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Location: Moldova

FotoFinder bodystudio ATBM® master

and

FotoFinder bodystudio ATBM®

Original user manual

Please read these original operating instructions carefully before using the device and always keep it easily accessible!

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Software version from 3.4.2
for FotoFinder medicams with the serial number MC1000-Y
Status: 17.02.2023

FotoFinder Systems GmbH
Industriestraße 12
84364 Bad Birnbach
Germany

www.fotofinder.de
info@fotofinder.de
Tel.: +49 (0) 8563 – 97720-0
Fax: +49 (0) 8563 – 97720-10

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1 About these operating instructions

NOTE

Caution: The failure to observe these operating instructions may lead to hazards for both the user and the patient!

1.1 Introduction

Please note the following points when using the product and this user manual:

- The product can only be used, operated and maintained properly and safely with the help of this user manual.
- This user manual refers only to the product indicated on the cover sheet.
- We reserve the right to change this user manual due to further technical developments.
- The operator must ensure that the user manual is read and understood by all persons concerned prior to work.
- The chapter on *Safety* (cf. chapter 4 Safety)provides an overview of all important safety aspects for the protection of personnel and the safe operation of the product.
- The manufacturer is not liable for any damage resulting from non-compliance with this user manual.
- Safety incidents occurring in connection with the product must be reported to the manufacturer and the competent authority of the respective country in which the operator is established.
- Reprints, translations and reproductions in any form, including excerpts, require the written consent of the publisher.
- Copyright belongs to the manufacturer.
- These operating instructions are part of the delivery contents.
- These operating instructions apply from the point of transport to final disposal and must be observed.

1.2 Related documents

The following associated documents are relevant for the use of the product and these operating instructions:

- CE Declaration of Conformity (cf. chapter 21 Appendix)
- Documentation from third-party manufacturers are provided separately

1.3 Explanation of the symbols

Observe the operating instructions

Potential equalization

Protective conductor terminal

Alternating current

Direct current

General warnings

Warning of dangerous electrical voltage

Do not dispose of electrical and electronic equipment in household waste.

CE Mark

Manufacturer

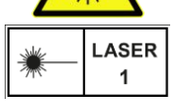
Type B application part

Weight / maximum load

Do not stand on top

Displays the Swiss authorized representative:
Johner Medical Schweiz GmbH, Tafelstattstrasse 13a, 6415 Arth, Schweiz

Warning: laser light



Warning: laser light

Do not push sideways

Risk of getting tangled in belt movement

Observe operating instructions

Additional symbols in the software:

Country of origin / Date of manufacture

Product updates available until

Model number

Medical device

Unique Device Identification

Observe User Manual

1.4 Information on the device label

The following information is shown on the nameplate of the device.

Information	Description
FotoFinder Systems GmbH Industriestraße 12 84364 Bad Birnbach, Germany	Manufacturer and its address
Type	Device type, description of the name of the device, e.g. FotoFinder **bodystudio ATBM master**
Input	Compatible voltage input (if applicable: Input voltage frequency, temperature class of the isolating transformer)
Power	Nominal output
Frequency	voltage frequency
Output	Nominal voltage / Rated current at isolating transformer output
SN	Unique serial number of the device
MD	Medical device
	Manufacturing month and year
MAX. LOAD	Safe working load in kg
	Total weight
IP	IP protection class

2 Installation, updates and uninstalling

The Software must be installed by a trained person or a representative of FotoFinder Systems GmbH. This is also applicable for updates, maintenance and deinstallation of the software.

3 FotoFinder bodystudio ATBM®

The system components and technical data differ depending on the respective system:

- FotoFinder **bodystudio ATBM® master**
- FotoFinder **bodystudio ATBM®** *(1. Generation)*

Automated Total Body Photography with the FotoFinder **bodystudio ATBM® master** or **bodystudio ATBM®** allows standardized photo-documentation of the patients skin surface. The system is for medical skin imaging as well as photo documentation of aesthetic face and body treatment.

The development and production of all products of FotoFinder Systems GmbH is carried out in accordance with the current ISO 13485 standards.

*Fig. 1: Example view for the FotoFinder **bodystudio ATBM master***

NOTE

You can use the following system components in the immediately vicinity of and in contact with the patient:

- medicam
- Positioning mat

NOTE

Some of the software described in this manual can also be used with predecessor systems of FotoFinder Systems GmbH.
Please ask your local consultant for more information.

3.1 System Components and Technical Data ATBM master

The FotoFinder **bodystudio ATBM master** consists of the following components:

1	ATBM Tower with automatic rail	11	Camera slide
2	Monitor	12	Drive belt
3	Camera	13	Cable chain
4	PolFlash XE (flash system)	14	Compartment for Docking Station
5	Keyboard	15	Laser Liner
6	Mouse with pull-out tray	16	Control Unit
7	Compartment	17	Main switch, LAN input
8	medicam	18	Electric motor
9	Silent Medical Server	19	Positioning mat (image may deviate)
10	Isolating transformer		

Positioning mat

Together with the **Laser Liner** the positioning mat allows consistent positioning of the patients at baseline and follow-up imaging sessions.

Technical information

Model:	FotoFinder **bodystudio ATBM master**
Supply Voltage / Frequency:	AC 115 V / 230 V / 47 - 63 Hz
Power consumption:	max. 350 Watt
Protection class:	1
IP Protection class:	IP20
Network (LAN):	RJ 45 socket 10/100/1000Mbit/s speed Network isolation standard IEC 60601-1 (3rd Edition)
Operating temperature:	0 - 25° C
Relative humidity*:	20 - 90 %, non-condensing
Air pressure*:	min. 80 kPA to max. 107k PA from -425 m to 2000 m a. s. l.
Transport / storage temperature:	0 - 40° C
Transport / Packaging:	The device is shipped upright or lying flat on a wooden pallet by a freight company. The package has the following dimensions, including pallet (LxWxH): 90 x 90 x 210 cm Total weight: 125 kg
Transport/ Storage:	dry room, do not subject to moisture, protect from dust
Software requirement:	FotoFinder **Universe** Software 3.1 and higher
Compatibility with Canon cameras:	Full-frame: – Canon EOS 6D Mark II – Canon EOS 5Ds – Canon EOS R Lens: – Sigma 50 mm F1.4 DG HSM | Art – Canon EF 24-105 mm f/3.5-5.6 IS STM – Canon RF 50 mm F1.8 STM – Canon RF 24-105 mm f/4L IS USM
Amount of patients / day:	Max. 24 patient / day (8 hours / day)

*valid for operation, transport and storage

3.1.1 Laser Liner

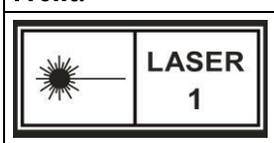
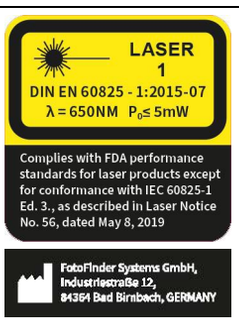
Fig. 2: Laser Liner on the ATBM master tower (figure differs for ATBM bodystudio ATBM 1st generation)

The **Laser Liner** enables reproducible patient positioning by projecting a red line onto the positioning mat.

Technical information

Model:	FotoFinder Laser Liner (USB)
Wavelenght:	650 nm (visible)
Output:	5 mW
Beam duration:	<1.5mm@3m
Laser class:	Class 1 Laser Product according to DIN EN 60825-1:2008-05
Angle of aperture:	20 degrees
Working range:	5 m
Thermal stability:	0°- 50° celsius
Input:	5,0 Volt via USB
Housing material:	polyamide

The following labels are applied on the device:

Front:	**Rear:**
	

3.1.2 PolFlash XE

PolFlash XE is the flash unit on your FotoFinder **bodystudio ATBM master** system.

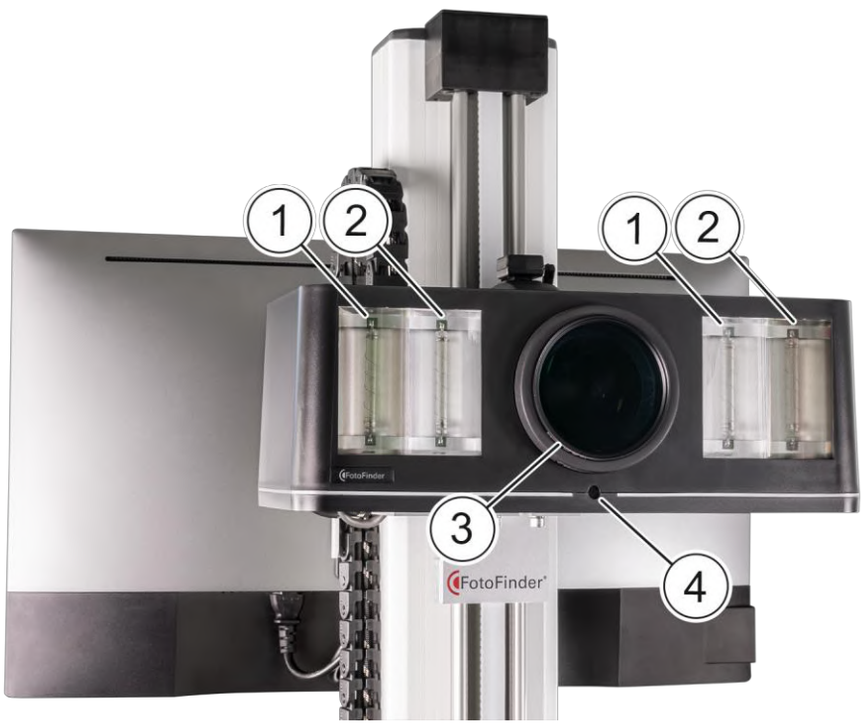


Fig. 3: PolFlash XE on an ATBM tower

1 Flash tubes for polarised captures
2 Flash tubes for non-polarised captures
3 Camera lens
4 Cross-line laser for focussing

- The software controlled Xenon flash enables cross-polarized, reflection free images as well as non-polarized images with studio lighting.
- The optional **Zoom Motor** is integrated in **PolFlash XE DX2** and connected to the camera lens. It automatically adjusts the camera lens to the correct zoom position.

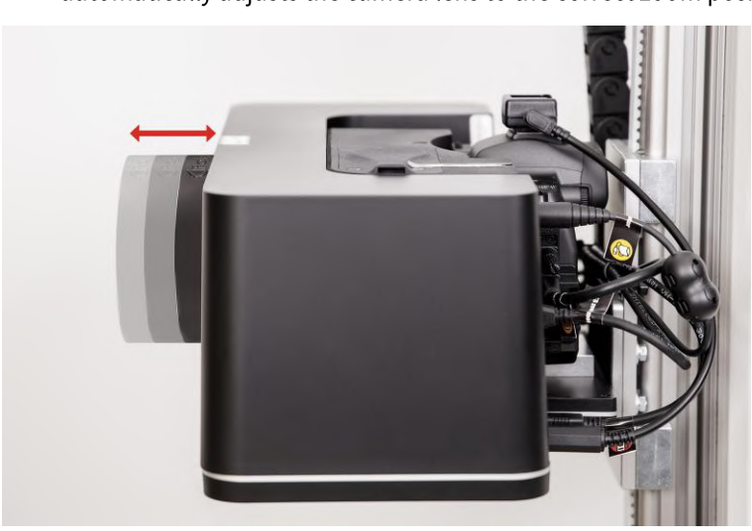
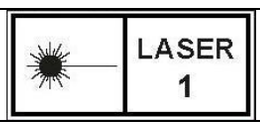
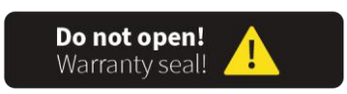
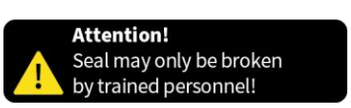


Fig. 4: PolFlash XE DX2 with Zoom Motor in different zoom positions

Technical data

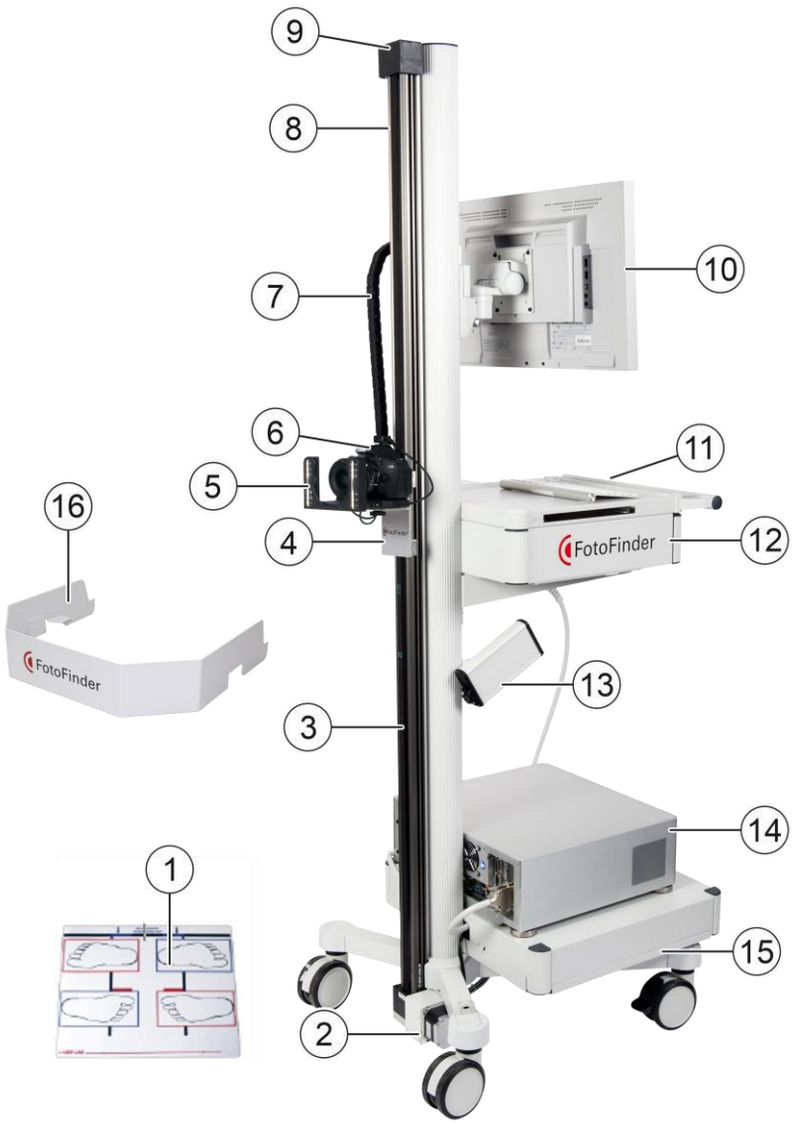
Model:	**PolFlash XE**
Input:	DC 24.0 V, 5 A
Power:	120 W
Output:	DSLR DC 8.0 V

The product is labelled as follows:

Top:	
Laser Class 1:	
"Do not open" seal:	
Bottom:	
Type plate:	
Laser label:	
"Do not open" warning:	

3.2 System Components and Technical Data ATBM (1st generation)

The FotoFinder **bodystudio ATBM** (1st generation) consists of the following components:



1	Positioning mat (image may deviate slightly)	9	ATBM Tower with automatic rail
2	Electric motor	10	Monitor
3	Drive belt	11	Keyboard and mouse
4	Camera slide	12	Compartment
5	PolFlash	13	Laser Liner
6	Camera	14	Silent Medical Server
7	Energy chain	15	Isolating transformer
8	Drive belt axis	16	Bumper

Your **bodystudio ATBM** system is delivered with a Canon EOS SLR camera and a Sigma 30 mm (F1.4 DC HSM) lens as standard. If you are using **aesthetics**, your system is equipped with a Canon EF-S STM 18-55 mm lens and the FotoFinder **Zoom Ring**.

Technical information

Model:	FotoFinder **bodystudio ATBM®**
Supply Voltage / Frequency:	AC 100-230 V / 47-63 Hz
Power consumption:	max. 500 Watt
Protection class:	1
IP protection class:	IP20
Ambient temperature:	0 - 25° C
Relative humidity*:	20 - 90 %, non-condensing
Air pressure*:	min. 80 kPA to max. 107k PA from -425 m to 2000 m a. s. l.
Transport / storage temperature:	0 - 40° C
Transport / Packaging:	The device is shipped upright on a pallet by a freight company. The package has the following dimensions, including pallet (LxWxH) [cm]: 90 x 90 x 210 cm Total weight: 125 kg
Transport / Storage:	dry room, do not subject to moisture, protect from dust
Software requirement:	FotoFinder Universe Software 2.0.41 or higher
Compatibility with Canon SLR cameras:	Canon EOS 600D/Rebel T3i, EOS 650D/Rebel T4i, EOS 700D/Rebel T5i, EOS 750/Rebel T6i, EOS 800D/Rebel T7i with Sigma 30 mm lens
Amount of patients / day:	approx. 20 patients

*valid for operation, transport and storage

3.2.1 Laser Liner

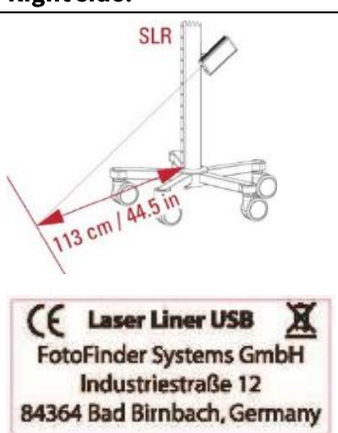
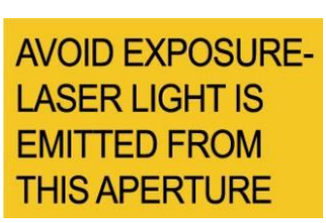
The **Laser Liner** enables reproducible patient positioning by projecting a red line onto the positioning mat.

Model:	FotoFinder Laser Liner (USB), for ATBM (1st generation)
Wavelength:	650 nm (visible)
Output:	< 5.0 mW
Beam diameter at aperture:	0.6 mm
Beam duration:	≥ 0.25 seconds
Laser Class:	1
Scattering angle:	20 degrees
Working range:	0.90 m/ 35.4 inch
Frequency drift:	0.25 nm/ °Celsius
Thermal stability:	0°- 45 °Celsius
Input power:	5.0 V via USB or 3.7 V via AA battery
Housing material:	Metal

Laser Liner Label

Instructions and symbols attached to the device such as safety labels and signs must be observed at all times. They may not be removed and must be kept in fully legible condition.

The following labels are fixed to the product:

Left side:	**Right side:**
	
Front:	**Rear:**
	

3.3 FotoFinder Docking Station mini

*Fig. 5: FotoFinder **Docking Station 1000 mini***

The FotoFinder **Docking Station 1000 mini** can be combined with a **Silent Medical Server** or with a PC / Laptop with USB 2.0 and USB 3.0 ports.

Technical data

Model:	FotoFinder **Docking Station 1000 mini**
Input voltage:	DC 12 V
Power consumption:	25 watts
Protection class:	1
IP protection class:	IP20
Video input connection:	RS232 DSub 4+1
Safety terminal:	Potential equalisation pin
Operating temperature:	0 - 25° C
Relative humidity*:	20 - 90 %, non-condensing
Transport / Storage:	dry room, do not expose to moisture, protect from dust
Compatibility with FotoFinder cameras:	**medicam 1000**
Required PC hardware:	USB 2.0 type A and USB 3.0 type A Please note that proper operation cannot be guaranteed with all USB ports on normal PCs/notebooks.

*valid for operation, transport and storage

3.4 FotoFinder medicam®

Your system is delivered with the **medicam 1000** dermoscopy camera.

For details on operation, please refer to the corresponding chapter later in this manual (cf. chapter 7.6 Operating the medicam®).

Abb. 6: ***medicam 1000*** *with the D-Scope IV dermoscopy lens*

1	Camera mount	4	Plug in distance holder
2	Bayonet fastener	5	Release button
3	D-Scope-IV Lens*	6	Operating light
		7	Back panel

**alternatively, other lenses and attachments can also be used, see in the following sections.*

- The **medicam** LED is illuminate in green when the camera is connected to power.

Abb. 7: For Overview images: ***medicam 1000*** *without a microscopic lens*

1 LED-Ring light
2 Contact pins for dermoscopy lens
3 optional Distance holder for close-up overview images

⚠ CAUTION

Please pay attention to the following when using the **medicam** without a lens attached: A small low voltage electrical charge could be transmitted if the contact pins inside the lens bayonet ring are touched by the patient or user. **Therefore, do not touch the contact pins during use!**

Fig. 8: medicam distance holder cover

The delivery scope of the optional distance holders of the **medicam 1000** includes a black cover as well.

These covers must be attached on the distance holder with slight pressure before it is placed on the patient's skin.

Remove the cover for cleaning purposes after each use and place it back on for the next use of the distance holder.

Technical data

Model:	FotoFinder **medicam 1000**
Protection class:	1
Classification of the applied part	B
IP protection class:	IP20
Operating temperature:	0 - 25° C
Relative humidity*:	20 - 90 %, non-condensing
Air pressure*:	min. 80 kPA to max. 107k PA from -425 m to 2000 m a. s. l.
Transport and storage temperature:	0 - 40° C
Image scanner element	1/2.8 type CMOS
Number of (effective) pixels:	approx. 2,000,000 pixels
Signal-to-noise ratio:	more than 50dB
Minimum exposure value:	min 0.1 lux / F1.6
Electronic shutter:	1/1 to 1/10,000 s, 22 levels
Resolution:	1920 x 1080 pixels
Image format:	16:9
Densest distance without attachment:	Wide-angle 1 cm, tele 120 cm
Zoom:	140x
Optical zoom:	Yes
Power supply:	12 V DC via computer
Illumination:	LED
Connection:	RS232 D-Sub 4+1
Weight without reflected light microscope attachment:	approx. 560 gram
Cable length:	300 cm

*valid for operation, transport and storage

3.4.1 D-Scope III

The **D-Scope III** is an optionally available attachment for your **medicam**. It allows optical magnifications up to 400x (cf. chapter 14.6 Micro images with the D-Scope III).

Fig. 9: D-Scope III

1 Focus ring
2 Colour markings to set an average focus value

3.4.2 D-Scope IV

The **D-Scope IV** lens for the **medicam 1000** can be used for both polarized and non-polarized microimaging. It allows optical magnifications up to 140x.

For the **D-Scope IV** the following attachments are available:

- **Lens attachment, closed**
  for contact Dermoscopy

- **Lens attachment, open**
  for non-contact Dermoscopy

- **Lens attachment, conical**
  for lesions difficult to access

NOTE

When using the conical attachment, please make sure to always use an immersion liquid and non polarized lighting.

The **D-Scope IV** is equipped with LED illumination. Depending on the capturing mode (polarized – non-polarized), this switches to the appropriate mode as well. The **Universe** software shows which illumination is active at the moment in micro capturing mode. This can also be seen when the attachment cap is briefly removed.

NOTE

Image capturing with the D-Scope IV without the attachment cap is not possible! These images are only to visualize the built-in illumination!

CAUTION

LED light may lead to short-term impairment of your eyesight.
Never look directly into the LED light.

Fig. 10: Visualization of the medicam 1000 with D-Scope IV with removed attachment cap and active LED light for polarized images.

Fig. 11: Visualization of the medicam 1000 with D-Scope IV with removed attachment cap and active LED light for non-polarized images.

3.4.3 Accessories for medicam®

Accessories	Item number
FotoFinder **Cleaning Kit**	FFS090400
D-Scope III Dermatoscopic attachment lens for up to 400x magnification (cf. chapter 3.4.1 D-Scope III)	FFS009800
D-Scope IV Dermatoscopic attachment lens for polarised and non-polarised images (cf. chapter 3.4.2 D-Scope IV)	FFS000910
■ **D-Scope IV attachment**, closed	
– individual	FFS913030
– Pack of three	FFS912205
– Pack of ten	FFS913019
■ **D-Scope IV attachment**, open	
– Pack of three	FFS912204
■ **D-Scope IV attachment**, conical	
– individual	FFS000911
FotoFinder **Docking Station medicam 1000**	FFS010002
Spacer for close-up overview images	
Spacer 28 mm	ASD000314
Spacer 63 mm	ASD000315
Spacer clip (pack of three)	THI000024

Tab. 1: List of **medicam®** *accessories*

Visit our webshop at **www.fotofinder.de**.

3.5 Life cycle

- The components of your system have an certain lifespan.
- Please note that this information is only based on reference values and estimates. The actual lifespan of every individual component may differ from these specifications.
- The lifespan is determined in imaging cycles, i.e. complete photo documentation of a patient. An imaging cycle is assumed to consist of 20 images taken with the camera.
- The estimated lifespan of the individual components:

	imaging cycles	images
Flash:		
– PolFlash	24.000	480.000
– PolFlash XE	3.000	60.000
Belt and step motor (only for ATBM Towers):	100.000	2.000.000
Canon camera:	3.000	60.000
Hard disk (until full):	8.000	160.000

- The automated tower control system (belt, camera holder, rail) is maintenance free and does not require lubrication. However these components should be visually inspected from time to time for wear damage (rail, camera holder) and stretching of the belt. If any of these components are no longer working correctly, they must be replaced by a FotoFinder technician.

4 Safety

4.1 Adherence to the operating instructions

NOTE

Every person assigned to work with the system must have read and understood these operating instructions and particularly the chapter on *Safety*.

- The knowledge and observation of the applicable contents is a prerequisite for protecting users and patients from hazards and to prevent user errors.
  It is therefore imperative that all safety guidelines are followed to ensure your safety.
- These operating instructions are a component of the system and must always be available near the product. These operating instructions must be read and understood by the personnel and observed during any work with the system. Please contact the manufacturer immediately if contents of these operating instructions are unclear or if you have any questions.
- Apart from the safety guidelines in these operating instructions, please observe the following regulations and provisions:
  - Intended use
  - Appropriate accident prevention regulations
  - Occupational health regulations
  - Generally recognized safety-related regulations
  - Country-specific regulations
  - Attached documentation from third-party manufacturers
- In addition to these user instructions additional safety regulations of your institution or company may have to be observed.
- Additional training is required besides reading these user instructions. The training must be administered by qualified training personnel only.
- The safety instructions of the manufacturer are provided in addition to the general safety regulations of your institution or company. The provided instructions shall not invalidate existing regulations.

4.2 Intended use

- The FotoFinder **ATBM** systems, as well as the **Bodystation** and **Studio Stand** systems are intended for the standardized non-invasive photo documentation of the skin's surface by medical professionals.
- The following applications are possible:
  - Imaging and documentation of the surface of the skin across the entire body
  - Before and after photography of cosmetic or medical procedures
  - Documentation of patient-relevant image data
  - Documentation of specific skin features
  - Non-invasive digital dermoscopy of intact skin
- The system is designed to be used in combination with the FotoFinder **Universe** software only.
- Images are taken with the attached DSLR camera from different positions and saved in the system.
- Only use the permitted lenses.
- For consistent image quality and illumination, only take pictures with the equipped PolFlash / PolFlash XE flash system.
- As background for the photo documentation, use only a dark, non-reflecting photo background (e.g. dark blue photography canvas/ paper provided by FotoFinder).
- The digital, non-invasive examination of intact skin (dermoscopy) is possible with the **medicam** camera.
- Use the device only in bright and well illuminated rooms. Avoid direct sun light.
- Full body photography can only be performed with patients of a height between of 130 cm and 200 cm. Full body photography of larger or smaller patients is not supported.
- The product is intended for temporary use up to a maximum of 60 minutes per session.
- Running the **Bodyscan** software module may only be done on photos of fully grown patients.
- The **Bodyscan** results are based on image comparison and do not replace a thorough skin exam by a trained physician. A diagnosis is always the responsibility of the physician.

4.3 User groups

The following target groups with the required qualifications may work on the device:

Target group	**Qualification**
Physician	Professionally qualified as physician
Practice personnel	Trained and instructed and professionally qualified through a completed apprenticeship in specialized medicine
Service/Hospital technician	At least 3 years of professional experience in the medical technological sector

We have allocated target groups to life below. The target groups may work on the device dependent on this allocation:

	Target group		
Life phase	Physician	Practice personnel	Service/Hospital technician
Installation			X
Commissioning			X
Operation	X	X	
Malfunction			X
Maintenance			X
Disassembly			X
Disposal			X

4.4 Use environment

- The product is intended for use in a professional medical environment (e.g. clinic, hospital) by the users described in the chapter on *User groups* (cf. chapter 4.3 User groups).
- The product is intended for use and operation in a patient environment as per EN 60601-1 only.
- Refer to the respective chapter (cf. chapter 5 Requirements for using the device)for requirements regarding the physical and technical environment of use.
- There are no additional requirements for the social or clinical environment of use.
- The product is not intended for use by laypersons.

4.5 Patient population

Patients with one of the following characterizations are intended to be examined with the systems:

- General persons with skin lesions
- Patients with multiple nevus syndrome
- Patients with general inflammatory skin disease
- Patients with scalp hair disorders

The intended patient population includes patients regardless of demographic factors (e.g. gender, profession), physical factors (e.g. weight, strength) or social, religious and cultural background. It is possible to document various skin types within the FotoFinder **Universe**.

4.6 Indications and contraindications

The systems are intended for the conditions mentioned in chapter *Patient population*. For a detailed list of ICD codes, please reach out to info@fotofinder.de.

The following body parts are intended to be examined with the FotoFinder **medicam 1000** and FotoFinder **leviacam**:

- Intact skin surface of the whole body
- Scalp skin
- Nails

The devices are not intended to record images from mucosa, eyes and natural or artificial body orifices. The devices are not intended to record images from injured skin. The devices do not carry out a diagnosis. The diagnosis is the responsibility of the medical professional!
The Total Body Mapping module is only applicable to persons with a height between 130 cm and 200 cm; as well as the analysis with the **Bodyscan** is only permitted for patients with an age between 18 and 100 years.

NOTE

When using the additionally available FotoFinder **Moleanalyzer pro** software, please observe the supplementary instructions in the separately supplied user manual!

4.7 Improper use

- Any use of the equipment different to the chapter *Intended use* (cf. chapter 4.2 Intended use) and different to the operating instructions is not authorized!
- The manufacturer is not liable for any resulting damages in this regard. The risk is borne by the user/operator alone.
- It is prohibited to modify the equipment in any form.
- It is prohibited to bypass the safety features when operating the device.

4.8 Foreseeable misuse

The following points describe foreseeable misuse of the device:

- Incorrect setup
- Non-compliance to operating data
- Non-compliance to maintenance intervals
- Operation without or damaged components serving the safety of persons or the device

The following points describe foreseeable misuse of the **medicam / leviacam**:

- Incorrect connection and handling
- Use on and in natural and artificial orifices on the body
- Use on damaged skin
- Non-compliance to operating data
- Non-compliance to cleaning instructions
- Non-compliance to maintenance intervals
- Operation with damaged components serving the safety of persons or the device

The following points describe foreseeable misuse of the software:

- The physician incorrectly assumes that the software provides a diagnosis.
- The physician bases their diagnosis exclusively on results of software.
- The application for documentation is performed on non-intact skin, mucous membranes or in body orifices.

When using the optional expert system **Moleanalyzer pro**:

- The physician believes that the accuracy of the AI Score can be claimed and assumes that the score is indicative of the malignancy of the mole.
- The physician requests an AI Score for an image that does not meet the requirements, e.g., due to body hair, visible tattoo, or size.

4.9 Residual risks

⚠ WARNING

Despite compliance with all regulations and the implementation of risk-minimizing measures, not all risks can be completely excluded. Residual risks that exist in connection with the use of the product are listed below.

- Improper operation by untrained personnel and non-compliance with the specified safety and warning instructions may result in harm to the patient or operator.
- In case of improper handling or damage to the device, there is a risk of injury from electric shock. Serious injury or death may result.
- The device can emit electromagnetic radiation, which can influence or interfere with other devices.
- The device can be affected by emission of electromagnetic radiation from other electrical devices, or by electrostatic discharge, so that the live image is interrupted, or the device is damaged.
- Despite the used materials tested for body compatibility, in rare cases irritation of the skin may occur upon contact.
- If the unit is not adequately cleaned or disinfected after each patient, it could lead to infections due to poor hygiene.
- Any accessories that are not intended for the product or the modification of the system, can lead to the device no longer being functional or being able to be used in accordance with it´s intended use.
- Installing additional software on the PC may cause the FotoFinder Universe software to stop working.
- During longer operation, the surface of the device may get warm.
- Maintenance or servicing that is not performed on time or improperly can endanger operational safety.
- In the event of improper transport contrary to the instructions, the device may tip over or collide with other objects / persons and can cause injury to the person or operator, or result in damages to equipment and property.
- Moving parts on the system (e.g. monitor, camera positioning system, camera slide and drive belt) can cause injuries.

ATBM

- Avoid looking directly into the laser beam as it could temporarily affect the eye sight.
- For individuals with epilepsy or other light-sensitive eye and nerve disorders, the camera flash could trigger seizures.
- Covering the PolFlash XE flash unit with flammable materials may cause the unit to overheat and could cause a fire.

medicam / leviacam

- The magnets used in the medicam or leviacam may affect sensitive devices, e.g. pacemakers.
- The use of damaged attachment caps (e.g. breakage or cracks in the material) may cause injury of the skin.

Software

- Improper operation by untrained personnel may result in harm to the patient.
- Incorrect entry of information in the software, or incorrect assignment of patients or images by the operator, can lead to a misinterpretation. The consequences can be an unnecessary treatment or delayed treatment of a skin condition.
- Installing additional software on the PC may, in some cases, cause the FotoFinder Universe software to stop working. If you have any questions about compatibility, please contact FotoFinder support.
- Misuse by the user cannot be ruled out completely despite the provision of written user instructions and training.

4.10 Presentation of warning labels

- In the operating instructions, warnings are marked with a signal word panel.
- Warnings are introduced with signal words expressing the extent of the hazard.
- Observe all warnings to avoid accidents, personal injury and damages.
- The following signal words and symbols are used in the operating instructions:

⚠ This is the general hazard sign. It warns you of dangers to life and limb. All actions marked with this symbol indicate a personal danger. Follow these warnings implicitly to avoid injury or death.

⚠ DANGER

Death or severe injuries will occur if appropriate cautionary measures are not taken.

⚠ WARNING

Death or severe injuries may occur if appropriate cautionary measures are not taken.

⚠ CAUTION

Indicates a possible hazardous situation, which may lead to minor injuries if not avoided.

ATTENTION

The signal word Attention indicates possible material damage. Non-compliance may lead to damages to the device.

NOTE

Notes indicate important information that the user must consider when executing an instruction. Notes provide the user with more detailed information on a particular subject.

4.11 Safety instructions

4.11.1 General

- Please read the following points carefully and follow the general rules before operating the device.
- The device may only be operated by qualified, instructed personnel.
- The specified safety instructions must be followed at all times while using the system.
- Ensure that all cable connections are inserted correctly and tightly.
- All devices with an grounding / earthing bolt (docking station, isolating transformer, tower station, Silent Medical Server) must be earthed to the potential equation rail on the system and to the domestic or industrial earth in accordance with EN 60601-1.
- Never open the casing of the **Laser Liner**: you may be exposed to uncontrolled laser radiation.
- The system may never be operated if
  - the power cables are visibly damaged.
  - the camera or medicam has fallen or been dropped.
  - any cables or covers are visibly damaged.
- Conduct all adjustment, cleaning and disinfection procedures listed in the accompanying documents at the prescribed intervals.

4.11.2 Environmental conditions

- Only use the device indoors. The system must not be exposed to extreme humidity.
- When setting up the system, please ensure sufficient air supply to avoid an accumulation of heat in the devices. Do not close or cover the ventilation slots of the **Silent Medical Server**.
- Do not place the devices near sources of heat like radiators or in places where they are exposed to direct sunlight, unusually high dust, mechanical vibration or shocks.
- Do not place the system near other devices which generate a strong magnetic field, such as converters or high-voltage power lines.
- Only use the device in bright and well illuminated rooms.

4.11.3 System components

Valid for FotoFinder bodystudio ATBM® master systems:

- Only connect devices that have been confirmed as compatible by the manufacturer.
- The individual components of the system must not be connected directly to a power outlet. Only connection via the device's power supply and the isolating transformer is permitted.
- Only connect external network cables via the central network port at the bottom of the machine. The port is marked as "RJ45 LAN". For electrical safety never connect the network cable directly to the Silent Medical Server.

Valid for FotoFinder ATBM (1st generation)

- The system is equipped with a multi power outlet.

  ⚠ Warning! Fire hazard

  Do not connect any other devices to the multipower outlet. The maximim load is 2200 watts. A higher load poses a fire hazard due to overheating.

  - Do not place the multipower outlet on the floor.
  - Do not connect additional multipower outlets to the multipower outlet.
  - Do not connect extension cables to the multipower outlet.
- Only connect devices to the system which have been specified as compatible by the manufacturer.

- Do not connect the individual components directly to a socket. Connection is only permitted via the device's power supply and the isolating transformer.

4.11.4 Camera positioning system

The following instructions are relevant if you are using a FotoFinder **ATBM**® System.

- Ensure that the camera drive belt and chain can always move freely.
- All cables, such as the **medicam** cable, should therefore be secured with cable ties, no cables should be in the way of the DSLR camera.
- Do not place anything which may affect the camera directly in front of or under the tower.
- Never grasp the chain or belt, especially when the camera is moving up or down along the rail.
- If the camera is interrupted during its automatic travel, e.g., by a hand or by pressing the emergency STOP button in the software, the subsequent position will be registered as not having been reached. The camera must make a reference run to be repositioned.
- Always keep a safety distance of 30 cm (12 inches) to all moving parts of the camera positioning system (belt and chain, cameraslider).

Below you will find further information of each ATBM systems:

Valid for FotoFinder bodystudio ATBM® master systems:

- The camera positioning system is equipped with an integrated brake. As a result, the camera slide holds its position even the system is turned off.

ATTENTION

Never attempt to move the camera slider manually. This is solely controlled by the software. Otherwise, the axle drive could be damaged.

FotoFinder bodystudio ATBM (1. Generation)

- The camera's weight will slowly move it to the lowest position when the system is idle. Please take this into consideration, especially when the system is moved.

4.11.5 Canon SLR camera

- Do not dismantle the camera.
- Do not twist the camera cable or avoid stepping on it or straining it in any way.
- Do not spill any liquids onto or into the camera.
- Do not touch the lens of the camera.
- If you have removed any lenses, do not rest them on the glass lens, which could be scratched.
- Before cleaning, disconnect the complete system from the power supply.
- If the camera makes any unusual noise, emits smoke or unusual odor, disconnect the whole system from the power outlet immediately and contact FotoFinder Systems.

4.12 Operator duties

- The operating instructions are an essential component of the device.
- The operating instructions must be stored with the device and must be accessible at all times at the location of use.
- The operator must ensure that the operating instructions are read and understood by everyone working on and with the device. Only trained staff who are familiar with the fundamental occupational safety standards and have been instructed on use of the device may be assigned to operate it.
- The manufacturer is not liable for damages caused by the failure to observe product-related documentation.
- Before the device is commissioned and after repair work or constructional changes, the device must be inspected by a specialist/technician in order to ensure that it complies with standard EN 60601-1.
- A final production check is carried out on the entire system or, if applicable, the components as per EN 62353 during in-house production. When commissioning is performed by a FotoFinder contact, the operator is encouraged to check and confirm the values of the in-house inspection. Alternatively, the operator is free to have a repeat inspection carried out independently.
- The device must be operated so that it withstands its intended purpose and the expected stresses.
- Non-medical electrical devices (e.g. existing PC equipment) as defined by EN 60601-1 must not be used or operated within the patient environment of 1.5 m. If the operator fails to adhere to this rule, the operator is responsible for checking before commissioning that the limit values of the leakage current as per EN 60601-1 are not exceeded.
- Requirements in chapter *Service information* (cf. chapter 19 Maintenance) must be met.

4.13 Electric safety

4.13.1 Potential equalization

The equipment must be connected to the potential equalization network by plugs with angled sockets (cf. chapter 6.3.1 The potential equalization plug).

Additional equipment connected to a medical electric equipment must comply with the respective IEC or ISO standards (e.g. IEC, DIN EN 62368-1 Audio/video, information and communication technology equipment, IEC 60601-1/EN 60601-1 for medical devices). Furthermore, all components of the product must comply with the requirements for medical electric systems IEC 60601-1-2/EN 60601-1-2 standards. Any additionally connected equipment to any of the in- or outputs of the medical electric equipment must comply with the IEC 60601-1-2/EN 60601-1-2 standards.

⚠ WARNING

- An electric shock may occur if the system and all externally connected devices are not properly grounded.
- Do not remove the casing of the device: there is hazardous current inside. The casing must be correctly mounted. All repairs and replacements must be made by a qualified FotoFinder representative.
- Check the casing and cables before use. Do not use the device and disconnect it completely from the power supply, if the casing is cracked, chipped or broken, or if the casing or the cables are damaged.
- Always disconnect the system from the power supply before cleaning it.
- Avoid locations where it is likely to be difficult to disconnect the unit from the power supply.
- The system must only be connected to a power supply outlet that is properly grounded to avoid electric shock.

ATTENTION

- The system has been designed for 115 VAC or 230 VAC. Before plugging in the power cable, check that the mains switch is set to your input voltage commonly used in your country.
- Do not immerse the cable in liquids. The cables are not waterproof.
- The additional power outlets of the device are designed for 230 VAC voltage and a maximum load of 350 Watt. Only use these power outlets for devices that are part of the system. Do not connect any additional power strips and extension cords.
- Do not connect any devices that are not listed in this manual and approved by the manufacturer to the additional power outlets of the system.

4.13.2 ESD

Electrostatic discharge (ESD), commonly referred to as a static shock, is a naturally occurring phenomenon. ESD occurs most often during low humidity, which can be caused by heating or air conditioning. Under such circumstances electrical charges naturally build up on individuals, creating static electricity. An ESD occurs when an individual with an electrical energy build-up comes in contact with conductive objects such as metal doorknobs, file cabinets, computer equipment, and even other individuals. The static shock or ESD is a discharge of the electrical energy build-up from a charged individual to a lesser or non-charged individual or object.

⚠ CAUTION

The electrostatic discharge of a user or patient to the FotoFinder device can damage the system or camera.

4.13.3 EMI

Although this system has been manufactured in compliance with the existing EMI (Electromagnetic Interference) requirements, an electromagnetic field can cause momentary disturbance of the camera live image. If this occurs often, FotoFinder Systems suggests a review of the environment in which the system is being used, to identify possible sources of interference. These could be from other electrical devices used within the same or a nearby room. Even communication devices such as cellphones and pagers can cause such emissions. The existence of radios, TVs, or microwave transmission equipment nearby can also cause interference.

⚠ CAUTION

In case an EMI is causing disturbance, it may be necessary to relocate this system.

4.13.4 EMC

The testing for EMC (Electromagnetic Compatibility) of this system has been performed according to the international standard for EMC with medical devices (IEC 60601-1-2:2014+A1:2020). This IEC standard complies with the European norm (EN 60601-1-2:2015+A1:2021).

European publication	Surroundings of professional medical facilities	Deviation from basic EMC standards or EN 60601-1-2
EN 55011:2016 + A1:2017 +A11:2020 +A2:2021	Group 1 Class A	Yes ☐ No ☒
EN IEC 61000-3-2:2019	Class A	Yes ☐ No ☒
EN 61000-3-3:2013 +A1:2019	---	Yes ☐ No ☒
EN 61000-4-2:2009	± 8 kV contact ± 2 kV, ±4kV, ±8 kV, ±15 kV air	Yes ☐ No ☒
EN IEC 61000-4-3:2020	3 V/m 80 MHz - 2.7 GHz 80 % AT at 1 kHz	Yes ☐ No ☒
EN 61000-4-3:2020	According to 8.10 Table 9 of EN 60601-1-2:2015+A1:2021	Yes ☐ No ☒
EN 61000-4-4:2012	AC port: ± 2 kV (100 kHz) SIP/SOP: ± 1 kV (100 kHz)	Yes ☐ No ☒
EN 61000-4-5:2014 +A1:2017	AC line to line ± 0.5 kV, ± 1 kV AC line to earth: ± 0.5 kV, ± 1 kV, ± 2 kV	Yes ☐ No ☒
EN 61000-4-6:2014	3 V 0.15 MHz – 80 MHz (6 V in ISM frequency bands) 80 % AM at 1 kHz	Yes ☐ No ☒
EN 61000-4-8:2010	30 A/m 50 Hz or 60 Hz	Yes ☐ No ☒
EN IEC 61000-4-11:2020 +AC:2020	0 % U_T; 1/2 period at 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°	Yes ☐ No ☒
Additional information: Conformity for each EMISSIONS and IMMUNITY standard or test specified by this supplementary standard, e.g., EMISSIONS class and group and IMMUNITY test level.		

This device has no essential performance characteristics according to EN 60601-1:2013+A1:2020. Therefore, no deterioration or failure of these functions can be caused by electromagnetic interference.

4.13.5 Instructions and manufacturer's information on electromagnetic radiation

This device is intended for use in the electromagnetic environment described below. The user of this device should ensure that it is used in such an environment.

Radiation test	Compliance	Electromagnetic environment - Directive
RF emission CISPR 11	Group 1	The FotoFinder device is not likely to cause interference with other electronic devices in the vicinity.
RF emission CISPR 11	Class A	The FotoFinder device is approved for use in professional medical facilities such as hospitals and doctors' surgeries. For residential use (which requires CISPR11 Class B), the device may not provide adequate protection against radio interference.
Harmonic distortions IEC 61000-3-2	Class A	
Fluctuating interference IEC 61000-3-3	Complied	

ATTENTION

The use of this device directly next to other equipment or with other equipment stacked should be avoided, as this could cause it to malfunction. If it is still necessary to use it in the manner described above, this device and the other equipment should be first observed to ensure that they are operating properly.

4.13.6 EMC tested cables, transformers and accessories

The cables used with this device may affect the radiation of the device. Use only the cable types and lengths listed in the following table.

⚠ CAUTION

When connecting other customer-supplied accessories to the system, it is the user's responsibility to ensure the electromagnetic compatibility of the system. Only use devices that are compliant with the CISPR 11 or CISPR 22, Class B standards.

⚠ WARNING

The use of cables, adapters or peripherals other than those specified may result in increased emission or decreased compatibility of the FotoFinder device.

FotoFinder bodystudio ATBM master

Cable	Type	Length
HDMI	Isolated	2 m
LAN (RJ45)	Isolated	0,5 m
USB	Isolated	< 2,4 m
Power input cable	V-Lock	< 3 m

4.13.7 Recommended minimum distance between portable and mobile RF communication devices and the FotoFinder device

This product is intended for use in an electromagnetic environment where the radiated RF disturbances are controlled. The user of this device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and this device as recommended below, according to the maximum output power of the equipment.

Maximum nominal power of transmitters	**Minimum distance according to the frequency of the transmitter [m]**		
	150 kHz to 80 MHz $d = [\frac{3,5}{V_1}]\sqrt{p}$	**80 MHz to 800 MHz** $d = [\frac{3,5}{E_1}]\sqrt{p}$	**800 MHz to 2,5 GHz** $d = [\frac{7}{E_1}]\sqrt{p}$
	V_1 = 0,01 Veff	**E_1 = 3 V/m**	**E_1 = 3 V/m**
0,01	35,00	0,11	0,23
0,1	110,68	0,36	0,73
1	350,00	1,16	2,33
10	1106,80	3,68	7,37
100	3500,00	11,66	23,33

For transmitters with different maximum power rating from what is listed above, the recommended distance (“d”) in meters (m) can be calculated using the same equation as for transmitters, where “p” is the maximum power rating in watts (W) according to the manufacturer's specifications.
NOTE 1: The 80 MHz and 800 MHz are the distances for higher frequency range devices.
NOTE 2: These guidelines cannot be applied to all circumstances. Electromagnetic transmission is affected by absorption and reflection from structures, objects and people.

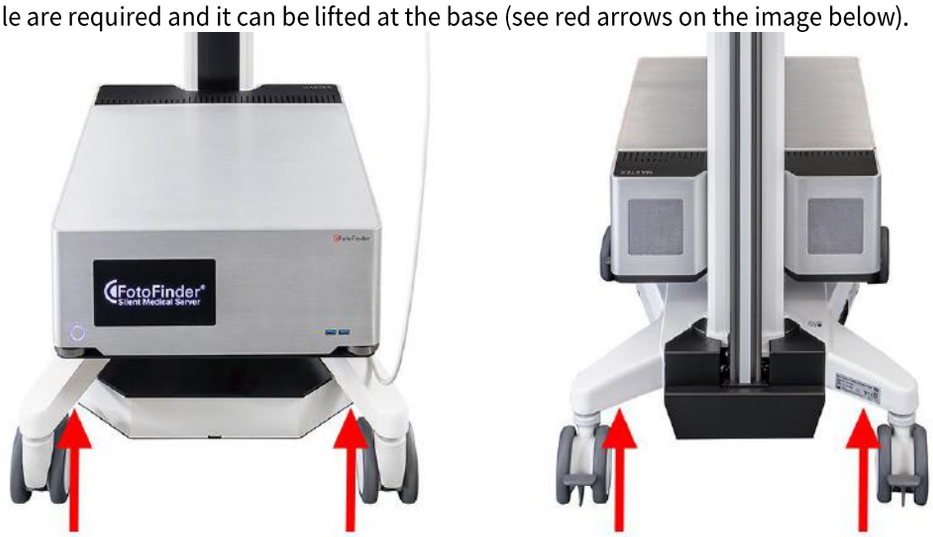
ATTENTION

Portable RF communications devices (radios, including their accessories such as antenna cables and external antennas) should not be used within 30 cm (or 12 inches) of the parts and cables of the ME equipment specified by the manufacturer. Not observing this warning may reduce the performance characteristics of the device.

4.14 Moving the mounted device

FotoFinder bodystudio ATBM master:

The system should be moved as little as possible to avoid damages while moving:
The equipment has a weight of 80 kg / 176.6 lbs. Do not tilt the equipment. If the system must be lifted, several people are required and it can be lifted at the base (see red arrows on the image below).



⚠ WARNING

The system mustn't be pushed sideways. It might tip over.
Pay particular attention to this when moving over smaller gaps.
Only push the device from the front. Make sure that the brakes are released on the wheels.

⚠ WARNING

Under no circumstances stand on top of the PC or PC stand. The casing will break.

Corresponding labels can also be found on your device (cf. chapter 1.3 Explanation of the symbols).

⚠ DANGER

Before the assembled device can be moved or transported, the PolFlash XE including camera must be removed from the camera slider. In the casing there are live components. If the casing is damaged, there is a risk of electrical shock to the user!
Before removing the PolFlash XE from the device:

1. Disconnect the complete system from the power supply.
2. Wait at least 10 minutes.

Removing the PolFlash XE may only be performed by a trained technician.

4.15 Maximum load of the components

FotoFinder bodystudio ATBM master:

The maximum load of the individual device components must not be exceeded, otherwise the device could be damaged. Please keep to the specified load limits. You will also find these on the corresponding labels on your device.

Keyboard tray	10 kg / 22 LB
Compartment	3 kg / 6,6 LB
Silent Medical Server	2 kg / 4,4 LB
Silent Medical Server tray	12 kg / 26,5 LB
Monitor stand	4 kg / 8,8 LB
Camera mount for the medicam	8 kg / 17,6 LB
Tower base	65 kg / 143,3 LB

5 Requirements for using the device

5.1 Recommended configuration of the system computer

The system is delivered with a **Silent Medical Server** by default. The recommended configuration of an alternative computer is listed below:

FotoFinder bodystudio ATBM master

- CPU
  - 2.50 Ghz
  - Hexa-Core (6 cores / 12 threads)
  - CPU generation not older than 5 years
  - x86-64 architecture
- RAM
  - 16384 MB (16 GB) RAM
- Graphics card
  - Graphics card 4 GB RAM, nVidia, min. 3840 × 2160 pixels, e.g.: GeForce GTX 1050Ti
- Hard drives
  - 1 x SSD with at least 250 GB and 500 MB/s for Operating System, e.g. M.2 SSD with 6 Gbit/s
  - 1 x HDD with at least 4 TB data memory
  - 1 x HDD with at least 4 TB for backup*
  - External hard drive (USB 3.0) min. 4 TB *
- Operating system
  - Microsoft® Windows® 10 Pro, 64 bit
  - Microsoft® Windows® 11 Pro, 64 bit (from FotoFinder **Universe** version 3.4.2)
- USB ports*
  - 4 USB 2.0 Ports, 6 USB 3.0 Ports
- Screen
  - 3840 x 2160 px, 27"
- Miscellaneous
  - Requires internet connection for activation, software updates and remote maintenance
- Plug connection for potential equalisation

**not required with View-Only license*

FotoFinder bodystudio ATBM (1. Generation)

- CPU: 2.50 Ghz, Quad-Core (4 cores / 8 threads), CPU generation not older than 5 years, x86-64 architecture
- 16384 MB (16 GB) RAM
- Graphics card with 2 GB RAM, resolution 1920x1080 pixels, e.g., GeForce GTX 1650
- 1st system hard drive SSD with 250 GB (operating system, database)
- 2nd hard drive with at least 2 TB (images)
- 3rd hard drive with at least 2 TB (backup)
- Microsoft Windows© 10 Pro or Microsoft Windows© 11 Pro (64-bit)
- 8 free USB ports (4 free USB 2.0, 4 free USB 3.0)
- Plug connection for potential equalisation
- Requires internet connection for activation, software updates and remote support

Screen:

- 24‘‘ screen/LCD, 1920x1080 pixels

5.2 Use in a network

- It is possible to operate the system in a network with several FotoFinder **Universe** clients.
- The FotoFinder **bodystudio ATBM®** includes a galvanic network isolator as per IEC 60601-01.
- For additional information, please contact FotoFinder Support at support@fotofinder.de.

5.3 Required recording space

- As background for the photo documentation you should non-reflecting dark photo background (e.g. dark blue photography paper provided by FotoFinder).
- The distance between the patient and the background should be as close as possible. The distance to the background should be the same during follow ups.
- Only use the device in bright and well illuminated rooms. Avoid direct sun light.
- Full body photography can only be performed with patients of a height between 130 cm and 200 cm. Full body photography of larger or smaller patients is not supported.

NOTE

Feel free to contact FotoFinder Systems to discuss the best design for your photography room.

6 Installation

6.1 Safety

NOTE

Please always observe all safety instructions in this manual!

DANGER

A device of Protection Class 1 Danger of injury due to electric shock.
Connect the device to a properly grounded power outlet only.

DANGER

Danger of electric shock due to high voltage!
Severe injury or death could result when touching an energized conductor.
Work on electrical systems may only be conducted by authorized electricians.
Disconnect the power supply and secure against reconnection before starting any work.
Do not try to open any electric components of the equipment.

CAUTION

Risk of injury caused by tripping over the power cord or network cable!
The cables can create a tripping hazard if not organized well. This may result in injury caused by falling.
Always place supply cables away from walkways.

CAUTION

Give the power cord always some slack to avoid unintended disconnects from the wall outlet.

ATTENTION

Incorrect power supply voltage could damage the device.
Use only the original power supply cable connected to the isolating transformer for power supply.

CAUTION

Only use power supply cables with V-Lock locking mechanism. This way any unintentional interruption of the power supply can be prevented.

CAUTION

The power plug should be easily accessible in case of emergency. Set up your device so that you have direct access to the power plug.

CAUTION

Make sure the positioning mat is not slipping on the floor, as this could result in injuries from slipping.

⚠ CAUTION

The camera positioning system's movements may cause injury.

Never grab the chain or belt, especially when the camera is moving up or down the rail.
Always keep clear at least 30 cm to all moving parts of the camera positioning system (automatic chain, camera slider).

ATTENTION

Damage to the camera positioning system caused by objects or obstacles

Ensure that the camera, belt and chain can always move freely.
All cables should therefore be organized with cable ties.
Do not place anything which may affect the camera directly in front of or under the tower.
Never grab the chain or belt, especially when the camera is moving up or down along the rail.

ATTENTION

If you are using a system with castors (e.g. the FotoFinder **bodystudio ATBM master**), make sure that the wheel locks (brakes) are working before using the system. After reaching the parking position or when stopping during transport, all brakes on the cart must be locked.

6.2 Delivery scope

Your FotoFinder device will be shipped mostly assembled. However, the following parts must be mounted and connected before use. This is done by the responsible FotoFinder distributor.

NOTE

Please note the **medicam** accessory list (cf. chapter 3.4 FotoFinder medicam®).

NOTE

Please also refer to the separately available installation instructions.

NOTE

Report any damages or defects to your distributor or the manufacturer immediately and in written form.

NOTE

Do not plug any additional device onto your system!
Please consult with the manufacturer if you wish to plug any additional devices.

- Motor control unit
- Computer
- Mouse and keyboard
- Screen
- PolFlash
- Camera
- If applicable, connect the Laser Liner or insert the Laser Liner battery
- The column and the drive unit are already assembled.

6.3 Connections on the system cart

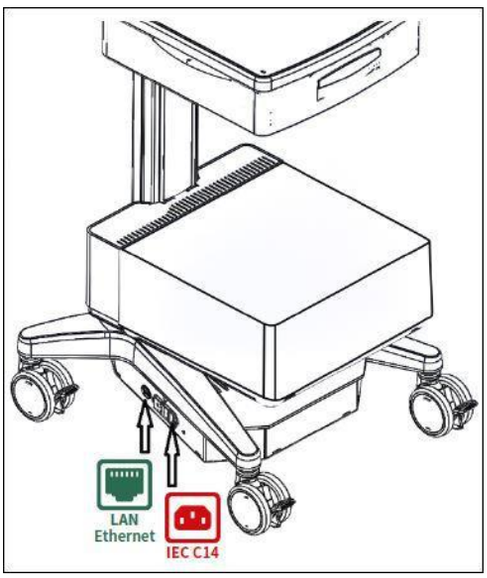


*Fig. 12: Connections on the cart**

** Only valid for FotoFinder bodystudio ATBM master and FotoFinder vexia. With other devices it may deviate.*

6.3.1 The potential equalization plug

Before you start up the device and connect the mains plug, first connect the potential equalization cable connected through the main potential equalization rail to the designated socket for potential equalization (POAG) (cf. chapter 4.13.1 Potential equalization).

The requirements for medical electrical equipment with a connector for potential equalization are described in the EN 60601-1 standard.

6.3.2 LAN plug

The central Ethernet network plug (LAN RJ45) is located at the bottom of the device, directly next to the main switch.

6.3.3 Power supply plug

The IEC C14 mains supply is on the side of the device on the bottom.

6.4 Main voltage settings on the system cart

The device can be operated with a mains voltage of 115 V or 230 V.

ATTENTION

Turn the device off and disconnect the power cord before changing the power supply voltage of the unit.

The mains voltage can be adjusted at the voltage selector on the isolating transformer.

The following fuses can be used:

Device	Fuse	
	115 V mains voltage	**230 V mains voltage**
FotoFinder studio	T 3,15A	T 1,60A
FotoFinder bodystudio ATBM master,		
FotoFinder vexia	T 4,0A	T 2,0A
FotoFinder bodystudio ATBM (1. Generation)	T 6,3A	TT 3,15A

6.5 Connecting the camera to the computer

6.5.1 medicam

1. Plug the FotoFinder **medicam** into the FotoFinder **Docking Station** or the FotoFinder **Docking Station mini**.
2. Tighten the plug's screw connections.

- The **FotoFinder Docking Station** is integrated below the drawer in the FotoFinder **bodystudio ATBM**.

6.6 Mounting the lens

6.6.1 medicam

- The lens for microscopic images can be attached to the video camera via a bayonet fastener:

  1. Simply place the lens on the contact area at the front of the camera and press lightly against the lens.
  2. Then turn it clockwise until it locks.
  3. The lens can be easily removed by turning it counterclockwise.
- The lens attachment can be removed for maintenance and cleaning by turning it counterclockwise (cf. chapter 8.4 Cleaning and disinfecting the medicam).
- The integrated micro illumination can be turned on and off with the button on the back panel of the camera. As soon as the micro lens is attached, the floodlight automatically turns off.

6.7 Connecting the camera with the PolFlash XE DX2 (with Zoom Motor) and the computer

Fig. 13: PolFlash XE DX2

The polarising filter at the front of the camera's lens is correctly mounted when the lettering “FotoFinder” is on the top.

Fig. 14: PolFlash XE DX2 from above

The **PolFlash XE DX2** including the mounted camera must be attached to the ATBM Tower by placing it on the camera slider and fixating it from below with two screws and lock washers.

NOTE

To avoid damaging the device, do not compress the lock washers too much. Tighten to a maximum of 1 Nm.

The cables must be connected as shown here:

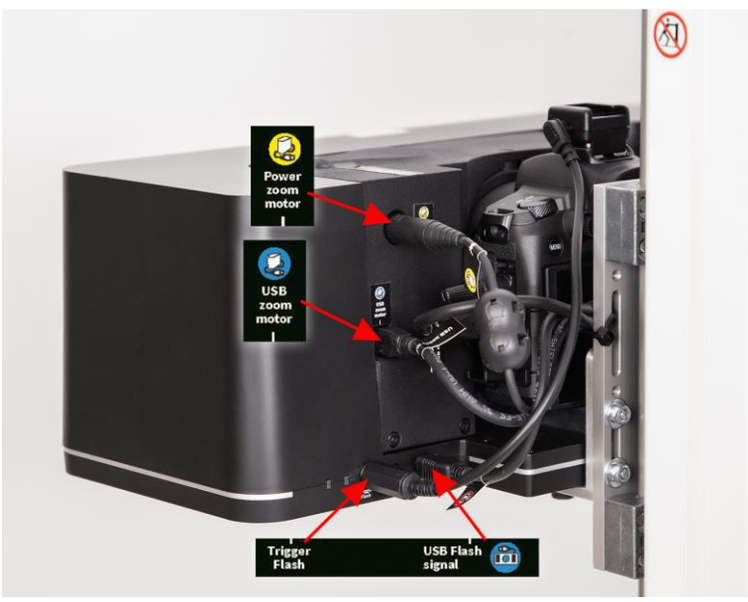


Fig. 15: Cable connections of PolFlash XE DX2 and camera to ATBM Tower (viewed from the left)

Fig. 16: Cable connections of PolFlash XE DX2 and camera to ATBM Tower (viewed from the right)

ATTENTION

Do not (e.g. during cleaning) apply any pressure to the PolFlash XE lens or camera. The device could get damaged and the fine adjustments could be changed. This also applies to

- the lenses of the flashes (the Fresnel lense structure could be damaged)
- the lenses of the camera and the polarization filter
- the casing and
- the Zoom Motor

ATTENTION

The polarization filter ring that is attached on the lens should not be touched. Especially during the automatic zoom adjustments.

ATTENTION

Do not put any additional device or other objects on the camera slide with the PolFlash XE. The control unit cold get damaged by the additional weight.

ATTENTION

Only clean the POLFLASH XE.
When cleaning with a wet cloth, the cleaning fluid could leak inside the case and damage the circuit board.

⚠ DANGER

Before the assembled device can be moved or transported, the PolFlash XE including camera must be removed from the camera slider. In the casing there are live components. If the casing is damaged, there is a risk of electrical shock to the user!
Before removing the PolFlash XE from the device:

1. Disconnect the complete system from the power supply.
2. Wait at least 10 minutes.

Removing the PolFlash XE may only be performed by a trained technician.

⚠ DANGER

Any maintenance work on the PolFlash XE is only allowed to be performed by the manufacturer.

6.8 Connecting the camera with the PolFlash XE (without Zoom Motor) and the computer

Fig. 17: Fully mounted camera on the PolFlash XE

Fig. 18: Individual system parts (partly pre-assembled at the factory)

1 PolFlash XE with pre-assembled metal adapter plate for the camera

2 Digital camera (model may deviate) with already inserted battery dummy and power supply cable, as well as a flash adapter

3 Assembly material

1. Connect the assembly material as illustrated in the adjacent figure: Two spring washers are placed onto the screw with camera thread.
2. Place the camera onto the metal adapter plate while carefully pushing the lens into the round opening on the **PolFlash XE**.
3. Turn the whole thing over so that you can reach the bottom of the **PolFlash XE** while holding the camera.

The positioning aid features matching screw holes for the different camera types.

4. Place the positioning aid in the slot on the underside of the **PolFlash XE** as illustrated below.

5. Screw on the camera from below through the corresponding screw hole of the positioning aid. Use the previously connected assembly material.

Please note that you should lead the power supply cable of the camera to the back and not pinch it under or in front of the camera.

6. Slide the flash adapter from the back to the front onto the camera's hot shoe until it clicks into place.
7. Cable connections: Plug the cables of the flash adapter and the camera’s power supply cable into the respective sockets on the **PolFlash XE**.

The **PolFlash XE DX2** including the mounted camera must be attached to the ATBM Tower by placing it on the camera slider and fixating it from below with two screws.
The cables must be connected as shown here:

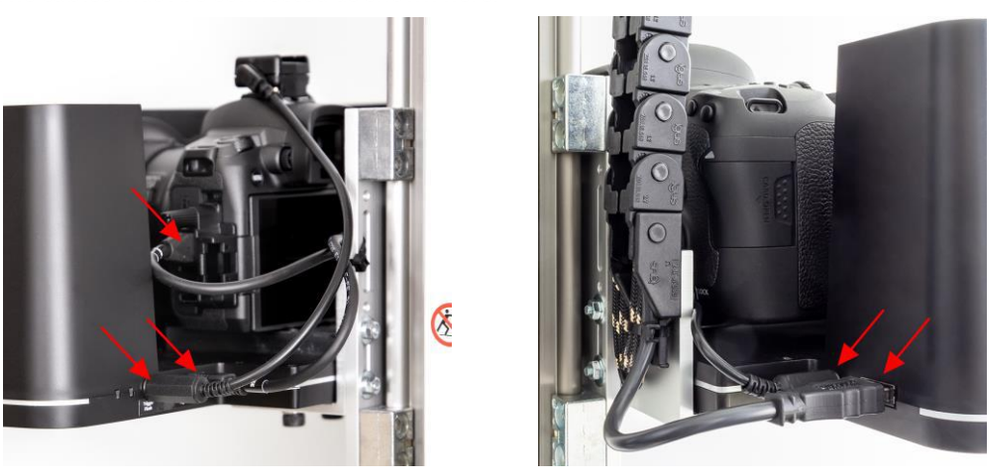


Fig. 19: Cable connections of PolFlash XE and camera to ATBM Tower (viewed from the left and right)

ATTENTION

Please observe all safety instructions for the PolFlash XE in this manual (cf. chapter 6.7 Connecting the camera with the PolFlash XE DX2 (with Zoom Motor) and the computer).

6.9 Connecting the camera to PolFlash and the computer

FotoFinder bodystudio ATBM (1. Generation)

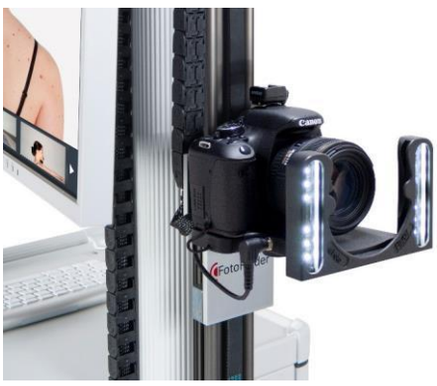


Fig. 20: Assembled camera slide with the PolFlash and camera on the FotoFinder bodystudio ATBM (1. Generation)

1. Insert the **PolFlash**'s battery adapter into the battery slot on the camera.
2. Attach the camera to the **PolFlash** using the screw connection.
3. Mount the **PolFlash** and camera on the Tower's carriage with the provided knurled screw.
4. Insert the **PolFlash**'s flash adapter into the flash slot on the camera.
5. Mount the lens on the camera.
6. Connect the **PolFlash** power supply up to the mains adapter or isolating transformer.
7. Connect the digital camera's USB cable to the computer.
8. Switch on the camera by pressing its ON/OFF button next to the menu wheel.
9. Use the menu wheel to set the camera to mode: M.
10. Installation of the camera driver starts automatically as soon as the camera is connected to the computer via the USB cable.

6.10 Assembly of the Laser Liner

Below you will find further information of each ATBM systems:

Valid for FotoFinder bodystudio ATBM® master systems:
The Laser Liner is fully assembled on delivery.

Valid for FotoFinder bodystudio ATBM (1. Generation):

The Laser Liner is fully assembled on delivery.

NOTE

- The FotoFinder **Laser Liner** is fully assembled on delivery.
- Do not open the housing for neither maintenance nor any other reasons.
- In case of any malfunction contact the manufacturer.

For all systems with Laser Liner:

1. Check the distance between the **Laser Liner** and the projected line on the ground. This must be 111.5 cm. Measurements are made from the lowest point of the camera drive belt to the laser line on the ground.
2. Make sure that the positioning mat is correctly aligned with the laser line: between the two arrows.

7 Operation

7.1 Safety

NOTE

Please always observe all safety instructions in this manual!

CAUTION

The camera positioning system's movements may cause injury.
Never grab the chain or belt, especially when the camera is moving up or down the rail.
Always keep clear at least 30 cm to all moving parts of the camera positioning system (automatic chain, camera slider).

CAUTION

Make sure the positioning mat is not slipping on the floor, as this could result in injuries from slipping.

ATTENTION

If you are using a system with castors (e.g. the FotoFinder **bodystudio ATBM master**), make sure that the wheel locks (brakes) are working before using the system. After reaching the parking position or when stopping during transport, all brakes on the cart must be locked.

ATTENTION

Under no circumstances stand on top of the PC or PC stand. The structure might break.

ATTENTION

Never place any product that could leak on your equipment or over the power supply cables. Liquids could cause serious damage.

ATTENTION

May damage the camera cable.
Do not bend the camera cable.
Do not step on the camera cable or subject it to any other strain.

ATTENTION

Do not use the USB connection to charge mobile phones, Smartphones and Tablets.
Only use the USB connection for updates and reading out log files.

ATTENTION

Damage to the camera positioning system caused by objects or obstacles
Ensure that the camera, belt and chain can always move freely.
All cables should therefore be organized with cable ties.
Do not place anything which may affect the camera directly in front of or under the tower.
Never grab the chain or belt, especially when the camera is moving up or down along the rail.

ATTENTION

Damage to the SLR camera caused by improper handling!

Do not allow any liquids to penetrate the camera's interior.
Do not touch the lens of the camera.
If you have removed any lenses, do not rest them on the lens, which could be scratched.
Before cleaning the camera, please disconnect the complete system.
If the camera makes any unusual noises, emits smoke or unusual odor, disconnect the whole system immediately and contact FotoFinder Systems GmbH.

7.2 Visual inspection before use

1. Before each use, check the system for visible damage.
2. Pay particular attention to the supply lines and attachment lenses.
3. Check the cables for possible damage, e.g. caused by sharp edges or improper use.
4. In ATBM systems, check the function light on the motor control unit:

ATBM Control Unit Version 2:	ATBM Control Unit Version 1:	ATBM bodystudio ATBM (1st generation):
Green: In operation Yellow: Not referenced (= normal state e.g., prior to first travel after reboot) or Warning (if occurring during operation) Red: Fault	Green: Power supply on	

5. In ATBM systems, check the castors in the device for free motion.
6. Check the system regularly according to the valid rules of technology, but at least every 12 months.

7.3 Operating the Canon SLR camera

The camera was already preset at the factory for use. These settings, deviating from the camera's factory settings, are listed below:

- Camera mode, setting in menu wheel: M - Manual
- Software settings
  - Auto power: OFF
  - Auto lighting optimizer: OFF
- Lens: AF mode (Autofocus)
- Focus point is set to wide area

When using a full-frame camera (e.g., Canon EOS 6D, Canon EOS 5Ds, Canon EOS R), the focus point may have to be manually adjusted. If you require assistance, please contact FotoFinder Systems or your local consultant.

7.4 Operating the Laser Liner

Turn on the FotoFinder **Laser Liner** by pressing the ON/OFF button.

1. Turn on the FotoFinder **Laser Liner** by pressing the ON/OFF button.

⚠ CAUTION

The laser beam at the laser optics may be damaging to eyesight. Once the device is switched on, laser light will immediately issue from the laser output opening.
Never look directly into the laser beam.

2. Turn off the FotoFinder **Laser Liner** by pressing the ON/OFF button again.

NOTE

The FotoFinder **Laser Liner** turns off automatically after 10 minutes.

7.5 Capturing

1. Switch on the Silent Medical Server by pressing the start button on the front panel.
2. Check that the camera switch is turned on. The camera should always remain turned on, even after operation. The software automatically powers up the camera when the program is started.
3. Switch on the Laser Liner.
4. Point the **Laser Liner** at the line on the FotoFinder positioning mat.
5. Start the software.
6. Position the patient on the mat according to the software's instructions.

7.6 Operating the medicam®

7.6.1 General

- The camera is already preset by the manufacturer.
- The camera is controlled by the FotoFinder **Universe** software and can only be used in combination with this software (or, if applicable, with the software from **TrichoLAB**).
- Depending on the capturing mode (overview or micro image), the camera must be used with or without an reflected light microscope attachment lens.
- The camera is equipped with an integrated LED floodlight for overview images from a distance of up to 120 cm. This LED floodlight turns on automatically as soon as the overview capturing mode is started in **Universe**. The LED floodlight can only be operated in this overview mode in **Universe**.
- The attachment lens of the **medicam** (e.g. the **D-Scope IV**) are equipped with illumination. This illumination switches on automatically as soon as you start the micro capturing mode in **Universe**. The illumination can only be operated in this micro capturing mode in **Universe**.
- The shutter release is integrated in the camera handle.

NOTE

FotoFinder recommends using a antiseptic spray. An immersion oil or gel could lead to a build up on the inner side of the camera attachment.
For polarized images, for example with the **medicam** and the **D-Scope IV**, or with the **leviacam** there is no need for an immersion fluid.

NOTE

The camera casing of the **medicam 1000** may become slightly warm if it is used for longer periods.

NOTE

Detailed instructions for capturing images with your dermatoscope can be found in the respective chapters:

- **Overview images** (cf. chapter 14.2 Overview images)
- **Overview video** (cf. chapter 14.3 Overview video)
- **Micro capturing** (cf. chapter 14.5 Micro capturing (images and videos))
- **Screening** (cf. chapter 15 Module Screening)

7.6.2 The back panel of the medicam

*Fig. 21: The back panel of the **medicam 1000***

- The camera can be mostly operated through the back panel, or optionally through the software.
- An overview of the button functions can be also displayed in the software. This additional guidance can be activated in the **Settings** (cf. chapter 11.2.2 medicam).
- An overview of the button functions can be found in this manual in the respective chapter.

7.6.3 Setting the distance holder

The **medicam 1000** can optionally be used with two different distance holders for capturing close-up overview images. These distance holders enable standardized close-up images, and therefore ease the calibration and measurements of the images.

*Fig. 22: Example application of the **medicam 1000** with a distance holder*

*Fig. 23: **medicam 1000** with the 63 mm distance holder (1)*

1. Select one of the distance holders (28 or 63 mm).
2. Insert the ends of the distance holder into the according recesses on the front of the camera. No additional fastening is required, as the mount is magnetic.
3. Please note the cover attachment for the distance holder (cf. chapter 3.4 FotoFinder medicam®).

7.7 Ending operations

1. Close **Universe** and any open software modules.

This will also automatically log you out of the software.

2. Shut down the computer.
3. Press the main switch on the device.
4. Disconnect the power plug from the power supply.

The Canon camera should always be left switched on, even when you are not using it.

8 Cleaning and disinfection

8.1 Safety

NOTE

Please always observe all safety instructions in this manual!

DANGER

Danger of electric shock due to high voltage!
Severe injury or death could result when touching an energized conductor.
Work on electrical systems may only be conducted by authorized electricians.
Disconnect the power supply and secure against reconnection before starting any work.
Do not try to open any electric components of the equipment.

WARNING

Risk of infection caused by lack of hygiene.
Clean and sanitize any part that gets in contact with the patient after each use.
Clean and sanitize the positioning mat after each use.

ATTENTION

Sanitize with wipes only.
Sanitize any components with sanitizing wipes only.

ATTENTION

Damage to the device and the screen caused by unsuitable cleaners.
Do not use abrasive agents or sponges!
Do not use solvents such as alcohol or gasoline!
Do not use glass cleansers with anti-static solution!
Only use the provided brush to clean the lens!

ATTENTION

Please do not spray directly onto the camera lenses, only on to a cleaning wipe. Any direct contact with liquids can damage the lense or the camera.

ATTENTION

Damage to the SLR camera caused by improper handling!
Do not allow any liquids to penetrate the camera's interior.
Do not touch the lens of the camera.
If you have removed any lenses, do not rest them on the lens, which could be scratched.
Before cleaning the camera, please disconnect the complete system.
If the camera makes any unusual noises, emits smoke or unusual odor, disconnect the whole system immediately and contact FotoFinder Systems GmbH.

ATTENTION

Only clean the POLFLASH XE.
When cleaning with a wet cloth, the cleaning fluid could leak inside the case and damage the circuit board.

ATTENTION

Do not (e.g. during cleaning) apply any pressure to the PolFlash XE lens or camera. The device could get damaged and the fine adjustments could be changed. This also applies to

- the lenses of the flashes (the Fresnel lense structure could be damaged)
- the lenses of the camera and the polarization filter
- the casing and
- the Zoom Motor

ATTENTION

The polarization filter ring that is attached on the lens should not be touched. Especially during the automatic zoom adjustments.

8.2 Cleaning the device

- Before cleaning, disconnect the entire system from the power supply.
- Clean the case, control panels, control elements and the screen with a soft cloth moistened slightly with a mild detergent.

8.3 Disinfection of the device

- Commercially available disinfectants that are approved for surface disinfection or disinfection wipes can be used. The disinfectants must be applied and used as pure wipe disinfection according to the manufacturer's instructions.
- If a complete disinfection is necessary, the mounted parts can be disassembled by a specialist and disinfected in this state by wiping.

8.4 Cleaning and disinfecting the medicam

NOTE

Clean and disinfect the contact parts of the dermatoscope capturing device after every patient.

8.4.1 Cleaning

NOTE

For cleaning, we recommend the FotoFinder **Cleaning Kit** (cf. chapter 3.4 FotoFinder medicam®), consisting of the FotoFinder Cleaning Solution and the FotoFinder Cleaning Wipes.
The **Cleaning Kit** is suitable for all FotoFinder camera models and lenses.

1. Carefully remove the dermoscopic lens from your **medicam** camera.
2. Take off the lens attachment (front cap) by turning the attachment ring counterclockwise.
3. To prepare for cleaning, apply the Cleaning Solution to your Cleaning Wipes.
4. Clean the inside and outside of the lens attachment (front cap) with the moistened wipe. Don‘t forget to disinfect the front surface that is in direct contact with your patient.
5. Apply the Cleaning Solution to a fresh wipe and clean the two lenses at the front and the back of the dermoscopy lens. With a circular motion, gently remove oil, fingerprints and grime from the lens surfaces, working from the centre outward.
6. If necessary, also clean the lens at the front of the camera where the dermoscopic lens is attached.
7. Again, take a fresh, dry wipe to remove the residue of the cleaning solution and polish the lenses.
8. When attaching the front cap to the dermoscopic lens, please ensure that it snaps into place completely. Otherwise the camera auto focus will not work correctly.

8.4.2 Disinfection

- The **medicam** and its accessories (e.g. attachment caps, distance holders) must be cleaned and disinfected before each use on a patient.
- To disinfect the medicam and its accessories, use alcohol-free quick disinfection wipes, e.g. mikrozid® sensitive wipes from Schülke. The disinfection wipes should be suitable for disinfecting ultrasound heads.

Specific notes for the D-Scope IV attachments:

Fig. 24: D-Scope IV attachment

The **D-Scope IV** lens attachment (cf. chapter 3.4.2 D-Scope IV) can be cleaned in an ultrasound bath (tested with Podolock Sonic, manufacturer: Ruck) with for example the Endozime® Dual Enzymatic Detergent disinfection liquid (manufacturer: Ruhof Corporation).

To disinfect the **D-Scope IV** attachment the following cleaning materials are suitable:
Disinfection sprays:

- Incidin™ OxyFoam or Incidin™ OxyFoam S (manufacturer: Ecolab Engineering GmbH)
- Kodan Tinktur forte, colorless (manufacturer: Schülke & Mayr GmbH)

Disinfection foams:

- Tristel Duo pour Ophtalmologie (manufacturer: Tristel GmbH)

Disinfection wipes for quick cleansing:

- Cleanisept® Wipes (manufacturer: Dr. Schumacher GmbH)

Disinfection wipes:

- Cidalkan Wipes (manufacturer: Alkapharm)
- Incidin™ OxyWipe or Incidin™ OxyWipe S (manufacturer: Ecolab Engineering GmbH)
- Sani-Cloth AF3 Germicidal Disposable Wipe (manufacturer: PDI, Inc.)

WARNING

Note that the D-Scope IV attachment cap must not be reused if, for example, the material becomes cloudy or discolored, contamination is visible at adhesive points or cracks in the plastic. Otherwise, the quality of your images will be severely impaired.

8.5 Cleaning and disinfecting the positioning mat

NOTE

Clean and disinfect the positioning mat after every patient.

- Use a skin-friendly, non-corrosive cleanser and disinfectant.
- Use quick disinfectant wipes to disinfect the floor mat. If necessary, wipe with a dry cloth to avoid smears due to residue of the disinfectant.

The following cleaning wipes are suitable:

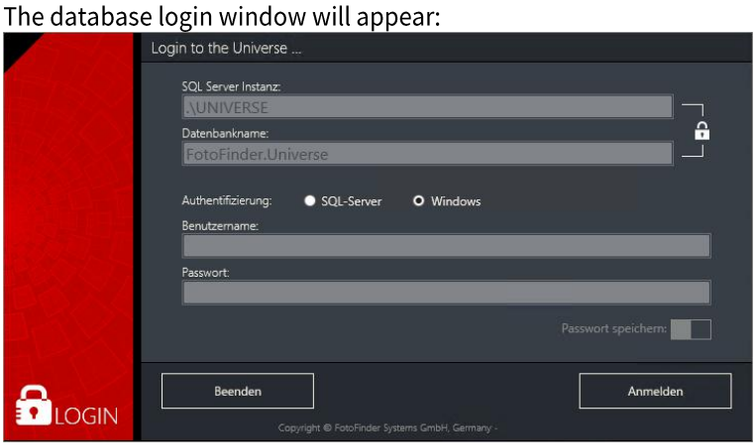
- Cleanisept Wipes (manufacturer: Dr. Schumacher GmbH)
- mikrozid AF wipes (manufacturer: Schülke & Mayr GmbH))
- Sani-Cloth AF Germicidal Disposable Wipe (manufacturer: PDI, Inc.)

9 Starting the System

9.1 Database login

1. To start the FotoFinder **Universe** software, simply double click on the desktop shortcut.

The database login window will appear:



2. Establish the connection to the database by clicking on *Login*. If you are working with the optionally available user management, you must first enter the username and password before clicking on *Login*.

The dashboard will appear (cf. chapter 9.2 Dashboard).

9.1.1 View-Only access

Alternatively, the database connection can also be established through a *View-Only access*. This is designed to

- to view / manage / edit the images and
- to review the findings.

In this mode no new images can be captured.

1. To start FotoFinder **Universe** as a *View-Only*, double click on the respective icon on the desktop.
2. Add the login credentials as seen above if necessary and click on *Login*.

9.1.2 QuickLogin

Alternatively to the above mentioned starting method, the software can also be started through *QuickLogin*. In this case the login window will be skipped and you will be directed to the dashboard.

NOTE

The *QuickLogin* function cannot be enabled if the optional User Management is activated (cf. chapter 10 User management (optional)) in **Universe**.

The QuickLogin can be activated as follows:

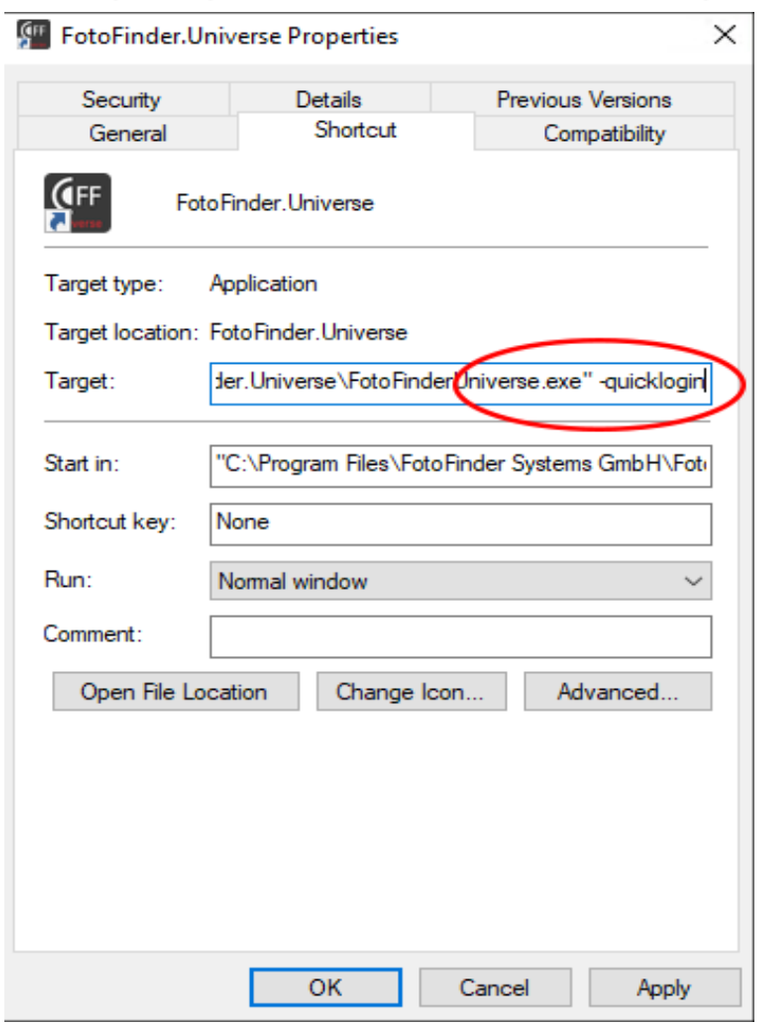
1. Right mouse click on the *FotoFinder.Universe* icon on the desktop.

A context menu will appear.

2. Click on *Properties*.

The subsequent Properties window will appear.

3. In the *Target* field go to the end of the text and add the following extension: (*space*)**-quicklogin**

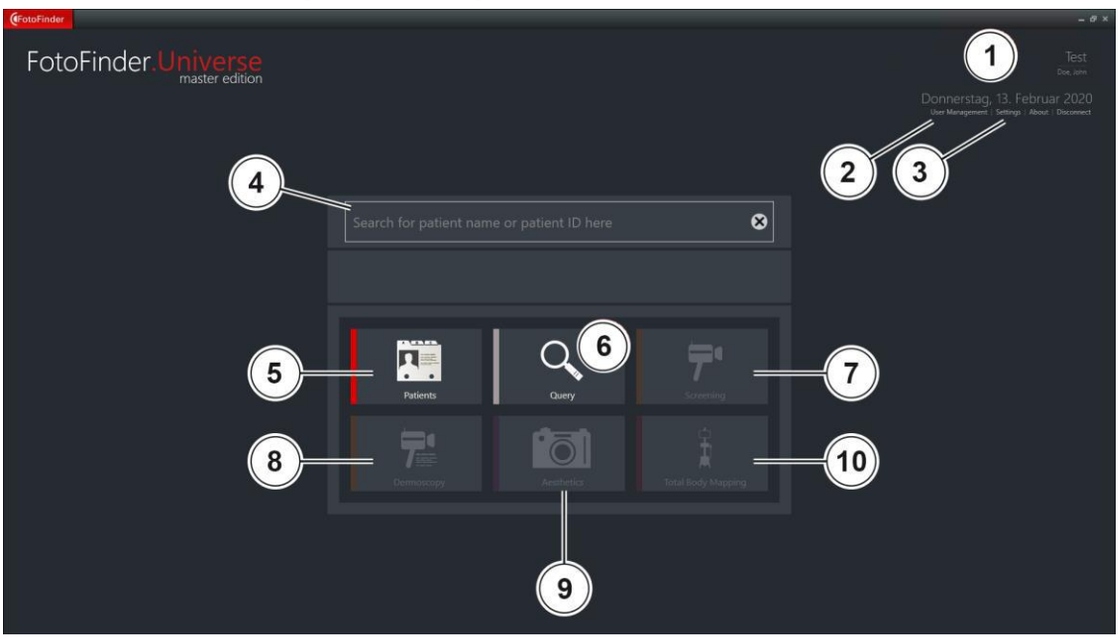


4. Click on *Apply* and then on *OK*.

Afterwards when **Universe** is started, the login window will be skipped and you will be directed to the dashboard (cf. chapter 9.2 Dashboard).

9.2 Dashboard

After successful database login the following dashboard will appear:



The dashboard consists of the following modules and functions, which are available depending on your program licensing:

1	About section (cf. chapter 9.2.1 The About section)	6	Query (cf. chapter 16 Module Query)
2	User management (optional) (cf. chapter 10 User management (optional))	7	Screening (cf. chapter 15 Module Screening)
3	Settings (cf. chapter 11 Settings)	8	Dermoscopy (cf. chapter 14 Dermoscopy module)
4	Patient search bar (cf. chapter 9.2.2 Patient search field)	9	Aesthetics
5	Patient management (cf. chapter 12 Module Patient administration)	10	Total Body Mapping (cf. chapter 13 Total Body Mapping Module)

- The Patient management, Query and Screening can be used immediately after the program start.
- In order to start Dermoscopy, Aesthetics or Total Body Mapping, you have to select a patient first. These buttons are therefore initially inactive.

9.2.1 The About section

On the dashboard in the upper right corner is the additional *About section*.

Fig. 25: The About section

Next to the ***User management* (2)** (cf. chapter 10 User management (optional)) and the ***Settings (3)*** options (cf. chapter 11 Settings) the *About section* can be accessed:

Logged in user account (1)
If you are working with the optional *user management*, you can see at this point which user is currently logged in. Otherwise, this area will stay empty.

Date

About (4)
By clicking on *About* you will get information about the program version used, contact details of the manufacturer and other information.

Disconnect (5)
You can log out from the database by clicking *Disconnect* without having to close or restart the application.

9.2.2 Patient search field

1. Type the last name or first name, date of birth or patient ID into the input field. The matching patients will be displayed in a drop-down list as you type.

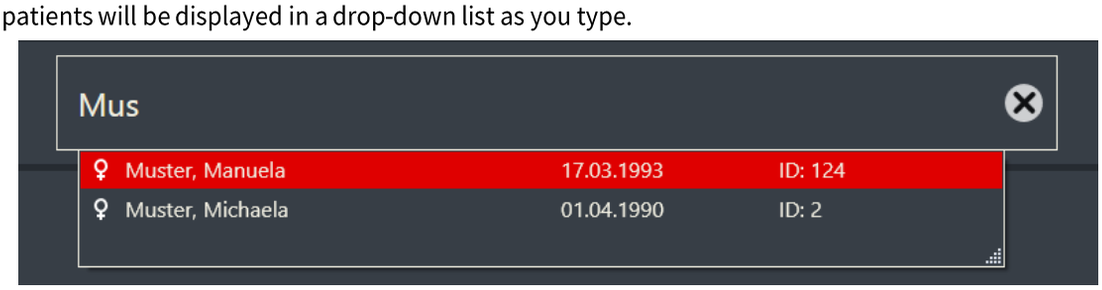


Fig. 26: Example of a patient query

2. Select the desired patient directly from the drop-down list by mouse click.

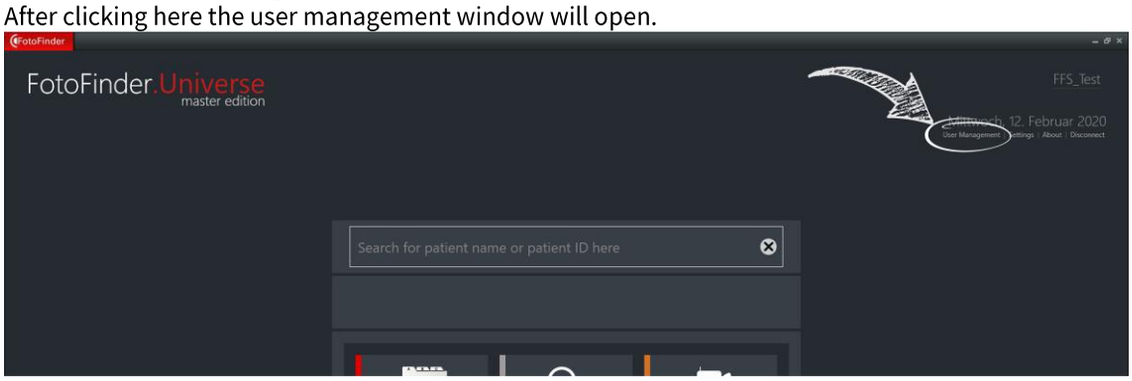
The selected patient is now displayed with name, date of birth and patient ID in the patient selection field. This is however different if the option to anonymize patient data is activated in *Settings* (cf. chapter 12.2.2 Anonymizing the Patient Data). In this case, only the initials of the patient and the patient ID appears in the drop-down list.

3. By clicking on the X on the right side of the input field the selected profile can be cleared.

10 User management (optional)

10.1 Starting User management

The user management can be started from the FotoFinder Universe dashboard. The corresponding button is located in the upper right corner.
After clicking here the user management window will open.



To control access to data and functions in FotoFinder **Universe**, user accounts can be set up and permissions assigned. When the user management is enabled, the software can only be started with user name and password.

ATTENTION

The configuration of the user management is at your own risk. Please keep your administrator password and the recovery key (displayed during the configuration) of the user management safe. **FotoFinder has no way to restore access to the database or the images if you loose your Administrator password and recovery key!** Your photos are encrypted and could not be accessed anymore!

In user management the following actions are available:

- Extensive permission management for individual users and user groups
- Create, edit or delete user groups and user profiles
- Creating and editing USB keys

Generally the following applies:

- All users access the same patient database.
- The requested password strength that is set during initial login applies to all users.
- All actions the individual users can perform in the user management depends on the settings in the permission management (cf. chapter 10.8 Permission management).

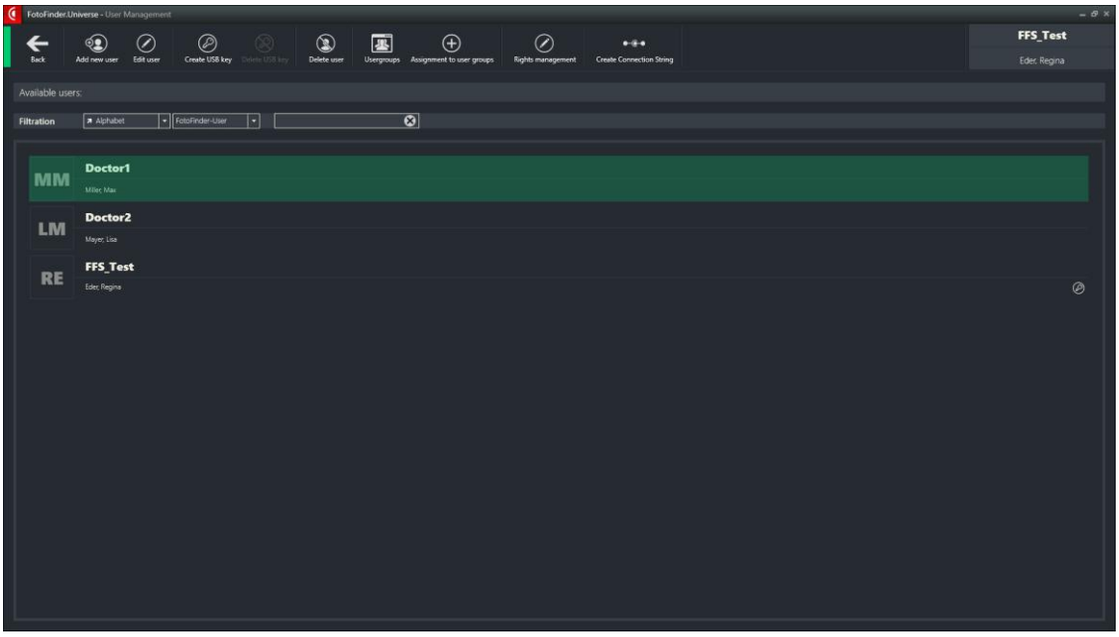


Fig. 27: Example view for the User management

10.2 Concept / Best-Practice

We recommend the following procedure:

The following information must be available:

- Administrator password
- Recovery key (printed out / safely stored)
- List of users for whom a user account should be created

Steps:

1. Create the accounts for the users (cf. chapter 10.4 Creating a new user)
2. Assign the users to a predefined user group (cf. chapter 10.7.1 Adding a user to a user group). The following user groups are preinstalled and available:

Standard user:	Full access to patient data, can change its own password
Doctor:	Just like the standard user, however cannot change its own account/password
Nurse:	Just like the doctor account it cannot change any software settings, and additionally cannot delete any patients
View Only user:	Like the nurse account, but with only read permissions for the patient data
IT technician:	No access to the patient / user data, however it can change the software settings
IT admin user:	Like the IT technician, and additionally it can make changes to the users

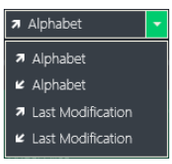
The permissions of the predefined groups should normally be sufficient. If further restrictions are required, permissions can be withdrawn via the permission management (cf. chapter 10.8 Permission management).

NOTE

Permissions that are directly assigned to a user have priority over permissions that may be denied to the user via an assigned group.

10.3 Filtering and sorting tools in user management

For a better overview, various filters and sorting tools are available in the user management:



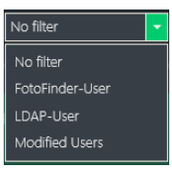
Sorting tools

You can sort the list of users and user groups (ascending or descending) by

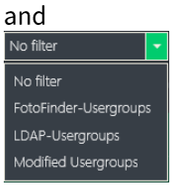
- Alphabetical order or
- Time of Last Changed.

Filtering tools

The filtering tools are available for both users and user groups.

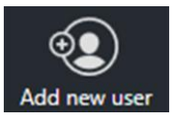


and



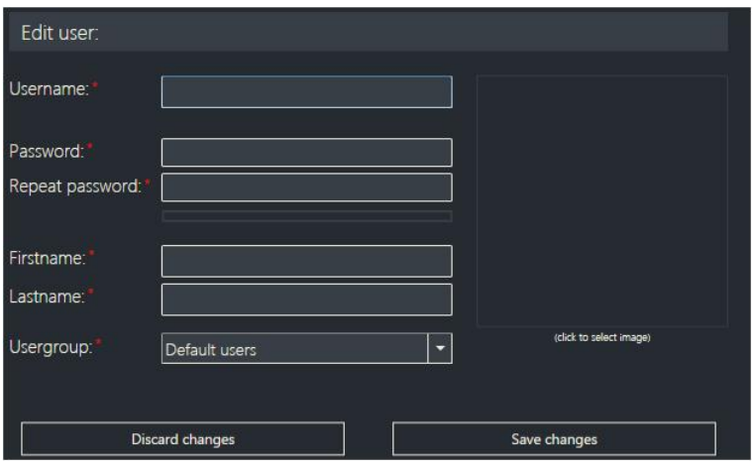
- The *FotoFinder user (groups)* shows all users (groups) that are created in the FotoFinder Universe software. This includes the preinstalled users (groups) as well.
- The *LDAP user (groups)* shows all users (groups) that were imported in Universe through the LDAP import.
- The *Changed users (groups)* shows all the already modified users and groups.

10.4 Creating a new user



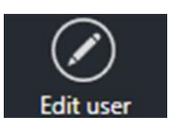
1. Click on *Add new user.*

The *Edit user* window will appear:



2. Fill in all the necessary informations. The fields marked with an asterix are mandatory, the user picture is optional.
3. With the *Discard changes* button you can erase the added data.
4. With clicking on *Save changes* the new user will be saved and now listed at the Available users.

10.5 Editing a user



1. Click on *Edit user* to make changes on the selected user.

The same editing window will appear as when creating a new user.

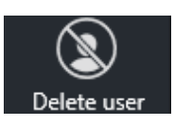
2. Make the necessary changes.
3. After clicking on *Save changes* the new data will be saved.

10.6 Deleting a user

To delete a user from the user management follow these steps:

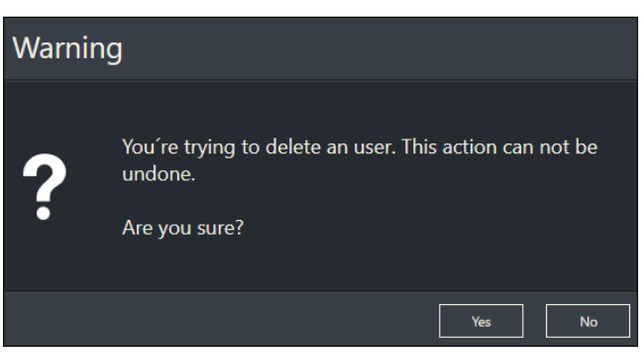
1. Click on the user you wish to delete.

This user will be now highlighted.



2. Click on *Delete user* in the menu bar.

The following dialog box will appear that the action cannot be revoked:



3. Confirm with *Yes,* or click on *No* to cancel this action.

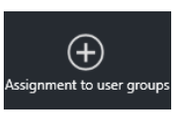
10.7 User groups

The *User groups* allow to have the same permissions set for a group of users.
Please refer to our recommendation for this in the beginning of this chapter (cf. chapter 10.2 Concept / Best-Practice).

Generally the following applies:

- In *Patient management* there are already preinstalled *User groups* available. The already set permissions can be adjusted or deleted here.
- It is also possible to create a new user group with specific permissions.
- Every user can be added to one or more user groups.

10.7.1 Adding a user to a user group



One user can belong to several user groups. You can adjust the individual assignments as follows:

1. Click on *Assignment to user groups* in the menu bar.

The following menu will open:

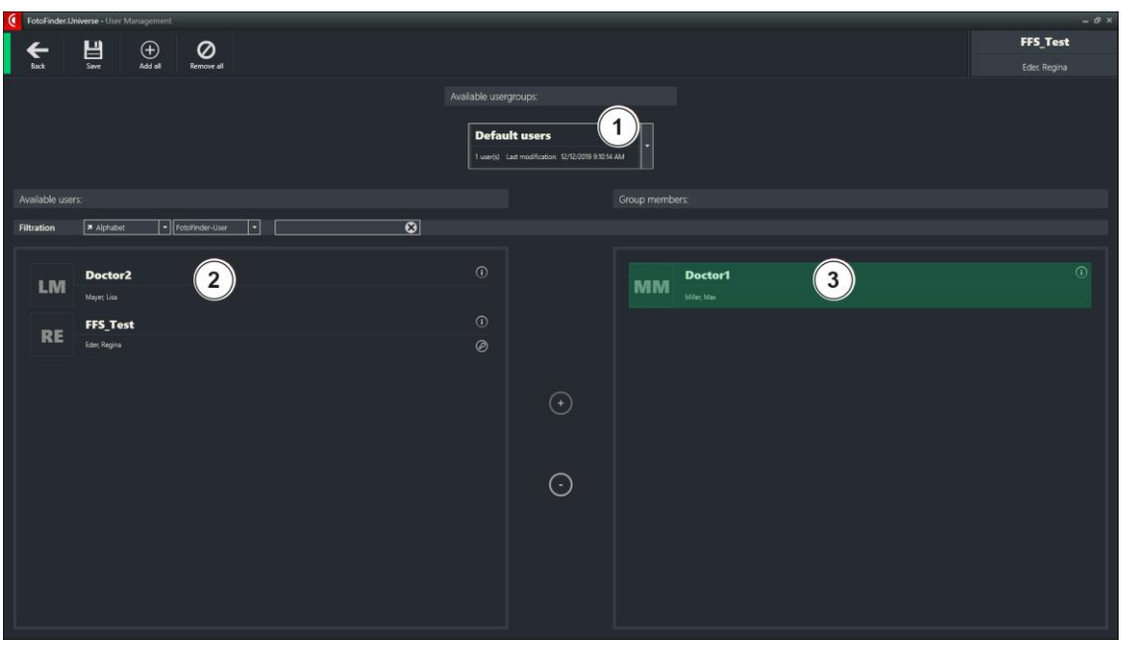


Fig. 28: Example view for the user assignment menu

To change a user assignment:

2. Open the drop down menu in the middle at *Available user groups* (**1**).
3. Select here the group where you want to add the user.

On the right side at *Group members* (**3**) all the already assigned users will be visible. On the left side at *Available users* all users will be shown (**2**) that are not members of this selected group yet.

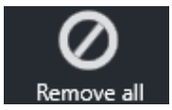
4. Click on the user you want to add or remove from the selected group.

The selected user will be highlighted.

5. A user can be added or removed with the and buttons between the two columns. With a click on the plus sign the user will be added to the selected group. With a click on the minus sign the user will be removed from the selected group.

Add or remove all users at once

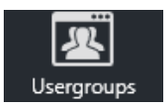
With the *Add all* and *Remove all* buttons all the users of the selected group can be added or removed.



6. Confirm your selection with *Save*.

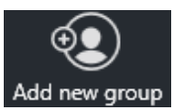
10.7.2 Adding and editing a new user group

Typically the preinstalled user groups should be sufficient. In case an additional user group is required, with the following steps can a new group be created:



Click on the *User groups* icon in the menu bar to open the editing window:

10.7.2.1 Adding a new group



1. Click on *Add new group*.

On the right side a new window will appear where you can add the name of the group.

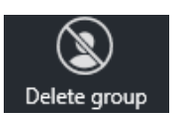
2. Add the group name and save it.

The new group will be now visible in the list.

10.7.2.2 Deleting a user group

1. Mark the user group you wish to delete.

The group will be highlighted.



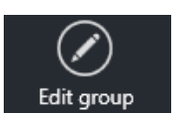
2. Click on the *Delete group* icon in the menu bar.
3. Confirm the following message with *Yes*.

The group will be deleted.

10.7.2.3 Editing a user group

1. Mark the desired user group you wish to edit.

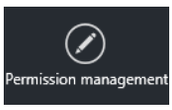
The group will be highlighted.



2. Click on *Edit group* icon in the menu bar.
3. On the right side the editing window will open where you can make the required changes.
4. Confirm your changes with *Save*.

10.8 Permission management

In the permission management you will have a full overview over all active permissions. You can also control here all individual user and user group permissions.



1. Click on the *Permission management* icon.

The following window will appear:

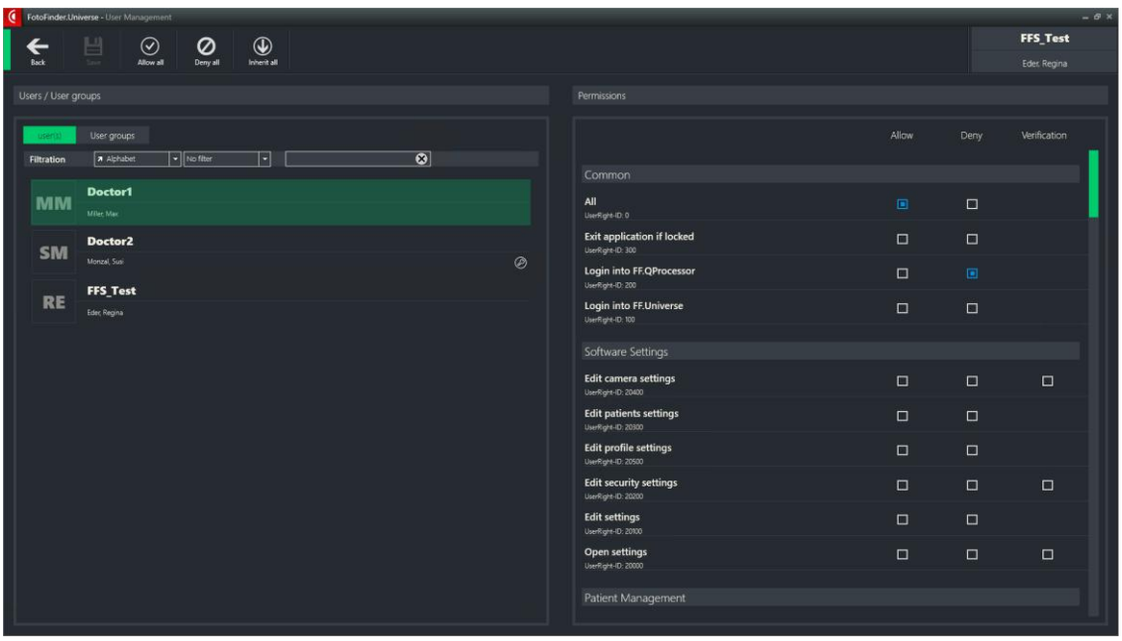
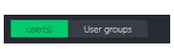


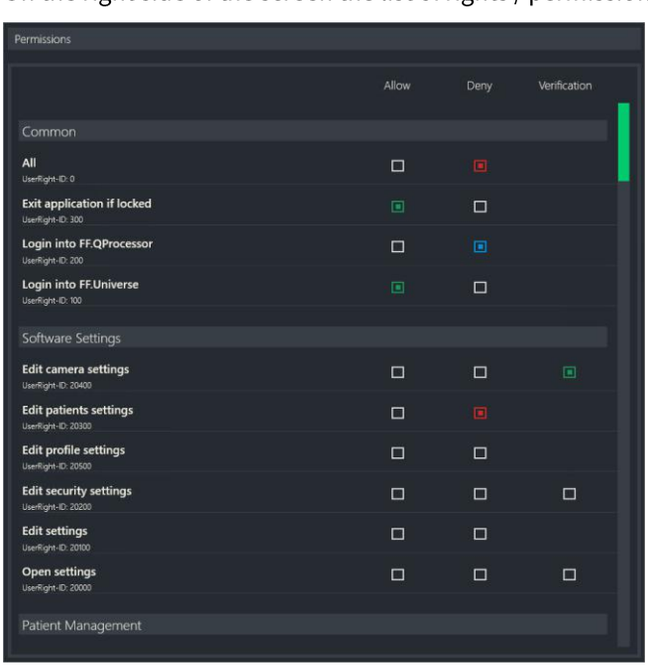
Fig. 29: Example view of the permission management



2. Select on the left side if you want to work on individual (user) or group permissions.
3. From the list below select the user/group you wish to edit.

The selected user/group will be highlighted.

On the right side of the screen the list of rights / permissions will be displayed:



The following status options are available:

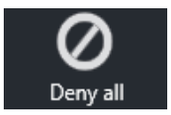
: Allow

: Deny

: Verification (see below)

4. Adjust the permissions as required.

The following buttons are also available for quick changes:
With clicking on *Allow all*, all points will be set to allowed. You still can set the permissions individually.



With clicking on *Deny all*, all points will be denied. You still can set the permissions individually.

With clicking on *Inherit all*, all the permissions will be copied from the other users of the same group.
These permissions are displayed with blue on the right side.
Allowed permissions will only be the ones that have the allowed status.

5. Confirm your changes with *Save*.

Generally the following applies:

- If a user is in more groups added, it will only have the permissions that are in **every** group allowed for the user.
- If any permissions are denied for a group, the same permission can still be allowed for any individual users in the same group.

NOTE

Any permission that is allowed for a user has priority over permissions that are set for the group where the user is.

10.9 USB Key

With a USB Key you can log in safe and fast without always having to type in a Password. Your login data will be stored on a USB Stick or SD Card. To set this please follow these steps:

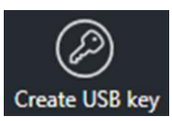
NOTE

Only the active user can set a USB Key. It is not possible to set this for another user.

NOTE

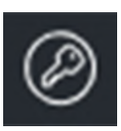
Please keep your administrator password and recovery key safe at all times.
FotoFinder has no way to restore access to the database or images if all access data is lost. If the key is lost, You won't be able to access the data again!

10.9.1 Creating a USB Key

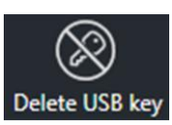


1. Plug in a USB stick or SD card.
2. Click on *Create USB Key.*
3. In the appearing window select the drive you wish to use.
4. Confirm your selection with clicking on OK.

The USB Key will be created on the drive and can immediately be used to log in to the database.
In the user management a small key symbol will be shown at any user where a USB Key is created.



10.9.2 Deleting a USB Key



Every user can also delete their own USB Key as well. In addition, users within the *Administrators* group can also delete other users USB keys.

1. Click on *Delete USB Key.*

This user now will only be able to log in with typing in the password.

11 Settings

You can adjust the settings of your program on the Dashboard (cf. chapter 9.2.1 The About section) itself. The *Settings* button is located in the upper right corner.
Clicking on it will open a menu in which you can manage various settings. The most important ones are described in the following sections.

11.1 General

In the General section, you can make the following settings (mark the checkboxes at the corresponding functions):

11.1.1 Customer data

This section is described separately (cf. chapter 11.8 Adjust user information).

11.1.2 Patient List

- The software can for example, automatically assign a new ID when creating a new patient.
- Anonymizing patient data: In the Patient List and when searching on the dashboard, the Software will only be display the initials of your patients. The full name is still displayed when the application is open.
- Specify the unit system with which you want to measure (cm/inch).

11.1.3 Safety

- Lock settings with a password: To ensure that selected settings are not changed inadvertently you can enter a password under Security. Settings can then only be changed by entering this password. For additional information, please contact FotoFinder Support at support@fotofinder.de

11.2 Image Capture Devices

Under *Image Capture Devices* you can control the different parameters of all connected cameras and video cameras. For example, the white balance and the preset iris values for the **medicam**.

NOTE

Please note that changes in the camera settings will negatively impact the comparability of new images with previously existing images.

11.2.1 General

Here you can adjust the settings for the image display:

- If required, enable or disable the 4: 3 mode for new capturings.
- By default the micro images are set to start in polarized mode. Disable this here if necessary.

Device names

If you used the renaming option (cf. chapter 14.2.2.1 Renaming connected digital cameras) you can reset the device name here.

11.2.2 medicam

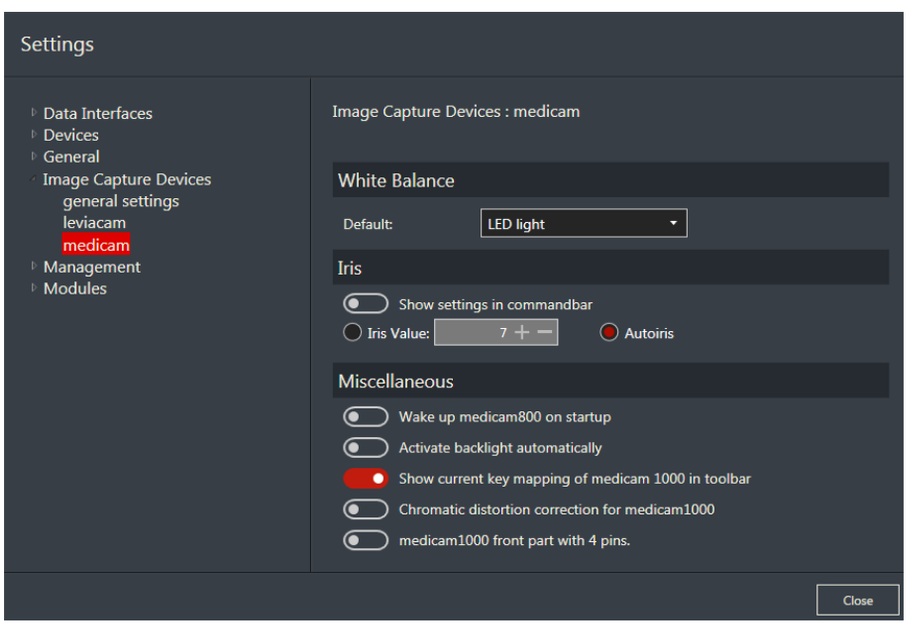


Fig. 30

White balance

Here you can specify a standard value, which can be changed during the capturing process. Select the type of illumination in accordance with the lighting condition in your practice.

Iris

Select the iris settings in accordance with the lighting condition in your practice.

Miscellaneous

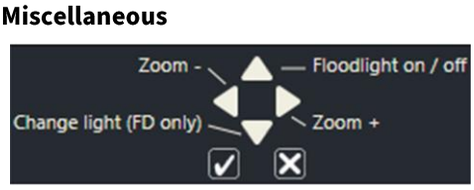


Fig. 31

Activate or deactivate the display of medicam key allocations in the Software.

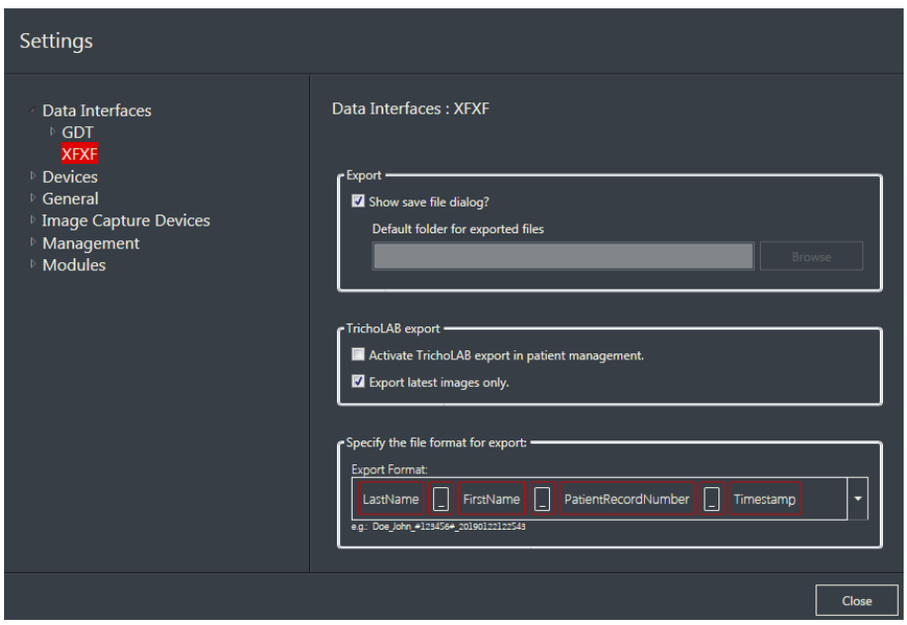
11.3 Data Interfaces

11.3.1 GDT

Here you can adjust the settings for the GDT connection. For this you will need the data of your GDT system.
Please contact FotoFinder Support for individual consultation and integration.

11.3.2 XFXF

Here you can adjust the settings for exporting data (for example, setting a default storage folder).



Export
You can skip the save dialog for XFXF exports by removing the check mark in the dialog box for entering the storage path. Exports are then directly saved in the storage folder you selected here.
If you leave the checkmark here, the last used storage location will be suggested. The system remembers this and also differentiates according to the individual export functions, such as Image Export, FXF Export, etc. The location can be changed each time you save / export.

TrichoLAB Export
The **TrichoLAB** Export provides you with an export function for hair analysis via **TrichoLAB**. Please note that this requires the installation of the **TrichoLAB** sync Software.

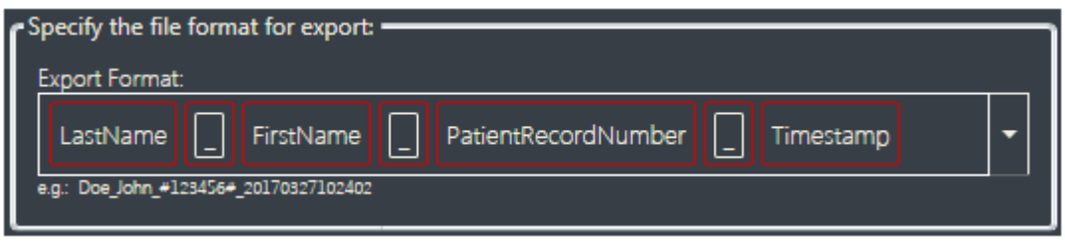
Please adjust the following settings:

1. Remove the tick for *Show save file dialog.*
2. Tick *Activate TrichoLAB export in patient management.*
3. Optional tick: Export latest images only

Do not enter a password during the **TrichoLab** export process.

Specify the file format for export

Here you can specify how file names are recommended by the Software for export. The file name is comprised of various data fields.



1. If you want to add a certain field, click on the arrow on the far right and select the required field from the displayed drop-down list.
2. Click and hold the left mouse button to change the order of fields in the selection.
3. You can delete the field again by right-clicking on a field and then selecting *Delete*.
4. The field *Customize* provides a text field for free text. If you click into the field, a cursor appears and you can enter your text.

A sample is displayed below the field selection and shows the current order of your fields.

11.4 Devices

11.4.1 Automatic Tower

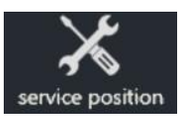
You can find some functional settings for the ATBM Tower under *Devices.*

- **Camera profile**: Here you can preselect a camera profile as default, e.g. *PolFlash XE.* The selected camera profile is preset in the capturing process, but can be changed at any time.
- **Countdown**: Before starting a Total Body Mapping or Body Photography, there is a countdown rate before the camera starts moving for safety reasons. By default, this countdown lasts for 3 seconds. This countdown can be changed or deactivated completely by setting it to 0.
- **Service position**: The service position describes one of three possible positions of the camera slide on the tower (top, middle, bottom).

  The service position is used for better accessibility of the camera slide including the devices mounted on it (e.g. camera, PolFlash XE, cable) for maintenance.
  Select the desired service position from the drop-down list.
  You have two options for moving the camera slide to the service position:

  – Through the *Settings*: Click on the *Service position* icon on the right side of the drop-down list.

  Or:

  – Enable in the *Settings* the option *Show service position in live view.* As a result, the corresponding button will also be displayed in the Total Body Mapping module in live image. Click on the Service Position button to move to this position.

- **Parking position**: The digital camera can automatically go to a parking position at eye height when the program is closed. This prevents the camera from sliding down and possibly causing damage in the camera. To set this check the appropriate checkbox. When you exit the program, a window will appear which must be confirmed. Afterwards, the camera will automatically move to the parking position.

11.5 Modules

11.5.1 Dermoscopy

Here you can specify the pre-settings of the Dermoscopy module.

11.5.1.1 General:

- Hide/Show the Screening button on the menu bar.
- Select the reference image to be shown when creating a new micro image.
- Micro image comparison: Select the combination with which image should the latest micro image be compared (first, second or second to last).
- Micro image comparison: Select whether the overview image should be displayed automatically in the absence of a comparison image.
- Specify whether a micro image is to be displayed on full screen immediately after capturing or only in the preview window
- Activate or deactivate the highlighting of overview images without markers in the gallery (SmartGallery).
- Use *Filter and sort gallery* to adjust the standard filter value in the image gallery (SmartGallery).
- Use *Medicam Zoom* to specify a standard enlargement for micro images. This is then automatically set during the capturing process of baseline images.

If you mark *Reset to standard zoom value* this will cause a reset to the standard value after the capture of every micro image. If not, the manually selected zoom level will be maintained during the capturing process.
For follow-up images, the same zoom level as in the baseline images will be set by default, to ensure an optimal image comparability.

11.5.1.2 Image Viewer:

- Here you can activate or deactivate the possibility to attach file attachments for images (cf. chapter 13.1.6 Saving file attachments).
- Enable or disable the automatic synchronization of micro image appearance (cf. chapter 14.7.2 Imaging Tools)
- Enable or disable the **Ghost** button for micro images here (cf. chapter 14.5 Micro capturing (images and videos)).
- Select if the Zoom percentage should be displayed in the Image Viewer or not.
- Enable or disable the grayscale button for micro images.

11.5.1.3 Localization:

By default, for an image abbreviations are used for localization such as "HF" (Head Front)

- Change the localization descriptions by clicking on *Enable user-defined localization descriptions.* Enter the required descriptions in the appearing table.

11.5.1.4 PuppetControl:

For each overview image, the corresponding localization must be chosen on the localization puppet. By default, the puppet appears automatically when saving if you have not yet selected a localization.

- Adjust the time of the automatic appearance.
- The virtual patient can be displayed with or without clothing. Adjust this if necessary

11.5.1.5 Reporting

- Check *Extended printer options* in order for the extended printer menu to appear when creating a report.
- Select whether
  - markers
  - overlay graphics und
  - measurement ranges (with or without grid)

  should be included in the printed report. Check the respective field as required.
- You can select a standard output for the reports: PDF, Preview or Printer. This option allows you to select the type of any subsequent reports. This can be edited in the extended printer menu.
- If necessary, adjust the *Marker scaling* here. This changes the size of the markers in the reports. You can also leave this setting on *Default.*
- By clicking on *Browse* you can select a standard destination folder to save the reports to.
- *Define file format for export and reports:* You can set here the title format of the reports and exported images.

11.5.1.6 Schematic Localization:

If you use schematic images instead of overview images, different localizations to the ones used in the selection via PuppetControl are used.

- Adjust the default descriptions. Click on *Activate user-defined localization descriptions* and edit the values in the appearing table.

11.5.1.7 Screenshots:

When creating a screenshot with *Copy to Clipboard* from image comparison, further information is made available together with the image.

- Select these details here.
- Adjust the image size of the rendered screenshot.

11.5.1.8 Videos

Here are the settings available for the Video recordings:

- Recording
- Export
- Watermarks

11.5.1.9 Wi-Fi

You can also capture macro and micro images with a digital camera via Wi-Fi SD card.

- Activate the checkbox *Activate Wi-Fi* and specify the folder to where the WLAN SD card imports the images. When taking overview or micro images in the Wi-Fi mode, the images are then imported to the **Universe** software from this designated folder. Deactivate the use of sub-folders in the Wi-Fi SD card menu.

NOTE

The connection to the Wi-Fi SD card and the computer must be established outside of the **Universe** software with the help of the Wi-Fi card's third-party software. Additionally, a wireless network must exist so the Wi-Fi SD card can import images to the FotoFinder PC.
The eyefi mobi and Toshiba Wi-Fi SD cards are supported and recommended.

11.5.2 Total Body Mapping

Here you can adjust the Total Body Mapping module's default settings.

11.5.2.1 Image Viewer

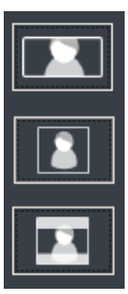
Gerneral

Here you can activate or deactivate the possibility to attach file attachments for images (cf. chapter 13.1.6 Saving file attachments).

Image cropping

For Total Body Mapping, you capture four images from every side of the body that are automatically assembled into one full body image.

- Set how the combined image is supposed to be displayed with the original images. You can choose how the photos are displayed:
  - cropped images
  - original size
  - original images with marked overlay (transparent overlay)



- Activate the *Display mode* function in order to switch between the various display mods within the mode.

- Activate *Display alignment* to re-align compared TBM images at the push of a button.

11.5.2.2 Bodyscan

- Choose if the images should be normalized for the **Bodyscan**.

11.5.2.3 Reporting

- Check *Extended printer options* and the extended printer menu will appear when creating the report.
- Select whether
  - markers
  - overlay graphics and
  - measurement ranges

  are to be included in the report or print-out. Check a respective field as required.
- If required, select a standard output for your reports: you can select between PDF, Preview or Printer. This lets you preselect the type of output during the creation of subsequent reports. This can be edited in the extended printer menu.
- By clicking on *Browse* you can select a standard folder for reports from this module.
- *Specify the file name format for exports and reports*: Here you can specify how file names are recommended by the Software for exported images and reports (cf. chapter 11.3 Data Interfaces).

11.5.2.4 PuppetControl:

- The virtual patient can be displayed with or without clothing. Adjust this if necessary

11.5.3 Query

11.5.3.1 Reporting

If desired, you can define the file name and format for exports and reports from this module (cf. chapter 11.3 Data Interfaces).

11.6 Management

On the Administration tab, you can manage a list of possible treatments, diagnoses and studies and change the associated settings for the **dermoscope** and **aesthetics** modules.
The list will then appear as a drop-down menu with the image data on the user interface.

- You can add more entries by clicking on *New*.
- You can deactivate individual list entries by using the mouse to uncheck behind the appropriate name. By clicking the mouse again, you can check it again and reactivate the entry.
- After clicking on a previously stored entry, you can change the name with *Rename*. Please note that this change will also affect existing images in which this entry was already used.

NOTE

If you want to combine several (up to five simultaneous) existing entries, e.g. because the same treatment was created with different spelling, you can easily combine them as follows:

1. Select the appropriate entries by clicking the mouse and holding the Ctrl button.

The selected lines are highlighted in red.

2. Click on *Rename* and allocate a name.
3. Confirm by clicking on OK.

The entries are now combined.

Confirm all changes with *Save*.
Click on *Close* to return to the Dashboard.

11.6.1 Treatments

(Treatments only relevant for the **aesthetics** module)
Checking *Editable list of recommended treatments in Aesthetics* will result in the following: You can either choose a treatment from the previously created list or freely enter a treatment directly in the user interface. New entries are automatically moved to the treatment drop-down menu.

11.6.2 Diagnoses

You can import a saved csv file by using the *CSV Import* button.

Leaving the checkbox empty at *Use fixed templates for diagnoses in Dermoscopy/Aesthetics* will result in the following for the specific module: You can either choose a diagnosis to tag a photo from the previously created list or freely enter a diagnosis directly in the user interface. New entries are automatically moved to the diagnosis drop-down menu. The system does not suggest any diagnosis.

11.6.3 Studies

Leaving the checkbox empty at *Use fixed templates for studies in Dermoscopy/Aesthetics* will result in the following for the specific module: You can either choose a study from the previously created list or freely enter a study directly in the user interface. New entries are automatically moved to the study drop-down menu.

11.7 Audit Control

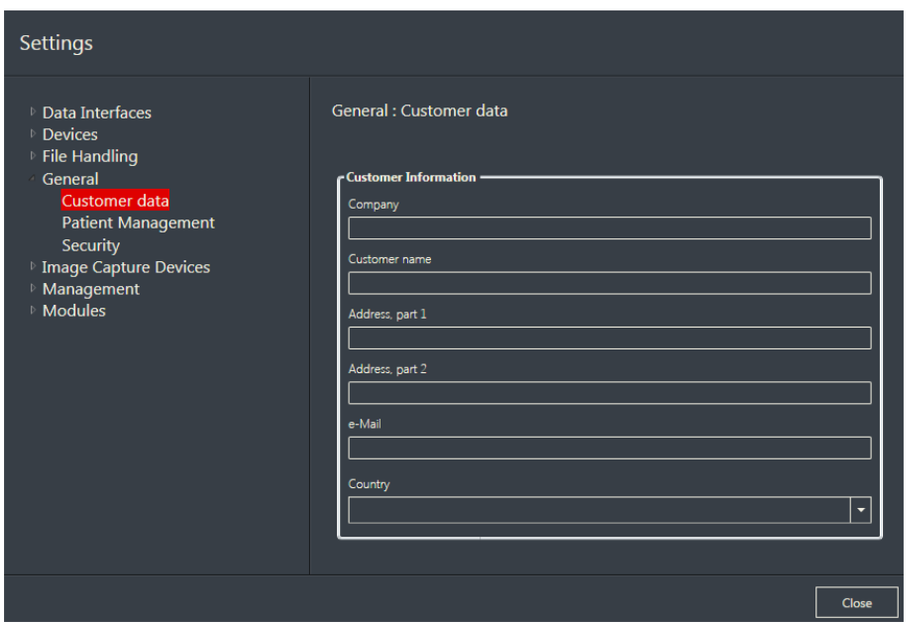
Since **Universe** Software Version 2.0.35.0 it is possible to record changes and procedures by each user. This record is activated by default.
Please get in touch with your local FotoFinder contact person if you need further information.

11.8 Adjust user information

During the installation process you filled in your user information for the print layout. This data is now displayed in the header.

You can edit these data as follows:

1. Click on *Settings* at the top right of the start screen.
2. Open the menu *General - Customer Data* and edit your data there.



3. Exit the menu by clicking on *Close.*

Your data are now edited.

Alternatively, you can edit the company name, address and email as follows:

1. Press the Windows key.
2. Enter **SetCustomerInfo.**
3. Confirm with Enter,

which opens a window in which you can update the data.

4. Save the data and exit the program with *Accept.*

NOTE

When creating a report, these data will now be inserted automatically.

12 Module Patient administration

You can perform the following actions in the Patient List module:

- create new patient profiles
- edit or delete existing patient profiles
- export or import patient data with all associated images (cf. chapter 17 Import and Export)

12.1 Add patient

1. To add a new patient record, click the *Add patient* button in the upper left hand corner of the Patient List module.

The following form will appear:

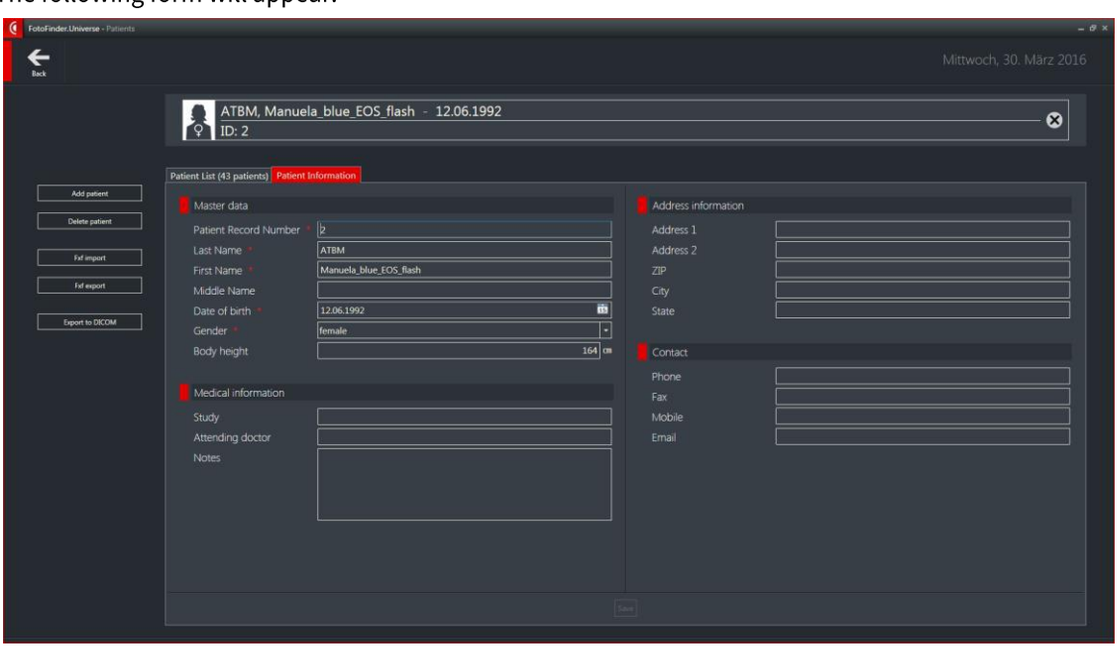
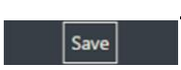


Fig. 32

2. Fill in the required patient information. Blanks are provided to fill in mandatory and optional patient information.

NOTE

- Fields marked with an asterisk are mandatory!
- While body height is not marked as a mandatory field, this information is indeed required to run Total Body Mapping. If you do not fill in the field at this point, you will be asked to provide the body height information before the first exposure in the Total Body Mapping module.
- The patient ID format is not specified. You can create it individually. It can consist of letters and numbers, or a combination of both. By selecting the field *Generate new patient record numbers automatically* in *Settings → General*, you can set up automatic assignment of the patient number (cf. chapter 11.1 General).



3. When you have filled out the patient information form, click on *Save*.

A new patient record has been added to the database and you are referred back to the Dashboard.

12.2 Editing Patient Records

12.2.1 Opening a Patient Profile

You can select an existing patient profile by either searching in the search mask on the Dashboard itself, or by searching in the Patient List module.

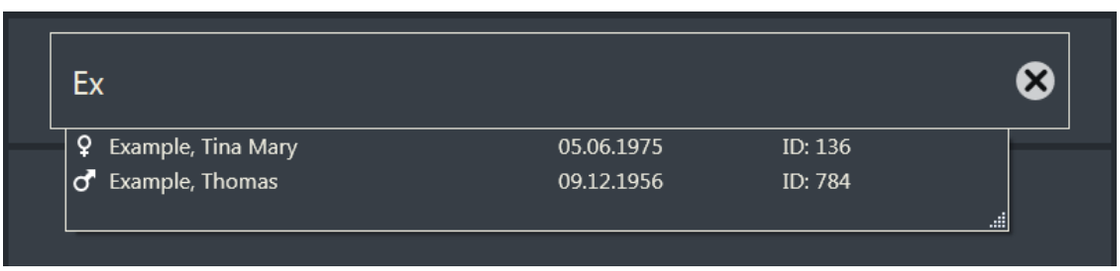
NOTE

The most recently selected patient record remains active in the search field of the Dashboard. Click on the closing symbol X on the right side to clear this selection and to start a new search.

12.2.1.1 Searching with a search option

1. Insert at least the first character of the patient record number, the last name or the first name or the complete date of birth into the search field on the upper edge of the screen.

During the input of the characters, possible results will already be displayed in the hit list:

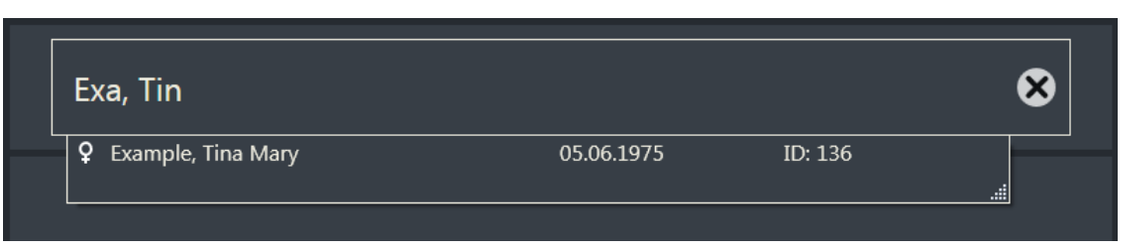


2. Click to select the required patient profile from the hit list.

12.2.1.2 Searching for first names and surnames

You can also search for surnames and first names simultaneously:

1. Enter these in the search field. The first characters suffice.



2. Click to select the required patient profile from the hit list.

12.2.1.3 Feature for patients with several first names or surnames

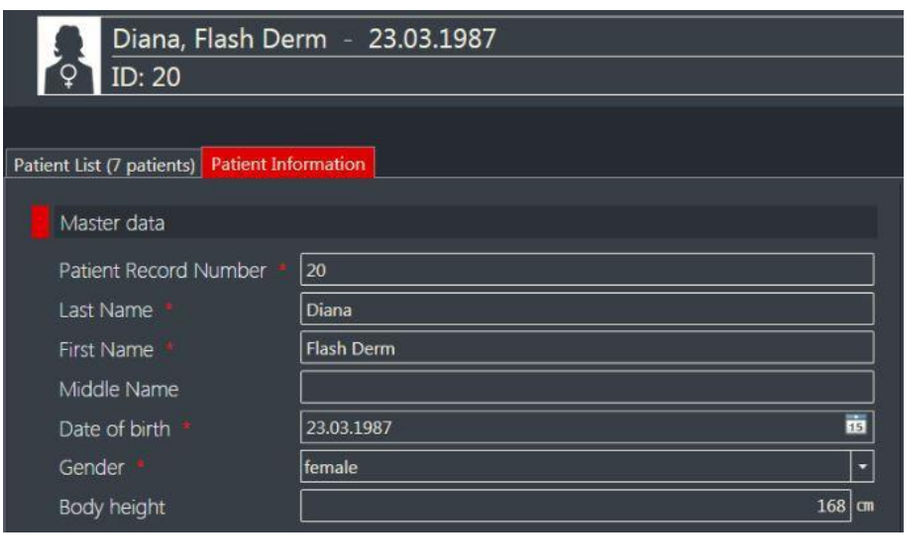
Please note the following when entering a search for a patient has several first names or surnames (e.g. “Tina Mary”):
For instance, when entering “Tina Mary”, the Software will only recognize the patient if you also add a comma (,). The Software can then detect that the search refers to one and the same field (in this case; the first name).

12.2.2 Anonymizing the Patient Data

The patient names are by default anonymized so that it is not displayed while treating a third party. However, you can still select anonymized patient names via the search field. You can turn anonymizing off in Settings (cf. chapter 11.1 General).

12.2.3 Updating and Deleting Patient Information

1. Select the required patient profile.
2. Click on the *Patient data* tab.
3. Edit or complete the patient data and contact details.
4. Click on *Save*.



If you want to delete a profile, select the appropriate profile from the database first and then click on *Delete Patient.*

NOTE

After confirmation, the patient profile and all related images will be removed irrevocably!

13 Total Body Mapping Module

Total Body Mapping (TBM) is the module used in connection with the ATBM Tower. You can capture full body photographs and review images with this module.

1. Create a new patient profile or select an existing one.

2. Click on *Total Body Mapping* on the Dashboard.

Fig. 33

Should you not have provided information for the patient's height, you will be asked to do so now (for ATBM only).

3. Use the slider bar or the +/- signs to enter the size in centimeters.

You can still amend the information in the master data of the patient administration tab at a later stage.

13.1 The Desktop

The user interface of the module consists of six sections:

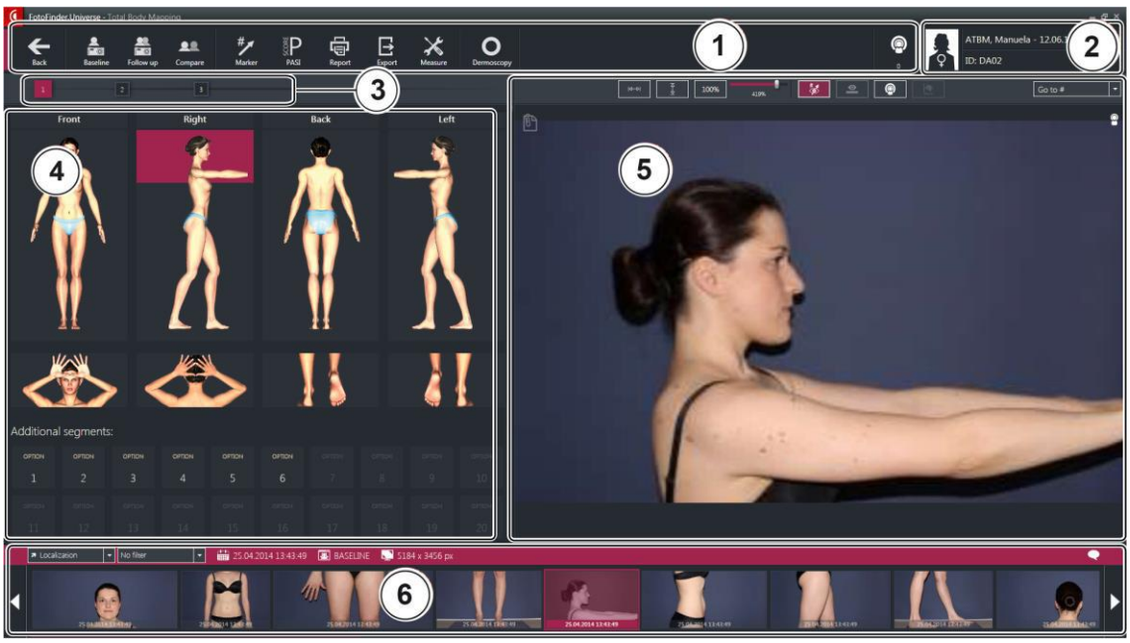


Fig. 34

1	Menu Bar	4	Body Map
2	Patient Data Field	5	Preview Window
3	Timeline	6	SmartGallery

To give the preview window more space, you can reduce or hide the display of the image segments and the **SmartGallery**:

1. Click on the hide symbol in the shown spot (see arrow markings on the next figure) in order to reduce the size.

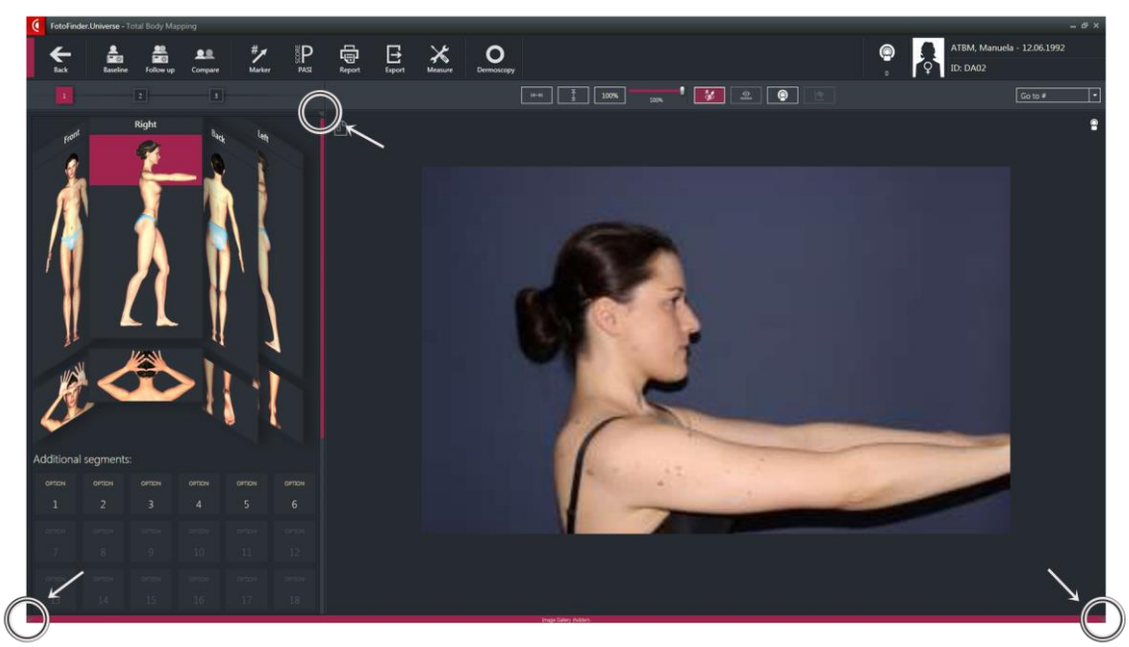
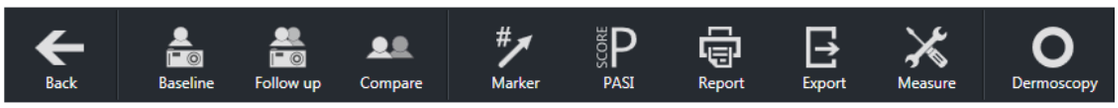


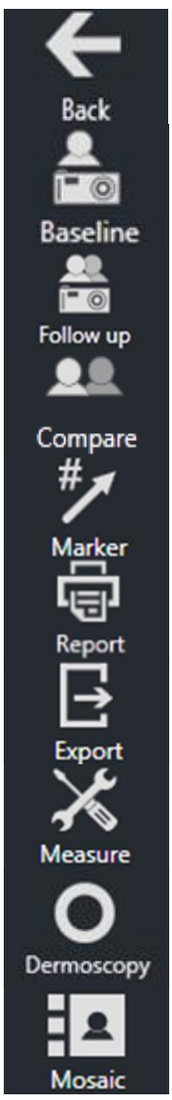
Fig. 35: User interface with enlarged preview window

2. Click on the symbol a second time to enlarge the window again.

13.1.1 Menu Bar

You can see the Menu Bar on the upper edge of the screen.





Back: you are returned to the previous screen. When you click this button in the overview, you will leave the module and return to the Dashboard.

Baseline: You start Total Body Photography on patients for whom prior reference images are not yet available, or if you want to create a new baseline for the patient. Please refer to the notes in the separate chapter for more information (cf. chapter 13.2.2 Creating a new Baseline).

Follow Up: You start the capturing process of images for patients for whom prior references are already available.

The Compare function: You directly compare images from one position but different sessions.

Marker: You insert an arrow and mark a skin feature.

Report: You create a report. The print is specifically designed to match Total Body Mapping.

Export: You export the image displayed in the preview (cf. 17.2).

Measure: You can use a simple measurement tool (cf. chapter 13.3.4.2 Drawing and measurement tools).

Dermoscopy: You directly change over to the Dermoscopy module.

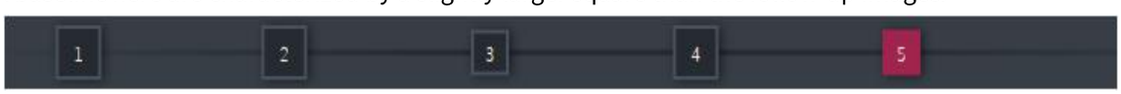
Mosaic: Viewer to see multiple pictures on a single screen (cf. chapter 13.4 Mosaic View (exclusive for ATBM master Edition)).

13.1.2 Patient Data Field

The Patient Data Field is displayed on the right side of the screen with the name and patient number of the current patient. The number of images already captured of this patient is specified next to the patient number in brackets.

13.1.3 Timeline

The timeline is located in the upper left section of the screen. Use this timeline to select baseline and follow-up images in chronological sequence.
A baseline here are characterized by a slightly larger square than the follow-up images.



The currently selected session is marked with color.

Fig. 36

If you move the cursor over the mark of an individual session, the information related to the session will appear. You will see

- the name of the capturing session
- the date of capture
- the number of images
- the height of the patient and
- the image segments for which images were captured (displayed in color; those without images are gray).

You will also find the *Delete session* button below.

13.1.4 Body Map

On the left hand side of the screen, body puppets guide you through the various capturing segments.

- Positions with existing baseline images are shown in color.
- Gray body parts are not yet photographed.
- The current image, which is also shown in the preview window, is highlighted in color.

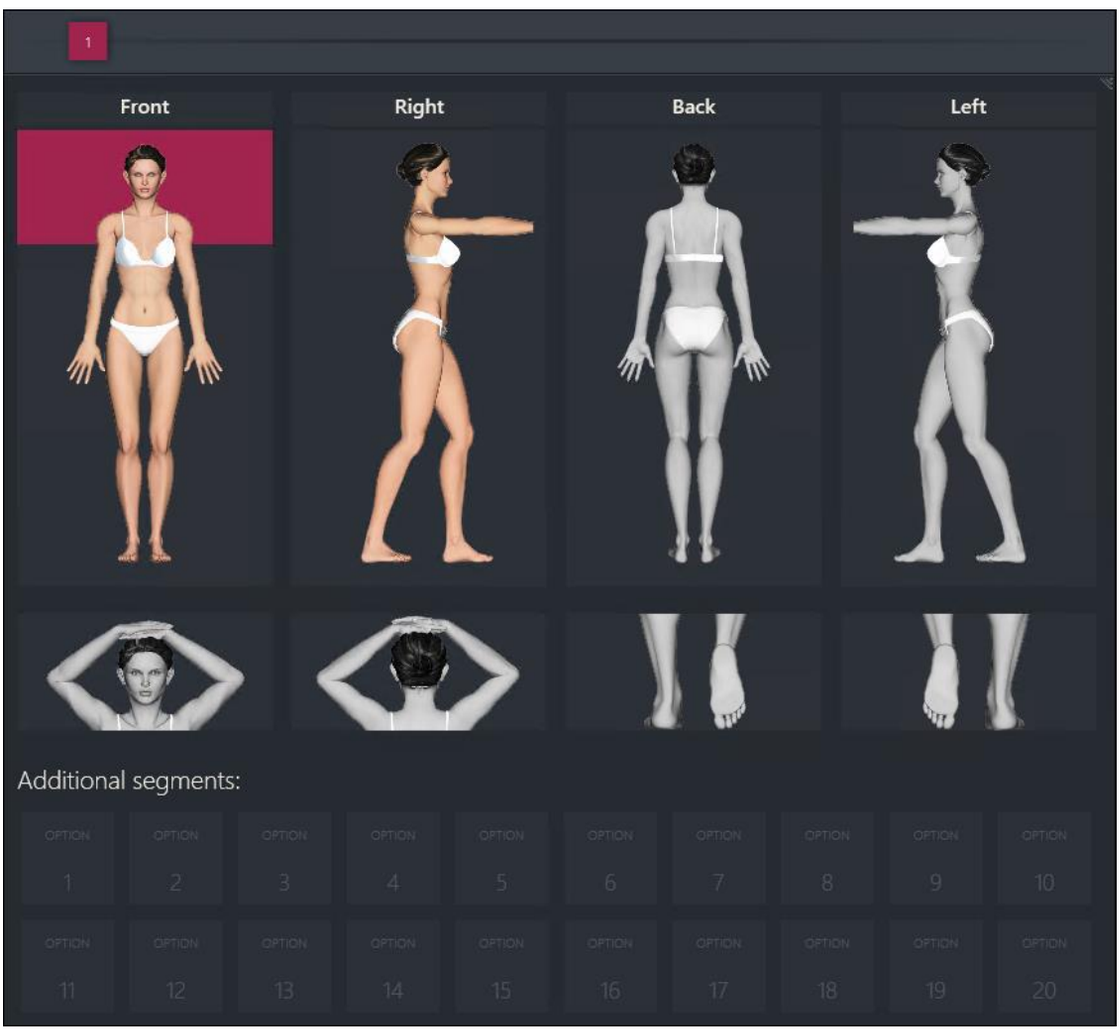


Fig. 37

Each body map is divided into four segments:

- Head and shoulders
- Torso
- Upper legs
- Lower Legs

The Total Body Mapping software automatically prompts for 20 standard poses to document the majority of the skin surface. To capture additional body areas which are not visible on the standard views, up to 20 additional positions can be photographed.
Click on any segment to select it. The selected area is then highlighted and the selected image will appear in the preview window.

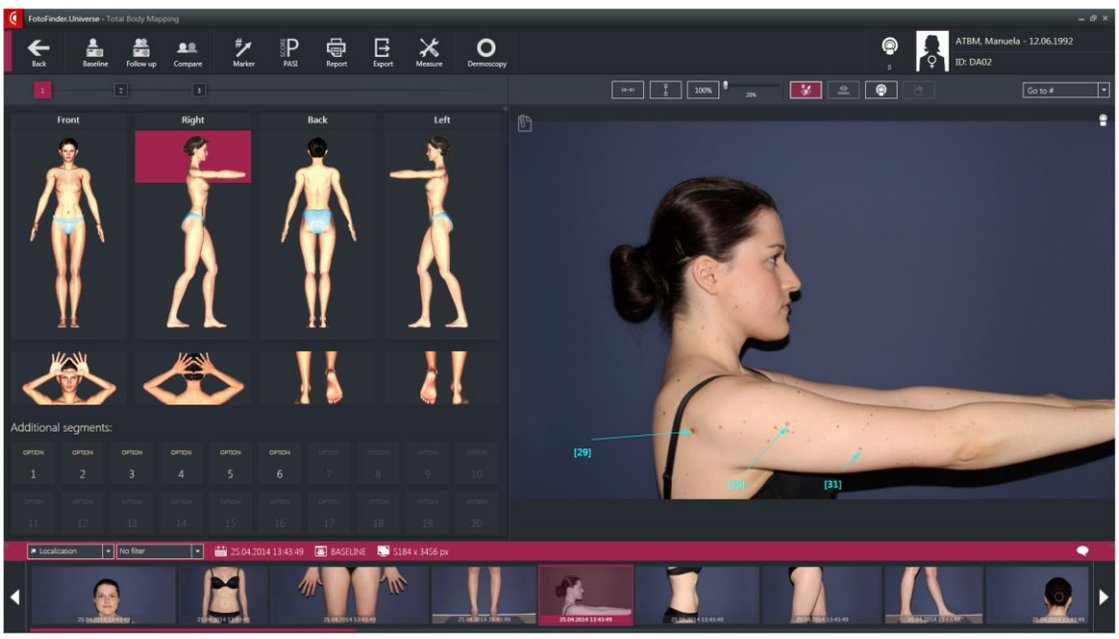


Fig. 38

13.1.5 Preview Window

The preview window is located on the right hand side of the screen. Here you can see the image of the current imaging session and the currently active segment or the live image during the capturing processes.

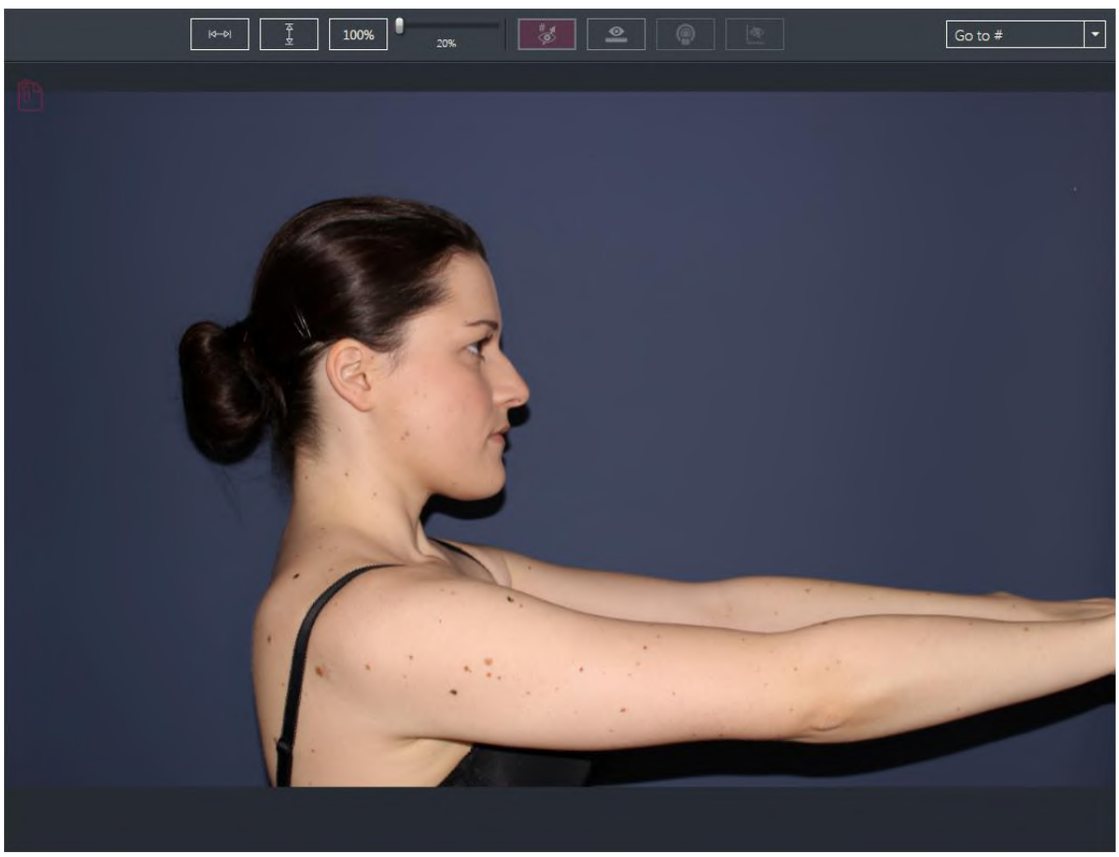


Fig. 39

13.1.5.1 Magnifier function

If you right-click and hold the mouse button in the displayed preview image, a magnifier appears which allows you to enlarge an image section. Adjust the size of the magnifier with the mouse wheel while you keep the right mouse button pressed.

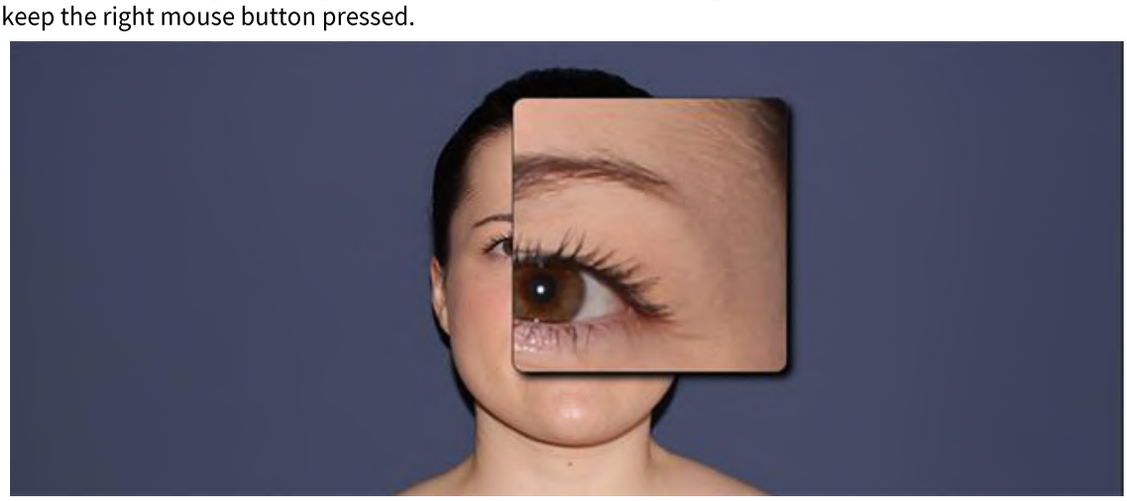


Fig. 40: Magnifier function

13.1.5.2 Imaging Tools

Above the image you see the following menu bar for the image display:

With this button you can enlarge the image to the width of the preview window.

With this button you can adapt the image to the height of the preview window.

With this button you can display the full resolution of the picture.

With the help of the slider or by turning the mouse wheel you can zoom in or out on a photo. You can pan the image by holding the left mouse button after you zoomed in.

With this button you can hide or display Markers.

With this button you can show or hide overlayed graphic items.

With this button you can show or hide **Bodyscan** circles (cf. chapter 13.3.3 Bodyscan ATBM).
This is only possible for images created in the Total Body Mapping module.

Use this button to fade in a scale in the preview window (not possible for uncalibrated images). By right-clicking on this button, an additional menu will appear where you can individually set the line thickness as well as the text and line color.

13.1.5.3 *Go to #* function

With the *Go to #* button you can select images of a special marker. Select the number of the appropriate marker in the drop-down-menu.
Only the markers that were set in Total Body Mapping images are displayed. To see all markers please go to the Dermoscopy module.
Use the *Dermoscopy* button to quickly call up any associated micro images.

13.1.5.4 Changing the segments in the preview window

If you want to change the displayed segments in the preview window, there are two options available:

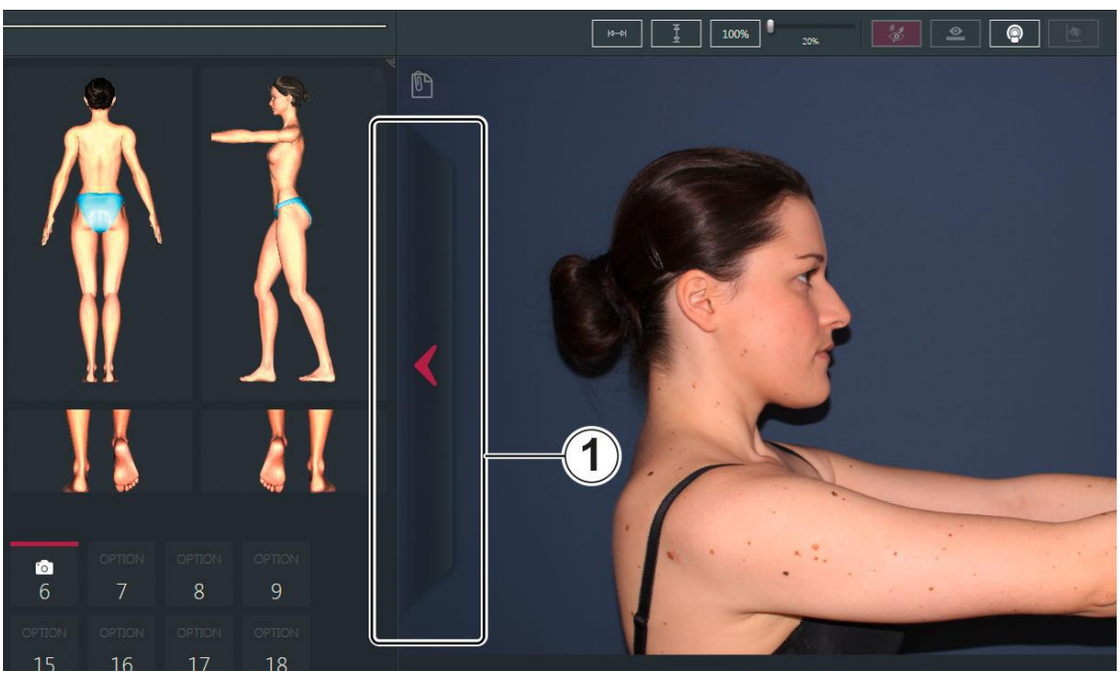
Change using navigation arrows:

1. Move the cursor to the sides, or to the upper or lower edge of the preview window.

This displays a bar with a navigation arrow.

2. Click on this arrow.

The view changes to the adjacent segment in this direction.



1 Navigation arrow

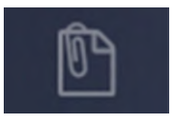
Change via direct selection on the puppet:

1. Left-click onto the required puppet segment on the left side of the user interface.

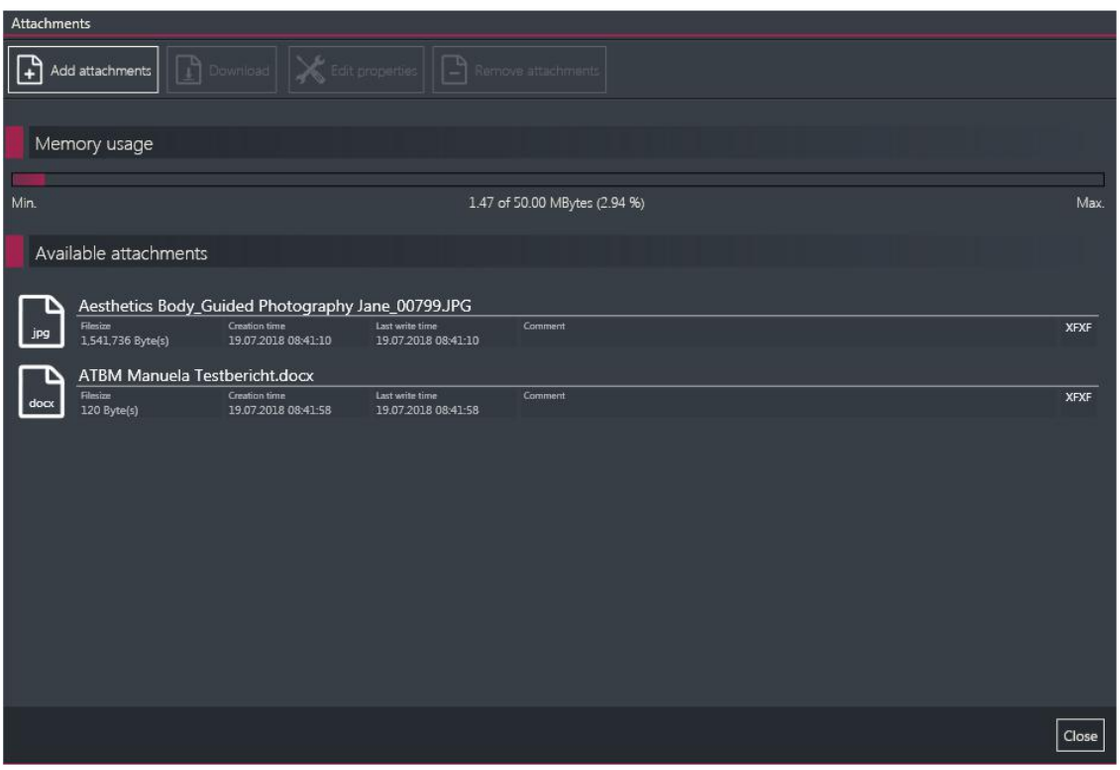
The view changes to the selected segment.

13.1.6 Saving file attachments

You can save file attachments for every photo.
This function can be activated and deactivated in the settings (modules / ... / image viewer) (cf. chapter 11.5.1.2 Image Viewer:).



1. Click on the paperclip icon in the upper left corner of the preview window.
   The Add attachments window will open.

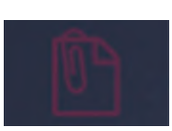


2. Via Add Attachments you can select files that you want to save as an attachment here.

Once you selected an existing attachment, you can also perform the following actions here:

- Download: The attachment can also be stored outside of Universe.
- Edit properties: You can change the files name, enter a comment and choose whether to include the attachment in an XFXF export.
- Remove selection: The file can be removed again as an attachment.

3. With Close this menu and window will be closed.



You can see if there is any attachment if the paper clip is colored. This color variates depending on which module are you using (Dermoscopy, Total Body Mapping or Aesthetics).

13.1.7 SmartGallery

The **SmartGallery** is located on the bottom edge of the user interface. It displays thumbnails of all the images of a session in the sequence of capture.

Fig. 41:SmartGallery

- If you click on one of the images in the **SmartGallery**, it is marked with a red frame and displayed in its original size in the preview window.
- Above the **SmartGallery** you will find information on the capturing session (date, name, image size).
- With the left and right arrows you can scroll through the images in both directions. Alternatively, you can use the mouse wheel to do so. In this case, the mouse cursor must be in the **SmartGallery**.

13.1.8 Image notes

Fig. 42: Field for image notes

You can save image notes for every image.

1. Click on the white chat bubble on the top right of the SmartGallery to open the field for image notes and enter your information here.

- These notes will also be displayed in the Dermoscopy module under image information.
- You can also detect any previously made notes on the image if the chat bubble pulses slightly (color changes from white to purple and back).
- You can fix the image comment with the pin in the top right corner. It will remain open until you click on the pin again.

13.2 Creating images

The camera is connected to the computer via the **CamControl** to the software. This enables the standardized capturing of high-resolution digital photos.

1. Make sure that the camera is connected correctly (cf. chapter 6 Installation).
2. The camera should always remain switched on, even after the tower is no longer used. However, if it is off, switch the camera from OFF to ON with the main switch on the top of the camera.

Otherwise the connection between software and camera cannot be established and you will receive an error message.

NOTE

All settings such as exposure, flash, etc. are automatically saved in the profile via the **CamControl** function and optimized for the respective use.

3. Make sure that the camera's menu wheel is set to M ("manual") before capturing.

Otherwise an error message will appear.

4. Switch on the **Laser Liner** and check the alignment of the mat with the designated laser line marking on the mat.

Additional information for predecessor systems with PolFlash (cf. chapter 6.9 Connecting the camera to PolFlash and the computer):

- The **PolFlash** itself also must be turned on with the *ON/OFF* switch.
- If your camera is equipped with the FotoFinder **Zoom Ring**, make sure that it is set to 31 mm (= red mark). Otherwise you will get an error message.

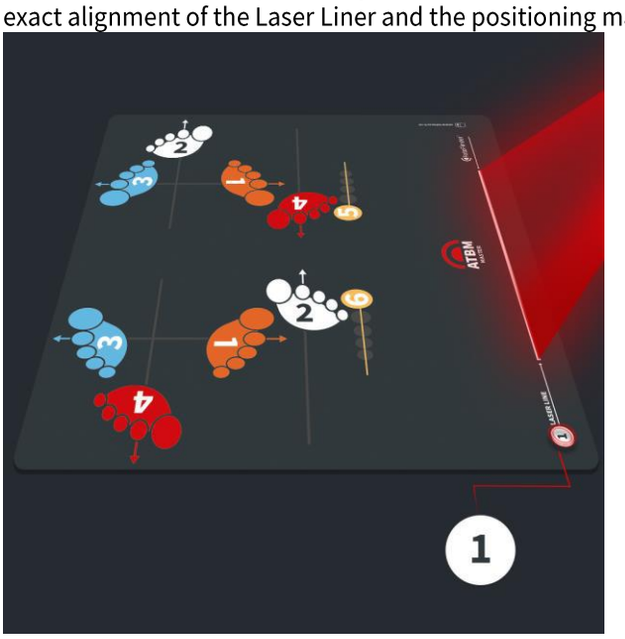
NOTE

The patient should be undressed with the exception of a uni-colored, preferably black, tight briefs and bras. Long Hair should be tied up.

13.2.1 Baseline with the ATBM

1. In the Total Body Mapping module click on *Baseline*.

The software will warn you to adjust the tower position to the Laser Liner. Always pay attention to the exact alignment of the Laser Liner and the positioning mat.



This notification (cf. chapter 11.4.1 Automatic Tower) can be deactivated in *Settings*.

2. Click on *I understand* to continue.

The Baseline capturing will start now:

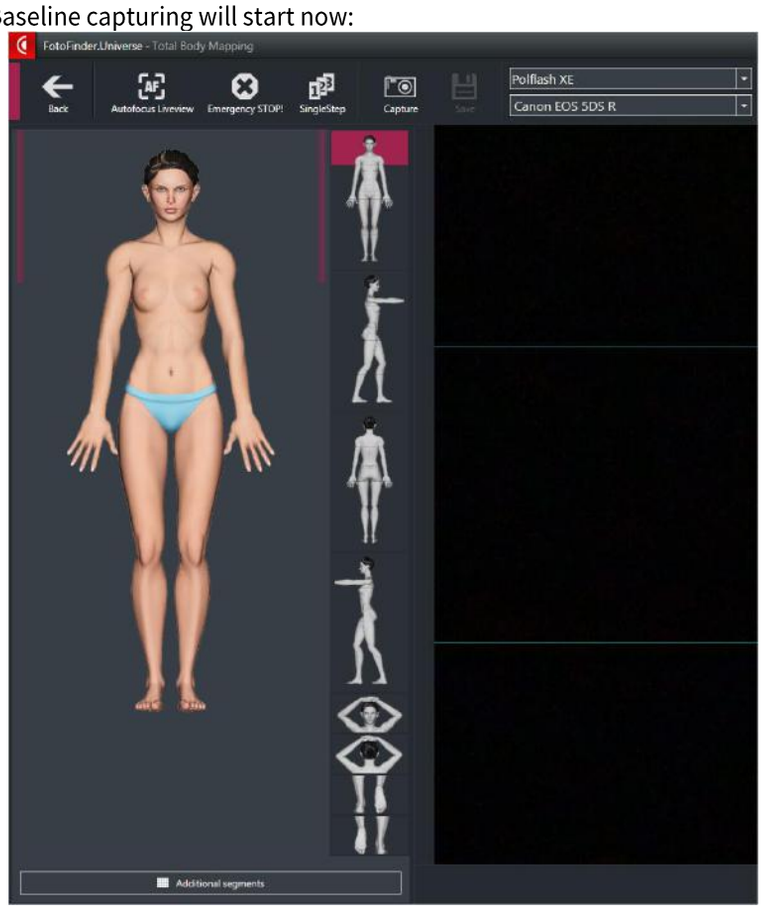


Fig. 43: View of the Baseline menu

According to the information you added for height, after a short countdown the camera now moves to the first imaging position.

If desired, you can select a different body part by clicking on the virtual patient in the middle of the screen and capture images here.

NOTE

- Full body photography can only be performed with patients of a height between 130 cm and 200 cm.
- If the tower control cannot be initialized, an error message will appear.

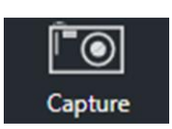
The corresponding body segment is highlighted on the virtual patient and the live image is displayed on the right side in the preview window.

3. Position the patient as the virtual patient indicates in the software. Use the positioning poster to guide the patient.
4. In the menu bar a list of the available camera profiles is displayed (e.g. *Polflash XE RAW*). By default the software will use the profile that is set in *Settings* (cf. chapter 11.4.1 Automatic Tower).
5. If you have different cameras connected to your system, you can change the camera model here too. These can also be renamed as desired (cf. chapter 14.2.2.1 Renaming connected digital cameras).

Please observe the requirements set for the capturing room and background (cf. chapter 5.3 Required recording space).

Option: Autofocus Preview

The displayed live preview is used to position your patient correctly. In case the preview image seems blurry, click the Autofocus Liveview button to refocus automatically. The camera will always focus before it takes a photo.



6. Once the patient is positioned correctly, start the capturing series by clicking on *Capture*.

The Total Body Mapping module now automatically captures the images from one side (head to toe). The camera will automatically pass through the various segments and triggers a capture at the specified positions.

Option: SingleStep

The button is underlined in purple as soon as it was activated with a mouse click.
With *SingleStep*, you can capture each segment individually. For example, this lets you check the individual patient position in each segment and the image in general.
After every capture with *SingleStep*, the menu displays the options

and

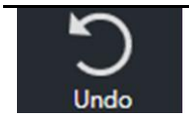
.

Undo: Discard the current image.
Continue: The program continues to the next capturing position.

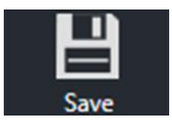
The left side of the screen will then display an overall image which automatically combines four individual images. You can adjust and move the transitions between the individual images (cf. FotoFinder SmartMatch Technology (image cropping)).

NOTE

If the image does not meet your expectation, click on *Undo*.



Restart the process.



7. Click on *Save* to save the images.

The software now automatically continues to the next view.

8. For the remaining positions, continue the capturing process according to this principle.

Using the puppet, the system will show you how to position the patient. As soon as all of the twenty standard segments are captured, a pop-up will confirm the completion of the standard views and prompt if you would like to take additional segments.

Focus errors

If the camera is unable to focus correctly during capture, it will issue an error message. You are given two options:
Repeat: Discards only the current image.
Discard: Discards all images from this side of the body.

Option: Emergency STOP!

If you want to interrupt the automatic capturing process at any stage, click on *Emergency STOP!* The camera will stop immediately and all images of this segment will be discarded. Further photos can only be made after clicking *Back* and restarting the capturing process.

FotoFinder SmartMatch Technology (image cropping)

Before saving the four images of one side of the body, you can manually adjust and move the transitions between the individual images.

Fig. 44: Manual correction of image cropping after baseline capture

1. Click and hold the left mouse button to move the red lines (1) between the individual images.
2. Release the mouse button as soon as the body is correctly displayed in the full body image.

In the settings (cf. chapter 11.5.2 Total Body Mapping), you can specify

- how to display the view of the overlapping areas in the user interface at a later stage and
- have additional buttons displayed to change the view in the user interface.

If you want to restore the original capturing view, you can discard your manual changes by clicking on *Reset Smart Matching.*

NOTE

The Software will adopt the manual adjustmemts from *SmartMatch* for every follow-up Session for this patient.

Additional segments

Should you need to add further images to the specified positions, there are a total of twenty special positions available.
In the window for storing images in special positions you can see the overview with buttons for a total of twenty images.

1. Click on the *Additional segments* button below the large segment puppet in capturing mode.
2. Use the arrows to align the camera.
3. Click on one of the 1 - 20 special positions (e.g. Option 1).

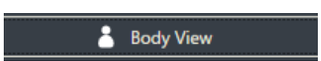
The live image appears and the selected field will be marked in color.

4. Start capturing.

Saved images are then displayed as thumbnails in the respective special position field.

NOTE

For follow-up images of a special position, the camera will automatically move into the position of the baseline image.



By clicking on the *Body view* button, you can exit the special position area and return to the standard capturing segments.

5. Click on *Back* to return to the user interface and to exit the capturing mode.

13.2.2 Creating a new Baseline

If necessary, a new baseline can be created. This might be necessary if:

- The patient's body or weight drastically changed
- the original baseline is incomplete or no longer comparable
- additional images of further body parts are necessary or the previous baseline is not comparable.

Previous sessions will still be saved but will no longer be used as the reference baseline in case of a new follow-up session. New follow-ups can only be created for the latest baseline session.

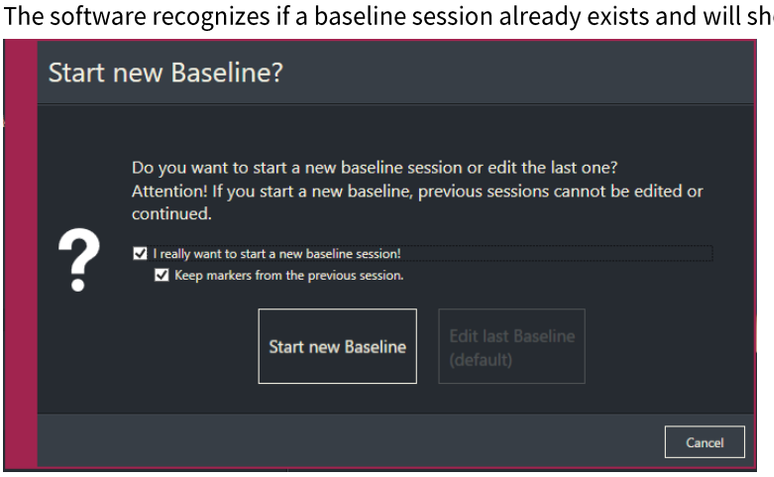
NOTE

The FotoFinder **Bodyscan** can only be performed within a baseline and the belonging follow-up session.

You can create a new baseline by following these steps:

1. Click on *Baseline* in the Total Body Mapping module.

The software recognizes if a baseline session already exists and will show the following window:



2. Mark the checkbox at *I really want to start a new baseline session!*
3. If the markers from the previous baseline sessions should be taken over then mark the checkbox at *Keep markers from previous session* too.
4. Click on *Start new Baseline.*

   Alternatively you can
   - *Edit last Baseline (default)* to make adjustments to the original baseline, or
   - *Cancel* to close this window.
5. Enter the height of the patient in the following window. You can add this with the help of the +/- symbols or on the slide bar.
6. Click on *OK and start Baseline.*

The following steps are identical to a normal baseline session.

13.2.3 Follow-up images

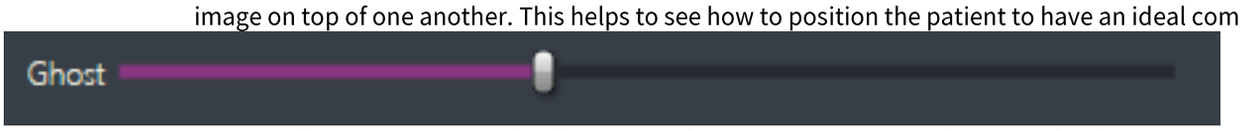
Standardized follow-up images allow a comparison over time.

1. Start the capturing process for a patient by clicking on *Follow up*.

In case not all 20 default positions were fully documented during the baseline session, a message will appear.

2. You can choose to either complete the baseline session or immediately proceed to the follow-up session.
3. Watch out for the selected camera profile (e.g. *PolFlash XE*). For the best comparison the same profile has to be selected as the profile of the baseline. By default the camera profile set in the *Settings* will be used by the software (cf. chapter 13.2.1 Baseline with the ATBM).

After having initiated the follow-up session, the **Ghost** function places the baseline image and the live image on top of one another. This helps to see how to position the patient to have an ideal comparison.



Use the slider above the preview image to adjust the transparency of the baseline image.
If required, you can select a different body part by clicking on the localization puppet and creating appropriate images, but only if a baseline image already exists. You can recognize this as soon as the localization puppet is displayed in color and is not gray.
In the preview window on the right side, you will now see a live image and the relevant body part will be highlighted in purple on the virtual patient.

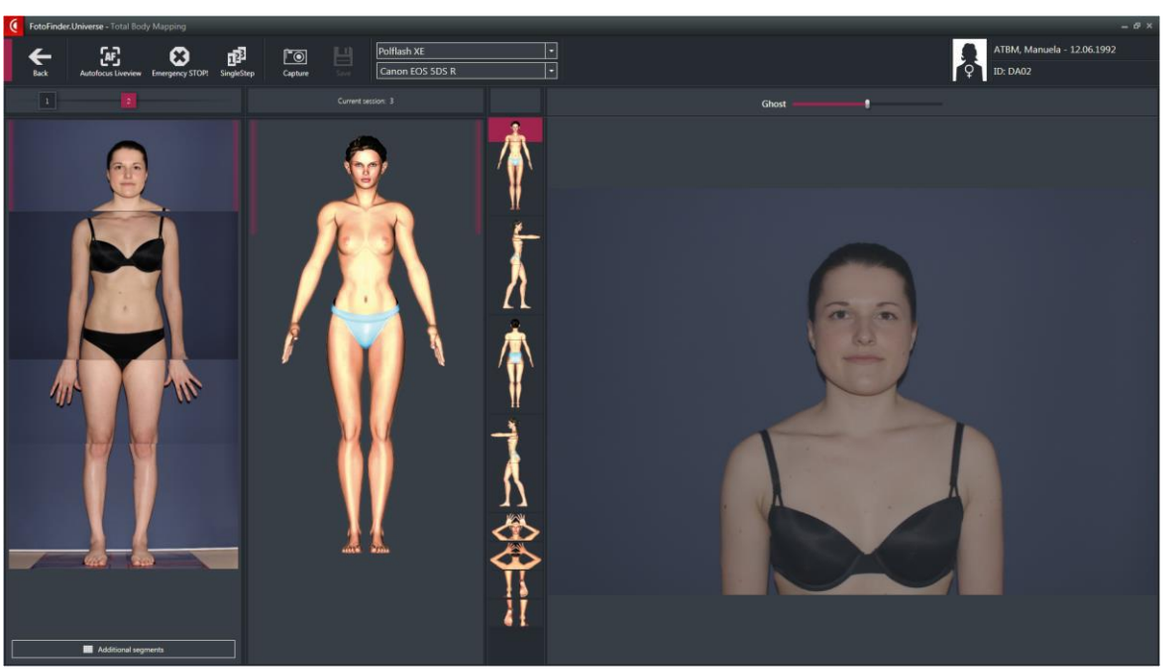
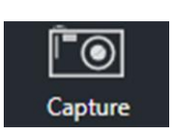


Fig. 45: Follow-up



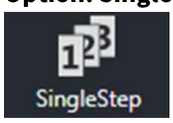
4. Click on *Capture* after positioning the patient correctly.

5. Then click on *Save* if you are satisfied with the image.

If you are not satisfied with the image, click on *Undo.*

Restart the capturing process.

Option: SingleStep (only for ATBM)



You can use the *SingleStep* function to compare individual segments with the **Ghost** function.
This function is described separately (cf. chapter 11.4.1 Automatic Tower).

Once you have saved the image, the program will automatically take you to the next position.

6. Continue with the next follow-up images until all positions are done.

7. When you are finished with the capturing, you can return to the patient user interface by clicking on *Back*.

NOTE

All stitching coordinates of a body position will be saved from the baseline session.
To create consistent follow up photos make sure that you use:

- an even background
- consistent patient positioning
- even illumination
- matching camera profile (e.g. PolFlash XE)

13.2.4 Polarized Bodymapping

Your ATBM system allows you to create polarized total body images.
Follow these instructions:

FotoFinder bodystudio ATBM master	**FotoFinder bodystudio ATBM (1. Generation)**
1. In the Settings at *Devices* / *Automatic Tower* set the camera profile to *PolFlash XE RAW* or PolFlash XE.	1. In the Settings at *Devices*/ *Automatic Tower* set the camera profile to *AutomaticTowerPolarization* (from *AutomaticTowerDualFlash)*. **NOTE** Make sure that your system is equipped with a **PolFlash** (not **BodyFlash**). In case of any questions, please contact your local FotoFinder representative. You can find the label with the model description on the bottom of the flash.
2. The **PolFlash XE** will automatically change to polarized.	2. Place the polarization filter - **Polfilter body** in front of the camera on to the **PolFlash**.
3. Continue with the imaging as usual.	
4. If you wish to return to making non-polarized images, please keep these points in mind:	
■ set the camera profile back to *PolFlash XE RAW NonPOL* or *PolFlash XE NonPOL*.	■ set the camera profile back to *AutomaticTowerDualFlash* and ■ take the filter - **Polfilter body** off the flash.

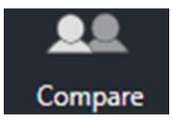
NOTE

The ATBM procedure can be used for the examination of Psoriasis patients as well. The FotoFinder **PASIscan**® supports a computer-aided evaluation of the PASI Score.

For more detailed information, please contact your local FotoFinder distributor or FotoFinder representative.

13.3 Working with the images

13.3.1 Compare



You can use the compare function to compare the images of one position from different capturing sessions.

1. To start, click on the *Compare* button.

If you hold the mouse cursor above a square in the timeline of the displayed image you will be shown a small preview window with capturing information.

2. Click on the timeline to select the desired shooting sessions. The selected timeframes are purple, the remaining one are white.

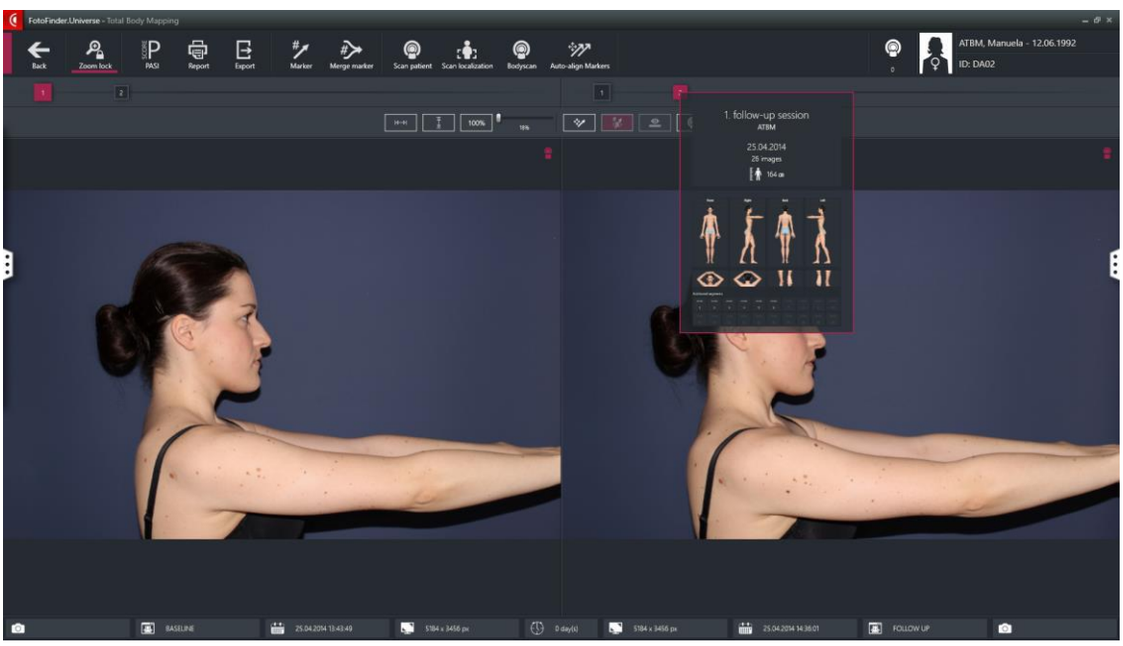


Fig. 46
You can now compare two images.

13.3.2 Image display tools

In the image comparison besides the image display tools of the preview window you have the following button:

Use this button to change the function of the cursor:
With holding down the mouse button you can move / change either only the enlarged image, or individually the markers.

- More about the markers in the Total Body Mapping module can be found in the separate chapter (cf. chapter 13.6 Connection with the Dermoscopy module).
- By turning the mouse wheel you can select any magnification factor.

To move the magnified image section, follow these steps:

1. Click in the image.
2. Hold down the left mouse button.
3. Move the cursor.

- The magnifier tool is also available in image comparison (cf. chapter 13.1.5 Preview Window).

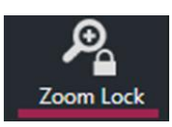
  If the magnifiers in the two images are not located in the same position (e.g. because the capturing positions were not identical), you can move one magnifier and therefore adjust the positions:

  1. Press the Ctrl button on your keyboard and the right mouse button at the same time.

     This takes you to Offset mode and you only move the magnifier which is currently selected by the cursor.

  2. Release the Ctrl button as soon as both magnifiers are in the same position.

Zoom Lock (SmartZoom)



The *Zoom Lock* function is set as default if you select the compare section. This function allows you to zoom in and move both images simultaneously. This also enables an objective comparison of the images.

Without Zoom Lock both images can be displayed independently.

1. Click on the Zoom Lock button again.

Zoom Lock is deactivated and a second zoom control is displayed.

In image comparison the *Merge marker* function is also available.
If several markers have been created for the same lesion, they can be merged to one marker number using the *Merge marker* function (cf. chapter 14.4.3 Merging markers).

Navigation

In comparison mode you always compare the same segments with one another. A change in segments is therefore always performed simultaneously for both images. There are several options for navigating between segments in comparison mode.

- If you move the cursor onto one of the tabs on the left and right edge of the screen, a slide-in display of the capturing segments will appear, where you can select the required body sections.

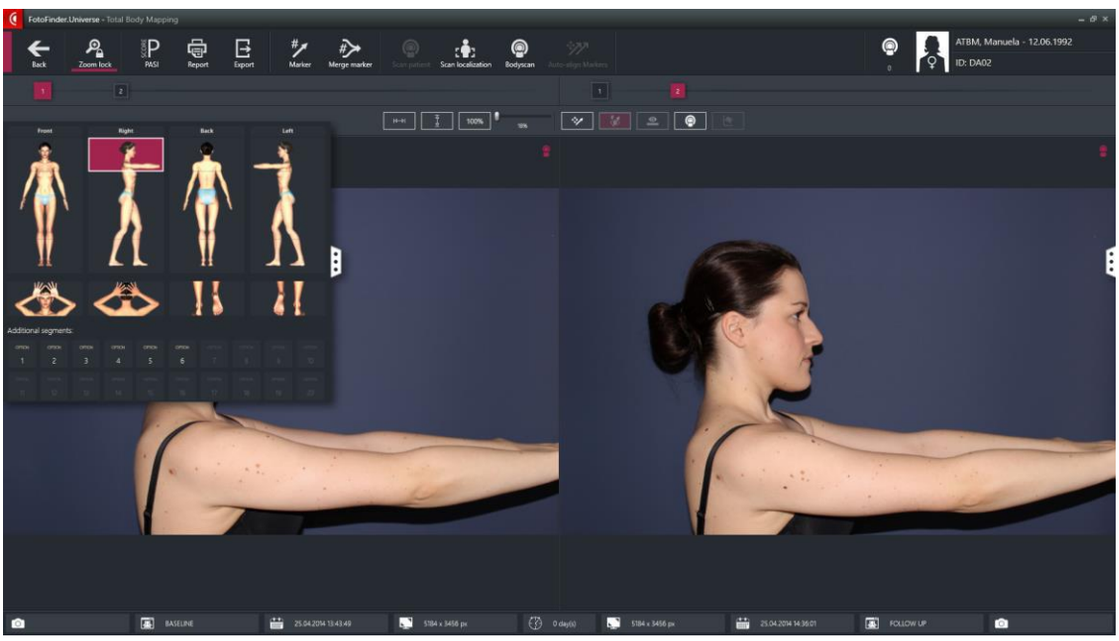


Fig. 47

- Use the navigation arrows on the edge of the preview images also available in image comparison.

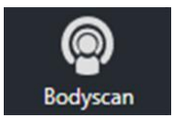
Bodyscan

In the image comparison you can view **Bodyscan** circles (cf. chapter 13.3.3 Bodyscan ATBM).

NOTE

You can repeat the scan at any time by clicking on *Scan patient*.

13.3.3 Bodyscan ATBM



Bodyscan ATBM is an software modul for detecting new and changed lesions and is integrated in the Total Body Mapping module. It automatically analyzes whether new lesions have appeared on the patient since the last examination or whether previously existing lesions have changed. With the help of a complex algorithm, the current images are compared with the images of the last examination and any changes will be marked.

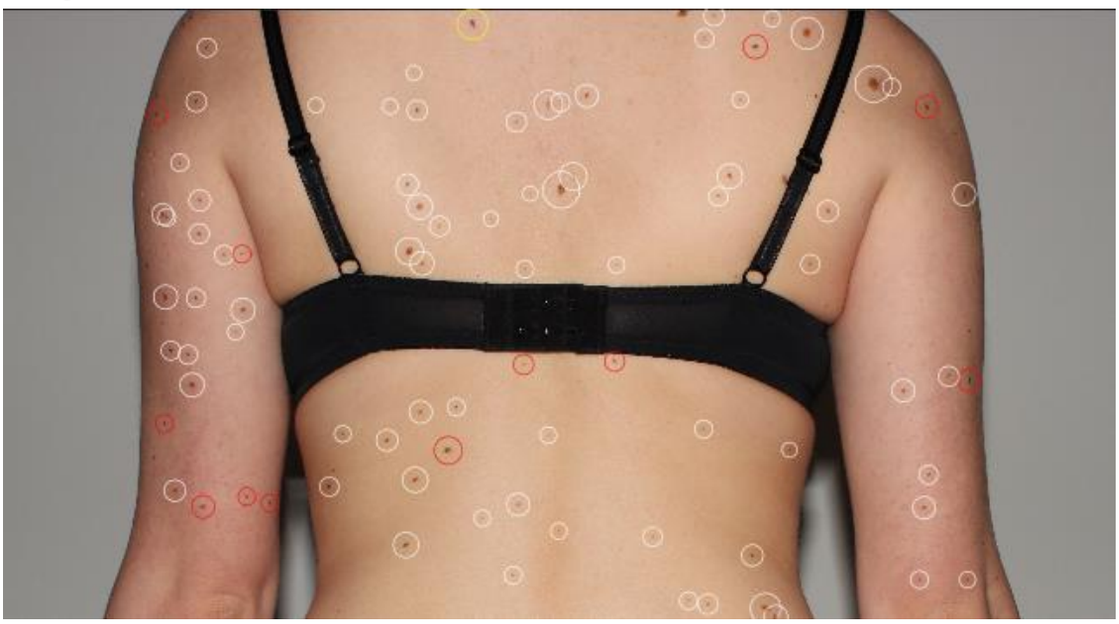
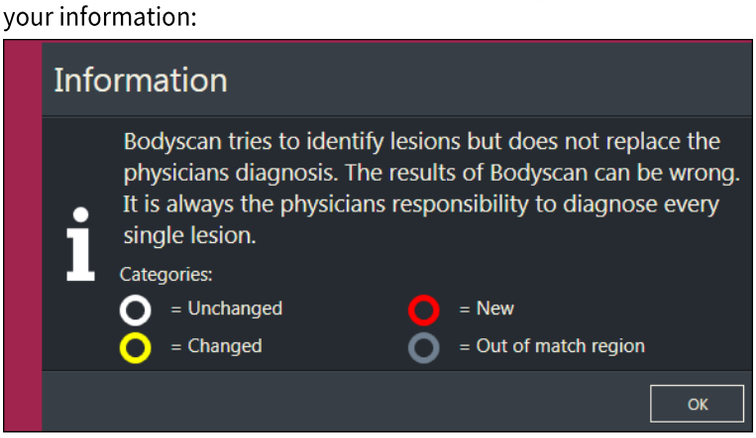


Fig. 48: Bodyscan results

Every time you call up this display after restarting the program, the following overview will appear for your information:



NOTE

The *Out of match region* is used to classify lesions which were not assignable during the image comparison (e.g. when the patient position deviates too severely and lesions are located on the edge of the images). **However, these lesions marked in gray should be examined and visually compared by a dermatologist.**

NOTE

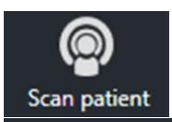
Analysis with **Bodyscan** is permitted only for fully grown patients to ensure the comparability of the images. The best possible standardization of the images increases the quality of the results.
Please note that dense body hair may affect the result, as the **Bodyscan** is a visual procedure.
The classification of the **Bodyscan** results is based on statistical analyses and does not replace professional medical diagnosis. The diagnosis is the responsibility of the doctor.

The results of the **Bodyscan** can be displayed as follows:

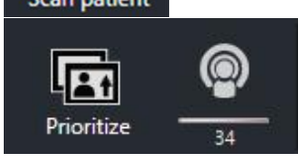
- in the preview window of the desktop
- in full screen mode
- in image comparison
- in the Dermoscopy module

13.3.3.1 Performing a Bodyscan

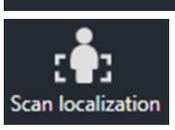
In Image Comparison, the following buttons are available for the **Bodyscan**:



With *Scan patient*, the system start a **Bodyscan** for all of the patient's images. The **Bodyscan** is automatically performed in the background for new images.

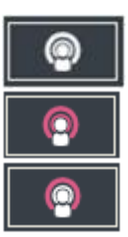


During the scan, a counter is displayed on the right in the menu bar. It tells you how many images needs to be still scanned.
The *Prioritize* button is located to the left of the counter. You can use this button to prioritize the images currently displayed in image comparison.



By pressing *Scan localization*, the system starts a **Bodyscan** only for the two currently displayed images.

13.3.3.2 Bodyscan views



If the ***Bodyscan*** button is deactivated, the **Bodyscan** markings are not displayed on the image.

If you click the icon once, all circles are displayed.

If you click the icon twice, only yellow and red circles are displayed.

The small **Bodyscan** symbol in the corner of each image in image comparison indicates that **Bodyscan** was completed.

- A red symbol indicates the presence of yellow and red circles.
- A white symbol indicates the presence of white circles only.

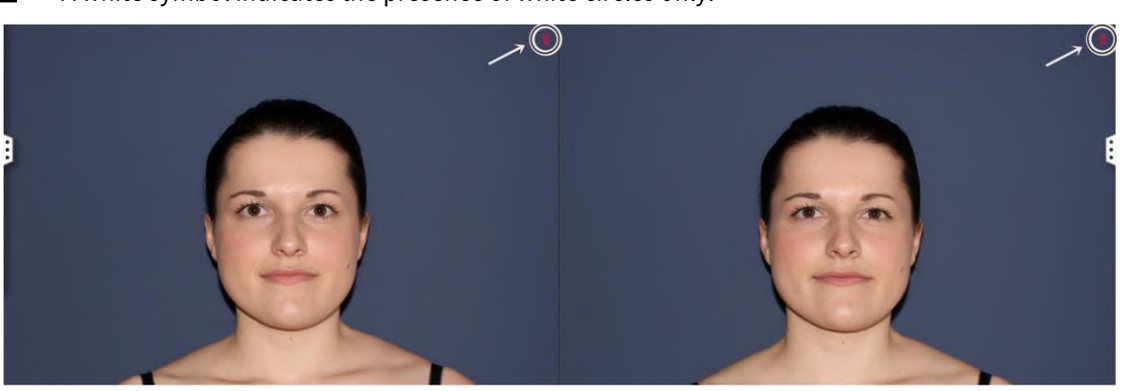
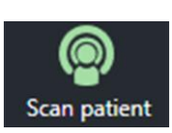


Fig. 49: Bodyscan symbol



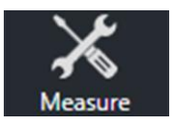
If the **Bodyscan** did not run yet the *Scan patient* symbol appears green.

13.3.4 Measuring

You have the option of viewing the images in full image view. Here you can choose between the following actions:

- Evaluating the images with various measurement tools.
- Deidentifying the patients with a black bar.

You have two options of displaying the currently selected position in full image view:



- Double-click on the image in the preview window.
- Click on the *Measurement* button.

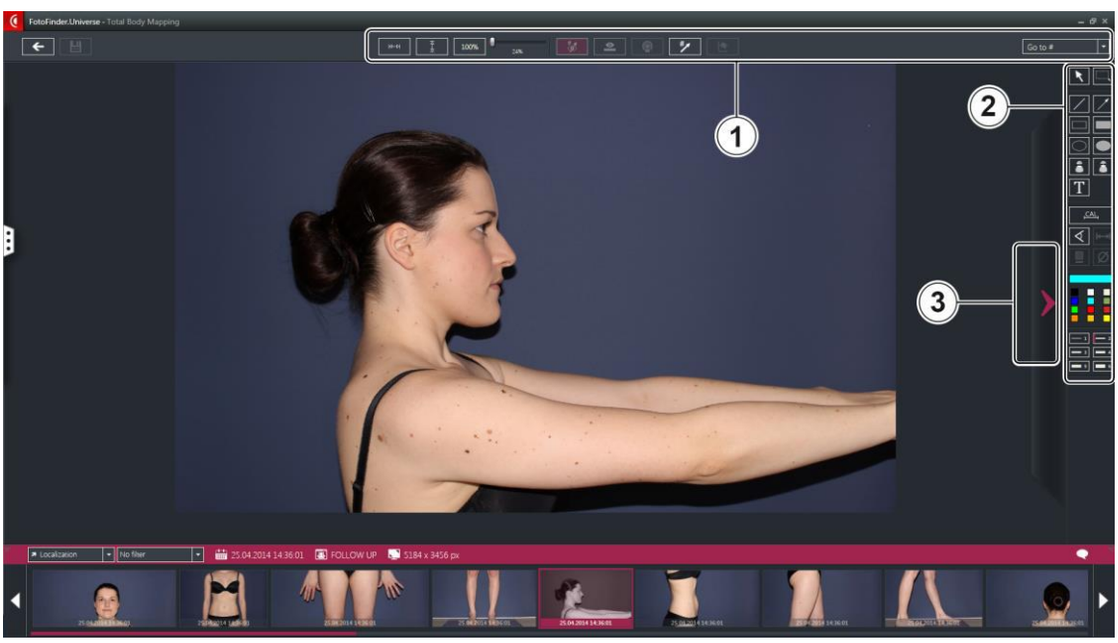


Fig. 50

1	Imaging Tools	3	Navigation arrow (one of four possible ones)
2	Drawing and measurement tools		

Navigation

There are various options available for navigating between the individual images:

- The **SlideGallery** bar is located below the displayed image. With the help of this tool you can comfortably scroll through the positions or jump to the desired position with one click.

  This can be hidden or displayed as required by clicking on the Hide symbol in the upper left and right corner of the **SlideGallery**.

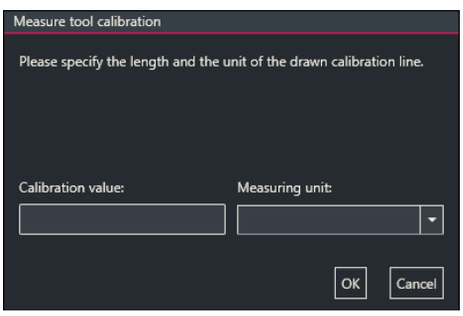
- Moving the mouse cursor to either sides the lateral edge will display a bar with a navigation arrow. By clicking on it, the view will change to the adjacent segment in this direction (cf. chapter 13.1.5.4 Changing the segments in the preview window).

13.3.4.1 Calibration

Before measurements are possible in the displayed image, you first have to calibrate the image.

1. Start the calibration process by pressing the *CAL* button in the menu bar on the right of the displayed image.
2. Click once to create a starting point in the image and then draw a line with the mouse button pushed down.

A context menu is displayed.

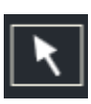


3. Add the known length of the line and the appropriate measuring unit.
4. Confirm your entry.

Calibration is now complete. Now you can measure distances, surfaces and angles in the image.

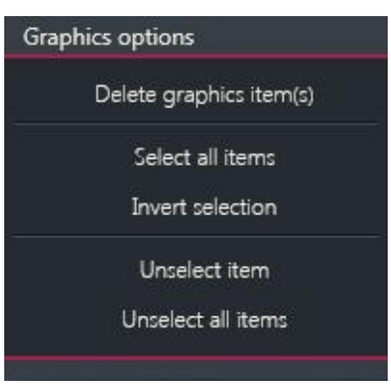
13.3.4.2 Drawing and measurement tools

The drawing and measurement tools are located on the right-hand side of the screen.



Edit/Move:

- Moving inserted objects
  Move the cursor over the object until the arrow turns into a cross-hair. Move the object by pressing and holding the left mouse button.
- Changing the size of the inserted objects
  Click to mark the required object. Small squares now appear along the edges/corner points. Click and hold the left mouse button to move the squares and change the size.
- Context menu
  Right-click on an object to display a context menu.



Here you can
- Delete graphics item(s)
- Select all graphics items
- Reverse the selection
- Deselect the graphics item
- Deselect all graphics items

Rectangle selection
Click and hold the left mouse button to insert a rectangle and mark several draw objects simultaneously to edit them all after changing to the *Edit/Move* tool.

Line tool
Click and hold the left mouse button to insert lines.

Arrow
Click and hold the left mouse button to insert arrows.

Rectangle (empty)
Click and hold the left mouse button to insert an empty rectangle.

Rectangle (filled)
Click and hold the left mouse button to insert a filled rectangle.

Ellipse (empty)
Click and hold the left mouse button to insert an empty ellipse.

Ellipse (filled)
Click and hold the left mouse button to insert a filled ellipse.

Anonymization functions Black Bar and Ellipse
By clicking and holding the left mouse button, you can insert a black bar or ellipse to hide certain areas or to deidentify your patient.

Text tools
After selecting the text tool, left-click on the image. A text input and formatting window will appear.

Angle
Use this tool to measure angles between 0 - 180 degrees.

1. Click on a point on one side of the angle.
2. Click on the apex.
3. Click on a point on another side of the angle.

The software calculates the size of the angle.

Measure distance
Use this tool to measure the length of a distance.

1. Click and drag the mouse in the required direction.
2. Release the cursor once you have reached the end point.

The software calculates the distance between the two points.

Area measurement
Use this tool to measure any area.

1. Click on each consecutive corner point on the edge of the area you want to measure.
2. Then click on the first set point again.

The software calculates the area which is delineated by the connecting lines between the set points.

Diameter
Use this tool to calculate the diameter of a circular area.

1. Click into the center of the required circle.
2. Click and hold the mouse button to drag the circle to the required size.

The software calculates the circle's diameter.

Color Selection
The color buttons allow you to select a color in which the new measurement objects are drawn into the image. The current color can be seen in the larger bar above. By left-clicking on this, you can also open an additional menu.

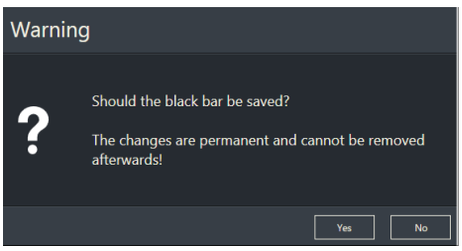
Line thickness
Here you can select the line width for the drawn objects.

13.3.4.3 Anonymization

If you want to deidentify patients or want to blacken parts of the image for any other reason, use the *Black Bar* function.

1. Click the *Black Bar* button in the right menu bar of the measuring function in the preview window.
2. Hold the right mouse button down to drag the black rectangle from one corner to the opposite one.

3. To save, click on the disc symbol in the menu bar above the image.



4. Click *Yes* to confirm the security message.

NOTE

Once an black bar is saved it can no longer be removed.

13.3.4.4 Deleting images

It is not possible to delete individual images in the module Total Body Mapping. Alternatively, the following options are available:

- Delete complete sessions:
  1. Move the cursor over the number of the corresponding session in the timeline until the info window for the imaging session appears (cf. chapter 13.1.3 Timeline).
  2. Click on *Delete session* and confirm the following message.

  If a baseline has been deleted, the first follow-up session automatically becomes the baseline. Please note that this action cannot be undone!
- If necessary, the entire patient profile can be deleted (cf. chapter 12.2.3 Updating and Deleting Patient Information).
- Alternatively, information that is no longer required in individual images can be permanently overdrawn with the anonymizing function and thus deleted. (cf. chapter 13.3.4.3 Anonymization).

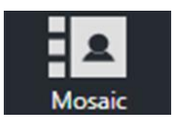
  Please note that this action cannot be undone! The overdrawn content of the image will be irrevocably overwritten.
- If the image content is only to be temporarily overdrawn, you can use for example the Rectangle drawing tool (filled) (cf. chapter 13.3.4.2 Drawing and measurement tools)

13.4 Mosaic View (exclusive for ATBM master Edition)

After performing the FotoFinder **Bodyscan** (cf. chapter 13.3.3 Bodyscan ATBM) the Mosaic View can be used for the lesions. This feature is exclusively only available for the ATBM master.
The function is for the rapid detection and comparison of lesions. The lesions of the **Bodyscan** are displayed in a grid, which allows a simple comparison of shapes and sizes.

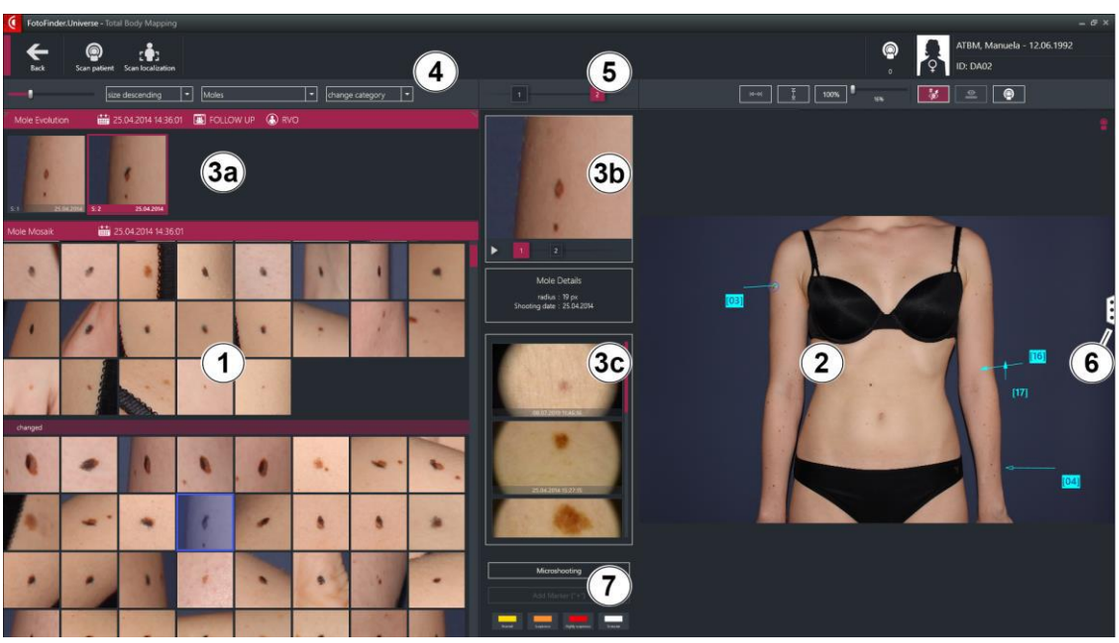
NOTE

The classification of the **Bodyscan** results are based on statistical analysis and do not replace a medical diagnosis. The diagnosis is the responsibility of the doctor.



1. To start, click on the *Mosaic* icon in the menu bar.

The Mosaic View will be displayed:



Mosaic (1)

In the lower left half of the screen **(1)** you can see all detected tiles of the **Bodyscan**.

Overview image (2)

If you click on one of the tiles, the corresponding overview image **(2)** appears on the right. There, the selected tile is marked with a small blue circle.

Mole Evolution (3a) and (3b)

The development of the selected lesion will be shown in this section:

Each capturing session is listed individually **(3a)**.

In addition, an evolution course is displayed in the middle section of the screen **(3b)**.
The view of the lesion changes here through the individual imaging sessions and thus indicates the change over time.

With clicking on the Pause icon you can pause the replay and with another click now on the Play icon you can resume.

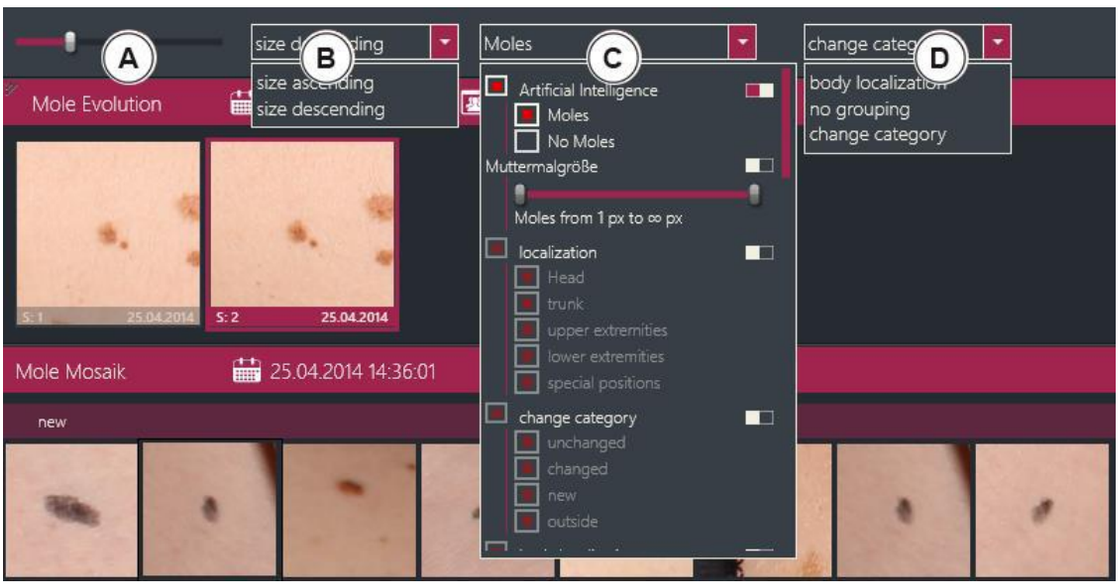
Below the replay further information are shown, e.g. capture date.

Existing micro image (3c)

If a marker with micro images already exists for the selected lesion, these will be displayed in the center of the screen **(3c)**. By clicking on the micro image you can also enlarge it in the preview window.

Sorting, filtering and grouping options (4)

For a better overview, there are multiple tools available:



A **Zoom control**

Here the zoom factor can be freely adjusted.

B **Sorting options**

Here the sorting can be set, based on size (ascending or descending).

C **Filter function**

Here a selection of the criteria can be set that the lesions must meet in order to be displayed. Inactive filters are grayed out, active filters are marked with a colored checkbox.

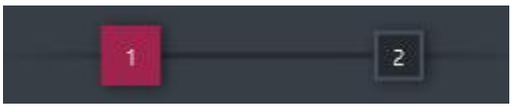
NOTE

The Mosaic view works with **Artificial Intelligence**, which provides even more accurate results compared to rule-based lesion detection. To refine the results displayed here, the *Artificial Intelligence* filter is already active by default and set to *Moles*.

D **Grouping function**

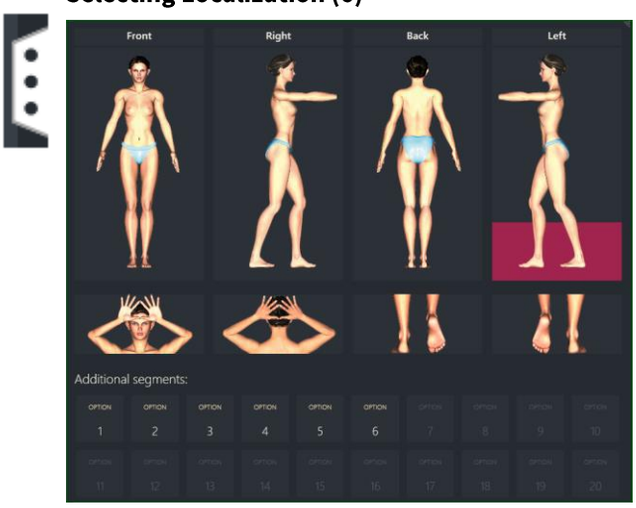
Based on Localization or the status of change (new, changed, not changed, other) the images can be further grouped.

Selecting the imaging session on the Timeline (5)



A timeline is also available here (cf. chapter 13.1.3 Timeline). You can quickly and easily switch to another recording session with a mouse click.

Selecting Localization (6)



1. Move the mouse over the tab on the right edge of the image to call up the localization menu:
2. Select the desired body region by mouse click.

Adding a Marker (7)

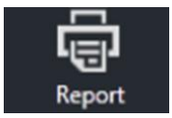
1. Select in the Mosaic grid view on the left or in the preview image the corresponding tile with a mouse click.

2. In the lower part of the screen, click on the *Add marker* icon.

   The tile is then marked on the overview image with a marker and automatically assigned with a marker number.

3. To classify the tile click on the corresponding field (*Normal, Suspicious*, …) in the classification menu.
   You can also click directly on the desired classification instead of step 2. to create and classify a marker in just one step.
4. Right-click on the marker number to open a context menu to. e.g. continue directly with the micro image capture or delete the marker again. Detailed information about markers can be found in the separate chapter (cf. chapter 13.6.1 Marker).

13.5 Reports



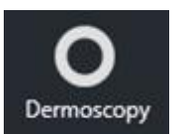
With the *Report* button in the menu bar of the TBM module´s user interface or the image comparison, you can create various types of reports in pdf format.

ATBM Single
The photos during a session are selected without the associated micro images.
ATBM Full
The selected markers and micro images associated with the photos of a session are also selected.
ATBM Image compare
You can start this report function from the image comparison screen. The photos currently selected from the two sessions are selected for the report.

13.6 Connection with the Dermoscopy module

With the *Dermoscopy* module you can take images with a Dermoscopy camera.

- You can capture dermoscopic images of lesions and track changes.
- The results of the **Bodyscan** are transferred to the Dermoscopy module where they can be displayed or hidden just as in the TBM module.

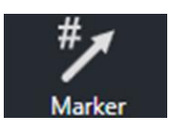


With the *Dermoscopy* button in the menu bar of the user interface you can change directly into the Dermoscopy module. The image currently displayed in the TBM module is then also shown in the preview window of the Dermoscopy module, where you can continue using it immediately. If you click *Back* in the Dermoscopy module, you will return to the TBM module.

NOTE

You can start some important functions of the Dermoscopy module directly from the TBM module.

13.6.1 Marker



Use this tool to mark a skin feature.
You can start the *Marker* tool in the TBM module by clicking on the *Marker* button. You can find this button in the following menu bars:

- On the Desktop
- In full image display
- In image comparison

The image displayed in the preview window of the image is framed red in the marker mode. You can now place markers with arrows on the photo.

1. Move the cursor over the area you want to mark.
2. Press and hold the left mouse button and move the mouse to draw an arrow in the required length.
3. Release the mouse button.

A marker is added and automatically numbered.

13.6.1.1 Context menu

Right-click on the number of a marker to open the context menu.

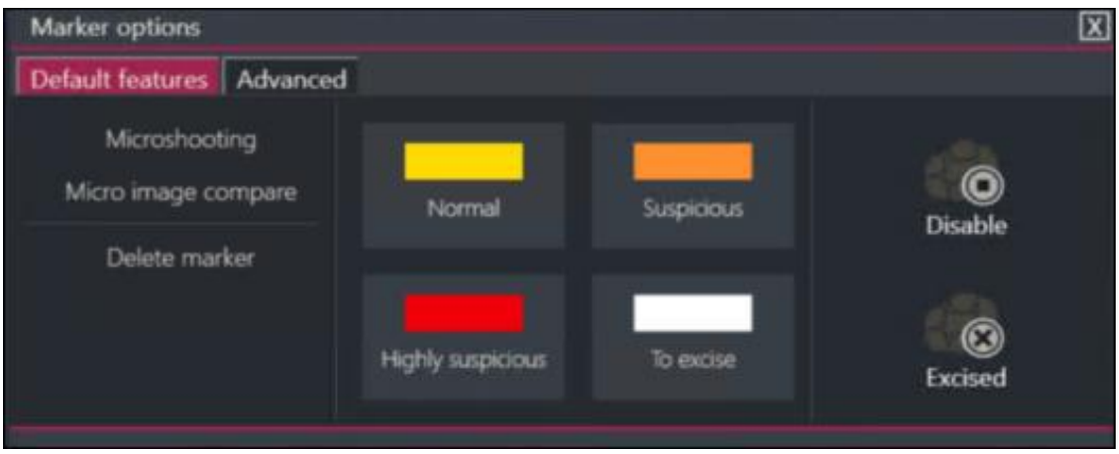


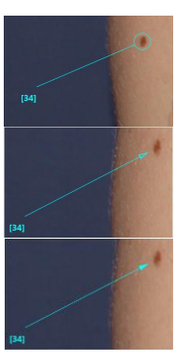
Fig. 51

- With *Micro image* you can start the micro image capturing process.
- With *Micro image compare* you can compare two existing micro images at the marker position.
- With *Delete marker* you can remove a marker and all associated micro images.
- With *Deactivate marker* you do not delete the marker. It is then displayed as deactivated.
- The four colored buttons in the middle allow you to classify the skin feature.

13.6.1.2 Markers in Follow-ups (Ghost Marker)

The software automatically copies existing markers (Origin Markers) into follow-up sessions. This prevents the creation of markers with different numbers for the same skin feature. You will see the marker in all follow-up sessions.

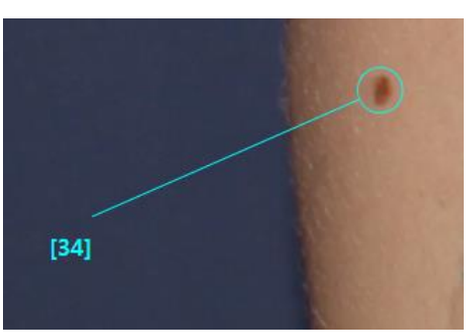
Here is an overview of the different marker labels:



Ghost Marker that has not yet been confirmed: Marker tip is round.

Ghost Marker, which was confirmed: Almost like an Origin Marker, but the tip is not filled.

Original Marker: Marker head is filled.

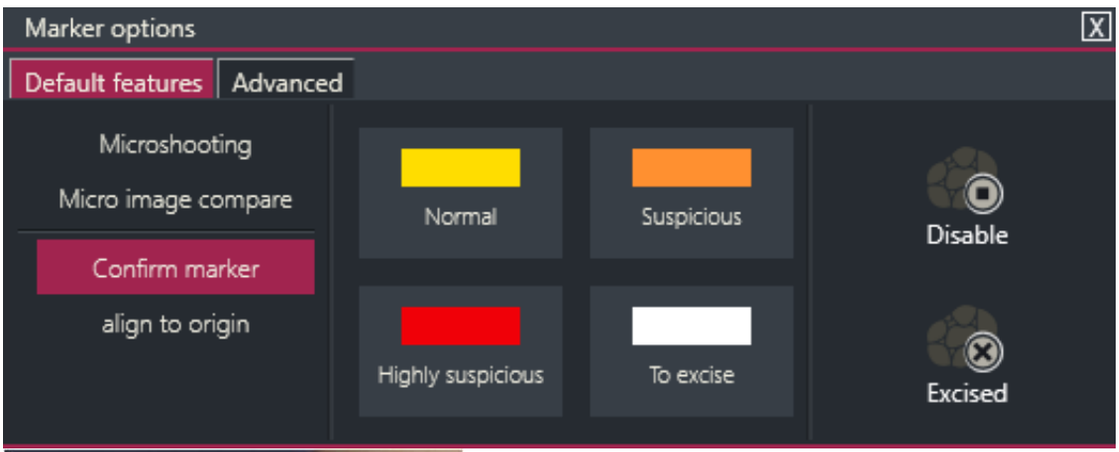


Once you create a follow-up image, any markers from previous sessions will be displayed there as well. You will recognize these automatically adopted Ghost Markers on the circle at the end instead of a pointed tip.

Confirming markers

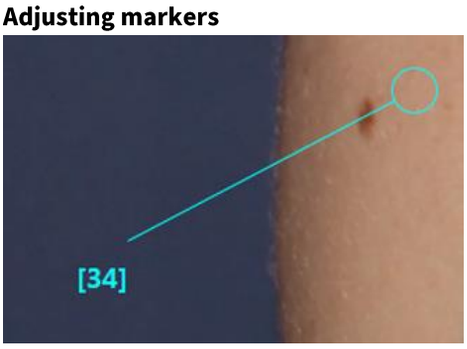
If you are satisfied with the automatic placement of the marker in the following shot, you can confirm the marker:

1. Open the context menu with the marker options by right-clicking on the marker number.
2. Select *Confirm marker.*



The marker now has an empty arrowhead instead of the circle at the end.

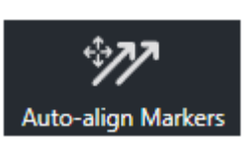
Adjusting markers



If for example the orientation of the following shot does not exactly match that of the previous one, the Ghost Markers are not inserted exactly at the lesion. In this case, you can move Ghost Markers:

1. In the Total Body Mapping module, open the image comparison with the two overview images.
2. The tool required to do this has to be selected. It will be highlighted in purple.
3. If you want to move the marker, click with the left mouse button and hold it pressed down on the desired marker and move it.
4. If you want to change the angle of a marker, click on the end of the arrow (not on the number) and drag it to the desired direction and length.

The marker now has an empty arrowhead instead of the circle and is considered confirmed.



Auto aligning markers

If you have not manually aligned your Ghost Markers in the follow-up image, you can also use the *Auto-align markers* feature. The prerequisite is a **Bodyscan** performed, as this function aligns the markers in all follow-up images.

13.6.2 Capturing micro images

You can start capturing micro images directly from the Total Body Mapping module.

1. In the preview window or in image comparison, right-click on the marker of the required lesion.
2. Select the *Microshooting* option in the appearing context menu.

Fig. 52

The software starts the capturing mode of micro images in the Dermoscopy module (cf. chapter 14.5 Micro capturing (images and videos)).

3. Click on *Back* to return to the TBM module.

13.6.3 Display micro images

You can view dermatoscopic micro images directly in the TBM module. You can recognise markers with existing micro images by the fact that the numbering at the end of the marker arrow is in color.
To open the micro images, proceed as follows:

1. Left-click on the number highlighted in color.

A thumbnail preview of all micro images associated with this marker position will open.

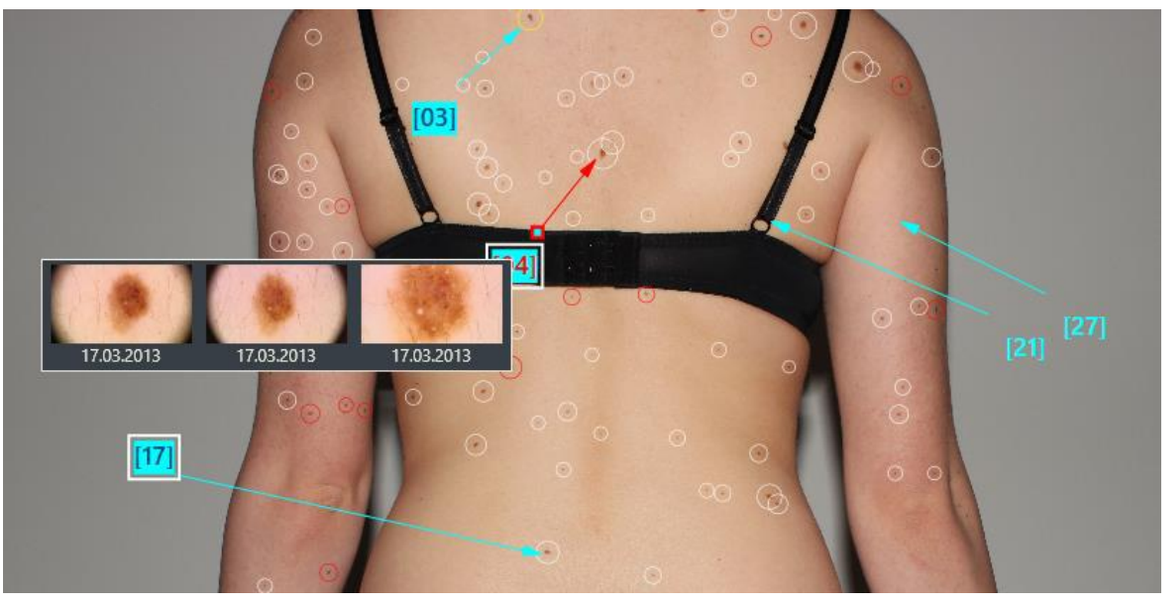
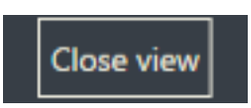


Fig. 53

2. Click on one of the thumbnails to display the respective micro image instead of the overview image in full screen.

You can now view the image in detail.

3. Double-click on the enlarged micro image to return to the previous view.



Alternatively, you can return to the overview image via the *Close view* button.

13.6.4 Micro image compare

You can compare two micro images of one marker position from the TBM module.

1. Right-click on the number of the required marker position.
2. Select the *Micro image compare* option in the appearing context menu.

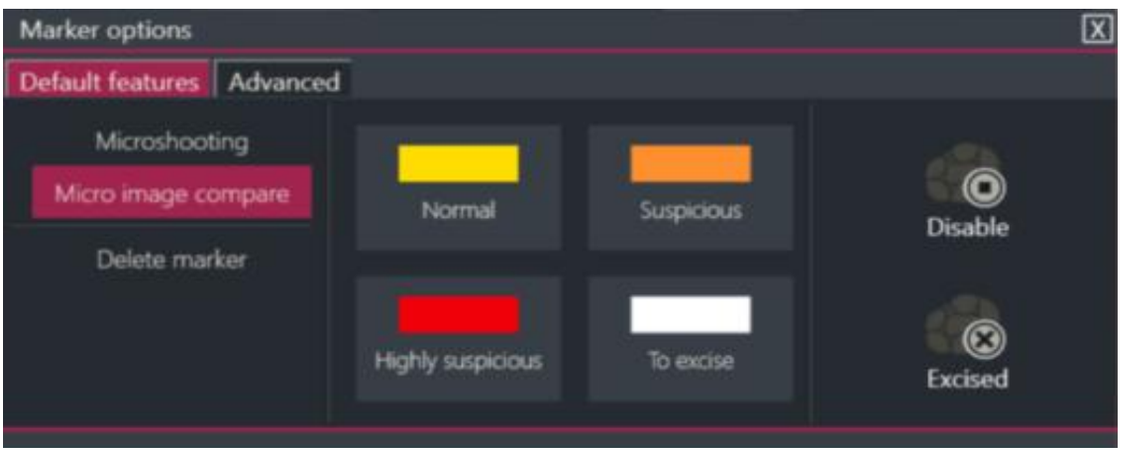


Fig. 54

The software starts the image comparison of micro images in the Dermoscopy module at the selected marker position (cf. chapter 14.7.3.2 Comparing micro images).

3. Click on *Back* to return to the last view in the TBM module.

14 Dermoscopy module

To start, click on the *Dermoscopy* button.

14.1 The Desktop

Dermoscopy's user interface is composed of seven sections:

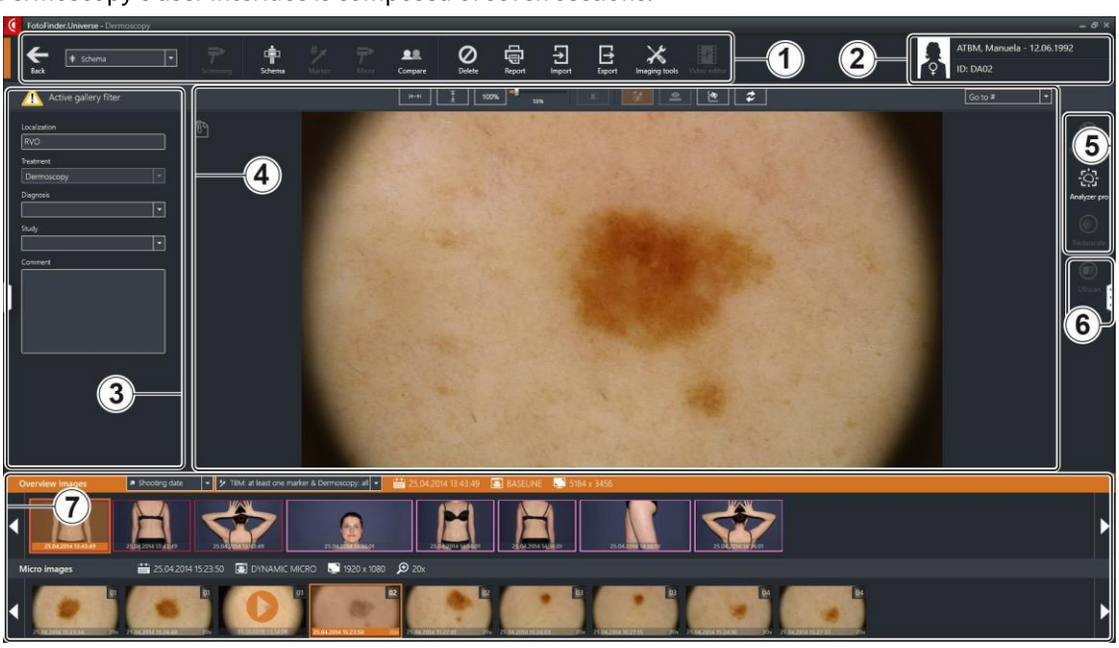


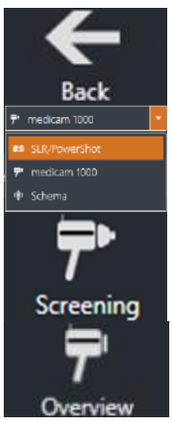
Fig. 55:

1 Menu Bar
2 Patient Data Field
3 Image Data Field
4 Preview Window
5 Optional software modules - not available in all countries
6 Tabs for the localization and classification menu
7 SmartGallery

14.1.1 Menu Bar

The Menu Bar is located on the upper screen.

The functions of the buttons are listed below.



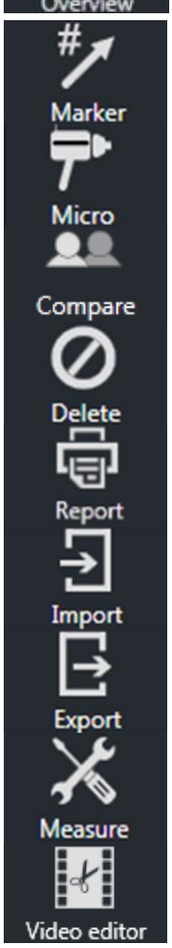
Back: you are returned to the previous screen.

Open the adjacent camera selection using the arrow to set the overview images.

Screening: Here you can change directly into the Screening module (cf. chapter 15 Module Screening). You can hide or display this button in the settings (cf. chapter 11.5.1 Dermoscopy).

or

This button changes depending on the selected camera:
Overview: You create overview images.
Scheme: You select the locality using a localization puppet.



Marker: You add arrows to the overview images to indicate the position of individual lesions and to assign these to the micro images.

Micro: You start capturing micro images with the **medicam** for marked lesions in the overview images.

Compare: You compare images side by side.

Delete: You delete the marked (orange framed) image. You have to confirm the function before final deletion.

Report: You create a report with the relevant images of a patient.

Import: You import overview images from your hard drive or external storage media (cf. chapter 17.1 Importing images).

Export: You export images to local or external storage media.

Measure: You open the tools for measurement and the anonymization of images (cf. chapter 14.7.4 Measuring).

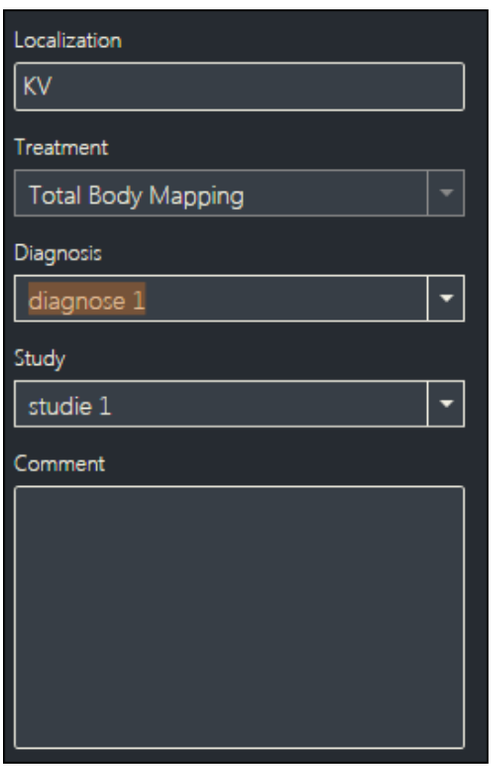
Videoeditor: Here you can edit videos (cf. chapter 14.8.1 The Video editor).

14.1.2 Patient Data Field

The most important patient data are displayed in a field on the top right next to the menu bar:

- Name
- Date Of Birth
- Patient Record Number

14.1.3 Image Data Field



The image data field is located below the menu bar on the left side of your screen. This field displays the following values:

- Treatment localization
- Type of treatment
- Diagnosis
- Associated study
- Comment on the current image

The treatment and localization will be filled in automatically during the capturing process. All other fields are optional.

14.1.4 Preview Window

The Preview Window is located in the middle of the screen. Here you can freely enlarge selected overview or micro images. You can select the image's enlargement individually by turning the mouse wheel. You can also move the slide bar above the image. You can change the displayed section by clicking and holding the left mouse button to shift the image.

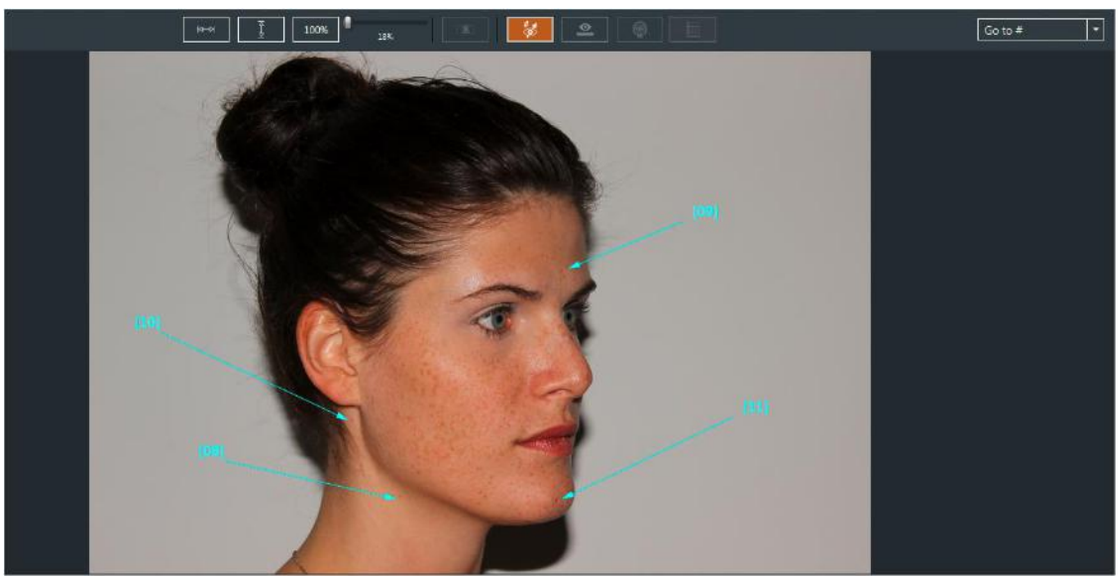


Fig. 56

14.1.4.1 Magnifier function

If you right-click and hold the mouse button in the displayed preview image (overview or micro image), a magnifier appears which allows you to enlarge image sections. Adjust the size of the magnifier with the mouse wheel.

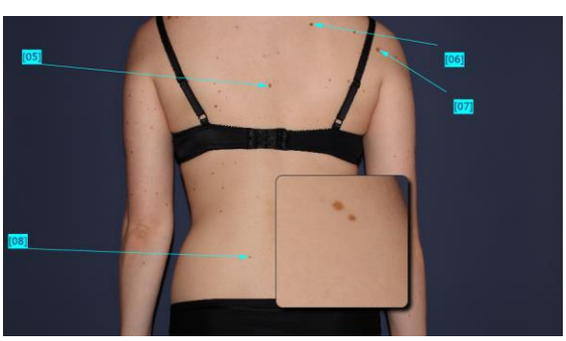


Fig. 57

14.1.4.2 Imaging Tools

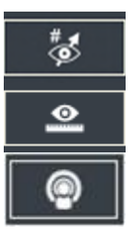
Above the image you see the following menu bar for the image display:

With this button you can enlarge the image to the width of the preview window.

With this button you can adapt the image to the height of the preview window.

With this button you can display the full resolution of the picture.

With the help of the slider or by turning the mouse wheel you can zoom in or out on a photo. You can pan the image by holding the left mouse button after you zoomed in.
With this button you can hide or display Markers.

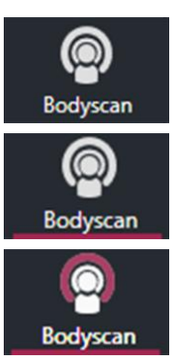


With this button you can show or hide overlayed graphic items.

With this button you can show or hide **Bodyscan** circles (cf. chapter 13.3.3 Bodyscan ATBM).
This is only possible for images created in the Total Body Mapping module.

Use this button to fade in a scale in the preview window (not possible for uncalibrated images). By right-clicking on this button, an additional menu will appear where you can individually set the line thickness as well as the text and line color.

Bodyscan



With this button you can show or hide the results of the Bodyscan function integrated in the Total Body Mapping module in two steps.

- During the first step, you can mark all detected lesions with white, yellow or red circles. Here, the red and yellow circles mark the new or changed lesions in the more recent image. To simplify visual comparison, the changed lesion are also marked yellow in the prior image.
- During the second step, you can mark only the new or changed lesions in the new image with yellow or red circles.

14.1.4.3 Marker

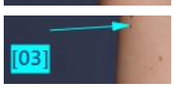
With the *Go to #* button you can jump to the images of a specific marker. Select the number of the appropriate marker in the drop-down menu.

NOTE

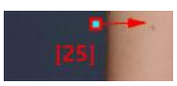
More about the marker functions can be found in the chapter Markers (cf. chapter 14.4 Marker).

The following points apply to the marker view:

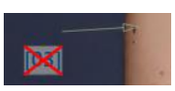
- The numbered arrows (Markers) on an overview image point to the marked lesions.



- If the number of a marker is highlighted with a color, at least one micro image exists for this position.



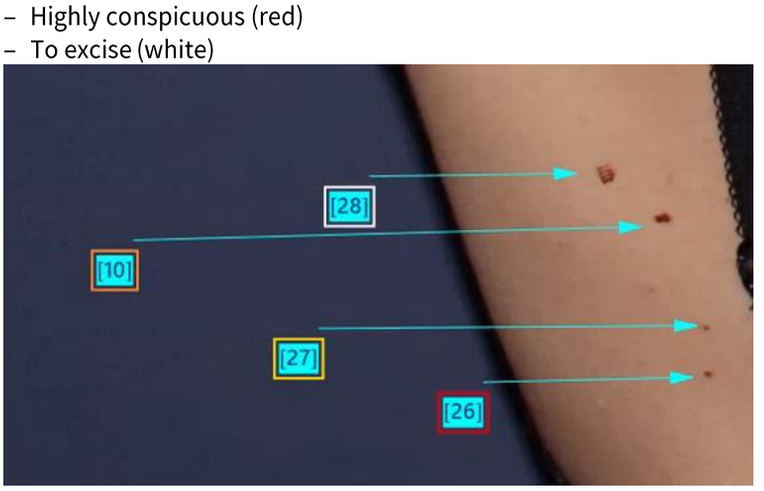
- The currently selected marker is displayed in red.



- *Disabled* markers appear as light gray arrows with the numbers crossed out with red. Disabled markers can be enabled again (cf. chapter 14.4.2.6 Deactivating a marker).

- *Deleted* markers appear as light gray arrows with the numbers crossed out with white. *Deleted* markers can also be reactivated (cf. chapter 14.4.2.7 Set markers as deleted).

- Classified markers appear with a coloured frame around the number (cf. chapter 14.4.2.5 Classify Marker):
  - Normal (yellow)
  - Conspicuous (orange)
  - Highly conspicuous (red)
  - To excise (white)



14.1.5 Optional expert systems

Click on the respective button to start the optional expert system.

NOTE

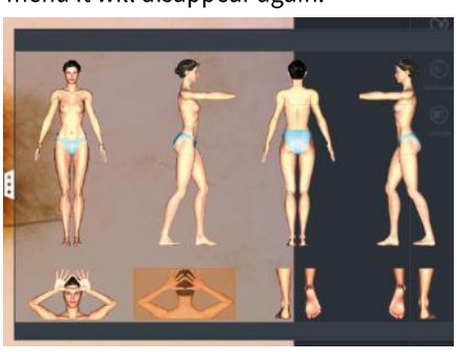
The software application **Moleanalyzer pro** is described in detail in a separate manual.

NOTE

The software application of **TrichoLAB** is available in a separate manual for **TrichoLAB Suite**.

14.1.6 Localization and Classification

If you move the cursor to one of the tabs on the right or left side of the screen, a menu with additional information on the currently selected image will appear. If you move the cursor away from the displayed menu it will disappear again.



The tab on the right side of the screen displays a schematic view of the patient. The localization of the image in the preview window is highlighted in color.
There are two different localization puppets for Total Body Mapping and Dermoscopy.
Localization in the Dermoscopy module is editable (e.g. when the wrong arm was selected). Click to deselect.

The tab on the left is only visible if the image in the preview window is a micro image. A menu will appear where the displayed micro image can be classified. You can fixate this menu with the pin in the top right corner. You can classify several micro images without having to open the menu again each time.

14.1.7 SmartGallery

The gallery on the lower part of the screen displays all the overview and micro images of the selected patient.
Micro images belonging to the respective (orange framed) overview image are displayed in the second line.

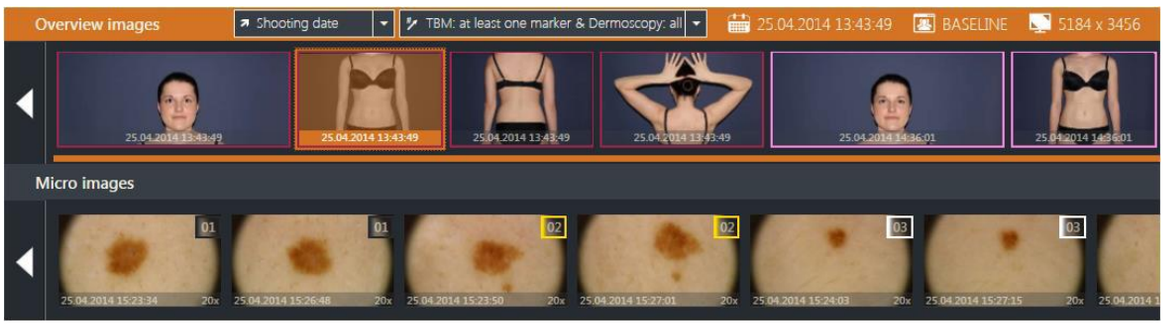


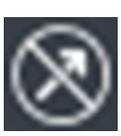
Fig. 58

Overview images
The field *Overview images* displays all of a patient's overview images.

Fig. 59

- The active image is displayed with an orange frame.
- You can scroll through the images with the arrows on the right and left of the overview images. Alternatively, you can use the mouse wheel to do so. In this case, the mouse cursor must be in the **SmartGallery**.
- Click on any thumbnail to select it. The selected image is displayed in the preview window

The screening date and time, image type as well as the resolution of the selected image are displayed above the gallery:



The crossed-out arrow on the thumbnail of an overview screen indicates that there is no marker in this overview.
You can enable/disable the display of this icon in the settings (cf. chapter 11.5.2 Total Body Mapping)

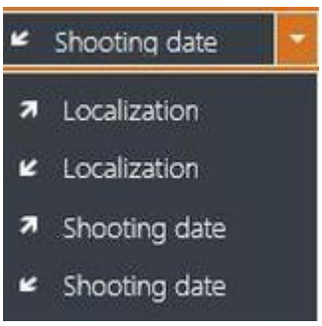
NOTE

The color of the overview image frame indicates the image type:

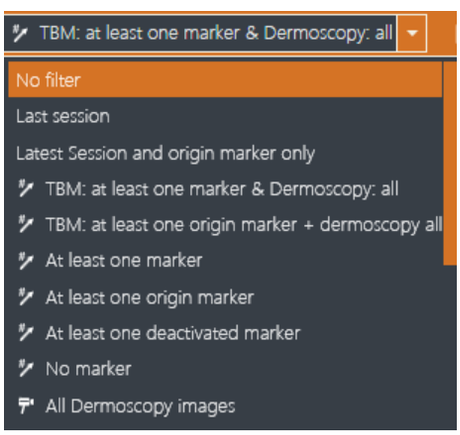
- Dark purple: TBM baseline session
- Pink: TBM follow-up session
- Blue: Overview image from the Dermoscopy module

Sorting and Filtering Overview Images

By default, all overview images of a patient are displayed in the gallery sorted by image capturing date. To make navigation easier, the **SmartGallery** offers additional options for sorting and filtering images



With the help of the drop-down menu above the overview images, you can sort the images by localization or capturing date in ascending or descending order.



An additional drop-down menu is located on the right. Here you can specify the criteria an image needs to fulfill in order to be displayed in the gallery.

Micro images

Micro images are displayed on the lowest screen section.

- As a default setting, all micro images for the current (orange framed) overview image are displayed. As soon as you left-click to choose a marker in the preview window, this will appear in red and only the corresponding images will be displayed in the micro gallery.
- If the marker has already been classified, the marker number in the gallery is framed with the corresponding color.

By clicking on one of the micro images in the gallery, this micro image will be displayed in the preview window. By double-clicking in the preview window you can see the image in full screen.

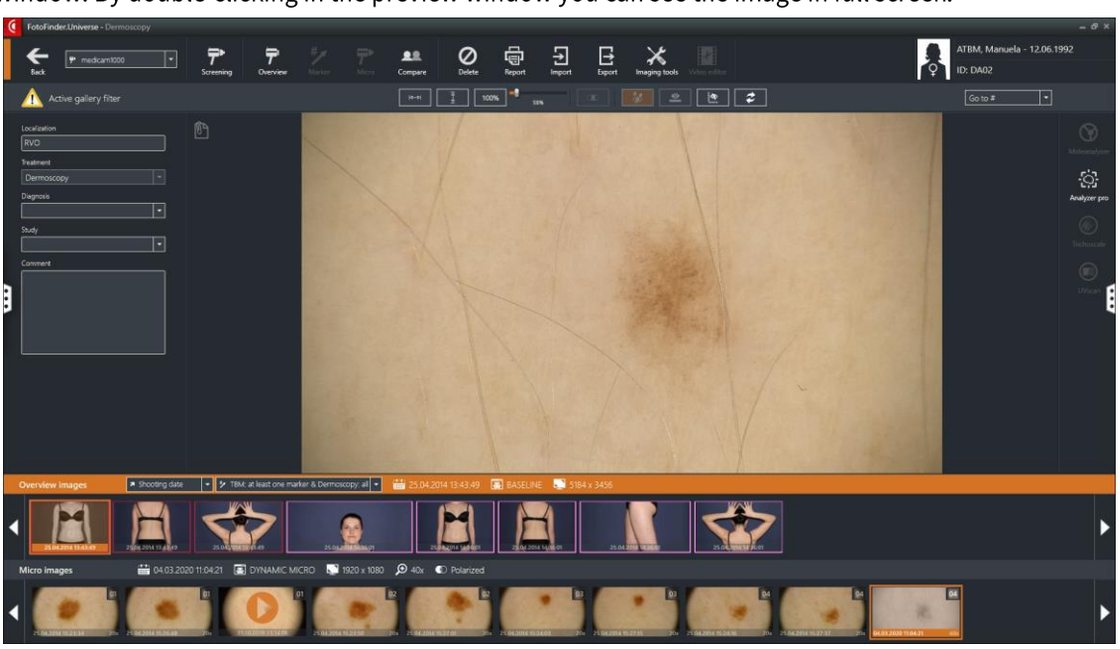
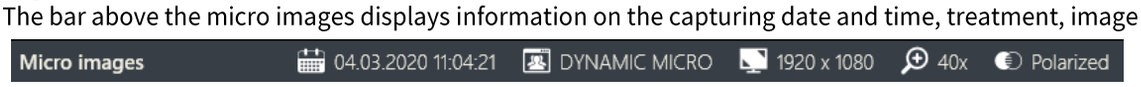


Fig. 60

The bar above the micro images displays information on the capturing date and time, treatment, image

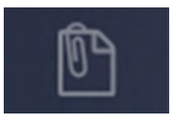


type and resolution. It also displays the zoom factor used during the capture of micro images.

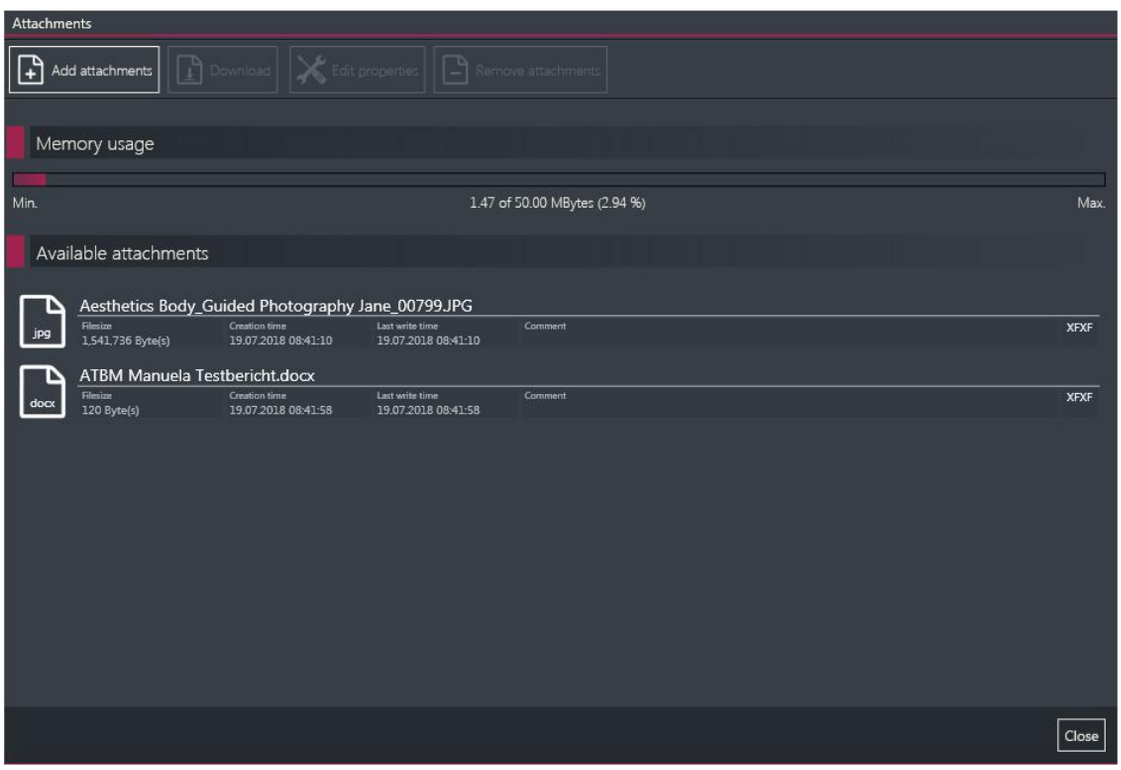
In addition you can see whether the micro image was captured with polarized or non polarized lighting.

14.1.8 Saving file attachments

You can save file attachments for every photo.
This function can be activated and deactivated in the settings (modules / ... / image viewer) (cf. chapter 11.5.1.2 Image Viewer:).



1. Click on the paperclip icon in the upper left corner of the preview window.
   The Add attachments window will open.

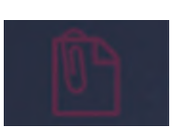


2. Via Add Attachments you can select files that you want to save as an attachment here.

Once you selected an existing attachment, you can also perform the following actions here:

- Download: The attachment can also be stored outside of Universe.
- Edit properties: You can change the files name, enter a comment and choose whether to include the attachment in an XFXF export.
- Remove selection: The file can be removed again as an attachment.

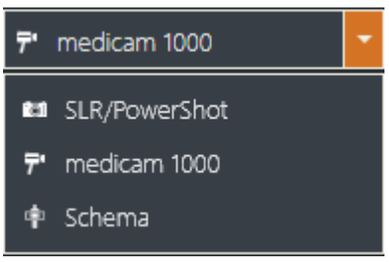
3. With Close this menu and window will be closed.



You can see if there is any attachment if the paper clip is colored. This color variates depending on which module are you using (Dermoscopy, Total Body Mapping or Aesthetics).

14.2 Overview images

In overview images, you can save the exact position of a lesion which is to be microscopically examined with the **medicam**.



You therefore need an overview image assigned with markers for every microscopic image. You can create this overview image in various ways:

- with the **medicam** or the **leviacam** without the dermoscopy lens
- with a digital camera connected to the computer
- as a schematic template

NOTE

The standardized overview images of the entire body taken in the *Total Body Mapping* module can also be used as overview images for dermoscopy.

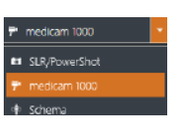
Beware of magnetic field

Never use the **leviacam** without **levialens** directly on a pacemakers or implanted cardioverter defibrillators (ICDs).

14.2.1 Overview images with the medicam or the leviacam

For Overview images with the **medicam** or the **leviacam** please consider the following:

- Make sure that the room is bright and well illuminated.
- Do not capture images in front of a window as this could result in overexposed images.
- Hold the camera still while capturing. Use the distance holder to help you when capturing close-ups with the **medicam**.

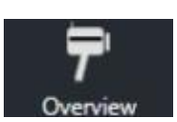


1. Remove the micro lens from the **medicam** or the **leviacam**.

CAUTION

Please pay attention to the following when using the **medicam** without a lens attached: A small low voltage electrical charge could be transmitted if the contact pins inside the lens bayonet ring are touched by the patient or user. **Therefore, do not touch the contact pins during use!**

2. In the menu bar, select **medicam** or **leviacam**.



3. Click on *Overview* to start the capturing.

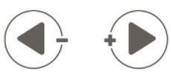
Now you are in the imaging mode.

NOTE

The camera will automatically exit the live view after 5 minutes of inactivity. If necessary, start the capturing again by clicking on the icon above.

The imaging mode will start after a short initialization. Here it is possible to change between image or video recording with the *Switch* button.

The LED ring light turns on automatically.



4. Select the zoom level using the respective buttons.

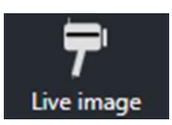
leviacam: zoom not possible.

During the capturing process, you can choose between five white balance settings in the menu bar.

5. Select the color profile depending on the environmental and light conditions. Use the same color profile for follow-up images.

6. Now press the camera's release button or click on the *Photo* icon.

leviacam: Please note that capturing an image with activated autofocus (cf. chapter 11.2 Image Capture Devices) may take a few seconds. Keep the device still during this period. If the autofocus is deactivated, focus the image using the arrow button before capturing the image.



If the image is blurry or if you are not satisfied with the image, you can reactivate the Live view by clicking on the *Live image* icon. The captured image will be deleted.
This will also work using the appropriate button on the back panel of the camera:

medicam: **leviacam**:

You can enter additional information in the image data field on the left side of the screen:

- Diagnosis
- Associated study
- Comments

7. Select the patient's body region from the localization menu on the right edge of the screen (cf. chapter 14.1.6 Localization and Classification). Click on the respective body part of the virtual patient.

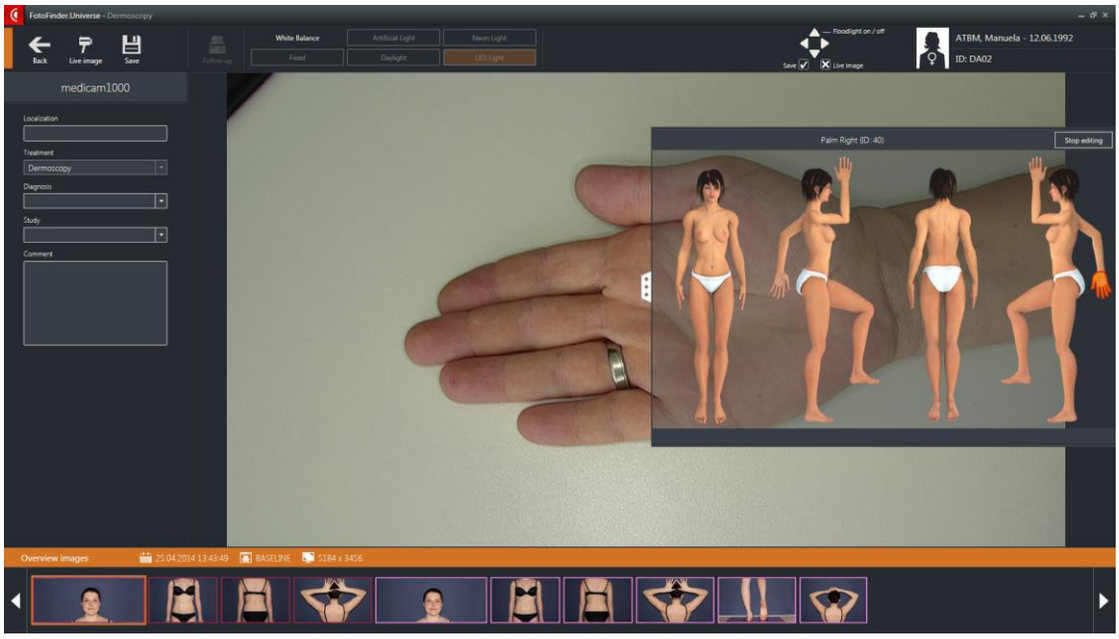
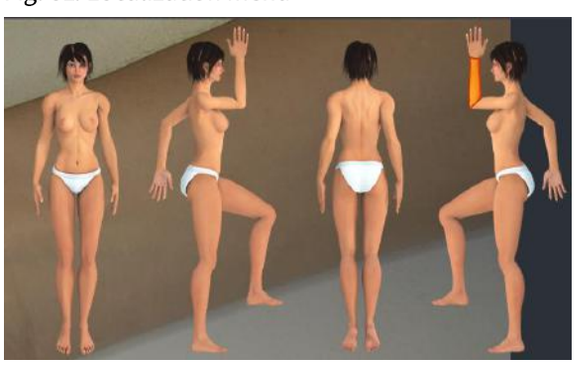
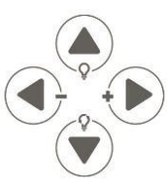


Fig. 61: Localization menu



When moving the cursor over a localization, this will be highlighted. By clicking on one sections it will be marked red and automatically entered in the *Localization* field.



The localization puppet also appears when the release button is pressed again. You can use the arrow buttons to browse through the displayed body regions on the localization puppet and select the appropriate one using the release button.
When using the **medicam**, it is also possible do this with the corresponding button of the camera:

In this way, the image is also saved and stored in the **SmartGallery**.

8. If you have not already done so, save the image with one of the following methods:
   - Press the release button a second time.
   - Click on the *Save* button.

After the image is saved, the camera switches back to the live view and you can immediately take the next overview image.

Use the *Follow-up* function to create a follow-up image for an already existing overview image.

When starting this function by clicking on *Follow-up* in the menu bar, the preview window will be divided in the middle. The already existing overview image will be displayed on the left side. You can select the required image of the patient from the field on the bottom of the screen.
When using the **medicam** or **leviacam**, you can browse in the **SmartGallery** with the buttons on the back panel and select an image:

medicam: **leviacam:**

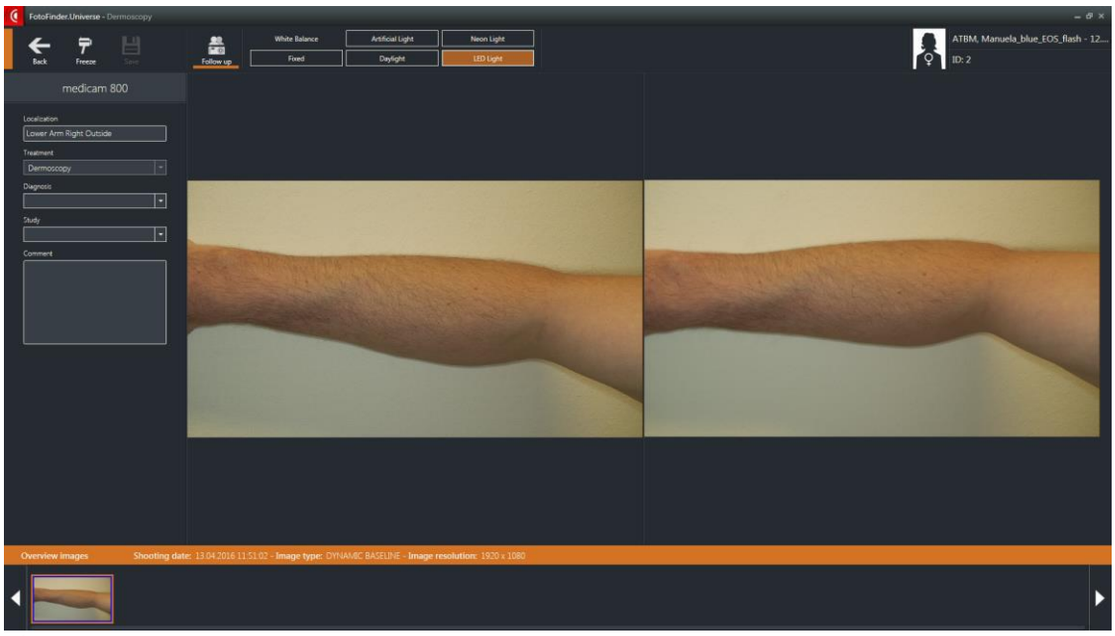
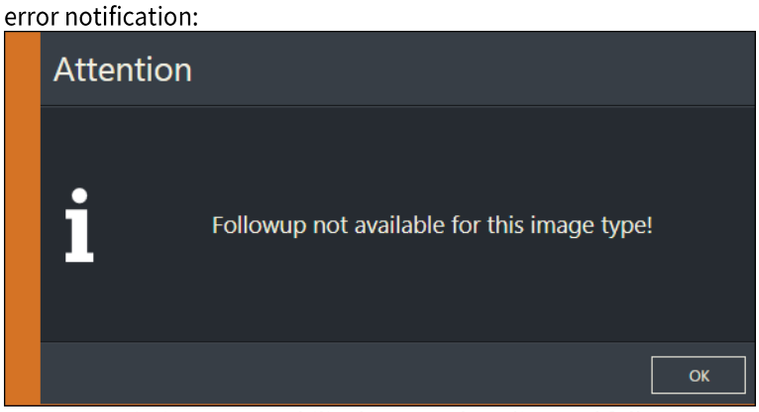


Fig. 62

Please note that you can only capture follow-up images for images that were also captured in the dermoscopy module. Imported images are an exception. Selecting a different image will result in an error notification:



You can optimize comparability between baseline and follow-up images by proceeding as follows:

1. Position the camera so that both images display the same sections.
2. Configure the lighting values so that both images correlate in the following points:
   - Image section
   - Capturing angle
   - Lighting
   - Color

Use the *Back* button to end the capturing and return to the user interface of the Dermoscopy module.

NOTE

The image data field now automatically displays the capture date and time, treatment and localization.

An overview of the **medicam 1000** panel functions relevant for overview images is provided below:

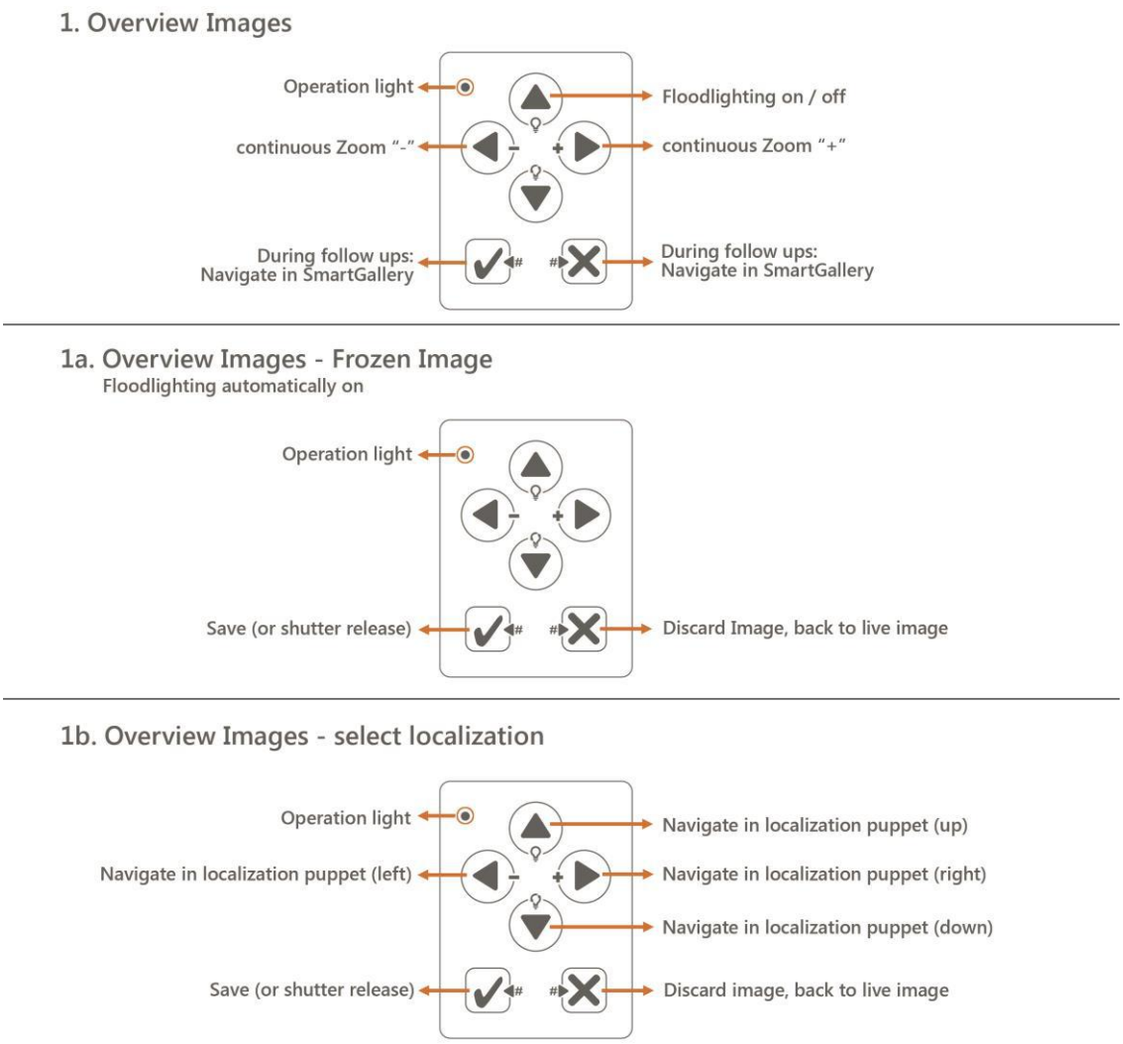
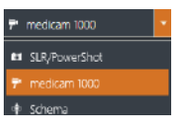


Fig. 63: ***medicam 1000*** panel functions for overview images

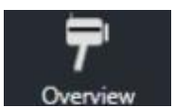
14.2.1.1 White Balance for the medicam 1000

Environmental and light conditions in overview images may vary considerably. In order to adjust your **medicam 1000** to the current ambient lighting, you can adjust the white balance.

For white balance in the Dermoscopy module, proceed as follows:



1. Remove the micro lens from the **medicam**.
2. In the menu bar, select the **medicam**.



3. Click on Overview to start the imaging mode.

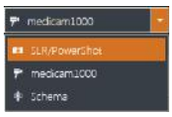
Now you are in the imaging mode.

4. Hold the camera over a white surface.
5. Click on *Fixed*.

The camera color settings are now aligned to the current ambient light conditions.

14.2.2 Overview images with a digital camera

In order to capture overview images with a digital camera connected to the system, proceed as follows:



1. Select *SLR/Powershot* in the drop-down menu.

2. Start the capturing process with the *Overview* button

You are now in capturing mode.

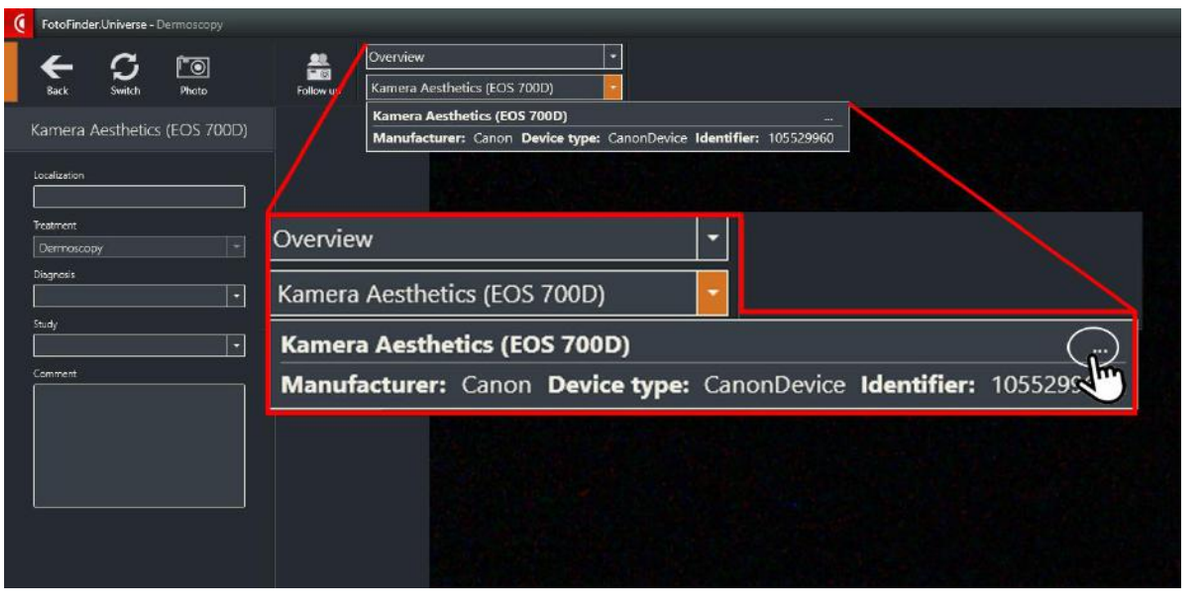
3. The default capturing profile is *Overview*. You can change this if necessary to adjust the camera settings to your needs.
4. If several SLR cameras are connected, the camera selection can be changed in the drop-down menu in the menu bar.

The further procedure is similar to the use of the **medicam**.

14.2.2.1 Renaming connected digital cameras

Several different digital cameras can be connected to your system. As a user to be able to differentiate between these cameras during the capturing process, these cameras can be individually renamed.

1. Start the capturing process.
2. Open the camera selection drop down menu.
3. Click on the „…“ at the end of the row (see on screenshot below)



4. A cursor appears behind the current camera name. Overwrite this as desired and confirm with *Enter*.

Reset camera names

You can reset the camera names to the original if you follow these steps:

1. From the main Dashboard go to *Settings* / *Image Capture Devices* / *general settings*.
2. Click on *Reset* at *Reset all custom device names*.
3. Quit the *Settings* with clicking on *Close*.

14.2.3 Overview images via Wi-Fi

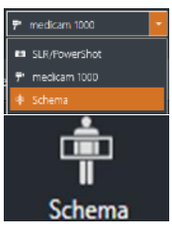
Overview images can also be imported with a digital camera via Wi-Fi SD card.

1. Select *Wi-Fi* from the drop-down menu.
2. Click on the *Overview* button.

In Wi-Fi mode, you can take several overview images without having to confirm anything in the software.

After the capturing process, you can insert localizations using the tab on the right edge of the screen (cf. chapter 14.1.6 Localization and Classification).
More information is contained in the chapter Settings (cf. chapter 11 Settings).

14.2.4 Overview images with the scheme



Instead of clinical overview images you can also use the virtual patient's corresponding detail.

1. Select *Scheme* from the drop-down menu.

2. Click *Scheme* now.

You can now select different localizations.

3. Select the appropriate body part from the most suitable perspective by clicking on it.

The selected schematic body area will now appear enlarged on the right.
In the image information area on the left you can add further details, e.g. Diagnosis, Study or Comments.

4. Click on *Save*.

The selected schematic display is saved as an overview image.

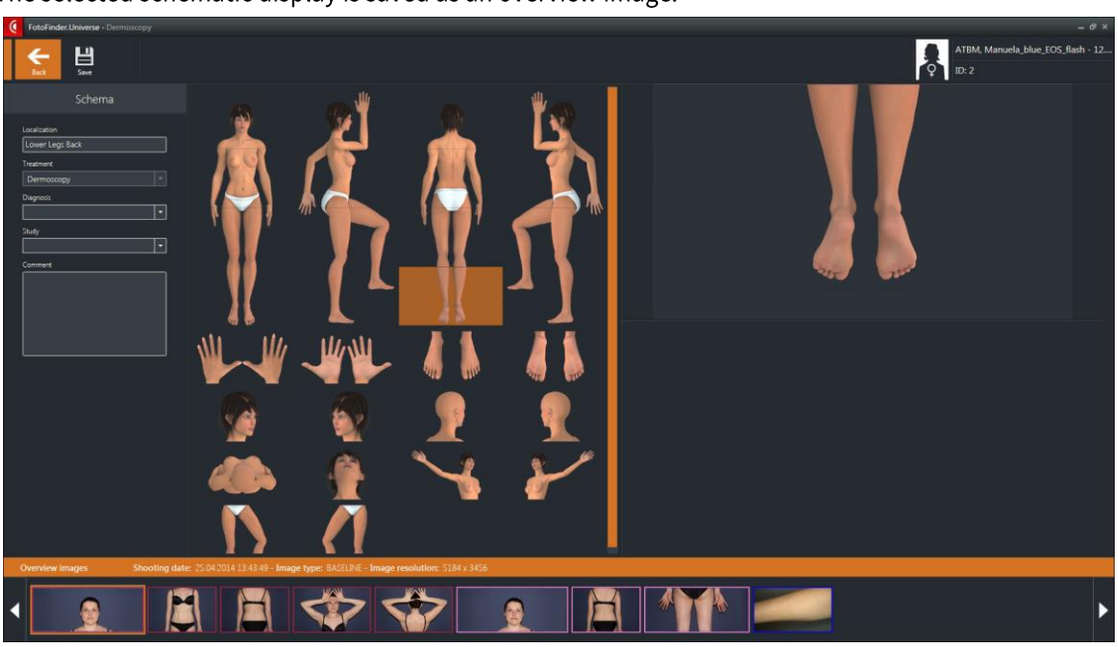
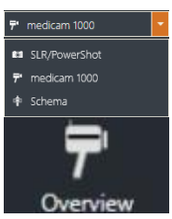


Fig. 64

14.3 Overview video

The FotoFinder Universe software offers the possibility besides imaging to create and save videos as well. These videos can be recorded in the *Dermoscopy* and *Aesthetics* modules. In the *Dermoscopy* module it is possible to create a video for overview and micro recordings as well.

For good results please always keep in mind all the instructions applied for normal image capturing (cf. chapter 14.2.1 Overview images with the medicam or the leviacam).



1. Take the microscopic lens off of your **medicam** or **leviacam**.
2. Select from the drop down menu your **medicam** or **leviacam**.
3. Click on *Overview* to start the imaging.

NOTE

The camera will quit the Live view mode after 5 minutes of inactivity. You can start the imaging again by clicking on the Overview button again.

The LED ring lights will automatically turn on.
After a short initialization the imaging mode will start. You can switch here between Image capture or Video recording.

4. Position your imaging device.

5. Click on *Record*, or press the release button on the grip to start the video recording.

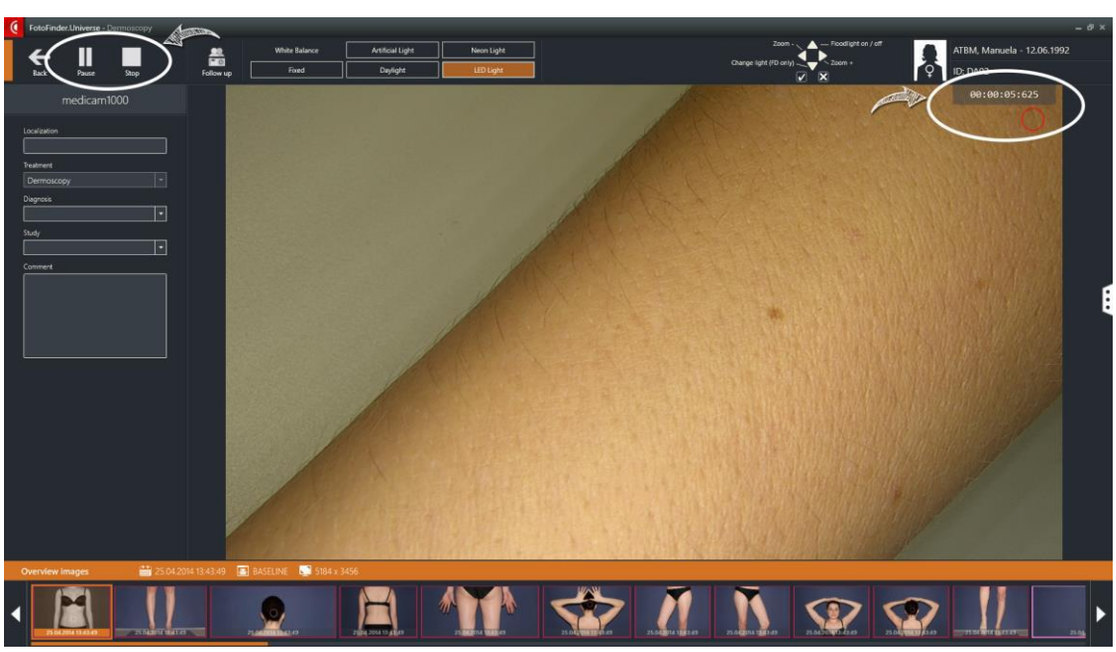
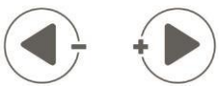


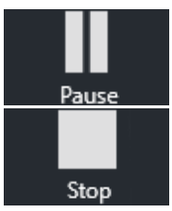
Fig. 65: Example view for active video recording

During the recording:

– the length of the recording shows in the upper right corner. The blinking red dot indicates that the recording is in progress.

– you can adjust the zoom factor on the **medicam** with the respective  buttons.

– the *Pause* and *Stop* buttons are active:



You can pause the recording with the *Break* button. You can restart the recording any time with clicking on *Record* again.

When finished, click on *Stop*.

You can specify the maximum length of videos in the settings. (cf. chapter 11.5.1.8 Videos).

Right after the recording the video will be automatically played back.

You can enter additional information in the image data field on the left-hand side of the screen:

- Diagnosis
- related Studies
- Comments

6. Click on *Save* when you are satisfied with the recording.
   Otherwise click on *Live image* to be able to start a new recording or on *Back* to quit the capturing mode.
7. The localization menu will open automatically after you click on *Save*. Here select the body part on the virtual patient (cf. chapter 14.1.6 Localization and Classification).

For editing options please see in *Videoeditor* (cf. chapter 14.8.1 The Video editor).

14.4 Marker

Markers indicate the positions on the overview images where lesions are to be examined with dermatoscopy. Before a micro image can be created, a marker has to be drawn. Additional markers can be set in newly captured or already existing overview images at any time.

NOTE

- Without drawing a marker it is not possible to capture and save a micro image.
- Every micro image has to be ordered to a marker on an overview image.
- The same lesion should always be captured under the same marker.

NOTE

An overview of the possible marker views can be found earlier in this manual (cf. chapter 14.1.4.3 Marker).

MoleHistory

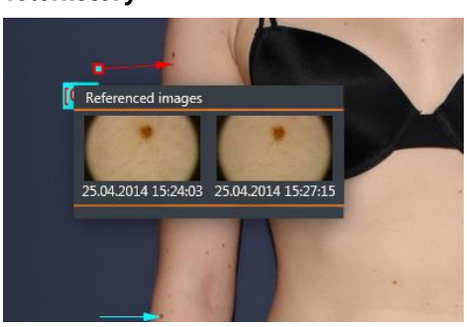
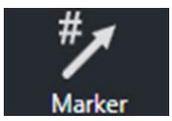


Fig. 66: MoleHistory

To visualize the evolution of existing micro images for a specific marker (*MoleHistory*), click directly on the marker number with the left mouse button.
Click on any of the preview images to see it in full screen mode.

14.4.1 Set marker



For labeling, please proceed as follows:

1. Click on the *Marker* button.

   This is located in the menu bar of the user interface of the dermoscopy module as well as in the full screen view of the selected overview image.
   When the marker function is activated the button and the preview images or both marked with an orange frame.
2. Click and hold the mouse button to draw a line away from the required lesion in the overview image.
3. Release the mouse button when the line has the required length and alignment.

The line is saved and automatically given a number.

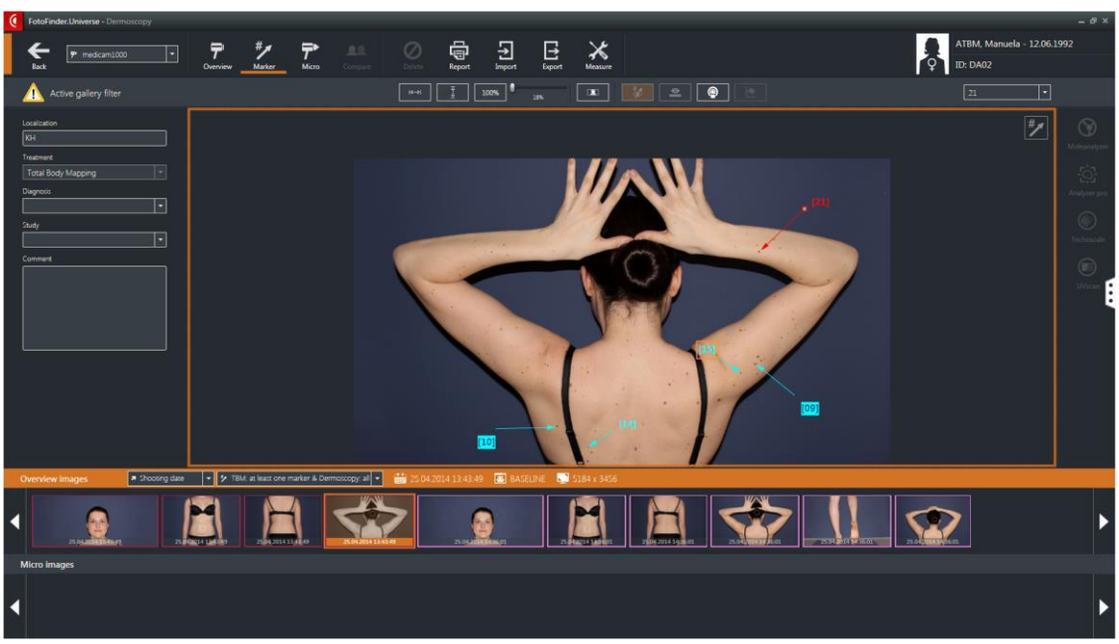


Fig. 67: Set marker

4. Mark the whole overview image in this manner.
5. As soon as all areas are marked, switch off the marker function by clicking on the *Marker* button again.

NOTE

A patient's marking is consecutive, i. e. each number is assigned only once.

14.4.2 Marker Context Menu

Right-clicking the number of a marker displays a context menu with various marker options.

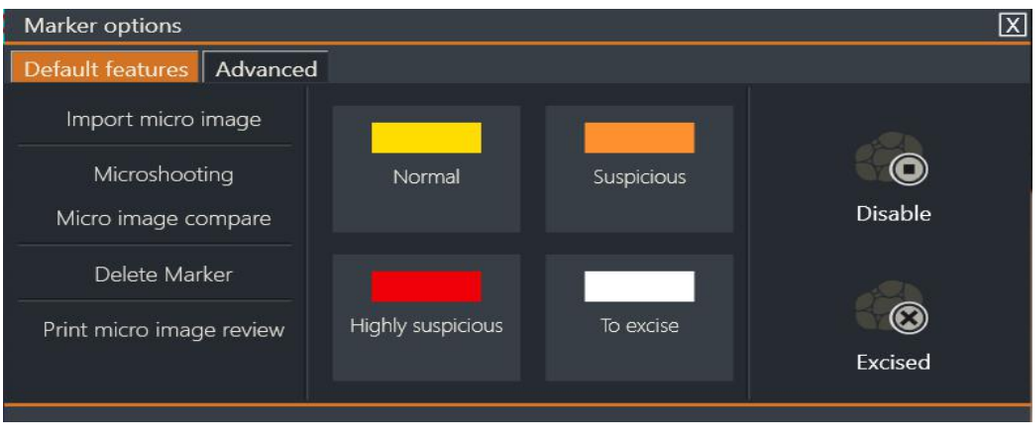


Fig. 68: Marker Context Menu

14.4.2.1 Importing a micro image

You can import micro images from your harddrive or external storage media.

14.4.2.2 Micro image compare

You can compare two micro images (cf. chapter 14.7.3.2 Comparing micro images).

14.4.2.3 Delete marker

You can delete incorrectly placed or no longer needed markers.

1. In the image, right-click on the number of the appropriate marker.
2. In the appearing context menu, select *Delete marker*.

NOTE

By deleting a marker all micro images in this position are also deleted.

14.4.2.4 Print micro image review

If micro images have been captured for this marker, the function *Print micro image review* will also be active. Selecting this will directly create a review with the appropriate overview image and all available micro images (cf. chapter 14.9 Reports).

14.4.2.5 Classify Marker

You can classify markers using four different marker tags. Depending on the lesion, you can label the markers as follows:

- Normal (yellow)
- Conspicuous (orange)
- Highly conspicuous (red)
- To excise (white)

Select the required classification in the appearing context menu.

If a micro image in the Dermoscopy module is displayed in the preview window or in full screen mode, you can classify this position by using the tab menu on the left side of the screen.
In addition, a classification menu is available in the Dermoscopy Micro Image compare menu bar.
The selected classification applies to all capturing sessions.

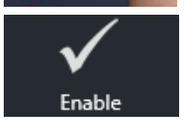
14.4.2.6 Deactivating a marker

If a marker should be skipped in all future examinations, but the marker itself should not be deleted, this can also be disabled:

1. Right click with the mouse directly on the marker number.

2. From the appearing menu select *Disable*.
   This icon is also available in Micro compare.

The marker number on the overview image will be displayed with a red X crossed out.

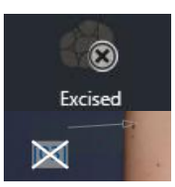


With the same steps the marker can be enabled again. For this in the appearing menu click on *Enable*.

14.4.2.7 Set markers as deleted

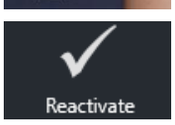
If a lesion has been excised, the belonging marker can be set to *deleted*. With all follow-up examination this marker position will be skipped without the micro images being deleted.

1. Right click with the mouse directly on the marker number.



2. From the appearing menu select *Excised*.
   This icon is also available in Micro compare.

The marker number on the overview image will be displayed with a white X crossed out.



With the same steps the marker can be reactivated again. For this in the appearing menu click on *Reactivate*.

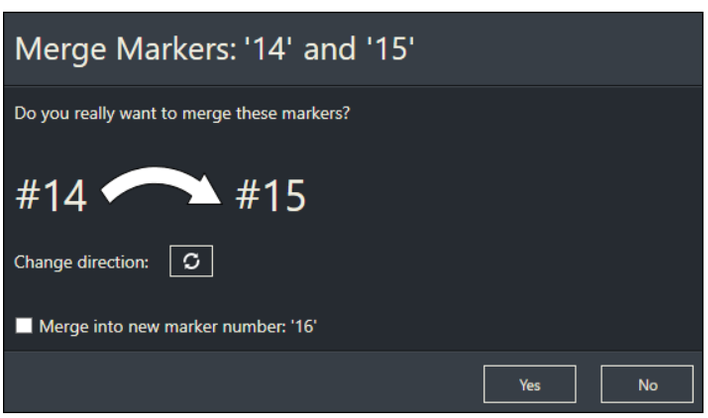
14.4.3 Merging markers

If several markers have been created for the same lesion, these can be merged to one marker number using the *Merge marker* function:

1. Start the image compare feature in Dermoscopy or Total Body Mapping.
2. Select the overview image with the markers you wish to merge.
3. Select the two markers with pressed down Ctrl key on your keyboard and left mouse click. The selected markers will be red.

4. Click on *Merge marker*.

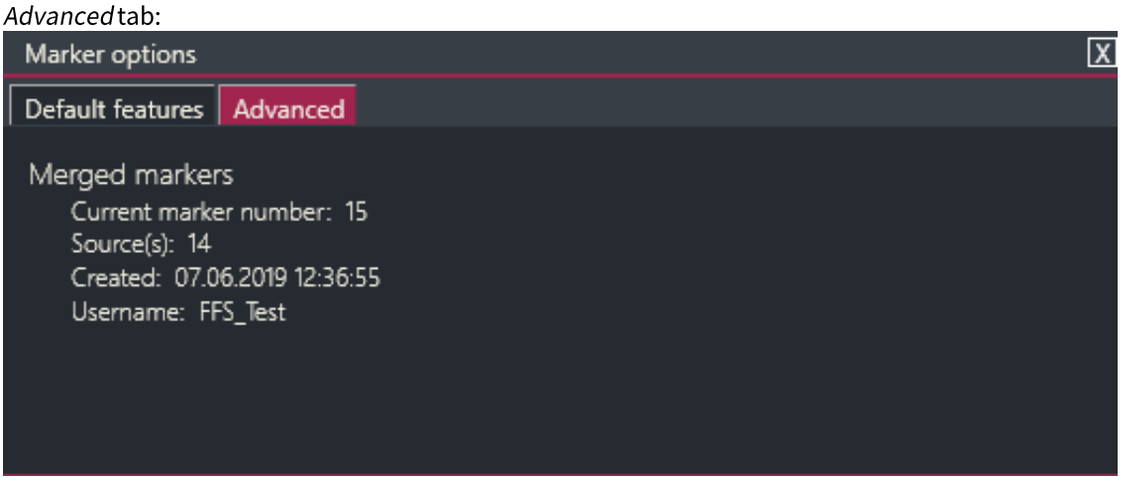
The following window will appear:



5. By default the software will offer to take the marker number from the left and merge it into the marker number on the right.

   With clicking on *Change direction* you can change this to the other way around. If you would prefer creating a new marker number, check the checkbox at *Merge into new marker number: ...*
6. Confirm with *Yes* to finalize the marker merge.

In this example the remaining marker has been assigned number 15. All existing micro images of both markers are stored at this new number now.
You can also find information about the performed marker merges in the marker context menu in the *Advanced* tab:



14.5 Micro capturing (images and videos)

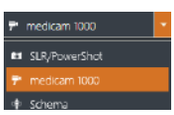
Once you have marked a lesion in an overview image with a marker, you can use the **medicam** or the **leviacam** to create high resolution illuminated micro images (incl. videos).

Please observe the following for high-quality micro images:

- To take non-polarized micro images, always use alcohol solutions which contain 70% alcohol. The skin needs to be moistened completely. Try to prevent bubble formation and the inclusion of hair during capture. Shave if necessary.
- When capturing polarized images without immersion solution, ensure sufficient disinfection
- Make sure, that the lens and the attachment are both completely clean before start capturing.

  Details on the proper cleaning steps can be found in another chapter (cf. chapter 8 Cleaning and disinfection).

1. Place the micro lens onto the **medicam** or **leviacam**.



2. In the menu bar, select **medicam** or **leviacam**.

3. In the **SmartGallery**, select an overview image for which you would like to capture micro images.

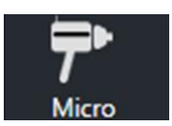
You have two options to change over to the micro image capturing mode:

4. Right-click to select the appropriate marker position on the overview image.

This opens the context menu.

5. In the appearing context menu, select *Micro image*.

or:



6. Click on *Micro* in the menu bar.

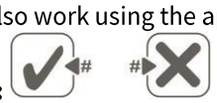
This will open the micro image window.

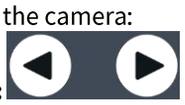
NOTE

The camera will automatically exit the live view after 5 minutes of inactivity. If necessary, start the capturing again by clicking on the icon above.

Here you can also choose between markers using the adjacent buttons.

This will also work using the appropriate buttons on the back of the camera:

medicam: 

leviacam: 

The program now shows you the interface for micro image capturing.

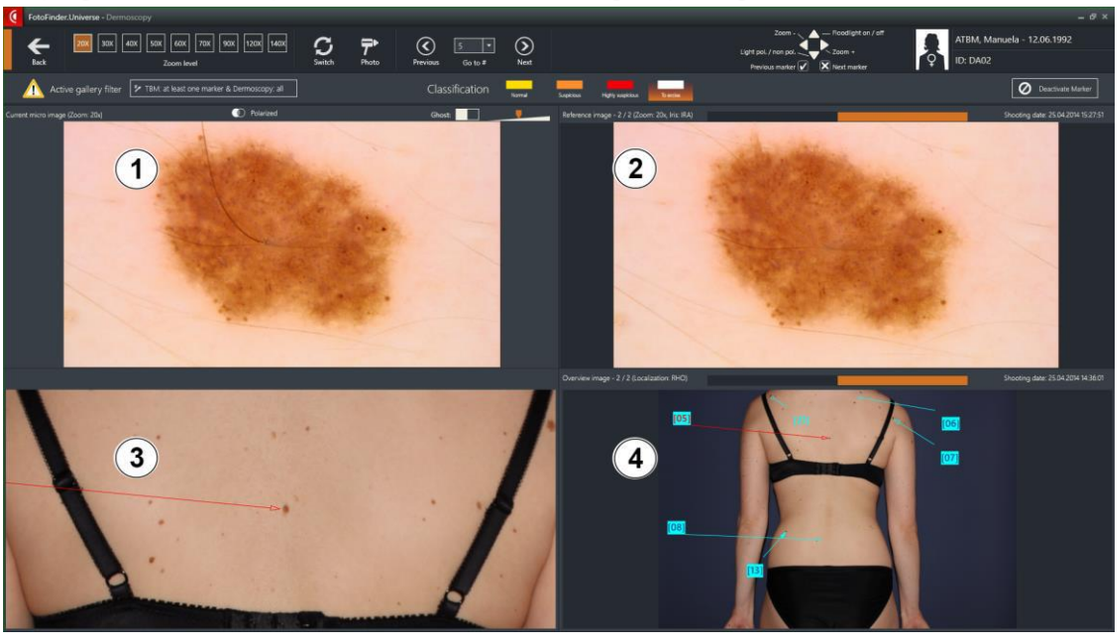


Fig. 69: Screen view for micro image capturing

1 **Live image**
At the top left you can see the current live image and - if activated - the **Ghost** function.

2 **Reference image**
Next to it is the last recorded reference image. In case there are no reference images, the corresponding window will be empty.

3 **Marker position**
The lower left corner shows the marker position in detail.

4 **Overview**
On the bottom right is the overview picture with the active marker (colored red). With ATBM or Aesthetics images you will always see here the baseline overview image with the Origin Markers, not a follow-up image. The orange bar above the image can be used to display the other overview images for this marker (baseline, follow-ups). The new micro images will be stored at the last Ghost Marker, even if this may not yet be aligned (cf. chapter 13.6.1.2 Markers in Follow-ups (Ghost Marker)).

7. The lens light turns on automatically.
8. For non-polarized images use an immersion fluid.
   For polarized images with the **medicam** and the **D-Scope IV** lens, or with the **leviacam** there is no need for an immersion fluid.
9. Place the microscopic lens on the skin.

medicam 1000 in combination with the D-Scope IV:
You can switch from polarized to non-polarized images during the capturing process. Press the corresponding button on the medicam:

leviacam: You also do not need immersion fluid when capturing polarized images with the **leviacam**. In this case, switch the light over to polarized:

10. Only for **medicam**: Use the *Zoom level* button to select the required magnification.
    Alternatively, you can set the magnification factor using the zoom buttons on the camera's back panel (zoom change is also possible during a video recording). If there are already micro images for this position, the camera automatically adjusts to the same values as in the reference image.

The **leviacam** captures micro images with a 20x zoom factor.

The following procedure differs depending on whether you want to create a micro image or a micro video:

14.5.1 Further steps at micro image captures

NOTE

For later segmentation in **Moleanalyzer pro**, you require images with 20x, 30x or 40x magnification. For analysis with **AI Score** you require images with 20x magnification.
This magnification factor is also required for hair analysis with **Trichoscale® pro**.

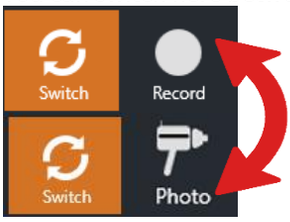
The **medicam** will Autofocus right away. With the **leviacam** you can adjust the settings for the Autofocus. (cf. chapter 11.2 Image Capture Devices).

Micro Ghost
To have access to this features it must be enabled first in Settings at Dermoscopy. (cf. chapter 11.5.1.2 Image Viewer:).

If there is already a reference image then you can use the **Ghost** function to improve the comparison. Here the reference image will be layered over the live image. The intensity of the transparency can be set with the slide bar on the right side of the live image. You can also turn the **Ghost** feature off for the active image with the button on the left side of the slide bar.

The bar above the reference image allows you to select another image as the reference image if there are others available.

You can switch here between Image capture or Video recording.



11. Press the release button on the camera handle or click on the *Photo* icon.

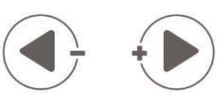
The image will immediately be frozen and displayed in full screen.
Alternatively you can also specify that the displayed image is only shown in Field 1 (cf. chapter 11.5.1 Dermoscopy).

If the picture is blurry or you are not satisfied with the image you can reactivate the *Live View* and with that delete this image.
This you can do with the respective buttons on the back panel of your imaging device too:

medicam 1000: **leviacam:**

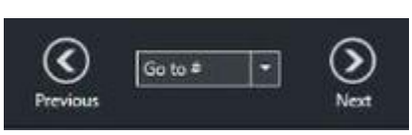
12. If necessary, the captured lesions can be immediately categorized. Click on the classification menu above the Micro image.

This also works through the respective buttons on the back panel of your imaging device:

medicam 1000:  **leviacam:**

Around the selected class a red frame will appear.

13. You can save the image in the following ways:
    - Press the release button on your camera twice.
    - Click in the software on *Save*.



With the *Previous* and *Next* buttons you can jump to the next marker. You can also select the desired marker number from the drop down menu at *Go to #*.
If all markers of an overview image have been called up, the system automatically jumps to the chronologically next overview picture.

Micro images via Wi-Fi

You can also create micro images via Wi-Fi.

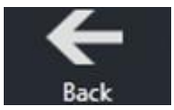
1. In the menu bar, select *Wi-Fi.*
2. Select the *Micro* button to import images.

In this mode, the software automatically jumps to the next marker without you having to confirm anything in the software.

3. Save the image.

The software jumps to the next marker.

4. Repeat the last steps to take further images.

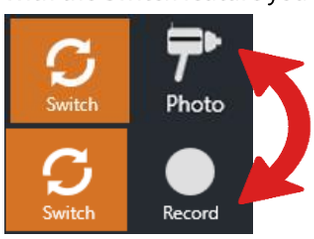


When clicking *Back* you are returned to the dashboard of the Dermoscopy module.
If you have not yet saved the last captured micro image, the system will now prompt you to do so.

14.5.2 Additional steps with Micro videos

The first steps to capture micro videos are described earlier in this chapter (cf. chapter 14.5 Micro capturing (images and videos)).

11. With the *Switch* feature you can change between image capturing and video recording.



12. Click on *Record* or press the release button on the grip of your camera to start the video recording.

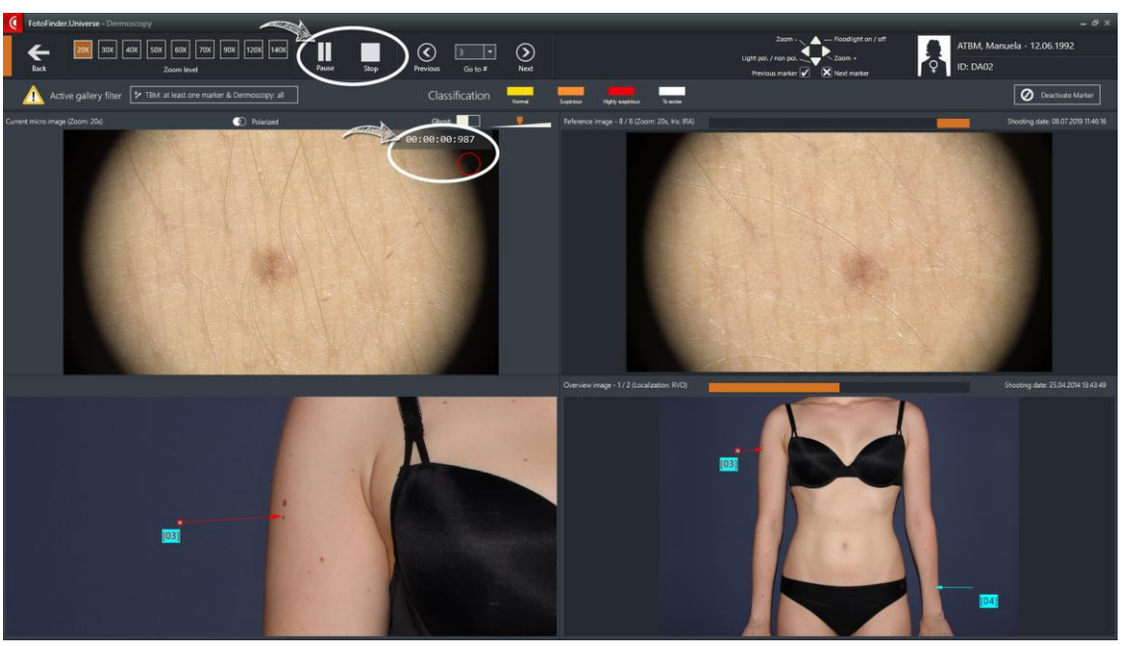
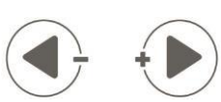


Fig. 70: Example view for active recording in Micro video recording mode

During the recording

– the length of the recording shows in the upper right corner. The blinking red dot indicates that the recording is in progress.

– you can adjust the zoom factor on the **medicam** with the respective  buttons.

– the *Pause* and *Stop* buttons are active:

You can pause the recording with the *Pause* button. You can restart the recording any time with clicking on *Record* again.

When finished, click on *Stop*.

You can specify the maximum length of videos in the settings (cf. chapter 11.5.1.8 Videos).

Right after the recording the video will be automatically played back.

13. Click on *Save* when you are satisfied with the recording.

    Otherwise click on *Live image* to be able to start a new recording or on *Back* to quit the capturing mode.

The saved video will be displayed in the SmartGallery.

For editing options please see in *Videoeditor* (cf. chapter 14.8.1 The Video editor).

An overview of the **medicam 1000** panel functions relevant for micro images is provided below:

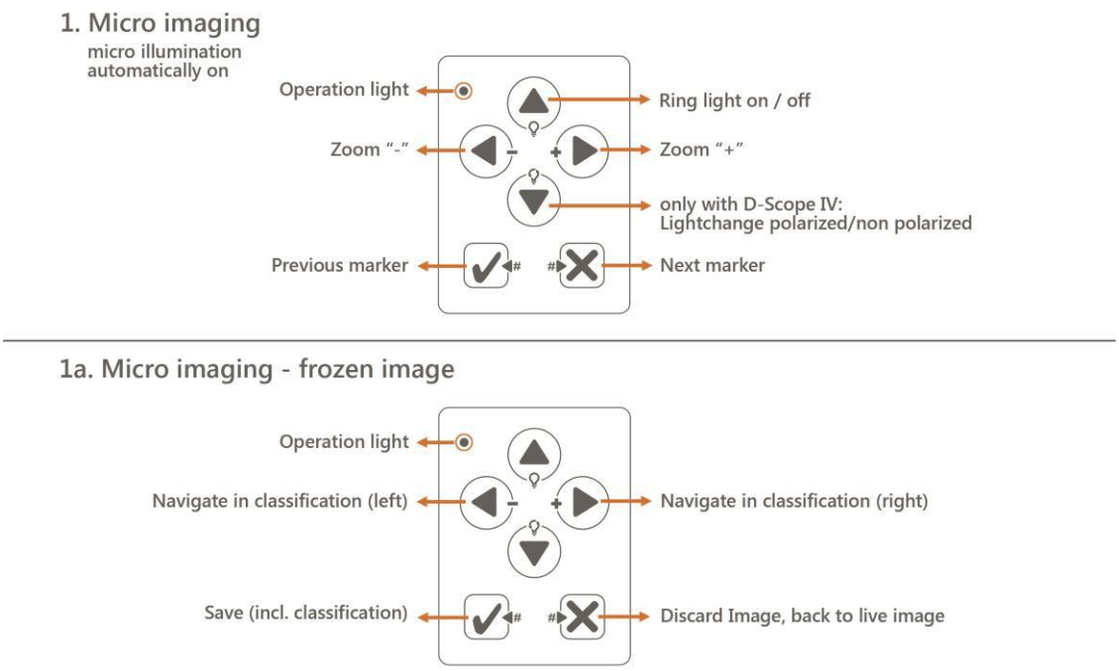
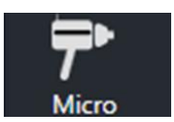


Fig. 71: ***medicam 1000*** panel functions for micro images

14.6 Micro images with the D-Scope III

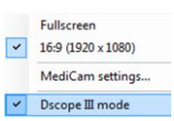
Fig. 72: D-Scope III



1. For D-Scope III images, start the micro image mode.

2. Attach the **D-Scope III** to your **medicam**. Proceed as follows:

   1. Remove the standard lens. Open the bayonet fastener by rotating it slightly to the left.
   2. Attach the **D-Scope III.** Ensure that the small red dot is at the top and then insert the two pins into the appropriate recesses in the medicam. The **D-Scope III** will click into place by rotating it slightly to the right.



3. Open the context menu by right-clicking the mouse in the preview. Select *Dscope III mode*.

This disables the **medicam** autofocus and you can use the **D-Scope III** to manually set the focus level in the image. Enlargements are possible up to zoom factor 400.

4. Use immersion liquid on the skin.
5. Place the **medicam** directly onto the patient's skin.
6. To capture an image, activate the release button on the camera´s handle. Keep the camera very still and adjust the focus ring manually to focus.

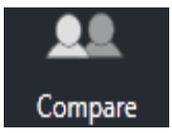
The subsequent process follows in accordance with normal micro image capturing (cf. chapter 14.5 Micro capturing (images and videos)).

Ending D-Scope III recordings:

1. End the **D-Scope III** mode by unchecking in the context menu.
2. Remove the **D-Scope III** from your **medicam** and replace the standard lens.

14.7 Working with the images

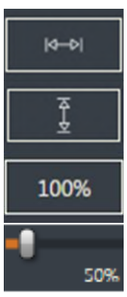
14.7.1 Compare



The *Compare* function allows you to compare both overview images and micro images.

1. Select an image you want to compare with other images by clicking on it.
2. Click on the *Compare* button in the menu bar of the Dermoscopy module's user interface.

14.7.2 Imaging Tools

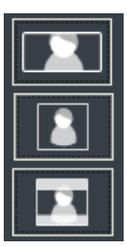


With this button you can enlarge the image to the width of the preview window.

With this button you can adapt the image to the height of the preview window.

With this button you can display every pixel of the image with one pixel at a time.

With the help of the slide bar or by turning the mouse wheel the enlargement of the image display can be set individually. You can shift the image by clicking and holding the left mouse button.



For Total Body Mapping, you capture four images from every side of the body (in the Total Body Mapping module), which are then automatically assembled into one full body image. Use this button to alternate between different display modes:

- cropped images
- original size
- original images with marked overlay for cropped sections (transparent overlay)

This button changes depending on the current selection.

With this button you can fade inserted image markings (e.g. Marker) in and out.

With this button you can fade inserted measurement tools in and out.

Use this button to synchronize the brightness and color of the two micro images. This symbol will appear as a watermark in the top right corner of the synchronized image. The other image is synchronized when you press the button again. A third click will return both images to their original form. These adjustment are not saved.

Use this button to fade in a scale in the preview window (not possible for uncalibrated images). By right-clicking on this button, an additional menu will appear where you can individually set the line thickness as well as the text and line color.

With this button you can switch to grayscale view in the micro image comparison. This button only appears if you have activated it in the settings (cf. chapter 11.5.1.2 Image Viewer:).

■ You can select the image's enlargement freely by turning the mouse wheel.

To move around in the zoomed in image, proceed as follows:

1. Click on the image.
2. Click and hold the left mouse button.
3. Move the cursor.

- The magnifier tool is also available in image comparison (cf. chapter 14.1.4.1 Magnifier function).

  If the magnifiers in the two images are not located in the same position (e.g. because the capturing positions were not identical), you can move one magnifier and therefore adjust the positions:

  1. Press the Ctrl button on your keyboard and the right mouse button at the same time.

  This takes you to Offset mode and you only move the magnifier which is currently selected by the cursor.

  2. Release the Ctrl button as soon as both magnifiers are in the same position.

14.7.3 Zoom Lock (SmartZoom)

The *Zoom Lock* function is set as default if you select the compare section. This function allows you to zoom in and move both images simultaneously. This also enables an objective comparison of the images.

Use the button at the top of the screen to zoom into the displayed images simultaneously.
Without *Zoom Lock* both images can be displayed independently.

1. Click on the *Zoom Lock* button again.

Zoom Lock is deactivated and a second zoom control is displayed with the image display tools.

Copying into clipboard

Using the *Into Clipboard* button you can insert compare images directly in other programs, e.g. Word or Power Point. In this case an accurate screenshot is created with all current settings.

1. Select the required images, enlargements and sections.
2. Click on the *Into Clipboard* button.
3. Right-click into the target document.
4. Select *Paste*.

Fig. 73
Information on image type, date and time of capturing is located above the images.

14.7.3.1 Comparing overview images

In this section you can view and compare all of the patient's overview images taken so far.

1. Select the required overview image for image comparison.
2. When the desired overview image is displayed in the preview window, click on *Compare*.

- Use the scroll bar located below the images to call up the required overview image.
- Older images are further to the left, the latest one is on the far right.

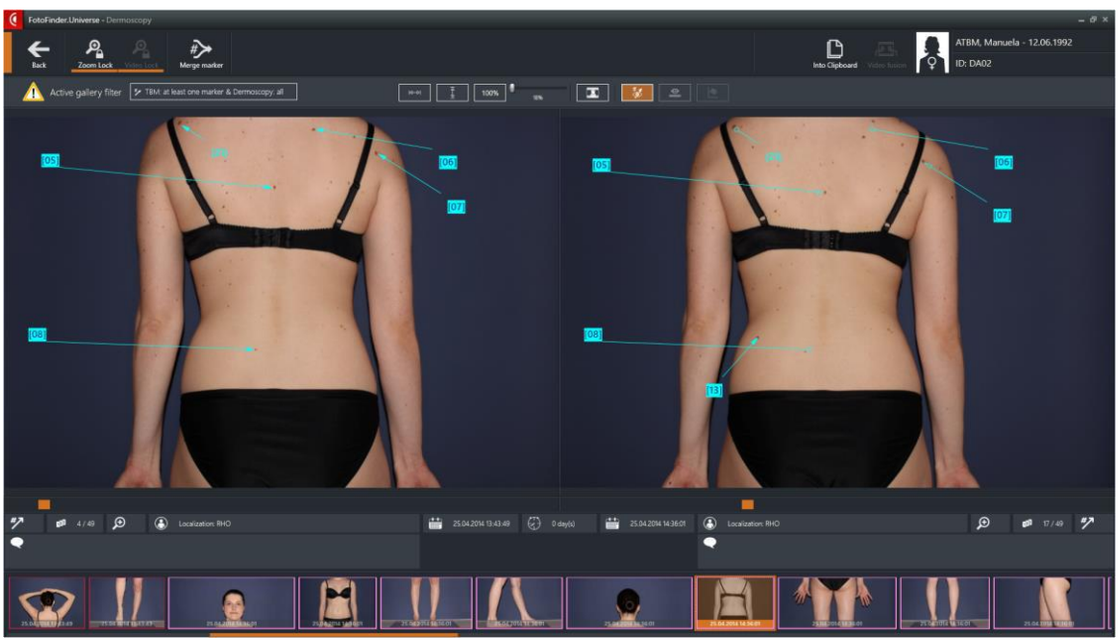


Fig. 74

The following information is displayed below the overview images:

- the total number of images taken so far
- where the selected image chronologically stands
- the date of capture

Click on *Back* to return to the overview of the Dermoscopy module.

14.7.3.2 Comparing micro images

1. Select a micro image in the desired position so that it is displayed in the preview window.
2. Click on the *Compare* button.

Alternatively, you can also right-click on the marker number in the overview image. This will open the marker context menu. Select *Micro image compare.*
The following user interface will open:

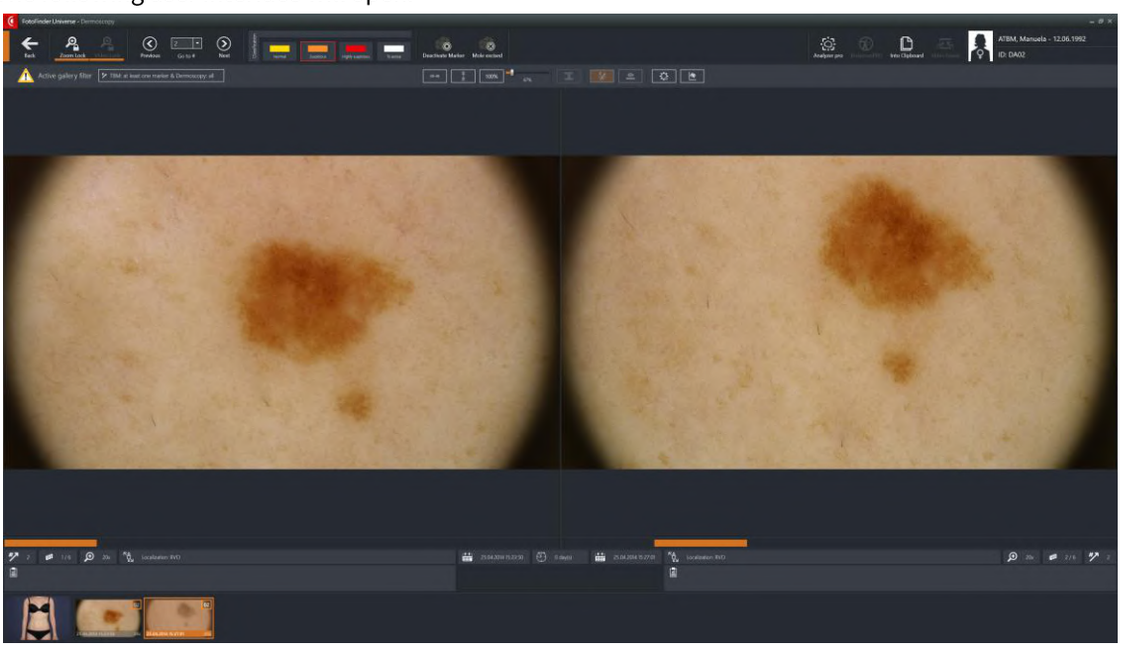


Fig. 75

You can now compare all lesion images in the two sections of the screen. The following options are available to select an image:

- Use the slide bar under the preview images to browse between older or more recent images.
- Drag and drop the required micro image from the gallery field on the lower screen to the required preview position.

Under the two displayed micro images the following image settings are shown:

- the marker position (the number of the marker)
- where the selected image chronologically stands
- the total number of images
- Information about the used zoomfactor
- the localization
- the shooting date and time
- the number of days between the two images
- Comment field

The lower left corner of the screen displays the corresponding overview image. If you move the cursor over this thumbnail the overview image will be shown enlarged and the currently selected marker position will be highlighted with red.

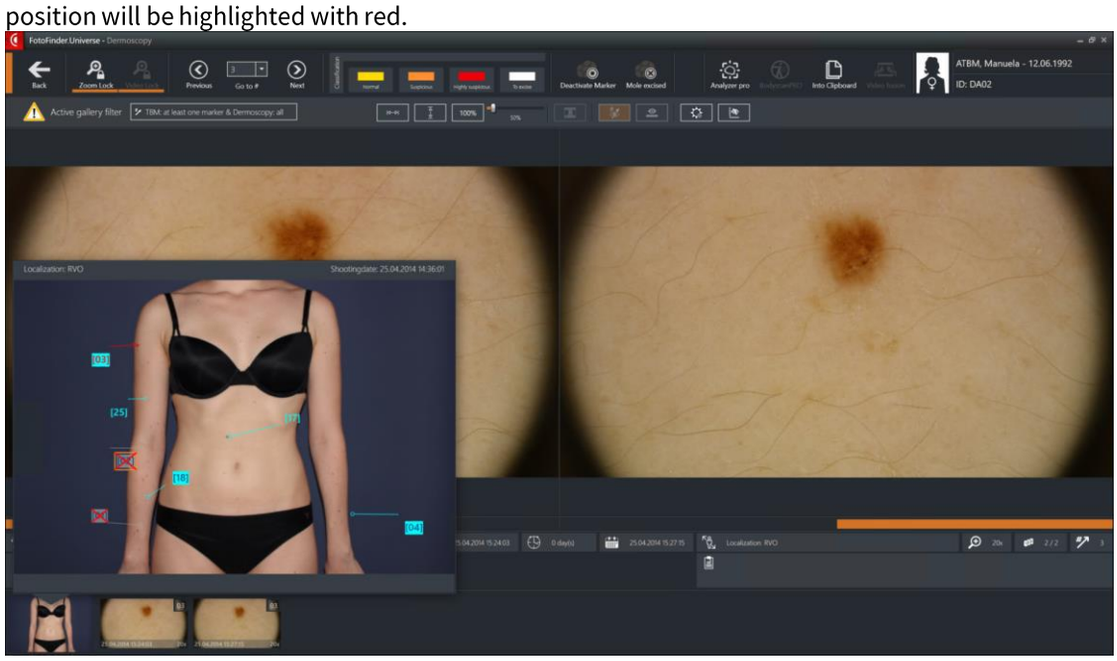


Fig. 76

You can also have the overview image displayed in the left preview window.

1. Left-click once on the reduced overview image.

Instead of a micro image, the overview image is now displayed in the left preview window:

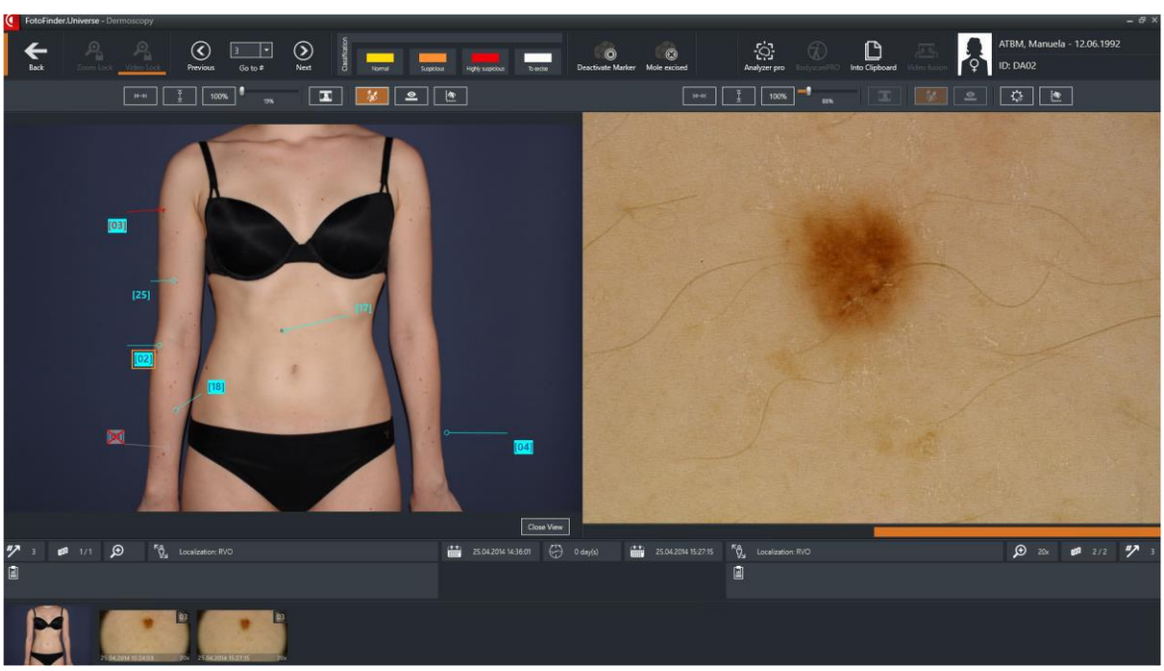
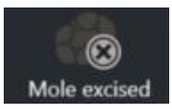


Fig. 77

2. Left-click again on the reduced overview image or alternatively, on *Close view* to return to the original view with two micro images.

In the menu bar the following icons are also available
Deactivate marker
and



Lesion excised.

Whether one of these buttons are already selected (possibly here in micro *compare* or in the *Marker context menu*) can be determined if the respective icon is underlined with orange.

More details regarding these functions can be found in the sub chapters (cf. chapter 14.4.2.6 Deactivating a marker)/
(cf. chapter 14.4.2.7 Set markers as deleted).

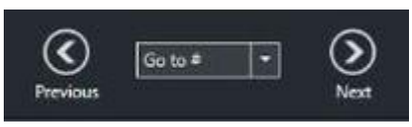


Fig. 78: Marker selection fields

With the *Previous, Go to #* and *Next* buttons other micro images can be selected for comparison without having to leave the *Compare* function.

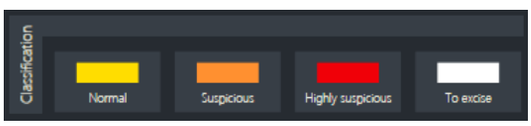
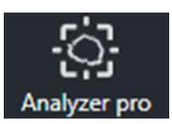


Fig. 79: Classification icons

Using the *Classification* categories at the top part of the screen, the currently selected lesion can also be classified.



Optional and not available in all countries:
Not With the help of the **Moleanalyzer pro** in image comparison two micro images can be simultaneously analyzed.

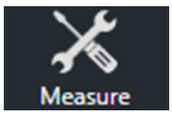
NOTE

You can only compare micro images that are saved under the same marker.

NOTE

You can also compare micro images created with different camera generations (**medicam 500$_{HD}$**, **medicam 800$_{HD}$** and **medicam 1000**). The software will automatically adjust the display.

14.7.4 Measuring



Use the measuring function to measure distances, surfaces and angles in overview or micro images.

1. Click on the *Measure* button in the menu bar of the Dermoscopy module's user interface to start the measurement function.

NOTE

Please note that a photograph is a two-dimensional depiction of a three-dimensional object. Therefore, the values measured are not exact.

If the measuring function is active, additional buttons will appear on the right:

Fig. 80

14.7.4.1 Calibration

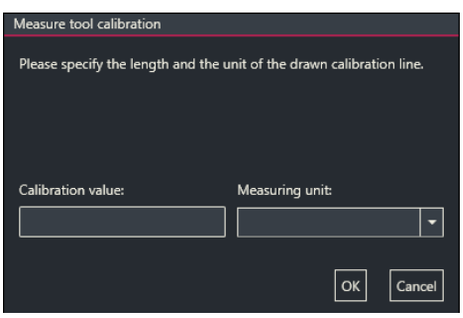
For micro images captured with a standard zoom (20x – 140x), the image is already calibrated and you can start measuring directly.
Overview images or micro images using a different zoom setting need to be calibrated first before you can start measuring.

NOTE

If you already place an object of known size onto the captured image, e.g. a rule, this well help you in the calibration process.

1. Start the calibration process by pressing the *CAL* button in the menu bar on the right of the displayed image.
2. Click once to create a starting point in the image and then draw a line with the mouse button pushed down.

A context menu is displayed.



3. Add the known length of the line and the appropriate measuring unit.
4. Confirm your entry.

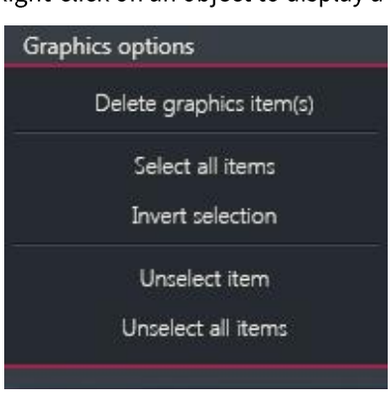
Calibration is now complete. Now you can measure distances, surfaces and angles in the image.

14.7.4.2 Drawing and measurement tools

The drawing and measurement tools are located on the right-hand side of the screen.

Edit/Move:

- Moving inserted objects
  Move the cursor over the object until the arrow turns into a cross-hair. Move the object by pressing and holding the left mouse button.
- Changing the size of the inserted objects
  Click to mark the required object. Small squares now appear along the edges/corner points. Click and hold the left mouse button to move the squares and change the size.
- Context menu
  Right-click on an object to display a context menu.

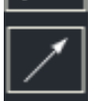


Here you can
- Delete graphics item(s)
- Select all graphics items
- Reverse the selection
- Deselect the graphics item
- Deselect all graphics items

Rectangle selection

Click and hold the left mouse button to insert a rectangle and mark several draw objects simultaneously to edit them all after changing to the *Edit/Move* tool.

Line tool
Click and hold the left mouse button to insert lines.



Arrow
Click and hold the left mouse button to insert arrows.

Rectangle (empty)
Click and hold the left mouse button to insert an empty rectangle.

Rectangle (filled)
Click and hold the left mouse button to insert a filled rectangle.

Ellipse (empty)
Click and hold the left mouse button to insert an empty ellipse.

Ellipse (filled)
Click and hold the left mouse button to insert a filled ellipse.

Anonymization functions Black Bar and Ellipse
By clicking and holding the left mouse button, you can insert a black bar or ellipse to hide certain areas or to deidentify your patient.

Text tools
After selecting the text tool, left-click on the image. A text input and formatting window will appear.

Angle
Use this tool to measure angles between 0 - 180 degrees.

1. Click on a point on one side of the angle.
2. Click on the apex.
3. Click on a point on another side of the angle.

The software calculates the size of the angle.

Measure distance
Use this tool to measure the length of a distance.

1. Click and drag the mouse in the required direction.
2. Release the cursor once you have reached the end point.

The software calculates the distance between the two points.

Area measurement
Use this tool to measure any area.

1. Click on each consecutive corner point on the edge of the area you want to measure.
2. Then click on the first set point again.

The software calculates the area which is delineated by the connecting lines between the set points.

Diameter
Use this tool to calculate the diameter of a circular area.

1. Click into the center of the required circle.
2. Click and hold the mouse button to drag the circle to the required size.

The software calculates the circle's diameter.

Color Selection
The color buttons allow you to select a color in which the new measurement objects are drawn into the image. The current color can be seen in the larger bar above. By left-clicking on this, you can also open an additional menu.

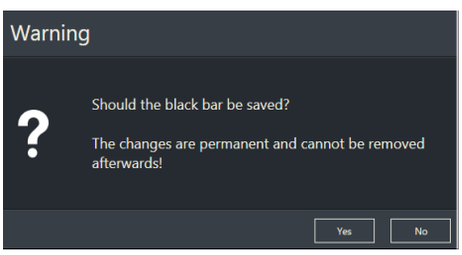
Line thickness
Here you can select the line width for the drawn objects.

14.7.4.3 Anonymization

If you want to deidentify patients or want to blacken parts of the image for any other reason, use the *Black Bar* function.

1. Click the *Black Bar* button in the right menu bar of the measuring function in the preview window.
2. Hold the right mouse button down to drag the black rectangle from one corner to the opposite one.

3. To save, click on the disc symbol in the menu bar above the image.



4. Click *Yes* to confirm the security message.

NOTE

Once an black bar is saved it can no longer be removed.

14.8 Working with Videos

14.8.1 The Video editor

The recorded videos can be edited (e.g. cropped) in the video editor and markers can be here embedded.

1. In the SmartGallery select the desired video.

2. Click on *Video editor* in the menu bar to start the editor.

Fig. 81: Example view for the video editor

In the lower middle section the following buttons are available:

Start

Pause and

Stop.

In the lower right corner underneath the preview window you can find the total length of the video, in the lower left corner the timeline where you are in the video. The orange bar will too indicate where you are in the video.

On the bottom left you can adjust the playback speed of the video, e.g. 1.5 times.

14.8.1.1 Cropping the videos

In the video editor you have the possibility to crop the video so you only see a selected part. Proceed as follows:

1. Click on the crop icon left from the timeline bar.

2. With the mouse button held down, drag the mouse on the bar from the desired start and end points of the video

When you are dragging with your mouse the orange timeline bar, the corresponding position of the video will be displayed above in the preview window

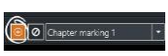
3. When finished, click again on the crop icon.

Now only the selected part of the video is visible. The cropped off part is inactive but can be re-displayed at any time by clicking the cut icon again and moving the start and end points.

14.8.1.2 Working with chapter Markers

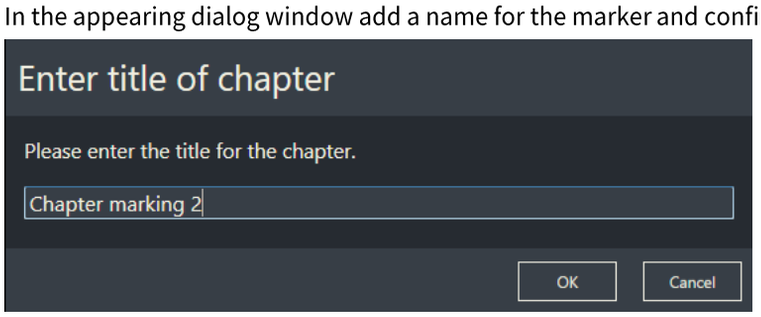
In the Video editor there is an option to insert chapter markers. This way you can jump faster to any desired point in the video. Follow these steps:

1. In the video editor start the video and press pause at the desired point.



2. Click on the + symbol on the lower right corner.

3. In the appearing dialog window add a name for the marker and confirm it with OK.



4. Now you can jump directly to this point in the video by selecting this marker from the drop-down menu in the lower right corner.

14.8.2 Video Lock

The Video Lock feature is enabled by default (marked with orange) when you are using the image comparison with two videos. With this feature activated both videos will be played simultaneously.

Without the *Video Lock* you can play both videos independently. To deactivate the *Video Lock* just click on this icon once.

14.8.3 Video fusion

You can export videos from the image comparison section out of **Universe** and save them as one video so that they are displayed in one file next to each other.

1. Open two videos in *Image compare*.
2. Click on the *Video Fusion* icon.
3. In the following window select a location to save it to and confirm with OK.

The video file (*avi* file format) will be saved. The length of the merged file will be the length of the shorter video. The additional part of the longer video will not be saved here.

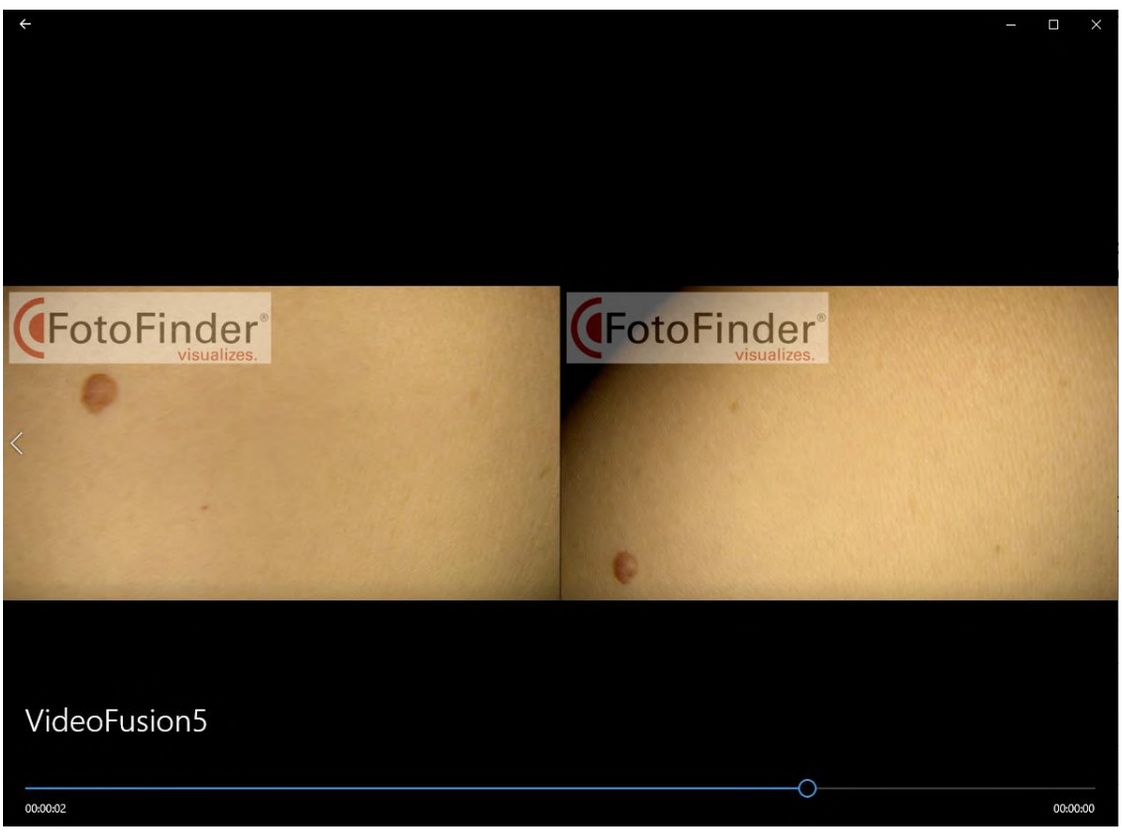
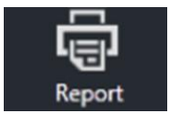


Fig. 82: Example view for an exported merged video file.

14.8.4 Inserting watermarks

You can insert a watermark (e.g. practice logo) into videos exported from **Universe**.
Further details can be found in Settings (cf. chapter 11.5.1.8 Videos).

14.9 Reports



The *Report* button in the menu bar of the Dermoscopy module´s user interface allows you to create various types of reports in pdf format.

Under *Settings* you can specify the folder to where the reports should be saved or activate the extended printing options.
Once you have started the Report function, a menu will appear offering three options for creating reports:

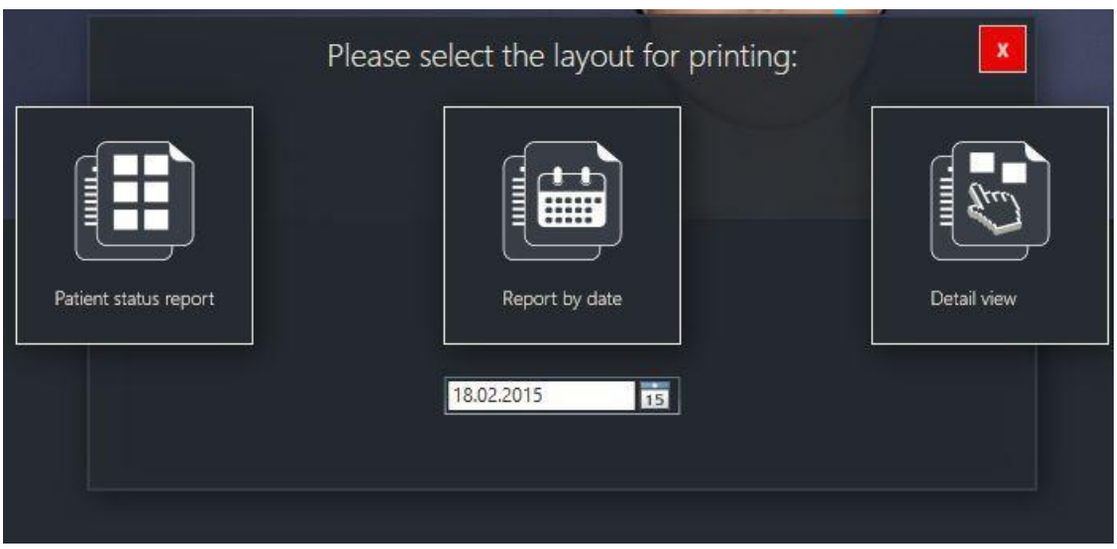


Fig. 83

Patient status report

- All overview images with associated micro images are printed with these associated micro images (first and last session).
- Comments will be included.

Report by date

- All images captured on the specified date will be printed.
- Overview images without existing micro images are also printed.

Detailed print view

You can select the images to be included in the report.

1. To select the images just pull the required overview and micro images into the clipboard in the middle of the screen.

If an overview image is added, all associated micro images are also added.

NOTE

If you just want certain micro images of an overview image, simply pull those micro images upward. The corresponding overview image will therefore also be selected.

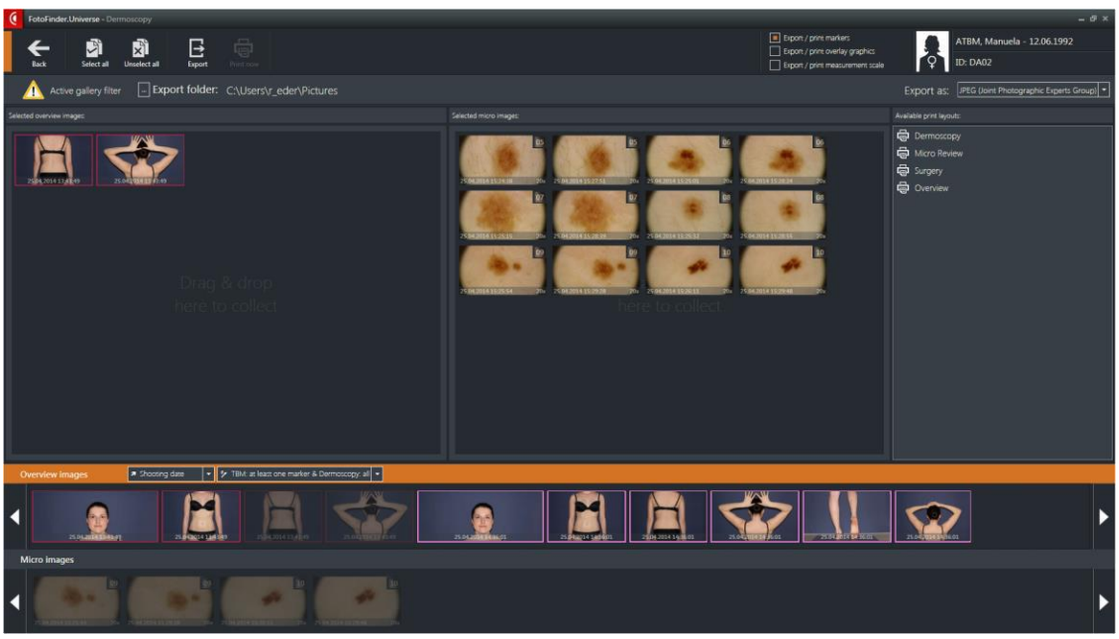


Fig. 84

For review the following print layouts are available (see upper right column):

- *Dermoscopy*: Every micro image on the right side is connected to an overview image with the relevant marker on the left.
- *Micro Review:* The overview image is only printed once per page for all associated micro images. This report may also be created by selecting the print option in the context menu of a specific marker (right mouse click: *Print micro image review*).
- *Surgery*: Each selected micro image is displayed individually with the respective overview image on one page. This report can be used for the clear presentation of naevi to be removed.
- *Overview:* The selected overview images are included in the report without micro images.

2. Click *Print now* to create the report.

15 Module Screening

Screening Mode in FotoFinder **Universe** in combination with the **medicam 1000** or the **leviacam** is used to take a quick photo without saving the image to a patient record.
To start, click on the *Screening* button on the Dashboard.

15.1 The Desktop

This screen is displayed when the camera is switched on. The user interface consists of two sections:

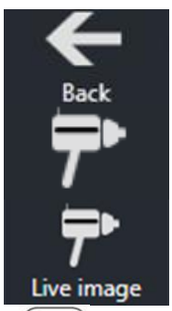
- Menu bar
- Full-screen display of the camera image

Fig. 85

15.2 Menu Bar

The Menu Bar is located on the upper screen.

The functions of the buttons are listed below.

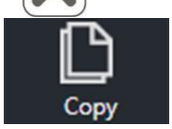


Back: you are returned to the previous screen.

Freeze: You freeze the live image. Alternatively, you can also press the release button on the **medicam** or **leviacam** once.

Live image (button only appears once the release button is activated): you activate the live video. Alternatively, you can press the release button again in the frozen image.

When using the **medicam 1000** the key displayed on the left has the same function.

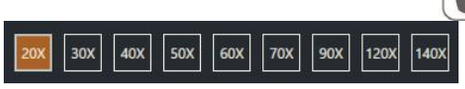


Copy: You copy a frozen image to the FotoFinder's clipboard. You can then assign it to a marker.

When using **medicam 1000** or the **leviacam**, you can also do this with the respective key on the rear:

medicam 1000:

leviacam:

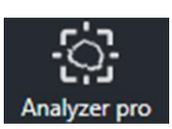


By using the *magnification factor*, you can select the required enlargement.

Alternatively, you can set the magnification factor using the zoom buttons (+ and -) on the video camera. The **leviacam** does not have a zoom function. The images are automatically captured with 20x enlargement.

NOTE

If the **Moleanalyzer pro** expert system is available, a micro image can be analyzed, even without having to save the image first.
For the segmentation in **Moleanalyzer pro** a micro image with 20, 30 or 40x magnification is needed.
For an analysis with AI Score in **Moleanalyzer pro** a micro image with 20x magnification is necessary.



Moleanalyzer pro: The application can be started from here. This enables the additional analysis of a micro image.

15.3 A screening process

1. Start the Screening mode.

The lights will turn on automatically.

2. Moisten the skin with an immersion fluid. For polarized images with the **D-Scope IV** there is no need for immersion fluid.
3. Place the camera on the skin.

4. Select the desired *zoom factor* (not possible with **leviacam**).
5. Press the release button to freeze the live image.

You can now comfortably examine the lesion.

6. Pressing the release button again activates the live image.
   With **medicam** you can also activate the live image again with the corresponding button on the back panel of the camera.

15.4 Saving images

It is not possible to directly save images in the Screening Mode. However, images taken in the Screening Mode can be copied to the clipboard and assigned to a marker in *Dermoscopy* later.

1. To do so, copy the frozen image by clicking on *Copy* in the FotoFinder clipboard.

When using **medicam 1000** or the **leviacam**, you can also do this with the respective key on the rear:

medicam 1000:

leviacam:

2. Exit the Screening mode.
3. Select a patient.
4. In *Dermoscopy*, open the overview image you want the micro image to be assigned to.
5. In the overview image, **right**-click on the appropriate marker.
6. Then select *Insert image* in the following context menu.

The micro image now also appears in the **SmartGallery** as soon as you have marked the overview image.

15.5 Overview of panel functions of the medicam® 1000

An overview of the **medicam 1000** panel functions relevant in the Screening module is provided below:

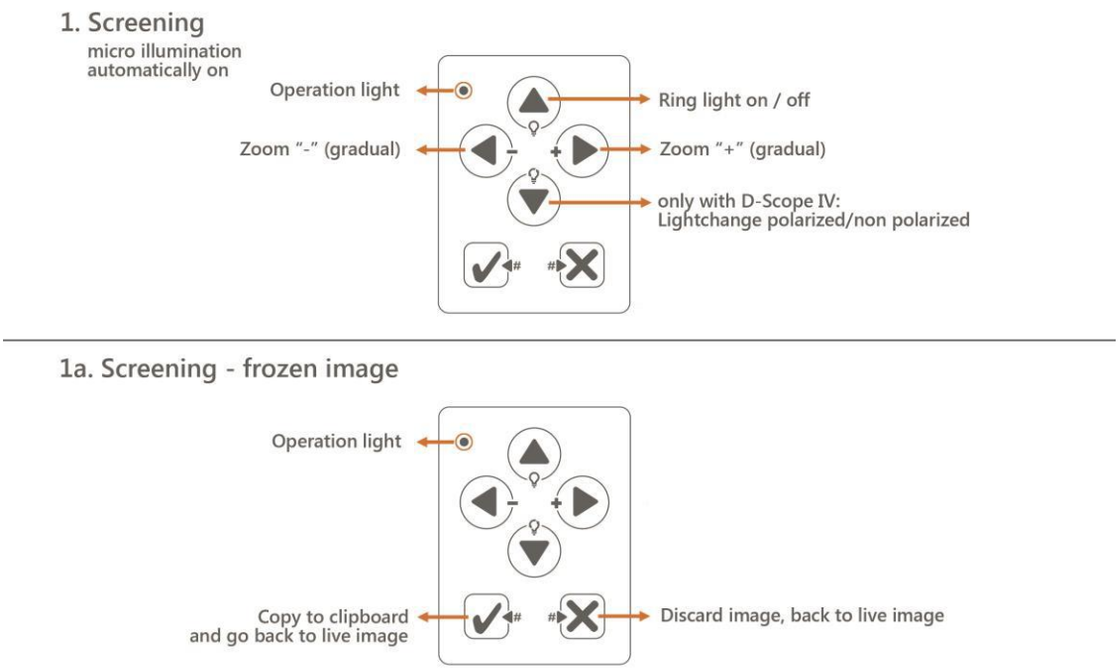
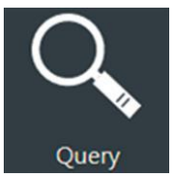


Fig. 86

16 Module Query



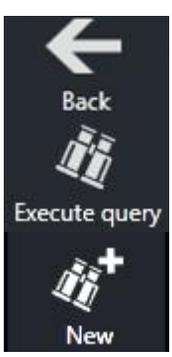
FotoFinder **Universe** offers the opportunity to systematically search your database for images with the help of different search criteria.
Start the module from the Dashboard.

Have a look at the following user interface:

Fig. 87

1	Menu Bar	3	Results filter
2	Entry Mode for search criteria / sorter	4	Results preview section

The upper menu bar contains the following standard functions:



Back: you are returned to the Dashboard.

Execute query: You start a defined query after you have specified all associated parameters.

New: You start a new query. The previous search will be discarded if it has not been saved.

Fields for various queries are located below the standard functions.

- Full-text search
- Basic query
- Extended query

1. Enter your search criteria into the input field.
2. Start the query with *Execute query*.

The matching data records appear in the results preview. The results are displayed together with the patient's name, patient ID, image capturing date and localization.

The results filter allows you to use additional criteria to group or filter results. The selection options are displayed as drop-down fields on the *Images* tab.
The *Patients* tab allows you to find more information on the patients visible on the images of the result preview.
Use *Print* to make this list available in PDF of xls.

16.1 Full-text search

In the *Full-text search* you can enter a certain term, e.g. "Manuela" or "melanoma".

1. Enter the search term in the search field.
2. Click on *Execute query.*

All images whose data record contains the entered term will be displayed in the results preview.

16.2 Basic query

An input screen is displayed for the *Basic query.*
Enter all criteria applicable for the images, which are filtered by the software.
If you use the values Date of birth and Capturing date, you can search for images taken *before* or *after* a date or *in-between* two certain points of time.

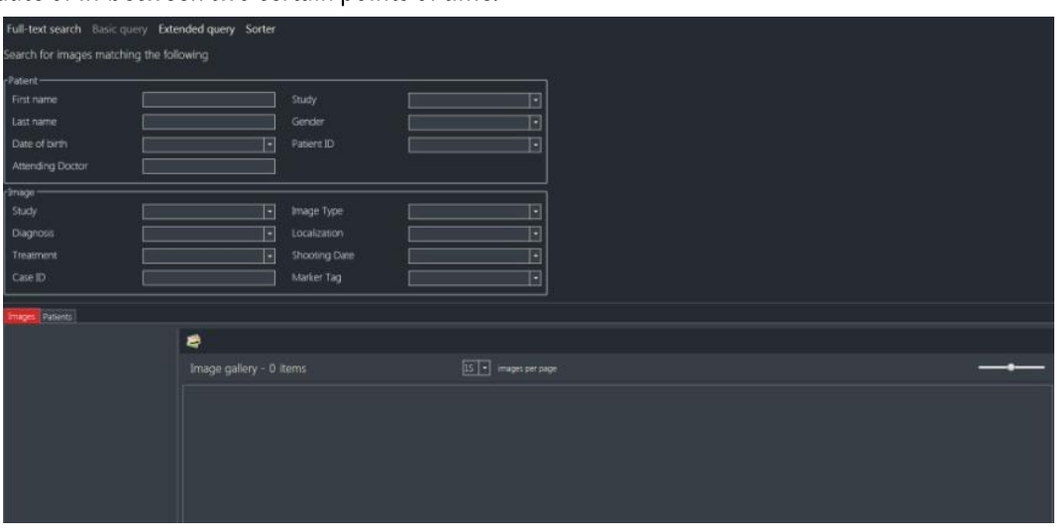
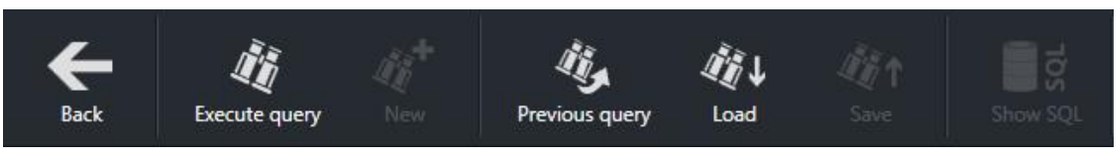


Fig. 88: Basic query

16.3 Extended query

By clicking on *Extended query* several features you can use during the query will be displayed automatically in the upper menu:



This contains a number of possible filter criteria to help you narrow down the results. You can then select the properties you want the researched images to have for every selected parameter.

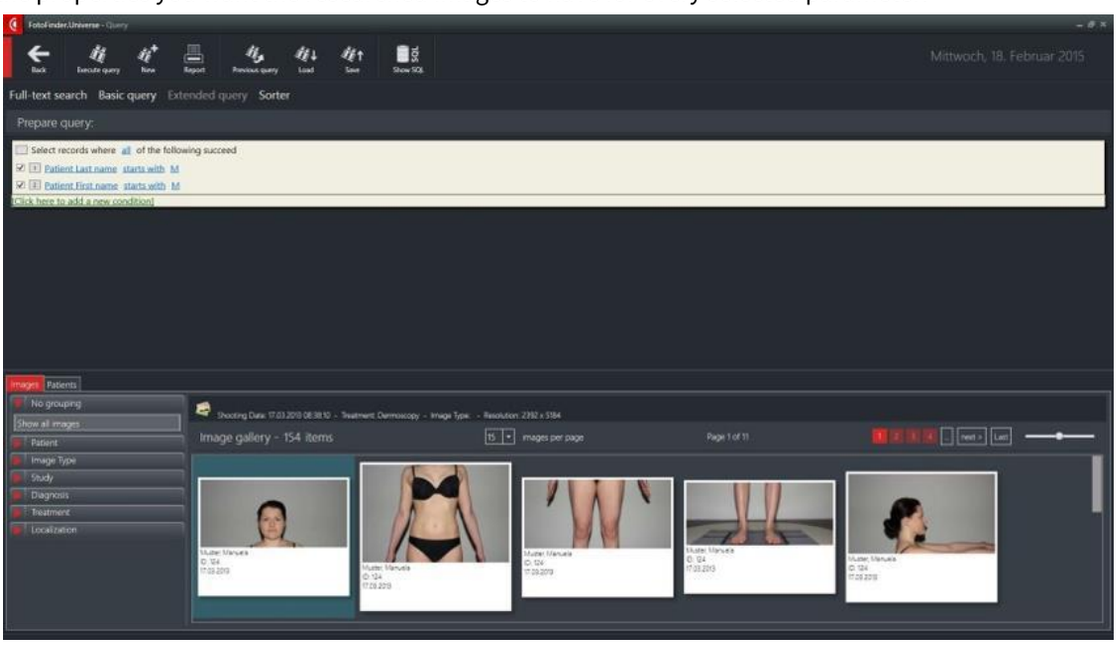


Fig. 89

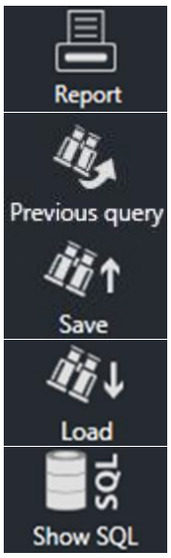
Sample query:

You are searching for dermoscopic micro images of lesions on the left hands of men younger than 50.

1. First, select a new filter. To do so, click on [*Click here to add a new filter*].
2. Now choose a corresponding parameter using the mouse:
   Patient → Gender *is equal to* → male
3. Narrow down the age with the following steps:
   Patient data → Date of birth *is before (precise date)* → e.g. 01.12.1965
4. Search for the localization with the following steps:
   Image → Localization *contains* → left hand

NOTE

At the beginning of each query, you define whether **all**, **at least one** or **none** of the query filters have to be met. The more parameters you add, the higher the hit accuracy is.



The functions of the additional buttons are listed below:

Report: After a completed query, you export the found images to a pdf file. You can also print out the images on a connected printer.

Last query: After several queries, you repeat the one before the current query.

Save: You save your query. The data will be saved as an .ffq file in **Universe**'s query folder.

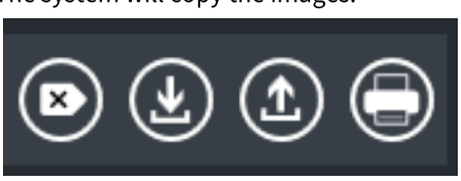
Load: You access saved queries. A new window will open and you will be able to delete the files using the right mouse button.

Display SQL: You view the SQL code of the query.

16.4 Sort function

1. Click on *Sort*.
2. Press and hold the left mouse button to drag the required images up into the Sorter.

The system will copy the images.



The buttons for editing the selected images are located on the right side.

Delete sorter: You can delete the images in the Sorter by clicking on this button.

Import: Imports all selected images from the last sorted arrangement in the current sorter.

Export: Exports all current sorted images as single JPEG to the selected storage location.

Print: You can print out the images as pdf files.

16.5 Patient information

After a query has been executed in the Research module, you can call up the respective patient data via the Patient Information tab and also switch between patients there.

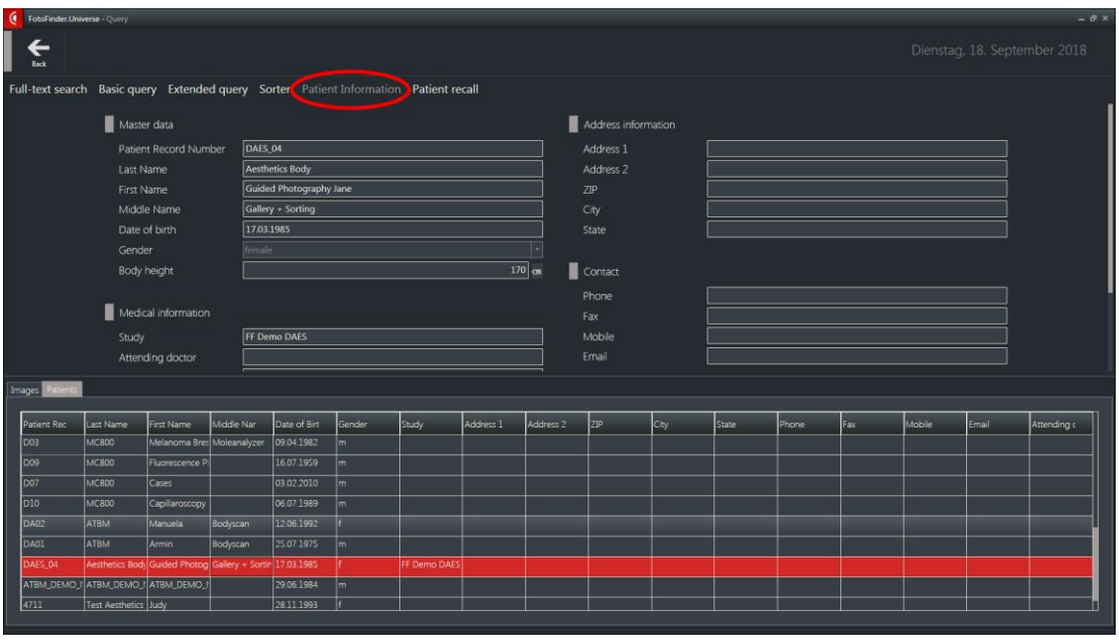


Fig. 90

1. Run a query and then click on *Patient Information*.
2. Select a patient.

The currently selected patient is highlighted in red in the result list at the bottom and the associated data is displayed at the top.

3. By clicking on another patient or using the arrow keys on your keyboard, you can change your patient selection.

NOTE

The selected patient remains active when you exit the Query module. This will allow you to subsequently edit the patient data or take images directly by selecting the appropriate modules.

16.6 Patient Recall

Patients who do not have images taken for a certain period of time can be filtered out using the Patient Recall feature.

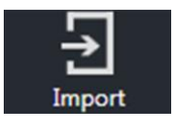
1. Click on Patient Recall in the menu bar.
2. The main criterion of the search is the date of the last visit. As a result, only patients whose last images were before or on this date are shown.

17 Import and Export

17.1 Importing images

You can import overview images and micro images from the hard drive or an external storage medium.

17.1.1 Importing overview images in the Dermoscopy module



1. To import overview images click the *Import* button in the menu bar of the Dermoscopy module.

The image import window appears.

2. Select the image you want to import; you can also select multiple images.
3. Click *Open*.

This opens the import menu:

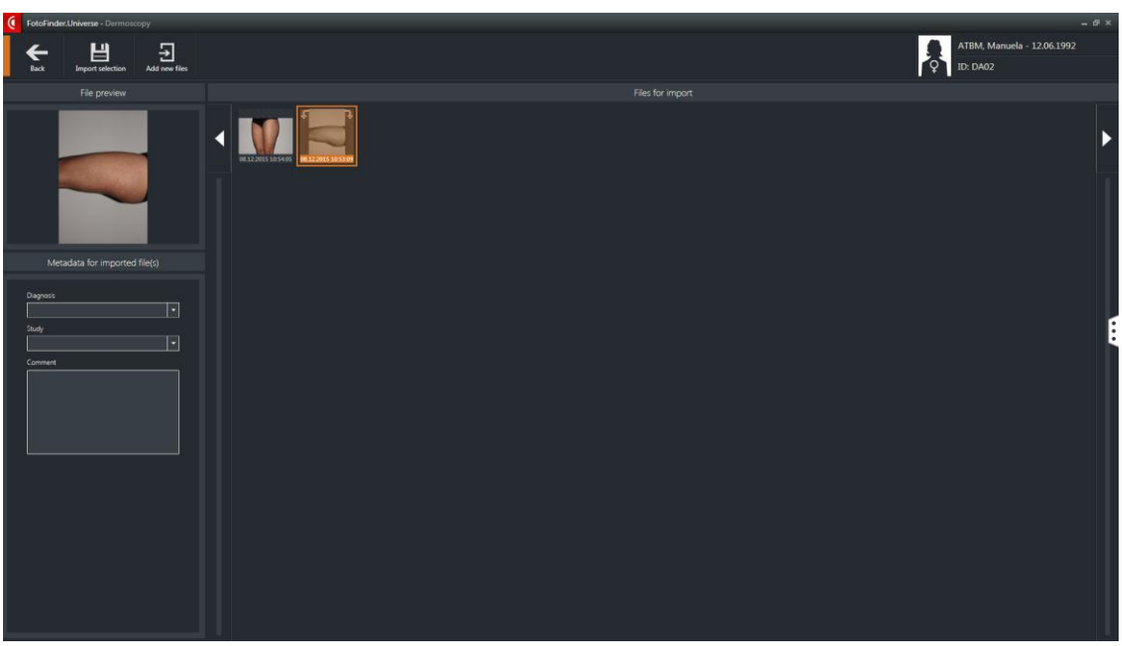


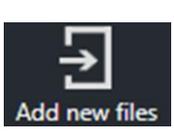
Fig. 91: Import menu

4. The program will recognize if you specified image alignment/rotation during image capture. However, you can also rotate images manually:
   1. Move the cursor over the small preview image.

   Rotation arrows will appear at the top corners of the image for rotation in clockwise or anti-clockwise direction.
   2. Click on the appropriate arrow until the image is suitably aligned.
5. Localize the images you want to import on the localization puppet:
   1. Click on the small preview image.

   The selected image now has an orange frame and the right edge of the screen will display a tab.
   2. Moving the cursor over this tab will display the localization puppet.
   3. Click to select the displayed body region.

6. If required, enter information under Diagnosis, Study and Comment.



7. With the *Add new files* button you can add additional images to your selection if required.

8. You can unselect images by clicking on them and then pressing the keyboard's *Del(ete)* button.
9. Click on *Import selection* when you have finished processing the images.

The images will now be shown as overview images in the user interface and marked blue as imported images.

17.1.2 Importing micro images in the Dermoscopy module

1. If you want to import a microscopic image, first right-click on the respective marker in an overview image.
2. In the displayed menu, click on *Import micro image*.

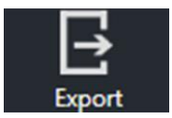
The Import Images window will appear on the screen.

3. Select the required image.
4. Click *Open*.
5. The program will recognize if you specified image alignment/rotation during image capture and will ask you for the required alignment.

The imported image will appear now in the micro image section.

17.2 Exporting images

17.2.1 Exporting from the Total Body Mapping Module



The export function allows you to export individual images to the local hard drive or other external devices such as a USB flash drive, external hard drive, etc.

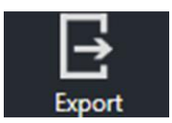
1. Select the required image in the gallery.
2. Click on *Export*.

Now the window *Export images* will open. Here you can edit the file name, file type where to save the image.

3. Click on *Save*.

17.2.2 Exporting from the Dermoscopy module

The export function allows you to export individual images to the local hard drive or other external devices such as a USB flash drive, external hard drive, etc.

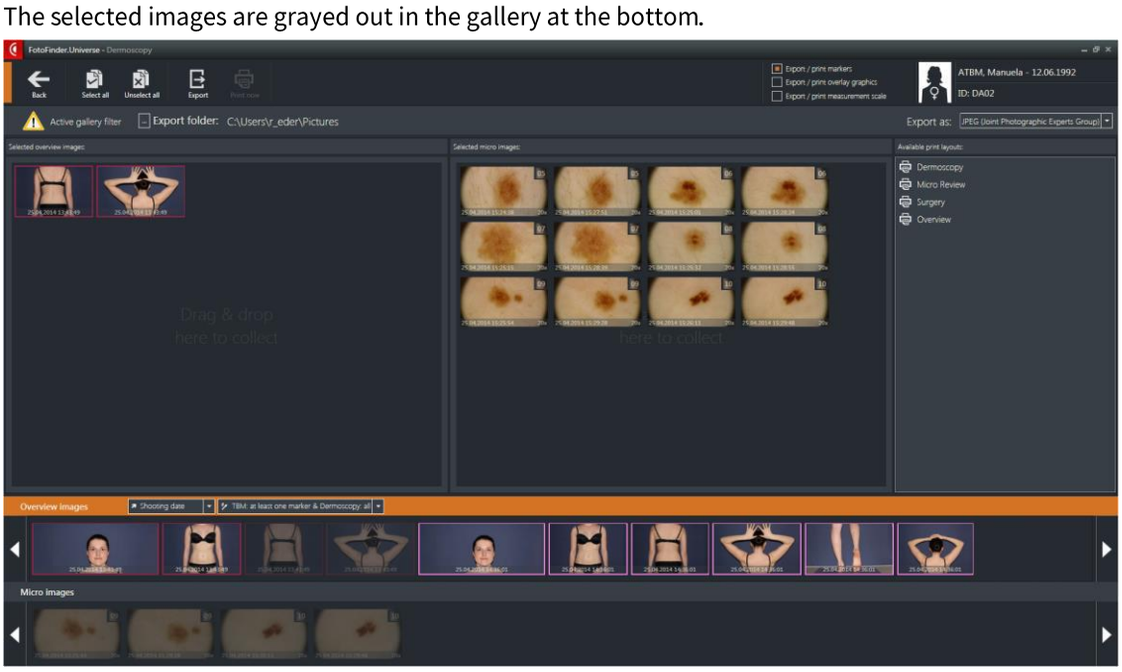


1. Click on *Export* in the menu bar of the *Dermoscopy module*.

This will open the image selection window.

2. Select the required images from the gallery by clicking and holding the left mouse button to drag them into the selection area in the center of the screen.

The selected images are grayed out in the gallery at the bottom.



If you click on *Select All*, all images will be moved to the selection area.
However, this is only possible if you have not selected a filter in the **SmartGallery**.

You can unselect unwanted images by

- dragging them back into the gallery by clicking and holding the left mouse button or
- clicking on them individually and then pressing the *Delete* key on the keyboard.

If you want to unselect several overview or micro images simultaneously, you can quickly select them as follows:

- Select all images:
  1. Click to select an image you want to delete.
  2. Press *Ctrl* + *A* on the keyboard
  All images are now selected and highlighted with an orange frame.
- Selecting several images in a row:
  1. Click to select the first image you want to delete.
  2. Press and hold the *Shift* key on the keyboard.
  3. Click to select the last image you want to delete.

Both marked images and all those in between are now selected

- Selecting several images not directly in a row:
  1. Press and hold the *Ctrl* key on the keyboard.
  2. Click to select all required images.
  All the images you have selected while holding the *Ctrl* key are now marked.

If you click on *Unselect All,* all images will be removed from the selection area.

You can also use the menu bar to select whether the

- markers
- overlay graphics and
- measurement range

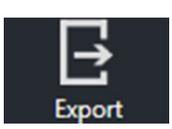
are to be displayed in the exported images. In this case, use the mouse to check the appropriate box. You can already preset these three items in the *Settings* tab (cf. chapter 11.5.1.5 Reporting).

When you have finished selecting your images, you can export and save them. (cf. chapter 17.2.3 Exporting and saving images).

17.2.3 Exporting and saving images

After selecting your image for export, proceed as follows:

1. Select the destination by clicking on the ... button in front of *Export folder* on the left above the selection frame.
   The export folder also remains saved for the next export.
2. Select the required file format from the drop-down menu at *Export as* on the right above the selection frame.



3. Start the exporting process by clicking on *Export.*

Your selected images are now saved to the export file.

17.3 Import and Export from FXF/XFXF Data

You can use this function to exchange complete profile data records (patient data and associated images) between different FotoFinder installations and save these to various storage media (CD, USB flash drive, etc.).
Start the import and export of fxf data records from the Patient administration module.
Available Data exchange formats:

FXF:

- FotoFinder Exchange Format
- used until Universe version 2.0.41

XFXF:

- remodelled FotoFinder Exchange Format
- used from Universe version 3.0.0.0

17.3.1 Import of XFXF- or FXF data records

1. Click on *XFXF/FXF Import*.
2. In the appearing window select the location where the file is located.
3. Click on *Open*.

NOTE

If you chose an encryption for the exported files you have to enter a password now.

The Import Wizard displays a list of all the images contained in the file.

Import Assistant with FXF file:

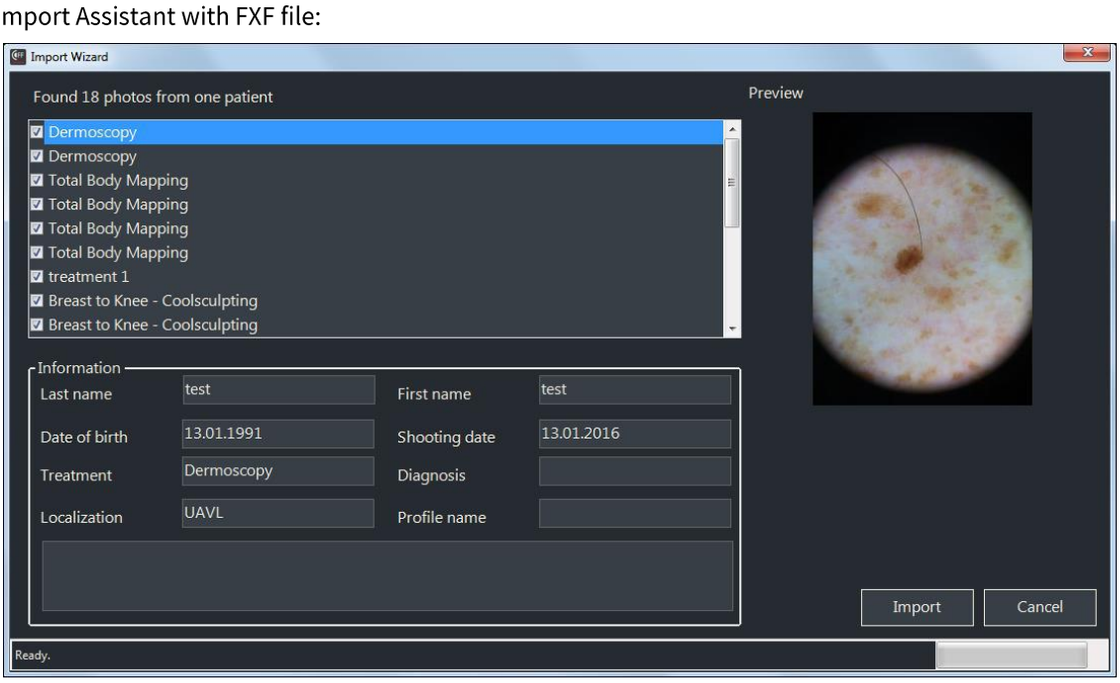


Fig. 92

Import Assistant with XFXF file:

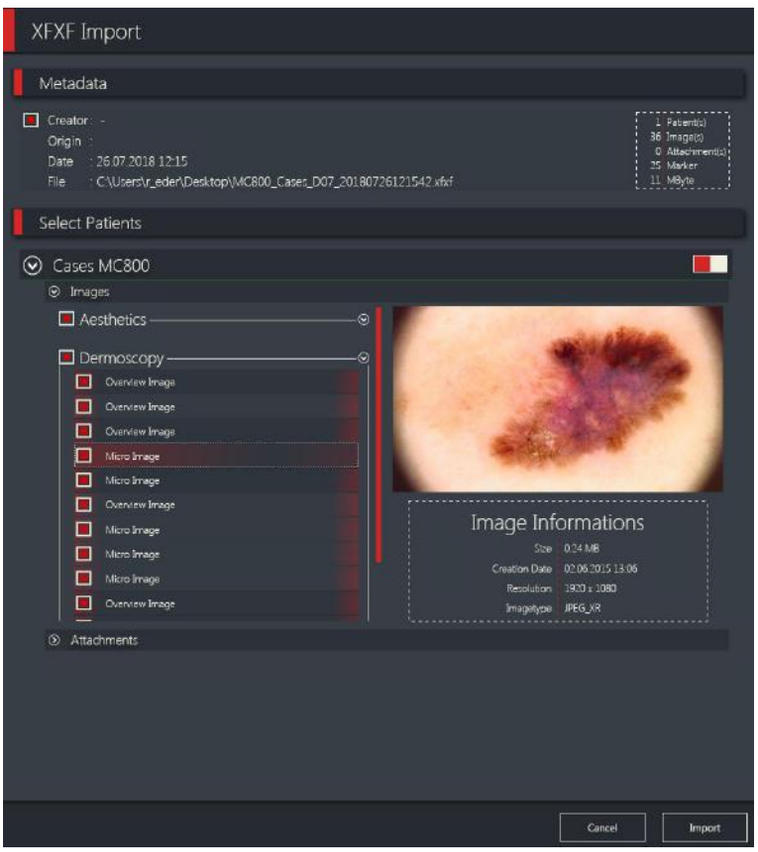


Fig. 93

4. Individual images can be removed from the import by removing the checkmark in front of the entry.
5. To start the process, click on *Import*.

You will receive a message once the import is finished.

17.3.2 Exporting XFXF files

1. Select the corresponding patient with a left mouse click in the patient list.
   You can select multiple patients with holding down the Ctrl key while clicking with the left mouse button. If the desired patients in the list are right after each other, you can click on the first patient and hold down the Shift key and directly click on the last desired patient. All patient profiles in between will be selected.
   The selected patients are highlighted with red.
2. Click on the *XFXF Export* button.

The export wizard opens.

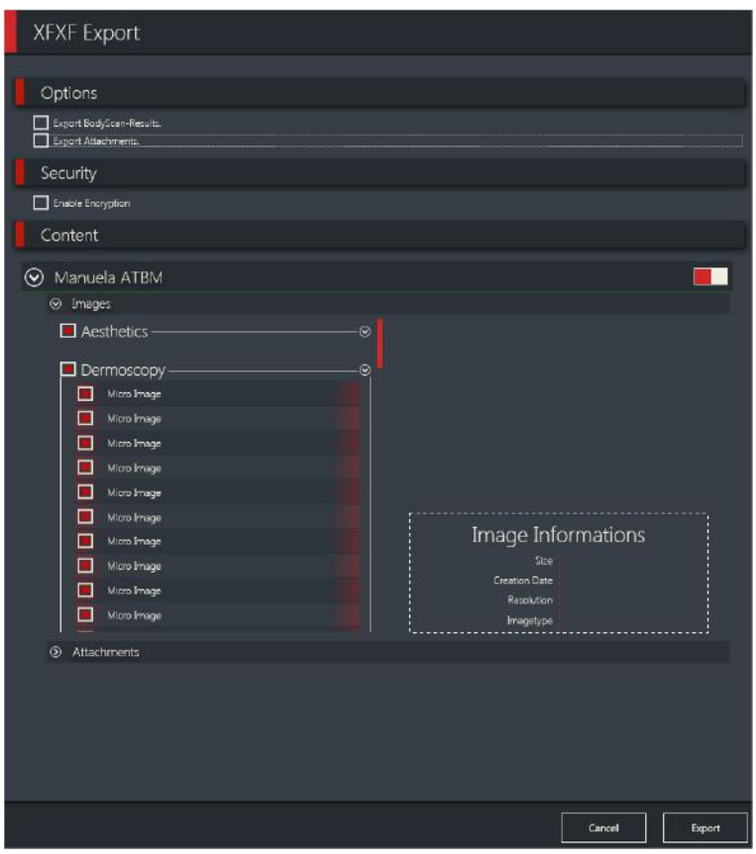


Fig. 94

3. Additional options: Select with a mouse click whether
   - the BodyScan results or
   - the attachments

   Should be exported.
4. Security: Enable this if you wish to encrypt the file. You can decide between
   - Default Encryption or
   - Password
5. Content:
   - If desired, you can deselect individual modules (Aesthetics, Dermoscopy, Total Body Mapping), images and attachments for each patient by clicking next to them in the check boxes, if you do not want to export them.

     For Total Body Mapping sessions only follow-up sessions can be deselected, no baselines.
   - You can also deselect whole patient profiles here by setting the slide bar on the right side from the patient profile name.
6. Click on *Export.*
7. In the appearing window select the location where you want to save your file and then click on *Save.*

The export can take a few minutes. Once it's finished a notification will appear. Please confirm this message by clicking on *OK*.

17.4 DICOM Image Export

With DICOM image export and patient data generated with the FotoFinder system get archived and are compatible with other medical imaging systems.

Image data records can be exported on a per-patient basis. Reference test program was the DICOM viewer MicroDicom®.

You can conduct the following functions:

- Export of complete patient records
- Export of Dermoscopy and Total Body Mapping images
- Export of overview and micro images
- Export of markers
- Collocation of data according to capturing sessions
- Localization of the imported images on the virtual patient
- Hierarchical file and folder organization
- Creation of a DICOMDIR directory
- Choice between uncompressed or compressed JPEG images
- Support of image frames

Further functions, not depending on the DICOM standard:

- ZIP compression and storage
- Encryption of exported data
- Configuration of rendering options for markers

NOTE

The DICOM image export requires a license and is not installed by default.

1. Start DICOM image export from the Patient administration module with the *Export to DICOM* button.

This button is only available if you select a patient with associated images from the list. "Empty" patients without previous images cannot be exported.

2. Configure the process with the following dialog:

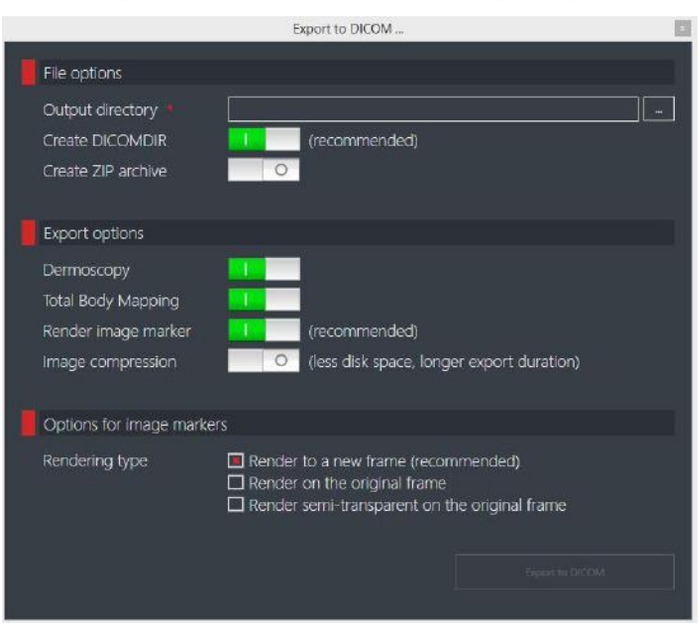


Fig. 95

17.4.1 File options

In the file options, you can set the output files and folders. The only mandatory field of the dialog is the output folder.

Output directory

NOTE

Data can only be exported to an empty folder! You must therefore create a new folder first.

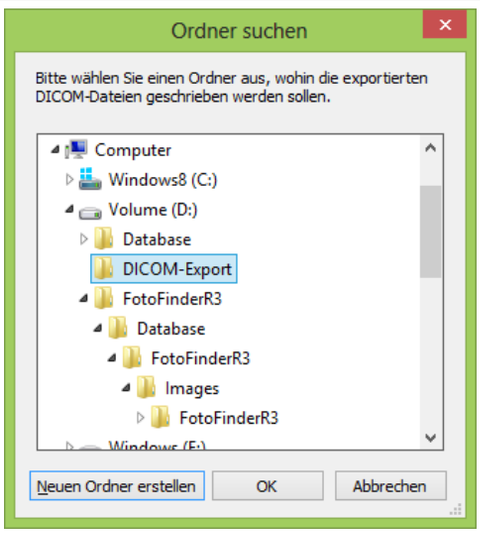


Fig. 96

1. Select the output directory by clicking the button *[…]*.

A dialog appears where you select a folder on any random storage medium supported by the operation system. You can also select a network path here.

2. Select the newly created folders as target destination.
3. Click on *OK*.

Create DICOMDIR

DICOMDIR-files contain a hierarchical overview and directory. They can be read by any DICOM-Viewer (external program) that needs to be installed on your computer.
The manufacturer recommends the selection of this option.

Create ZIP archive

If you activate this option, the software will also use the exported files to create a compressed ZIP archive. This is recommendable if you plan on forwarding the data. You can choose from the following additional options:

- **ZIP options**

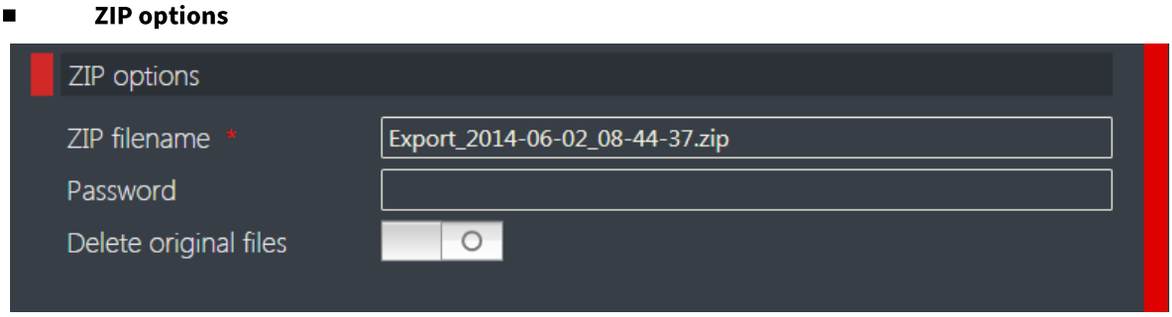


Fig. 97

Specify a file name for the ZIP archive in the text field. The ZIP folder will be created in the Output directory that you have chosen above.

- **Password**

If you enter a password, the created ZIP folder will be encrypted. To unpack the file at a later stage, you need to enter this password again, as otherwise the files will remain illegible. If the text field stays empty, there will be no encryption.

- **Delete original files**

When exporting to DICOM with activated ZIP archiving, the data will be duplicated on the target medium:

- the DICOM files
- the ZIP file

NOTE

The information from the FotoFinder database will not be affected or deleted by this option.

17.4.2 Export options

These options allow you to determine which images and data will be exported from FotoFinder Modules and how.

Dermoscopy

If this option is activated, all images associated with this patient and which have an overview image created in the Dermoscopy module are exported to DICOM.
If this option is not visible, the patient does not have associated images.

Total Body Mapping

If this option is activated, all images associated with this patient and which have an overview image created in the *Total Body Mapping* module are exported to DICOM.
If this option is not visible, the patient does not have associated overview images from this module.

NOTE

Activate at least one module from which the images are to be exported!

Render image marker

By choosing this option, markers and editions (marker, black bar etc.) can also be exported to DICOM. The system will offer you additional configuration options.

Image compression

If Image compression is active, the requested space for the exported DICOM files is considerably reduced. The time required for export is extended.
Without compression, the image quality is consistent. This could create larger files, depending on the image type and recording device. You will then require several hundred megabytes per DICOM export.
The manufacturer recommends activating image compression if you have insufficient memory space, e.g. when sending the files via the Internet or burning them to a CD-R.

17.4.3 Options for image markers

Apart from patient information and captured images, you can also export image markers, e.g. in order to save references to the corresponding micro images. You can define the rendering type with the following selection options.

- **Render to a new frame**

In this option you export two different versions of the image. This allows you to fade the markers in and out at a later stage.

- **Render on the original frame**

Image markers will be directly rendered in the pixel data of the original. This saves half of the storage space during export. However, markers cannot be turned off in the DICOM Viewer.

- **Render on the original frame**

This mode is basically the same as the option *Render on the original frame.* The difference is that markers will not be rendered with complete opacity but semi-transparently.

17.4.4 Start Export

1. Click on the *Export to DICOM* button at the end of the dialog after you have made all the necessary settings.

NOTE

The export may take a few minutes. The duration depends on the size and scope of the patient data record and on the selected options. It is influenced by the number and type of the images.

18 Malfunction and troubleshooting

18.1 Safety

NOTE

Please always observe all safety instructions in this manual!

DANGER

Danger of electric shock due to high voltage!
Severe injury or death could result when touching an energized conductor.
Work on electrical systems may only be conducted by authorized electricians.
Disconnect the power supply and secure against reconnection before starting any work.
Do not try to open any electric components of the equipment.

18.2 Error handling

This section contains information on troubleshooting.
Please try to work through the following points step by step. If none of the steps solves the problem and the system does not start functioning correctly again, then please call the support team on: 0049 8563 97720-45 or send an E-mail to: support@fotofinder.de.
Remote support over the Internet (remote control of your computer) is a great help in this situation. If you wish to use it, please download the Teamviewer software from the following site: www.fotofinder.de/support. Then inform us of your ID and the password shown in the Teamviewer software during the course of the support call. Please also name your system / license holder.

NOTE

For replacements or for repairs parts and necessary documents are available on request from the manufacturer.

18.3 Problems with the software

18.3.1 Software error: The software is no longer functioning correctly

- Close the software, restart the computer and run the software again

If the software error persists or the software is still not functioning correctly, please contact the support team.

18.3.2 The emergency STOP in the software has been pressed

- Close the FotoFinder **Universe** application and run it again

18.4 Problems with the hardware

18.4.1 Canon EOS Digital Camera does not react or is not recognised

- Check the power switch and the indicator light.
- Remove and reinsert all cables. Switch the camera off and on again.
- Check the connection cables, PolFlash, USB cable, power cable and battery adapter.
- Check the camera settings: *Auto Exposure Optimisation* must be disabled and *Auto Power Off* must be turned off; the lens should be set to AF (Auto Focus) mode.

18.4.2 PolFlash XE flash tube blown

Very rarely a **PolFlash XE** flash tube can blow and no longer work. This may be accompanied by an audible bang, slight smoke development and / or visible sooting on the inside of the respective **PolFlash XE** flash lens.

⚠ WARNING

Do not continue using the PolFlash XE with a blown flash tube! Switch off the FotoFinder **ATBM master** and disconnect it from the power supply. Please contact your distributer or FotoFinder contact to make an appointment for repair or replacement.
Continued use may cause voltage flash-over.

18.4.3 PolFlash – flash attachment does not trigger or does not light up

- Check whether the device is switched on.
- Check that the hot shoe adapter is correctly seated, it should be fully plugged in.
- Check the power plug and the supply cable of the **PolFlash** for damage and proper connection.

18.4.4 The motor has stopped working

For FotoFinder bodystudio ATBM master

- Check the indicator light of the slide sensor (should be orange). This is located on the left lower side of the slide.

  Do not attempt to more the camera manually. If you do not have a clear view of the indicator light, contact your responsible consultant or FotoFinder Systems GmbH.
- Check all connection cables at the back of the computer.
- Close the FotoFinder **Universe** software and shut down the computer. Disconnect the unit from the power supply for a few seconds. Restart the computer and the FotoFinder **Universe** software.
- Check the fuses on the motor control unit. Spare fuses are included and taped to the side of the motor control unit. From control unit version 2.0, please contact FotoFinder Systems.
- Open Windows *Settings / Devices* and check whether the appropriate device is displayed, irrespective of the installed control unit:
  - ATBM Control Unit Version 1: CP210x USB to UART Bridge
  - ATBM Control Unit Version 2: Control UnitV2

For FotoFinder bodystudio ATBM (1st generation)

- Check the indicator light of the slide sensor (should be orange). This is located on the left lower side of the slide.

  In order to view the indicator light, move the slider of the camera upwards by approximately 10 cm.
- Check all connection cables at the back of the computer.

- Close the FotoFinder **Universe** software and shut down the computer. Disconnect the unit from the power supply for a few seconds. Restart the computer and the FotoFinder **Universe** software.
- Remove the computer and open the lower cover on the system. Now check the indicator light and cable connections of the motor control unit.
- Check the power switch on the motor control unit, switch off the device, wait approx. 20 seconds and switch it on again.
- Check the fuses on the motor control unit. Spare fuses are included (taped to the side of the motor control unit).
- Open the Device Manager in the Windows Control Panel and check if the device “Silicon Laps CP210x USB to UART Bridge (COM3)” is displayed on the COM&LPT port.

18.4.5 Message that control unit could not be initialised

- Please follow the same steps as in the previous problem.

18.4.6 Computer won’t start

- Check the power switch on the rear.
- Check the plug connection of the power cable for correct fit.
- Press the power switch on the front (the indicator light should be blue).
- To minimise power problems, plug the system directly into a fixed power outlet.

18.4.7 Monitor has a black screen

- Check the ON switch on the front and rear of the monitor
- Check the cable and the connections between the monitor and the computer
- Check the signal (DVI, VGA or Display Port), press the "S" button on the front of the monitor several times until it is set correctly
- To minimize power problems, connect the ATBM (1. Generation) system directly with an installed power socket

18.4.8 medicam® does not react or is not recognised

- Check the green operating light on the back of the FotoFinder **medicam**.
- Check all connections to the computer and to the FotoFinder **Docking Station** for correct connection.
- Check whether the FotoFinder **Docking Station** is switched on.
- Shut down the computer, disconnect and reconnect the camera plug and restart the computer.

18.4.9 Malfunction in Live view or when saving

In the event of an external power disturbance (fluctuations, so-called bursts), there may be interferences in the display of the live image and/or saving the image (stripes or distortions in the image).

1. Wait until the power disturbance is over.
2. Restart the PC and
3. Capture the image again.

Please also refer to the information in the separate chapter (cf. chapter 4.13 Electric safety).

18.4.10 The isolating transformer when the system has no power

- Check the following points one after the other:
  - the green control light on the isolating transformer is on
  - the switch on the isolating transformer is on
  - all cables are correctly plugged in on both ends
  - the wall / floor socket has electricity (e.g. check with another device)
- Check or replace the two fuses on the isolating transformer if necessary. Replace the fuses with equivalent replacement fuses. Such fuses are enclosed on the isolating transformer under the black plastic cover. Contact a qualified personnel for this purpose. The fuse holder may only be removed when the mains plug is disconnected.
- Try an alternative connection cable with V-Lock locking system (against unintentional pull-out of the C13 plug).

Contact your FotoFinder Systems for help.

19 Maintenance

19.1 Safety

NOTE

Please always observe all safety instructions in this manual!

DANGER

Maintenance must be performed by qualified personnel and may only be carried out when the device or its components are not being used on a patient and, if not required for maintenance, are disconnected from the mains supply.

DANGER

Danger of electric shock due to high voltage!

Severe injury or death could result when touching an energized conductor.

Work on electrical systems may only be conducted by authorized electricians.
Disconnect the power supply and secure against reconnection before starting any work.
Do not try to open any electric components of the equipment.

DANGER

A device of Protection Class 1 Danger of injury due to electric shock.

Connect the device to a properly grounded power outlet only.

DANGER

Any maintenance work on the PolFlash XE is only allowed to be performed by the manufacturer.

ATTENTION

Damage to the camera positioning system caused by objects or obstacles

Ensure that the camera, belt and chain can always move freely.
All cables should therefore be organized with cable ties.
Do not place anything which may affect the camera directly in front of or under the tower.
Never grab the chain or belt, especially when the camera is moving up or down along the rail.

19.2 Service information

- **Warning! This device must not be modified without the approval of the manufacturer!**
- To ensure your system functions perfectly, subject your device to periodic inspections and repeat checks. At FotoFinder Systems we recommend that you carry out repeat checks as per EN 62353 every 12 months. In the process, the device must be checked to make sure that it is fully functional and operationally safe.
- The FotoFinder **bodystudio ATBM®** is equipped with dual swivel castors and brakes. These must be checked every 12 months to ensure that they are safe, and that the castor fastening bolt is firmly in place without a gap.
- Specialist staff are required for carrying out all servicing work.

NOTE

Safety checks and mechanical checks as per sections 11 and 14 of MPBetreibV (German Medical Devices Operator Act)
Safety checks and mechanical checks as per sections 11 and 14 of MPBetreibV (German Medical Devices Operator Act) are not legally required for FotoFinder products and systems as they do not fall into the product categories indicated in annex 1 and 2 of MPBetreibV (German Medical Devices Operator Act). Nevertheless, we recommend that operators have a safety check as per section 11 of MPBetreibV (German Medical Devices Operator Act) carried out on the respective medical products at least every 24 months. The operators are responsible for organisation of the necessary servicing and maintenance work. FotoFinder Systems is not qualified to carry out these checks. For this purpose, contact a qualified service technician.

- The FotoFinder **medicam** should be returned to the manufacturer for servicing at least once per year. A replacement camera is available to be borrowed for the duration of the servicing work. For this purpose, contact your FotoFinder distributor. He/she will inform you of the procedure and the costs.
- The automatic chain drive of the ATBM consists of elements which do not require any maintenance. Regular cleaning or lubrication of the chain drive is not necessary either.
- The FotoFinder **Laser Liner** is maintenance-free. Only models with batteries have to have these replaced as required.

  1. To remove the battery, lightly press and turn the lid of the battery compartment in anti-clockwise direction.
  2. Replace the battery with a battery of the following configuration: Size: AA, 3.7 volts.

19.2.1 Service position of the camera slide

The functionality of the service position is described in the chapter *Settings* (cf. chapter 11.4 Devices).

19.3 Visual inspection

NOTE

Have your device checked and inspected by a service technician at regular intervals. The intervals should be guided by the generally accepted technical rules and occur once every 12 months!

For inspection and the appropriate proof, use the following checklist:

Inspected by:

Inspection date

Inspection criteria	Met	Not met	Comment
Protection against direct contact with active parts in place and intact			
Protection measures in case of indirect contact must correspond with installation standards			
Power surge and short circuit protection measures in place and intact			
Corresponding measurement of short circuit protection measures correspond to conductor cross-section			
Circuit diagrams and descriptions of electrical circuits in place and intact			
Safety markings and labels in place and intact			
Status of grounding systems			
Strain relief of cables and power supply in place and intact			

20 Disposal

ATTENTION

Risk of environmental damages caused by improper disposal.
For disposal, observe local regulations and legal requirements.

By properly disposing of and recycling old equipment and used components, natural resources can be conserved and the environmental impact minimized. Therefore, please note the following points:

- The operator is responsible for proper disposal.
- Disposal must be carried out in accordance with applicable local regulations and laws.
- This product or its components must not be disposed of as normal household waste. Contact your local authority, municipal waste disposal companies or specialized dealers for information on acceptance points for recycling electrical and electronic devices.
- If necessary, the device must be disassembled into separate sections and materials at the end of its service life before it can be taken to a specialized company for recycling.
- Any batteries contained in the **Laser Liner** must be disposed of separately.

21 Appendix

FotoFinder

FotoFinder Systems GmbH
Industriestraße 12
84364 Bad Birnbach
Deutschland

SRN: DE-MF-000007084

SYSTEMERKLÄRUNG
SYSTEM DECLARATION

Wir erklären hiermit, dass nachstehende medizinische und nicht-medizinische Produkte

We declare that the following medical and non-medical devices

Gerät / Device	Basic UDI-DI (if applicable)
Medizinischer / Medical PC "FotoFinder Silent Medical Server"	*Nicht anwendbar / not applicable*
FotoFinder medicam 1000s	4260158454MC001WG
FotoFinder PolFlash XE	*Nicht anwendbar / not applicable*
Canon SLR Kamera / camera	*Nicht anwendbar / not applicable*
Positioning mat ATBM	*Nicht anwendbar / not applicable*
Laser Liner	*Nicht anwendbar / not applicable*
Camera drive electric motor and linear drive system	*Nicht anwendbar / not applicable*
FotoFinder Universe (Version 3)	4260158454FFU001XY
Gerätewagen / mobile cart "ATBM Tower"	*Nicht anwendbar / not applicable*
Bildschirm / Monitor	*Nicht anwendbar / not applicable*
Trenntransformator / Isolating Transformer	*Nicht anwendbar / not applicable*

zu einem medizinisch elektrischen System in einer Weise, die mit der Zweckbestimmung der Produkte kompatibel ist, gemäß Art. 22 (EU) 2017/745 kombiniert werden:

are combined to a medical electrical system in a manner that is compatible with the intended purpose of the devices by means of Art. 22 (EU) 2017/745.

"FotoFinder bodystudio ATBM master"

Basic UDI-DI: 4260158454FFS001XJ

Um die Konformität dieser Kombination zu beweisen, haben wir

In order to prove conformity of this combination, we

1. die gegenseitige Verein barkeit der Medizin- und gegebenenfalls sonstigen Produkte entsprechend den Hinweisen der Hersteller geprüft und ihre Tätigkeiten entsprechend diesen Hinweisen durchgeführt
   verified the mutual compatibility of the devices and, if applicable other products, in accordance with the manufacturers' instructions and have carried out their activities in accordance with those instructions;
2. das System verpackt und die einschlägigen Benutzerhinweise angegeben, unter Einbeziehung der Informationen, die vom Hersteller der Medizin- und sonstigen zusammengestellten Produkte bereitzustellen sind,
   packaged the system and supplied relevant information to users incorporating the information to be supplied by the manufacturers of the devices or other products which have been put together
3. die Zusammenstellung von Medizin- und gegebenenfalls sonstigen Produkten zu einem System unter Anwendung geeigneter Methoden der internen Überwachung, Überprüfung und Validierung vorgenommen.

FotoFinder

verified and validated the activity of combining devices and, if applicable, other products as a system by appropriate methods

Die einzelnen Produkte, sowie das gesamte System sind nicht steril, weswegen keine Sterilisierungs-Prozesse anwendbar sind.

The individual devices, as well as the system are non-sterile, which is why no sterilization procedures are applicable.

FotoFinder Systems GmbH Industriestr. 12 84364 Bad Birnbach Germany

Bad Birnbach, 01.06.2021 Florian Mayer, Authorized Officer

FotoFinder

Diese Erklärung ist gültig, bis sie durch eine neue Version ersetzt wird / *This declaration is valid until superseded by a new version.*

Bad Birnbach, 01.06.2021

Julian Mayer, Authorized Officer

FotoFinder Systems GmbH Industriestr. 12 84364 Bad Birnbach Germany

FotoFinder

EU - KONFORMITÄTSERKLÄRUNG

EU - DECLARATION OF CONFORMITY

Hersteller / *Manufacturer:* Adresse / *address:*	FotoFinder Systems GmbH Industriestraße 12 84364 Bad Birnbach Deutschland/Germany
Single Registration Number (SRN):	DE-MF-000007084
Benannte Stelle / *Notified Body*	Nicht anwendbar / *Not applicable*

Wir erklären hiermit in eigener Verantwortung, dass nachstehendes Produkt
We declare under our sole responsibility that the product

FotoFinder medicam 1000s
Artikelnr. / *Product code*: FFS010001

Mit folgendem Zubehör
With the following accessories

FotoFinder Docking Station (mini)
D-Scope IV mit Vorsatzkappen (offen, geschlossen, konisch) / *with front caps (open, closed, conical)*
D-Scope III mit Vorsatzkappe / *with front cap*
Medizinischer Trenntransformator / *Medical Isolating Transformer*

Zweckbestimmung / *Intended Use*:	Videodermatoskop / *Videodermatoscope*

Elektrisch betriebenes, handgeführtes Instrument zur mikroskopischen Untersuchung der äußeren Hautschichten durch Erstellung digitaler Bilder. Das Gerät verfügt über ein optisches sowie elektronisches Vergrößerungssystem, das im Rahmen einer so genannten Dermatoskopie digitale Bilder der Strukturen der Epidermis und des Epidermis-Corium-Übergangs zur Anzeige auf einem Monitor liefert. Dieses Gerät wird gewöhnlich zur Untersuchung von Hautstrukturen und zur Bewertung anormaler Farb- und Formänderungen pigmentierter Hautschäden verwendet.

An electrically-powered, hand-held instrument intended to be used for the microscopic examination of the external skin layers through the production of digital images.The device has a built-in light source(s) and an optical and electronic magnification system that provides the user with digital images of the structures of the epidermis and epidermal-dermal junction for visualization during dermatoscopy. This device is commonly used for the examination of skin structures and to assess abnormal colour and pattern changes of pigmented skin lesions.

der Risikoklasse / *of risk class*:	I (Annex VIII MDR)
Basis UDI-DI / *Basic UDI-DI*:	426015845MC001WG

den Grundlegenden Anforderungen gemäß Anhang I der Medizinprodukteverordnung (EU) 2017/745 entspricht / *meets the essential requirements of the regulation (EU) 2017/745.*

Konformitätsbewertungsverfahren / *Conformity assessment*	Annex IX, (EU) 2017/745

FotoFinder

KONFORMITÄTSERKLÄRUNG

DECLARATION OF CONFORMITY
DECLARATION DE CONFORMITE
DICHIARAZIONE DI CONFORMITA
DECLARACIÓN DE CONFORMIDAD

FotoFinder Systems GmbH
Industriestraße 12
84364 Bad Birnbach
Deutschland

Wir erklären hiermit in eigener Verantwortung, dass nachstehendes Produkt

We declare under our sole responsibility that the product

Nous déclarons sous notre propre responsabilité que le produit

Dichiariamo sotto nostra responsabilità che il prodotto

Declaramos bajo nuestra exclusiva responsabilidad la conformidad del producto

FotoFinder Universe
Version 3.4

der Klasse / of class/ de la classe / della classe/ de la clase : 1
(93/42 EWG / EEC / CEE)

der Klasse / of class/ de la classe / della classe/ de la clase : B
(IEC 62304:2006)

allen Anforderungen der Medizinprodukterichtlinie 93/42 EWG sowie der IEC 62304:2006 Medical Device software - software lifecycle processes entspricht, die anwendbar sind.

meets all requirements of the directive 93/42 as well as the IEC 62304:2006 which apply to it.

remplit toutes les exigences de la directive sur les dispositifs médicaux 93/42 CEE et IEC 62304:2006 qui le concernent.

soddisfa tutte le disposizioni della direttiva 93/42 CEE e IEC 62304:2006 che lo riguardano.

al que se refiere esta declaración, con las disposiciones aplicables de la 93/42 CEE y IEC 62304:2006.

Konformitätsbewertungsverfahren:/ Conformity assessment:/ Procédure d'évaluation de la conformité:/ Procedimento di valutazione della conformità:/ Procedimiento de Valoración de Conformidad:
Annex VII, 93/42 EWG / EEC / CEE

Bad Birnbach, 25.05.2021

Julian Mayer, Authorized Officer

FotoFinder

KONFORMITÄTSERKLÄRUNG

DECLARATION OF CONFORMITY
DECLARATION DE CONFORMITE
DICHIARAZIONE DI CONFORMITA
DECLARACIÓN DE CONFORMIDAD

FotoFinder Systems GmbH
Industriestraße 12
84364 Bad Birnbach
Deutschland

Wir erklären hiermit in eigener Verantwortung, dass nachstehendes Produkt

We declare under our sole responsibility that the product

Nous déclarons sous notre propre responsabilité que le produit

Dichiariamo sotto nostra responsabilità che il prodotto

Declaramos bajo nuestra exclusiva responsabilidad la conformidad del producto

FotoFinder *bodystudio ATBM* ®
(Software- Version FotoFinder Universe)

in der Systemkonfiguration mit
in the system configuration with
dans la configuration avec
nella configurazione con
consistente en

Medical PC "FotoFinder Silent Medical Server"
FotoFinder ***medicam 1000***
Gerätewagen/ cart/chariot mobile/ carello medicale/ portaaparatos **"ATBM Tower"**
Bildschirm / Monitor / Ecrán / Schermo / Pantalla
Drucker / Printer / Imprimante / Stampante / Impresora
Trenntransformator / Isolating Transformer / Transformateur d'Isolement / Trasformatore d'Isolamento / Transformador de Aislamiento

der Klasse / of class/ de la classe / della classe : 1

GMDN Code: 47158

allen Anforderungen der Medizinprodukterichtlinie 93/42 EWG entspricht, die anwendbar sind.

meets all the provisions of the directive 93/42 EEC which apply to it.

remplit toutes les exigences de la directive sur les dispositifs médicaux 93/42 CEE qui le concernent.

soddisfa tutte le disposizioni della direttiva 93/42 CEE che lo riguardano.

al que se refiere esta declaración, con las disposiciones aplicables de la Directiva 93/42 CEE.

Konformitätsbewertungsverfahren:/ Conformity assessment:/ Procédure d'évaluation de la conformité :/ Procedimento di valutazione della conformità:/ Procedimiento de Valoración de Conformidad:
Annex VII, 93/42 EWG/ EEC

Bad Birnbach, 31.08.2018

Julian Mayer, Authorized Officer

22 Glossary

ATBM	Automated Total Body Mapping
FotoFinder Universe	FotoFinder software solution for the ATBM system
medicam	Digital video camera from FotoFinder for examining and capturing lesions
leviacam	Digital USB camera from FotoFinder for examining and capturing lesions
HD	High Definition
DSLR	Digital Single Lens Reflex Camera
Laser Liner	Optical positioning system for the required/optimal alignment of the positioning mat
ID	Identification number of TeamViewer software
PolFlash	Polarized flashlight system for a Single Lens Reflex Camera. Ensures capture with constant illumination and quality

23 For your notes