locations.



Datasheet

All new software. Adjust everything.
See **what matters to you.**

Adjust pictures

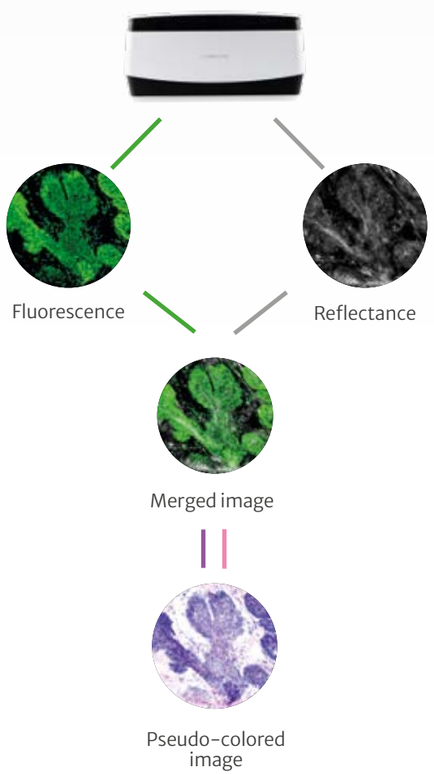
Navigate through the tissue

Optical Sections

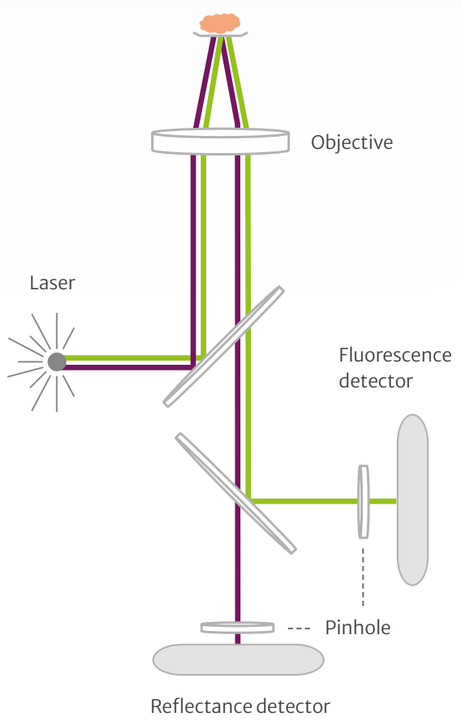
The technology behind:

The technology of the VivaScope 2500 is based on confocal microscopy and acquires images with excellent optical resolution and high contrast. Images obtained with the VivaScope allow pathological examination to be made while surgery is still in progress.

Imaging process



Technology



The **unique** VivaScope **advantages**:

1.

Pseudo-colored images generated by two lasers

A 488 nm laser (blue, fluorescence) and a 638 nm laser (red, reflection) generates images. An integrated algorithm converts the reflection and fluorescence signals into pseudo-colored images in H&E style (comparable information to conventional histology.)

2.

Easy sample handling

A patented sample handling solution simplifies assessing excised tissue, regardless of its shape. Customized solutions depending on the application and specimen properties are provided.

3.

Multiple optical sections without cutting

The user can adjust the focus of the device to different layers of the tissue. Similar to sectioning, multiple optical sections up to a max. depth of 100 to 150 µm (tissue dependend) can be acquired.

4.

Macro images

The digital camera provides a color image of the specimen. This macro image correlates precisely with the confocal image and thus allows for easy tissue navigation, visualization of tissue marking dye and simplified selection of regions of interest.

5.

Advantages over cryosections

Unlike cryosections, VivaScope technology enables a fast and easy handling and imaging of adipose tissue. Furthermore, freezing artifacts are no longer an issue. The excised tissue is not damaged by the imaging process and can be used for further analysis.

6.

FNA/FNB with CytoMatrix

In combination with the CytoMatrix, fragile cytological samples can be easily handled and their adequacy rapidly assessed. At the same time, the sample's integrity is fully preserved for subsequent histological, immunohistochemical and molecular analyses.


VIVASCOPE