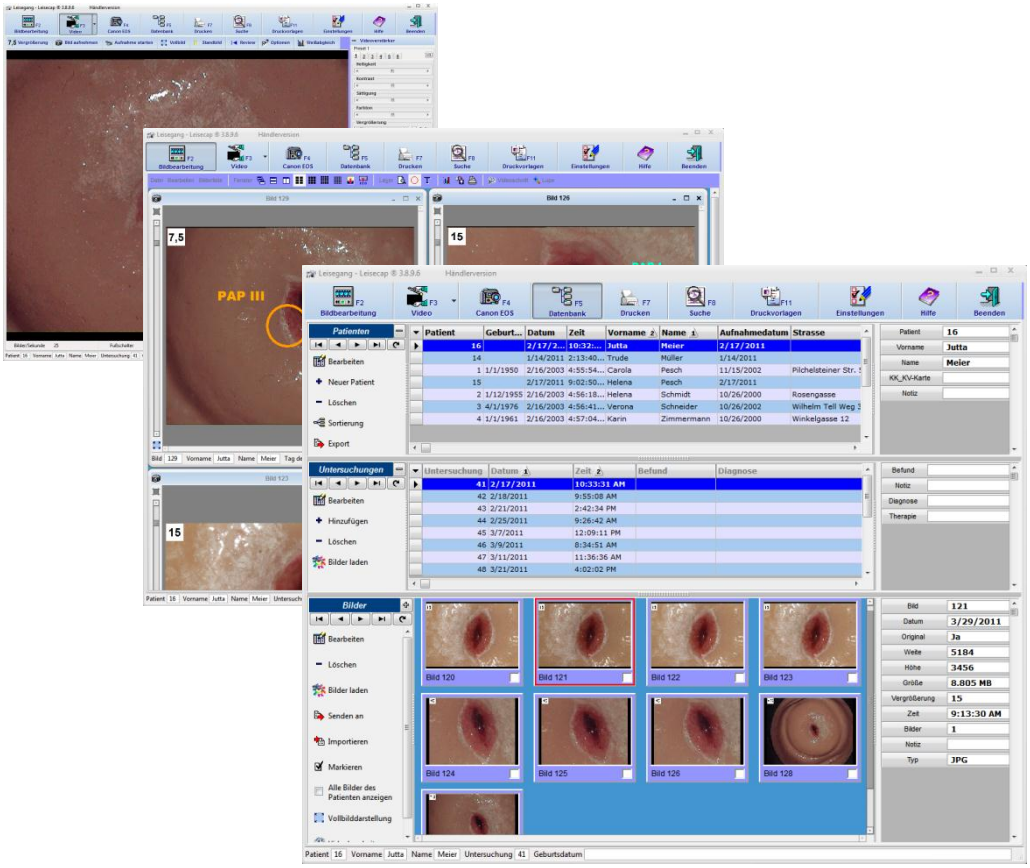
LEISEGANG

The Colposcope Company

LeiseCap

Digital Imaging and Data Base Software



User Manual

Software Version 3.9 (02/2012)

1 Table of Contents

2 System Requirements

To work comfortably with the programme, your PC should meet these requirements:

2.1 Minimum requirements

Colposcope	3MVC	3ML and 3MLW	
Camera	Internal: Point Grey Chameleon	External: Canon EOS DSLR	External: Point Grey Flea USB 3.0
Processor[1]	Dual Core CPU as of 1,6 GHz	Dual Core CPU as of 1,6 GHz	Dual Core CPU as of 2 GHz
Memory	2 GB	2 GB	3 GB
Operating system	Windows XP	Windows XP	Windows 7
Hard disc – free memory[2]	80 GB	80 GB	80 GB
Graphics and monitor	1280x960 Pixel	1280x960 Pixel	1280x960 Pixel
Interfaces	3x USB 2.0	3x USB 2.0	1xUSB 3.0 + 2x USB 2.0

2.2 Optimal configuration

Colposcope	3MVC	3ML und 3MLW	
Camera	Internal: Point Grey Chameleon	External: Canon EOS DSLR	External: Point Grey Flea USB 3.0
Processor[1]	Dual Core CPU as of 1,8 GHz	Dual Core CPU as of 1,8 GHz	Quad Core CPU as of 2 GHz
Memory	2 GB	2 GB	3 GB
Operating system	Windows 7	Windows 7	Windows 7
Hard disc – free memory[2]	120 GB	120 GB	500 GB
Graphics and monitor	1280x960 Pixel	1920x1080 Pixel	1920x1080 Pixel
Interfaces	3x USB 2.0	3x USB 2.0	1xUSB 3.0 + 2x USB 2.0

1) Excluded: Intel Atom and AMD C50
2) The optimal size of the hard disc depends on the recording frequency of pictures and videos

If your PC does not meet all of these requirements, the programme process may be impaired. In extreme cases, you cannot use the programme. If you have any questions on this subject, contact:

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3 Performance Description

All coloured modules are not part of the basic version.

3.1 Image recording

Function	Description	Basic
Live video display in real time	The camera's video image is written in the graphics card memory without delay. This leads to very low strain on the computer's CPU.	**x**
Full-screen display	Foot switch, keyboard or mouse can be used to switch the video image to the entire screen resolution.	**x**
Still	Foot switch, keyboard or mouse can be used to freeze video image, e.g. to talk about the findings to the patient. The still can be saved if required. This function is also available in full screen mode.	**x**
Last Image Hold	Foot switch, keyboard or mouse can be used to display the last image recorded, e.g. to decide whether another recording is necessary or not. This function is also available in full screen mode.	**X**
Recording images	Foot switch, keyboard or mouse can be used to record images in full PAL/NTSC resolution. This function is also available in full screen mode.	**X**
Automatic saving to the database	The recorded images and videos can be either inserted into the database automatically or only loaded to the image processing to make a manual selection.	**x**
Automatic opening of image processing	The recorded images and videos can also be automatically loaded to image processing. This is sensible to gain an overview right after completing the recordings.	**x**
Operation via foot switch	The functions "Snapshot", "Record video", "Still", "Last Image Hold" and "Full Screen" can be put on the different foot switches via the foot switch configuration dialogue. This permits comfortable work, in particular in case of three and four foot switches.	**x**
Hardware deinterlacing	The line skip method of the video camera results in so-called comb artefacts. These can be eliminated entirely with the graphics card deinterlacing function. The computer's CPU is not put under any strain.	**x**

3.1 Image recording		
Auto-Clear	The function "Auto-Clear" ensures that only those images that belong to the current patient are open in image processing. Once the patient in the database is changed, all images are closed in image processing. This function can also be switched off ("Settings" in the main window).	**X**
Video amplifier	The "Video amplifier" can be used to set important parameters like brightness or contrast. They can be saved and called again with four switches. This may be sensible if you frequently work with changing lighting.	**X**
Image list	The image list displays all recordings made as slides.	**X**
Left/right display	For recordings where the assignment of left and right is important, e.g. in the area of the eyes, the software can be configured to display and save "L" and "R" right in the image.	**X**
Recording videos	Video recording either at full or half PAL/NTSC resolution with 25/30 frames per second. Video compression in MPEG 4 either in real time or after recording. This leads to higher-quality recordings with minimum file sizes	

3.2 Image processing

Function	Description	Basic
General	Any number of images and videos can be displayed, edited, enlarged and compared in parallel in image processing.	**X**
Display • Freely configurable display of the patient files per image/video • Parallel display of images and videos • Concurrent playing of several videos • Extracting images from videos under maintenance of patient reference • Assumption of changed images to the database • Import, export function • Deinterlace filter	Every image has its own status bar where the associated patient data are displayed. The data to be displayed can be configured freely. Changed or flagged images are inserted into the database as a new image. The original recordings are always retained. Loading and saving images and videos to the hard disc or USB thumb drive. Deinterlace filter: See "Image Recording Hardware Interlacing"	**X**
Changing image and colour values • Brightness • Contrast • Saturation • Red, green, blue values can be changed individually	Like at a screen, the parameters on the left can be comfortably changed with sliders.	**X**
Aligning images • Free alignment • Quick alignment using pre-defined switches	 The above switches can be used to quickly put all opened images and videos in the respective alignment.	**X**
Cutting and pasting screen contents • Create as new image • Insert as image in the image • Turn partial sections • Transparent display	The clipboard can be used to insert complete images or partial sections (markers and filters) in other images or to create them as a new image. The inserted sections can now be turned freely and displayed transparently with a slider. This makes it possible, e.g. to put before and after images on top of each other for detailed comparison.	**X**
Smooth zoom function via sliders	On the left of the window, there is an additional slider for smooth enlargement or reduction of the image. This function is also coupled with the mouse scroll wheel. The image section can be freely moved by clicking it with the mouse.	**X**

3.2 Image processing		
Quick pressure	The menu "File->Print image" permits a quick print of the current image with the associated patient data. The print template consists of a letterhead, patient data and image. The letterhead and patient data to be printed can be configured freely (Settings->Quickprint configuration). The image is always scaled to the full width of the paper. The optional "Print module" with print template generation, serial letter function, address book, etc. offers much more extensive options.	**x**
Twain interface • Support for scanners • Support for digital cameras	The Twain interface permits importing images from scanners and digital cameras into image processing and inserting them into the database if required.	**x**
Setting markers • arrows • circles • rectangles • position, size, colour, line thickness can be selected freely	The images can be applied with markers to indicate details.	
Entering text • Position, font, size, colour of text can be selected freely	Any texts may be added to the markers, e.g. to describe findings right in the image.	
Filter functions • Magnifying glass • Sharpness, edge emphasis... • Special filter (Prewit, Laplace) • Histogram functions 1. Manual 2. Balance 3. Extension • Wrong colours • Negative • Softener	Special filters, e.g. to improve under-illuminated areas of an image. Particularly good results are provided by the histogram function. Black/white recordings can be coloured with the wrong colour filter. The selected areas can be "frozen" and moved to any position in the image or copied and inserted in other images.	

3.3 Database

Function	Description	Basic
General	The database is used to record and save patient data, studies, images, videos and documents. The currently selected patient is visible at all times in the main window's status bar. The displayed data is freely configurable (right mouse button->Configure view).	**X**
Free configuration of the database field display	All database fields can be displayed and hidden as required, moved within the data grids and used to sort the datasets.	**X**
Sorting by patient, study, findings	The datasets can be sorted freely. By default, all patients are listed and only the studies and images for these patients are displayed. However, it is also possible to have all studies displayed and to sort them, e.g., by findings. This makes it easier to find images of different patients with the same findings to compare them in image processing.	**X**
Import / Export of images and videos	Images and videos that are saved in the database can be exported to a hard disc or thumb drive. Vice versa, images can also be imported into the database from these media, e.g. from a digital camera.	**X**
Printing images	Use the button "Extras->Print image" in the preview or the right mouse button on the image for a quick printout of the current image with the associated patient data. The print template consists of a letterhead, patient data and image. The letterhead and patient data to be printed can be configured freely (Settings->Quickprint configuration). The image is always scaled to the full width of the paper. The optional "Print module" with print template generation, serial letter function, address book, etc. offers much more extensive options.	**x**
Network, multi-station capability	With the network module, you can access a database from several workplaces, e.g. to work with the same data in several treatment rooms or to enter patient and study data at one computer and to record the images at a different one (see remote control).	**X**

3.3 Database		
Remote control in the network	The remote control module permits synchronisation of another computer in the network. This means that the active patient and the active study of one computer are also captivated at a second one by a button. Thus, the physician does not have to enter data and select the patient but only needs to operate the foot switch.	**X**
Creating own database fields	To achieve best adjustment to personal requirements, this module offers the option for the user to create any database field in any table.	
Dictionary	The dictionary links recurring terms and longer descriptions with abbreviations, they can be easily selected from a dropdown list during data input. The field "Category" also permits explicit assignment of all entries to a specific database field, so that they then only appear in the list of this field.	
Card reader	You may simplify the input and search for patient data greatly by connecting your computer to a chip card reader. The programme can use it to import the patient data from insurance cards. If the patient is found in the database, he is automatically selected; otherwise, he will be set up newly with the data from the insurance card.	
GDT/BDT	The GDT/BDT interface is used to connect the programme to a present practice software. The practice software provides a file containing the data of the selected patient. This file is imported and the patient is selected or, if not present yet, created. Submission of data to the practice software is also possible. If active, the practice software is informed about every newly recorded image or video and receives a link to the new files via the return file.	

3.4 Printing

Function	Description	Basic
General	The print module offers a lot more options than the quick-print function. This module offers an interface similar to WORD, in which customised print templates with placeholders for database fields or documents with several images can be created. The resulting documents can be assigned function buttons to generate immediate printout or to be viewed in print preview and edited before printing. All database fields can be placed anywhere in the text. Together with the address book module, they permit simple creation of letters to health insurances or transfers to colleagues. You may select from three sources - image processing, the database and database search - from where images and data are to be inserted. In the context of the serial letter module, you may, for example, send thank you letters to all of your colleagues.	
Quick print	The print module's quick-print function offers the possibility of assigning function buttons to different print templates so that you can print, e.g., a referral to a colleague by pushing a button after recording an image and entering the findings.	
Template generation	An interface similar to WORD can be used to create individual print templates with placeholders for database fields or documents with several images and to save them as templates in the database. Additionally, you may define "Conditional fields" in a separate database. They output a specified text based on the value of a freely selectable database field, e.g. Mr/Ms depending on gender. These templates then can be selected via a dropdown list on the print page.	
Print page	On the print page, among others you may choose a pre-created print template, determine the source of the images to be printed, adjust the order of the images to be printed, select an address from the address book, edit the documents and submit the print order.	
Serial letters	The module serial letters permits printing, e.g. several corresponding letters with patient data or addresses from the address book.	

3.4 Printing

Document database	The document database offers a comfortable option of archiving printed documents. Every document is saved in a separate database with patient and address book reference so that the *document history* can be reviewed at all times. Any saved documents can also be corrected, printed again and saved. Another feature is direct integration of external documents from data carriers and directly via a scanner.	
Address book	Together with the address book module, you can easily generate letters to health insurances or referrals to colleagues. You may insert the database fields of the address book in the documents in template generation as well. On the print page, you may then select the corresponding address.	

3.5 Database search

Function	Description	Basic
General	Database search permits definition of search requests and recalling them at any time. The search request also offers the option of selecting the database fields to be filtered, as well as selection and order of the result fields. The preview also offers immediate overview of the images and videos of the query result. They can be easily loaded in image processing by double clicking or by using the corresponding button.	
Complex search with stored search criteria as a chart	Complex query charts can be generated in any manner using AND, OR, NOT, etc. and saved in the database with an indicative name. Here, periods like "all studies of the last two weeks" can be indicated.	
EXCEL Export as a table	All results of the search query can be exported in an Excel table	
WORD Export as a table	All results of the search query can be exported in a Word document	
Printing	All results of the database search are available on the print page and can be inserted into print templates. The serial letter functions permit, e.g., contacting all patients who were found in the search.	

3.6 Canon EOS digital camera

Function	Description	Basic
Canon digital camera	This module was developed specifically for Canon EOS digital cameras and offers the option of controlling a number of cameras right via the software. In contrast to the general digital camera module, e.g. Canon PowerShot modules also offer a preview of the motive as on the integrated LCD. You may make high-resolution recordings via the foot switch and do not need any additional video camera for the preview. The recorded images are then automatically saved in image processing and with reference to the active patients in the database. Any images on the memory card can be loaded as well.	

3.7 Export modules

Function	Description	Basic
General	The export functions can be called from the modules of image processing, database and database search.	
WORD Export	The WORD export function offers the comfortable option of inserting images, videos and patient data in a Word document at the push of a button. For this, text marks are inserted in the document where patient data or images are to be inserted later. The text marks have the format "table"_"field name" (e.g. "patient_first name"). After calling the function, a dialogue is opened that permits selection of any Word templates.	
PowerPoint Export	The PowerPoint export function offers the comfortable option of integrating images, videos and patient data in a presentation with a button. A new slide is automatically set up per image. The position of the images and data on a slide can be configured in a dialogue.	

3.8 Special modules

Function	Description	Basic
Keratography	This module permits remote control of the keratography programmes "Topcon CA 100" and "Oculus". The functions "Display study", "Start new study" can be called from the programme. The databases are also synchronised so that all patients and studies are available in both programmes. The "Print button" can be used to record an image of an open study that is then saved in the database for the corresponding patient.	
HD video recording	This module in combination with the "Blackmagic Intensity HDMI video card (PCIe)" permits recording of videos in Full-HD resolution. The special feature about this is the real time compression in H264. The computing power of an ATI HD4xxx graphics card is used for this. The compression format H264 offers best compression rates at very high quality.	
HD video cutting	This module offers the option of cutting and assembling videos in Full-HD resolution. The special feature here is that the videos can be processed loss-freely and without recoding, clearly reducing the required time.	
Canon EOS HD video recording	This module corresponds to the module "HD video recording", with the difference that the HD-display is located on the programme's "Canon page". This way, the HDMI-output of the Canon EOS camera can be used for the LiveView, which would otherwise have the standard resolution and be sent via USB interface.	

4 First Steps

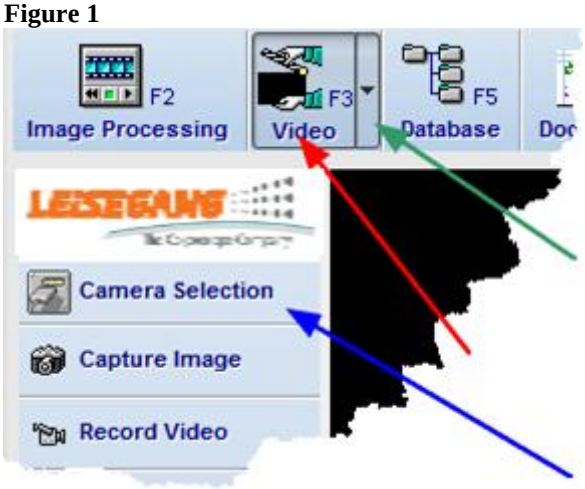
4.1 Installing the dongle

Connect the dongle with a free USB slot of your computer. The dongle is set up as HID device and does not require any further drivers.

4.2 Selecting the camera

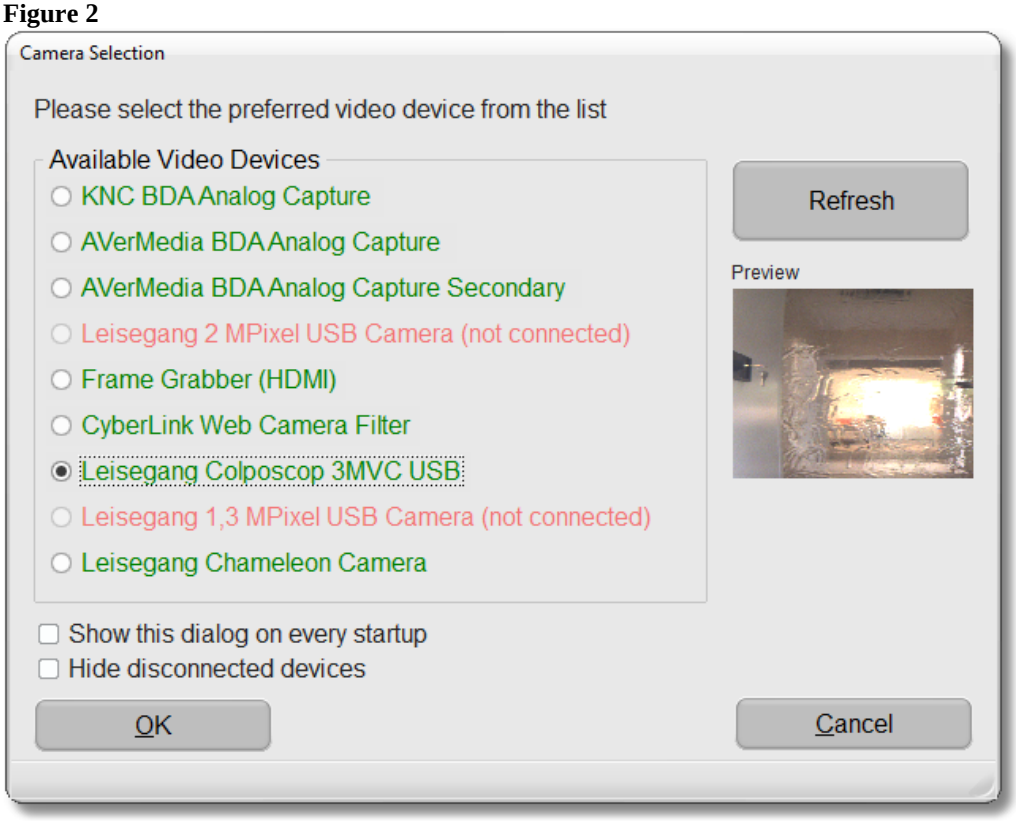
During the first start of the programme and activation of the video page (red arrow Figure 1), the dialogue for selection of the camera to be used is called automatically. Alternatively, you may also call the dialogue via the small button next to the video button (green arrow Figure 1) or the button "Camera selection" on the video page (blue arrow Figure 1):

Figure 1



The camera selection dialogue lists all available cameras:

Figure 2



Activating the camera you want to use (blue arrow Figure 2), the window "Preview" shows the camera's live image. If the preview does not display any image, you may switch the input if the camera driver offers this. If you do not want to have this dialogue displayed every time the programme starts, deactivate the corresponding control field (green arrow Figure 2).

4.3 Camera configuration

4.3.1 Changing the camera settings

The button "Options" on the video page takes you to the camera settings:

Figure 3 (Button bar left)

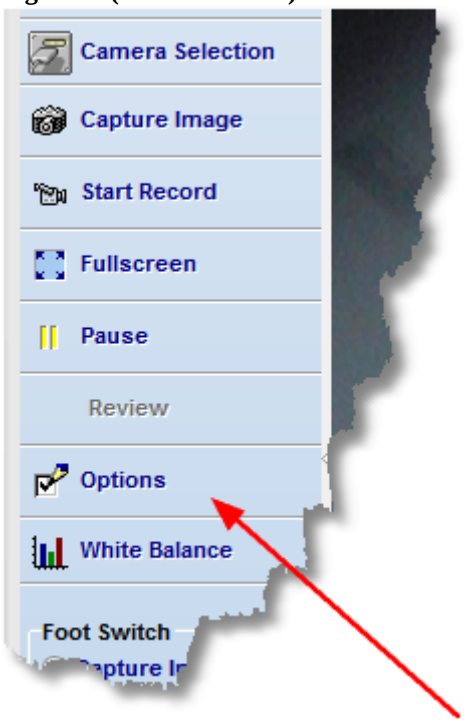
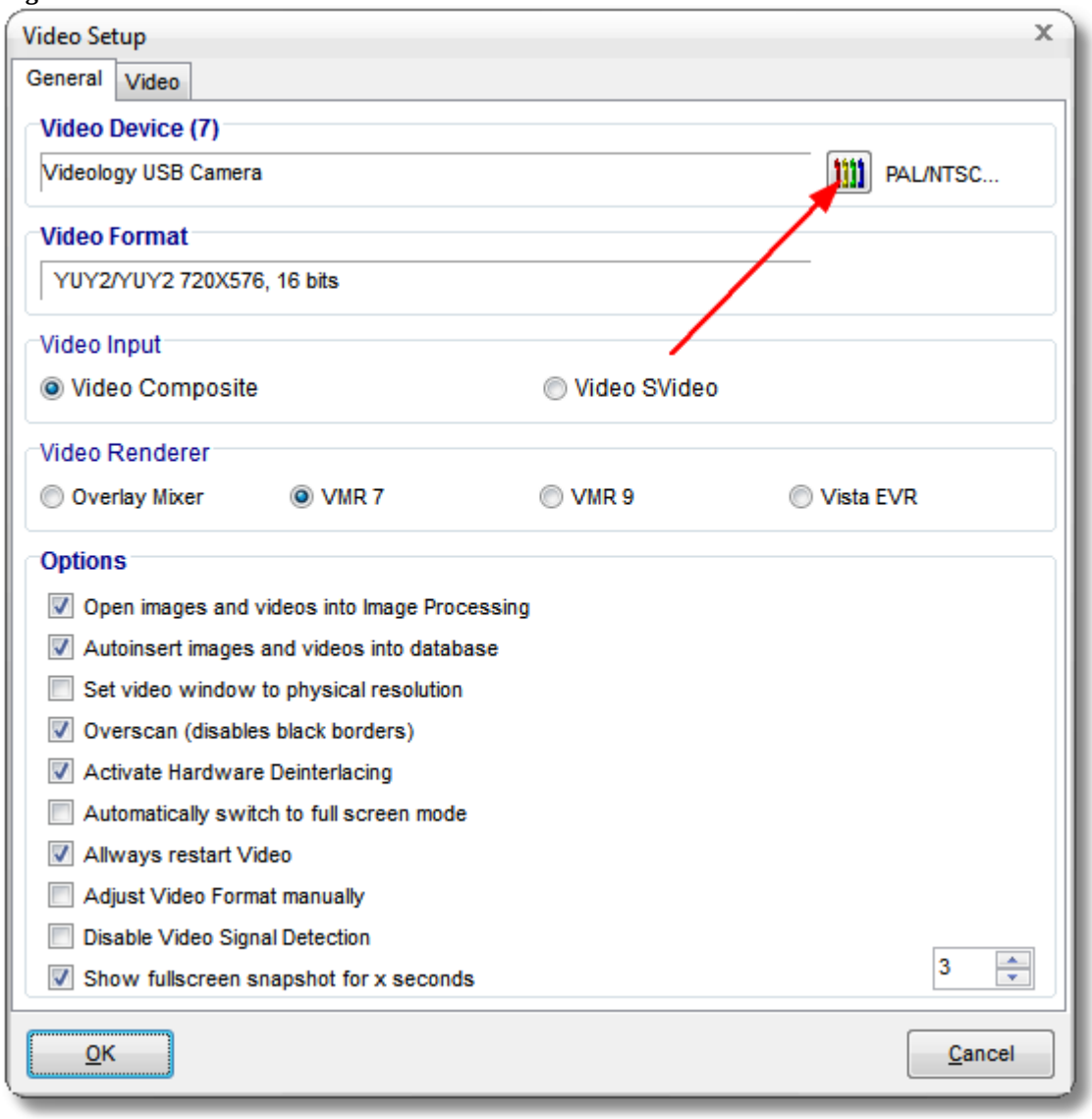


Figure 4 (Button bar top)

The button "Pal/NTSC" opens the dialogue to display and change the settings for the selected camera (red arrow Figure 5).

Figure 5



The resulting dialogue depends on the selected camera and its drivers.

Figure 6 (Example 1 USB camera):

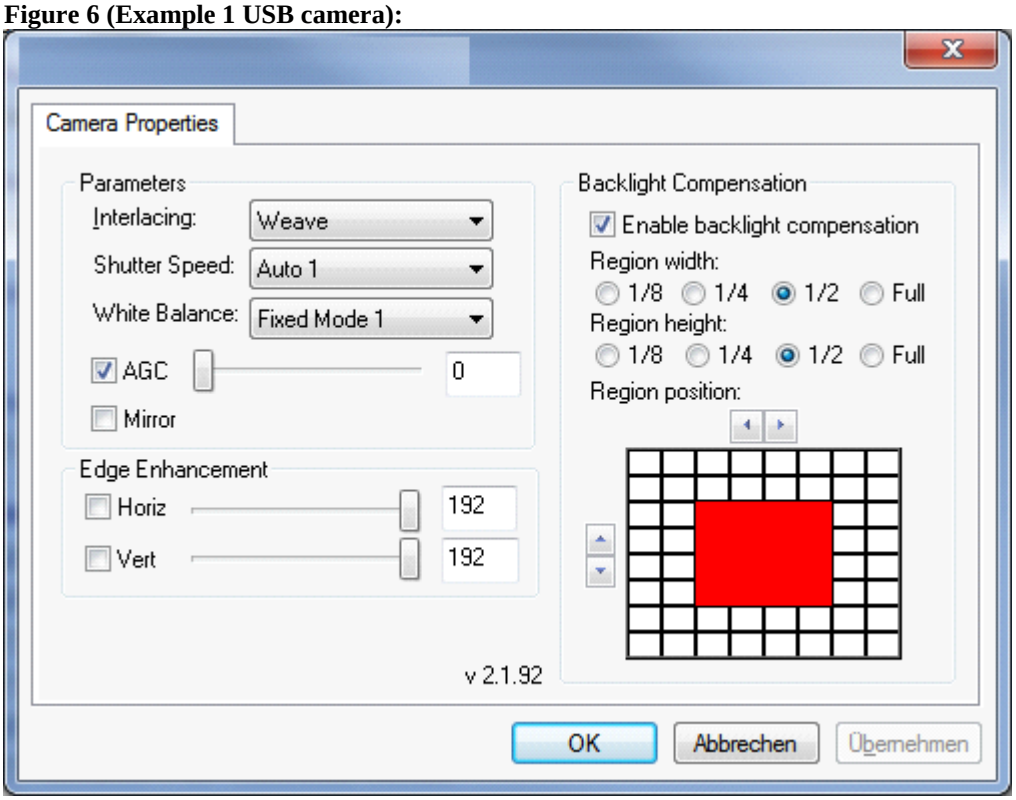
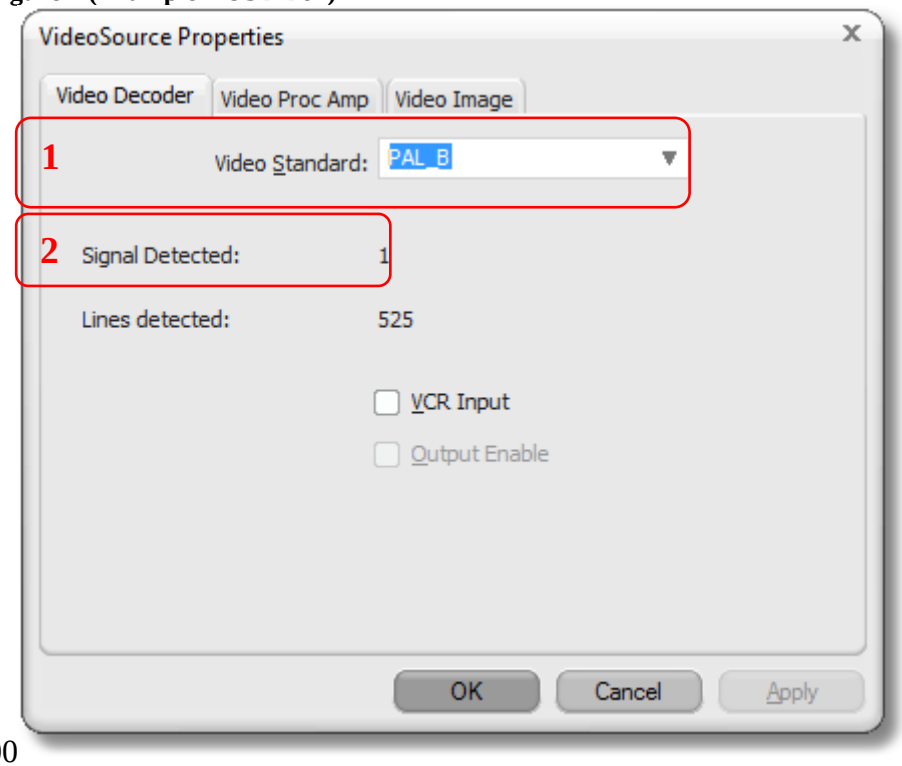


Figure 7 (Example 2 USB Box)



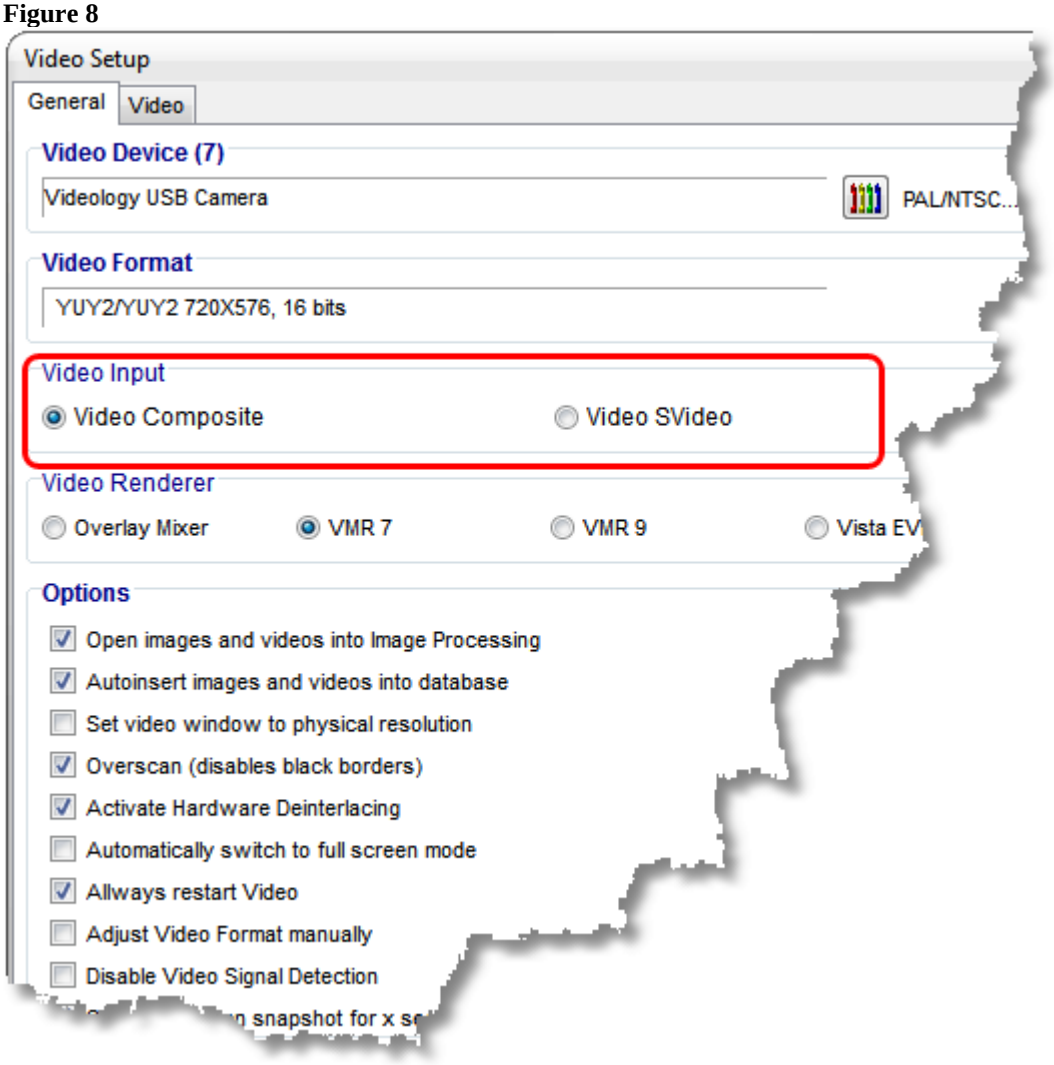
00

Choose the video standard for your camera in the selection box (1). In Germany, this is "PAL_B". Make sure that "Signal detected (2)" indicates "1". This shows that your camera is connected and works correctly. If this is not the case, you may have to switch the video input first. Now close all dialogues with OK and then initialise the video amplifier.

4.3.2 Setting the video input

If your video device has several video inputs, you may have to set the input used first. For this, go to the video page and click "Video options". Click the desired video input in the dialogue that now opens:

Figure 8

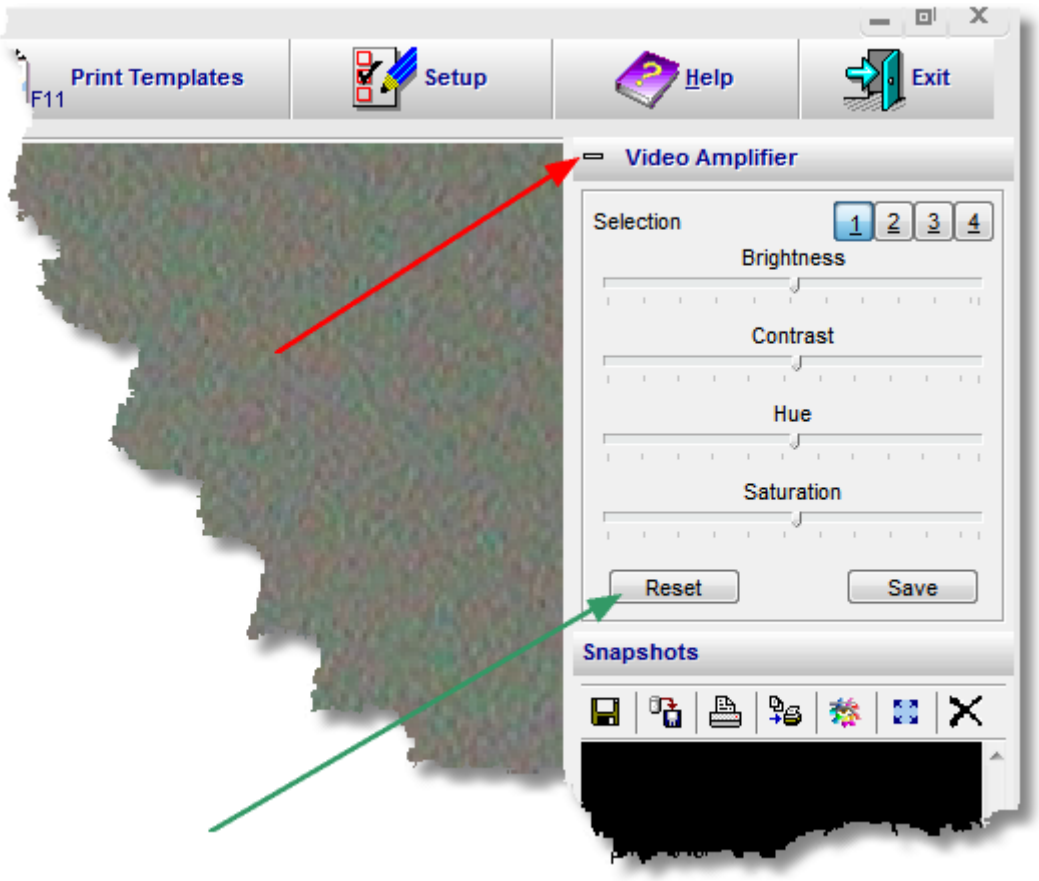


Now close the dialogue with OK and then initialise the video amplifier.

4.3.3 Initialising video amplifier

On the right of the video window, there is the "Video amplifier" (Figure 9).

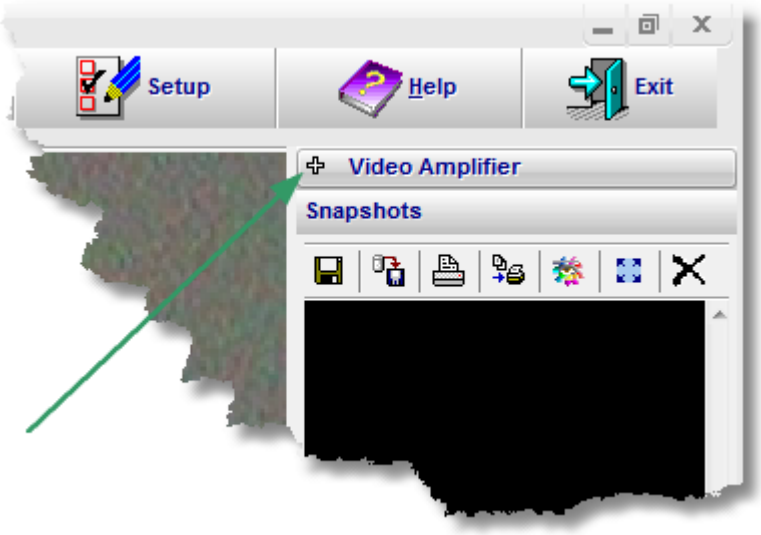
Figure 9



Click "Reset" once (green arrow Figure 8) and then "Save". If your camera is switched on and the video input set correctly, you can now see the video image.

If the video amplifier is hidden, click the "+" icon to open the window (Figure 9):

Figure 10

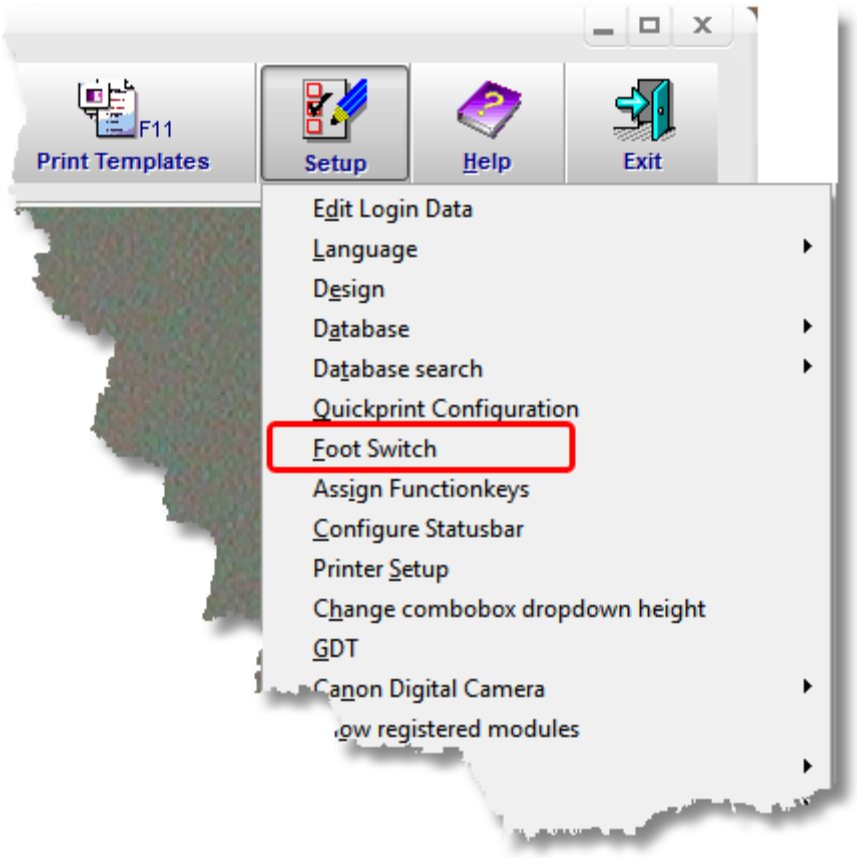


If the video amplifier does not open, your camera does not support this interface!

4.4 Foot switch configuration

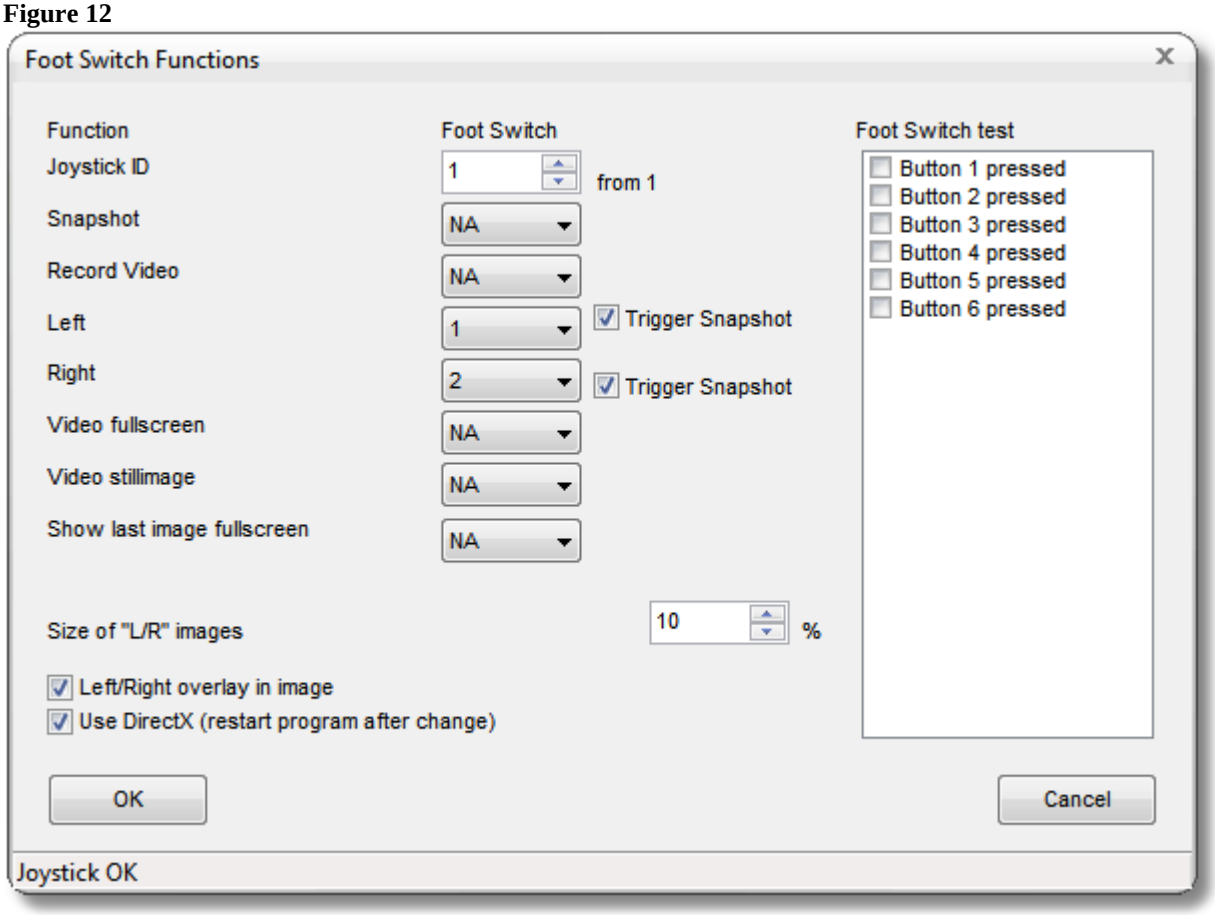
To record images with a foot switch, it must be configured first. For this, click "Settings" and then "Foot Switch" in the main window.

Figure 11



The following dialogue appears:

Figure 12



4.4.1 Joystick-ID

Designates the Windows-ID of the joystick or foot switch. This is important if several foot switches are present. The position of the button in the list "System menu->Game controller" determines the ID.

4.4.2 Snapshot

Designates the button for taking snapshots.

4.4.3 Record video

Designates the button to start and stop a video recording.

4.4.4 Left/right

Designates the button for switching left/right.

4.4.5 Trigger snapshot

If a recording is to be made automatically when switching from left to right or vice versa, switch on this option.

4.4.6 Video full screen

Switches the Live video to full screen mode.

4.4.7 Still image

Freezes the live video and returns to playback mode.

4.4.8 Show last image full screen

The last snapshot taken is displayed in full screen mode.

4.4.9 Size of "L/R" images

This input field can be used to set the size of the display of the left/right information in the image.

4.4.10 Left/right overlay in image

If you want to overlay the information left/right in the recorded image on a system that supports this function, you have to check this box.

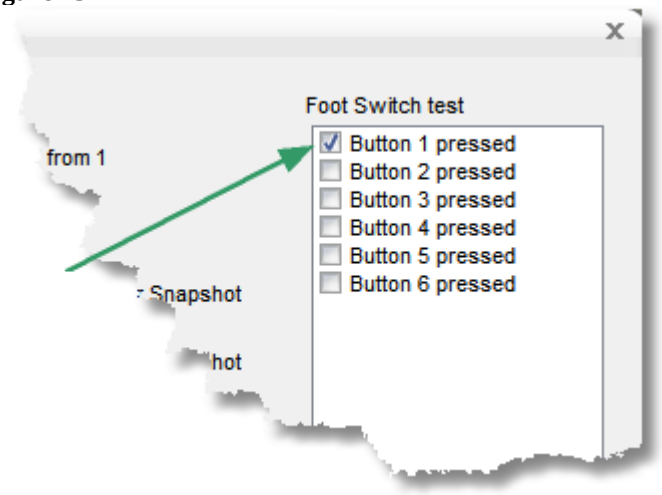
4.4.11 Use DirectX

Usually, this should be active. Under certain circumstances, this option can be switched off to remove problems with foot switch recognition.

4.4.12 Function test

Once the foot switch has been recognised by Windows, the list is populated with the available switches. Operating the foot switch now will check the corresponding entry in the list.

Figure 13

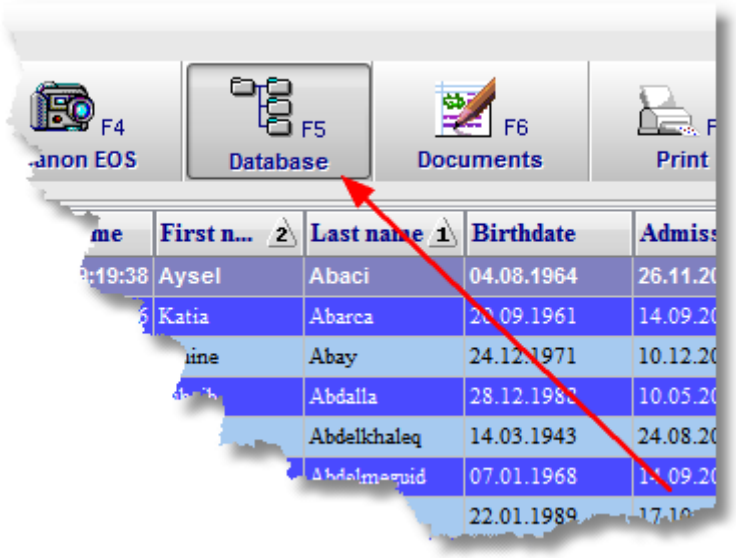


Joystick ID will show you the number of connected "button devices" in the addition "of..". If you have several devices installed (joysticks, game pads, etc.) select the ID of your foot switch. You can check this by operating your foot switch and watching the list "Foot Switch Test" for a checkmark to appear for the respective switch. Now assign the desired function to each switch. Example: You have a simple foot switch and want to record an image with it. Assign selection box "Snapshot" the number "1".

4.5 Database

Click the button "database" or press the key "F5" on the keyboard.

Figure 14



4.5.1 Video storage configuration

If you want to record videos, you should always configure storage. See Video archivi pages 8-114.

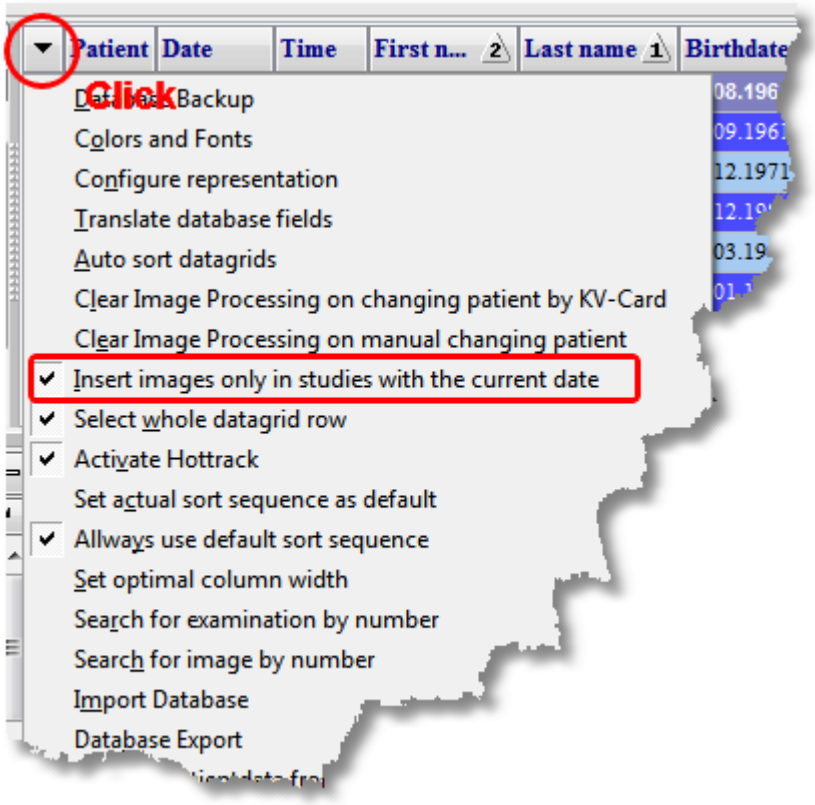
4.5.2 Creating a new patient

1. First switch to the database page and click the button "New Patient" or enter "Ctrl + B". Now you may enter the patient's data in the following "input dialogue".
2. If you are on the video page or the Canon page, you can directly enter data quickly with the RETURN button. You may enter a new patient in this dialogue or select one that's already present without having to switch to the database page.
3. If you have installed a KV card reader and the KVK module, a new patient is set up automatically if you enter a KV card in the reader.

4.5.3 Creating a new study

1. First switch to the database page and click the button "Add" on the left side of the field "Studies". Now you can generate an empty study ("Ctrl + G"), or clone the selected study with all data ("Ctrl + H"). Now you may enter or change the study data in the following "Input dialogue".
2. If you record an image and no study is present for the current patient, an empty study is created automatically.
3. If the item "Insert images only in studies with the current date" is active in the popup menu of the database page, a study with the current data is created as soon as you record an image. To get to this menu, use the button in the upper left corner of the data grids for patients and studies.

Figure 15



4.5.4 Specify active patient

All images you record are assigned to the "active patient". The patient who can currently be read from the main window's status bar. There are several ways to specify the active patient:

1. Click the entry in the data grid
2. Click the data grid "Patients" on the database page and enter the first letter of the patient's name. The programme skips to the matching patients.
3. Use a KV card reader (see above)
4. On the video page, press RETURN (see above)

4.6 Printing

4.6.1 Configure Quick print

Quick print can be performed from several pages and mainly serves creation of a standard print for the files. The set-up is accordingly simple and consists of the following components:

1. letterhead with date and time
2. patients and study data
3. one or several images

The letterhead and data fields can be freely configured.

Figure 16

You can reach the quick print configuration dialogue via several popup menus or via "Settings" in the main window. The lower image, for example, shows the menu for the image in the preview of the database page (right mouse button).

Figure 17

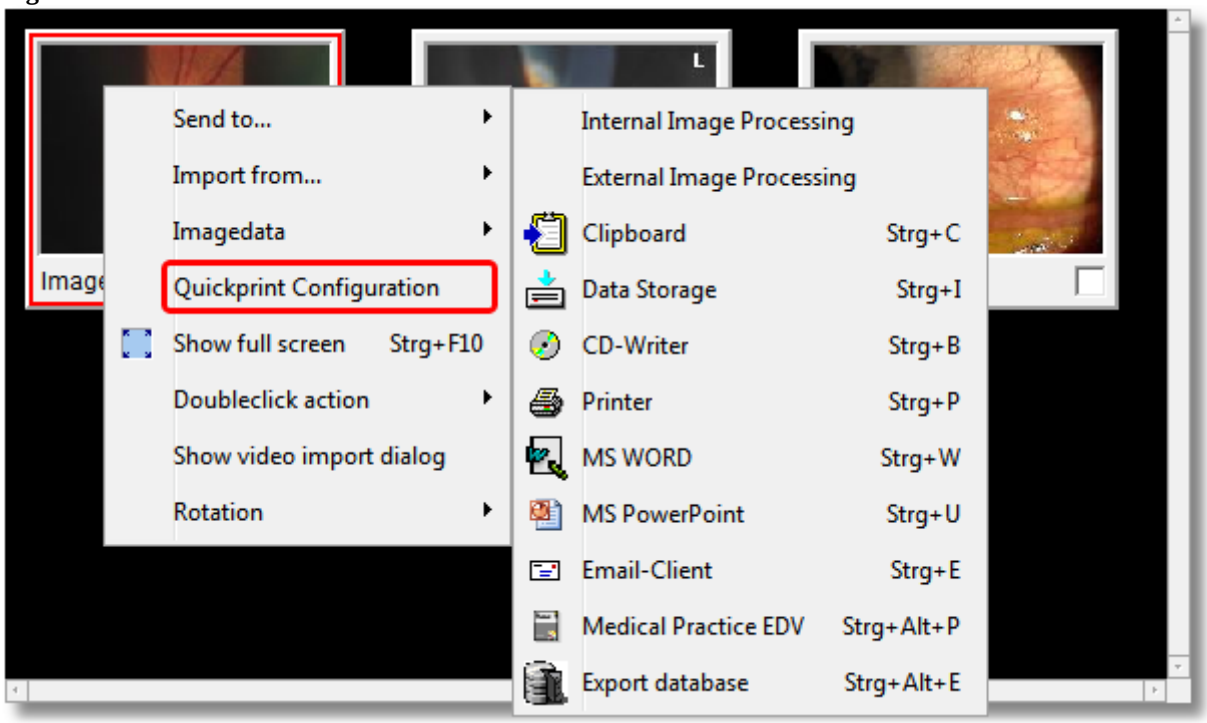
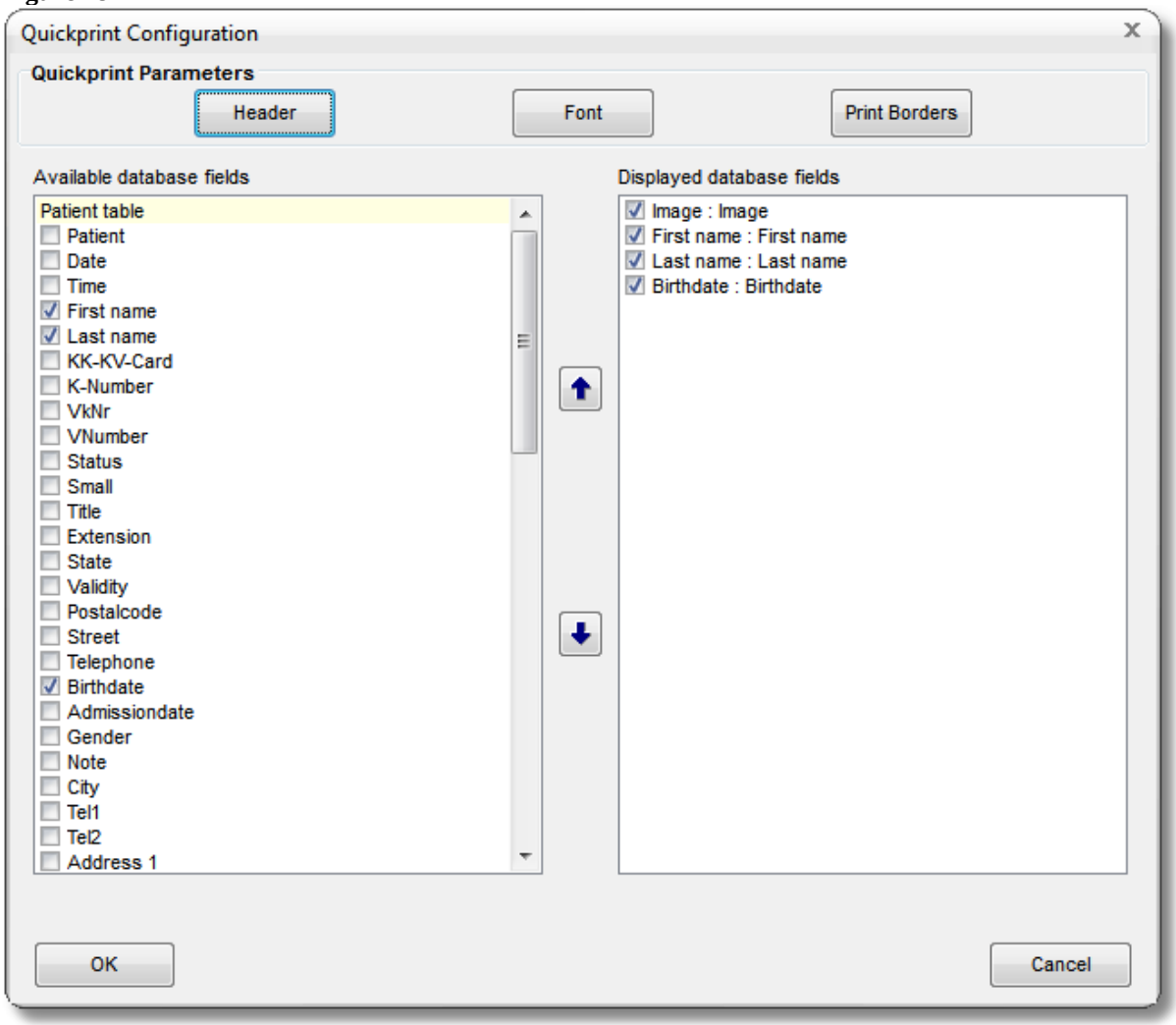
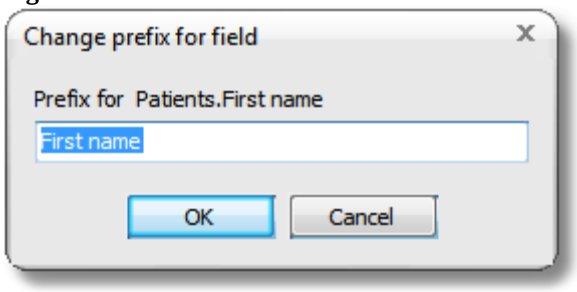


Figure 18



To include an entry in print, just click the respective selection box in the left list. The entry then automatically appears in the right list. Use the arrow buttons between the two lists to move the position of the highlighted entry of the right list. To remove an entry, click the checkmark in the right list. If you double-click an entry in the right list, you may change the description of the data field, e.g. to have "Customer:" in front of the patient's name rather than "Patient:" in the printout:

Figure 19

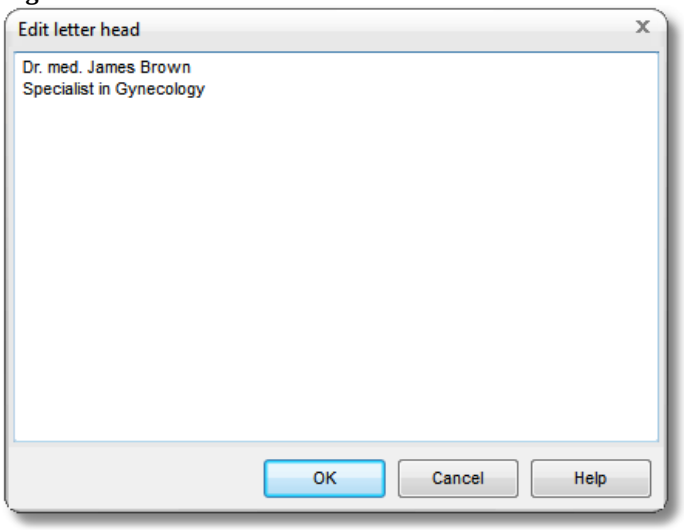


4.6.2 Quick print parameter:

4.6.2.1 Edit letterhead:

This dialogue can be used to enter the text to appear in the upper section of the document on every printout.

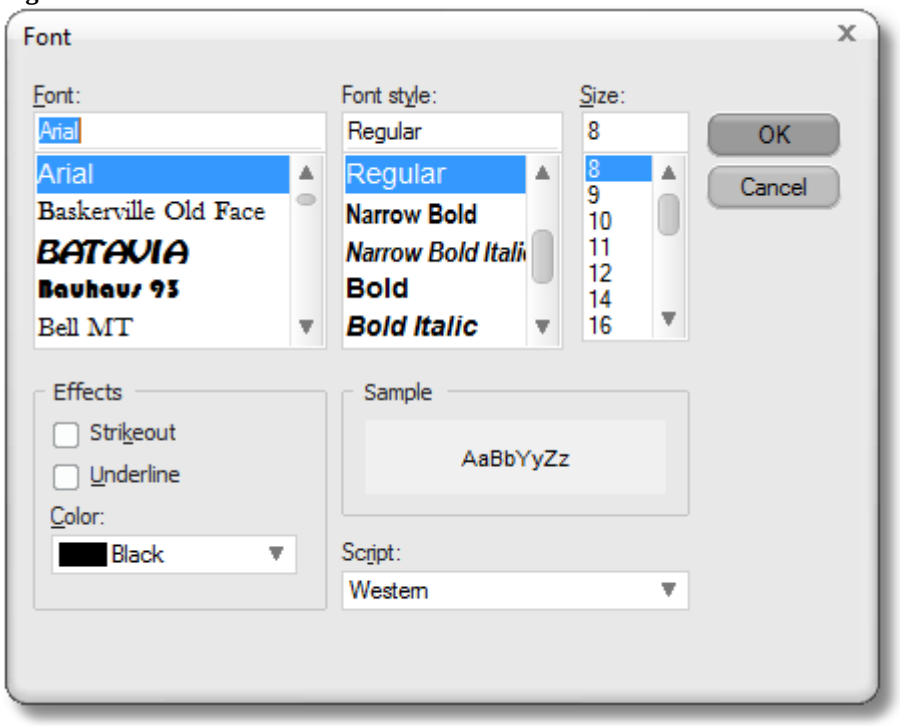
Figure 20



4.6.2.2 Setting the font:

Use this dialogue to determine the font and font size for the text to be printed in.

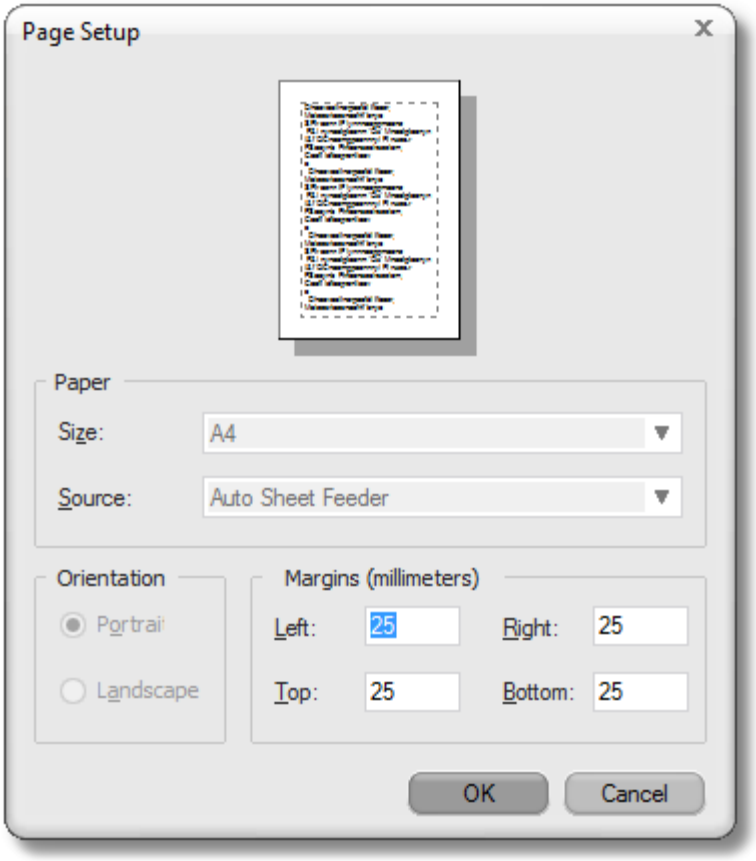
Figure 21



4.6.2.3 Print edges (set up page):

These dialogues can be used to set paper size, print edges and alignment of the document.

Figure 22



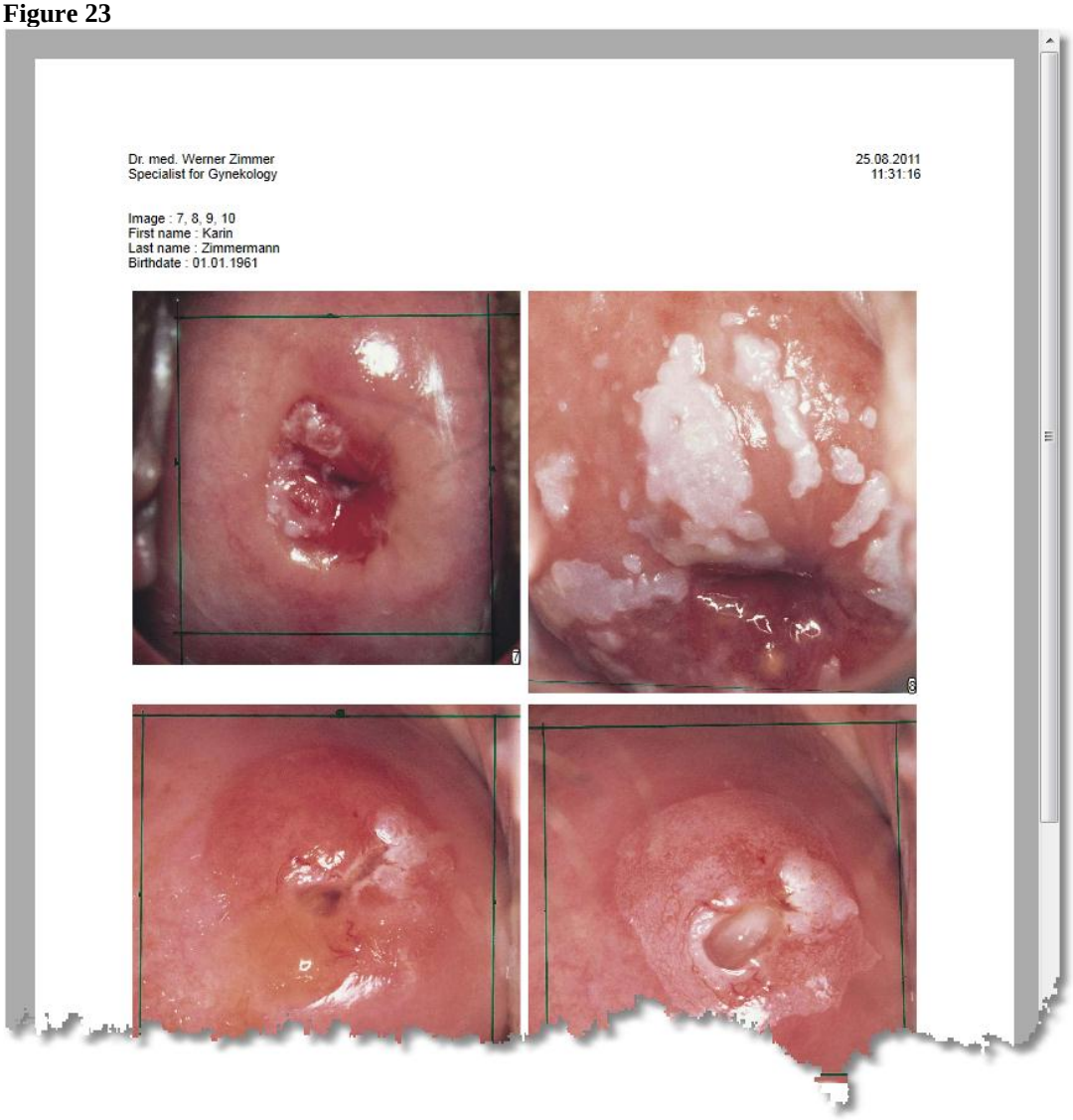
4.6.3 Printing images

There are several options to print one or several images as described above.

1. In image processing via the button  or the menu "File -> Print image" or the images' popup menu.
2. On the video page via the button  or the popup menu "Recorded images"
3. On the database page via the preview popup menu preview, "Images -> Extras -> Print image" on the left of the preview.

If you have selected several images, the programme automatically calculates an "Images split" as in this example:

Figure 23



4.7 Image processing

4.7.1 Loading images

You have several options of loading images into image processing:

1. Via the menu "File -> Open image"
2. From the database via the button "Load images" or by double click on the image in the preview
3. Via the video page: If the video options item "Loading images and videos into image processing automatically" is checked, all recorded images are automatically loaded in image processing.

4.7.2 Sorting images

There are pre-defined buttons for sorting images:

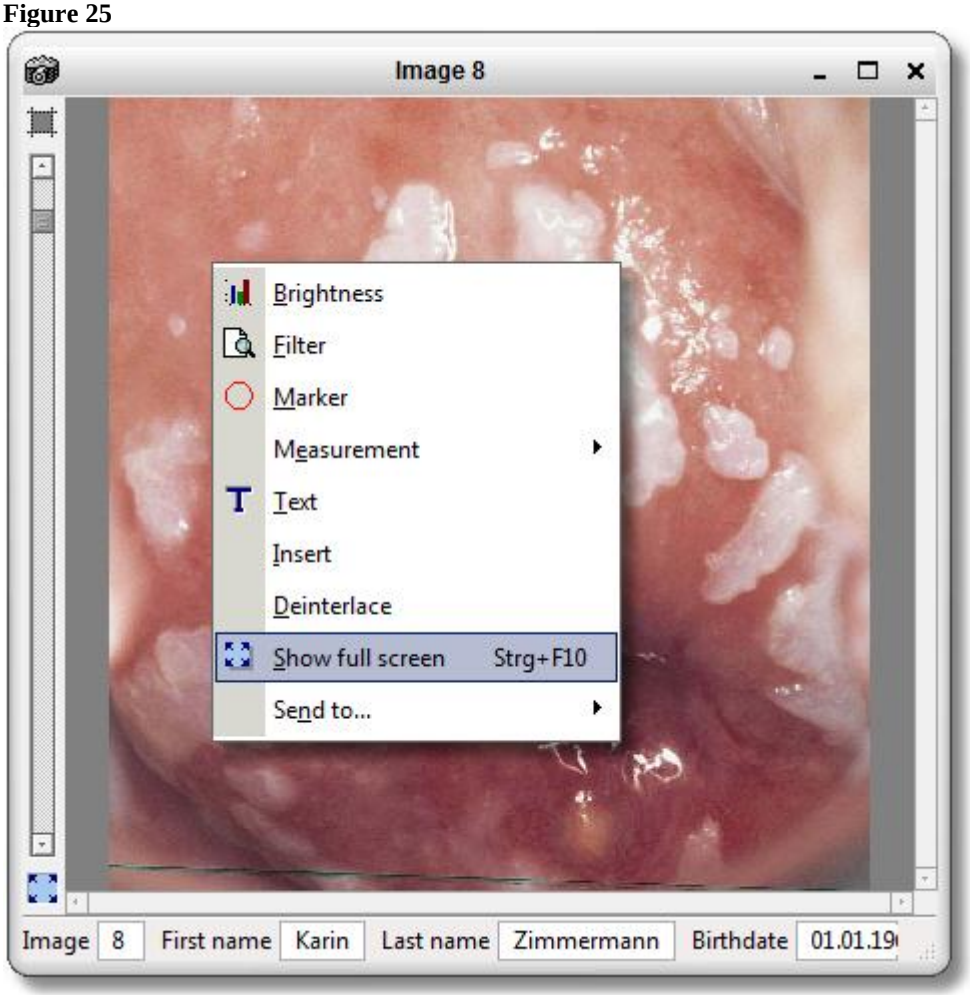
Figure 24

See **image processing**

4.7.3 Full screen display

The programme offers the option of displaying images in full screen mode. Click the image with the right mouse button and select "Show full screen" from the popup menu.

Figure 25



5 The Main Window

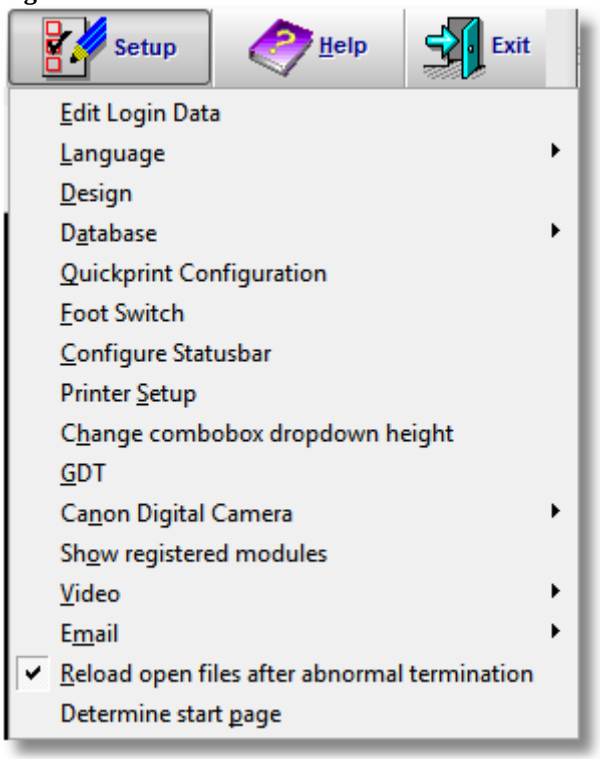
Figure 26

The main window essentially consists of the buttons for the individual programme modules as well as the menus for settings and help. Depending on the programme's module equipment, the button bar will look different. The upper image shows the minimum selection, the lower one the button bar with all cleared modules.

Figure 27

5.1 Settings

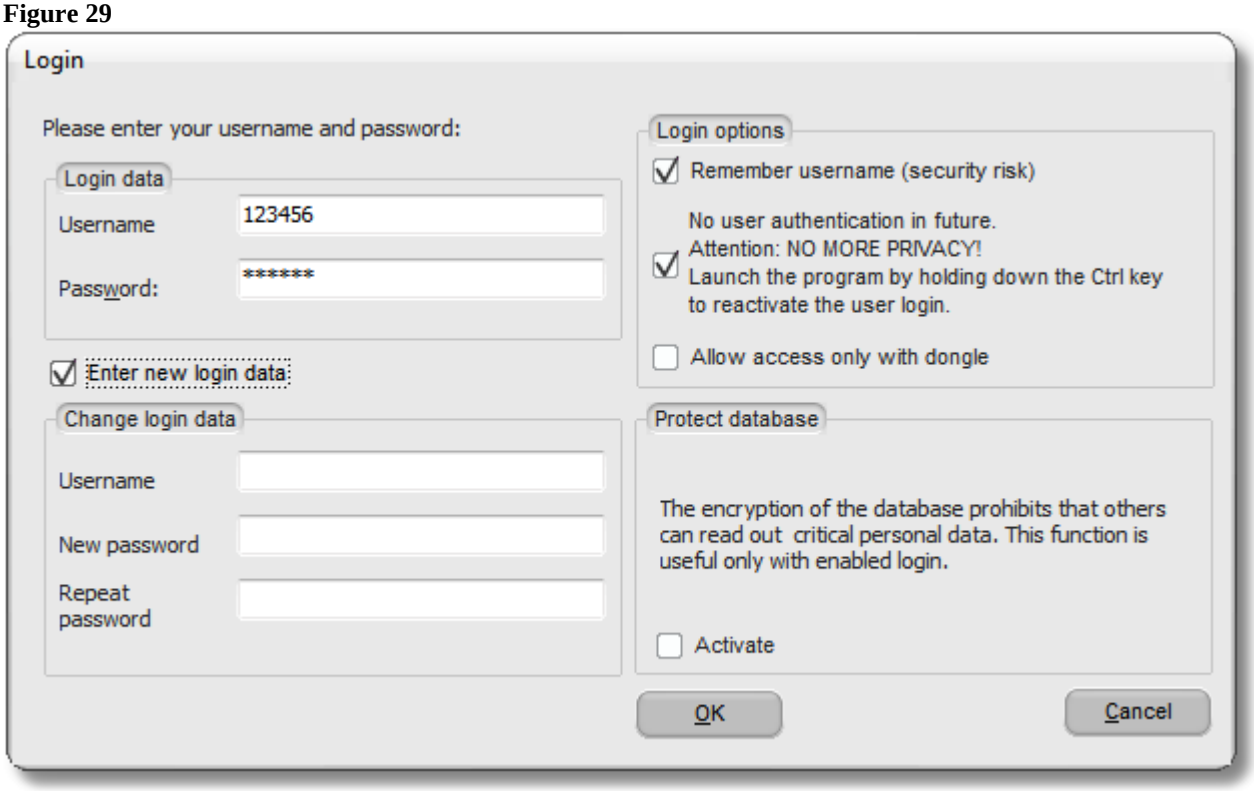
Figure 28



5.1.1 Login

The menu item "Edit login data" can be used to protect access to the programme with your user name and a password. Both when activating and deactivating the request and when changing the login data, you will be asked to enter the individual data. This ensures that no unauthorised person will be able to change these settings.

Figure 29



5.1.1.1 Login data

Enter your user name and password here if you have entered them before to clear the programme. For initial set-up, see "Change login data".

5.1.1.2 Enter new login data

Activate this option if you want to change your login data or if you want to set up the access protection for the first time. This option is only available once your login data have been entered correctly.

5.1.1.3 Change login data

Enter your new user name and the new password here. Observe:

- user name and password must have at least six digits.
- user name and password must not be the same.
- write down your input!
- login options

5.1.1.4 Remember user name

Only the password has to be entered for future logins.

5.1.1.5 No user authentication in future

The programme will start without user authentication. Caution: The patient data will not be protected from third-party access!

5.1.1.6 Allow access only with dongle

The programme can only be started with a present and valid dongle. This also applies if user authentication is deactivated.

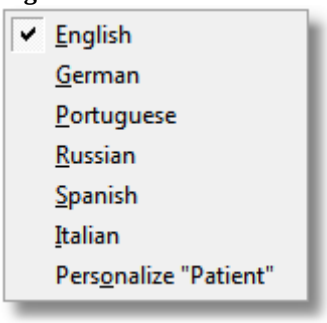
5.1.1.7 Protect database

For best protection of the patient data, you can protect the database by encryption. Once the programme is terminated, the database is packed in a password-protected zip file that will be unpacked again at start-up.

5.1.2 Language

At this time, you may choose between six languages that can be switched with the programme in operation.

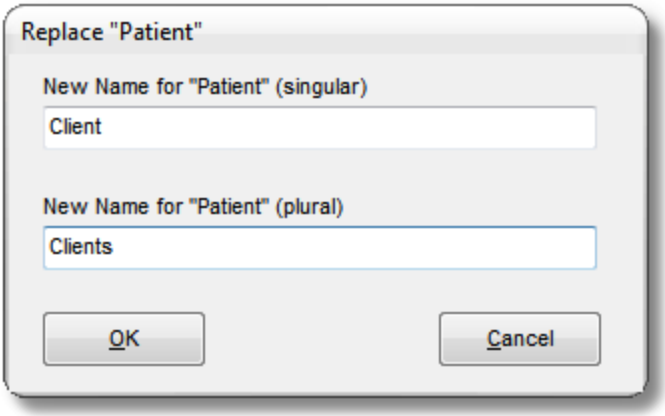
Figure 30



5.1.2.1 Replace "Patient"

This dialogue permits replacing the term of "Patient", e.g. with "Client" throughout the programme.

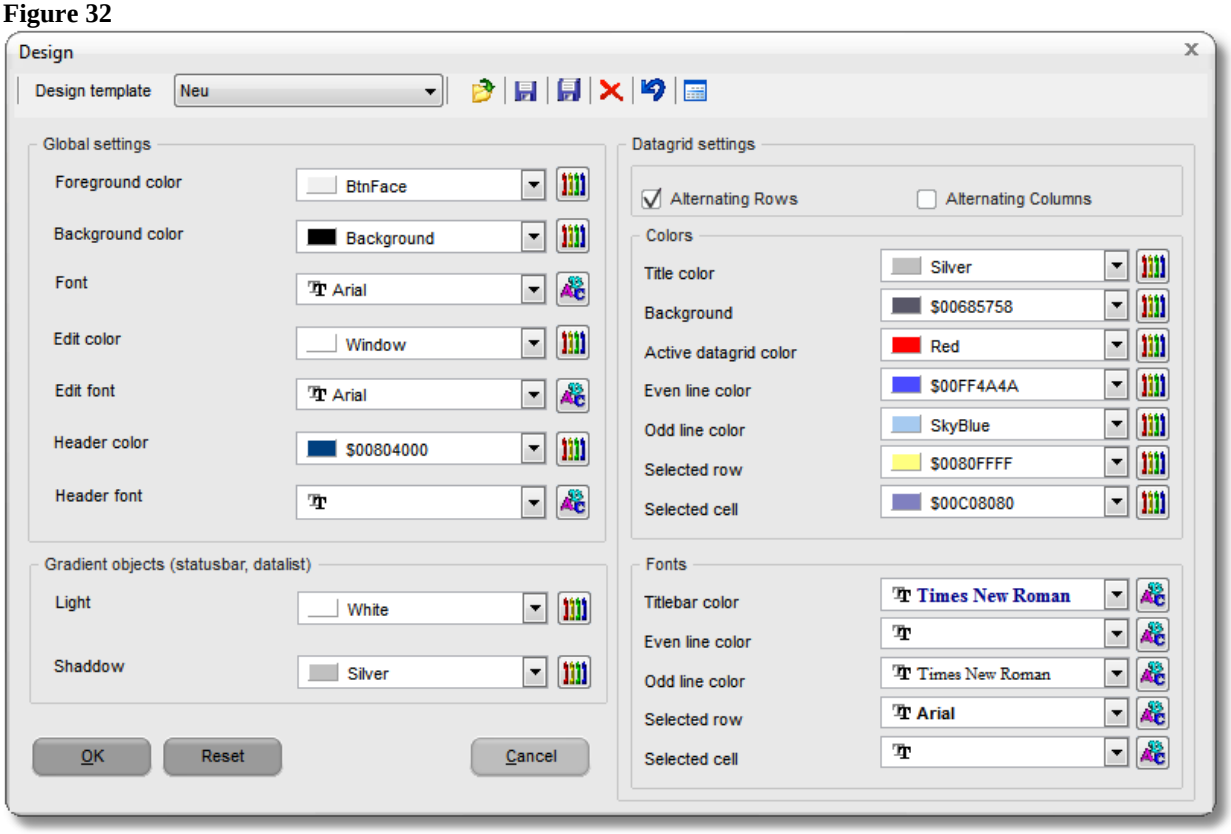
Figure 31



5.1.3 Design

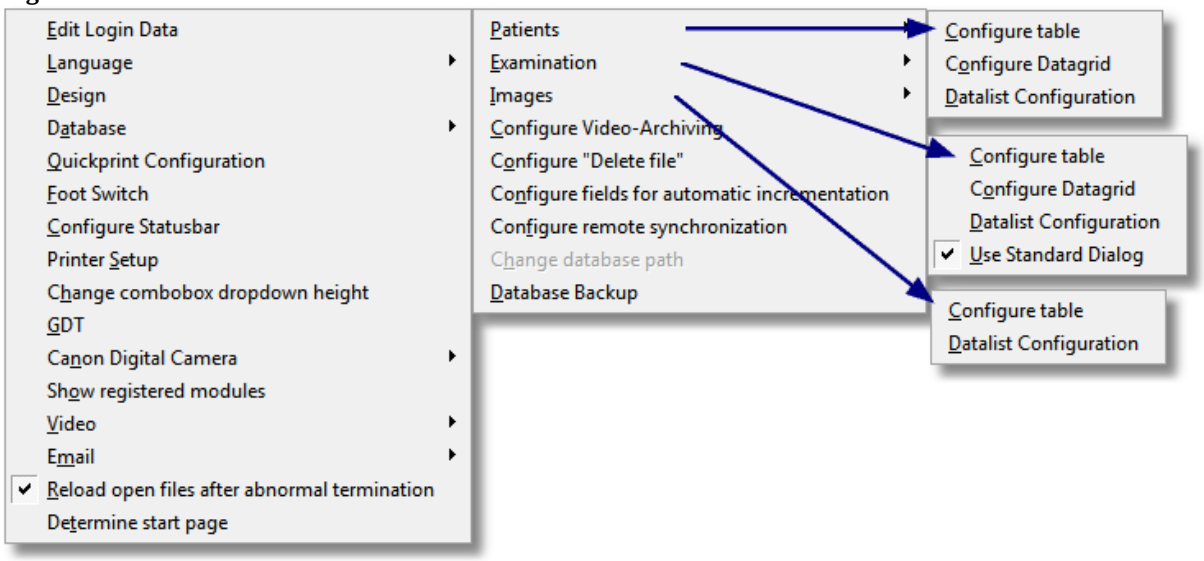
This dialogue permits adjusting the looks of the programme to your wishes. In particular presentation of the data grid on the database page can be adjusted individually. The settings of all parameters are stored in the database. This permits saving several designs as datasets and loading them as required.

Figure 32



5.1.4 Database

Figure 33



5.1.4.1 Configure Table

This function is designed as a module and not available in all versions of the programme.

See "Free database configuration" page 11-153.

5.1.4.2 Configure data grid

See "Data grid" page 8-106.

5.1.4.3 Data list configuration

See "Data list" page 8-106.

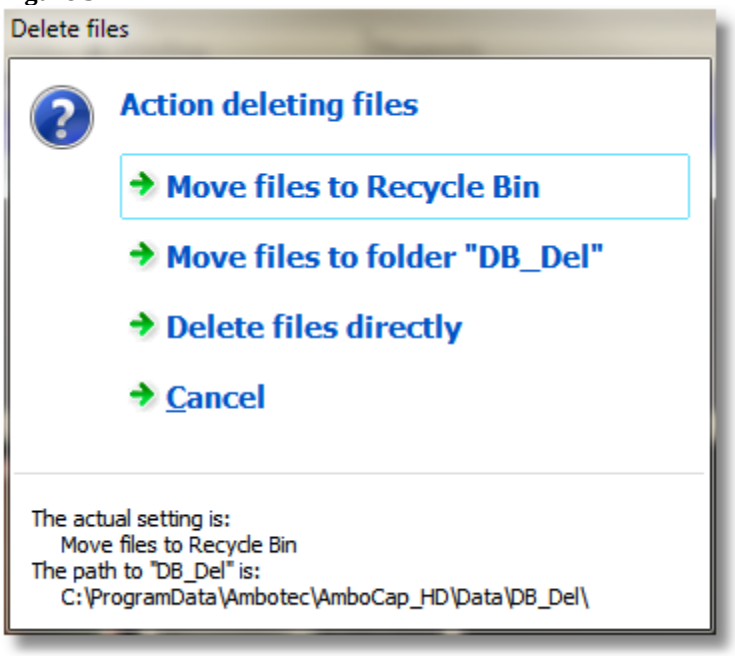
5.1.4.4 Examination – Use Standard Dialogue

5.1.4.5 Configure Video-Archiving

5.1.4.6 Configure "Delete Files"

In this dialogue, you may determine the action performed when an image or video is deleted from the database.

Figure 34



5.1.4.6.1 Move files to Recycle Bin

The files are moved to the Windows recycle bin and can be restored from there again.

5.1.4.6.2 Move files to folder "DB_Del"

The files are moved to the folder "DB_Del". It is set up by the programme and is a subfolder of the "DATA" folder with the database. The advantage of this setting is that the files are not deleted when the Windows recycle bin is emptied. If you delete files very often, however this folder may very quickly grow very large. This setting is not recommended, in particular for large video files.

The dialogue footer indicates the precise path to this folder.

5.1.4.6.3 Delete files directly

The files are deleted directly and irrevocably. Only use this setting if you are sure that you will not delete any important data.

5.1.4.6.4 Footer

The footer displays the current settings and path to the folder "DB_Del".

5.1.5 Configure fields for automatic incrementation

See "Configure fields for automatic incrementation" page 11-155

5.1.6 Configure address book search fields

See "Configure address lookup fields" page 11-183

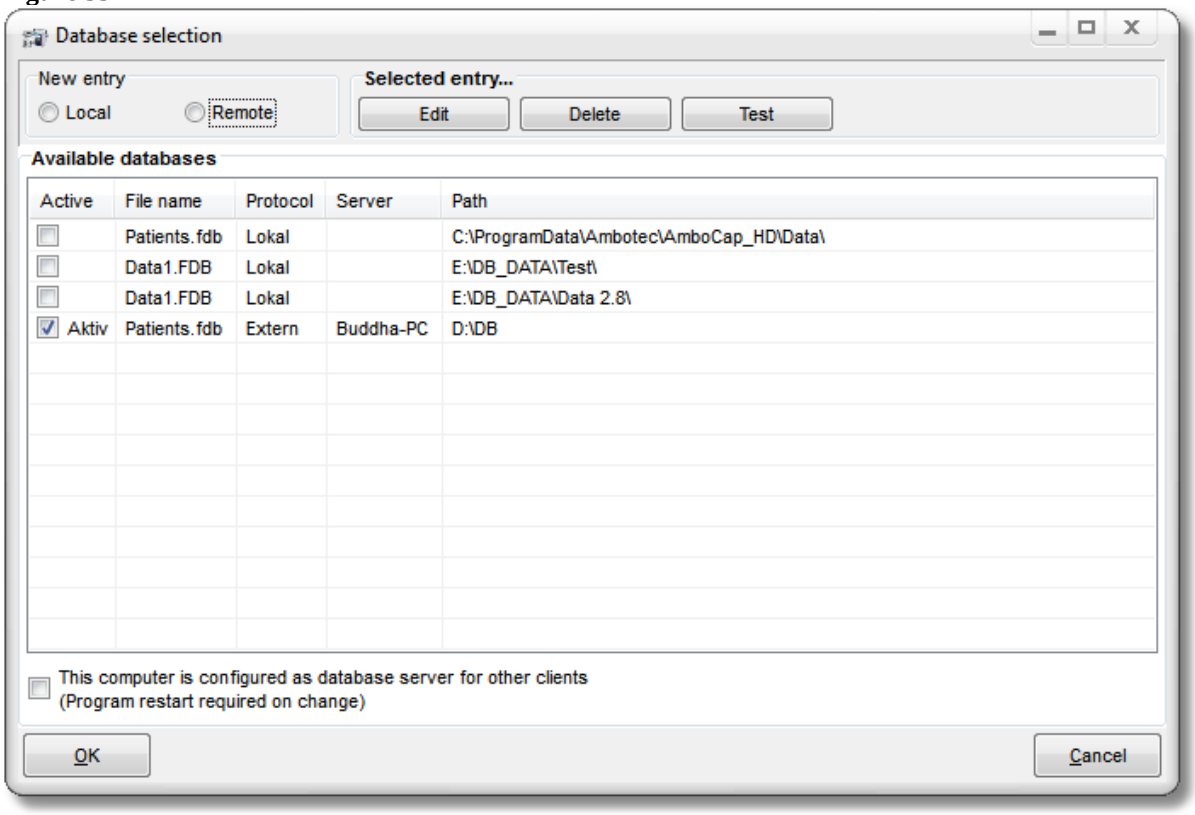
5.1.7 Configure remote synchronisation

See "Remote control" page 10-130

5.1.8 Change database path

This menu item opens the dialogue "Database selection" (Figure 35). It permits management of several databases.

Figure 35



Also see "Installing Firebird database server" page 10-127

5.1.9 Database backup

See "Database backup" page 11-151.

5.1.10 Database search

5.1.10.1 Assume database search display from database

The configuration of the fields in the data grids and data lists is assumed from the database page. This provides you with the same presentation in the database search as in the database.

5.1.11 Quickprint configuration

See “Configure Quick print” page 4-33.

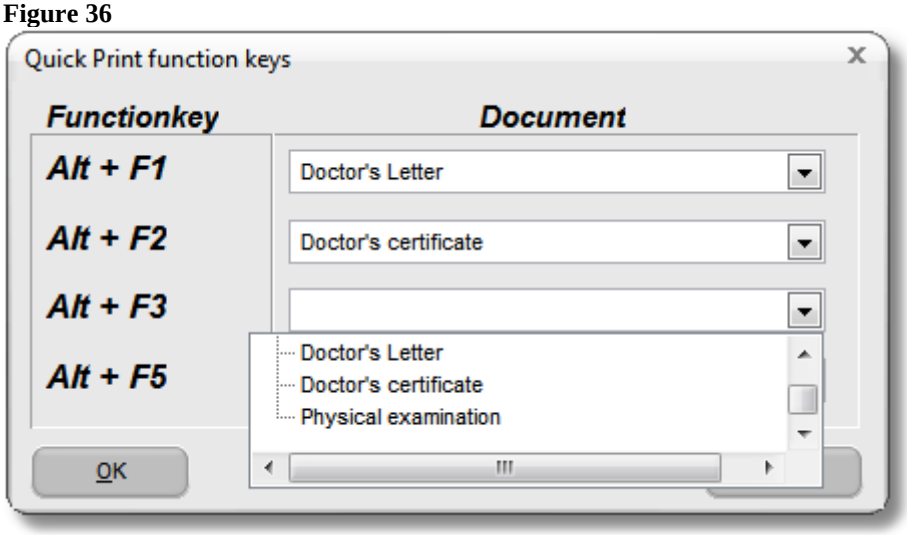
5.1.12 Foot switch

See "Foot switch " page 4-28

5.1.13 Assign function keys

The quick print function in the print module offers a way of assigning function buttons to different print templates so that you can print, e.g., a referral by pushing a key after recording an image and entering the findings:

Figure 36



5.1.14 Configure status bar

With this dialogue, you may specify database fields to be visible in the status bar. The prefix can be changed, e.g. to read "Client" instead of "Patient". The dialogue for status bar configuration is the same as for "Configure Quick print" on page 4-33.

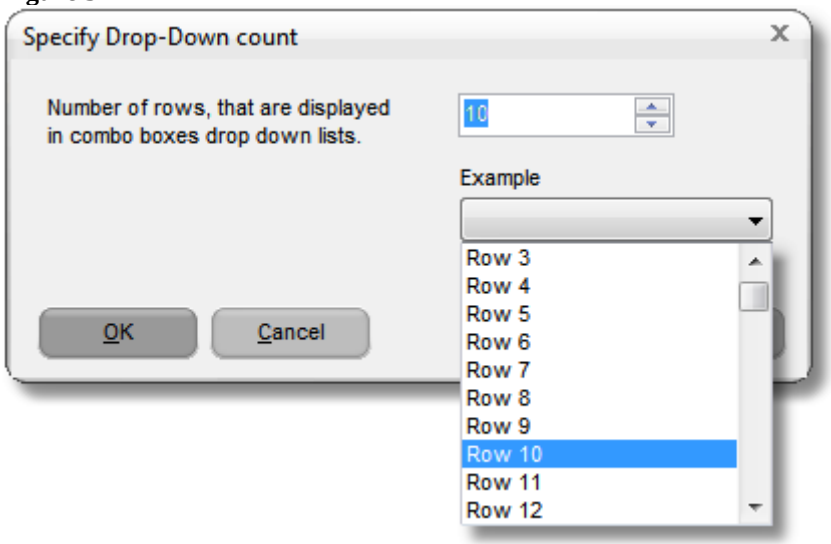
5.1.15 Printer set-up

Opens a dialogue to select a printer and change the print parameters. The settings are temporary and are not saved.

5.1.16 Change combo box dropdown height

All dropdown lists are controlled centrally. In this dialogue, you can specify the height of the lists dropping down and adjust them to your screen resolution.

Figure 37

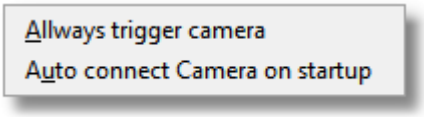


5.1.17 GDT

The GDT/BDT interface is used to attach the programme to a present practice software. The practice software provides a file containing the data of the selected patient. This file is read in and the patient is selected or, if not present, set up newly. Transmission of data to the practice software is possible as well. Once activated, the practice software will be informed of every new image or video recorded and receives links to the new files via the return file. For precise description. See "GDT practice software integration" page 11-159.

5.1.18 Canon digital camera

Figure 38



5.1.18.1 Always trigger camera

If a Canon EOS camera is connected to the programme, the camera is only triggered when the Canon page is active. If this option is active, the camera will always be triggered when the foot switch is pressed, even if, e.g., the database page is active right then.

5.1.18.2 Auto connect camera on start-up

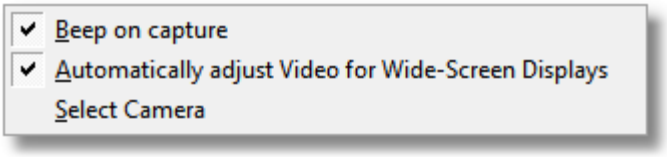
If this option is active, the programme will regularly try to connect the Canon EOS camera. This means that the camera will be connected as soon as it is activated.

5.1.19 Show registered modules

See "Additional modules" page 11-132.

5.1.20 Video

Figure 39



5.1.20.1 Beep on capture

When recording an image, as well as when starting and terminating a video recording, an acoustic message is output.

5.1.20.2 Automatically adjust video for Wide-Screen Displays

For wide-screen displays, the button bar is automatically put on the left side. This way, video cameras in the standard PAL format have more space available. See (Button bar left and (Button bar top).

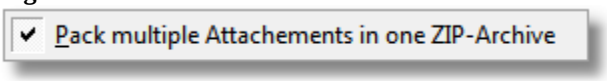
5.1.20.3 Select camera

You can use this menu item to call the camera selection dialogue. See Selecting the camera page 4-22.

5.1.21 Email

5.1.21.1 Pack multiple attachments in one ZIP archive

Figure 40



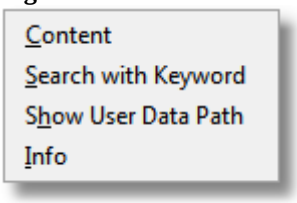
If several attachments are sent in one email, e.g. several images, they can be placed in a single archive.

5.1.22 Reload open files after abnormal programme termination

If the programme or Windows crashes, all images and videos previously opened in image processing will open again at the next programme start.

5.1.23 Help

Figure 41



5.1.23.1 Content

Opens the help file and the tab "Content".

5.1.23.2 Search with keyword

Opens the help file and the tab "Index".

5.1.23.3 Show user data path

In the user data path, all configuration files are saved. This path depends on the user name. To manually adjust settings if required, an Explorer window is opened from which the files can be opened directly.

5.1.23.4 Info

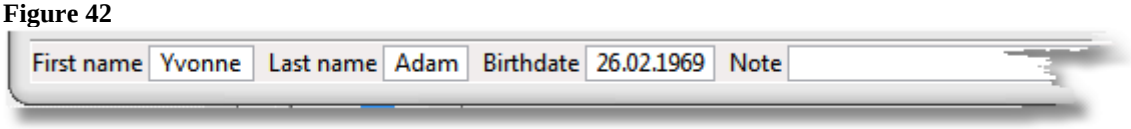
Opens a dialogue with information on the programme, such as version number or manufacturer.

5.1.24 Exit

Exits the programme. You may also use the "X" to exit the programme.

5.2 The status bar

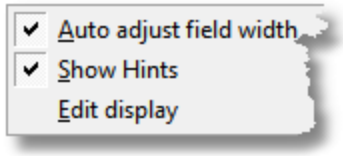
Figure 42



The status bar is located in the lower part of the programme and indicates the current patient. The current patient is the one whom all recorded images are assigned to in the database. The data to be displayed in the status bar can be set in the dialogue "Configure status bar" page 5-46.

5.2.1 The popup menu

Figure 43



5.2.1.1 Auto adjust field width

If this option is activated, the length of the field in the status bar is automatically adjusted to the respective content. Otherwise, a fixed length can be specified by moving the mouse to the vertical separating line between two fields and moving it to the right with the left mouse button pressed.

Figure 44

5.2.1.2 Show hints

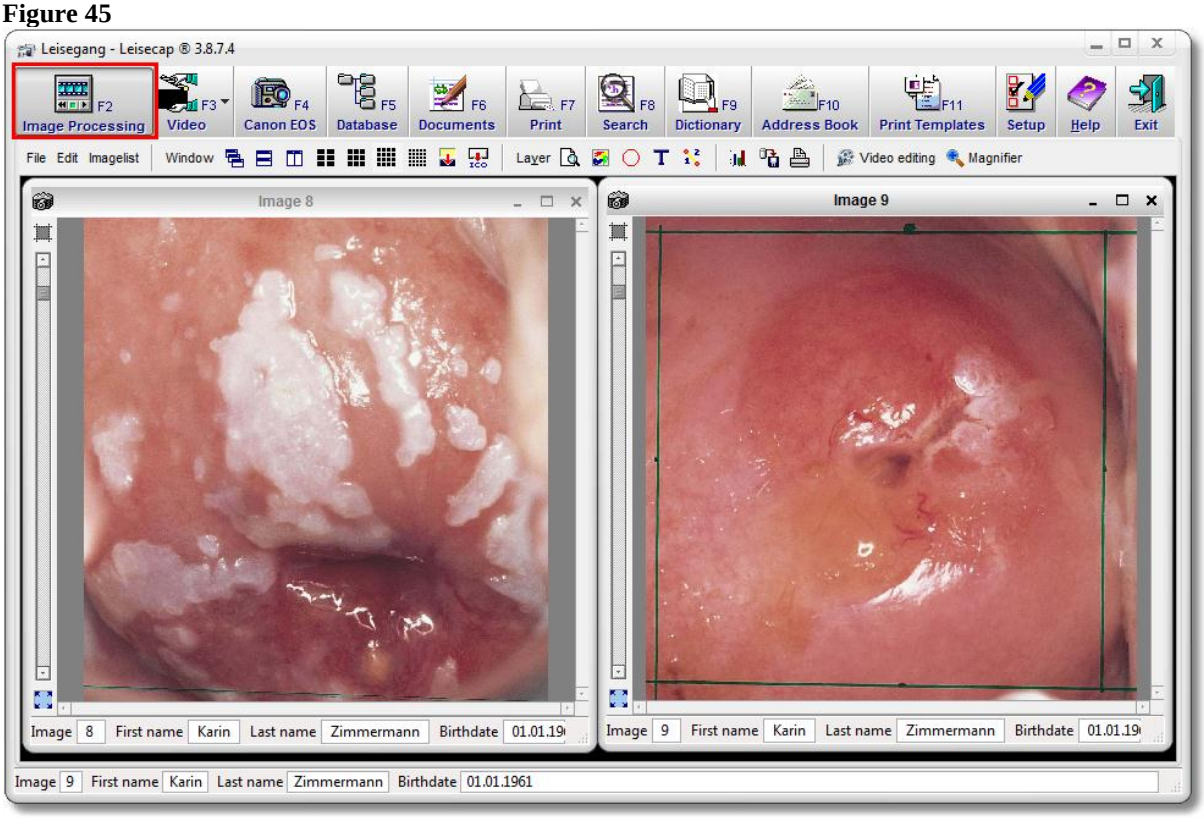
With this option activated, the entire content of the field on which the mouse pointer is located is displayed in a notice window. This is particularly helpful in fields with several lines of text.

5.2.1.3 Configure view

This menu item specifies the fields to be displayed in the status bar. See "Configure status bar" page 5-46.

6 Image processing

Figure 45



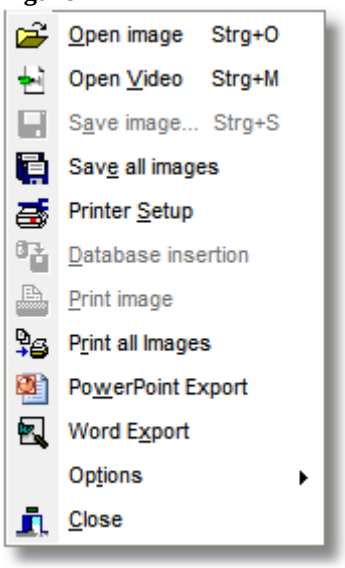
6.1 The menu bar

Figure 46

The menu bar on the image processing page offers access to all functions to open, save and edit images. If you want to learn more about the menu commands in a menu, click the respective fields in the corresponding menu name in the following list or the screenshots as you are used to from Windows.

6.1.1 Menu file

Figure 47



6.1.1.1 Open image

Use this menu item to load images to image processing from the hard disc, CD or thumb drive.

6.1.1.2 Open Video

Use this menu item to load videos to image processing from the hard disc, CD or thumb drive.

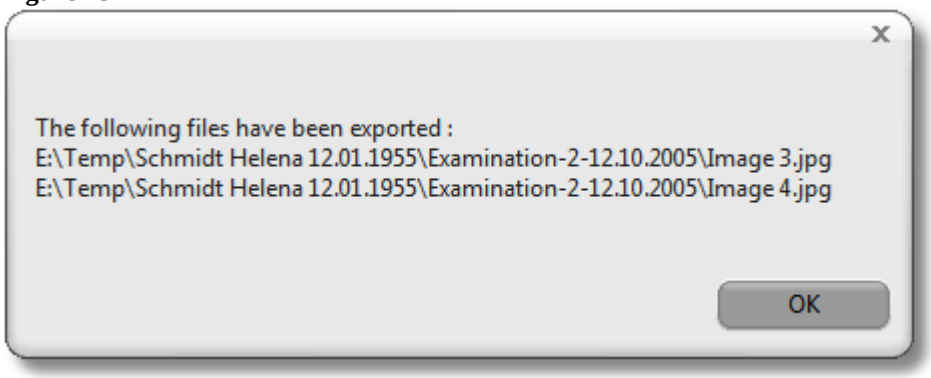
6.1.1.3 Save image

Use this menu item to save the current image to hard disc or USB thumb drive.

6.1.1.4 Save all images

Use this menu item to save all open images including patient and examination data on a data carrier at once. A separate subfolder is created for every patient and the associated study. The images are saved with their database number. After copying, you may receive the following dialogue:

Figure 48



6.1.1.5 Printer set-up

Opens a dialogue to temporarily change the printer settings or to select a different printer.

6.1.1.6 Print image

The active image is printed with the current quick print settings.

See "Printing images " page 4-38

Also see “Configure Quick print” page 4-33.

6.1.1.7 Print all images

All images opened in image processing are printed with the current quick print settings.

See "Printing images " page 4-38

Also see “Configure Quick print” page 4-33.

6.1.1.8 PowerPoint Export

All images opened in image processing are sent to Microsoft PowerPoint via a dialogue.

See "PowerPoint-Export" page 11-138.

6.1.1.9 Word Export

All images opened in image processing are sent to Microsoft WORD via a dialogue.

See "WORD-Export" page 11-133.

6.1.1.10 Options

6.1.1.10.1 Configure info bar

Use this option to switch the status bar of the image windows on or off and to configure the displayed fields. The process is the same as for the status bar in the main window.

Figure 49

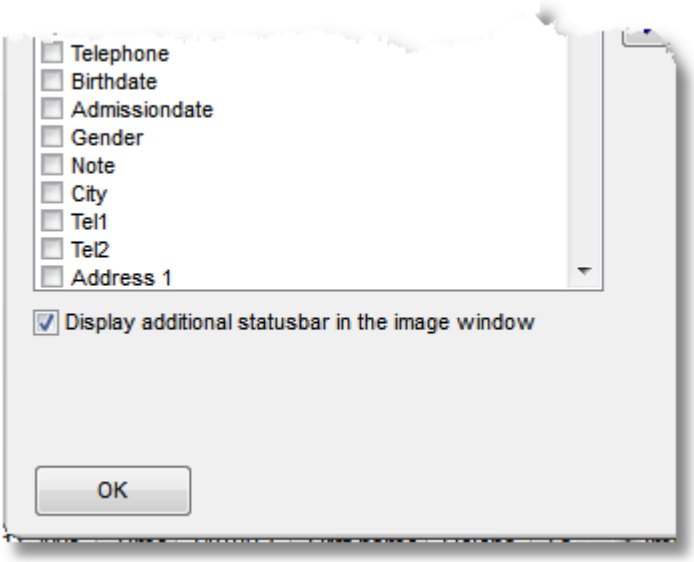
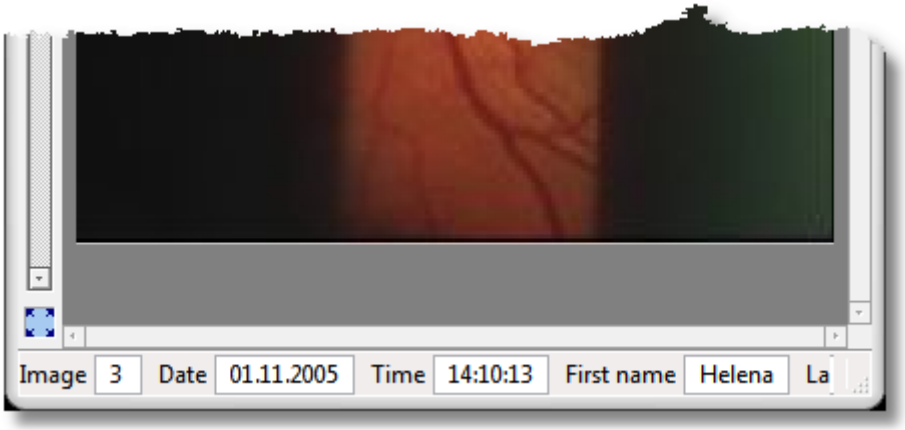


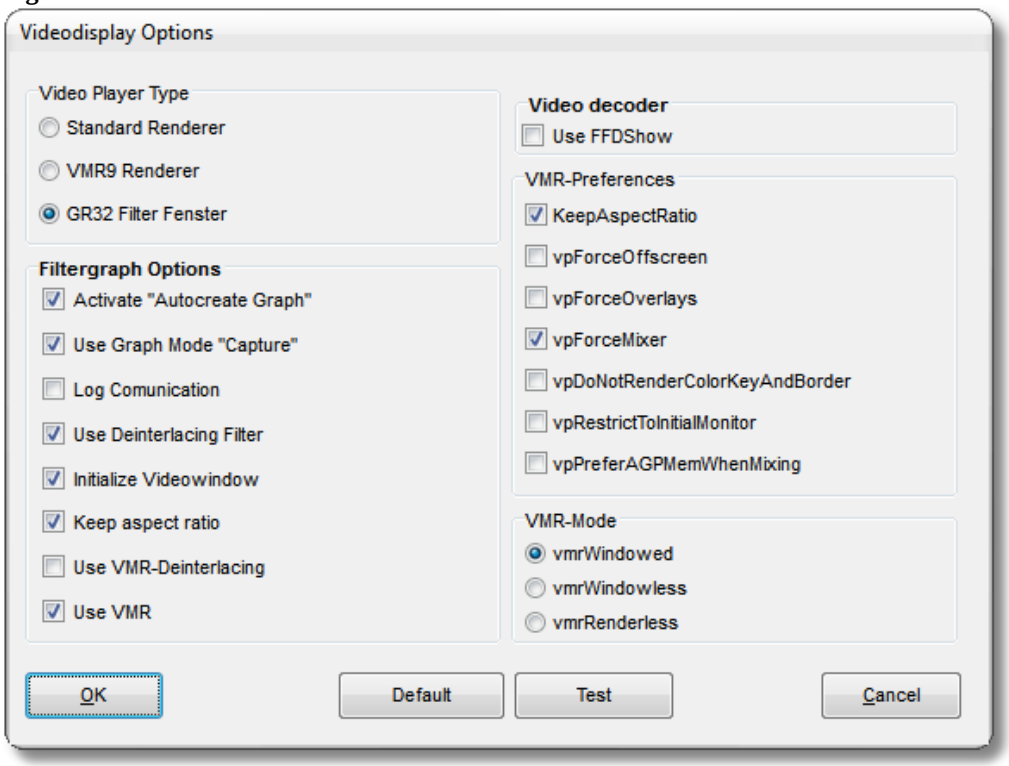
Figure 50



See "Configure status bar" page 5-46.

6.1.1.10.2 Configure video playback

Figure 51



This dialogue can be used to set special options that influence video playback. If you have problems with video playback, contact your supplier. An important option is selection of the video player, see “Video player selection” page 6-62.

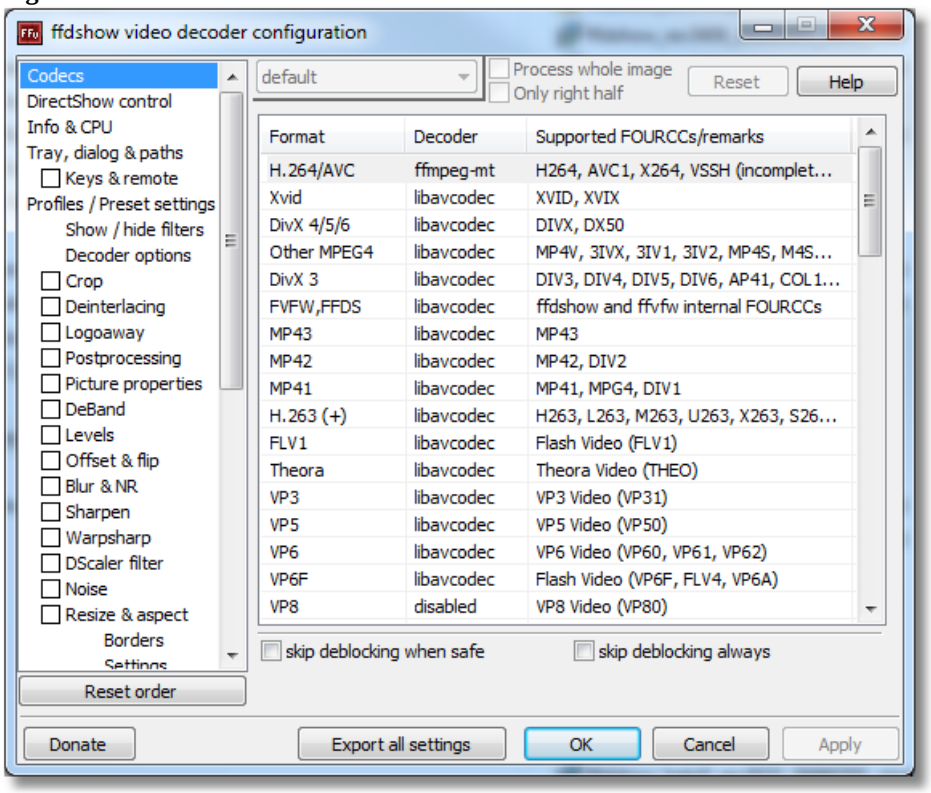
6.1.1.10.3 Use FFDShow

If the "FFDShow Video Codec Pack", which is available for free online ("http://ffdshow-tryout.sourceforge.net/"), is installed, this option can be used to integrate the raw video filter. This filter offers a number of editing options. To call the configuration dialogue, the task bar shows an icon you have to double-click:

Figure 52

The following dialogue appears:

Figure 53



6.1.1.11 Cancel

Exits and closes the programme.

6.1.2 Menu edit

6.1.2.1 Copy

The entire image, or, if activated, a "Layer" (image section) is copied to the clipboard.

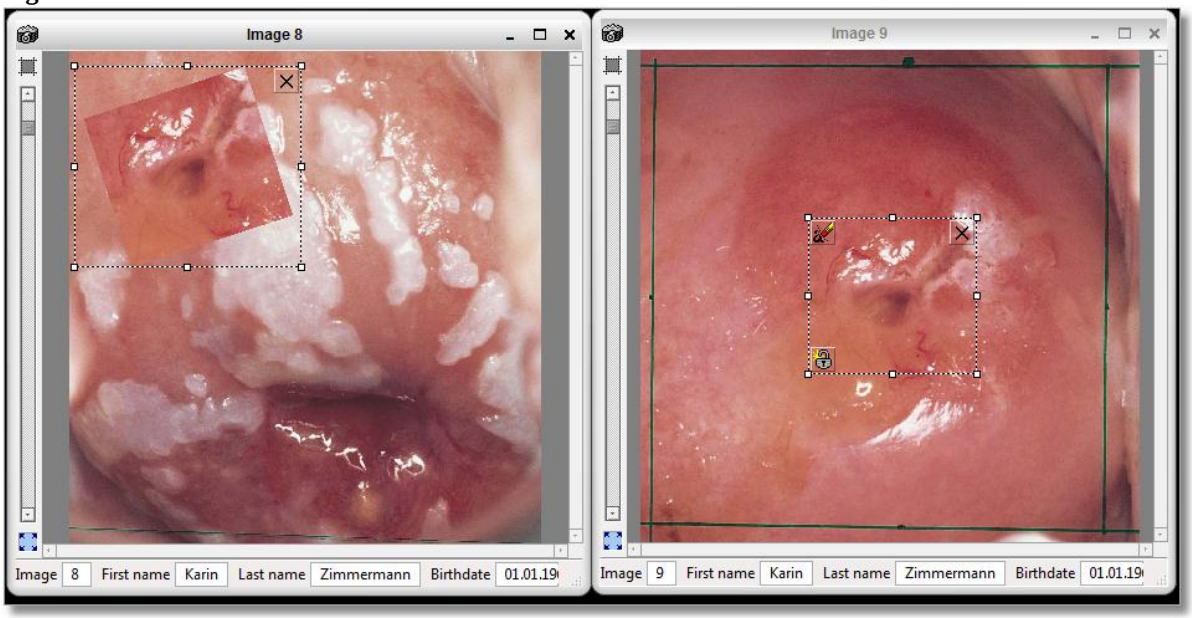
6.1.2.2 Insert as a new image

If an image is in the clipboard, it is inserted in image processing as a new image. If required, it can also be imported into the database.

6.1.2.3 Insert as layer

If an image is in the clipboard, it is inserted in the active image as a "layer" and can be moved and changed in size. Example:

Figure 54



Additionally, you may turn the inserted image and display it partially transparently.

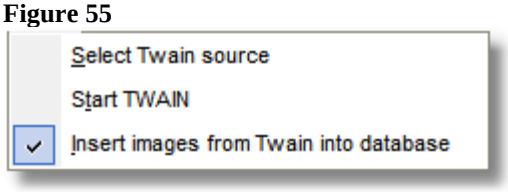
The window "Overlay" as visible in the example opens automatically.

6.1.2.4 Turning image by 90°

The current image is turned clockwise by 90°. This action can be repeated several times to achieve 180° and 270° turns.

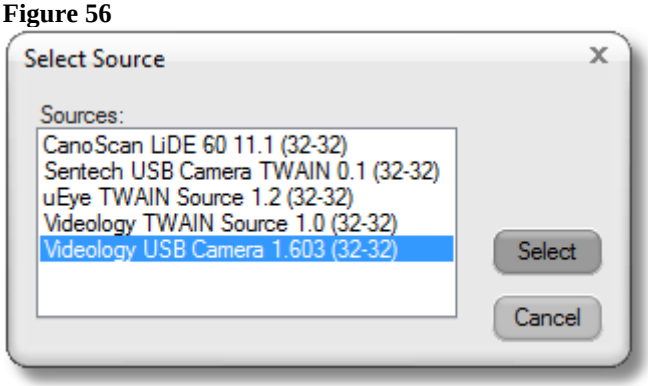
6.1.3 Menu Twain

Figure 55



6.1.3.1 Select Twain source

Figure 56



This dialogue permits selection of the source from which you want to collect your images. This is necessary if you have several Twain-compatible devices connected. If your desired device (camera...) is not in this list, re-install the driver.

6.1.3.2 Start TWAIN

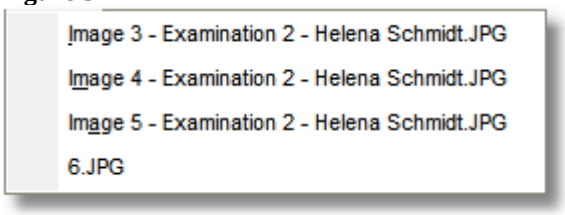
The above window is only an example, the Twain capture module is part of the driver software of your hardware. In case of problems, read the manual or the help files of your hardware.

6.1.3.3 Insert images from Twain into database

The button to switch automatic insertion of the Twain image into the database on and off is located on the image processing page in the left function bar. If this button is on top, the Twain images are automatically inserted into the database. If this button is pushed, the Twain images are only displayed in image processing.

6.1.4 Image list

Figure 57

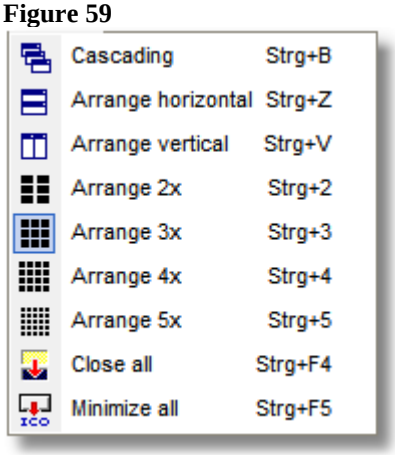


The image list lists all images you have opened. Depending on whether the images are from the database or a file, the patient data or file name will be displayed. This way, you can always access any concealed images by clicking the corresponding entry in the menu.

6.1.5 Sort images

Figure 58

Figure 59



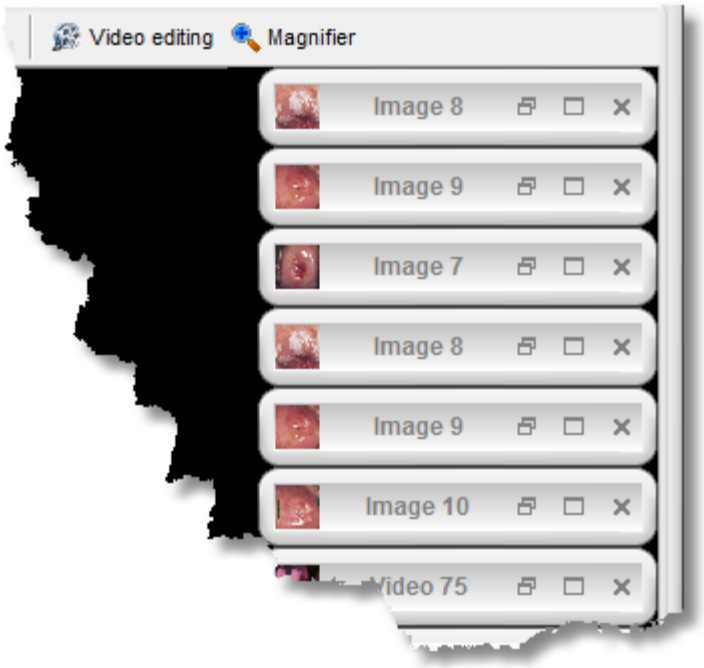
6.1.5.1 Cascading

All open windows are cascaded from the top left so that the title bar of each is visible. This function is useful if you have many open windows and want to get a quick overview.

6.1.5.2 Arrange horizontally

All windows are minimised down to the title bar and put below each other in the main window. This is useful, e.g. if you want to perform image analysis and record new images in between.

Figure 60

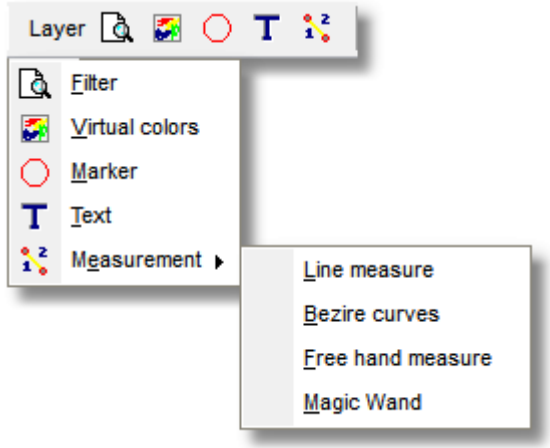


6.1.5.3 Close all

All windows are closed. Any changes made to the open images are lost!

6.1.6 Filter layer

Figure 61



See additional modules image processing page **Fehler! Textmarke nicht definiert.**

6.1.7 Additional button

Figure 62

6.1.7.1 Brightness, contrast, saturation

This dialogue is used to change various parameters of video playback.

This option is not available in the standard video player!

Figure 63 "RGB"-GR32 video player

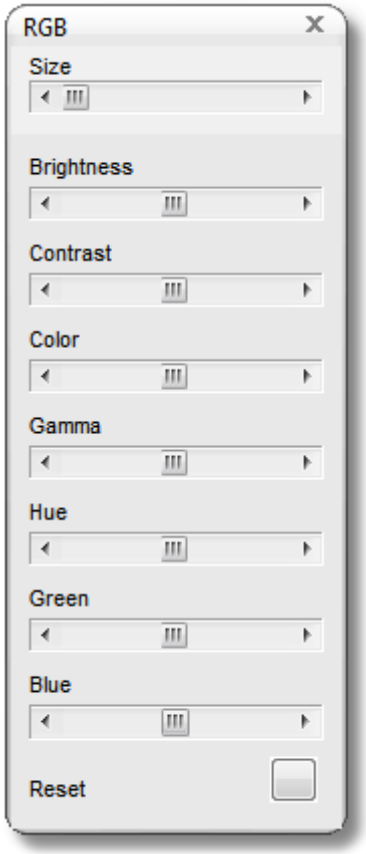
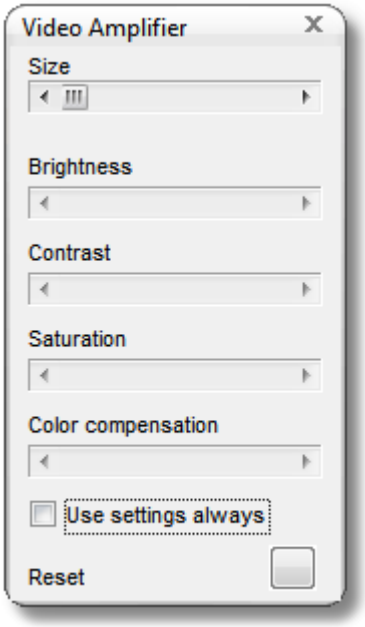


Figure 64 Video amplifier WMR9 video player



Use the option "Use setting always" to save your preferred settings. The programme now uses them automatically for every video.

6.1.7.2 Insert image into database

The current image or video is inserted in the database under the current patient.

6.1.7.3 Print image

The active image, and in videos the image at the current position, is printed with the current quick print settings.

See "Printing images" page 4-38.

Also see “Configure Quick print” page 4-33.

6.1.7.4 Video editing

See module “HD video processing (video cutting)” page 11-209.

6.2 The image window

Figure 65

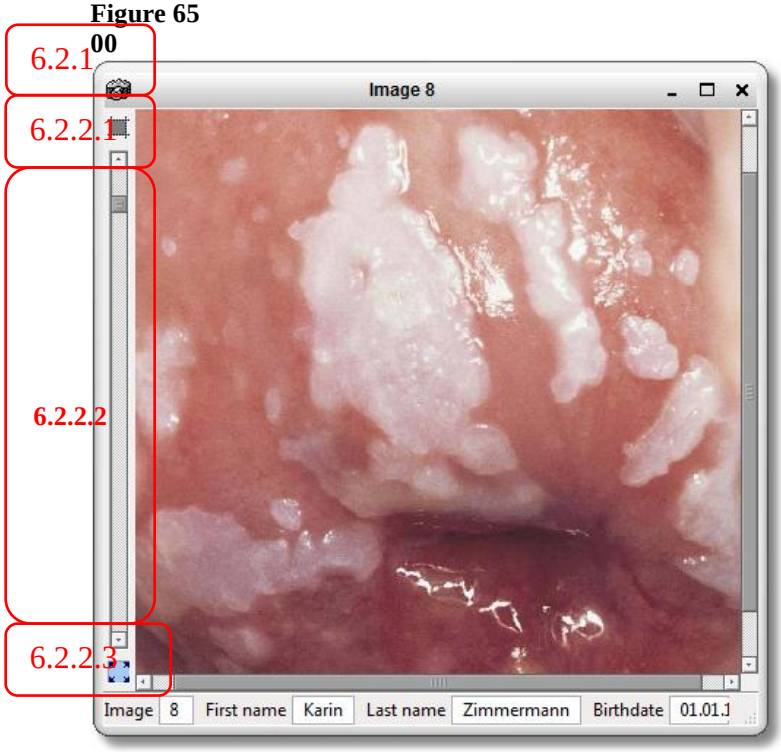


Figure 66 (Popup menu image window)

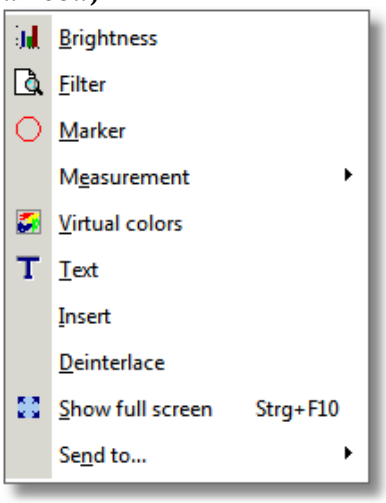
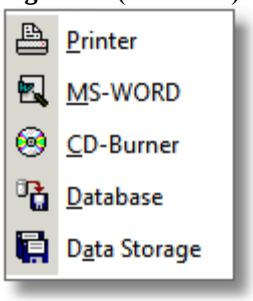


Figure 67 (Sent to…)



6.2.1 The popup menu

The popup menu can be opened with the button  or by right-clicking in the image window.

6.2.1.1 Brightness…

See Brightness, contrast, page 6-58

6.2.1.2 Filter

See “Filter functions” page 11-149.

6.2.1.3 Marker

See “Markers and texts” page 11-149.

6.2.1.4 Text

See “Markers and texts” page 11-149.

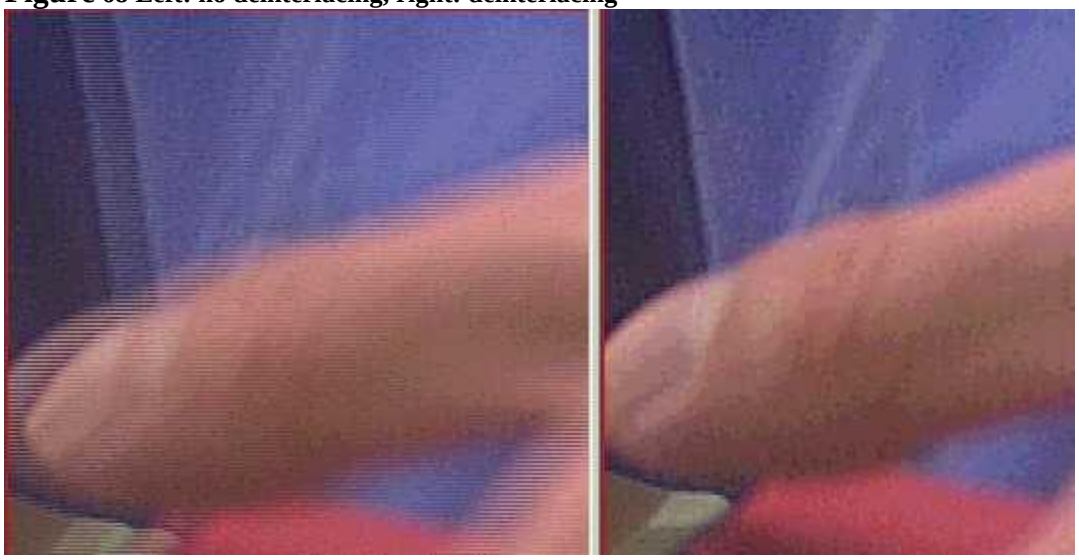
6.2.1.5 Insert

See “Insert as layer” page 6-55.

6.2.1.6 Deinterlace

Deinterlacing is necessary if images are recorded in interlaced scanning (PAL, NTSC) and the two half images form an interlace comb. Example:

Figure 68 Left: no deinterlacing, right: deinterlacing



6.2.1.7 Full screen

Use this button to output the image in the entire screen independently of image window or programme window size.

In full screen mode, you may zoom the image with the mouse scroll wheel and move it with the left mouse button pushed.

6.2.1.8 Send to…

6.2.1.8.1 Printer

See “Printing images” page 4-38.

6.2.1.8.2 MS-Word

See “WORD-Export” page 11-133.

6.2.1.8.3 CD writer

See “CD/DVD writing” page 11-140.

6.2.1.8.4 Database

The current image or video is newly inserted in the database under the current patient.

6.2.1.8.5 Data carrier

Use this menu item to save the active image to the hard disc or USB thumb drive.

6.2.2 Scale

6.2.2.1 Scaling to original size

The image is reset to its original size via the button  . This corresponds to 1:1 display on pixel level.

6.2.2.2 Free scaling

Use the slider on the left of Figure 65 to manually set scaling in a wide range. Alternatively, you may also use the mouse scroll wheel to zoom.

6.2.2.3 Adjust display to window

Use the button  to adjust the image to the current window size.

6.2.3 Status bar

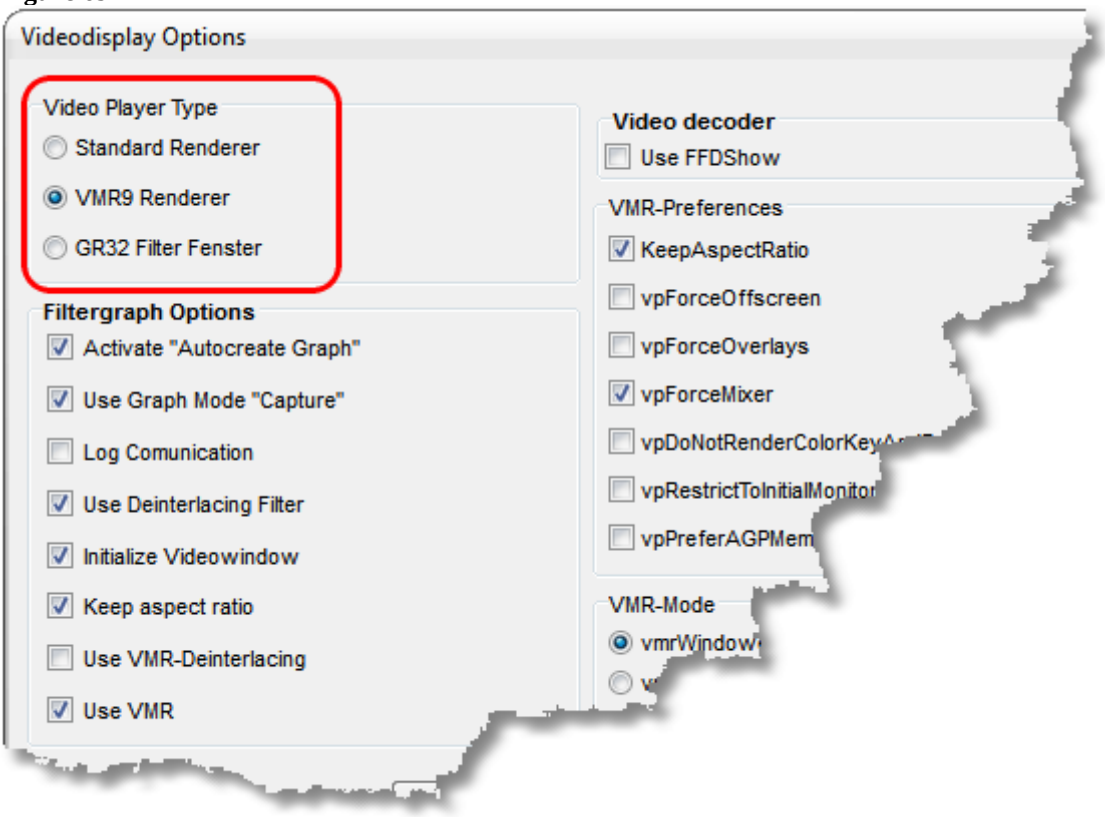
6.2.3.1 The status bar shows the patient data for the image. When loading an image from a data carrier, the patient currently selected in the database is displayed here. Use “

Configure info bar” page 6-52 to adjust the bar to your needs or to switch it off.

6.3 Video player selection

The programme offers three different video players for selection. To get to the selection dialogue, use Image processing -> Menu file -> Options ->”Configure video playback” on page 6-54.

Figure 69



6.3.1 Standard renderer

The standard renderer is the best selection for older and slower computers.

6.3.2 VMR9 renderer

This renderer is suitable for any computer that meets the system requirements for video recording. This renderer should be chosen particularly for playback of HD video.

6.3.3 GR32 player

This video player is only suitable for computers that meet the system requirements for HD video recording. It offers the options of zooming in on the video image and to apply filters in parallel in

the running video. However, this requires some computing power that will cause weaker computers to stutter when displaying HD videos. The size of the filter window is decisive for load.

Figure 70 (Standard and VMR9 Renderer)

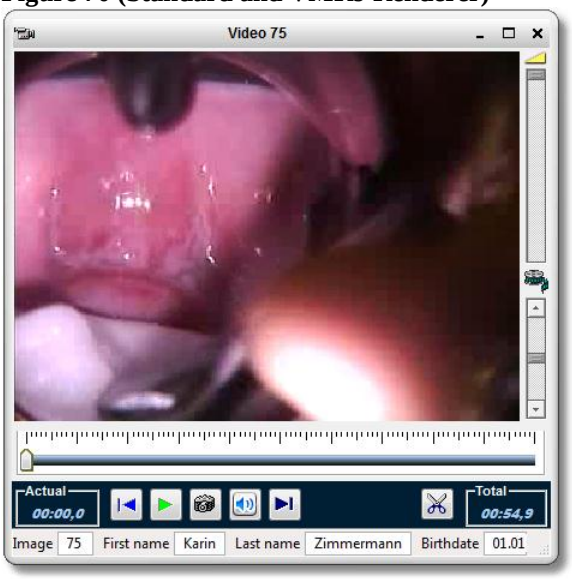
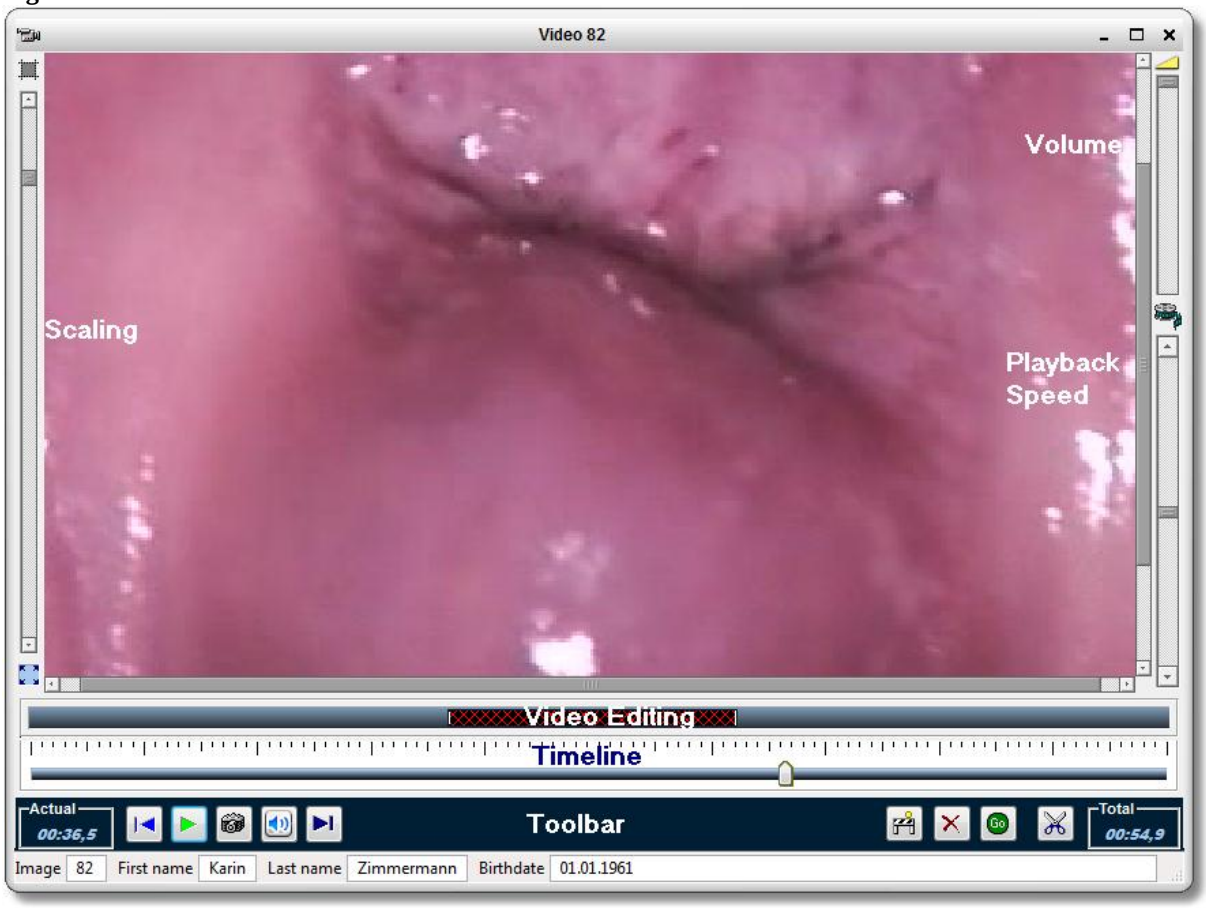


Figure 71 (GR32 Player)

6.4 The video player

Figure 72



6.4.1 Scaling

This function is only available in the "GR32-Player". See “Scale” page 6-61.

6.4.2 Volume

This slider adjusts the volume when the video has an audio track.

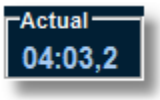
6.4.3 Speed

This control adjusts the playback speed in the area of 1/10 – 10x. Correct function, however, depends on the video codec used. Therefore, it is possible that not the entire range will be useful in every video. Higher speeds will also require a faster computer to prevent "image stutter". Use the button  to reset playback to the normal speed.

6.4.4 Timeline

The timeline permits jumping to any position within the videos or scrolling through a scene quickly by moving the slider with the left mouse button pushed. Clicking a free point of the timeline will fast forward or rewind the video by a tenth of the overall playing duration.

6.4.5 Operating bar



Displays the current video position in "minutes:seconds,milliseconds".

Displays the total video duration in "minutes:seconds,milliseconds".

 Rewind video to the beginning

 Start/stop playback

 Snapshot of the current video position. A new window is opened with the image

 Sound on/off

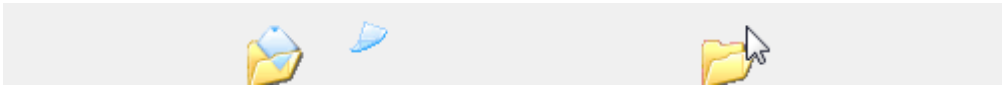
 Endless loop on/off. If you have inserted one or several cuts using the video cut bar, endless playback will play the resulting video clip; cut-out parts will be skipped.

6.4.6 Simple video cutting

The video cutting bar can be displayed or hidden with the button  in the player's operating bar.

If the cutting bar is displayed, you may use the button  to insert a new cutting mark. These are the cutting bar sections with red hatching. They represent the parts of the video that are cut out. The cutting marks are inserted in the timeline at the slider position. The cutting marks can be deleted again individually with the right mouse button. Use the button  to delete all cutting marks at once. You may move the cutting marks with the left mouse button pushed or change the start and end positions by moving the mouse to the start or end of the cutting mark until the mouse pointer changes:  . Now move the position with the left mouse button held down. The current video position will move along.

Use the button  to finally cut the video and to open it in a separate window as a new video; the original file is maintained. An animation is displayed during generation of the new file:



7 The video page

Figure 73 Video page left button panel

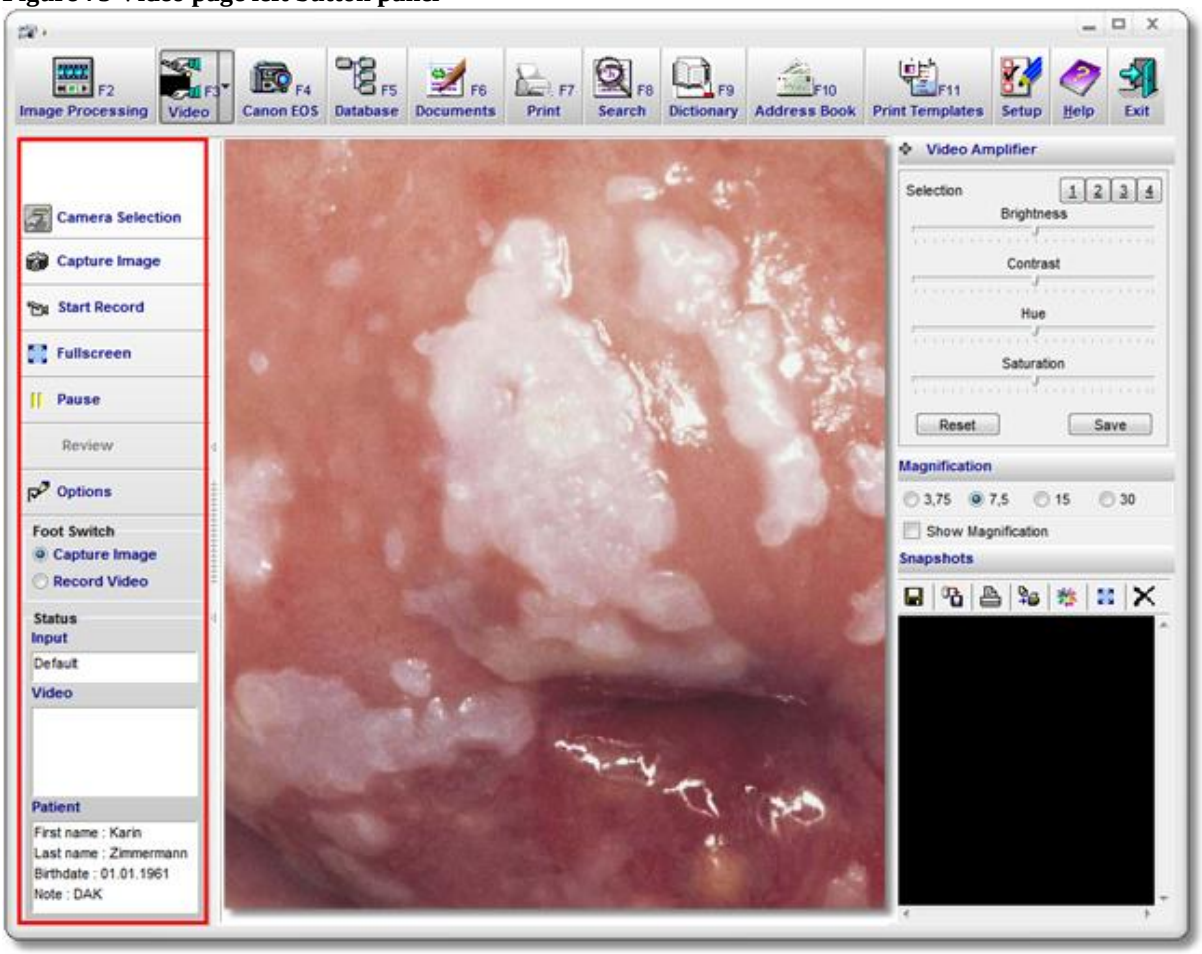
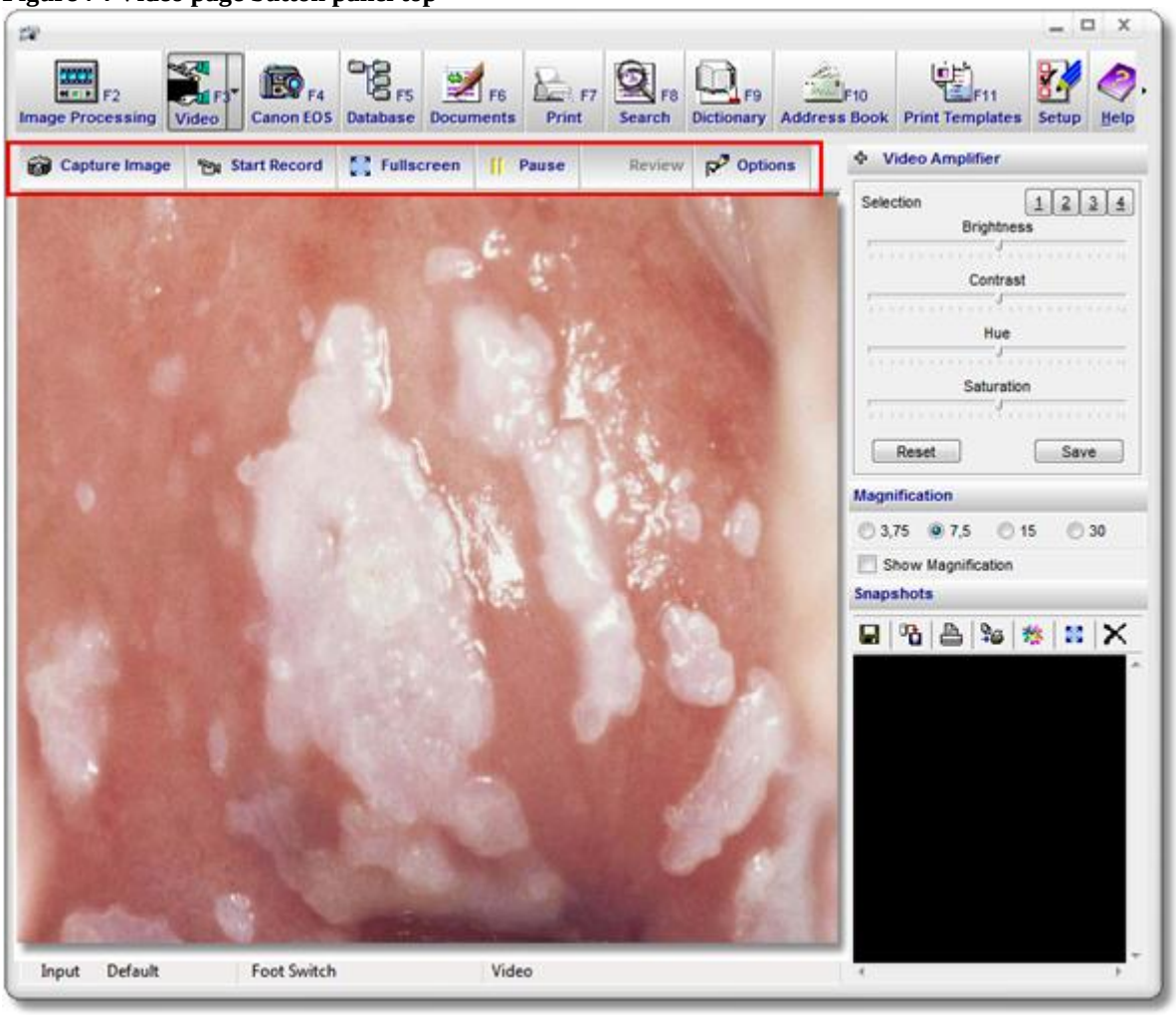
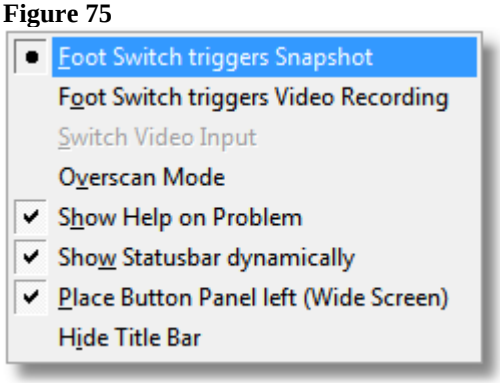


Figure 74 Video page button panel top



7.1 Video context menu

Figure 75



7.1.1 Foot switch trigger

This item can be used to temporarily switch the foot switch function. E.g., if you only have one foot switch, this still permits both starting and stopping the video recording with the foot switch. This setting is, however, not saved. For permanent change of foot switch function, see “Foot switch configuration” page 4-28.

7.1.2 Switch video input

If your frame grabber card has several inputs, you may use several cameras with the software. Use this menu item to switch between them. The active input is visible in "Input" in the status bar at all times.

7.1.3 Overscan

Quick change for overscan mode. See Overscan page 7-73.

7.1.4 Show help on problem

If your camera does not send any video signal, a help text is displayed to show possible error causes. Also see “Disable video signal detection” page 7-74.

7.1.5 Show status bar dynamically

If this option is active, the status with the patient information is displayed upon switching to the video page and shown again upon leaving.

7.1.6 Place button panel left

The button panel is displayed on the left so that the camera image has a higher area available. This is sensible in particular in case of wide-screen displays if a camera is connected that works in the PAL/NTSC standard resolution at a ratio of 4:3.

7.1.7 Hide title bar

When this function is activated, the programme is switched to full screen mode and the title bar is hidden. You can comfortably switch between the two modes with the function button F12.

7.2 *The button panel*

7.2.1 Camera selection

See Select camera page 4-22

7.2.2 Snapshot

Use this button to record an image as with the foot switch. The image is automatically loaded in image processing and/or inserted in the database, depending on video options configuration. The recorded images are always assigned to the current patients, i.e. the ones visible in the status bar. If the database has "Only insert images with the current date" activated, either the study with the current data is activated or a new one is set up. With the WIA-module activated and a camera connected, this button is used to trigger the digital camera. The recorded images automatically appear in the "Snapshot list" and can be viewed in full screen mode by double-clicking. If the option "Display left/right side in the image" is active, "L" or "R" is automatically displayed in the image. The images are saved in the JPG format and will take approx. 330 kB in standard resolution (approx. 800*600 pixel).

7.2.3 Record video

This button is used to record video sequences in "MPEG 4" when the "Video recording module" is active.

See "Video recording" page 11-145.

7.2.4 Full screen

In full screen mode, you may view the camera image on the full screen. All Windows and programme components are hidden. The side ratio of the camera is retained. Alternatively, you may also click the video image or use a foot switch configured accordingly to enter full screen mode. Another option is automatic switching to full screen mode (See "Automatic" page 7-73).

Key inputs or mouse clicks return to normal view.

Left-clicking into the full screen permits switching through several display modes:

7.2.4.1 Physical resolution

7.2.4.2 Adjust to window

7.2.4.3 Overscan mode

7.2.5 Still

The camera's video image is frozen. Pushing the button again returns to the normal playback mode. Pressing "Snapshot" or the foot switch records the frozen image. This does not apply when the "WIA-digital camera module" is active.

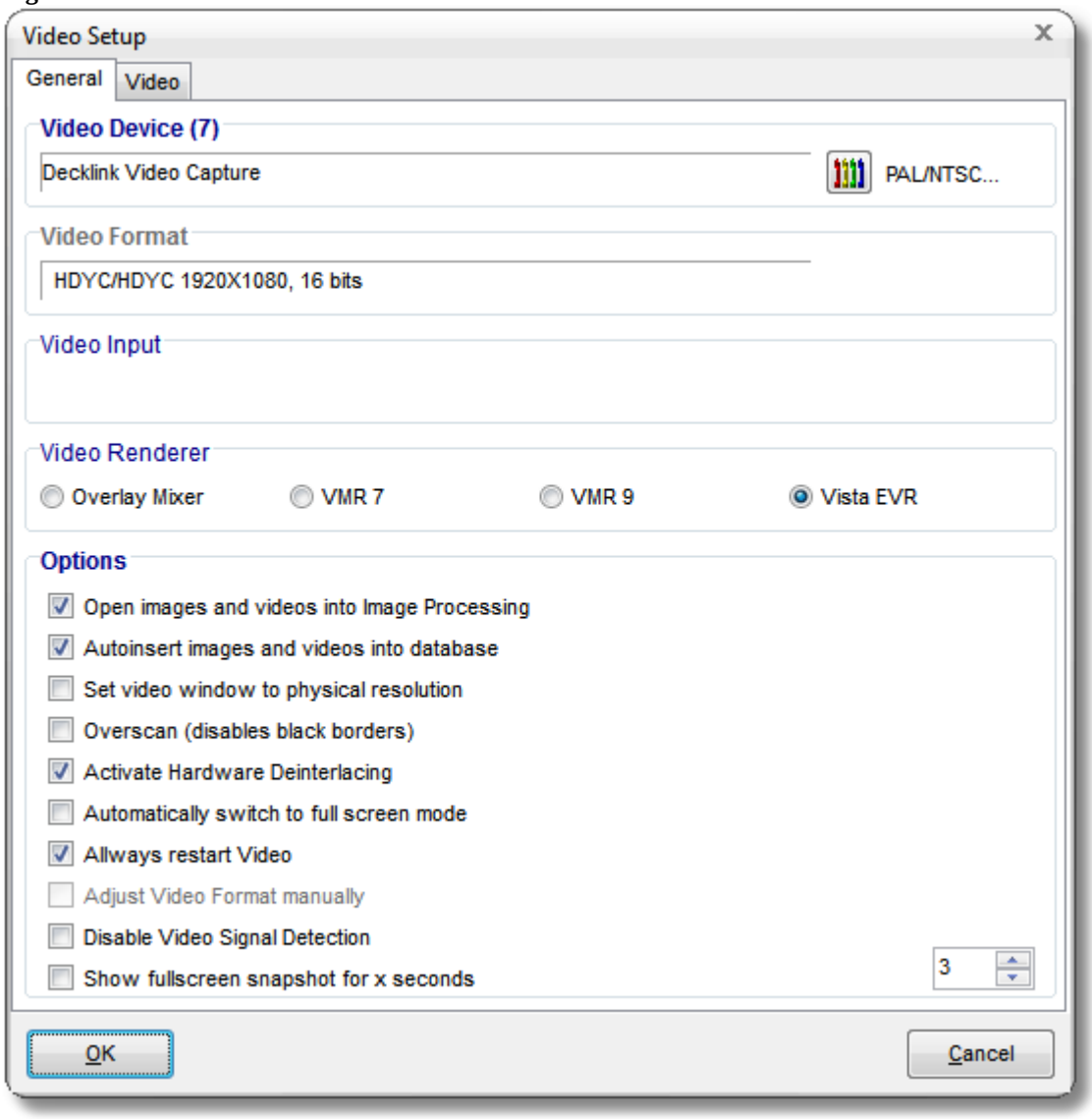
7.2.6 Review

This button can be used to display the last recorded image for inspection or discussion with the patients in full screen mode.

7.2.7 Video options "General"

This dialogue can be used to configure the selected video device, specify actions after recording and adjust video recording to the hardware. Also see Select camera page 4-22

Figure 76 General



7.2.7.1 Video device

The selected video device. Also see Select camera page 4-22

7.2.7.2 Video device configuration

Use the button right behind the video device list to set, among others, the video standard of your camera to "PAL" or "NTSC". Also see Select camera page 4-22.

7.2.7.3 Video format

This window usually only offers information because the video format is automatically set to the best values. If, in an individual case, special settings are necessary, activate "Adjust video format manually".

7.2.7.4 Video input

Here you may select the input socket to which your camera is connected, e.g. if you use a USB video box or PCI video card. Usually, you will find the two following connection types:

Figure 77 Video socket/plug

Figure 78 Composite plug/socket

This selection box will not contain any entries for USB cameras.

7.2.7.5 Video renderer

The video renderer provides the interface to the graphics card and specifies the manner in which the camera's input signal is processed. The standard setting is VMR9, because this usually works easily. Under special circumstances, however, it may be of advantage to use a different renderer.

7.2.7.5.1 Overlay mixer

This renderer directly forwards the video signal of the camera to the graphics card. On weaker computers or when displaying HD contents, this may be of advantage, in particular in case of latency problems (time difference between input signal and display on the screen). Correct function, however, depends on all parts of the playback chain interacting perfectly; this is not always the case.

7.2.7.5.2 VMR7

This renderer should only be used if no others provide the desired result, because latency may be too large.

7.2.7.5.3 VMR9

This is the standard renderer and usually provides the best results.

7.2.7.5.4 Vista EVR

This renderer was introduced with Windows Vista and thus is not available in Windows XP. If you use Windows Vista or Windows 7 and have problems with the VMR9 renderer, this one would be better.

7.2.7.6 Open images into image processing

If this item is checked, the images are opened for viewing and editing in image processing right after the foot switch is operated.

7.2.7.7 Autoinsert images into database

If this item is checked, the images are inserted in the database and assigned to the active patient right after the foot switch is operated.

7.2.7.8 Set video window to physical resolution

If this item is checked, the video image is swept to the side indicated in the video format dialogue. Otherwise, it is adjusted to the programme window sizes. In the worst case, this may cause increased interlace strips. A fixed video size also has the benefit that the CPU load on the computer is reduced. In particular in older computers or in DV operation, this may cause noticeable improvement of video recording.

7.2.7.9 Overscan

In overscan mode, the video image is increased so that there are no black bars on the sides anymore. However, this also decreases the visible area in height.

7.2.7.10 Activate hardware deinterlacing

Interlace scanning leads to very annoying distortion of the video image when the object moves. This option uses the graphics card deinterlacing functions, if present. Very good results are currently offered, e.g., by any graphics card by "ATI".

7.2.7.11 Automatically switch to full screen mode

This function automatically switches to full screen mode after approx. 3 sec. when switching to the video page.

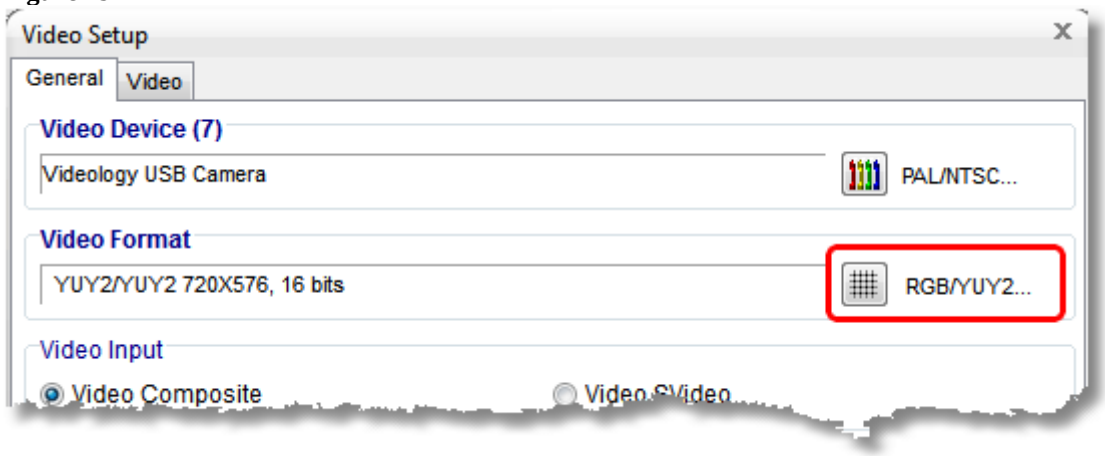
7.2.7.12 Always restart video

Some frame grabber or graphics cards or video formats may cause the video image to stop or only show stripes after recording or switching to a different programme page. This option prevents this.

7.2.7.13 Adjust video format manually

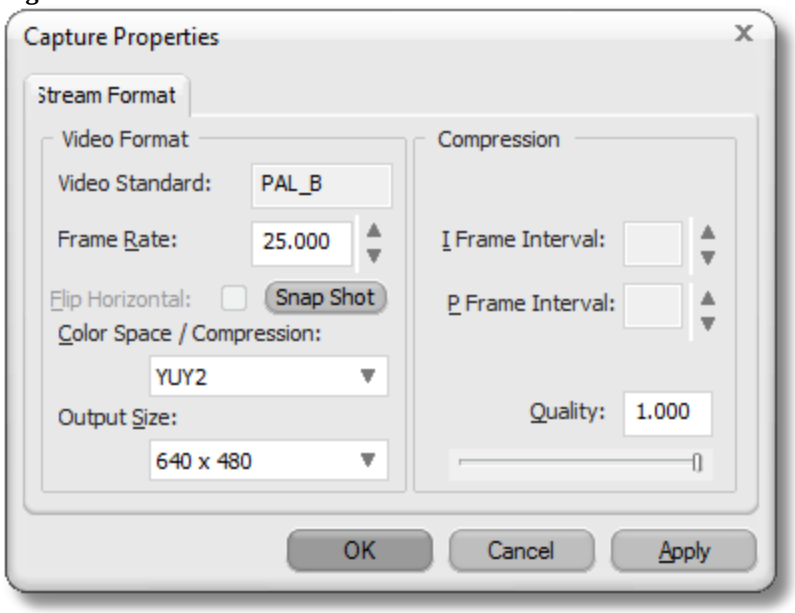
The video format is usually set to the best values automatically. If, however, special settings are required in exceptions, activate "Adjust video format manually". Then the button "RGB/YUY2" appears right behind "Video format".

Figure 79



Use this button to get to the following dialogue:

Figure 80



Observe that not all video formats are compatible with the programme; if possible, use UYVY or YUY2.

7.2.7.14 Disable video signal detection

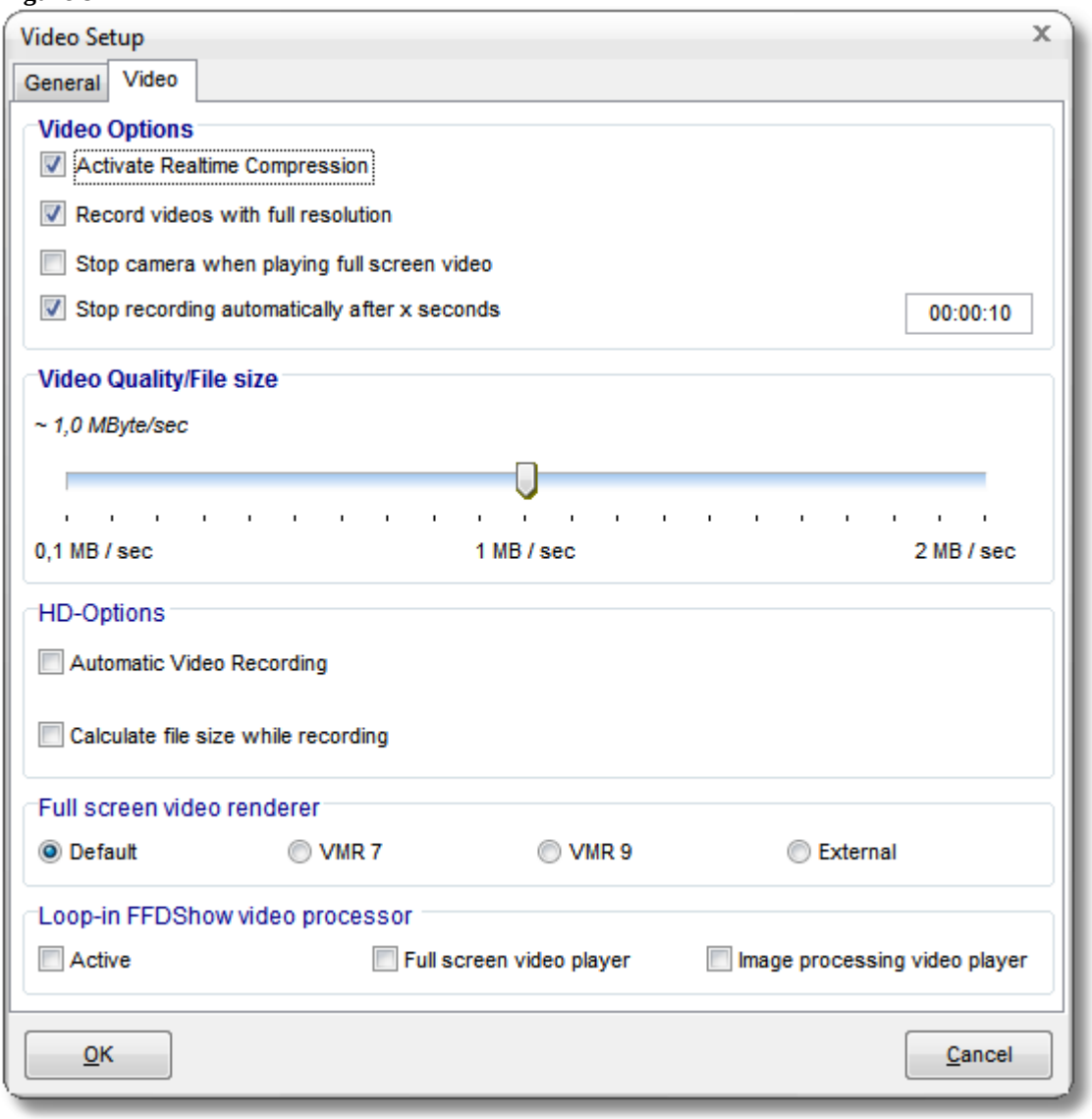
The programme usually assesses the information of the video device driver for whether or not a video signal is pending or not. If it does not, a help text is displayed, however, some drivers do not implement this information correctly, and will report "no signal" even if the correct signal is pending. Activate this option if your camera has this problem.

7.2.7.15 Show full screen snapshot for "x" seconds

When this option is activated, the snapshot is displayed in full screen mode for an adjustable time after you have taken it.

7.2.8 Video options "Video"

Figure 81



7.2.8.1 Activate real time compression

With this option activated, the video material will be compressed during recording. Otherwise, the initial recording will be uncompressed and compression will only be performed after completion of the recording. Depending on computer and recording duration, this may take some time. On the other hand, real time compression requires a quick computer. See “System Requirements” page 2-10.

7.2.8.2 Record videos with full resolution

Recording of videos in full resolution leads to great video quality but requires a fast computer, in particular in connection with real time compression. See “System Requirements” page 2-10.

7.2.8.3 Stop camera when playing full screen video

Double-clicking a video in the recording list leads to display in full screen mode while the camera continues to run in the background. If there are any interferences in this (stutter, stripes), this option should be activated. A problem is that the camera must be re-initialised after playback of the video, which may take several seconds with some camera drivers.

7.2.8.4 Automatically terminate recording after "x" seconds

After the end of the maximum recording time set here in seconds, the video recording is stopped automatically. The input field format is HH:MM:SS (hours:minutes:seconds).

7.2.8.5 Video quality / file size

Use this slider to determine the recorded video quality. Observe that the file size increases with higher quality as well. The best settings for this greatly depend on how much the image content changes during recording. If you have enough memory available, choose maximum quality.

7.2.8.6 HD Options

7.2.8.6.1 Automatic video recording

With this option active, a video recording is started at once when switching to the video page.

7.2.8.6.2 Calculate file size while recording

With this option active, the size of the recorded video file is determined during recording. This is an approximate and only serves for general orientation.

7.2.8.7 Full screen video renderer

This selection box permits adjustment of the type of display when displaying your video in full screen mode. This setting should only be changed when there are problems with full screen playback. See Video renderer page 7-72.

7.2.8.8 Loop-in FFDShow video processor

See “Use FFDShow ” page 6-54.

7.2.8.8.1 Active

The filter is looped into the camera live stream.

7.2.8.8.2 Full screen video player

The filter is lopped into the full screen video player

7.2.8.8.3 Image processing video player

The filter is looped into the image processing video player.

7.3 White balance

Some USB cameras offer the option of performing white balance. If your camera has this option, the button "white balance" appears in the button panel.

Figure 82 White balance button panel top

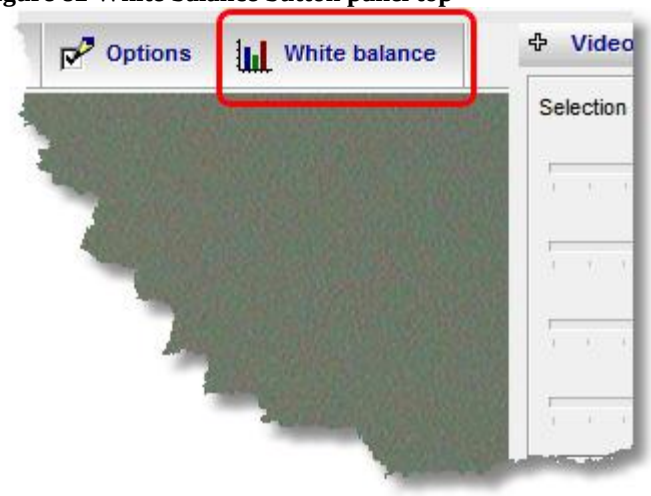
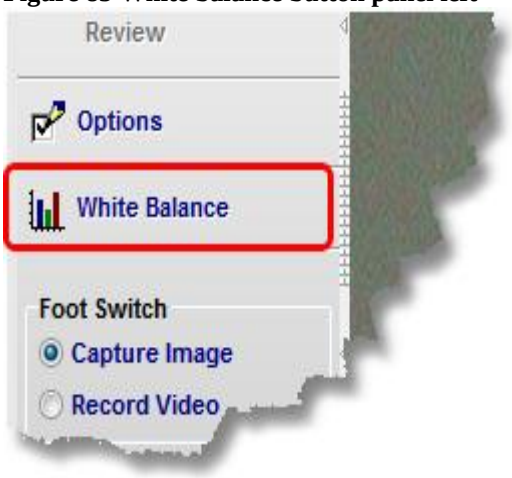
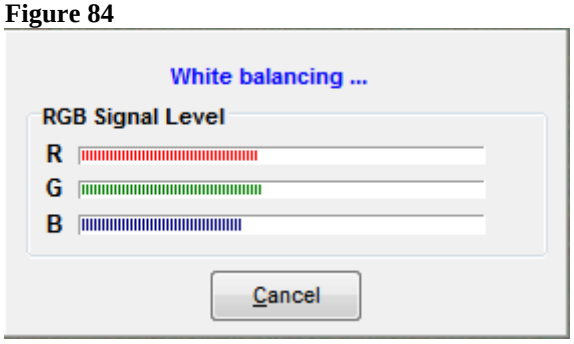


Figure 83 White balance button panel left



To perform correct white balancing, point the camera on a white surface; the following dialogue appears:

Figure 84



Once the correct white values are reached, the dialogue closes automatically.

7.4 The video preview window

If you use a Frame grabber card to view live video, you may follow the recording from your camera in real time here. Your card must be installed properly and the camera must be connected. It is also very important that all drivers that belong to the camera are installed. If all of these conditions are met, you may also need to select the video signal input with the button "Options" on this page. Left-clicking into the window will activate full screen mode. See “Full screen” page 7-70.

7.5 The video amplifier (WDM)

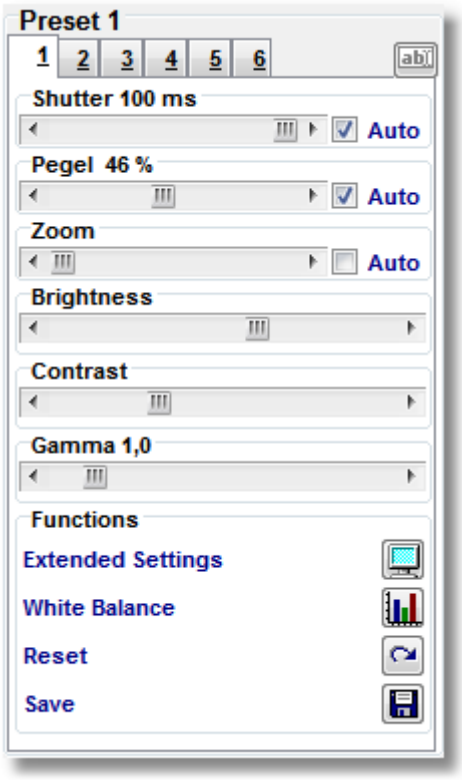
Figure 85

The video amplifier offers the option of making the basic settings for brightness, contrast, hue and saturation of your frame grabber card independently of the settings of your screen. Additionally, you can specify your different setting sets. Changes to the controls are always automatically saved for the selection button pressed.

7.6 The video amplifier (uEye)

Using an uEye-camera you can perform the following settings:

Figure 86



Use the controls brightness, contrast and gamma to adjust the basic settings. The button Reset resets these settings to the defaults. Pointing the camera to a white surface and pressing the button White Balance will cause the camera to recalibrate the colour values so that a white area appears on the screen.

The shutter time can be set per image or to auto. If the automatic function causes the image to be too dark, you may adjust the desired brightness to your needs with the level control.

The display section permits enlarging the video image, e.g. if the recorded object only fills a small part of the camera image. "Automatic adjustment" prevents black stripes at the edges.

7.7 Magnification

This selection box permits indication of the magnification factor of your lens. The selection is saved in the database with the image and inserted in the image if "Show magnification" is activated (Fig. 82). This option is not included in all programme versions.

Figure 87

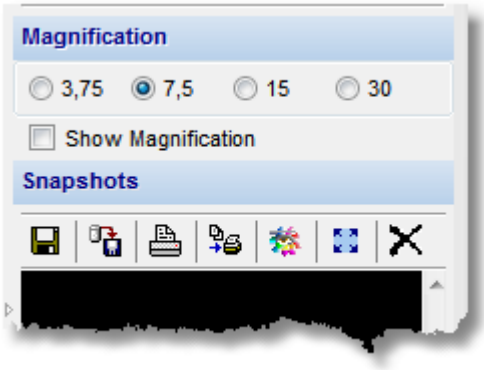
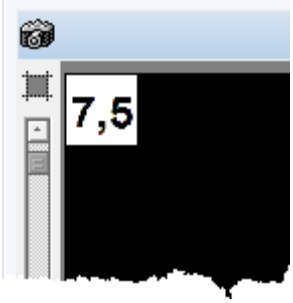


Figure 88

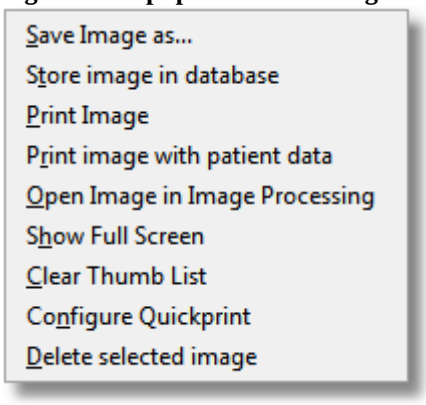


7.8 Recordings

This list contains all images or videos you have made. This way, you will always have an overview of the quality of your recordings and can decide at once whether a new recording is required. Double-clicking one of the miniature images will display the corresponding image in full screen.

Figure 89 Snapshot list

Figure 90 Popup menu recordings



7.8.1 Save image as…


The selected image or video is saved to the hard disc or thumb drive.

7.8.2 Store image in database


The selected image or video is stored in the database.

7.8.3 Print image

The selected image is sent to the printer without any further information.

7.8.4 Print image with patient data

The selected image is sent to the printer with the quick print parameters

7.8.5 Open image in image processing

The selected image is loaded in image processing and image processing is opened.

7.8.6 Show full screen

The selected image or video is displayed or played in full screen mode.

7.8.7 Clear thumb list

To keep an overview, it is sensible to delete the thumb list e.g. when switching patients. No data will be deleted! The opened images in image processing also are not closed. You may, however, close them with the option Clear image processing on manual changing of patient page 8-85.

7.8.8 Configure quickprint

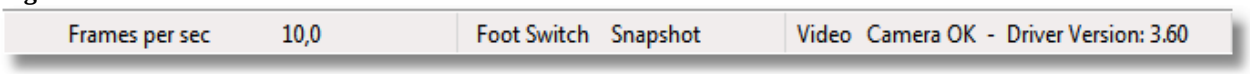
See “Configure Quick print” page 4-33.

7.8.9 Delete selected image

The selected image or video is deleted from the thumb list.

7.9 The status bar

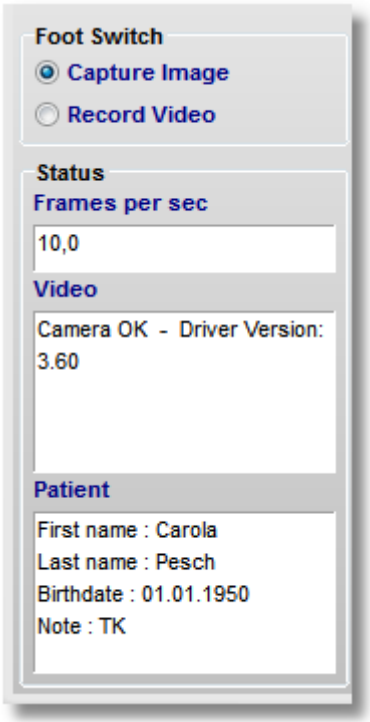
Figure 91



The status bar displays the currently used video input, the action triggered by the foot switch and information during and after recording of a video.

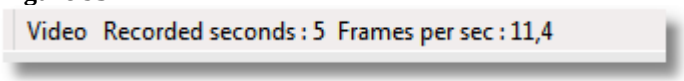
The status bar is only visible if the button panel is on top; otherwise, this information is on the left side, under status.

Figure 92



7.9.1 Video

Figure 93

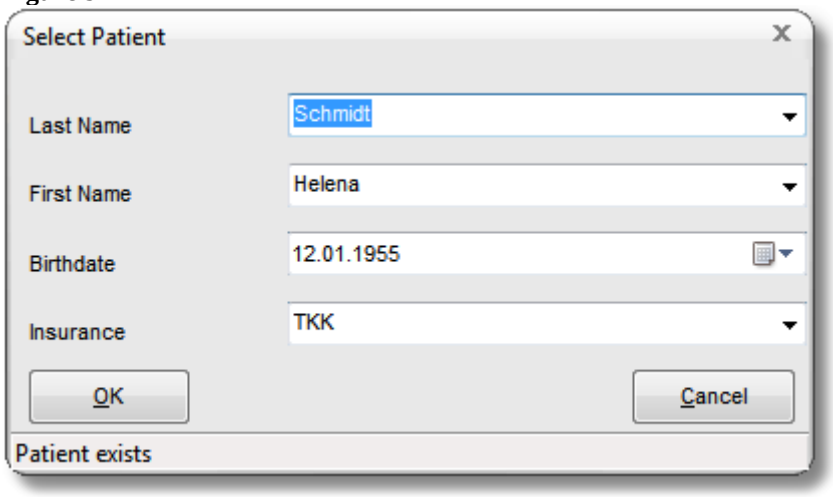


Shows the current status of the video recording, e.g. "Recording active", "Recording stopped" or any errors that have occurred.

7.10 Patient data quick input

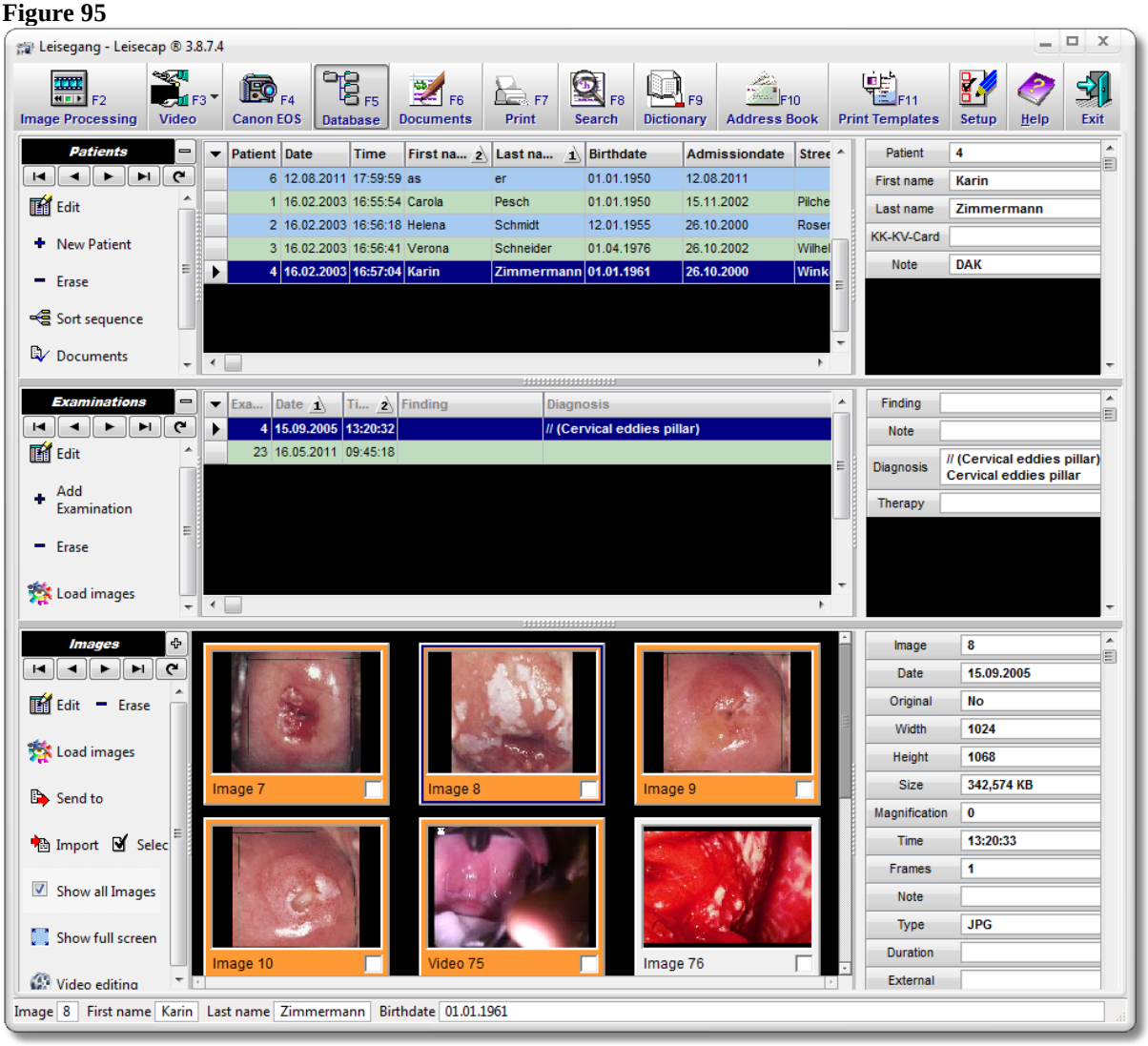
The patient data quick input can be called on the video page with the RETURN button. This dialogue permits changing the active patient without switching to the database page. Entering the first letter of the patient will call the matching entry with the associated data. The programme will automatically recognise that a new patient is to be displayed if you enter data that is not present in the database. This can be viewed in the status bar. On demand, a new study is set up as well.

Figure 94



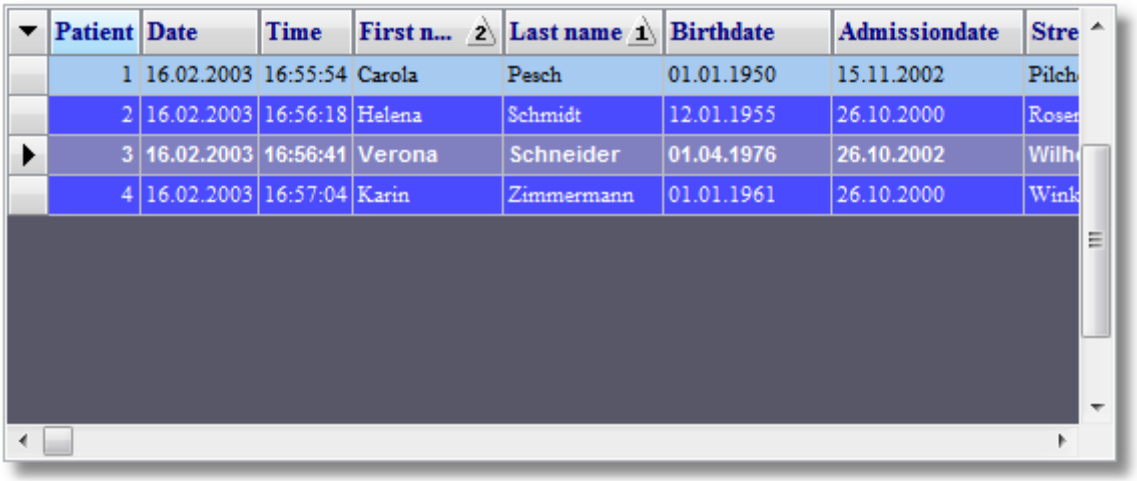
8 The database

Figure 95



The database is used to archive the patient data, studies, images and videos and is the central component of legal obligation to document.

8.1 Data grid

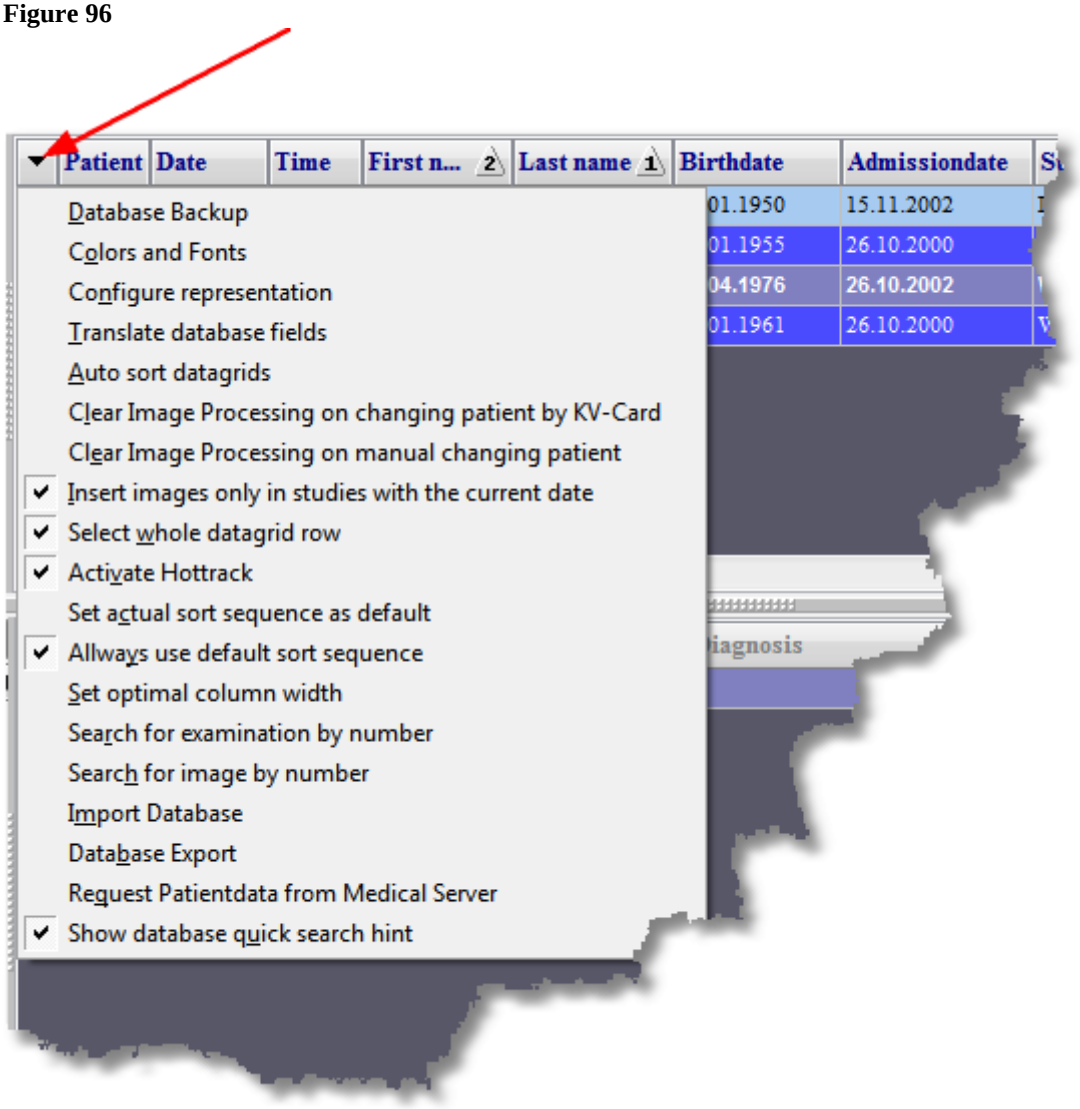


Patient	Date	Time	First n... 2	Last name 1	Birthdate	Admissiondate	Stre
1	16.02.2003	16:55:54	Carola	Pesch	01.01.1950	15.11.2002	Pilch
2	16.02.2003	16:56:18	Helena	Schmidt	12.01.1955	26.10.2000	Rose
3	16.02.2003	16:56:41	Verona	Schneider	01.04.1976	26.10.2002	Wilh
4	16.02.2003	16:57:04	Karin	Zimmermann	01.01.1961	26.10.2000	Wink

The data grid provides a quick overview of the most important data of all datasets. Clicking or scrolling will activate the individual datasets. Data field display can be configured freely and permits simple sorting of data by clicking the title bar of the entry to be sorted. A small triangle appears in the corresponding column, and the data is resorted. For multiple sorting, keep the "Ctrl button" pressed and click the next field. Click and hold a title bar with the right mouse button and then draw to quickly change the order of the data fields. The data grids also have a "quick-search function". If a data grid is active, the title text colour changes. The data grid now reacts to key input. Double-clicking a data line will take you to the editing dialogue. The data grids can also be controlled via the navigation bars.

8.1.1 Data grid context menu

Figure 96



8.1.1.1 Database backup

See module Database backup page **Fehler! Textmarke nicht definiert.**

8.1.1.2 Colours and Fonts

See change design page 5-42

8.1.1.3 Configure representation

See configure data grid page **Fehler! Textmarke nicht definiert.**.

8.1.1.4 Translate database fields

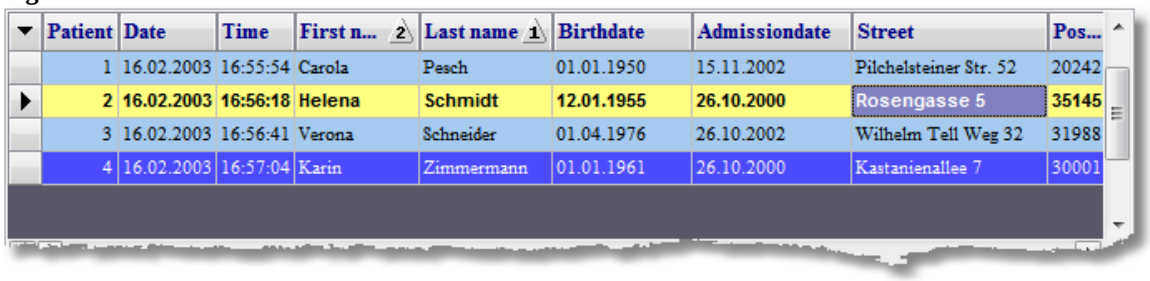
See change display name page 8-107

8.1.1.5 Auto sort data grids

Automatic sorting makes it possible to find certain database entries more quickly. For this, sorting of the data grids upon input of the first letters of the search term is switched to the active field.

Example: The sorting is set to first name, the active field is street.

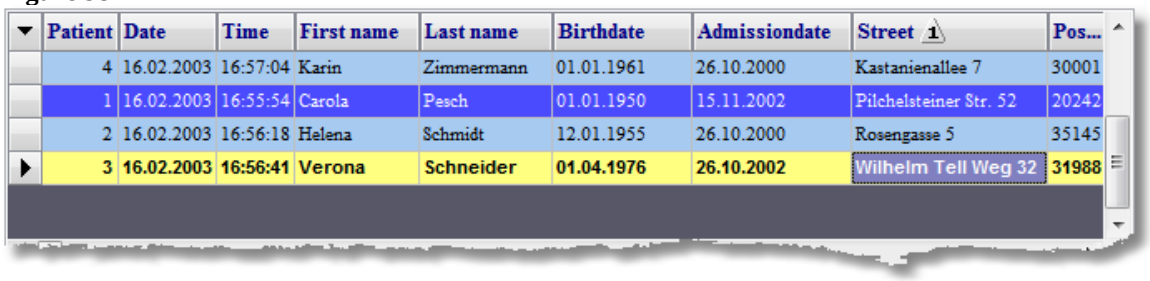
Figure 97



Patient	Date	Time	First n... 2	Last name 1	Birthdate	Admissiondate	Street	Pos...
1	16.02.2003	16:55:54	Carola	Pesch	01.01.1950	15.11.2002	Pilchelsteiner Str. 52	20242
2	16.02.2003	16:56:18	Helena	Schmidt	12.01.1955	26.10.2000	Rosengasse 5	35145
3	16.02.2003	16:56:41	Verona	Schneider	01.04.1976	26.10.2002	Wilhelm Tell Weg 32	31988
4	16.02.2003	16:57:04	Karin	Zimmermann	01.01.1961	26.10.2000	Kastanienallee 7	30001

After entering "w", the data grid will be sorted by street and the first entry with "w" is found.

Figure 98



Patient	Date	Time	First name	Last name	Birthdate	Admissiondate	Street 1	Pos...
4	16.02.2003	16:57:04	Karin	Zimmermann	01.01.1961	26.10.2000	Kastanienallee 7	30001
1	16.02.2003	16:55:54	Carola	Pesch	01.01.1950	15.11.2002	Pilchelsteiner Str. 52	20242
2	16.02.2003	16:56:18	Helena	Schmidt	12.01.1955	26.10.2000	Rosengasse 5	35145
3	16.02.2003	16:56:41	Verona	Schneider	01.04.1976	26.10.2002	Wilhelm Tell Weg 32	31988

With this function off, every key input will be applied to the first sorting field. In this example, the first first name with "w" would be found.

8.1.1.6 Clear image processing on changing patient by KV card

Every time the active patient changes via a KV card reader, all images in image processing are closed automatically. This has the benefit that only the images of the current patient are located in image processing.

8.1.1.7 Clear image processing on manual changing of patient

Every time the active patient changes via the database page or the patient quick input, all images in image processing are closed automatically. This has the benefit that only the images of the current patient are located in image processing.

8.1.1.8 Insert images only in studies with the current date

When inserting images in the database, the study with the current date is activated automatically, or a new study is set up. If this option is not active, new images will be entered in the active study. This may have to be switched off if you want to enter images into older studies subsequently.

8.1.1.9 Select whole data grid row

The entire row of the active dataset is displayed in one colour. "Automatic sorting" is, however, switched off.

8.1.1.10 Activate Hottrack

With this option active, the mouse wheel signals are automatically sent to the control element above which the mouse is located; otherwise, only the active element will react to input.

8.1.1.11 Set actual sort sequence as default

If you have changed the data grid sort sequence, you may use this menu item to apply this sort sequence automatically at every programme start.

8.1.1.12 Always use default sort sequence

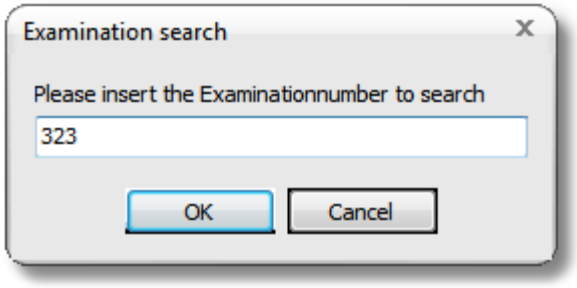
If you have changed the sort sequence of a data grid, e.g. to find a specific entry, and leave the page, the standard sort sequence will be activated again when you call the database page again if this is active.

8.1.1.13 Set optimal column width

This function calculates the best width of the individual columns of the data grid and sets the column widths to these values.

8.1.1.14 Search for examination/image by number

Figure 99



8.1.1.15 Import database

See Database import page 8-108.

8.1.1.16 Database export

See “Database export” page 8-110.

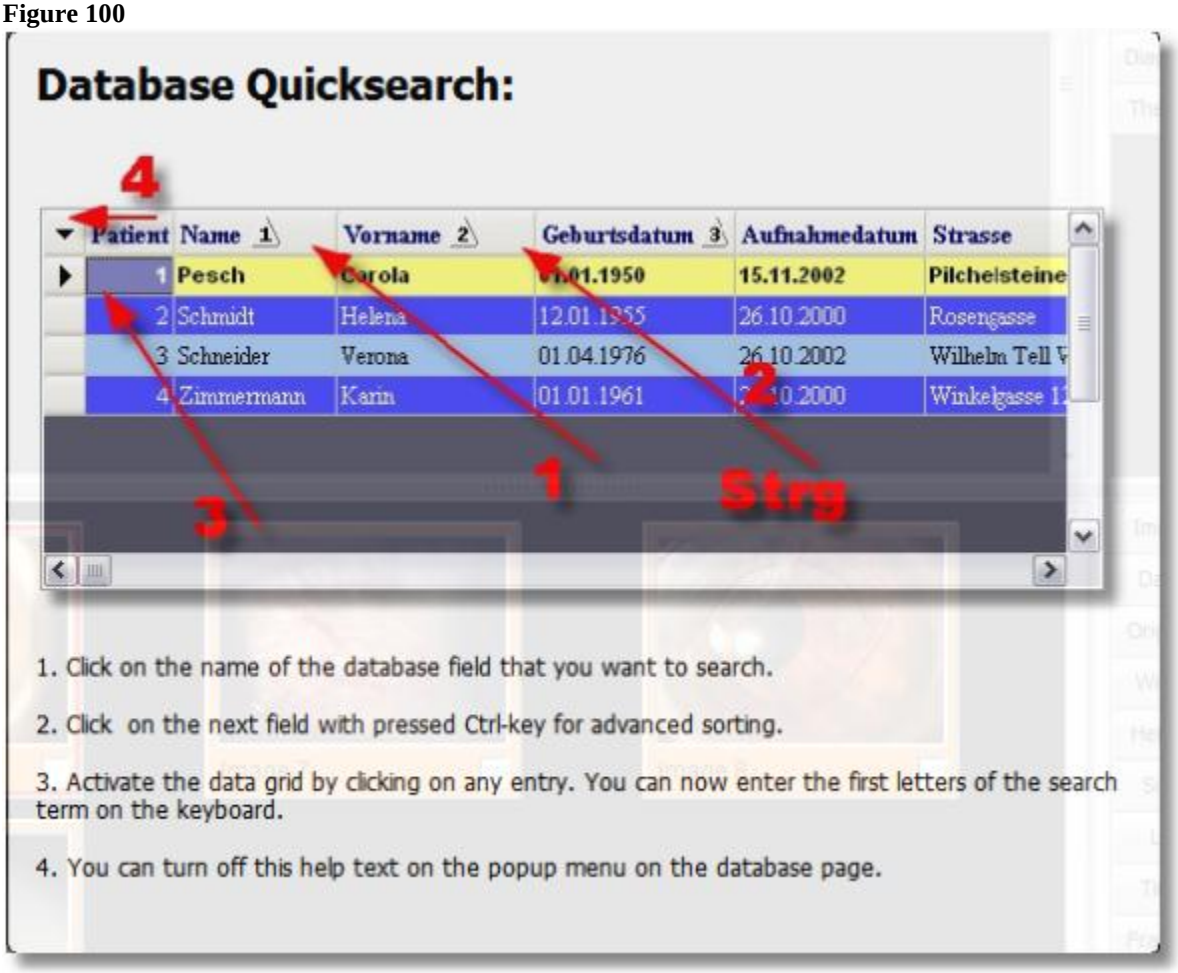
8.1.1.17 Request patient data from medical server

See “GDT practice software integration” page 11-159.

8.1.1.18 Show database quick search hint

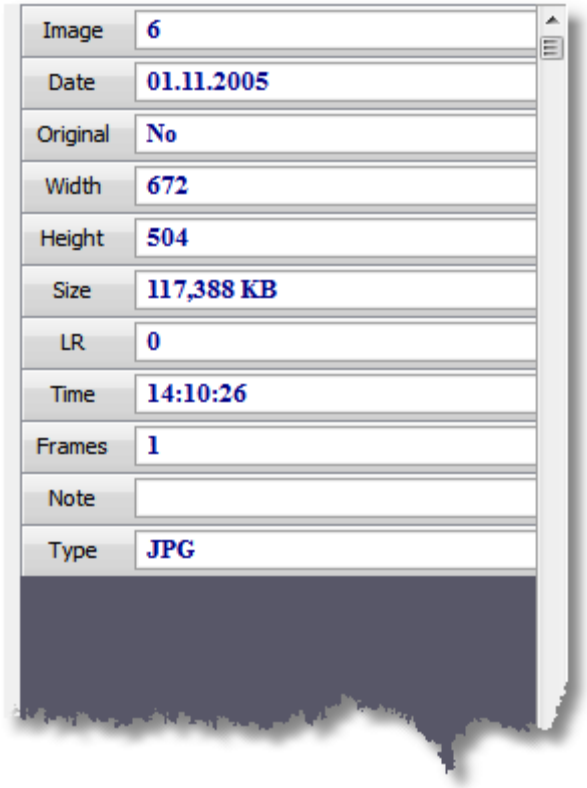
Database quick search help is displayed by default once the mouse pointer is above the title bar of a data grid. You may switch off this hint in this menu item.

Figure 100


Database Quicksearch:
4
Patient
Name 1
Vorname 2
Geburtsdatum 3
Aufnahmedatum
Strasse
1 Pesch Carola 01.01.1950 15.11.2002 Pilcheisteine
2 Schmidt Helena 12.01.1955 26.10.2000 Rosengasse
3 Schneider Verona 01.04.1976 26.10.2002 Wilhelm Tell
4 Zimmermann Karin 01.01.1961 26.10.2000 Winkelgasse
3
1
2
Strg
1. Click on the name of the database field that you want to search.
2. Click on the next field with pressed Ctrl-key for advanced sorting.
3. Activate the data grid by clicking on any entry. You can now enter the first letters of the search term on the keyboard.
4. You can turn off this help text on the popup menu on the database page.

8.2 *The data list*

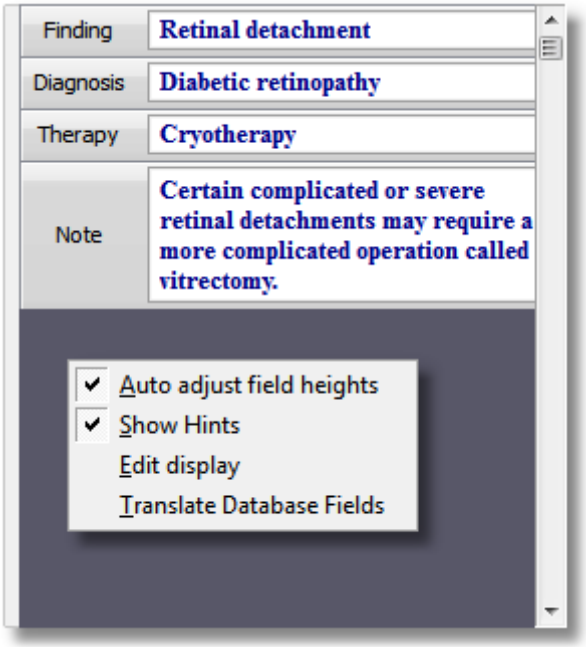
Figure 101



The data lists display selected data from the respective current dataset, e.g. patient "A". In contrast to the data grids, the data lists can also display longer texts with several lines. The fields to be displayed can be determined via the dialogue "Configure representation". The size of the fields is set automatically, but you may also adjust them mutually by moving the mouse in the border between two fields. The cursor will change. Pressing and holding the left mouse button now permits changing the field size by drawing the mouse. Double-clicking a field will open the edit window and the clicked field will be active automatically.

8.2.1 Data list context menu

Figure 102



8.2.1.1 Auto adjust field heights

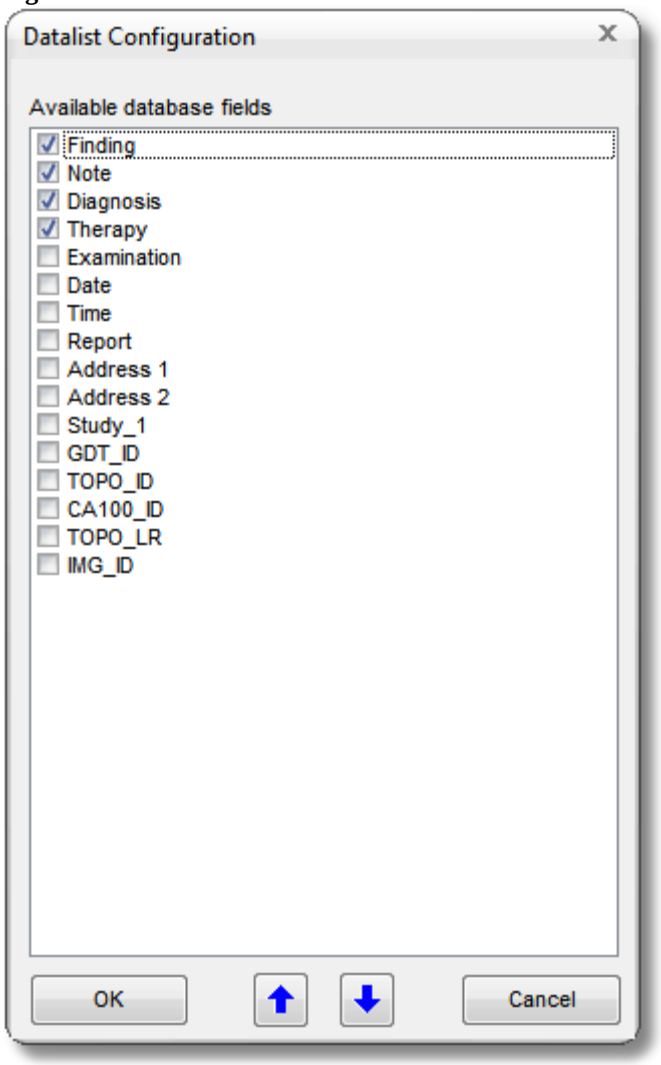
The data field height in the data list is automatically adjusted to the content. If you want to specify a fixed height, you may deactivate this option.

8.2.1.2 Show hints

If you move the mouse to a data field, the field content will be displayed as a short notice.

8.2.1.3 Edit display

Figure 103



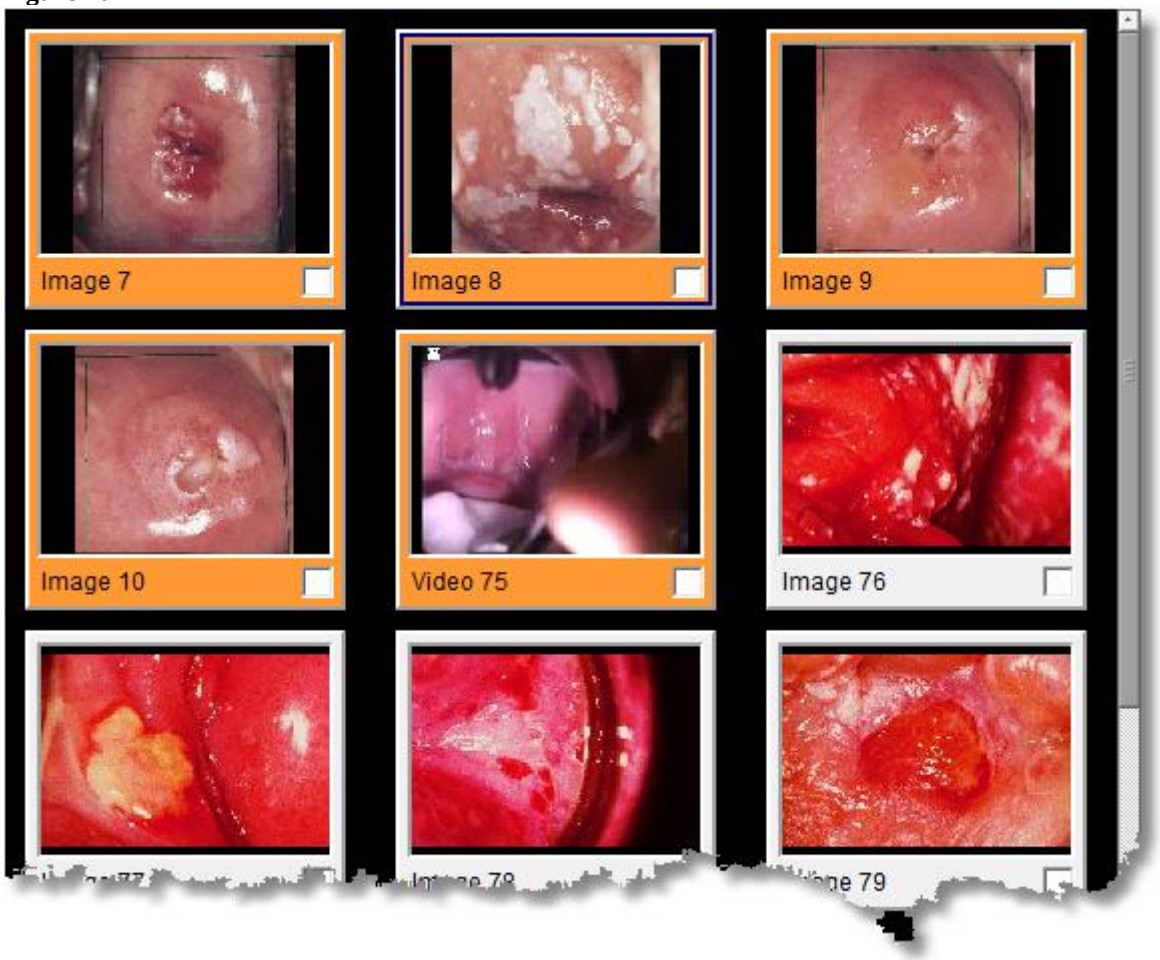
Use this dialogue to determine the fields to be displayed in the data list and their order.

8.2.1.4 Translate database fields

See Translate database page 8-84.

8.3 Preview

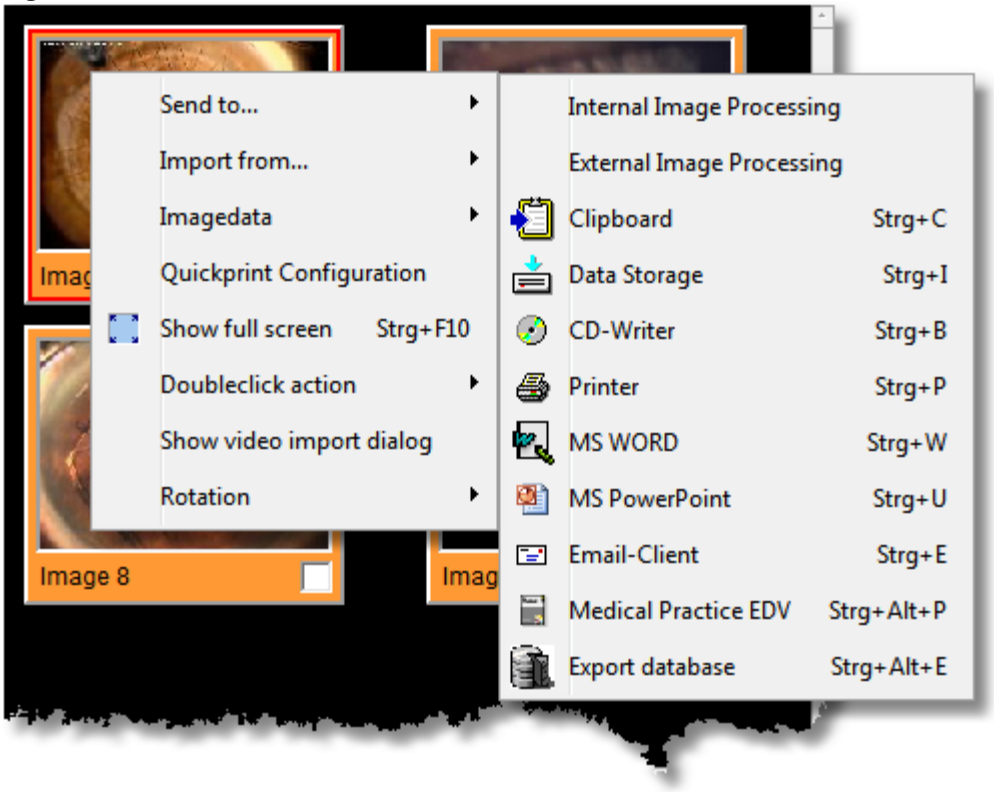
Figure 104



The preview provides an overview of all images in a study. The respective current image is marked with a red frame. Double-clicking an image will load it in image processing. If you want to load several images at once, click the rectangular grey selection field at the lower right edge of the respective image, which will cause a cross to appear in this field, or draw a frame around the images with the left mouse button pressed. If you want to remove several images from a selection, push the "ALT button" when drawing the frame.

8.3.1 Preview context menu

Figure 105



8.3.1.1 Submenu "Send to …"

8.3.1.1.1 Internal image processing

The active image or video is loaded in the programme's image processing.

8.3.1.1.2 External image processing

The active image or video is opened in the programme that Windows usually uses for this kind of file. For images this is usually "MS-Paint" and for videos the Windows Media Player.

8.3.1.1.3 Clipboard

Images are copied completely into the Windows clipboard so that they can be inserted in email or text processing programmes with Ctrl-C. For videos, only the path to the file is stored in the clipboard.

8.3.1.1.4 Data storage

A dialogue for selection of the target data carrier is displayed; you may save the image or video on the hard disc, thumb drive or a network drive.

8.3.1.1.5 CD writer

The file is opened in the CD/DVD writer dialogue and can be burned to CD or DVD from there. See “CD/DVD writing” page 11-140.

8.3.1.1.6 Printer

The active image or a selection of images is sent to the printer with the quick print parameters. Video files cannot be printed.

8.3.1.1.7 MS-WORD

All selected images are sent to a Word document via the Word export interface. Video files will be ignored. See “WORD-Export” page 11-133.

8.3.1.1.8 MS-PowerPoint

All selected images and videos are sent to a PowerPoint presentation via the PowerPoint interface. See “PowerPoint-Export” page 11-138.

8.3.1.1.9 Email Client

All selected images and videos are sent to the standard email programme. A new message is set up and the images and videos are inserted in the appendix as files. If the option “Pack multiple attachments in one ZIP archive” (page 5-47) is active, all files are packed in a single archive.

Caution: the maximum attachment size is 10 MByte!

8.3.1.1.10 Medical Practice EDV

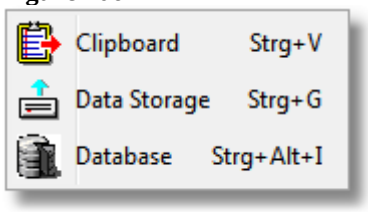
The medical practice EDP is informed of the selected images and videos by GDT file via the GDT interface. See “GDT practice software integration” page 11-159.

8.3.1.1.11 Export database

The selected images and videos are sent to the database export module and can be copied into a database from there, e.g. to then import them on a second computer. All patient and examination data are retained. See “Database export” page 8-110 and “Database import” page 8-108.

8.3.1.2 Submenu "Import from…"

Figure 106



8.3.1.2.1 … Clipboard

If you previously copied an image to the clipboard, you can insert it in the database now via this menu item.

8.3.1.2.2 … Data storage

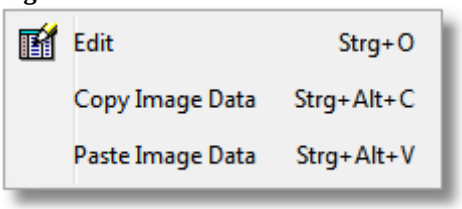
Use the open file dialogue to insert images or videos, e.g., on a thumb drive or another computer in the network, directly in the database.

8.3.1.2.3 … Database

The database import module is opened. You may open a Firebird database (*.fdb) and directly insert individual images or videos in your database. See Database import page8-108.

8.3.1.3 Submenu Image data

Figure 107



8.3.1.3.1 Edit

Corresponds to the button "Edit" in the images button panel. The dialogue to edit image data is called.

8.3.1.3.2 Copy image data

This function copies the user-defined image data into the clipboard. If you have set up new fields for the table images via "free database configuration", you may copy this data and insert it in a different image.

8.3.1.3.3 Paste image data

See "Copy image data".

8.3.1.4 Quickprint configuration

See “Configure Quick print” page 4-33.

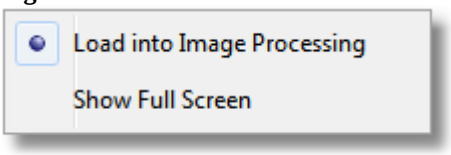
8.3.1.5 Show full screen

The current image is displayed on the entire screen in full screen mode.

To return to normal view, press any button or click the full screen.

8.3.1.6 Double-click action

Figure 108

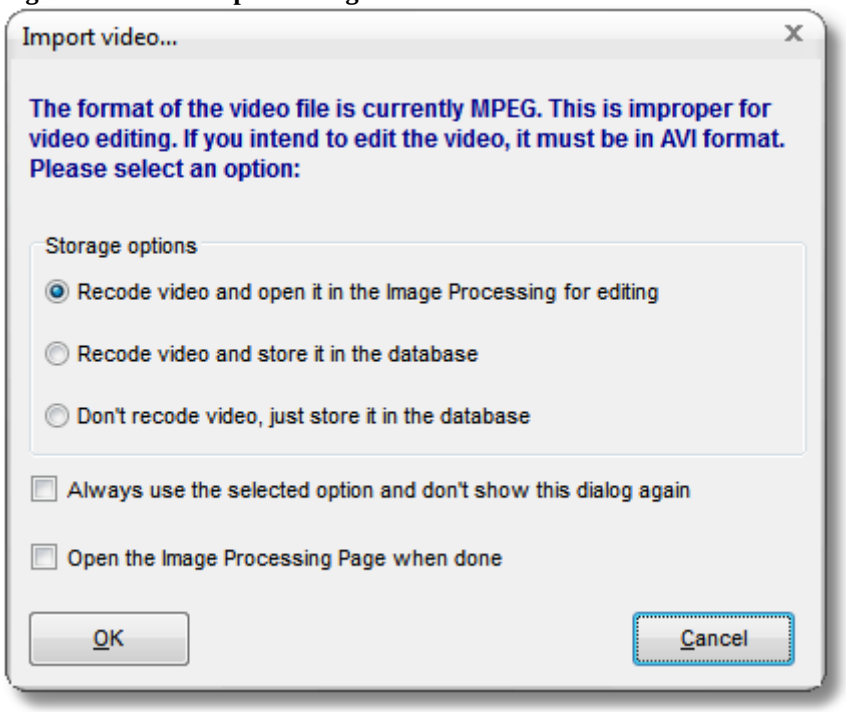


Set the action to be performed when double-clicking a preview image.

8.3.1.7 Show video import dialog

This option activates the video import dialogue. It is called when you want to import an MPEG file.

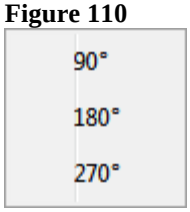
Figure 109 Video import dialogue



8.3.1.8 Rotation

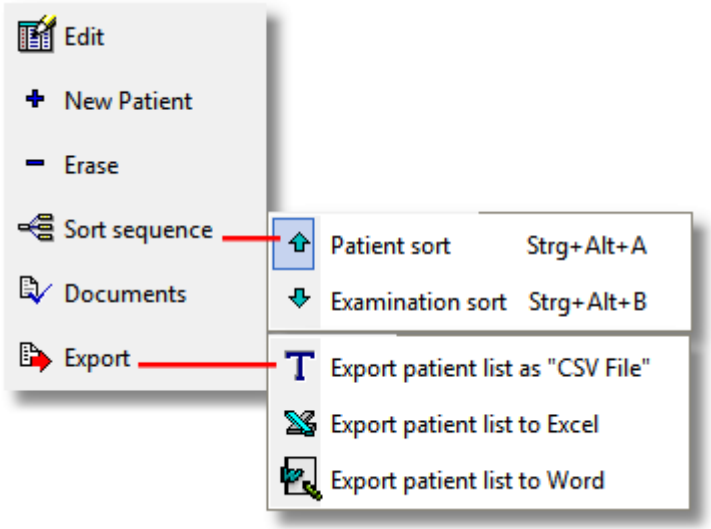
This submenu turns the selected images by 90°, 180°, 270°. Caution: this function is not available for video files.

Figure 110



8.4 Button patients

Figure 111



8.4.1 Edit

Opens the edit dialogue to edit the data of the selected patient.

See Edit patient data page 8-100.

8.4.2 New patient

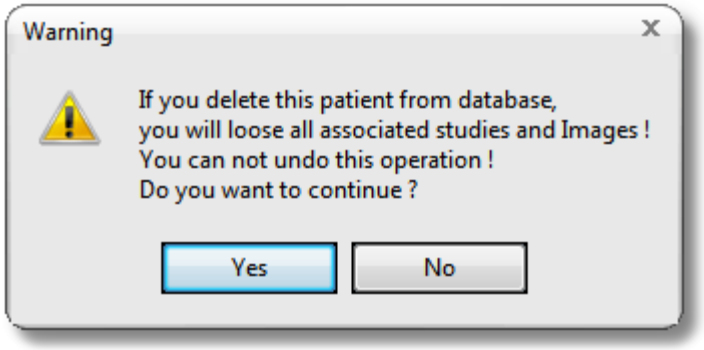
Opens the edit dialogue to enter data for a new patient.

See Creating a new patient page 4-32.

8.4.3 Erase

The current patient and all associated studies and images are deleted after a safety prompt.

Figure 112



8.4.4 Sort sequence

8.4.4.1 Patient sort

Standard setting. The examination table only displays the examinations for the selected patient.

8.4.4.2 Examination sort

In this setting, the examination table shows all examinations. The patient changes in the display depending on the selected examination. This permits sorting examinations, e.g., by same findings, to then compare the images of these examinations in image processing.

8.4.5 Export

8.4.5.1.1 Export patient list as "CSV File"

The entire patient list is exported as text file; the individual fields are separated by commas.

8.4.5.1.2 Export patient list to EXCEL

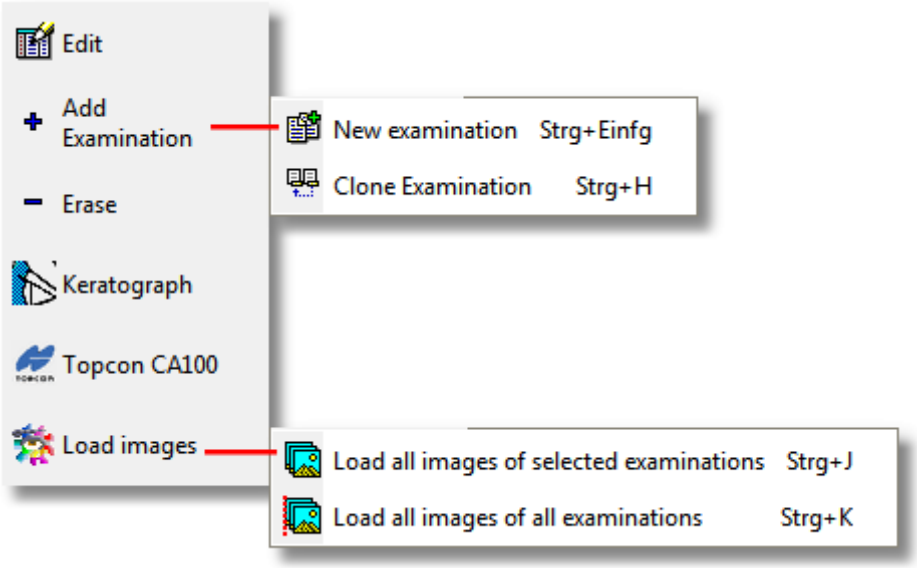
The entire patient list is exported to an EXCEL table.

8.4.5.1.3 Export patient list to WORD

The entire patient list is exported to a WORD document.

8.5 Button examinations

Figure 113



8.5.1 Edit

Opens the edit dialogue to edit the data for the selected study.

See Edit patient data page 8-100.

8.5.2 Add

8.5.2.1 New Examination

Opens the edit dialogue to edit the data for the selected study.

See Create new examination page 4-32.

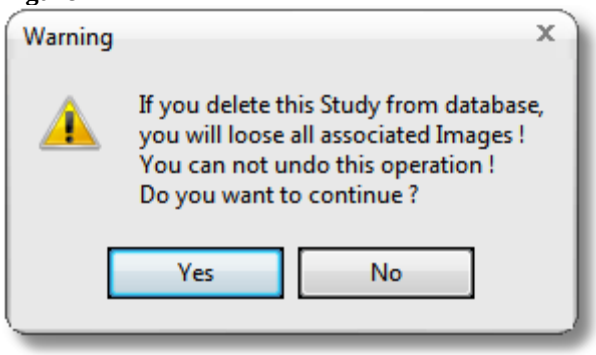
8.5.2.2 Clone examination

A new examination is set up and populated with the data of the active one.

8.5.2.3 Erase

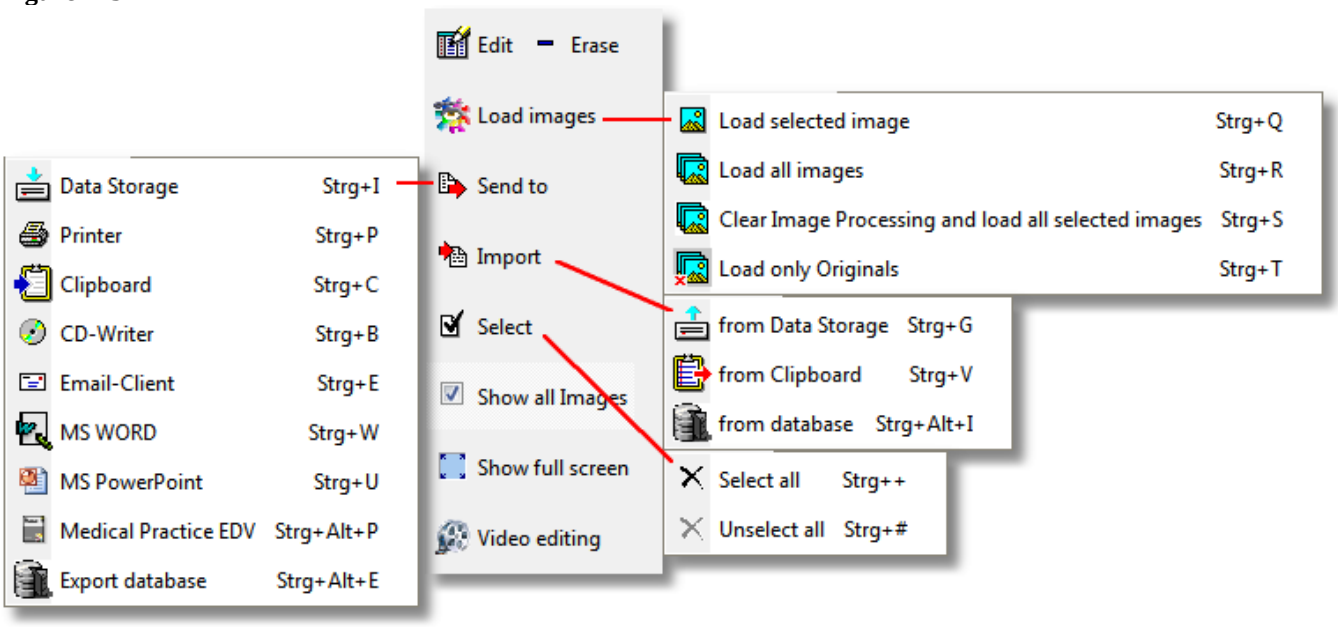
The current study and all images associated with it are deleted after a safety prompt. Also see “Configure "Delete Files"” page 5-44.

Figure 114



8.6 Button images

Figure 115



8.6.1 Edit

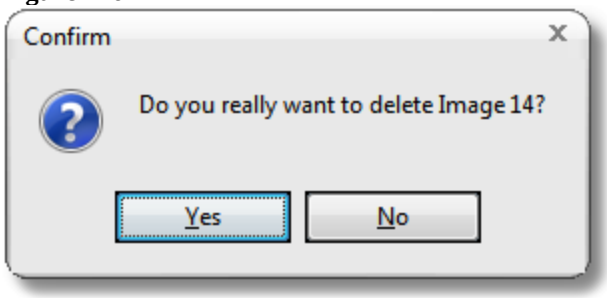
Opens the edit dialogue to edit the data of the selected image.

See Edit patient data page **Fehler! Textmarke nicht definiert.**.

8.6.2 Erase

After a safety prompt, all selected images will be deleted. If no images are selected, the active image will be deleted (red frame). Also see “Configure "Delete Files"” page 5-44.

Figure 116



8.6.3 Load images

8.6.3.1.1 Load selected images

All selected images are loaded in image processing.

8.6.3.1.2 Load all images

All images in the preview are loaded in image processing.

8.6.3.1.3 Clear image processing and load all selected images

All images listed in preview are loaded in image processing once all images opened in image processing have been closed.

8.6.3.1.4 Load only originals

All images in preview with the attribute "Original" are loaded in image processing. Originals are only unedited images generated by the programme. You may, however, change this attribute manually.

8.6.4 Send to…

See popup menu preview Submenu "Send to …" page 8-92.

8.6.5 Import

See popup menu preview Submenu "Import from…" page 8-93.

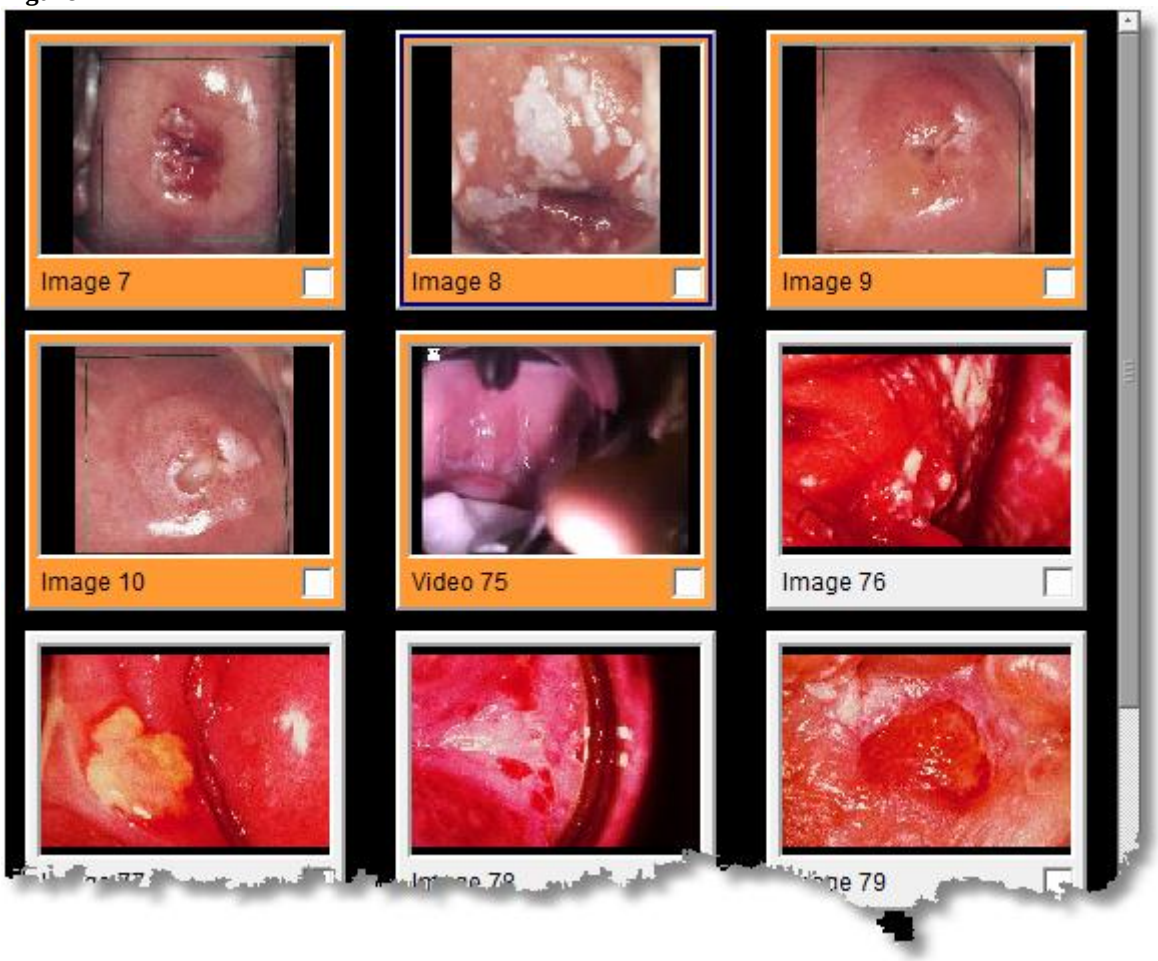
8.6.6 Select

These buttons permit selection or unselection of all images.

8.6.7 Show all images

Usually, only those images are displayed that belong to the active study. Activating this option will display all images for the active patient, independently of the selected study. The images that belong to the current study are displayed in orange.

Figure 117



8.6.8 Show full screen

See “Show full screen” page 8-94.

8.6.9 Video editing

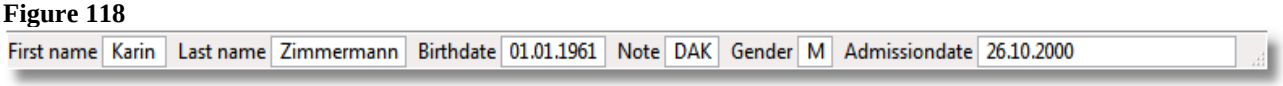
See “HD video processing (video cutting)” page 11-209.

8.7 The navigation bar

The navigation bar permits skipping to the start or end of the respective active table (red edge), or a dataset forwards or back. The "Minus" button deletes a dataset. The button on the outer right can be used to update the data in the display. This is particularly important in network operation if data on other stations has been changed or added.

8.8 Status bar

Figure 118

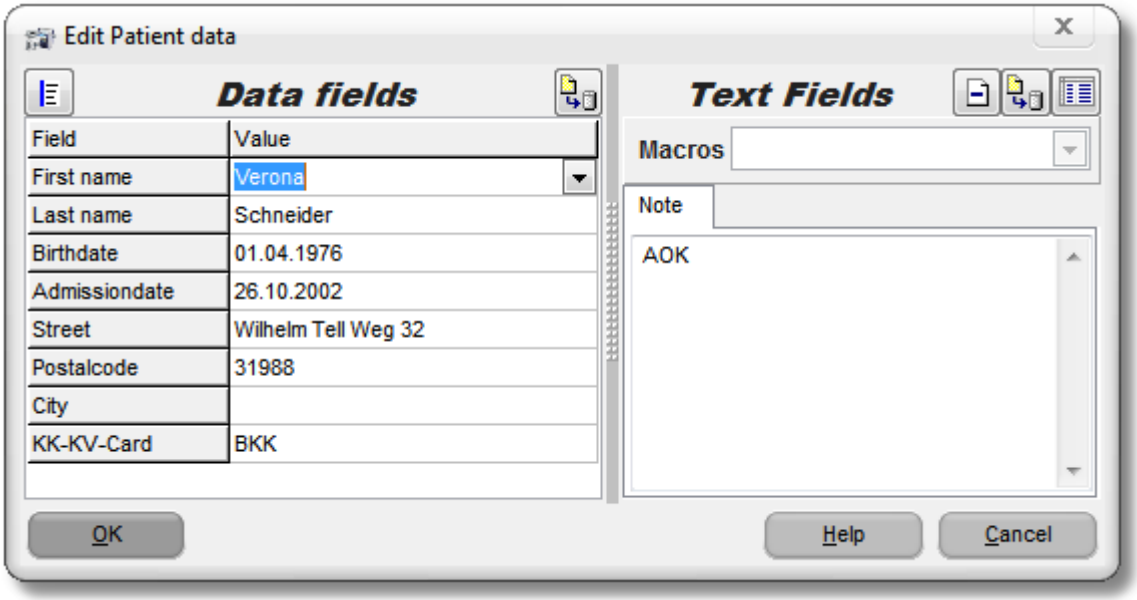


The status bar provides a continuous overview of the current patients on all programme pages. This is important because new images are inserted in the database for this patient. The field display can be configured.

See "Configure status bar" page 5-46 and "Configure Quick print" on page 4-33.

8.9 Input dialogue

Figure 119



This dialogue appears if you want to edit data and is adjusted to the respective tables, so that the same dialogue will appear for patient, study or image tables. The listed data fields correspond to those checked in "Configure display". The tab key on your keyboard will take you from one field to the next. To get to the previous field, also press the shift button. All changes in this dialogue are only saved when confirmed with "OK". To cancel editing, click "Cancel" or press "ESC". The individual fields contain dropdown lists or calendars each that can be reached via the corresponding button within the data row. Alternatively, you may reach the lists via "Alt-arrow down" and the calendar sheets via "Ctrl-Return".

8.9.1 Data fields

Data fields are date, time, number or text fields with less than 64 characters.

8.9.2 Text fields

All text fields exceeding 64 characters or with a variable length are listed as text fields. Here you can enter longer texts with line breaks.

8.9.3 Macros

This dropdown list lists all entries from the dictionary that correspond to the currently selected field. Selecting an entry in the dropdown list will insert the corresponding description in the active memo window.

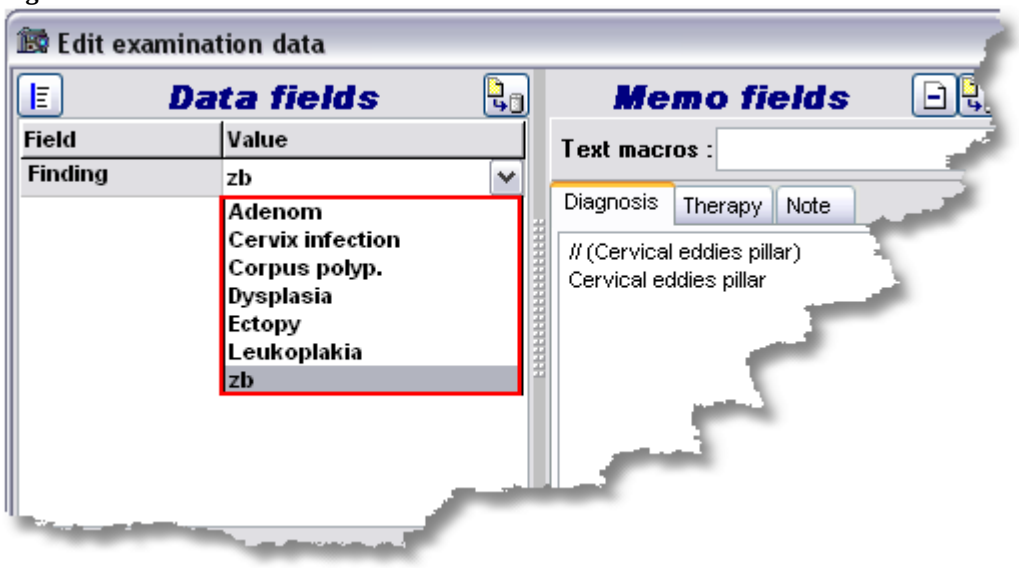
8.9.4 Dropdown lists

The dropdown lists are either put together from present data in the database or from dictionary entries. If at least one entry is present for the respective field in the dictionary, only these entries will be listed. The "Category" in the dictionary corresponds to the name of the database field.

8.9.4.1 Data fields

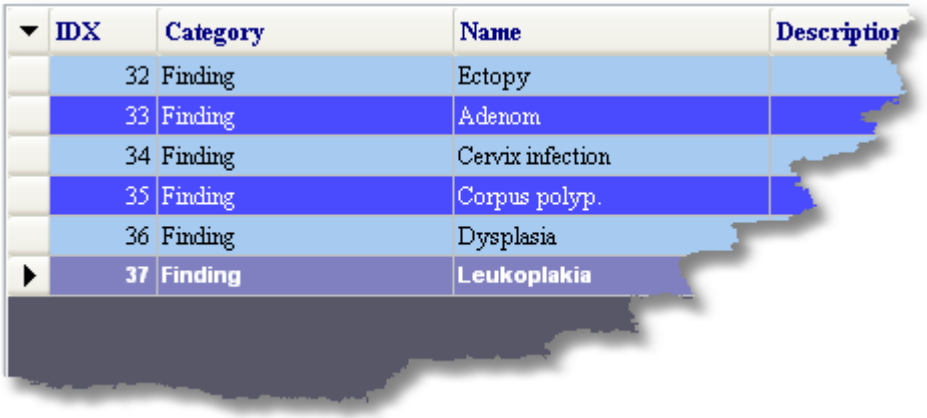
Dictionary selection:

Figure 120



Dictionary excerpt

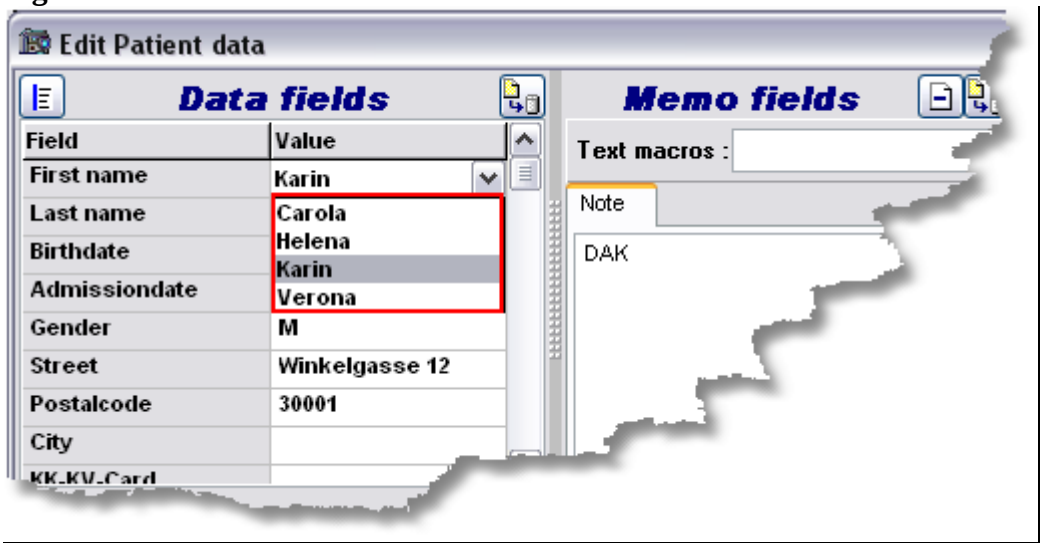
Figure 121



IDX	Category	Name	Description
32	Finding	Ectopy	
33	Finding	Adenom	
34	Finding	Cervix infection	
35	Finding	Corpus polyp.	
36	Finding	Dysplasia	
37	Finding	Leukoplakia	

Database selection:

Figure 122

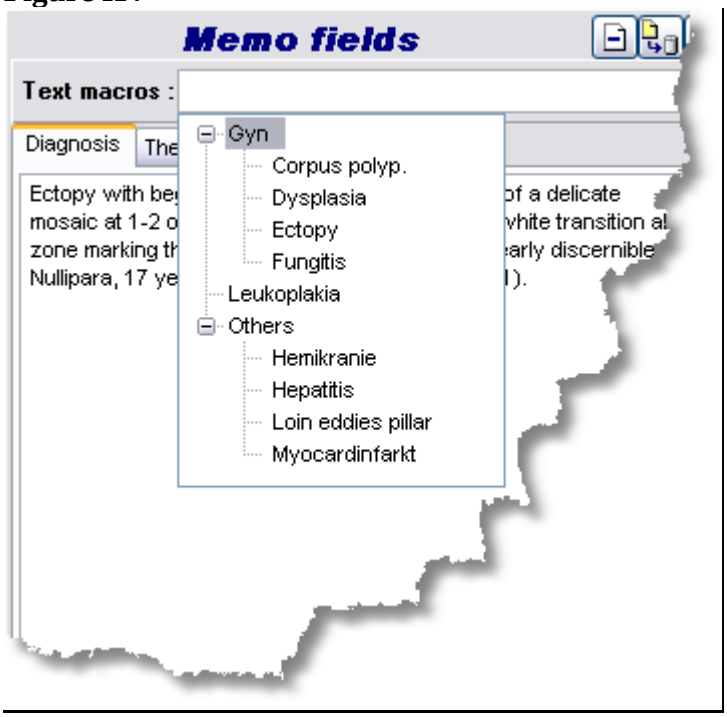


Database excerpt

Figure 123

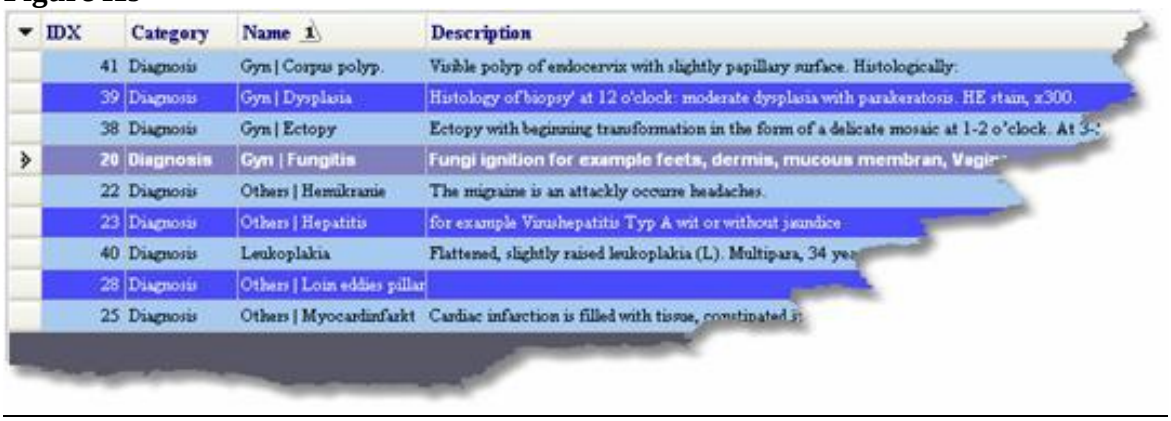
8.9.4.2 Text fields

Figure 124



Dictionary excerpt:

Figure 125



IDX	Category	Name	Description
41	Diagnosis	Gyn | Corpus polyp.	Visible polyp of endocervix with slightly papillary surface. Histologically:
39	Diagnosis	Gyn | Dysplasia	Histology of biopsy' at 12 o'clock: moderate dysplasia with parakeratosis. HE stain, x300.
38	Diagnosis	Gyn | Ectopy	Ectopy with beginning transformation in the form of a delicate mosaic at 1-2 o'clock. At 3-:
20	Diagnosis	Gyn | Fungitis	Fungi ignition for example feets, dermis, mucous membran, Vagi
22	Diagnosis	Others | Hemikranie	The migraine is an attackly occure headaches.
23	Diagnosis	Others | Hepatitis	for example Virushepatitis Typ A wit or without jaundice
40	Diagnosis	Leukoplakia	Flattened, slightly raised leukoplakia (L). Multipara, 34 ye
28	Diagnosis	Others | Loin eddies pillar	
25	Diagnosis	Others | Myocardinfarkt	Cardiac infarction is filled with tissue, constipated s

For detailed description, see dictionary page **Fehler! Textmarke nicht definiert.**.

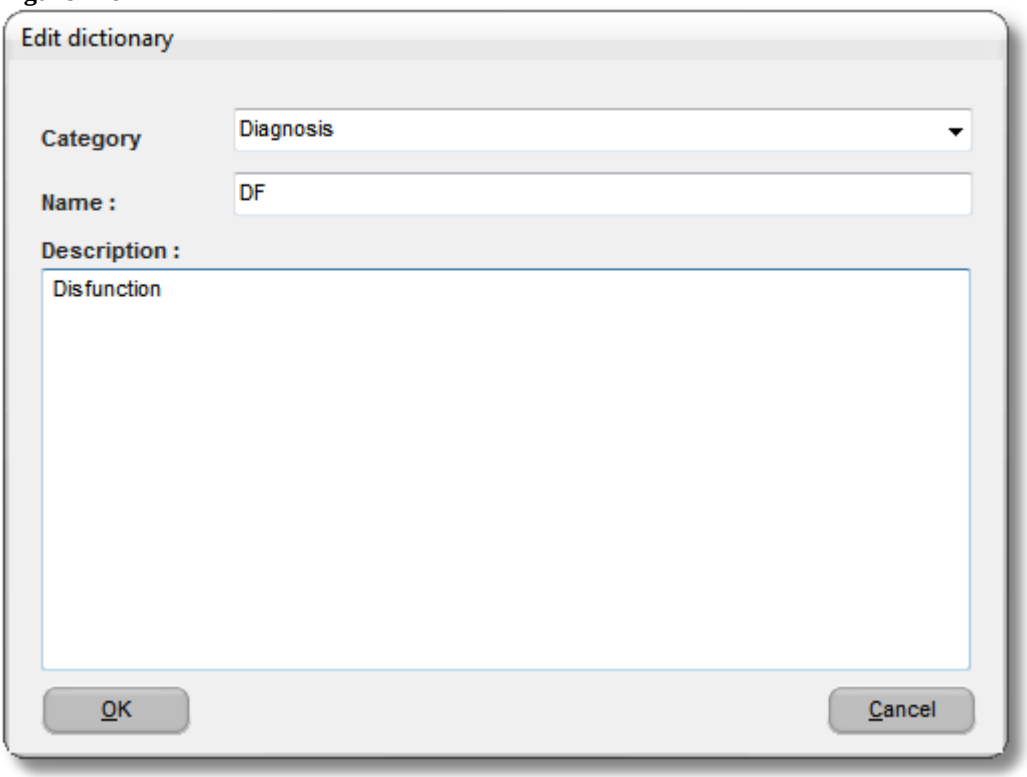
8.9.5 Deleting a text field

Deletes the content of the active text field.

8.9.6 Insert entry into the dictionary

The entered text will be inserted in the dictionary as a description.

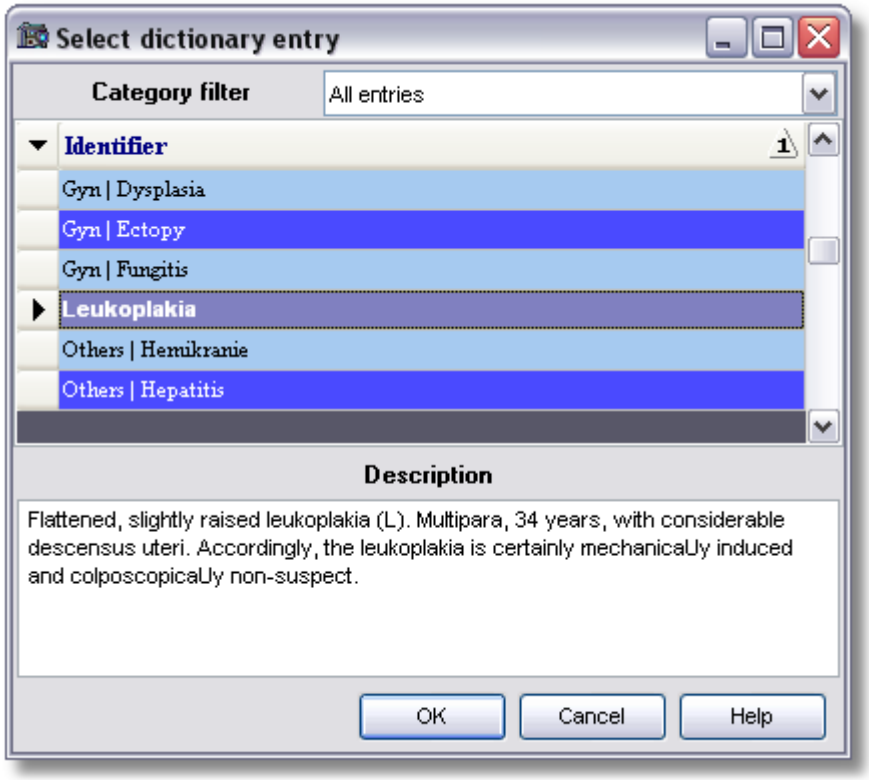
Figure 126



8.9.7 Insert entry from dictionary

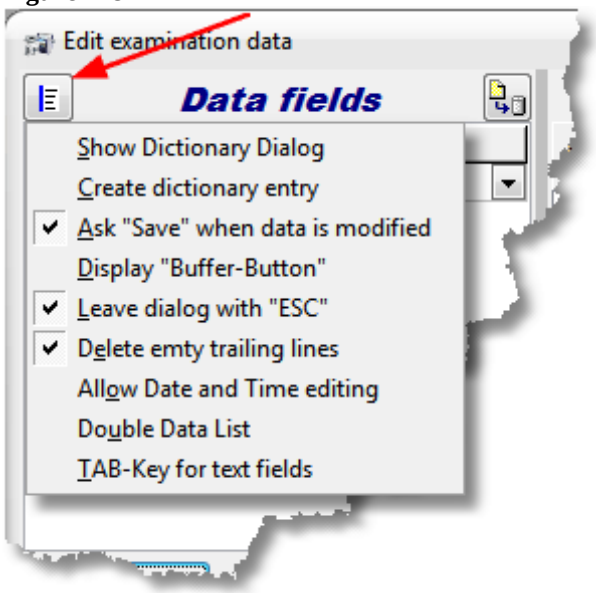
The dictionary dialogue is opened. You may select an entry that is then inserted in the corresponding input field in the input dialogue. Changing the category also permits selection of descriptions that are not part of the selected field.

Figure 127



8.9.8 Input dialogue context menu

Figure 128



8.9.9 Show dictionary dialogue

See "Inserting entry from the dictionary" page 8-104.

8.9.10 Create dictionary entry

See "Inserting entry into dictionary" page 8-103.

8.9.11 Ask "Save" when data is modified

With this option active, clicking "Cancel" will cause a prompt for whether the changed data is to be saved.

8.9.12 Display "Buffer-button"

With this option active, an additional button is displayed to directly write the data entered in the database without leaving the input dialogue.

8.9.13 Leave dialogue with "ESC"

Usually, "ESC" rejects changes to the active input field. Activating this option causes "ESC" to leave the dialogue at once.

8.9.14 Delete empty trailing lines

With this option active, all spaces and empty lines at the end of the data fields are deleted.

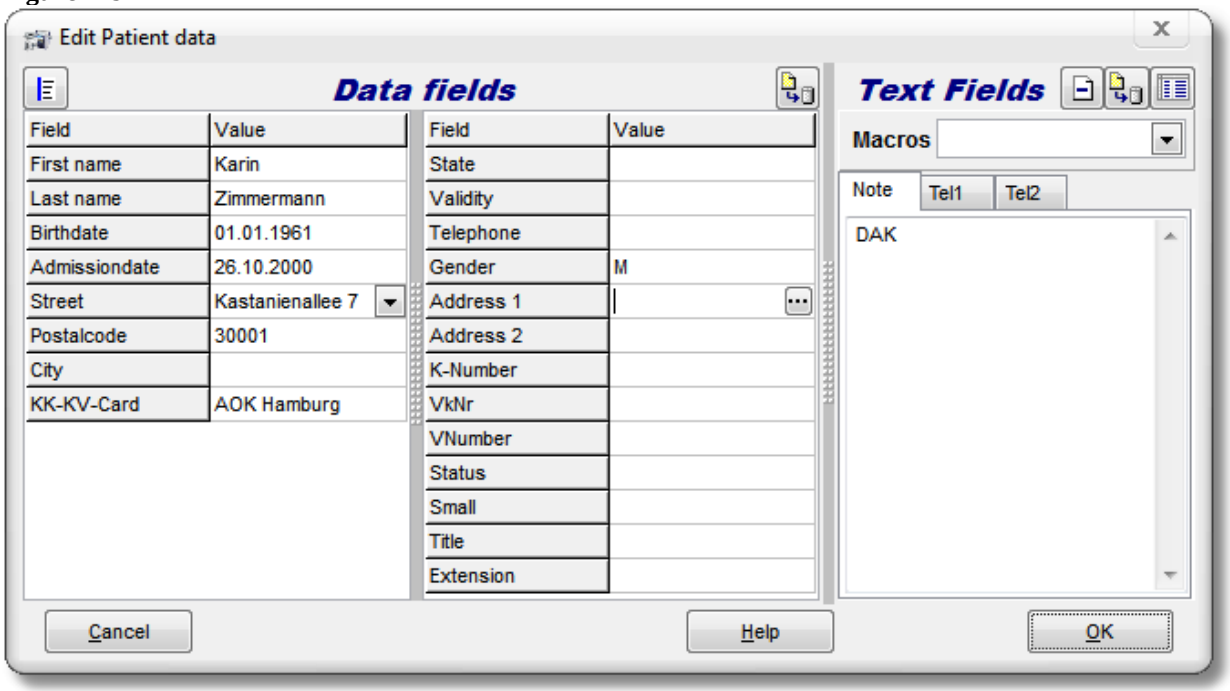
8.9.15 Allow date and time editing

Usually, date and time editing is blocked; if you have to edit these fields anyway, e.g. because the internal PC clock was misadjusted, you may activate it with this option.

8.9.16 Double data list

If a great number of fields is edited, it may be sensible to distribute them to two data lists.

Figure 129



8.9.17 TAB key for text fields

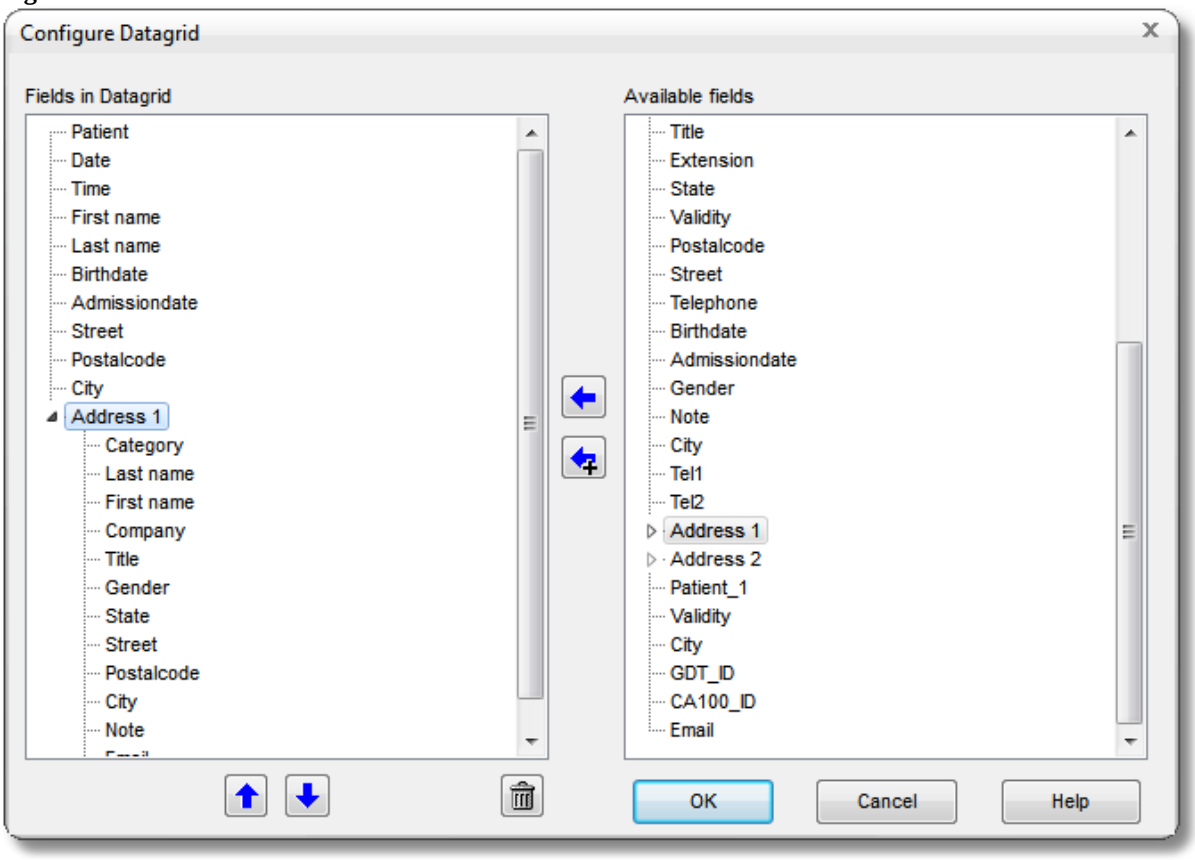
Activate this option if you want to navigate within the data list with the tab key.

8.10 Configure display

8.10.1 Data grid

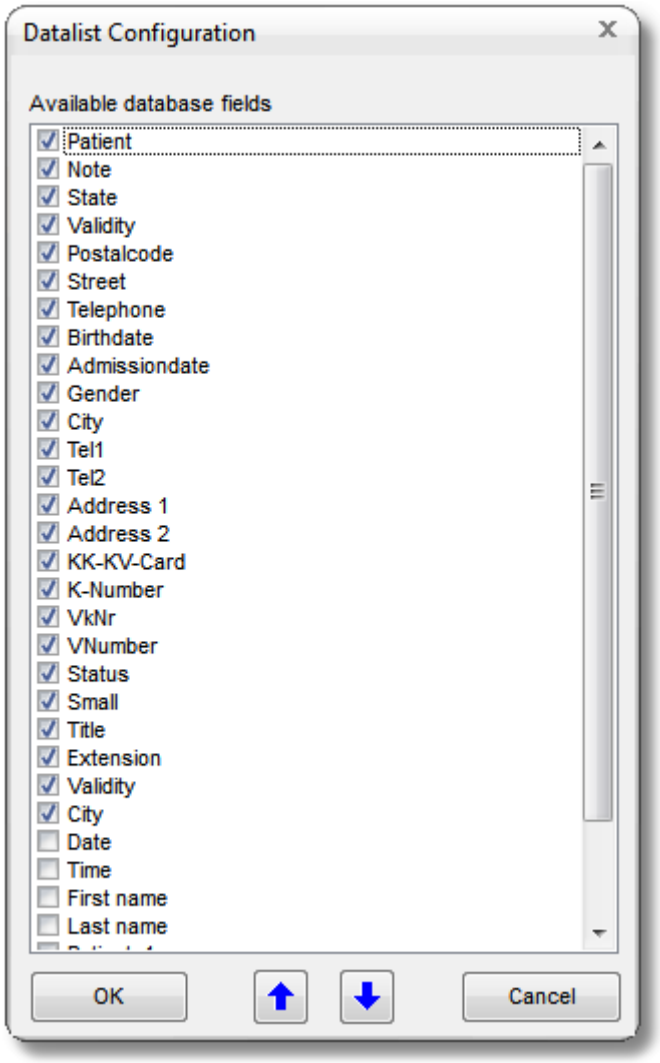
Use this dialogue to select the data fields to be displayed in the respective data grids. To display an entry, select it on the right side below "Available fields", then click the button with the blue arrow. If you want to display the field as member of a group, click the button with the plus icon. To delete a field, select it on the left below "Fields in data grid" and then click the button with the recycle bin. To change the position of an entry, select it on the left and click the up or down arrow button.

Figure 130



8.10.2 Data list

Figure 131



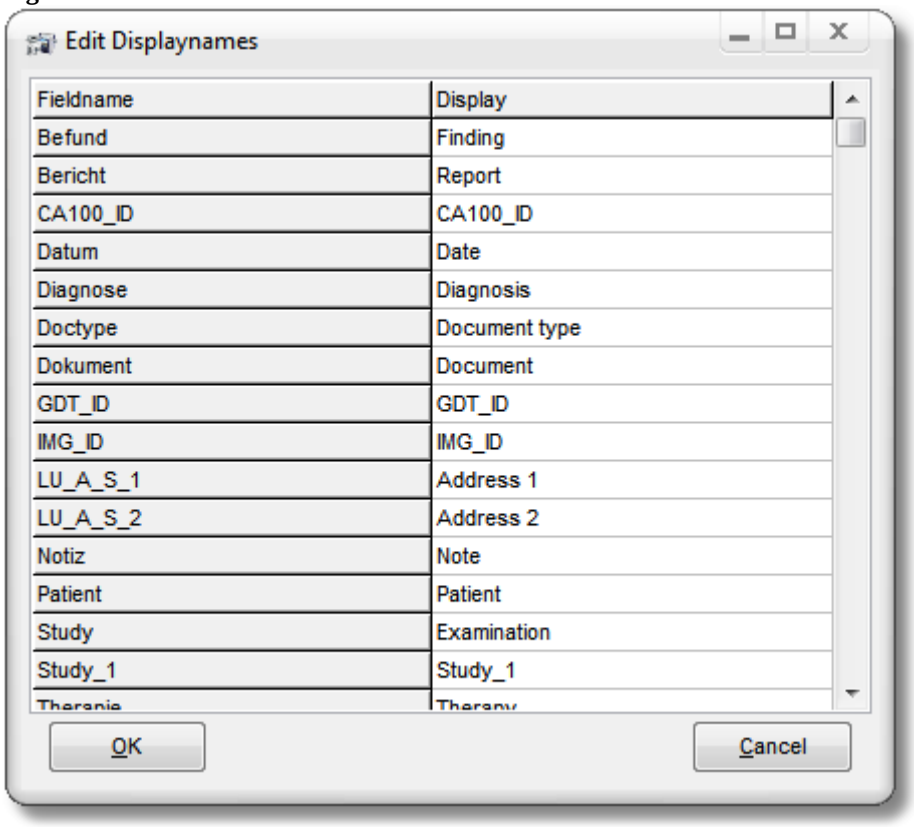
This dialogue determines the data fields to be displayed in the respective data lists.

8.11 Adjust display names of the data fields

This dialogue adjusts the designations of the data fields to your needs.

Caution: The display names must be unique, i.e. no name must be present twice!

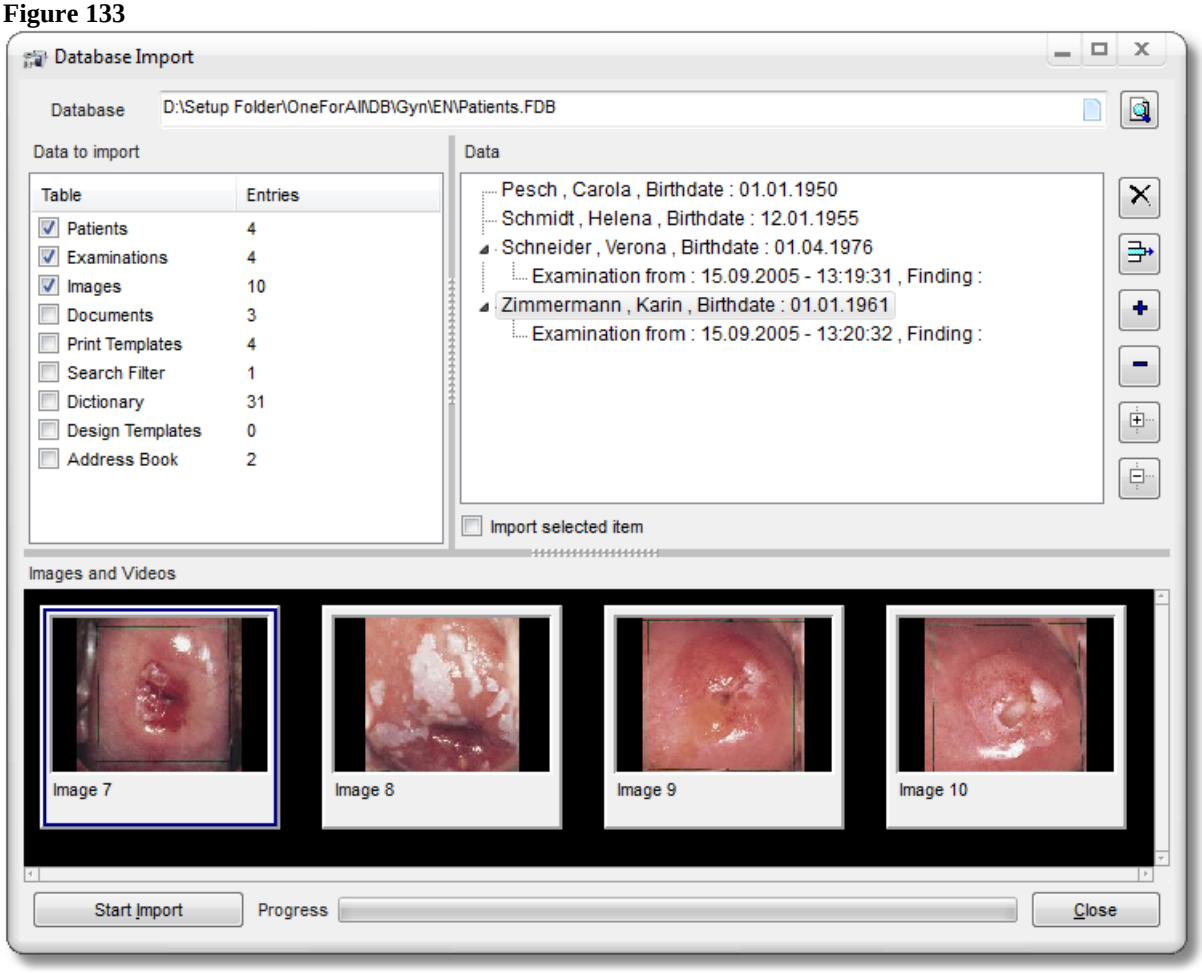
Figure 132



8.12 Database import

The module database import permits either importing entire databases or transferring selected patients with the associated studies and images, as well as videos, from one computer to another. The module “Database export” page 8-110 is available for this.

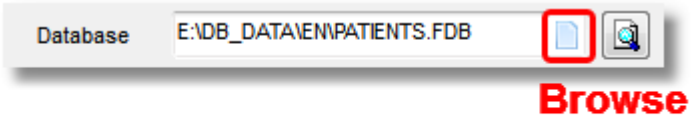
Figure 133



8.12.1 Database selection (1)

You can use the database input field to select the path for the database you want import by clicking the button "Browse":

Figure 134



Then the "Open file dialogue" opens and you can select the import file with the extension ".fdb".

The database is now read automatically. Click the button  if you want to import the database again.

8.12.2 Table selection (2)

Select the tables within the database to be imported in the list "Data to be imported". For databases generated via data export, only the first three tables are relevant.

8.12.3 Data selection (3)

The tree view "Data" lists all patients and the associated studies. Clicking an entry will display all images and videos for this entry in the view "Images and videos" (5).

8.12.4 Button panel data selection (4)

These buttons can be used to open and close the view of individual elements and in particular to also delete entries you do not want to import, if you only want to import one entry, you may also activate the option "Import selected entry".

8.12.4.1 Delete all entries

8.12.4.2 Delete selected entry

8.12.4.3 Open selected entry

8.12.4.4 Close selected entry

8.12.4.5 Open all entries

8.12.4.6 Close all entries

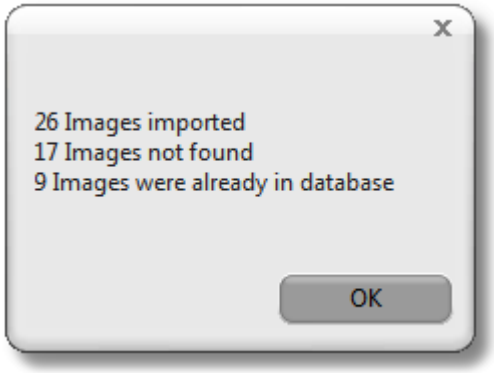
8.12.5 Preview "images and videos" (5)

Once you click an entry in the data selection in the preview "Images and videos", all images and videos that belong to this entry are displayed.

8.12.6 Start import (6)

Once you have selected the data you want to import, you may start import with the button "Start import". The programme will now try to recognise entries already present in the database and not add them again. You can follow the progress of the action with the progress bar. After completion of import, you will receive information on the result:

Figure 135

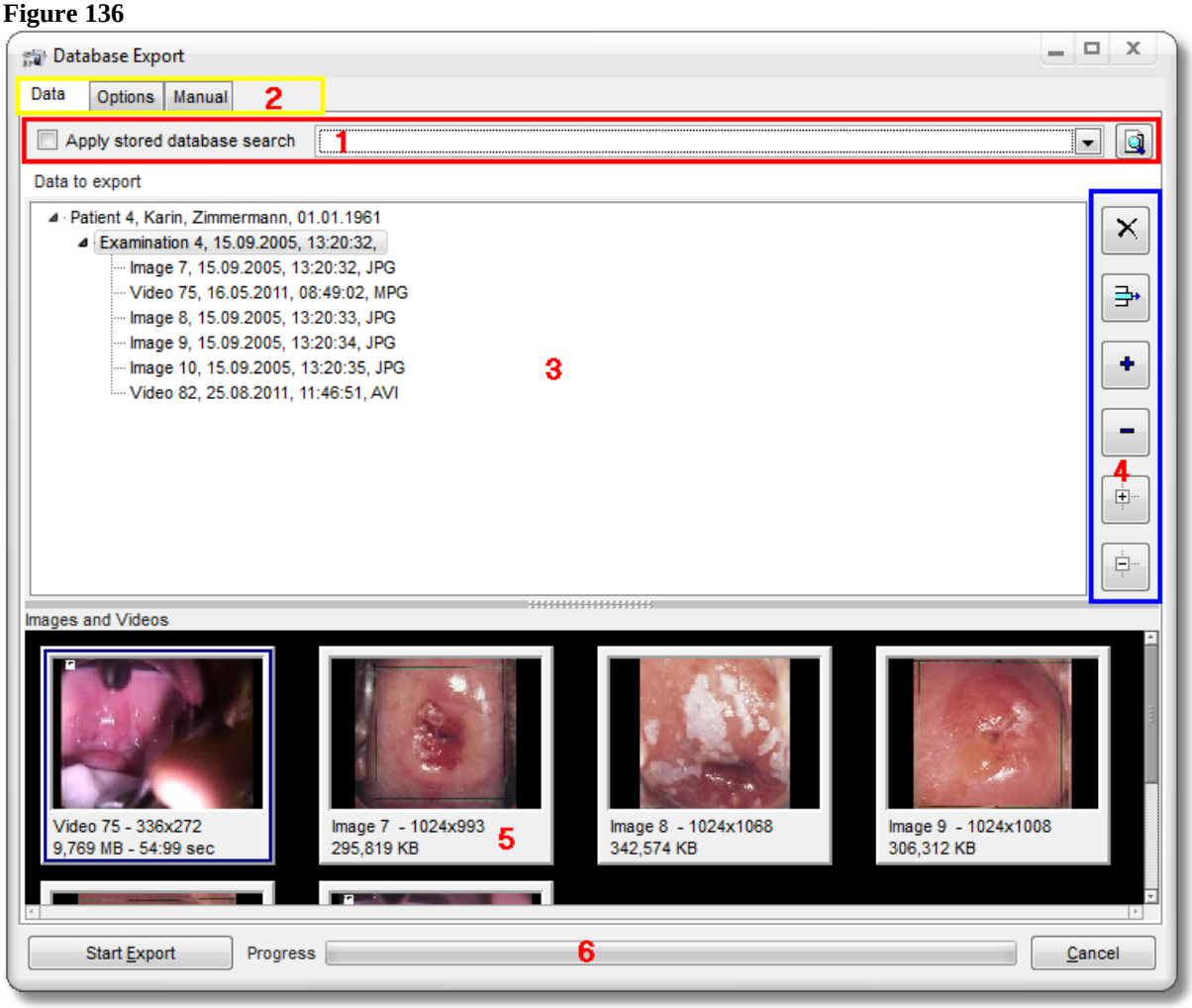


8.13 *Database export*

The database export module permits export of complete databases, or transfer of selected patients with the associated studies and images as well as videos from one computer to another. You can either insert individual data right from the database via "Drag and Drop" or use a saved database search as basis for export.

The subsequent import can be performed with the module “Database import” page 8-108.

Figure 136



8.13.1 Export via saved database search (1)

Using the module “Database search” page 9-116, you can save search requests such as "All images of the last two weeks " or "All images with findings "Cataract". The saved search requests can be called right from the database export module. Then you can delete entries from the result or add additional data by "Drag and Drop".

8.13.2 Export via "Drag and Drop"

Via "Drag and Drop", you may assume images, videos, entire studies or complete patient files into the export window. Click the corresponding entry in the database, either in the data grid patients, the data grid studies or one of the preview images, and drag this entry to the export window with the left mouse button pressed. Releasing the mouse button will enter the data in the list of the data to be exported.

8.13.3 Export of the entire database

Options (2) page 8-113 permit activation of "Export entire database". All patients, studies, images and videos are entered in the export list. Then you may use the button panel (4) to delete all entries you do not want to export.

8.13.4 Data selection (3)

The tree view "data" lists all patients and the associated studies. Clicking an entry will display all images and videos for this entry in the view "images and videos" (5).

8.13.5 Button panel data selection (4)

Use this button to display and hide the view of individual elements and to in particular delete entries you do not want to export.

8.13.5.1 Delete all entries

8.13.5.2 Delete selected entry

8.13.5.3 Open selected entry

8.13.5.4 Close selected entry

8.13.5.5 Open all entries

8.13.5.6 Close all entries

8.13.6 Preview "images and videos" (5)

The preview "images and videos" displays all images and videos associated with the entry you click in the data selection.

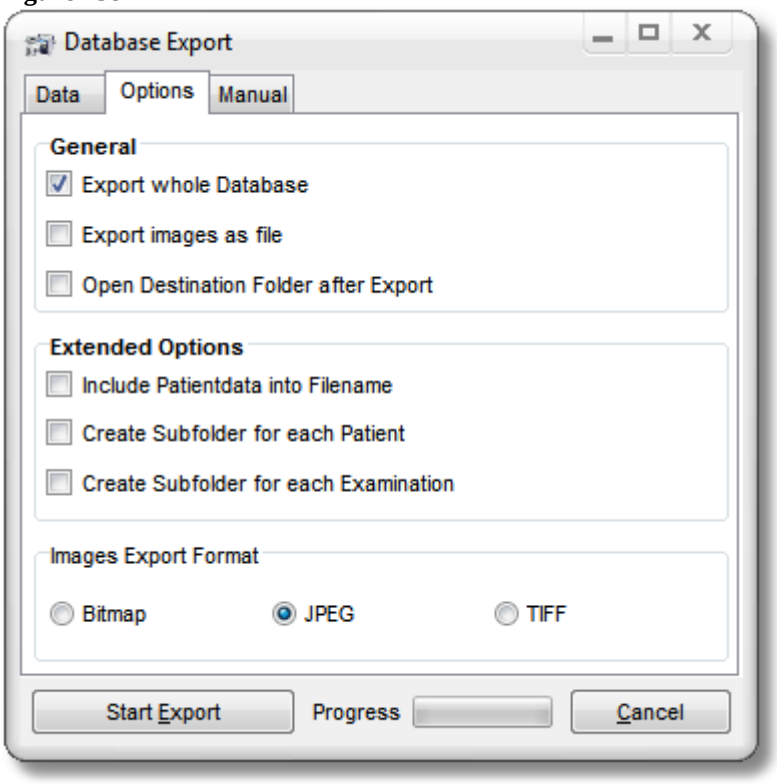
8.13.7 Start export (6)

Once the data you want to export are selected, you may start export with the button "Start export". You can follow the progress of the action with the progress bar. After completion of export, you will receive a report on the result:

Figure 137

8.13.8 Options (2)

Figure 138



8.13.8.1 General

8.13.8.1.1 Export entire database

Enters all patients, studies, images and videos in the export list. Then you may delete all entries you do not want to export via the button panel (4).

8.13.8.1.2 Export images as a file

Usually, the images are saved in the export database ("Export.fdb") and do not explicitly appear on the data carrier. With this option active, the images, as well as the videos, are stored as files and can be loaded in any image processing programme.

8.13.8.1.3 Open target folder after export

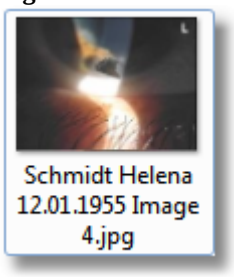
Opens an explorer window to the export file path after export.

8.13.8.2 Extended options

8.13.8.2.1 Integrating patient name into file name

If this option is active, the name and birth date of the patient are included in the file name as well as the image number:

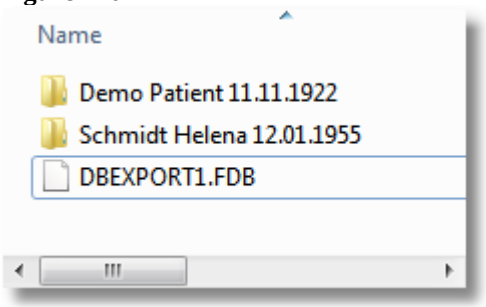
Figure 139



8.13.8.2.2 Creating subfolder per patient

If this option is active, a subfolder is generated in the target path for each patient; otherwise, the images and videos are copied right into the target path:

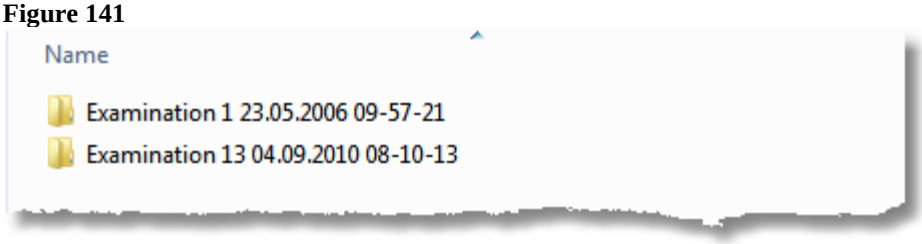
Figure 140



8.13.8.2.3 Creating subfolder per study

If this option is active a subfolder is generated in the target path for each study; otherwise, the images and videos are copied right into the target path:

Figure 141



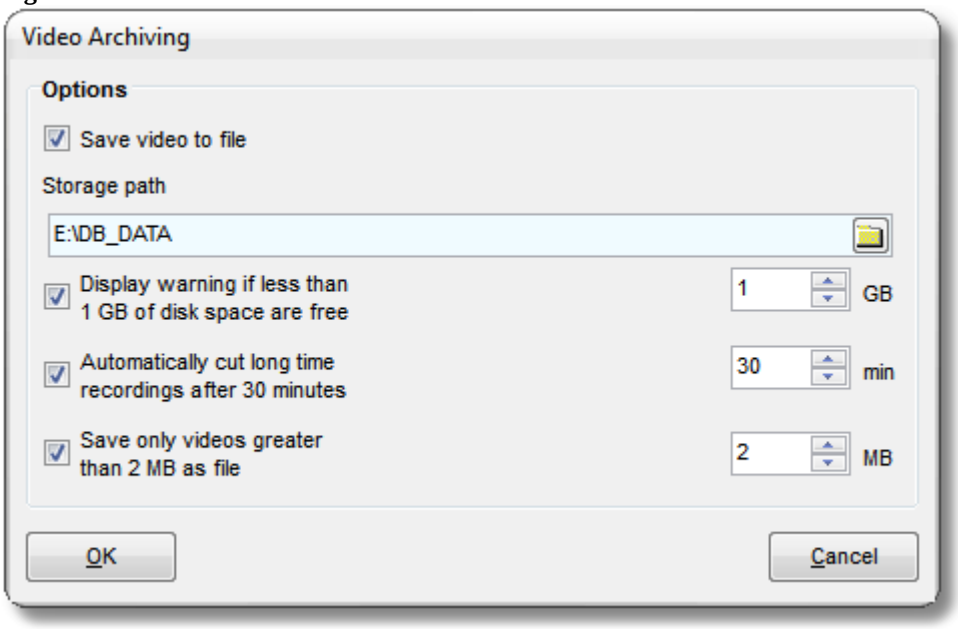
8.13.8.3 Export format for images

The standard setting is JPEG. Alternatively, you may also save the images in Bitmap or Tiff formats, depending on the format best suitable for further processing.

8.14 Video archiving

Use this dialogue to determine how to save videos. This is particularly important if you want to record larger videos, e.g. entire operations of several hours.

Figure 142



8.14.1 Save video to file

Usually, all images and videos are saved directly in the database. However, this is no longer sensible for videos with a size of several hundred megabytes; in particular recording HD-video leads to large data volumes. In this case, activate this option.

8.14.2 Storage path

Use this input field to determine the path in which your video files are to be saved if you activate "Save video to file". Please observe that the drive has sufficient free memory space available.

8.14.3 Display warning if less than x GB of disk space are free

Once the available disk space on the drive your videos are saved to undercuts the amount indicated here, a dialogue will inform you of this.

8.14.4 Automatically cut long time recordings after x minutes

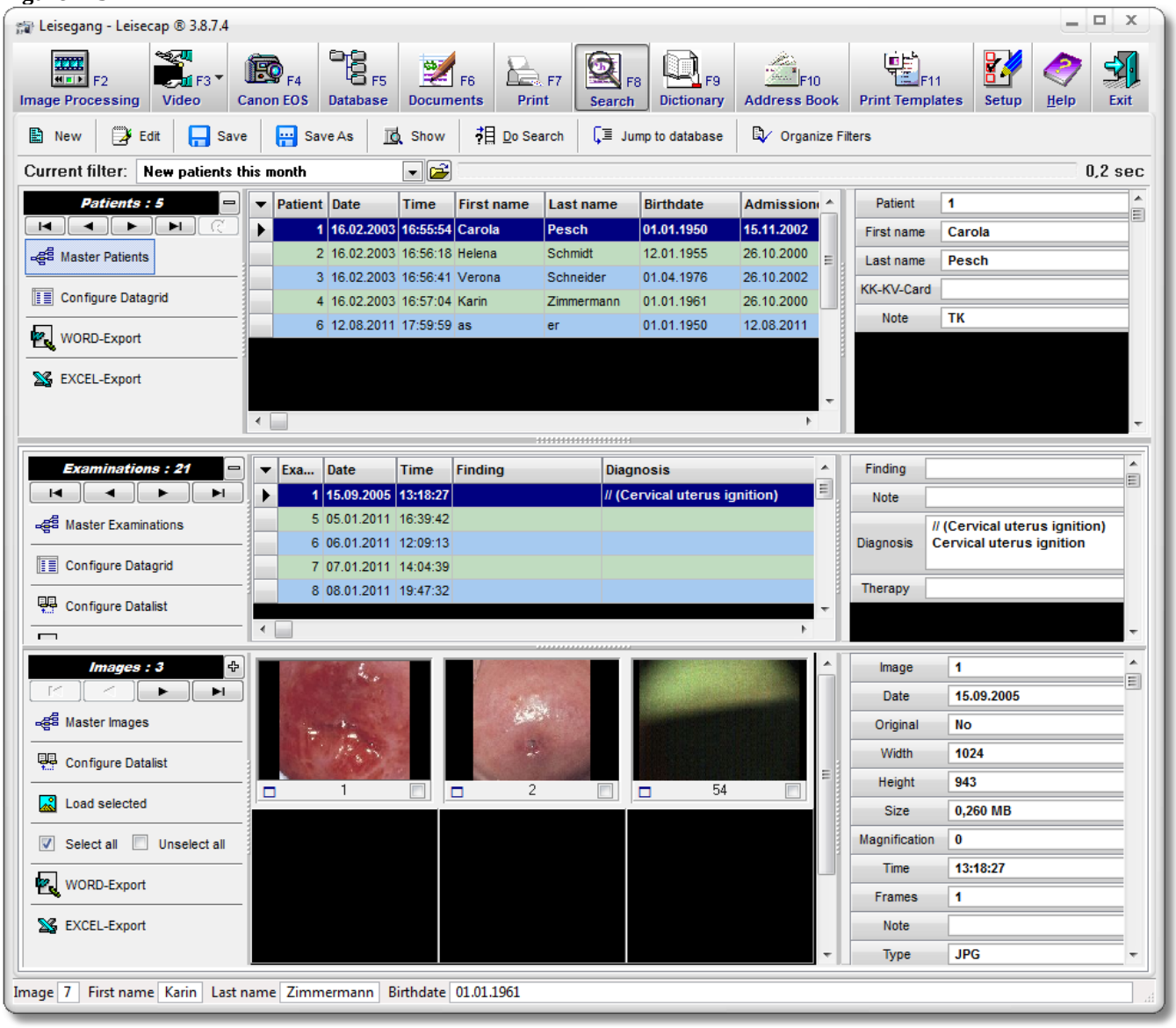
If you want to record video for several hours and may want to burn them on CD/DVD later, it may be sensible to prevent the individual recording files from getting too large. With this option, you can cause the programme to start a new file after a set time.

8.14.5 Save only videos greater than x MByte as file

Videos saved as a file cannot be called in the network. If you want to have at least smaller videos available in the network, it may be sensible to activate this option.

9 Database search

Figure 143



The module "Database search" offers an option of performing simple as well as complex search requests and to save them as a "search template". This permits quick and simple processing of recurring tasks. The search results are displayed as on the database page, making orientation easier. Search templates generated here can also be used for data export. See “Database export” page 8-110.

All buttons for setting, saving and calling search templates are in the upper button panel.

9.1 *Upper button panel*

Figure 144

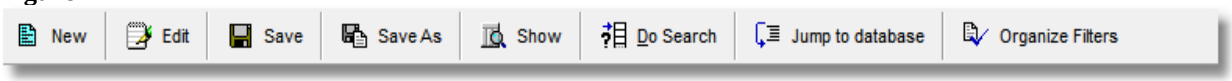


Figure 145

9.1.1 Load present search requests

If you have already set up your own search filters, clicking this button will display the dialogue "Load search filter". You may also use it to delete search filters.

Alternatively, you can also click the small arrow, which will display a menu with the present search filters (see image top).

9.1.2 New

This button creates a new search filter. See “Creating search filter” page 9-118.

9.1.3 Edit

This button can be used to change the criteria of the current search filter.

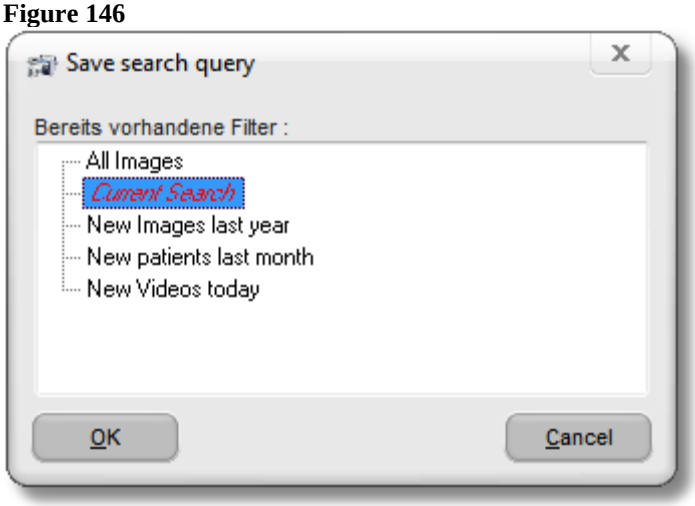
9.1.4 Save

The search query is saved under the current name. If you have set up a new search query that was not yet named, the dialogue "Save as" will open.

9.1.5 Save as

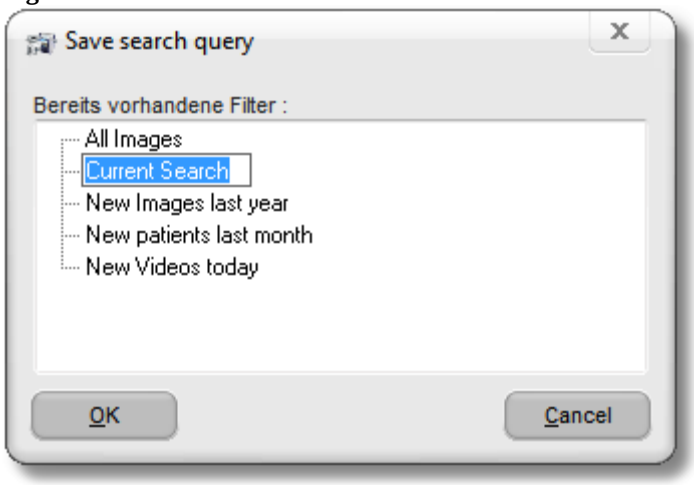
This button opens the dialogue "Save search query". The current search query can be saved under a new name or a present one can be overwritten.

Figure 146



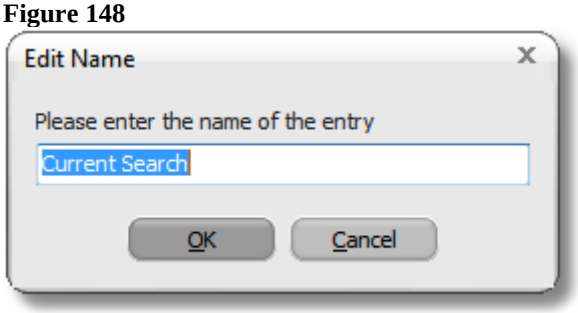
Clicking the entry "Current search" once, you can enter a name.

Figure 147



Double-clicking "Current search" opens an input dialogue:

Figure 148



9.1.6 Show

This button displays a short version of the current search query:

Figure 149

9.1.7 Do Search

Restarts the current query. This can be useful if you have performed changes to the database after the last query and want to update the search results.

9.1.8 Jump to database

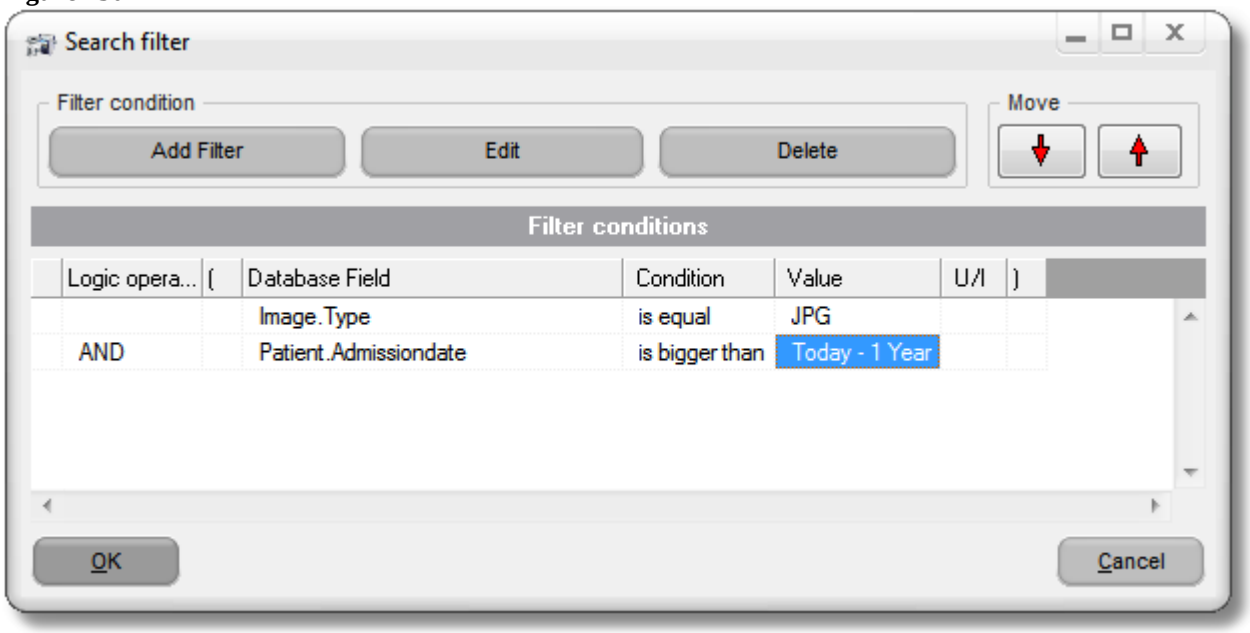
The database page is opened and the active patient, active study and selected image from the search page are called.

9.2 Creating search filter

You may create a new search filter with the button "New" or change a present search filter by loading it and clicking "Edit".

The following dialogue appears:

Figure 150



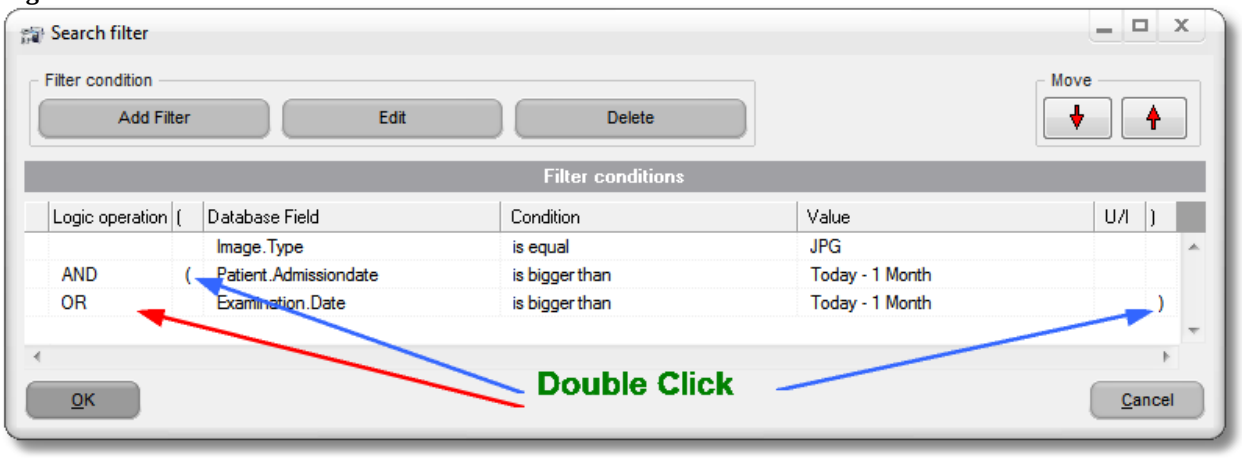
To change a search condition, select it with the mouse and click "Edit" in the search filter dialogue. To create a new filter condition, click "Add". The "Edit filter dialogue" is opened (See Edit filter).

Use the arrow buttons "Move" to move the selected entry up or down.

To delete a condition, select it again with the mouse and click "Delete".

In addition to the simple search criteria, you may also define this dialogue to use more complex interrelations, as in the following dialogue:

Figure 151



9.2.1 Linking rule (AND/OR)

The logical link between the individual conditions can be switched between AND, OR by double-clicking the corresponding field (red arrow).

9.2.2 Setting brackets ("(...)")

To set and remove brackets, double-click the corresponding field (blue arrows).

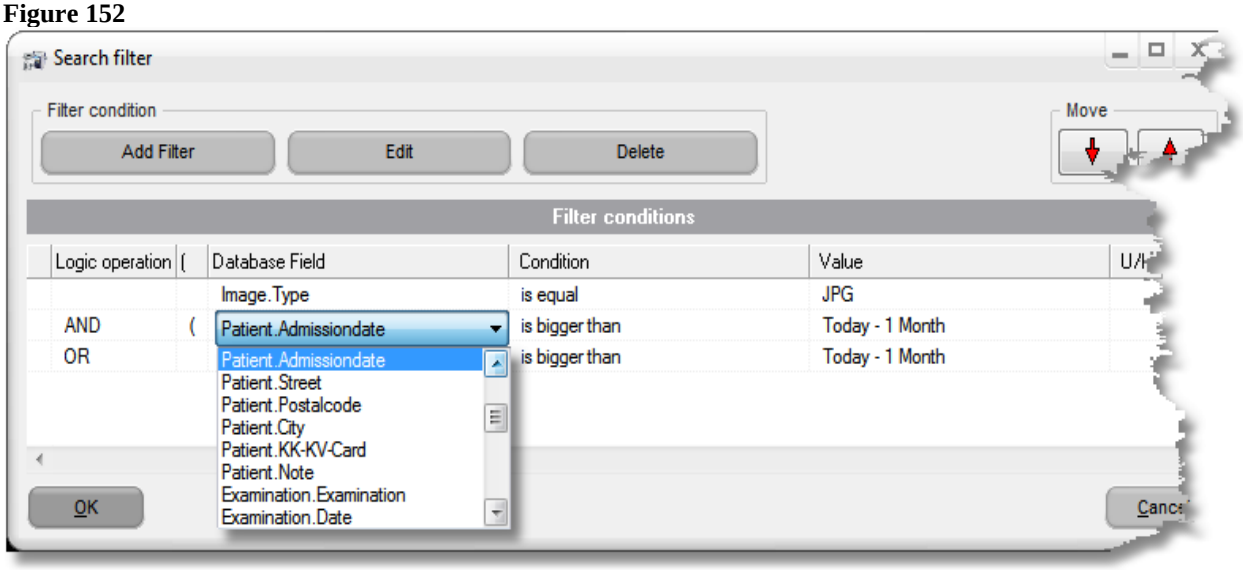
9.2.3 Observe Upper/lower case (U/l)

If you want to observe upper/lower case letters, double-click the corresponding field in "U/l". "x" means that upper/lower case are observed. In the above example, the entries "Aok" or "aok" will not appear in the search result.

9.2.4 Quick changing of individual parameters

You may also change individual parameters of the search filter by selecting the field to be changed and then clicking it again. Now a list of possible values appears. In the example below, you may now replace, e.g. "birth date" by "recording date" without calling the filter dialogue.

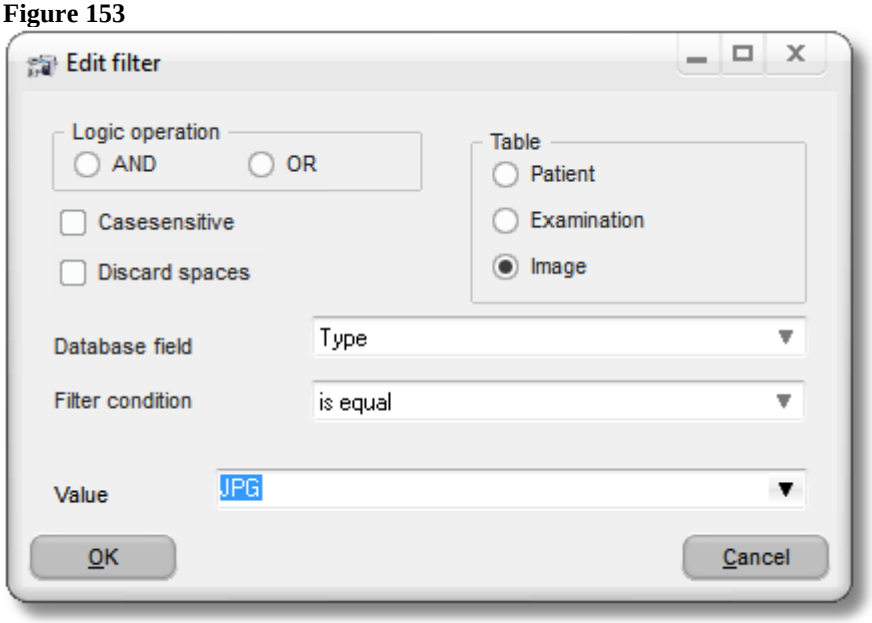
Figure 152



9.3 Edit search filter

Clicking "Add" in the dialogue "Search filter" or selecting an entry and then clicking "Edit" opens the following dialogue:

Figure 153



In this dialogue you may select the database field and table to be searched and the conditions to be met.

9.3.1 Logic operation

In the selection "Logic operation", you can specify how the new entry is to be linked with a possible previous one.

9.3.2 Table

The selection "table" specifies the database table the field you want to use for your search is to come from. If you want to search for a specific "result", for example, select the table "study". Once you have selected the table, the selection list "database field" will be updated automatically.

9.3.3 Case sensitive

See above.

9.3.4 Discard spaces

If this option is activated, all leading and trailing spaces are removed from the "value" entered by you before search. This is sensible in most cases because you cannot see things like trailing spaces but the programme will process them.

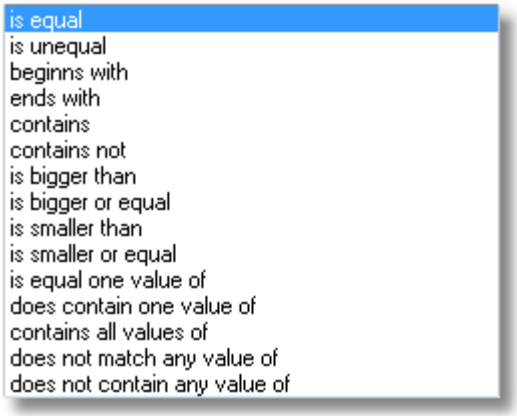
9.3.5 Database field

The field from the chosen table to be filtered. In the above example this is "Type" from the table "studies".

9.3.6 Filter condition

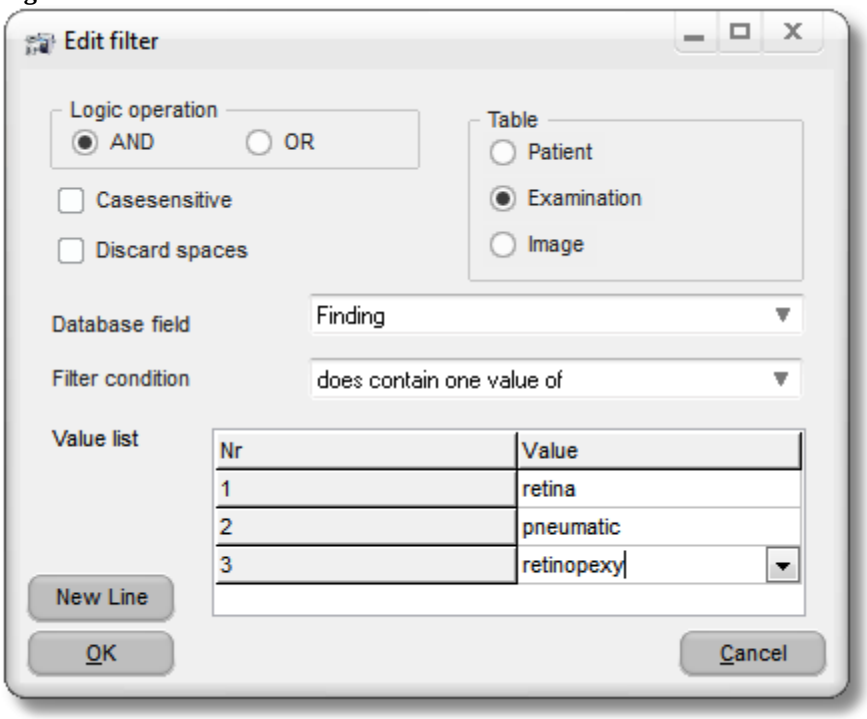
The following logic operators are possible:

Figure 154



The lower conditions permit entering several values in a list. The list appears once you select this operator. To enter a new entry in this list, just push the button "arrow down" on your keyboard.

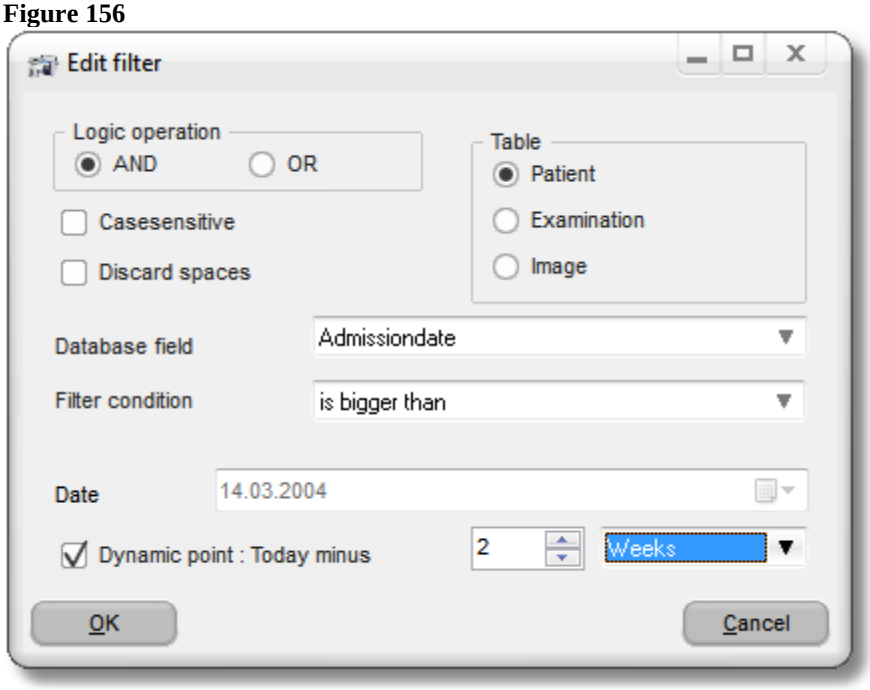
Figure 155



Date fields are a special feature. If you want to find, e.g. all patients you have admitted in the last two weeks, you may do so using the addition "Dynamic point" and then enter "Today minus 2 weeks". This has the clear advantage that the search will always use the current date so that you do not have to change the date entered every time for the search query you saved.

Example for a dynamic time:

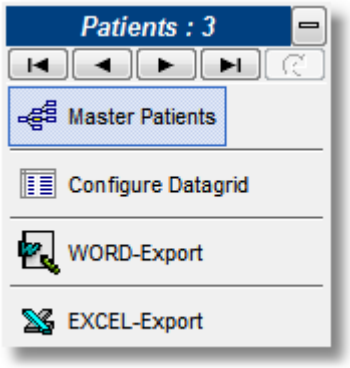
Figure 156



In this example, all patients with a recording date no more than two weeks in the past will be found. Observe that the filter condition must be "is bigger than".

9.4 Button "patients"

Figure 157



9.4.1 The master table

The master table is always the table in which all entries are displayed. The two other tables always display only those items that are linked to the active entry in the master table. Example:

1. If the patient table is the master, all patients are displayed. The examination table shows only studies of the active patient. The image table shows only images of the active study.
2. If the examination table is the master, all studies found are displayed. The patient table shows only the patient who belongs to the active study.
3. If the image table is the master, all images found are displayed. The examination table shows only the study and patient belonging to the active image.

9.4.2 Configure data grid

See "Configure display", “Data grid” on page 8-106.

9.4.3 WORD export

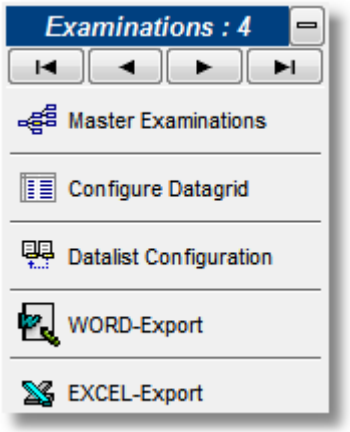
This button enters all data of all patients found in a table and sends them to WORD.

9.4.4 EXCEL export

This button enters all data of all patients found in a table and sends them to Excel.

9.5 Button "Examinations"

Figure 158



9.5.1 Master examinations

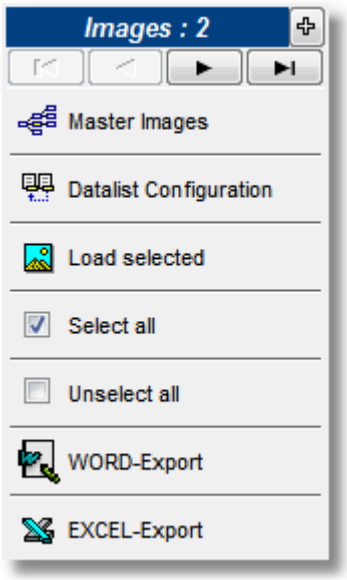
See "The master table", page 9-123.

9.5.2 Configure data grid

See "Configure display", “Data grid” on page 8-106.

9.6 *Button "Images"*

Figure 159



9.6.1 Master images

See "The master table", page 9-123.

9.6.2 Load selected

All selected images are opened in image processing.

9.6.3 Select all

All images are selected.

9.6.4 Unselect all

All images are unselected.

9.6.5 WORD-Export

All selected images are exported in a WORD document.

See "WORD-Export", page 11-133.

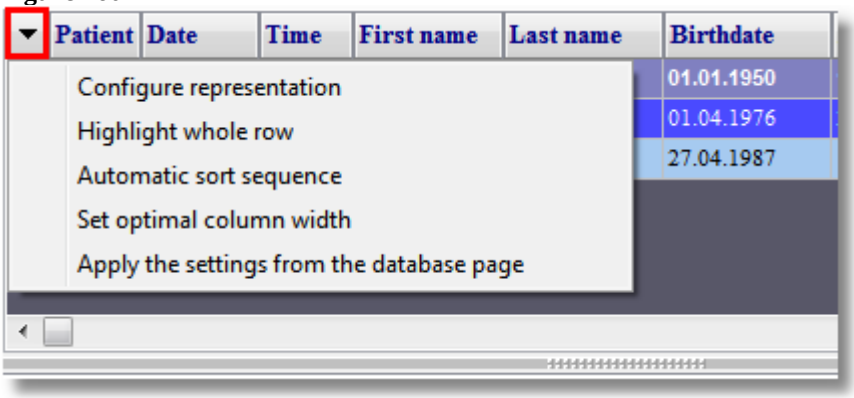
9.6.6 PowerPoint-Export

All selected images are exported to PowerPoint.

See "PowerPoint-Export" page 11-138.

9.7 Popup menu data grid

Figure 160



9.7.1 Configure display

See "Configure display", “Data grid” page 8-106.

9.7.2 Highlight whole row

The entire row of the active dataset is coloured. This switches off "Automatic sort sequence", however.

9.7.3 Automatic sort sequence

If you click a field in the data grid and enter the first letter of the value you are looking for, the database will be sorted by this field automatically if "Automatic sort sequence" is active. In the other case, key inputs will always be forwarded to the field that determines the currently selected main sorting (recognisable by the small triangle with the 1 in the title bar).

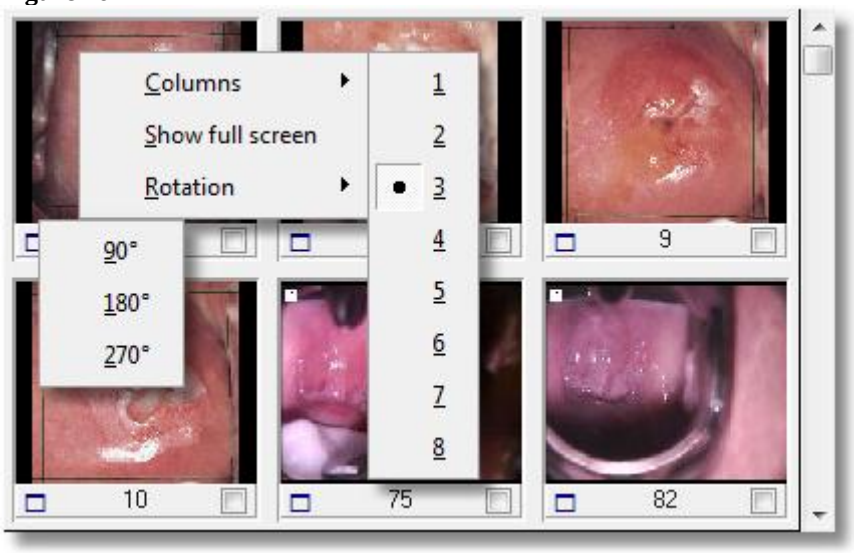
Figure 161

9.7.4 Set optimal column width

The width of the individual columns of the data grid is set depending on field content so that all entries are displayed completely.

9.8 Popup menu preview

Figure 162



9.8.1 Columns

Here you may enter the number of images to be displayed next to each other and thus the size of the preview images.

9.8.2 Show full screen

The selected image (red frame) is displayed in full screen mode. A mouse click or key input returns you to the usual view.

10 Network operation

10.1 Installing Firebird database server

If you want to set up a computer in your network as database server, this computer needs to have the "Firebird database server" installed. It is available from the installation DVD, directory "Firebird\Server". This directory contains the file "Firebird-2.1.1.17910-0_Win32.exe" (or newer).

If you want to run the programme on this computer as well, you also have to activate option (4) Figure 164. It switches off the integrated database server on this computer.

10.2 Setting the database path

For operation of the programme in a network with a central server, you have to inform the programme of where the jointly used database is located. These settings can be achieved via "Settings -> Database -> Change database path".

Figure 163

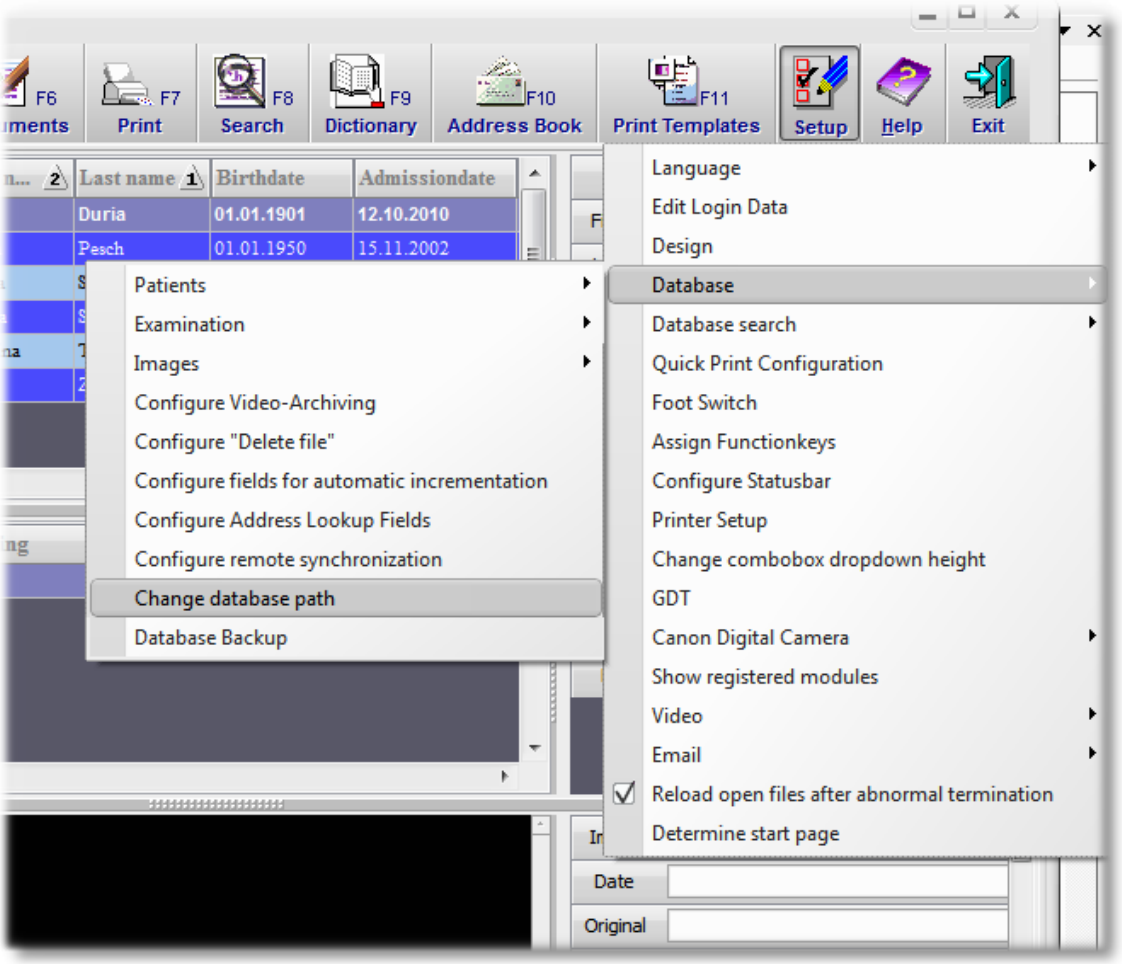
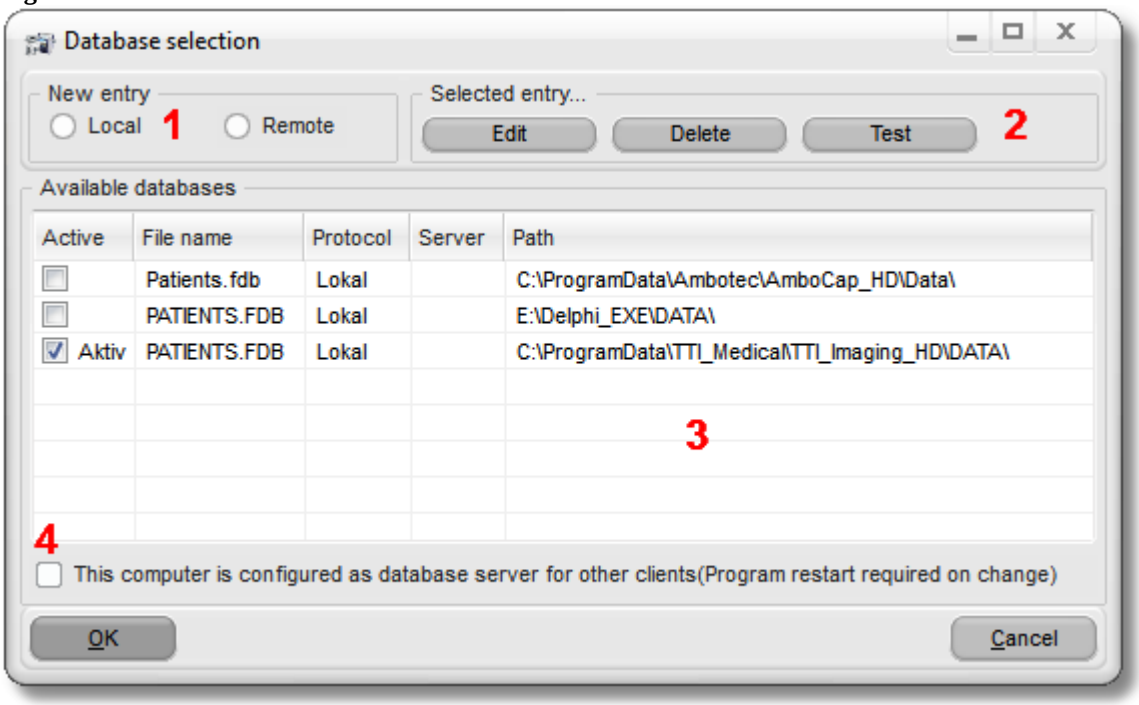


Figure 164



This dialogue can be used to determine the position of your database or to switch between different databases. You may also choose between local and remote database. One special feature is the option (4) in case you do not use any extra database server. See This computer is configured as database server for other clients (4) page 10-130.

In case of multi-station systems, you may synchronise several stations via one workplace. See “Remote control” page 10-130.

10.2.1 New entry (1)

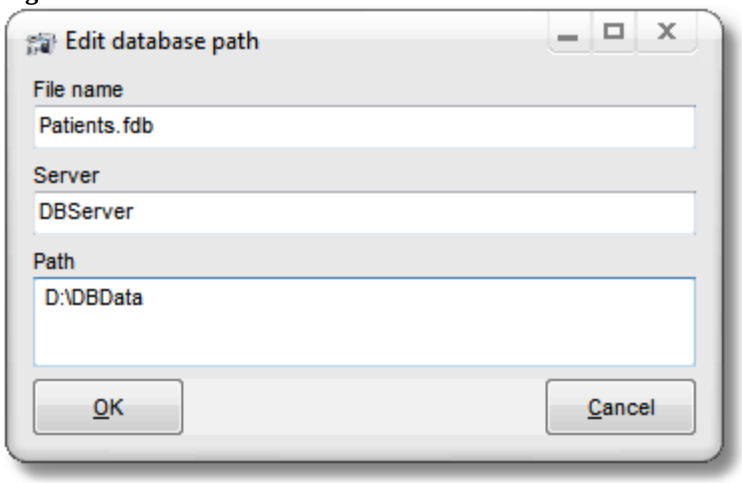
10.2.1.1 Local

The database is located on the same computer as the programme. A dialogue is opened to search the database via an explorer view. The database file name is usually "patients.fdb", for older installations (pre-3.5), the file is "Data1.fdb".

10.2.1.2 Remote

The database is located on a different computer in the network.

Figure 165



10.2.1.3 File name

The name of the database file. Usually, this is "patients.fdb", for older installations, the file is called "Data1.fdb".

10.2.1.4 Server

Designates the name of the network computer. The server name corresponds to the computer's Windows name.

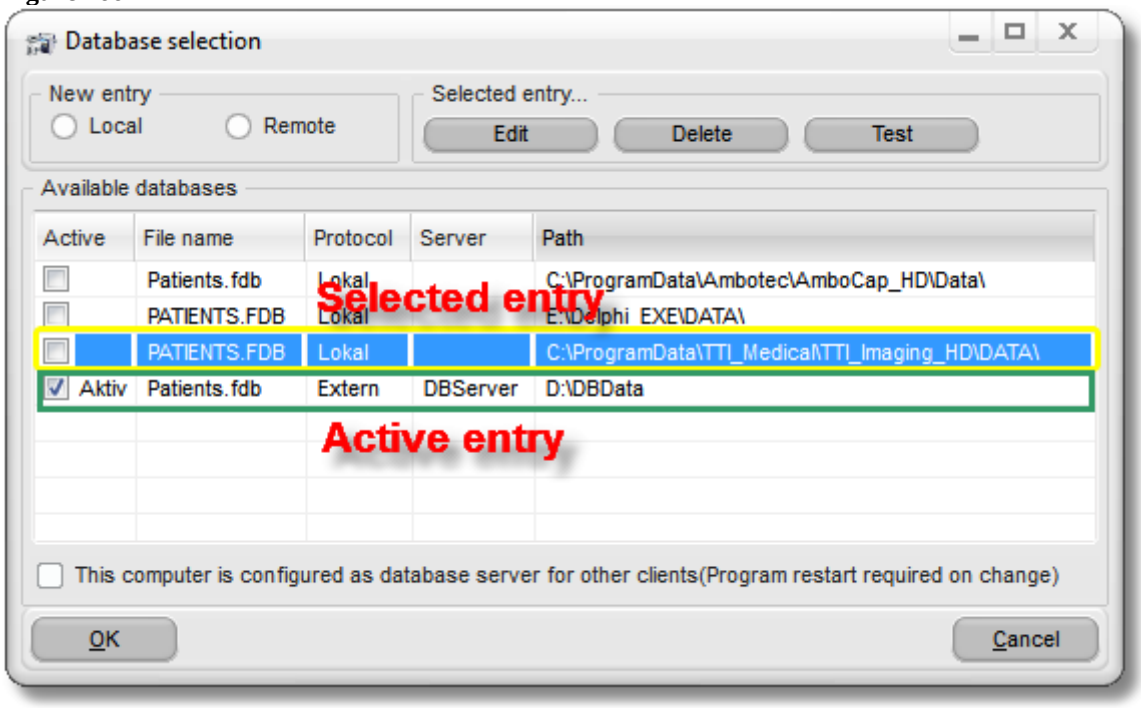
10.2.1.5 Path

The path to the database on the network computer.

10.2.2 Selected entry…(2)

The selected entry is backlit in light blue. Select an entry by clicking the corresponding line.

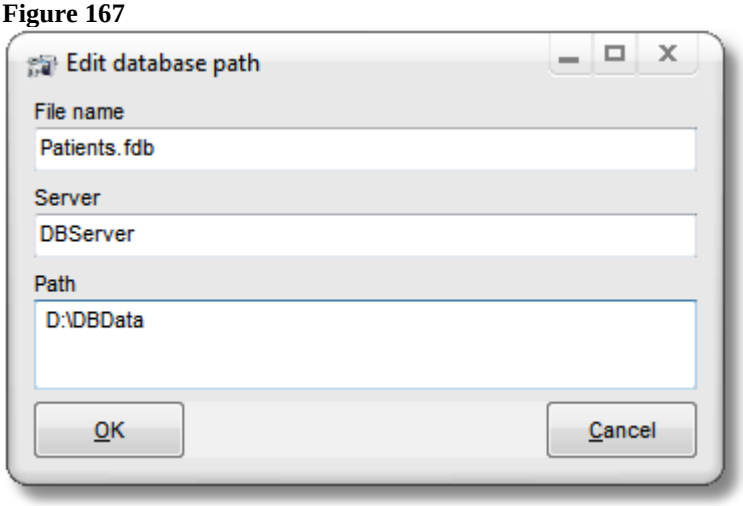
Figure 166



10.2.2.1 Edit

Opens the edit dialogue for the database entry. Operation is according to New entry (1) page10-128.

Figure 167



10.2.2.2 Delete

The selected entry is deleted.

10.2.2.3 Test

Here you may verify your printout. The programme tries to connect to the database without leaving the dialogue.

10.2.3 Available databases (3)

This list contains all databases you have already configured. Clicking the respective selection box in column "Active" turns a database active.

10.2.4 This computer is configured as database server for other clients (4)

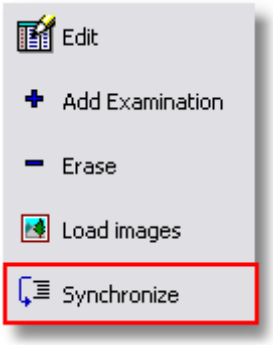
If you have configured one computer in your network as database server and want to run the programme on it as well, this option (4) Figure 164 must be activated. This switches off the integrated database server on this computer.

10.3 Remote control

Synchronisation permits switching the patient on a network computer. With the right configuration, the physician will not have to operate the programme anymore. For example, if a computer is installed at the reception desk, the assistant may enter or change the patient on this computer and use the button "Synchronize" on the database page to send the data to the computer in the treatment room. The synchronised computer now has assumed the data and set the active patient.

Excerpt database page "button studies"

Figure 168

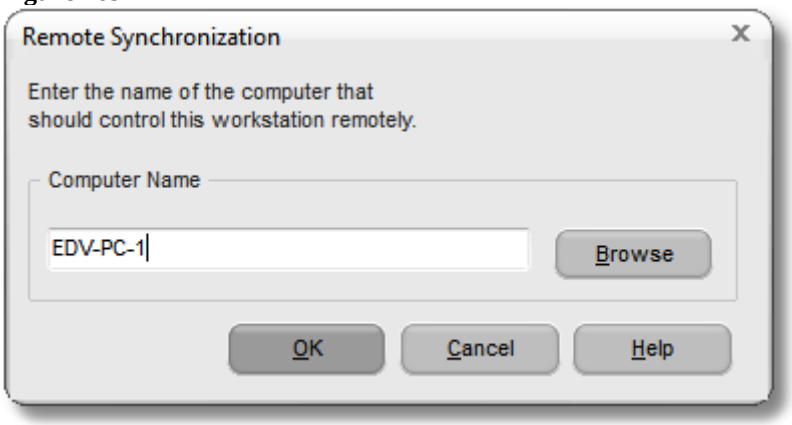


This button is only available in a multi-station system!

10.3.1 Configure remote synchronisation

The following dialogue is reached via "Settings -> Database -> Configure remote synchronisation".

Figure 169



10.3.1.1 Computer name

Windows network name of the computer to remote-control this one.

10.3.1.2 Browse

Opens a dialogue with all computers available in the network.

11 Additional modules

The programme offers the option of testing the various additional modules without limitation in time to find out if the respective function corresponds to your ideas and needs. The modules work in demo mode and are either limited in function, or the word "DEMO" is inserted in the recorded images. You can get to the dialogue to display and activate the modules via "Settings – Show registered modules":

Figure 170

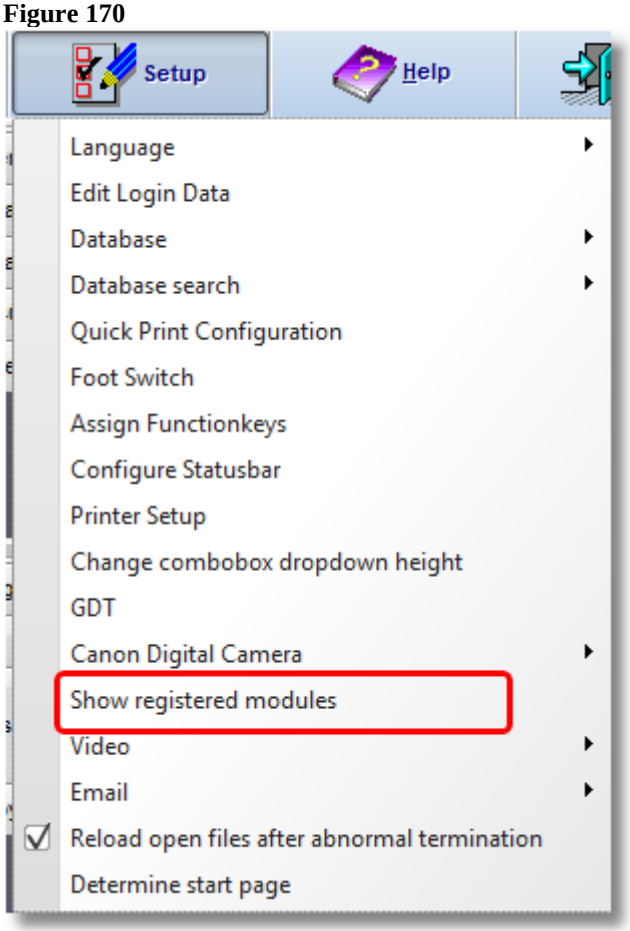
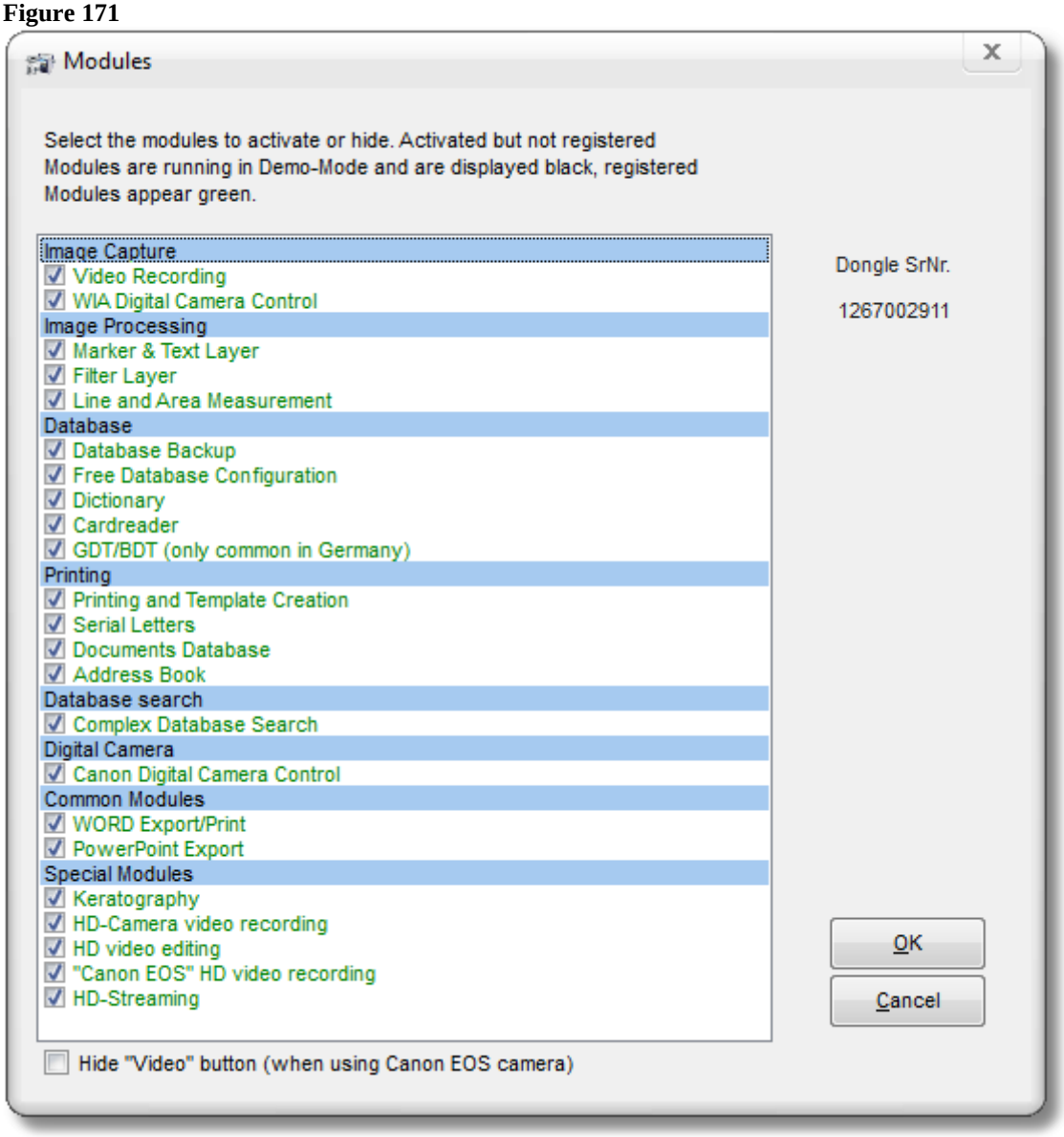


Figure 171



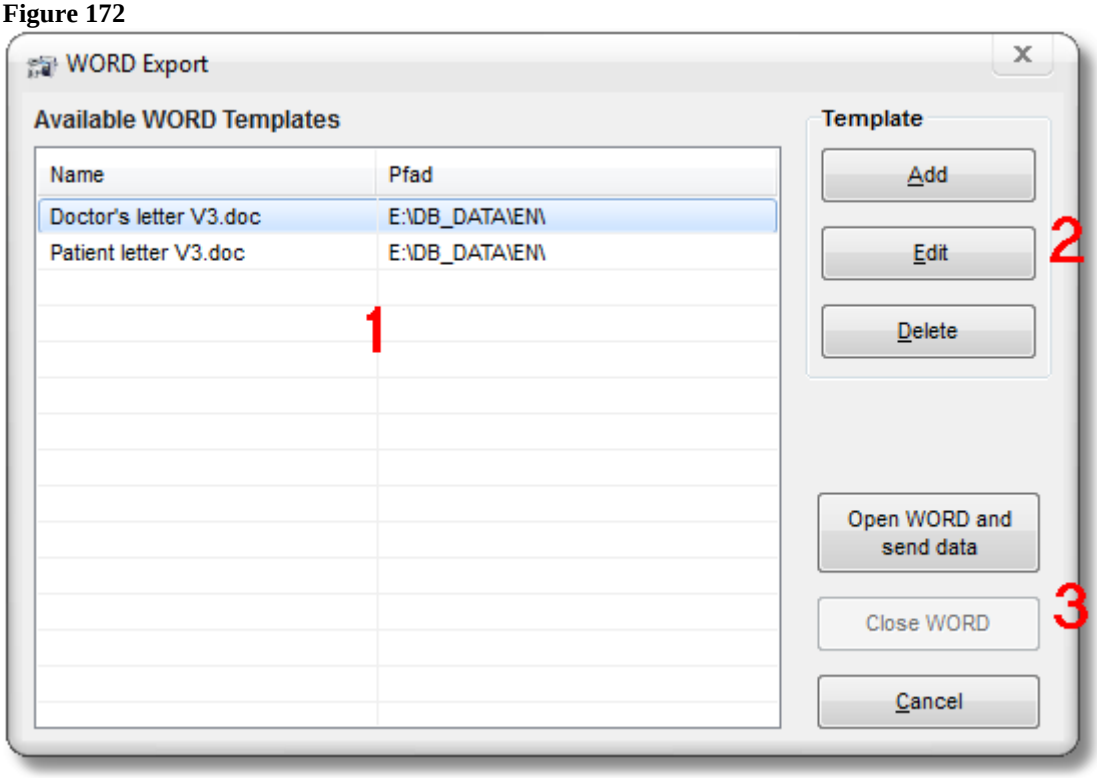
The green entries are registered via your dongle and are not subject to demo limitations. Activate the module you want to test by mouse click. After confirmation with OK, it is available for you at once. If you find that the module corresponds to your ideas, contact the manufacturer for registration.

11.1 Export functions

11.1.1 WORD-Export

The WORD export module permits inserting images, videos and the associated data in a WORD document in a specified position and selecting the desired document as needed. WORD export is possible anywhere in the programme where images are displayed, usually via the popup menu.

Figure 172



11.1.1.1 Available WORD templates (1)

This list displays all templates created by you for WORD export. Single mouse-click on the respective row renders the template active. Double-clicking opens an Explorer window to change the path in. Double-clicking an empty row adds a new template.

11.1.1.2 Button template (2)

11.1.1.2.1 Add

This button adds a present template on a storage medium to the list of available templates.

11.1.1.2.2 Edit

The active WORD template is opened in WORD for editing.

11.1.1.2.3 Delete

The active WORD template is deleted from the list of available templates, but the document is retained.

11.1.1.3 Button (3)

11.1.1.3.1 Open WORD and send data

The active template is opened in WORD. Then the data from the database are inserted in the document. The WORD window is put in the focus.

11.1.1.3.2 Close WORD

If you have a WORD window open, it is closed and the WORD export dialogue is exited. The programme is put in the focus again.

11.1.1.3.3 Cancel

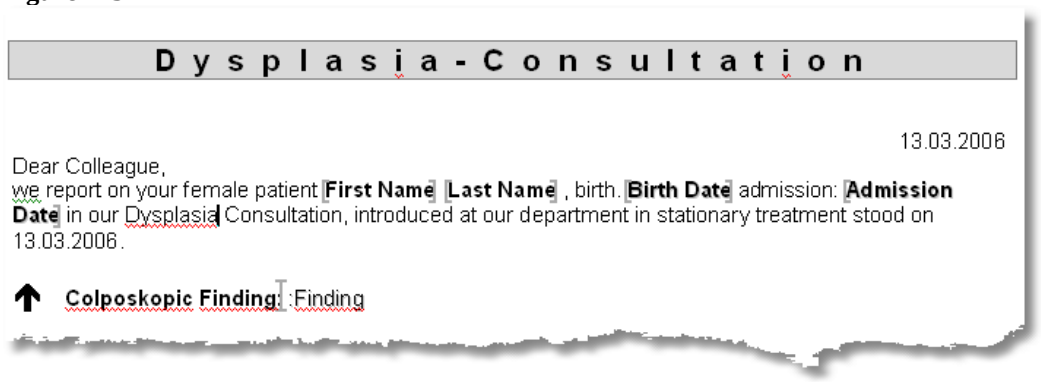
The WORD export dialogue is exited and the programme is put in the focus again.

11.1.1.4 Creating a Word template

Start MS-WORD and create a new document or open an existing template. Enter a designator that clearly describes the field in the places where database fields are to be inserted later, e.g. "Name" for the patient's last name, etc. This designator will later be replaced by the contents of the corresponding data fields. Select the entire word and ensure that no trailing spaces are selected.

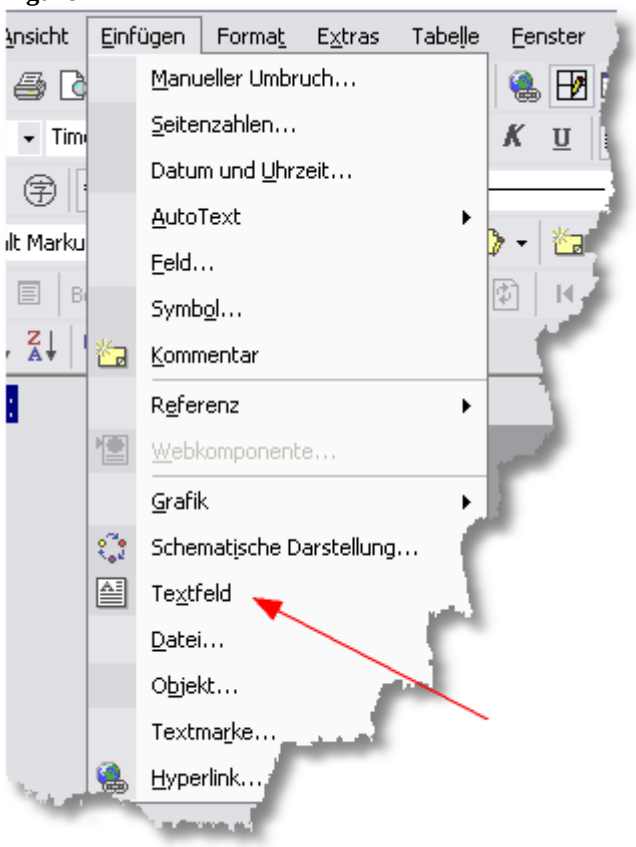
Example:

Figure 173



Now select menu "Insert" -> "Text field".

Figure 174



In the following dialogue, you have to designate the text mark as follows: table name_database field. If you want to enter, e.g. the last name of the patient, the respective text mark is: "patient_name".

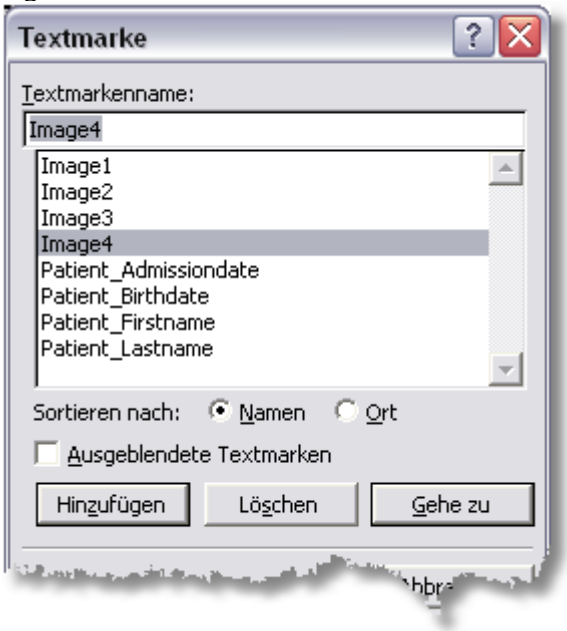
If you want to enter the patient name several times in the same document, you have to add an underscore and number to the following text marks. In the above example, this would be "patient_Name_1".

A special feature is database fields with special characters (except for "_") and spaces. They must not be used as text marks in WORD!

In this case, leave out these characters or replace them with an underscore. Example: the field "Referral to" becomes "Referral_to".

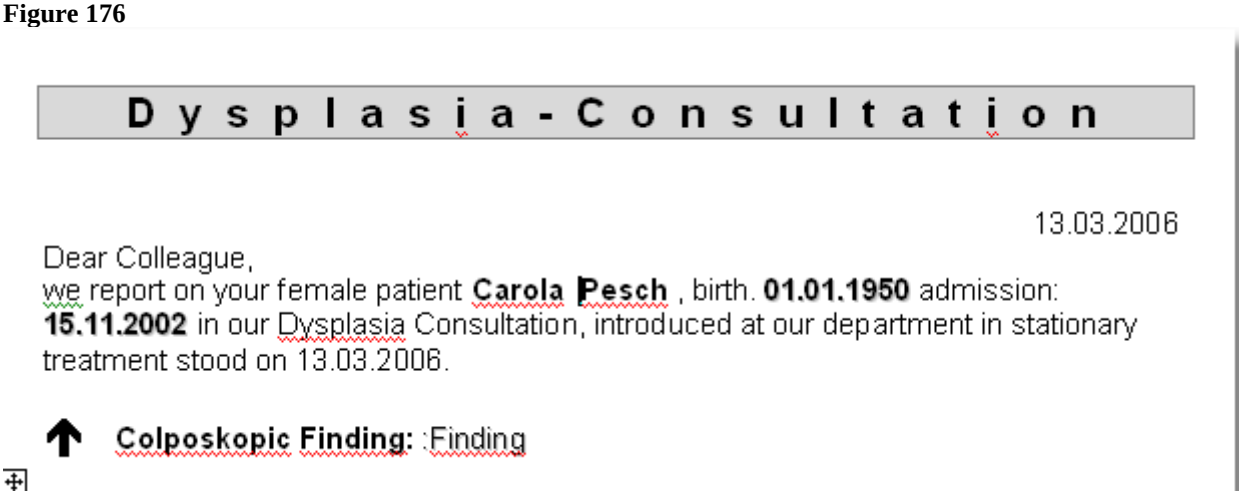
Example text marks:

Figure 175



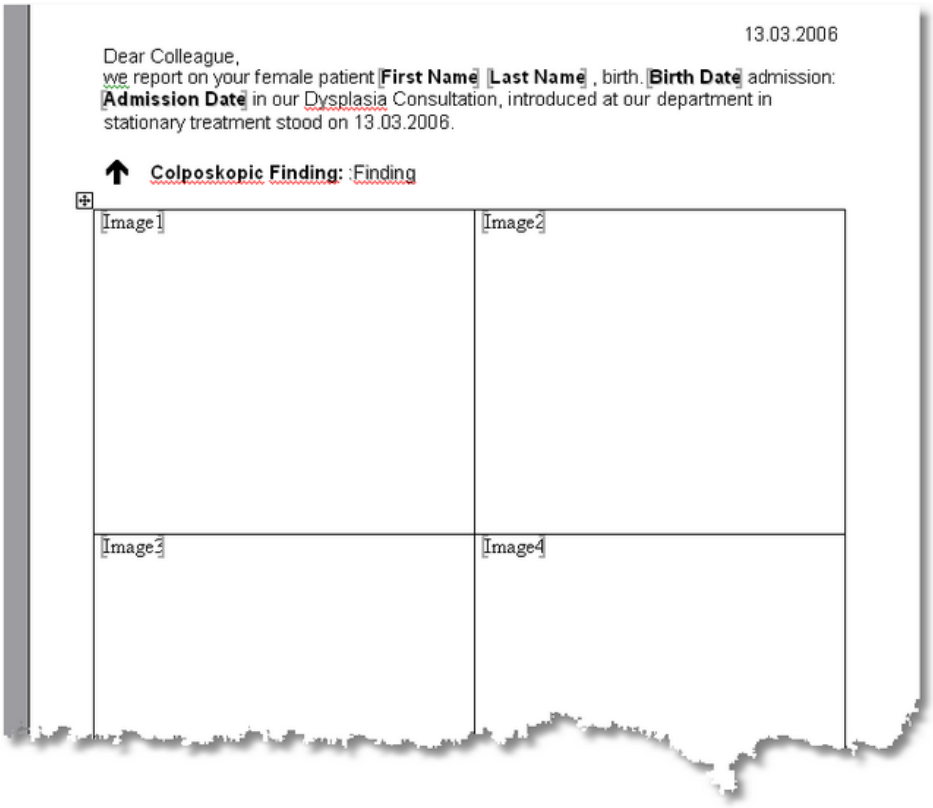
After data exchange, the following text excerpt results from the above example.

Figure 176



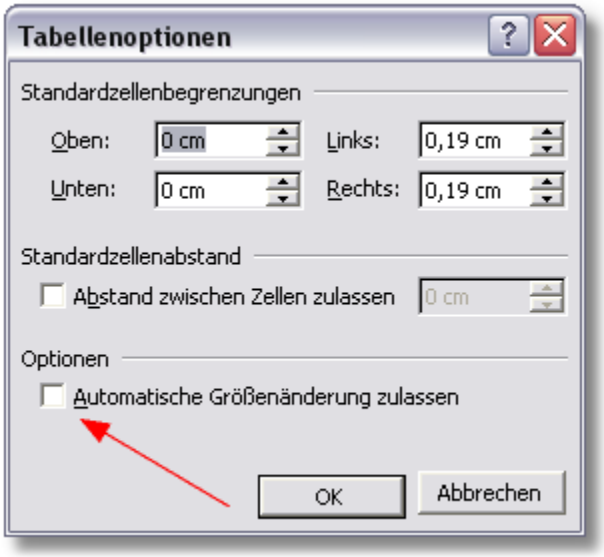
11.1.1.5 Inserting placeholders for images

To add images in a WORD document, it is a good idea to put them in a table because the size of the images is defined. The images are entered in the text marks by "image+_+number" (image_1, image_2, etc.).



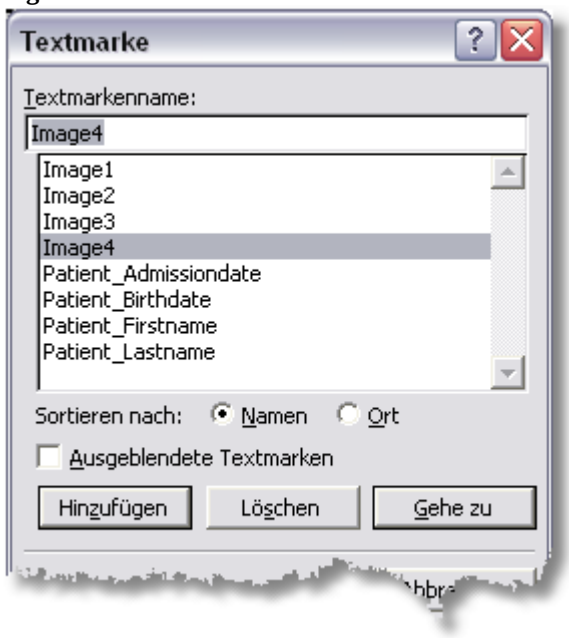
To prevent automatic size changes of the table, switch this off via "right mouse button -> Table Settings -> Options". The table height is still set depending on image size.

Figure 177



Example with four text marks for images:

Figure 178



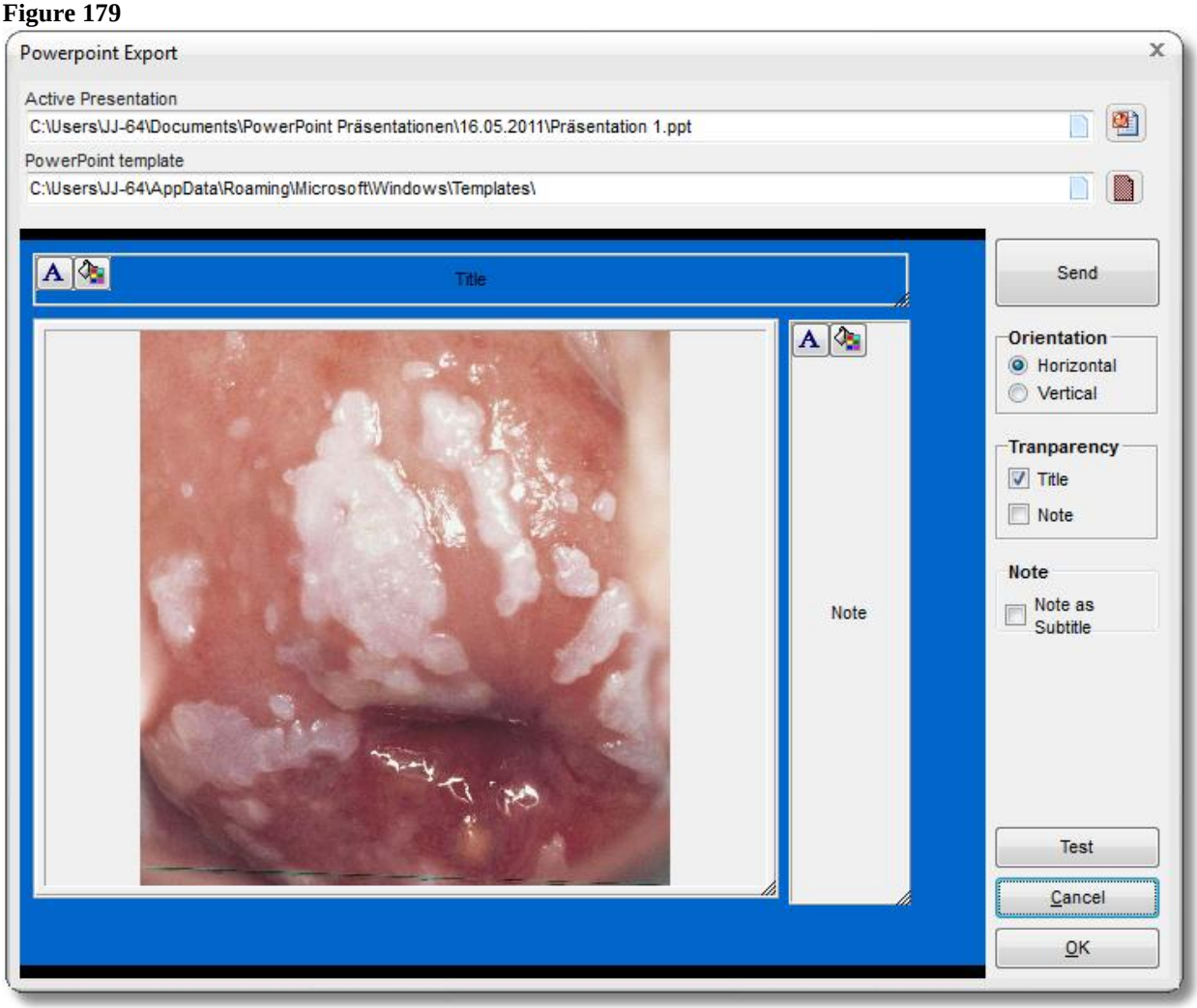
11.1.2 PowerPoint-Export

The PowerPoint export module permits comfortable insertion of images, videos and notes in a new or present presentation. All images and videos are copied into a directory so that the presentation can also easily be run on other computers. To integrate backgrounds or special characteristics even when setting up the presentation, you may indicate the matching "PowerPoint template".

In the preview window, you may adjust the individual windows in position and size with the mouse and specify the front and background colour for texts with the buttons  .

The data are sent to PowerPoint once you click "Send". To test your settings with an image first, use the button "Test".

Figure 179



11.1.2.1 Active presentation

You may insert images and videos in an existing presentation or use the button  to create a new presentation.

11.1.2.2 PowerPoint format template

If you want to use a special background for your presentation, select the respective format template here. Use the button  to reset the format template so that no background is used.

11.1.2.3 Send

If you have made all settings, all images and videos will be sent to PowerPoint via "Send".

11.1.2.4 Orientation

Changes the PowerPoint slide orientation.

11.1.2.5 Transparency

Can be used to display the text for titles and notes transparently. Any changes are displayed right in the preview.

11.1.2.6 Note as subtitle

Activate this option if you want to enter the note saved in the database for the images in the presentation.

11.1.2.7 Test

A demo image is sent to PowerPoint to test the correct function.

11.1.2.8 Cancel

The dialogue is closed and all settings are discarded.

11.1.2.9 OK

The dialogue is closed and all settings are saved.

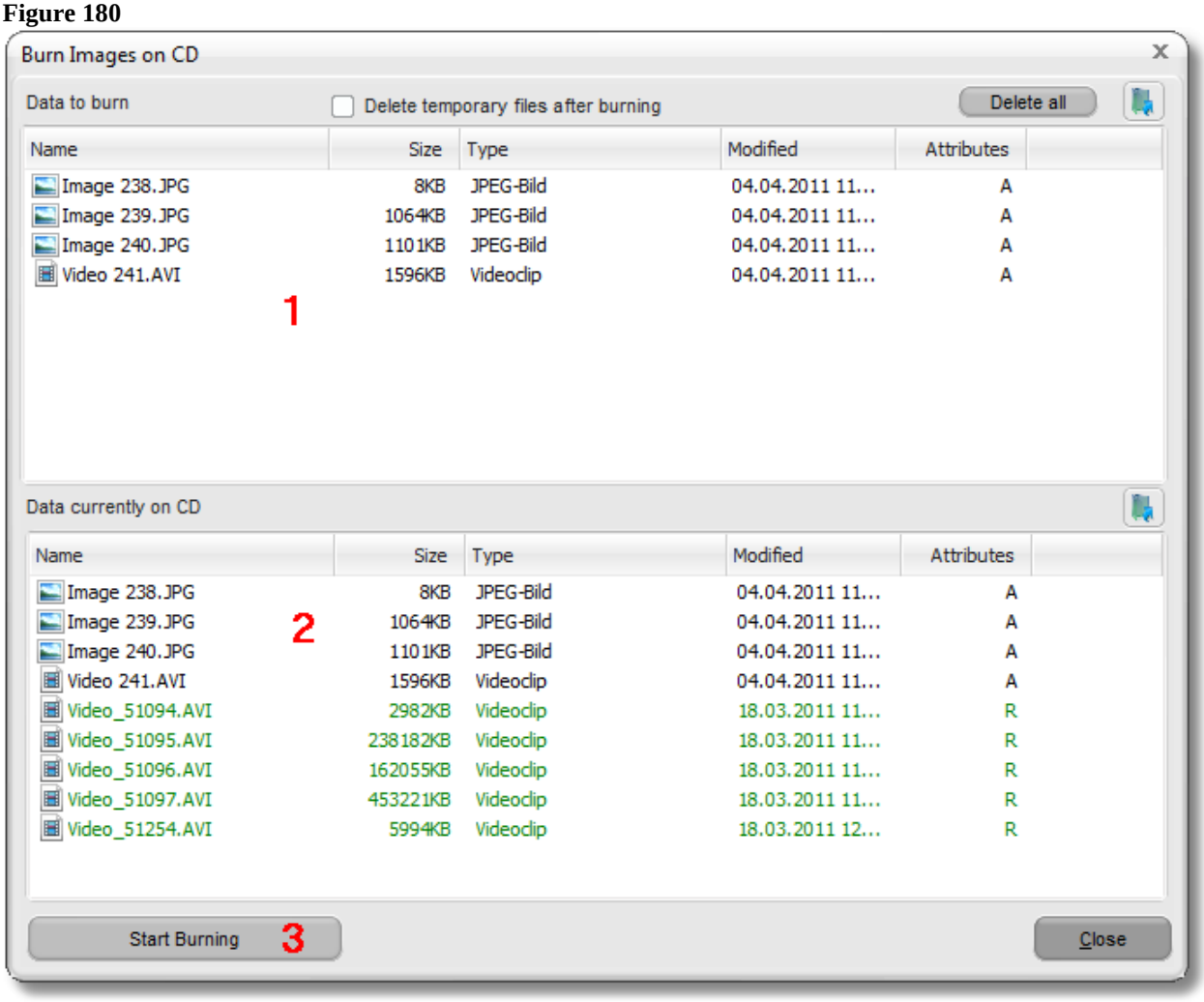
11.2 CD/DVD writing

There are two burning modules, the standard module for CDs, plus, for all Windows versions after Windows XP, a version that will also burn DVDs. The expanded burning functions can also be added with the Microsoft Update KB932716 for Windows XP (WindowsXP- KB932716 -v2-x86-<LNG>.exe).

11.2.1 Windows XP

In the above list (1) you can see the images and videos to be burned to CD; list (2) additionally shows the files already present on the inserted CD. Use the button (3) to start burning. If the data is not needed for another burning procedure after burning, check the option "Delete temporary files after burning". Use the button "Delete all" to manually empty the Windows folder with the data to be burned.

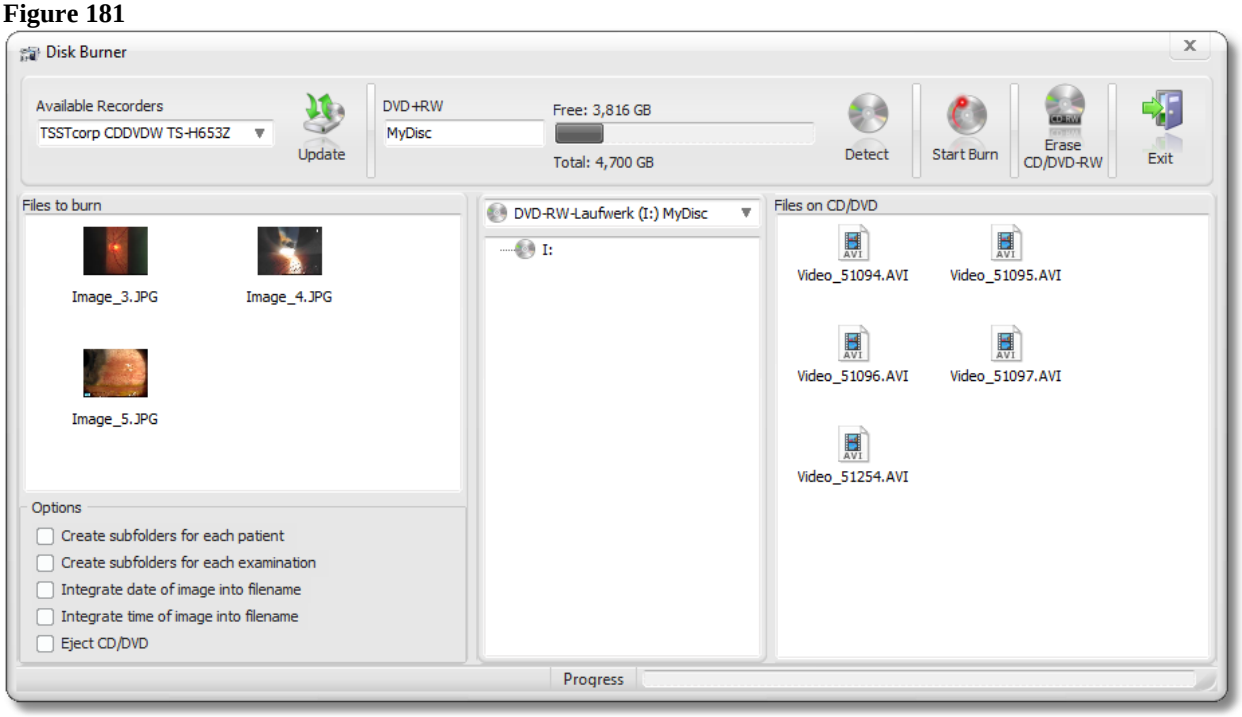
Figure 180



11.2.2 Windows Vista, Windows 7

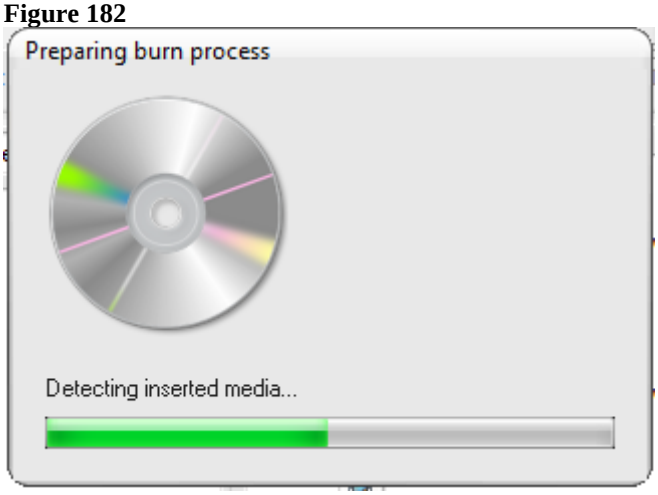
All Windows versions as of Windows Vista offer extended burning functions (IMAPI2) and you can thus also burn DVDs.

Figure 181



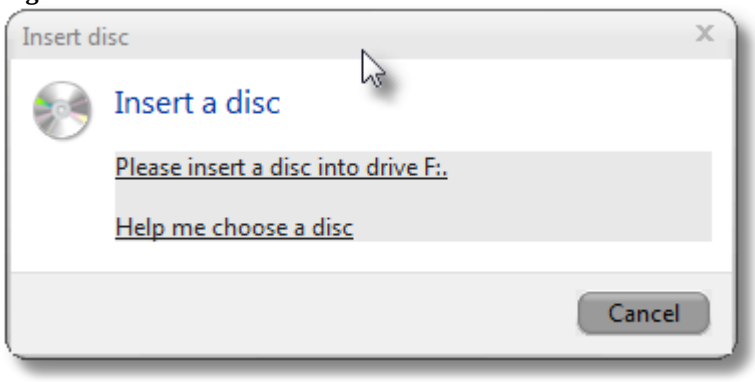
The available recorders will be found and verified first when opening the dialogue:

Figure 182



If no disc is inserted in the recorder, the following dialogue will appear:

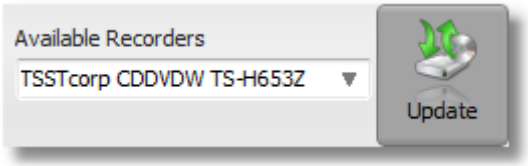
Figure 183



11.2.2.1 Available recorders

This selection permits selection of the desired CD/DVD recorder, if your computer has several. If you have an external recorder connected via USB or firewire, use the button "Update" after connection of the external device to have it entered into the list.

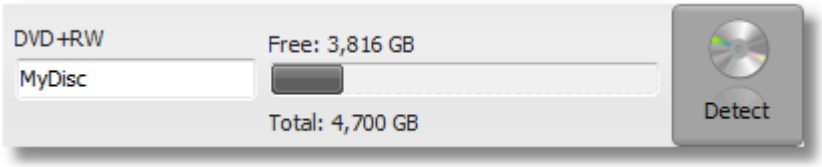
Figure 184



11.2.2.2 CD/DVD Info

This field displays the parameters of the inserted disc (type, storage space, free memory and designator). Use the button "Detect" to update the display, e.g. after changing disc.

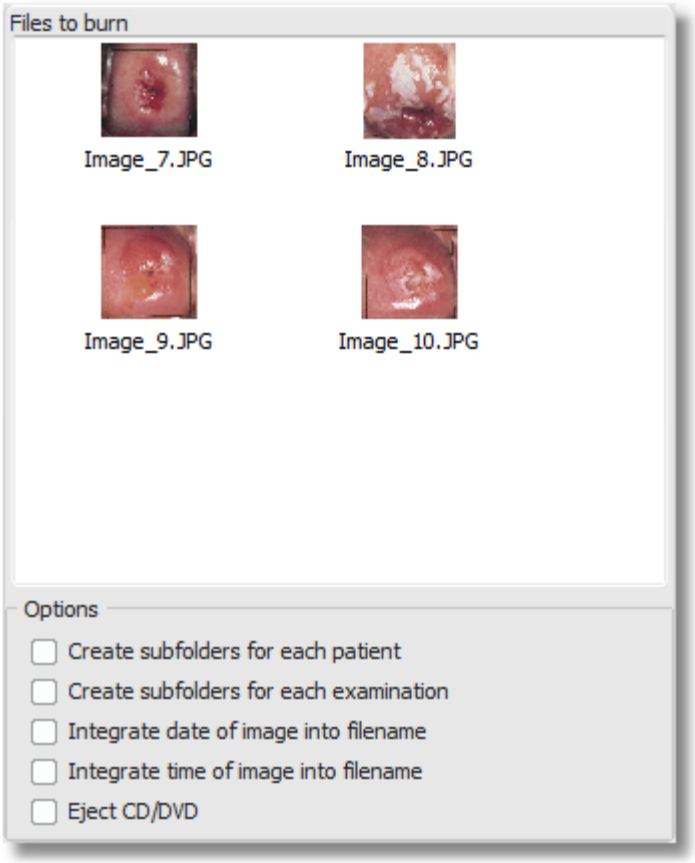
Figure 185



11.2.2.3 Files to burn

The list of files to burn lists all files to be written on the disc.

Figure 186



11.2.2.4 Options

11.2.2.4.1 Create subfolders for each patient

A separate folder is created on the disc per patient.

11.2.2.4.2 Create subfolders for each examination

A separate folder is created on the disc per examination.

11.2.2.4.3 Integrate date of image into file name

The image recording date is integrated in the file name.

11.2.2.4.4 Integrate time of image into file name

The image recording time is integrated in the file name.

11.2.2.4.5 Eject CD/DVD

The disc is ejected after burning

11.2.2.5 Files on CD/DVD

If the disc inserted already contains files, they are displayed here.

11.2.2.6 Start burn

The data are written on the CD/DVD

11.2.2.7 Erase CD/DVD-RW

If you have inserted a rewriteable disc, you can erase it before burning.

11.2.2.8 Exit

Closes the window

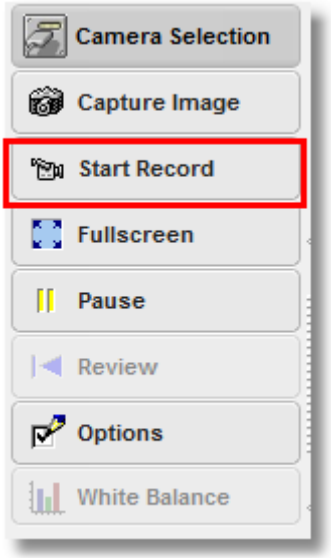
11.3 Video recording

11.3.1 Video recording

The video module permits recording video sequences in full or half PAL/NTSC resolution. The video settings also permit timer activation to stop the recording automatically after a set time.

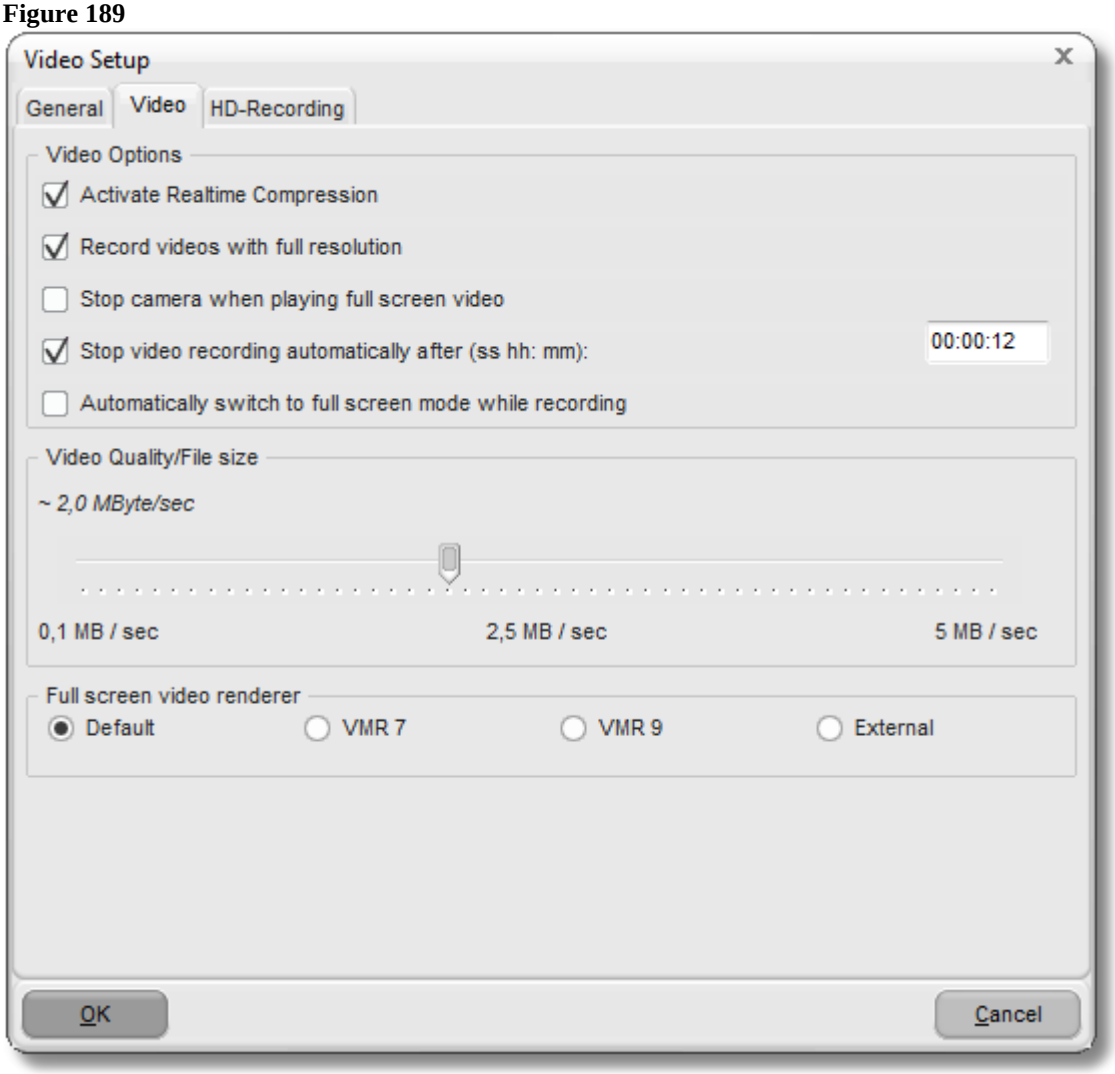
Figure 187 (Video recording button panel top)

Figure 188 (Video recording button panel left)



If the video module is active, the dialogue "Video options" displays expanded setting options for video recording:

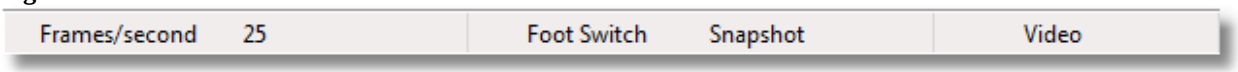
Figure 189



11.3.1.1 Real time compression

If this is activated, the video file will be compressed during recording already. This has the advantage that you can continue to work at once after completing the recording. This requires a very fast computer, however, when recording in full video resolution (>3GHz). If this is not active, the video is written on the hard disc uncompressed during recording and only compressed after recording is completed. Depending on computer and length of the video, this may take some time. The progress of this action can be followed in the video status bar in this case:

Figure 190



11.3.1.2 Record videos in full resolution

The video is recoded in full PAL resolution (768x576). If the option is deactivated, only half the resolution (384x288) is used. Recording full video resolution will lead to better-quality results but also requires a fast computer (Dual Core >2GHz).

11.3.1.3 Stop camera when playing full screen video

If you want to view a recorded video from the video page it may be sensible to stop the video camera during live display. If the computer is not very high-performance, stuttering playback may result otherwise.

11.3.1.4 Stop video recording automatically after x seconds

With this option active, the video recording is stopped automatically after the time set here.

11.3.1.5 Video quality/file size

This slider adjusts the recording quality. The higher the quality, the larger the resulting file. With the MPEG4 compression procedure, settings between 1 and 2 MByte/sec are usually enough for good results.

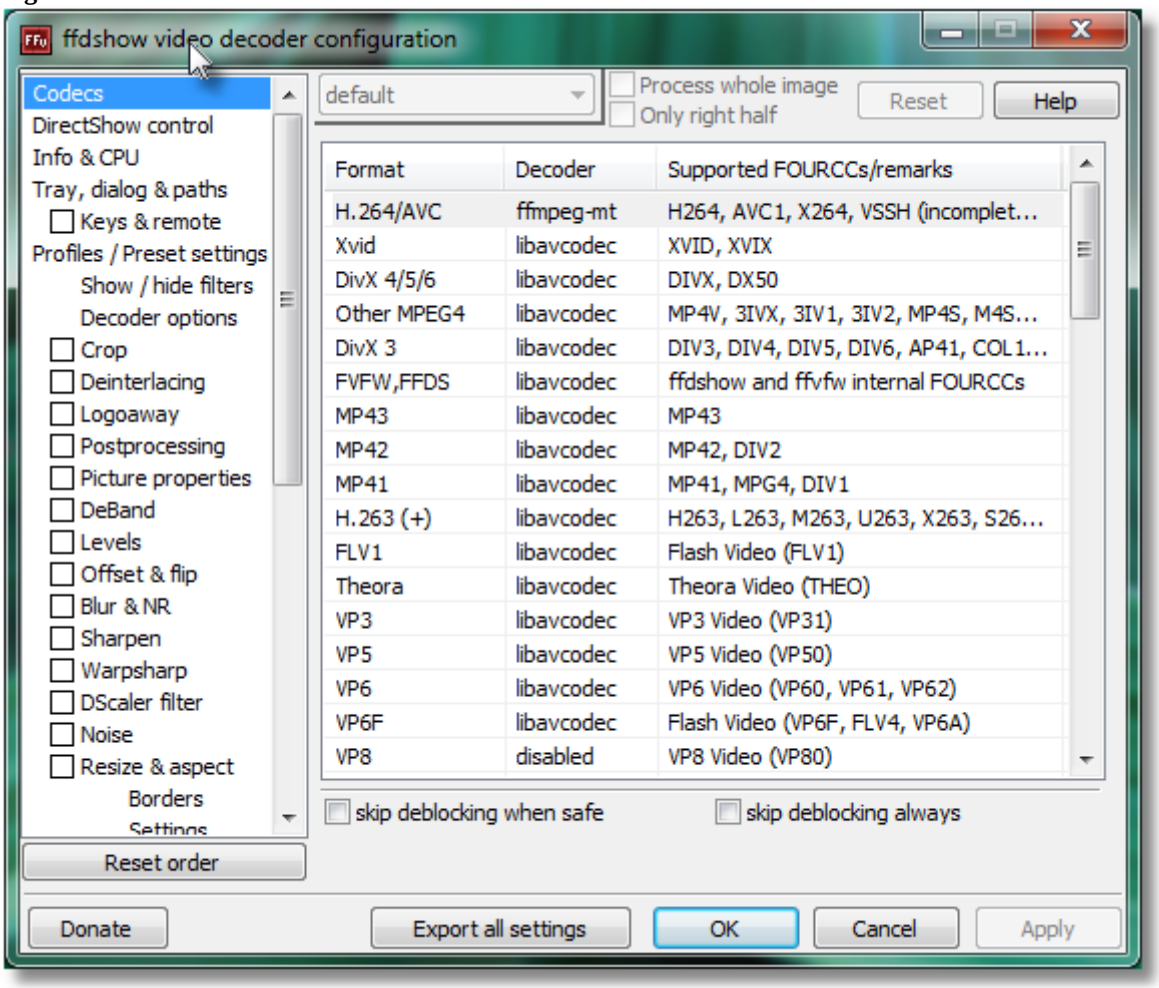
11.3.1.6 Full screen video renderer

This setting changes the method of how Windows will forward the video images to the graphics card. Depending on Windows version used, service pack installed or different graphics cards, some problems or stutter may result during video playback. Choosing a different renderer will usually help.

11.3.1.7 Loop in FFDShow video processor

This option permits switching the "FFDShow-filter" between camera and playback on the screen, the filter offers a great many options to influence the video image, such as sharpness, mirroring, rotating, deinterlacing…

Figure 191



Caution: This option is not present in all video devices!

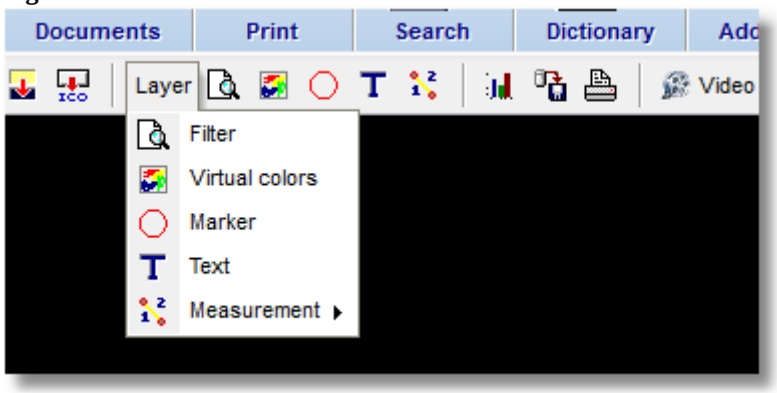
11.3.2 HD-Recording

See 11.12 page 11-199.

11.4 Image processing

The image processing modules are available in the button panel "Layer". They are only released when an image is active. Once you click one of the buttons, the active image displays a selection rectangle in which the corresponding function is displayed. This Rectangle can be moved freely with the mouse and changed in size. The "X" in the upper right corner removes the "layer" again. The lock icon in the lower left freezes the image section so that it can be moved to any position in the image. The button in the upper left corner, if present, is used for conditional inputs like measuring points again.

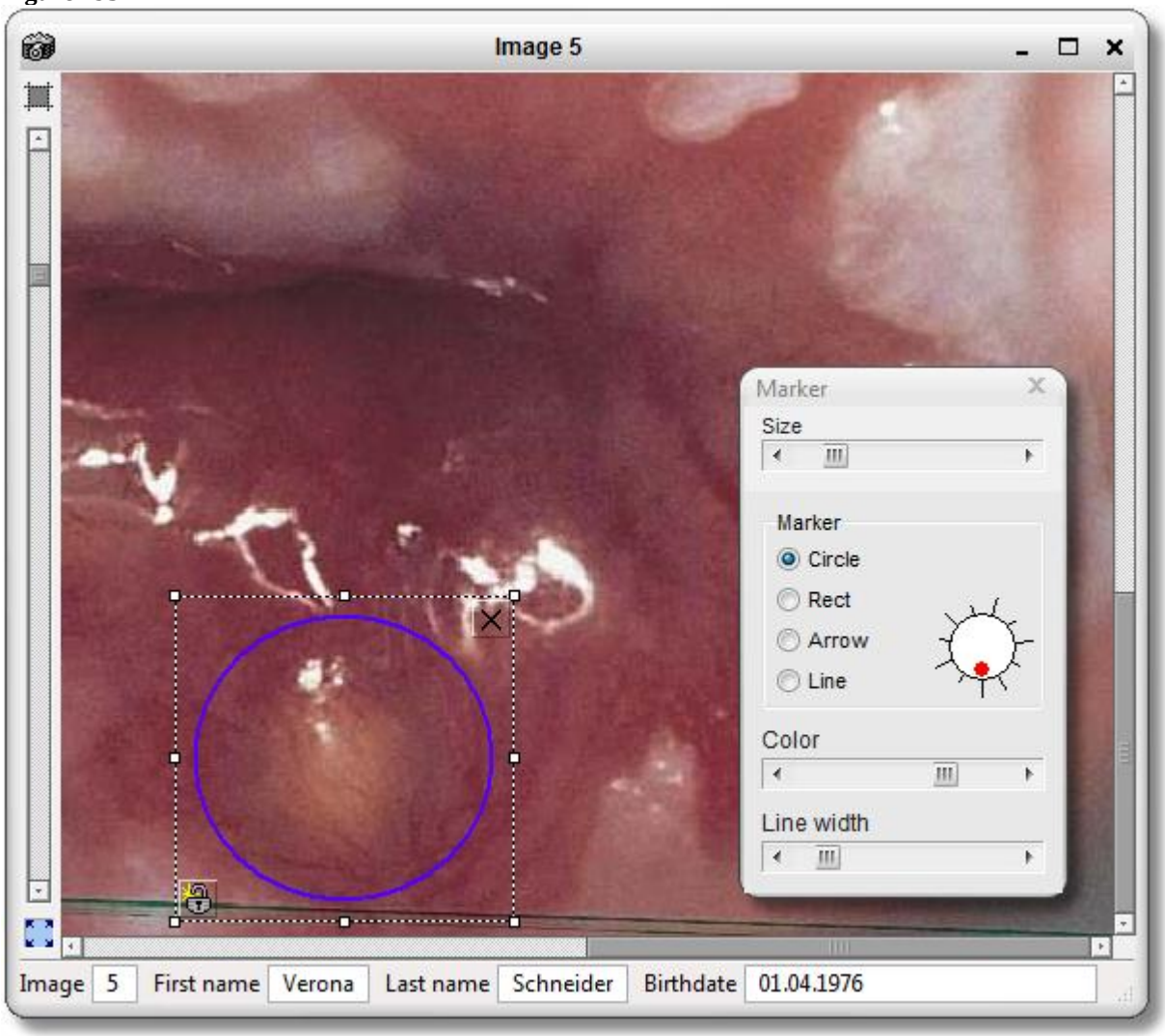
Figure 192



11.4.1 Markers and texts

Use the button with the red circle to embed markers like an arrow in the image to mark specific findings.

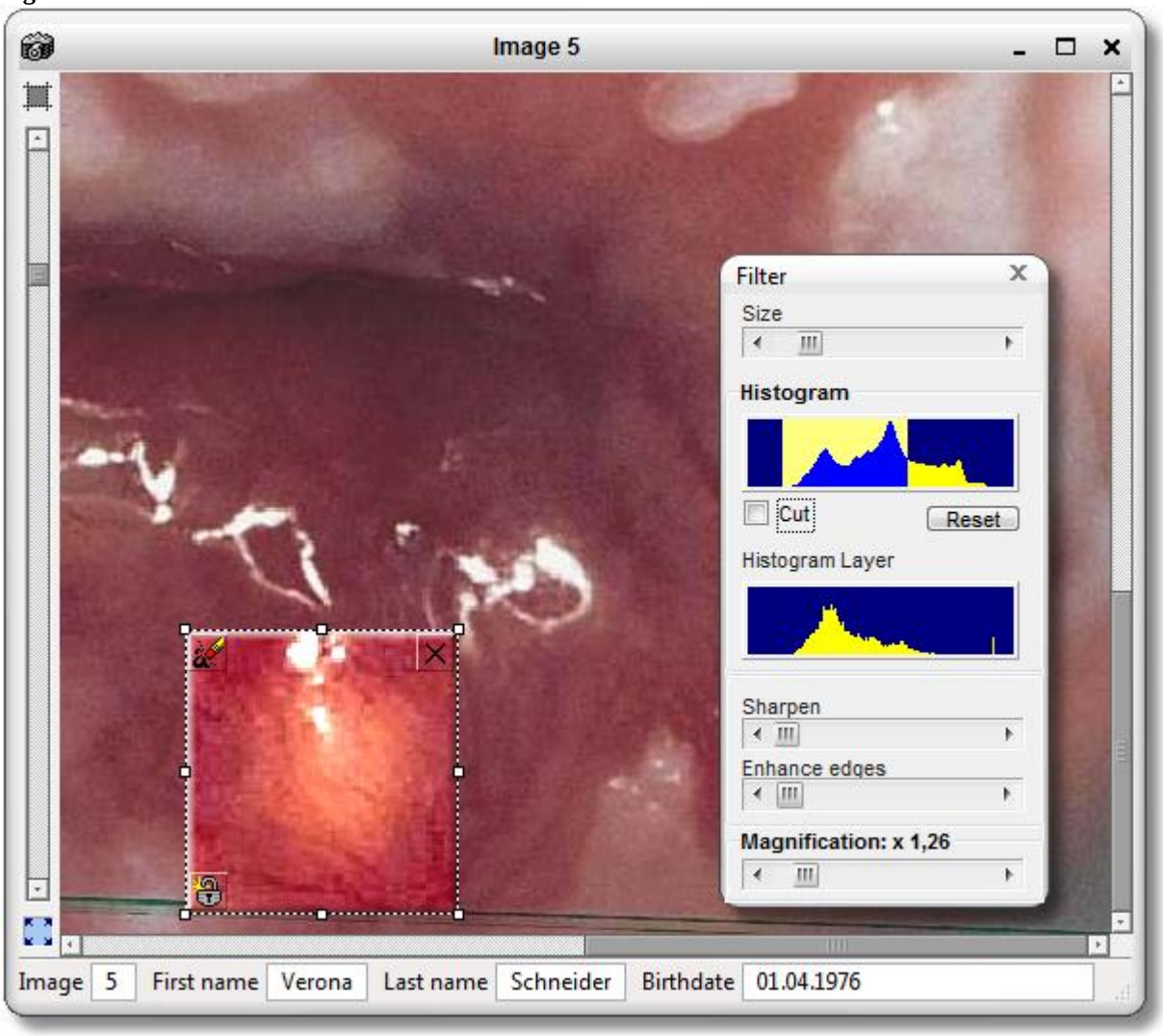
Figure 193



11.4.2 Filter functions

The filter functions offer the option of highlighting image contents, improving image sharpness and manipulating the histogram to balance out, e.g. under-illumination.

Figure 194



11.4.3 Histogram

Within the histogram window, you can see the brightness values of the image as yellow area. The part of the histogram window with the light background is displayed in the selected image. You may touch the part with the bright background with the mouse (the cursor turns into a hand) and move it within the histogram window. Move the mouse right onto the end of the light background to change the size of the light insertion. Press the left mouse button when the double arrow appears (at the edge of the light area) and keep the mouse button pressed. Now you can move the mouse back and forth to adjust the size of the light insertion. If the light insertion has reached the desired size, you can release the mouse button.

11.4.3.1 Button

11.4.3.1.1 Stretch

This setting stretches the brightness values not displayed; the brightness values not displayed are white.

11.4.3.1.2 Cut

This setting cuts the brightness values not to be displayed and displays them in black.

11.4.3.1.3 Reset

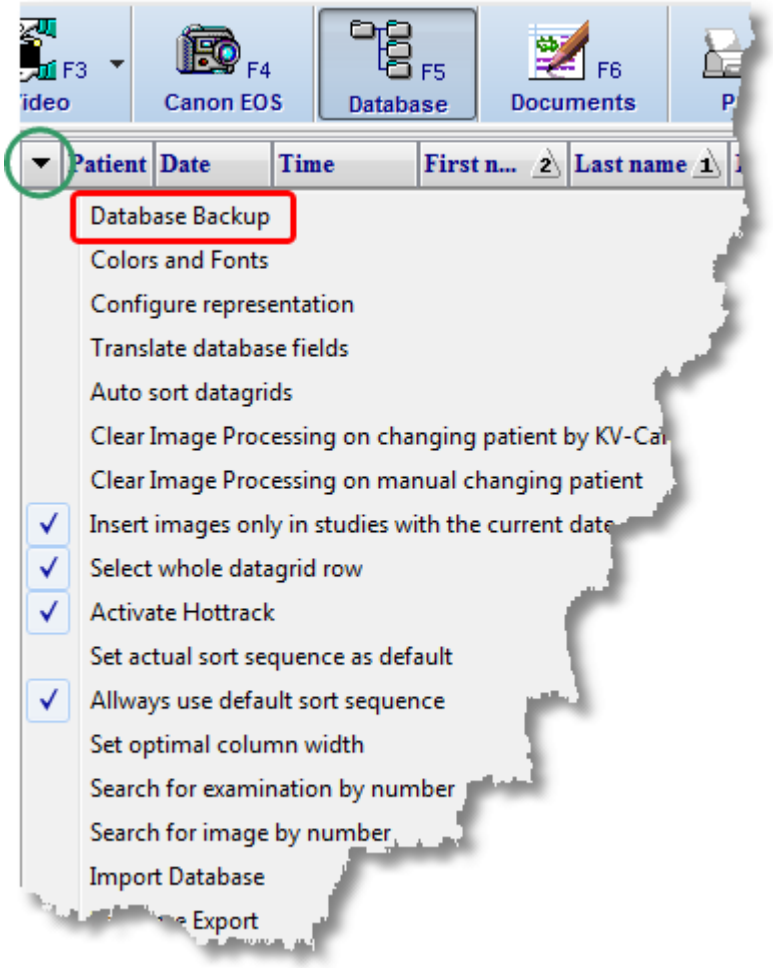
This button resets the histogram to the original condition. The condition before changes to the histogram were made is restored.

11.5 Database

11.5.1 Database backup

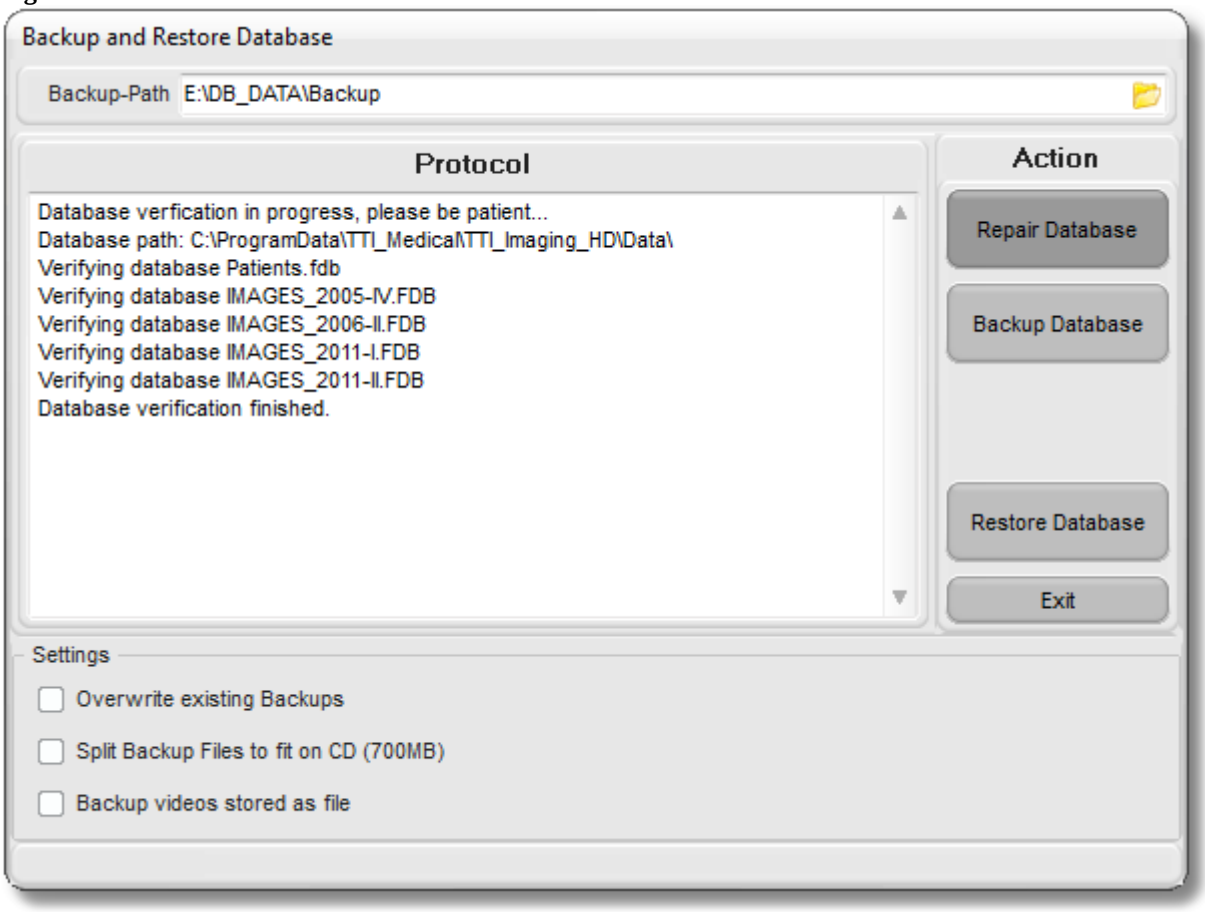
To get to the dialogue for database backup, use "Settings -> Database -> Database backup" or the popup menu of a data grid on the database page.

Figure 195



The following dialogue appears:

Figure 196

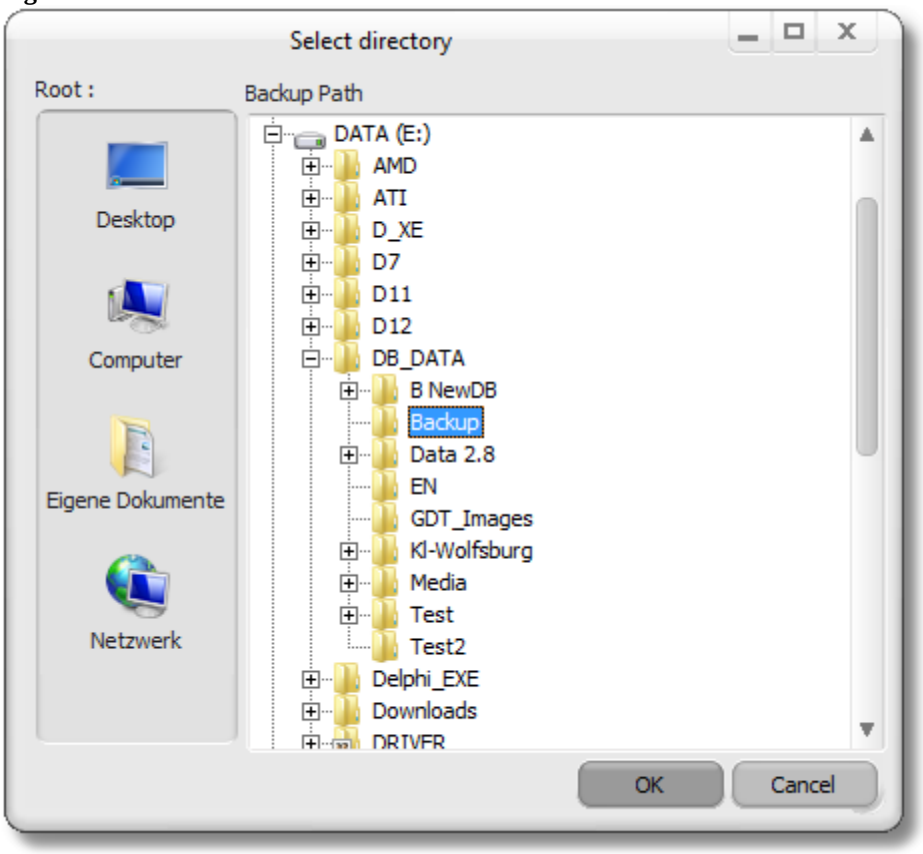


If the programme has any problems that indicate an error in the database, click "Repair database".

To back up the database, enter a folder where the backups are to be saved as "Backup path" and click "Backup database ".

If you want to restore the database from a backup, click "Restore database". Choose the path for the backup files in the following dialogue:

Figure 197



Caution: all data of the current database are irrevocably overwritten!

11.5.1.1 Options

11.5.1.1.1 Overwrite existing backups

Activate this option if you want to provide only one database backup at a time. It is automatically overwritten during each backup process. Otherwise, a new file will be created for each backup.

11.5.1.1.2 Split backup files to fit on CD

If this option is activated, the backup file will automatically be split for each file to fit a CD. Otherwise, a single large file will be generated.

11.5.1.1.3 Backup videos stored as file

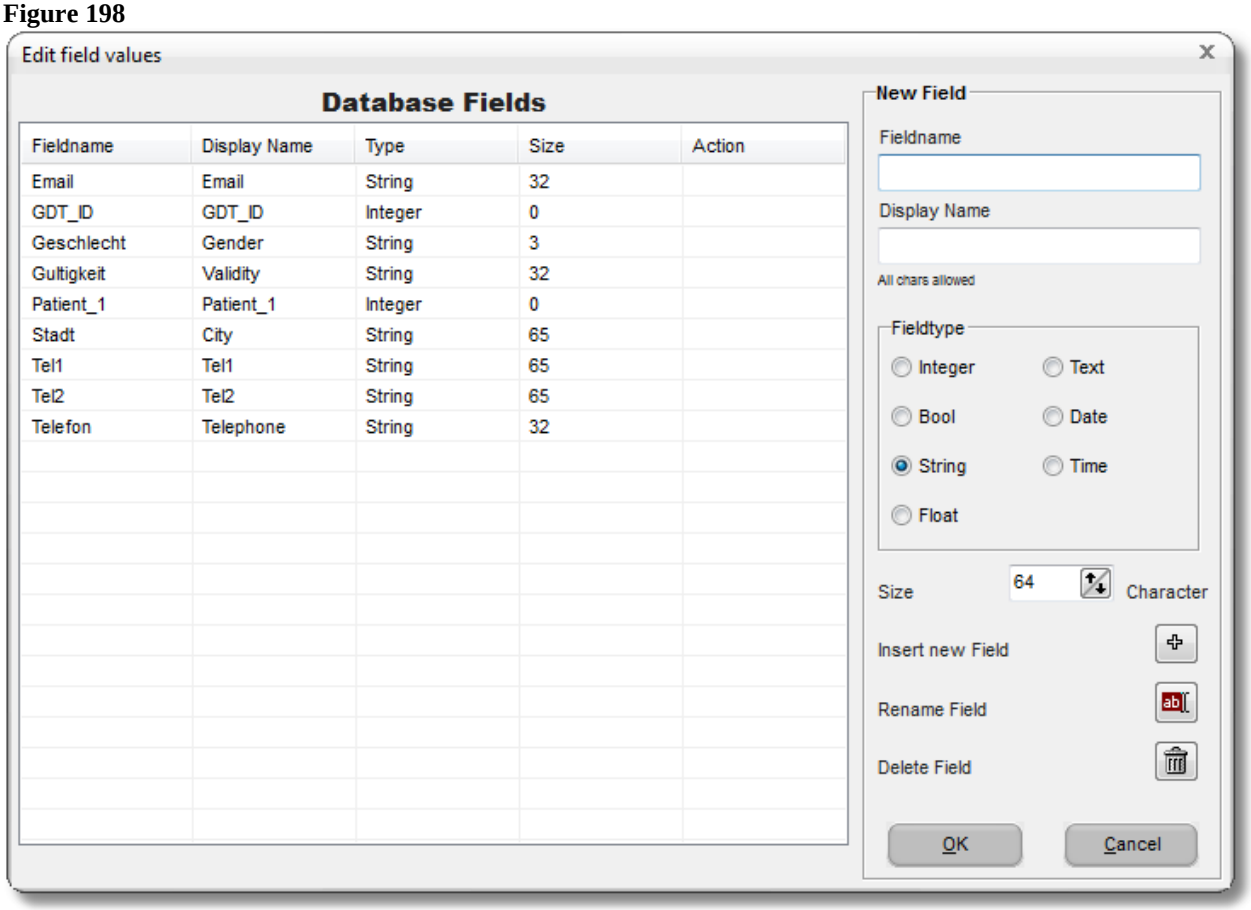
If you have recorded video files and saved them as a file (See Video archivi page 8-114), they are only backed up if you have activated this option.

Caution: this may cause the backup process to take very long!

11.5.2 Free database configuration

To get to this dialogue, use "Settings -> Database" and, depending on table you want to modify, either "Patient, Study or Images -> Configure Table".

Figure 198



In this dialogue, you can adjust the programme tables to your needs. You may delete data in all three main tables or add new ones. You may choose between all possible field types. All input will be made only when confirming with ok.

11.5.2.1 Creating new database field

Click the input field "Field name" and enter the name for the new field. Select the matching entry from the field type list and click the button "Insert new field". If you want to set up a "String field", enter the maximum length in "Size" first. The new field now appears in the list "Database fields". The new field will, however, only be entered in the database when confirmed with "OK". Observe that no umlauts or special characters are permitted for the "field name".

11.5.2.2 Rename present database field

Click the field to be renamed in the database field list so that it is highlighted in grey. Now enter the new name in the input field "Field name". Click the button "Rename field". The list "Database fields" on the right now shows: "Rename "Old field name" to "New field name". The final renaming will only take place after confirmation with "OK" and repeated safety prompt.

11.5.2.3 Delete present database field

Click the field to be deleted in the database field list so that it is highlighted in grey. Click the button "Delete field". The field is now removed from the database field list. Final deletion from the database will, however, only take place after confirmation with "OK" and repeated safety prompt.

Caution: Deleting a field is final and will cause loss of all data already entered in this field!

11.5.2.4 Function groups

11.5.2.4.1 Database fields

A list of all fields of the respective table.

11.5.2.4.2 Field name

Input field for the designator of new database fields. The database field names must not contain any special characters, umlauts or spaces.

11.5.2.4.3 Display name

The name entered here may include any character and is used in all control elements of the programme to designate the field.

11.5.2.4.4 Field type

Dropdown for the type of the new database field:

A. Integer: Full numbers (1,-100,77...)
B. Boolean: Selection "yes"/no"
C. String: Text with limited length.
D. Float: Decimal digit (343,3284729)
E. Text: Text with variable length
F. Date: Date
G. Time: Time

Observe the difference between string and text fields: a text field cannot be displayed in the data grid. Therefore, this field cannot be used for sorting. The access time needed by the database is also much longer than for text fields.

11.5.2.4.5 Field size

Only important for text fields. Defines the maximum field length.

11.5.2.4.6 Insert field

See "Creating new database field".

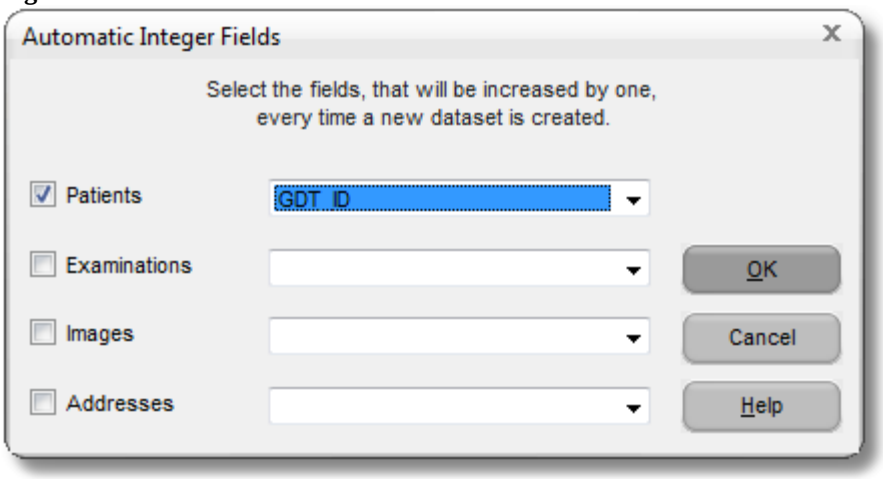
11.5.2.4.7 Delete selected field

See "Delete existing database field".

11.5.2.5 Configure fields for automatic incrementation

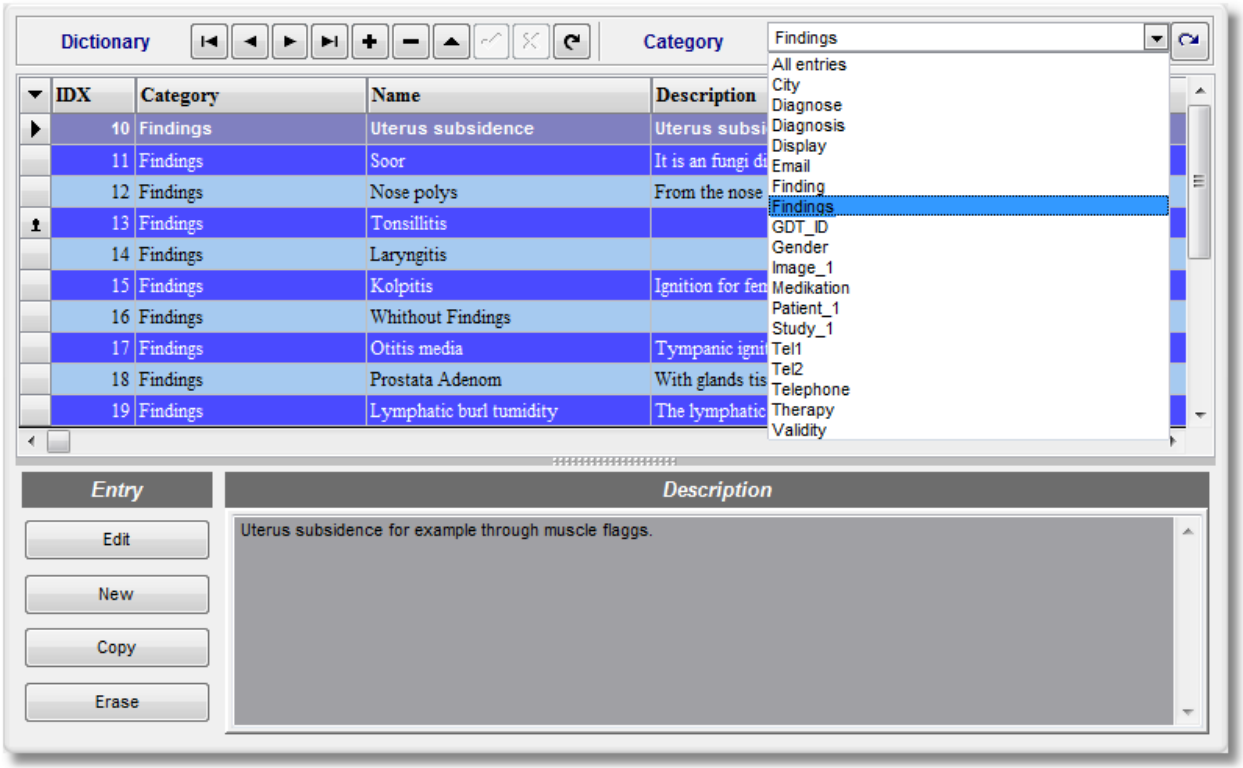
Automatic fields are number fields that are increased by one for each new dataset. For example, a field "Customer number" can be set up and set to a specific default value. For every new patient who is set up, the starting value is increased by one.

Figure 199



11.5.3 Dictionary

Figure 200



The dictionary can store frequently-used sentences or longer words with a short designation. This corresponds to the text components of MS-WORD. The individual items are structured in subgroups by indicating a "Category". **The category corresponds to the fields in the database**. This permits setting up a dedicated list of text components per database field to then comfortably select in a dropdown list in the database input dialogues. An example: You have set up a text field with the name "Referral" in the database table. You want this field to contain the address of the specialist to whom you refer the patient. To avoid having to enter the address every time, you can set up the following entries in the dictionary:

1. Category : ***Referral***
   Designator : Heisenberg
   Description :
   Dr. med. Werner Heisenberg

Rosenstr 7
33333 Hamm

2. Category : ***Referral***
   Designator : Koch
   Description :
   Dr. med. Robert Koch
   Sedanstr 7
   33334 Cologne
3. Category : ***Referral***
   Designator : Einstein
   Description :
   Dr. Dr. Albert Einstein
   Hohe Warte 99
   33335 Munich ...

If you want to enter the field "Referral" in the database via an input dialogue, the following entries will appear in the dropdown-list:

4. Einstein
5. Heisenberg
6. Koch

If you select the entry "Einstein", the complete address will be entered in the database and printed on the referral. Observe that the lists are sorted alphabetically so that it is sensible to only use the last name as "designator" to find the term more easily.

Of course, the method described above will work for any field of the database. If you did not make any entries for a specific field in the dictionary yet, the dropdown list of the corresponding field in the input dialogues is filled with a list of all entries already made in this field in the database.

11.5.3.1 Category filter

This dropdown list lists all database fields. Selection of one of these entries filters the dictionary so that only those entries that correspond to this "Category" will be visible. If you set the category filter, e.g., to "Referral", only the entries with the category "Referral" will appear. Also see "Deactivate filter ".

11.5.3.2 Deactivate filter

If you have entered a filter in the "Category filter", you may deactivate it again with this button this will display all dictionary entries again.

11.5.3.3 Keyword list

This data grid provides an overview of all dictionary entries.

11.5.3.4 Description:

Displays the text inserted in the database when selecting the corresponding entry in the dropdown list of the input dialogues.

11.5.3.5 Entry:

11.5.3.5.1 Edit

Opens a dialogue to edit the current entry.

11.5.3.5.2 New

Opens a dialogue to create a new entry.

11.5.3.5.3 Copy

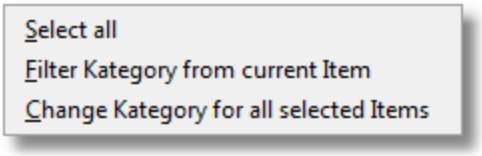
The current entry is copied. Then a dialogue opens to edit the copied entry.

11.5.3.5.4 Erase

The current entry is removed from the dictionary.

11.5.3.6 Context menu dictionary

Figure 201



11.5.3.6.1 Select all

All entries are selected. You may select individual entries or, if they are already selected, unselect them by clicking the corresponding entry with the Ctrl button pressed.

11.5.3.6.2 Filter category from current item

After selection of this menu item, only entries with the same category as the currently selected one will be displayed.

11.5.3.6.3 Change category for all selected items

Selecting this (See "Select all"), you may change the category of all selected entries. This is particularly important if you have renamed a database field or created a new field you want to assign some entries from a different field to.

11.5.4 KV card reader

The KV card reader module permits directly importing patient data into the programme via the health insurance card. The imported patient is automatically the current patient, so that you do not have to switch to the database page first. All Towitoko chip card readers are supported.

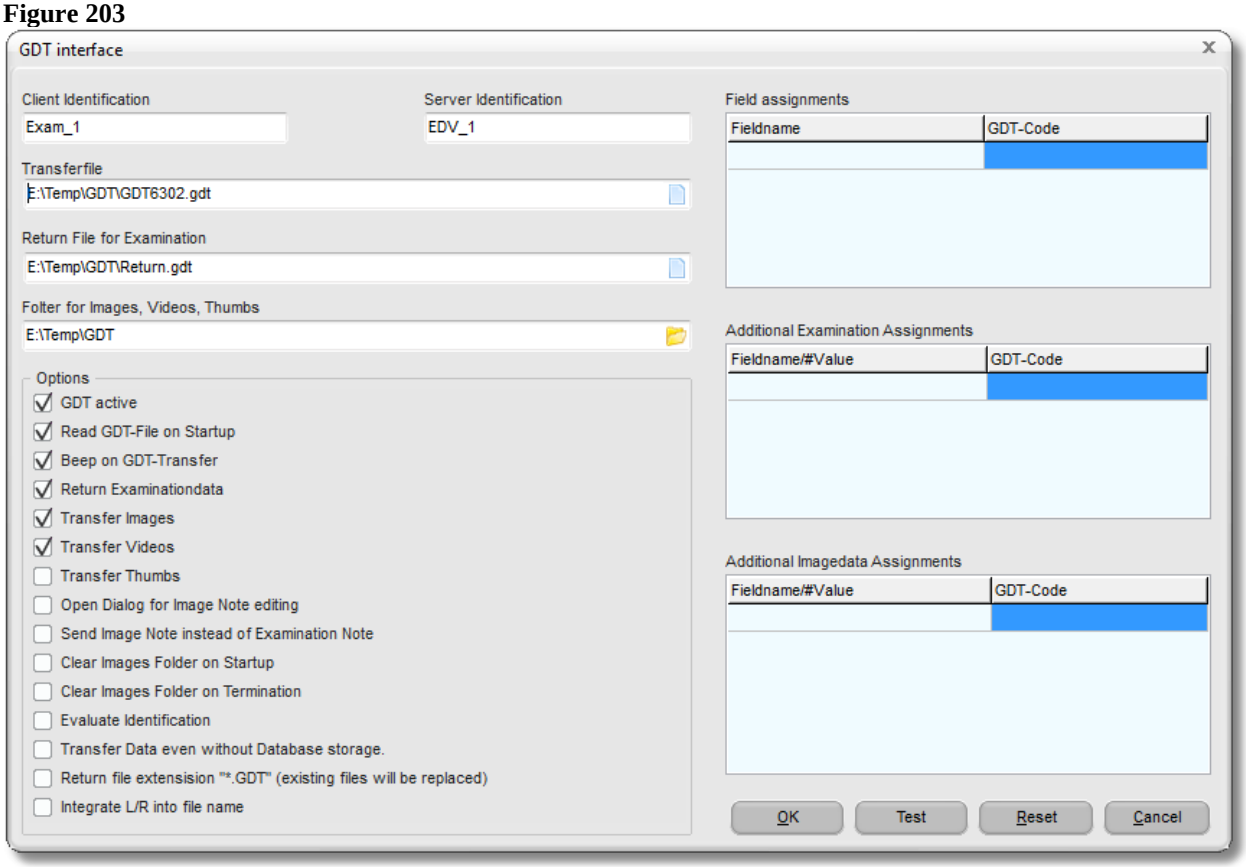
Figure 202 (Towitoko Chip card reader)

11.6 GDT practice software integration

The GDT module permits connecting the software to a present practice software supporting the GDT interface. The practice software will write a file with the new patient data upon patient change. This file is continually monitored and imported by the programme in case of changes. The imported patient is now active.

You may activate and configure the GDT interface via "Settings -> GDT":

Figure 203



Indicate the file your practice programme uses to submit patient data as "Transfer file" (ask the manufacturer if required), and then activate the field "GDT active". If your practice programme will submit another data as well that you want to include in the database, ask the manufacturer for

the corresponding GDT code. Then enter this and the database field to receive the data in the list "Field assignments".

11.6.1 Client identification

The client identification tells the practice EDP on which PC or GDT device the submitted data originates. In the reverse situation, the programme will only react to GDT files that contain this identification if the option "Evaluate identification" is active. If no other GDT devices are active in your system, this input can also be dispensed with.

11.6.2 Server identification

The server identification can be used if the programme is to react only to GDT files from a specific workstation in the network. The workstation must insert this identification in the transfer file. Also, only this one station will be able to process the return file. Also see "Evaluate identification".

11.6.3 Transfer file

Enter the path and name of the GDT file your practice EDP will write. This input must correspond precisely to the settings of your practice software. Once the EDP writes this file, the file will be read by the programme and deleted.

11.6.4 Return file for examination

Enter the path and name of the GDT file to be returned to your practice EDP here. This input must correspond precisely to the settings in your practice software. Once the new examination data are entered, this file is written and read by your EDP, and the data will be imported in the practice EDP. Also see "Return examination data".

11.6.5 Folder for images and videos

If you want to provide images and videos for your practice EDP, you can enter the path where the files are to be copied here. The options "Transfer images", "Transfer videos" and "Transfer thumbs" specify precisely what data will be copied.

11.6.6 Options

11.6.6.1 GDT active

This option activates or deactivates the GDT functions.

11.6.6.2 Read GDT file on start-up

This option should be activated if you call the programme from your practice. If the option is not active, any GDT files present at programme start-up will be ignored.

11.6.6.3 Beep on GDT transfer

Once a GDT return file was written, a beep is output. However, this only works if the PC has an integrated speaker or external speakers are connected to it.

11.6.6.4 Return examination data

If this option is active, a return file for the practice EDP will be written once you have edited an examination in the database. For this to work, your practice EDP must be configured accordingly.

11.6.6.5 Transfer images

If this option is active and "Folder for images and videos" contains valid paths, all new images will be copied to this folder for your practice EDP to access them.

11.6.6.6 Transfer videos

If this option is active and "Folder for images and videos" contains valid paths, all new videos will be copied to this folder for your practice EDP to access them.

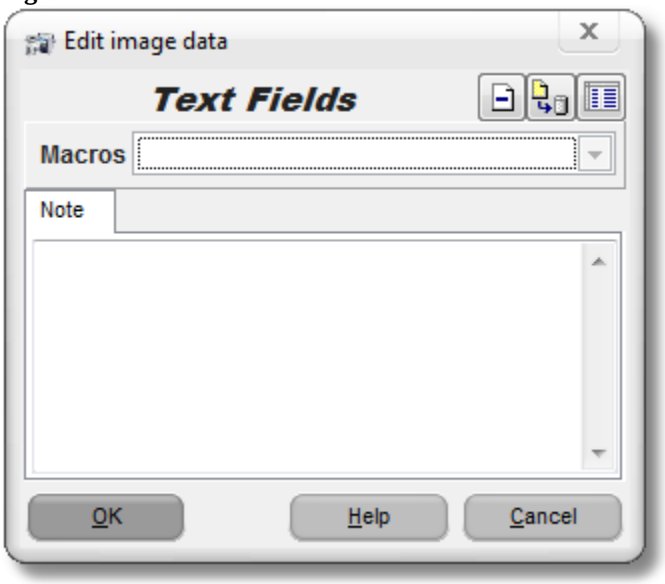
11.6.6.7 Transfer thumbs

If this option is active and "Folder for images and videos" contains valid paths, all new thumbnails (preview images with a resolution of 160x120) will be copied to this folder for your practice EDP to access them.

11.6.6.8 Open dialog for image note editing

If this is active, you will be taken to the database after every new image and asked to edit the image data:

Figure 204



If you have not set up dedicated database fields for the image database, only the field note will appear here. Also see "N

11.6.6.9 Send image note instead of examination note

Usually, the GDT return file will always transfer the note you have entered in the image examination (GDT identification 6227); if this option is activated, the image note will be used instead.

11.6.6.10 Clear images folder on start-up

If you provide your practice EDP with images and videos but it does not delete the data imported, you may cause the programme to clear the folder for images and videos at each start-up with this option.

11.6.6.11 Clear images folder on termination

See Clear images folder on ; the folder is only cleared upon termination of the programme.

11.6.6.12 Evaluate identification

With this option active, only GDT files containing the matching identification are evaluated. If you do not have any other GDT devices in your network, you may deactivate this option.

11.6.6.13 Transfer data even without database storage

Transfer of images and videos to your practice EDP is usually only triggered if they are saved in the database. This has the benefit that only the desired images and videos will be submitted. With this option active, all data will be sent independently of storage in the database.

11.6.6.14 Return file extension ".GDT"

The return files are usually given a serial number to ensure that no data is lost, e.g. "GDT_Return.001". if your practice EDP has not evaluated and deleted this file yet, the next GDT file will be "GDT_Return.002", etc. If your EDP expects the file extension ".GDT", you can force this with this option.

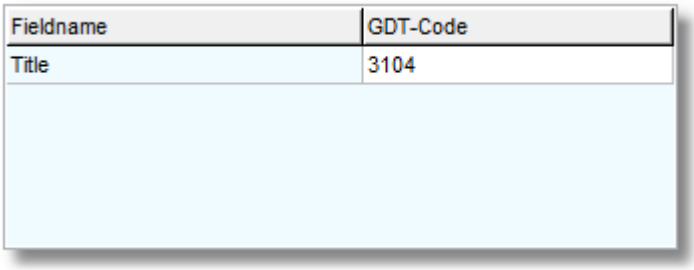
11.6.6.15 Integrate L/R into file name

The differentiation between "left/right" is usually submitted in the GDT return file (GDT identification 6004). If your practice EDP does not support this, the identification is appended to the return file: "GDT_Return.001" is turned to "GDT_Return_L.gdt" for left and "GDT_Return_R.gdt" for right.

11.6.7 Field assignments

Use this input template to set up additional links to your practice EDP that are not implemented by default. If you need database fields that are not set up (such as "house number"), you may create these fields in the database via the module Free database configuration page 11-153.

Figure 205



If the GDT file of your practice software sends the entered GDT identification, the corresponding data will be saved in the database.

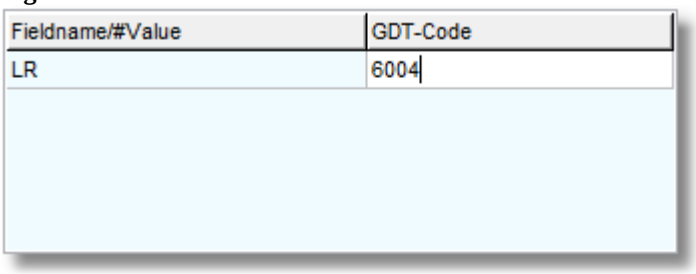
11.6.8 Additional examination assignments

The same as for field assignments applies, but these are additional data the programme returns to the practice EDP. The column "Field name/#value" permits entering fixed values as well; they must start with the character "#", e.g. "#1" or "#treatment room 2".

11.6.9 Additional image data assignments

The same as for 11.6.8 applies, but referring to data from the image table:

Figure 206



11.6.10 Button

11.6.10.1 OK

All input is saved and the dialogue is closed.

11.6.10.2 Test

You may test the GDT function if "GDT active" and "Read GDT file at start-up" are active and the transfer file is present. The data of the transfer file will be read and written to the database.

11.6.10.3 Reset

All settings are reset to the values saved before the dialogue was called.

11.6.10.4 Cancel

All input is discarded and the dialogue is closed.

11.7 Canon EOS DSLR interface

This module permits digitally controlling any Canon EOS digital camera, importing and triggering it. To use a connected camera, "Connect". Now you may use the button "Snapshot" to trigger the camera. Any recording will appear both in the large view with zoom function and in the "Snapshots" list. If a recording from the list is clicked, it will be loaded in the "zoom window". The control on the left edge can be used to smoothly enlarge or reduce the image size and keeping the left mouse button pressed permits freely moving the image.

Figure 207

11.7.1 Button panel

11.7.1.1 Connect/disconnect camera

This button can be used to connect or disconnect the camera. Alternatively, you may activate "Automatic connection" in the options.

11.7.1.2 Snapshot

This button triggers the camera. Alternatively, you may use a foot switch.

11.7.1.3 Video recording/terminate recording

This button triggers video recording of the LiveView stream. It has a resolution of approx. 800x600 pixels and delivers approx. 12 images/second, depending on USB connection quality. Alternatively, you may use the HDMI module as well, with the resolution 1920x1080 and 30 images/second.

11.7.1.4 State

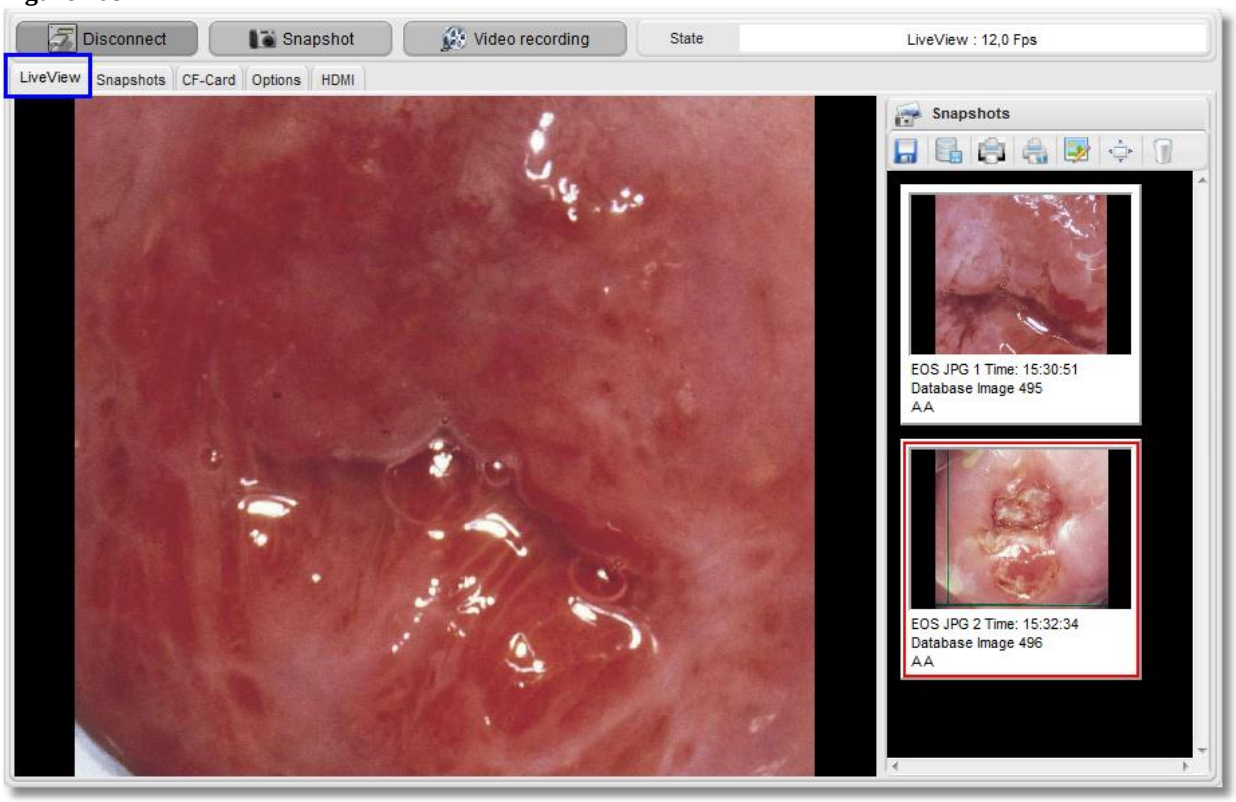
Displays status information

11.7.1.5 Zoom/left-right

Depending on medical device connected, this field will display either identification of left/right or amplification.

11.7.2 LiveView

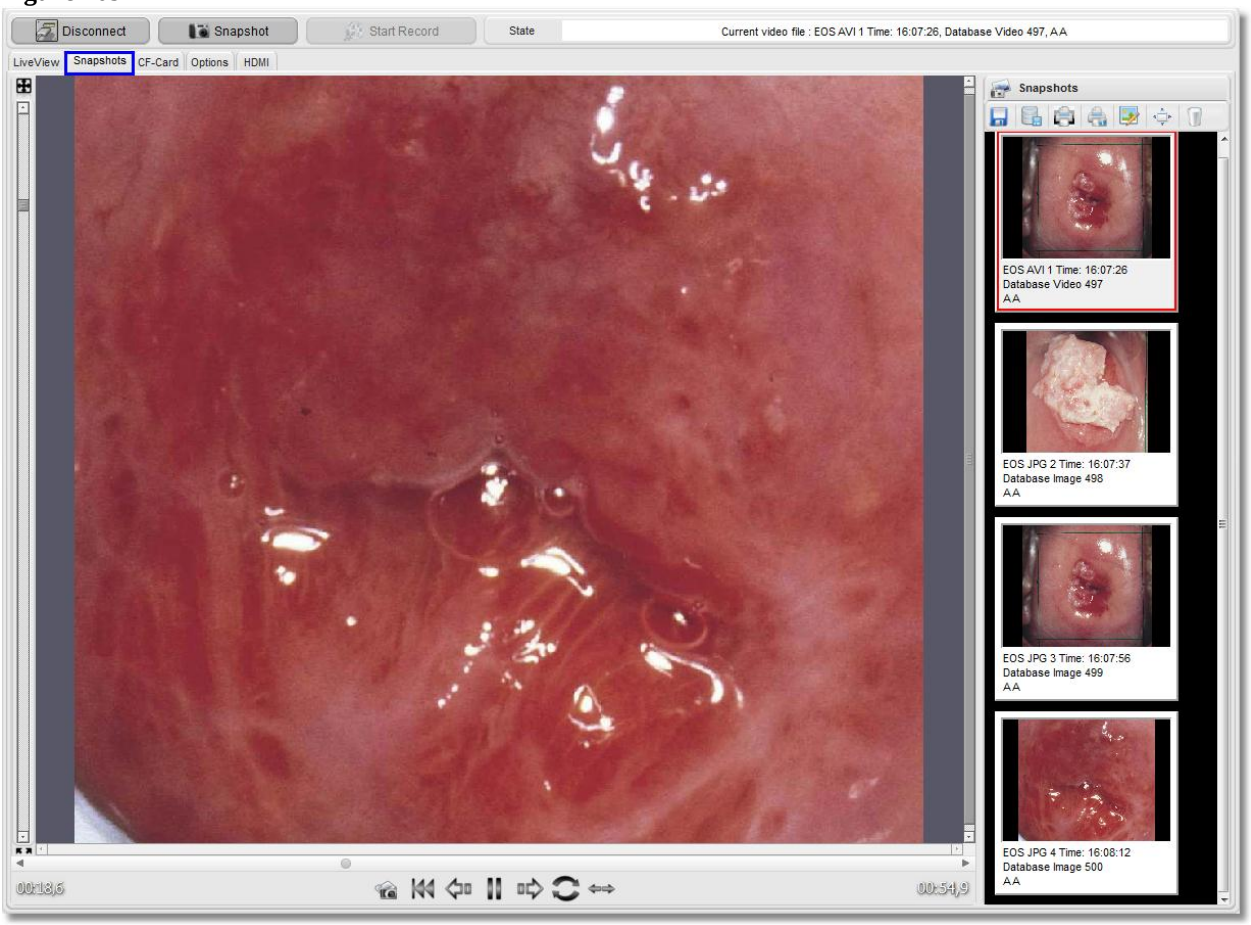
Figure 208



Once the camera is connected and you switch to the tab LiveView, the camera's LiveView mode will be activated, and you will see the video preview as you would on the camera LCD.

11.7.3 Recordings

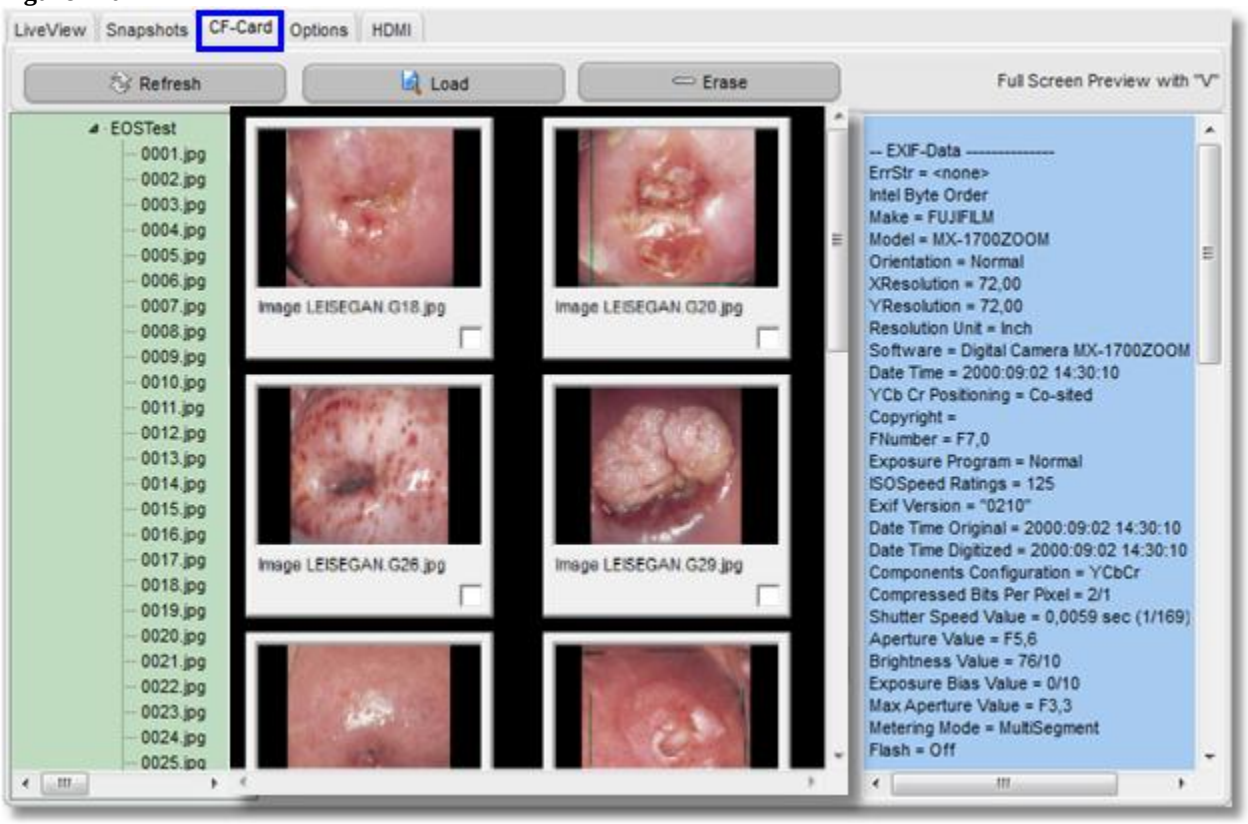
Figure 209



The tab recordings permits watching the recorded images and videos and, if required, zooming into the recordings. Clicking one of the images in the preview on the right side will load it in the large view. If it is a video, the lower part of the display area shows an operating bar.

11.7.4 CF card

Figure 210

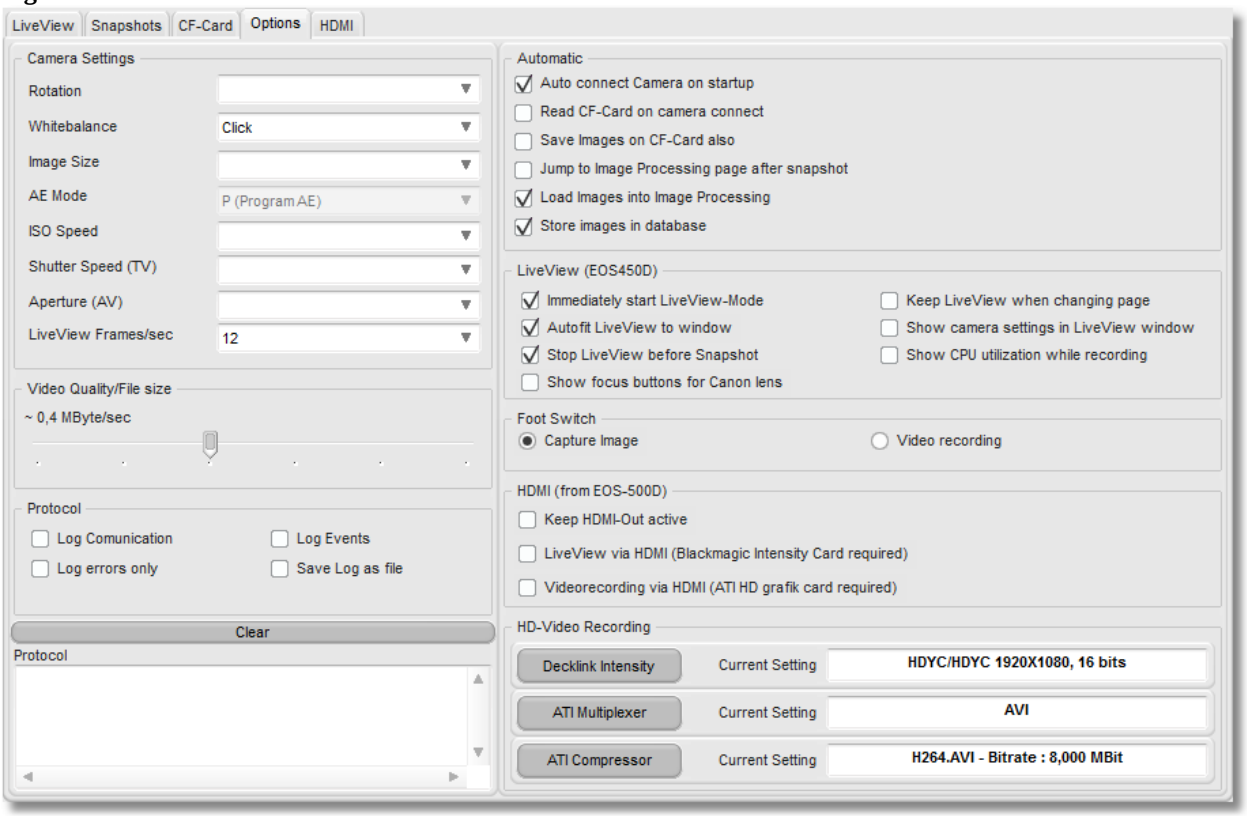


The tab CF card permits loading and viewing present images from a memory card. On the left side, all recordings are listed in a tree structure; the centre view shows the corresponding preview images. Clicking one of the preview images displays characteristics of the selected image on the right. The checkboxes in the preview images can be used to select specific images and to load them in the recordings list with the button "Load".

11.7.5 Options

On the page Options, you may set the most important camera parameters, specify the basic behaviour of the software and view the communications log.

Figure 211



11.7.5.1 Camera settings

11.7.5.1.1 Rotation

With this selection box, you can automatically rotate the LiveView display and recorded images by 90°, 180° or 270°. Alternatively, you can also use your camera for this setting.

11.7.5.1.2 White balance

The white balance makes sure that white areas appear white. Usually, the setting (automatic) achieves the correct white balance. If this setting does not lead to natural colours being displayed, you may manually adjust the white balance to the respective light source as well. For a precise description of the individual modes, see the operating instructions of your Canon EOS camera.

11.7.5.1.3 Image size

This setting corresponds to the item "Setting the image recording quality" in

the Canon EOS operating instructions. The better the quality, the larger the resulting file size.

11.7.5.1.4 AE mode

Shows the selected recording mode. This is the programme you can set at the camera using the dial.

11.7.5.1.5 ISO

Choose the ISO sensitivity (light sensitivity of the image sensor) according to the ambience light. In the motive area modes, ISO sensitivity is set automatically.

Information on ISO setting "Auto": In this mode, the ISO sensitivity is automatically set between ISO 100 and 800 according to recording mode and ambience light. Using a flash and manual illumination, ISO 400 is set.

11.7.5.1.6 Shutter Speed (TV)

You may set the desired shutter speed. This setting is only available in the mode "M" (manual).

11.7.5.1.7 Aperture (AV)

This setting specifies the aperture value and is only sensible when using the Canon lens.

11.7.5.1.8 LiveView frames/sec

The maximum LiveView frame rate depends on the transfer rate of the USB bus and the performance of the computer used. To warrant stable and stutter-free display, it is sensible to specify a fixed frame rate value below the maximum that can be achieved. A good compromise is the value 10.

11.7.5.2 Video quality/file size

This slider can be used to specify the quality of the recorded videos; observe that increasing quality will also increase file size. For best results, use the maximum setting of "1 Megabyte / second".

11.7.5.3 Protocol

Use the protocol options to specify the events to be logged and whether or not they should be saved to a file for later evaluation. These options are only used for error search in case of problems in transfer.

11.7.5.4 Automatic options

11.7.5.4.1 Auto-connect camera on start-up

If this option is active, the programme will try to connect with a connected Canon EOS camera every 10 seconds. Once connection was successful, the button will switch from "Connect" to "Disconnect".

11.7.5.4.2 Read CF card on camera connect

If a storage card is found in the camera and this option is active, the CF-card will be read and you can then import individual images into the programme with the tab "CF-card".

11.7.5.4.3 Save images on CF card also

If this option is active and a storage card is inserted in the camera, any recording will be saved on the PC as well as on the CF card.

11.7.5.4.4 Jump to image processing page after snapshot

The programme automatically jumps to image processing after each snapshot.

11.7.5.4.5 Load images into image processing

Every recording is loaded in image processing.

11.7.5.4.6 Store images in database

Every recording is stored in the database at once under the current patient.

11.7.5.5 LiveView options

11.7.5.5.1 Immediately start LiveView-Mode

After camera connection, the LiveView page is activated automatically and LiveView transmission is started.

11.7.5.5.2 Keep LiveView while changing page

If this option is active, the LiveView transmission remains active when switching to a different tab or a different main page. This may cause delay or stutter in low-performance computers, in particular if videos are played in parallel. In such cases, it is sensible to temporarily deactivate LiveView mode.

11.7.5.5.3 Auto fit LiveView to window

If this option is active, the LiveView is adjusted to the size of the preview window; otherwise, the LiveView is displayed 1:1.

11.7.5.5.4 Show camera settings in LiveView window

The current values for AV(aperture), TV(shutter speed) and ISO-settings are displayed in the LiveView window.

11.7.5.5.5 Stop LiveView before snapshot

Activating this option may accelerate transfer of recordings via the USB bus.

11.7.5.5.6 Show CPU utilisation while recording

In particular for low-performance computers, it may be sensible to check CPU utilisation during video recording, if the video is not recorded smoothly and without stutter and the CPU utilisation exceeds 80% during recording, the computer is overloaded by this function.

11.7.5.5.7 Show focus buttons for Canon lens

The sharpness point can be set via the software when using Canon lenses. For this purpose, the following bar is displayed in the lower right of the LiveView window:

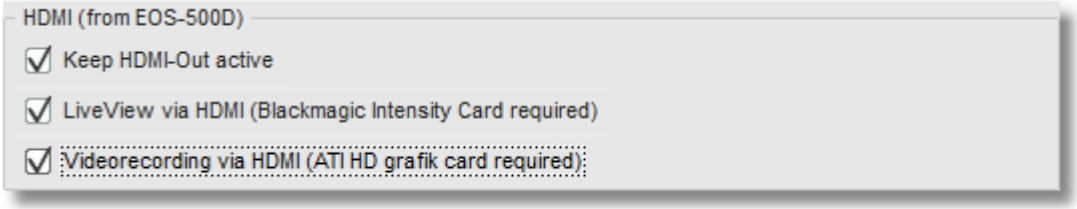
. The number of arrows corresponds to the step size of the change.

11.7.5.6 Foot switch

This selection field specifies the action to be performed when operating the foot switch: Capture image, or video recording.

11.7.5.7 HDMI options

Figure 212



To display the LiveView via the Canon EOS camera's HDMI-interface, you need a "Decklink HDMI Videocapture card". The advantage of this solution is the higher resolution (USB LiveView: 800x600, HDMI-LiveView: 1920x1080), as well as the

higher frame rate (USB LiveView: 12 frames/second, HDMI-LiveView: 30 frames /second).

11.7.5.7.1 LiveView via HDMI

If your computer meets the above conditions, this option activates the HDMI output of the camera, as well as internal HDMI processing.

11.7.5.7.2 Video recording via HDMI

If your computer meets the above conditions, this option activates video recording of the HDMI signal.

11.7.5.7.3 Permanently activate the HDMI output

Activating this option permanently maintains HDMI-transmission. This prevents delays when switching back to the HDMI tab. However, low-performance computers may experience performance problems here.

11.7.5.8 HD video recording

See 11.13 page 11-204.

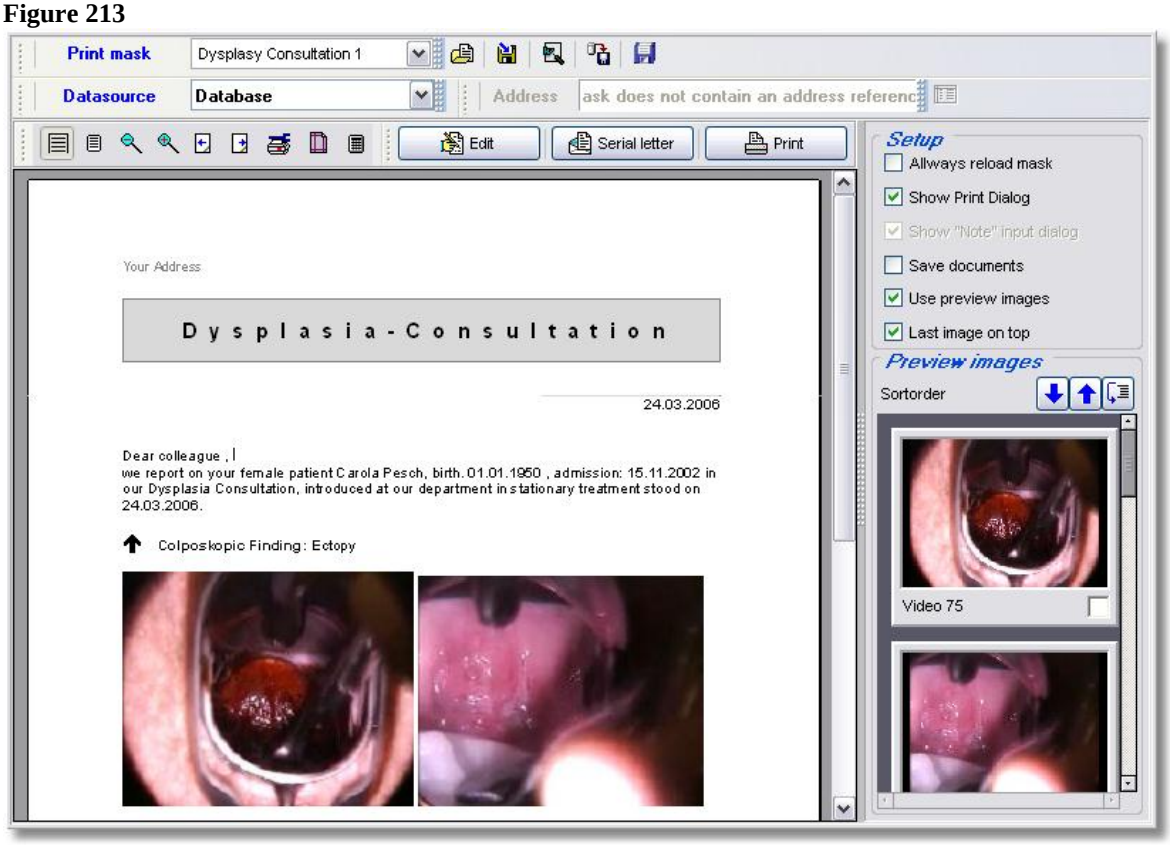
11.7.6 HDMI

The HDMI tab corresponds to the LiveView tab, except that the preview is not supplied via the USB connection but the HDMI interface.

11.8 Document printing (print))

The document print module offers the option of printing self-created print templates with patient data and images and editing them on demand. In combination with the document database. You may save all documents for a history or later printout. Additionally, you may save the completed documents in RTF format or export them to WORD.

Figure 213



11.8.1 Print template

The selection box "Print template" offers immediate access to all templates you have generated.

11.8.2 Data source

Data source specifies where the images and patient data are to come from. You may select among the data sources "image processing", "database" and "database search", depending on whether you have, for example, opened images in image processing or performed a database search.

11.8.3 Address

This field can only be selected if you load a print template that contains placeholders for address book data. If the address book module is cleared, you may include your colleagues' addresses in the address book, set up a print template with address field and print, e.g., a referral to a specialist.

11.8.4 Edit

Use the button Edit to set the print preview to processing mode. This permits making special changes before printing that are not yet included in the selected template.

11.8.5 Reload template

If you want to revoke changes to the document, click the button  "Reload template".

11.8.6 Settings

11.8.6.1 Always reload template

With this option, the template is automatically reloaded when the print page is left and called again. If you have changed the document with "Edit" and want to make additional prints with this changed template, the option must be switched off.

11.8.6.2 Show print dialog

Shows the dialogue for print parameter input before printout.

11.8.6.3 Show "Note" input dialog

If you use the document database, you can enter a note in the dialogue before printing any document; it is then entered in the corresponding database field.

11.8.6.4 Save documents

When using the document database, every printed document will be saved in this database. You may also save selected documents only with this button  .

11.8.6.5 Use preview images

Usually, the document's print preview always uses original images in full resolution. However, in pictures with a very high resolution, this may impair display because very large data volumes must be processed. If this option is active, only the small preview images are used. However, this only affects preview on the screen; print always uses the original images.

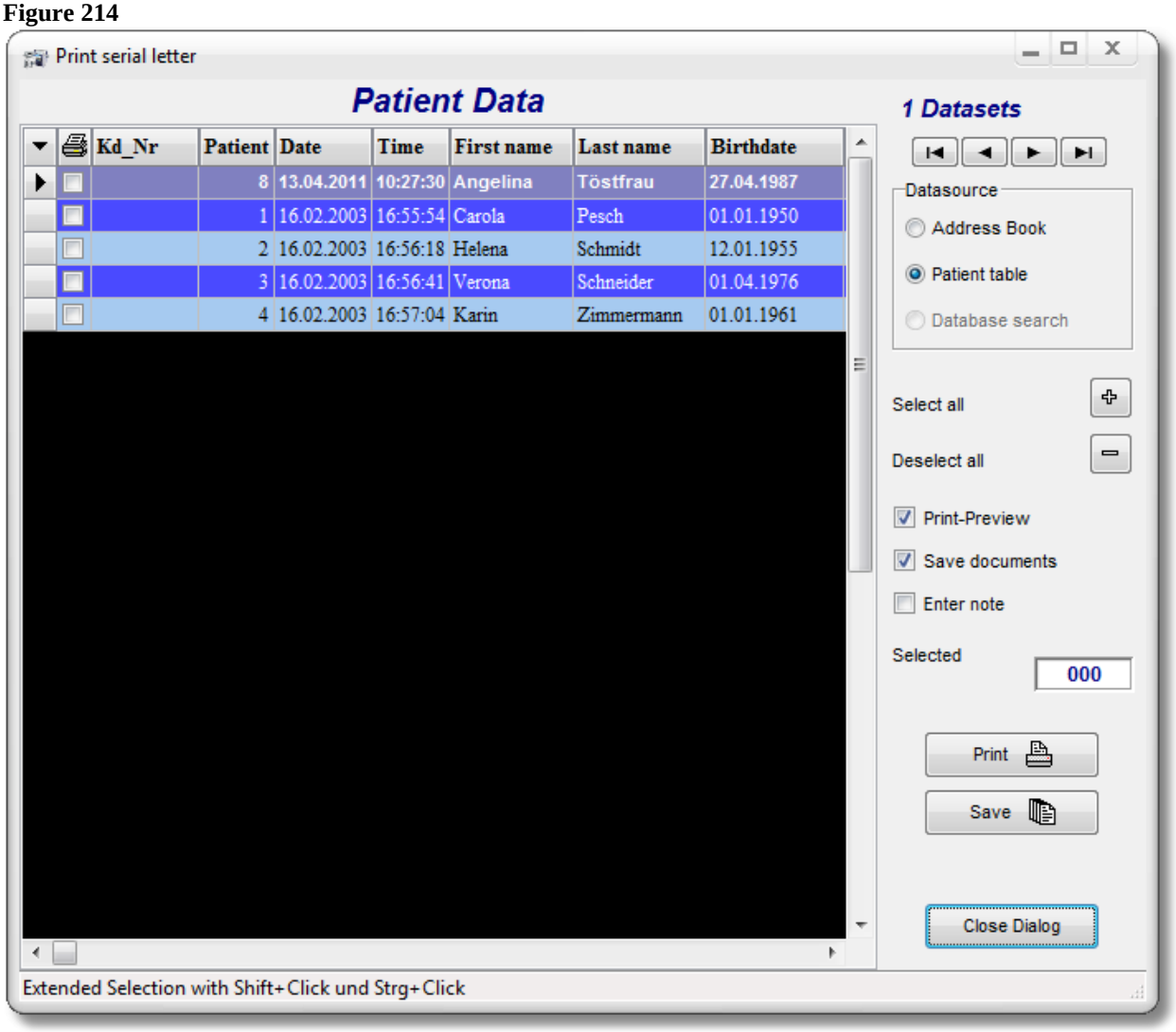
11.8.6.6 Last image on top

This option can be used to reverse the order of the preview images. It may be sensible if you have recorded several images and the last image is to be inserted in the document.

11.8.7 Serial letter function

The serial letter module permits contacting a selection of your patients or, via the address book, of your colleagues. After a database search, you may also use the results for serial letters. This permits, e.g., finding all new patients/clients in the database search of the last six months, and sending them a letter to thank them for their trust.

Figure 214



11.8.7.1 Selecting entries for print

There are two ways to select datasets for print. In standard input, you may simply check the entries to be printed by mouse click. With the expanded selection, you may select entire areas with the "Shift button" pressed and add or remove individual entries with the "Ctrl button" pressed. The "Selection mode" can be switched in the popup menu that appears upon click on the field in the upper left of the data grid.

11.8.7.2 Select data source

The data source selection specifies the database you want to use for serial letters.

11.8.7.3 Print preview

If this option is active, the current dataset is inserted in the document to be printed in the main window. This way, you can check at once whether the result meets your requirements and whether the selected print template is suitable for serial print.

11.8.7.4 Save documents

All serial letters that were printed are automatically saved in the database "Documents". This is recommended for complete document history.

11.8.7.5 Enter note

If "Save documents" is activated, you may enter a joint note for all documents that is then stored in the document database.

11.8.7.6 Print

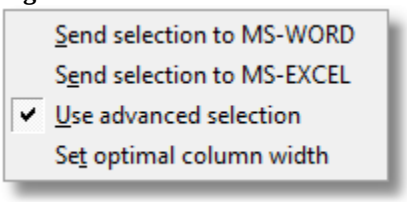
This button starts printout of the selected serial letters.

11.8.7.7 Save

This button saves the serial letters in the document database without printing them.

11.8.7.8 Popup menu

Figure 215



11.8.7.8.1 WORD-Export

WORD is opened and the selected data visible in the data grid are inserted in a new document as a table. Example:

Figure 216

Patient	Date	Time	First name	Last name	Birthdate	Admissiondate	Street	Postalcode
8	13.04.2011	10:27:30	Angelina	Töstfrau	27.04.1987	13.04.2011	Karl-Wiechert-Allee	30652
1	16.02.2003	16:55:54	Carola	Pesch	01.01.1950	15.11.2002	Pilchelsteiner Str. 52	20242
2	16.02.2003	16:56:18	Helena	Schmidt	12.01.1955	26.10.2000	Rosengasse	35145
3	16.02.2003	16:56:41	Verona	Schneider	01.04.1976	26.10.2002	Wilhelm Tell Weg 32	31988

11.8.7.8.2 EXCEL-Export

EXCEL is opened and the selected data visible in the data grid are inserted in a worksheet.

11.8.7.8.3 Use advanced selection

Expanded selection permits selecting entire areas with the "Shift button" pressed and adding or removing individual entries with the "Ctrl button" pressed. "Selection mode" can be switched in the popup menu that appears upon click on the field in the upper left of the data grid.

11.8.7.8.4 Set optimal column width

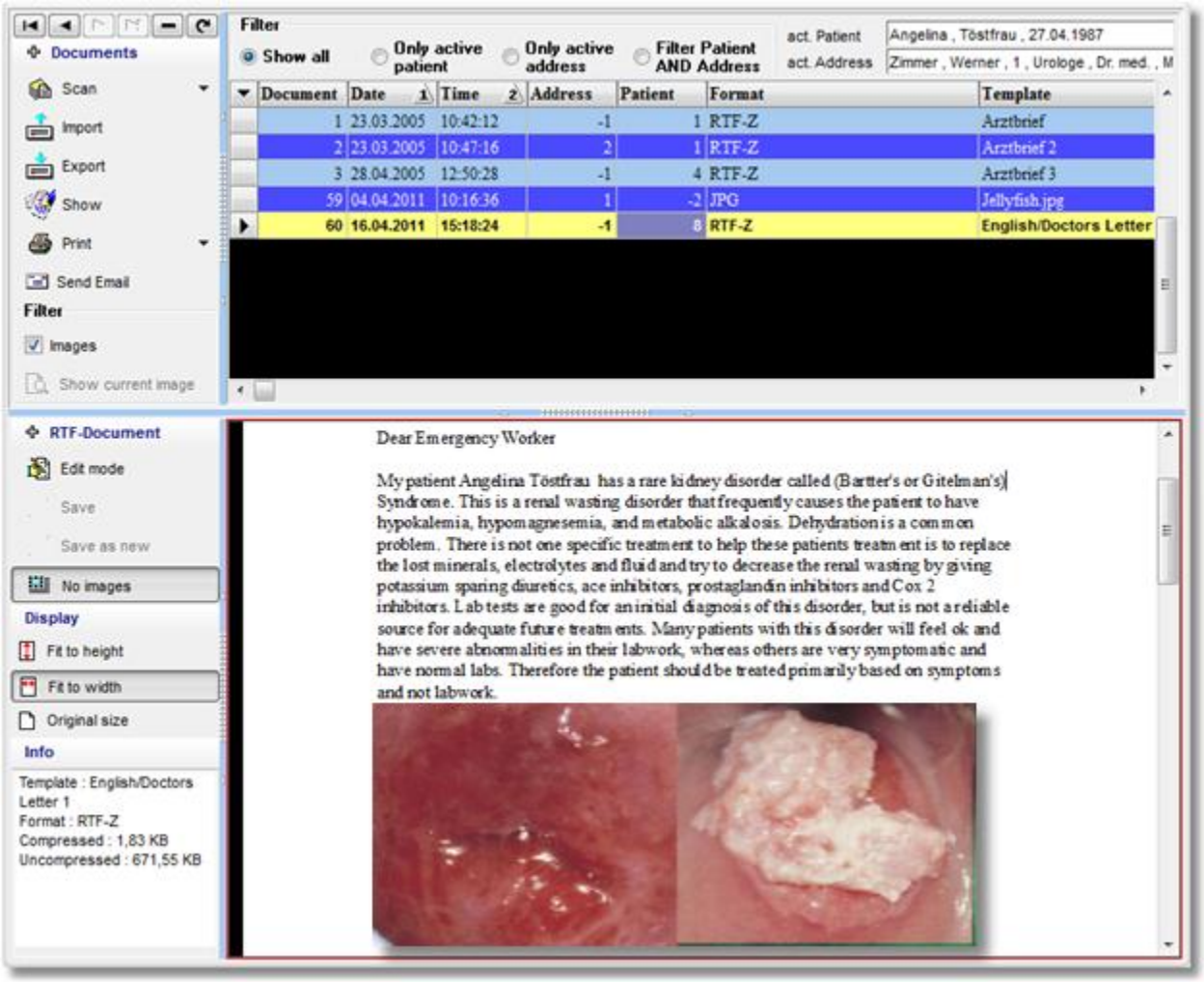
This function calculates the best width for the individual columns of the data grid and sets the column widths to these values.

11.9 Document database (documents)

The document database saves all documents you want to print. They can be set on the print page. You also have the option of scanning documents or importing them from a data carrier. The filter can be used to limit display of the present documents. The document window as such permits

subsequent editing of documents already printed and printing them. Use the button "Show" to open the documents in the programme intended for this by Windows. This way, you can also save, e.g., PDF documents and display them in "Acrobat Reader". Double-clicking the data grid permits subsequent changes to the data.

Figure 217



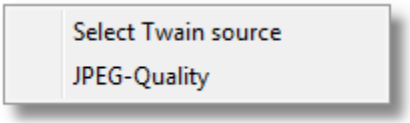
11.9.1 Button documents

11.9.1.1 Scan

This button permits importing documents or images into the document database via the TWAIN-interface. This may use a scanner, digital camera or any device supporting this interface.

Submenu

Figure 218



11.9.1.1.1 Select TWAIN source

If you have several devices installed that support the TWAIN-interface, you can select which one to use here.

11.9.1.1.2 Specify JPEG quality

The scanned images are saved in JPEG format. The lower the quality is set, the smaller the resulting files.

11.9.1.2 Import

This document imports documents or images from a data carrier to the document database.

11.9.1.3 Export

This document exports the current document or image from the document database to an external data carrier.

11.9.1.4 Show

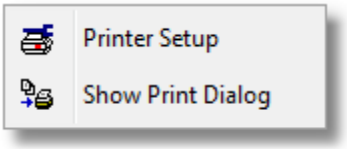
Opens the current document in the application intended by Windows. RTF-documents, for example, are opened in WORD.

11.9.1.5 Print

The current document is sent to the printer.

Submenu

Figure 219



11.9.1.5.1 Printer set-up

The dialogue for setting the print parameters, such as paper size or number of copies, is called.

11.9.1.5.2 Show print dialog

Once this menu item is active, the print dialog is called before every printout.

11.9.1.6 Filter

11.9.1.6.1 Show images

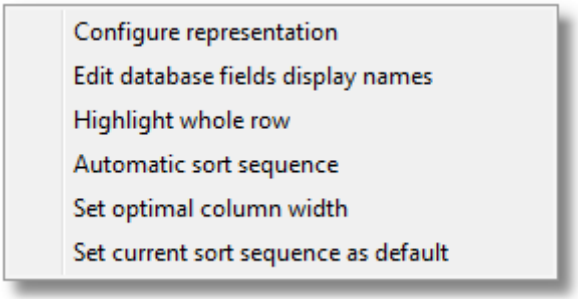
If you have saved many scanned documents in the database, it may be sensible to deactivate this item. These documents are often much larger than the pure RTF-documents and the computer needs relatively much time to display them.

11.9.1.6.2 Show current image

With the filter "Show images" deactivated, you may still have the current image displayed with this button.

11.9.2 Data grid popup menu

Figure 220



11.9.2.1 Configure representation

See "Configure representation", “Data grid” on page 8-106.

11.9.2.2 Edit database fields display names

See Edit display names page 8-107.

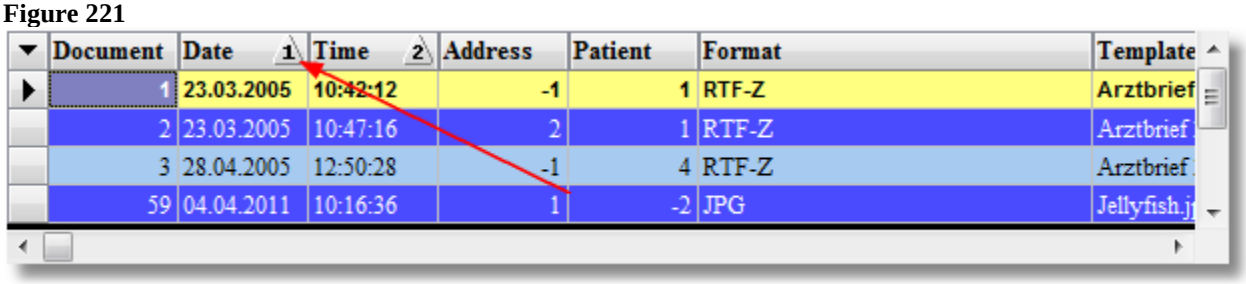
11.9.2.3 Highlight whole row

The entire row of the active dataset is displayed in one colour. This switches off "Automatic sort sequence".

11.9.2.4 Automatic sort sequence

Clicking a field in the data grid and entering the first letter of the printed value will automatically sort the database by this field with "Automatic sort sequence" active. Otherwise, the key input is always made in the field that specifies the currently selected main sort sequence (see the small triangle with the 1 in the title bar).

Figure 221



Document	Date 1	Time 2	Address	Patient	Format	Template
1	23.03.2005	10:42:12	-1	1	RTF-Z	Arztbrief
2	23.03.2005	10:47:16	2	1	RTF-Z	Arztbrief
3	28.04.2005	12:50:28	-1	4	RTF-Z	Arztbrief
59	04.04.2011	10:16:36	1	-2	JPG	Jellyfish.j

11.9.2.5 Set optimal column width

This function calculates the best width for the individual columns of the data grid and sets the column widths to these values.

11.9.2.6 Set current sort sequence as default

If you have changed the data grid sort sequence, you can use this menu item to ensure that this sort sequence is used automatically at start-up.

11.9.3 Database filter

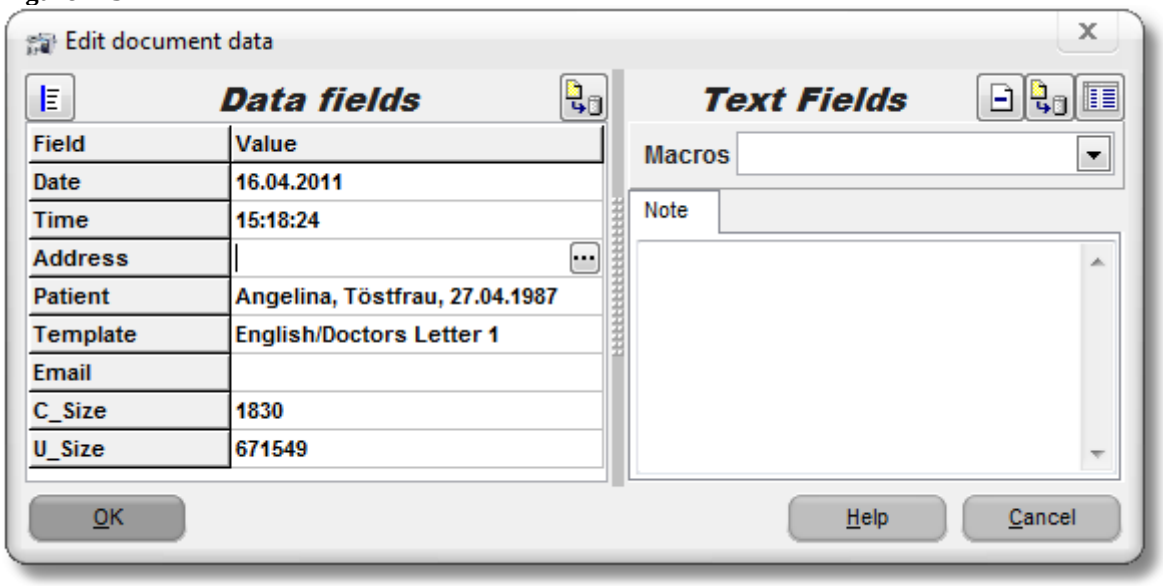
This filter permits listing only those documents in the database that are assigned to the current patient and/or the current address in the address book.

Figure 222

11.9.4 Edit document data

Double-clicking an entry in the data grid shows the following dialogue to edit the document data. Also see Edit patient data page **Fehler! Textmarke nicht definiert.**.

Figure 223

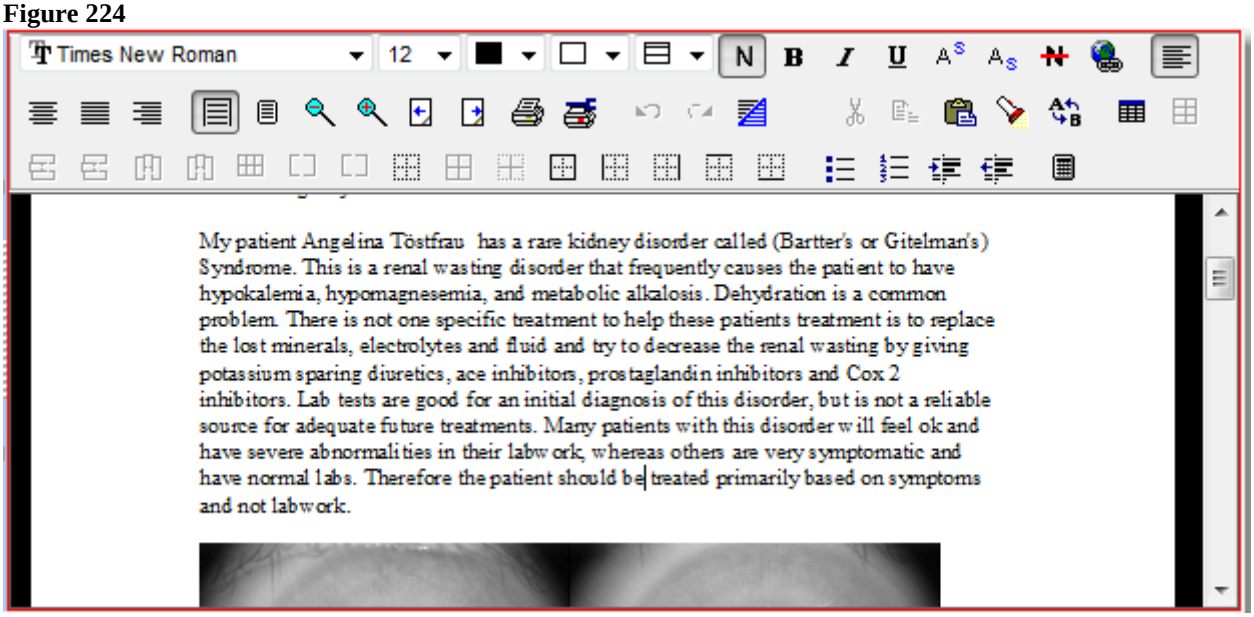


11.9.5 Button RTF-document

11.9.5.1 Edit mode

If you have opened an RTF document to view, you can use this button to switch to editing mode. Now you can, e.g. correct mistakes or add something and print the document again. In editing mode, a tool bar appears additionally above the document as shown in the example below.

Figure 224



11.9.5.2 Saving

If you have changed a document via the editing mode, you may save the changes on this in the database. The original document is replaced.

11.9.5.3 Save new

If you have changed a document in edit mode, you may save the changes on this in the database. A new database entry is generated and the original document will not be replaced.

11.9.5.4 No images

If you have lots of documents with high-resolution images in your database, it may be sensible to activate this item. These images are often much larger than the pure RTF documents and the computer requires relatively much time to display them. If this option is active no images that may be present in the document will be displayed.

11.9.6 Button display

11.9.6.1 Fit to height

The full height of the document or image is shown.

11.9.6.2 Fit to width

The full width of the document or image is shown.

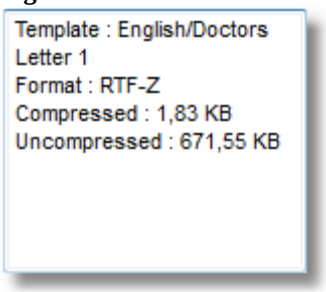
11.9.6.3 Original size

The document or image is shown in its original size.

11.9.7 Document info

Document Info shows the template used by the document, the format the document was saved in the database as and the amount of memory space it requires. The addition "-Z" means that the document was saved compressed.

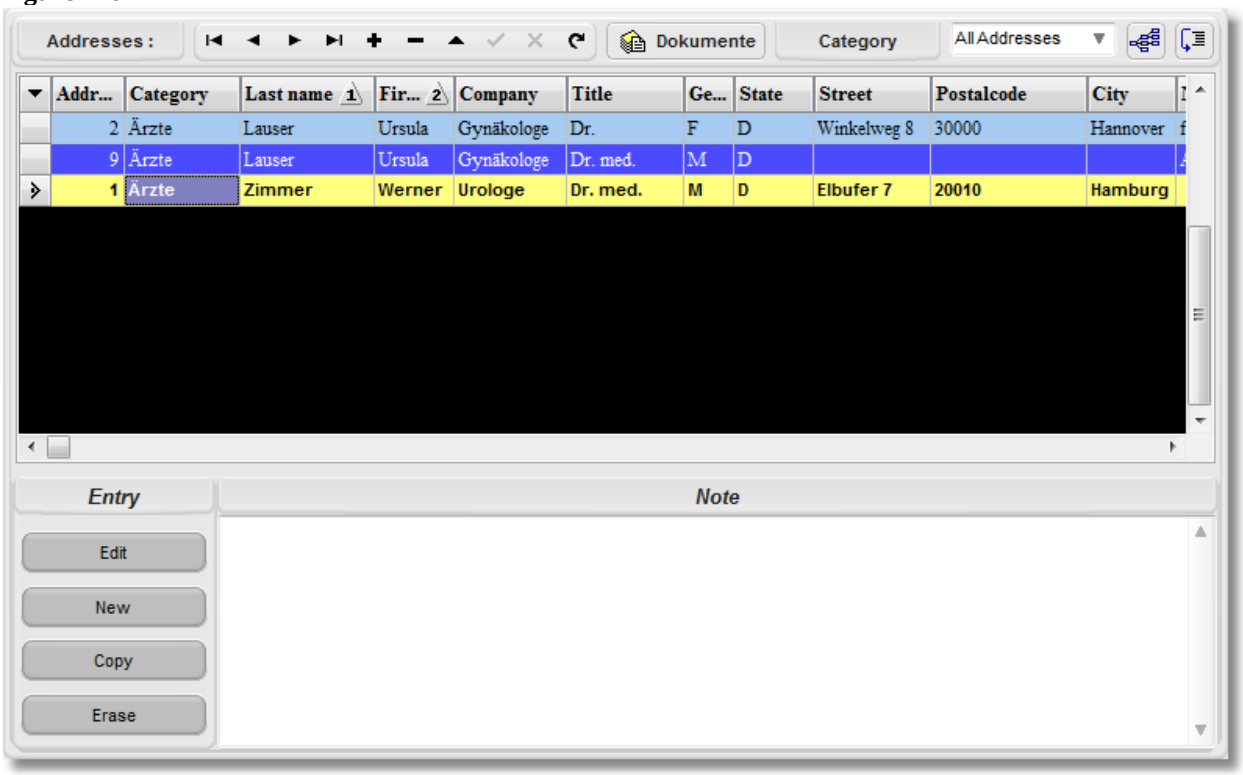
Figure 225



11.10 Address book

The address book permits attaching documents not only with patient reference but also with address data. This is helpful, e.g. if you want to write referrals to colleagues in which you refer to the patient. For this purpose, the print template generation also permits insertion of address placeholders.

Figure 226



11.10.1 Documents

Clicking this button will cause the programme to switch to the page "documents" and display all entries in the document database that are linked to the currently selected address.

11.10.2 Category filter

Use the database field "Category" to classify your addresses in different groups, such as physicians, health insurances, pharmacists, etc. This dropdown list lists all the present categories. Selection of one of these entries will filter the address book so that only those entries are visible that correspond to this "Category". E.g., the category filter "Physicians" will only display the entries with the category "physicians". Also see "Deactivate filter".

11.10.3 Deactivate filter

If you have entered a filter in the "Category filter", you can deactivate it again with this button. This will show you all entries in the address book again.

11.10.4 Entry:

11.10.4.1 Edit

Opens a dialogue to edit the current entry.

11.10.4.2 New

Opens a dialogue to create a new entry.

11.10.4.3 Copy

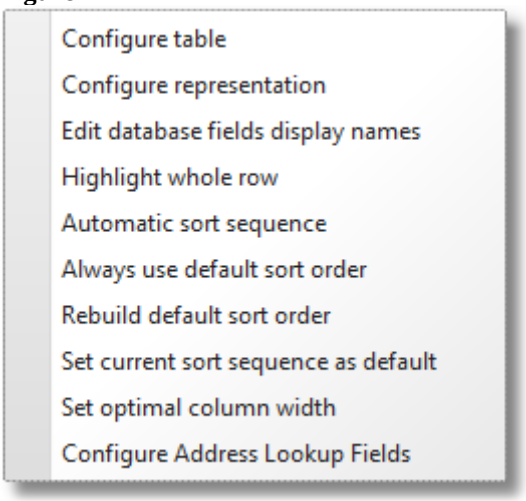
The current entry is copied. Then a dialogue opens to edit the copied entry.

11.10.4.4 Erase

The current entry is removed from the address book.

11.10.5 Data grid popup menu

Figure 227



11.10.5.1 Configure Table

Use this menu item to add new database fields to the address book.

See "Free database configuration" page 11-153.

11.10.5.2 Configure Representation

See "Configure display" page 8-106.

11.10.5.3 Edit database fields display names

See Edit display names page 8-107

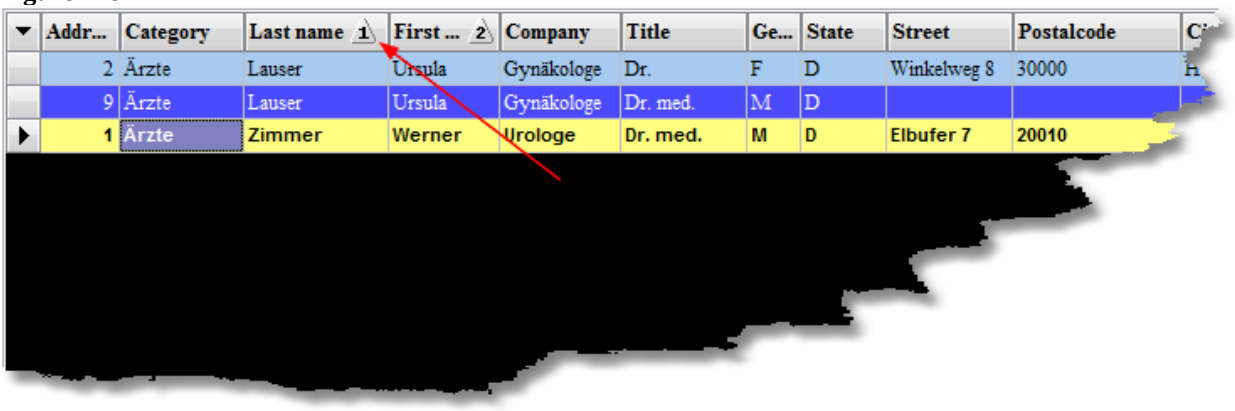
11.10.5.4 Highlight whole row

The entire row of the active dataset is coloured. This switches off "Automatic sort sequence", however.

11.10.5.5 Automatic sort sequence

If you click a field in the data grid and enter the first letter of the value you are looking for, the database will be sorted by this field automatically if "Automatic sort sequence" is active. In the other case, key inputs will always be forwarded to the field that determines the currently selected main sorting (recognisable by the small triangle with the 1 in the title bar).

Figure 228



11.10.5.6 Always use default sort order

If you have changed the data grid sort sequence, you can use this menu item to ensure that this sort sequence is used automatically at start-up.

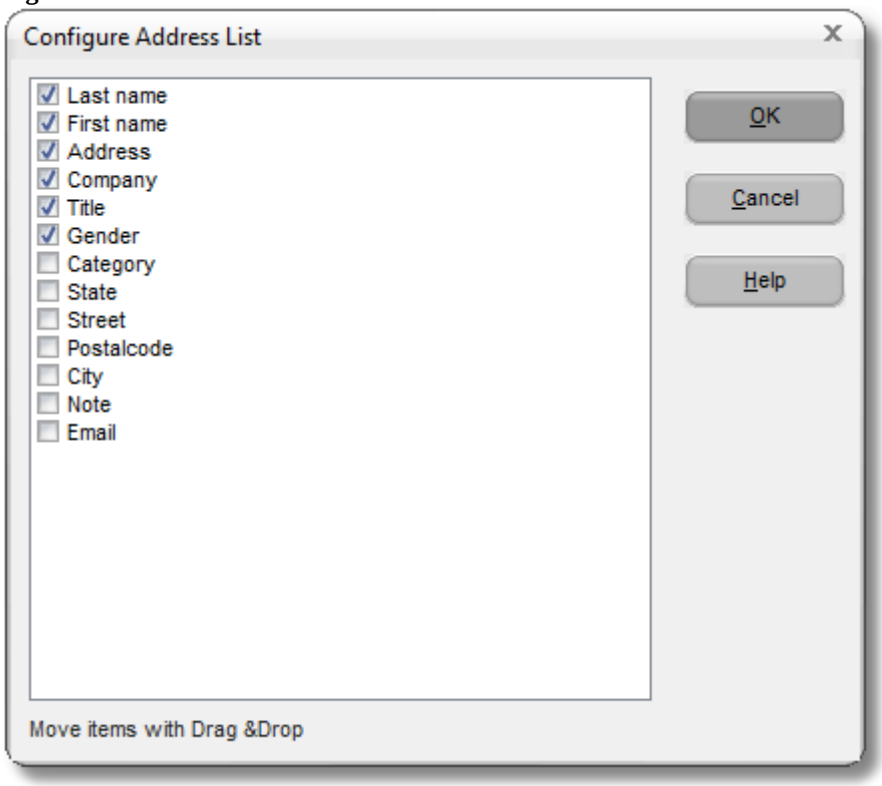
11.10.5.7 Set optimal column width

The width of the individual columns of the data grid is set depending on field content so that all entries are displayed completely.

11.10.6 Configure address lookup fields

This dialogue specifies the data to be listed in the short presentation of the address. The short presentation is used, e.g., on the print page at "address" or in the input dialogues of the document database.

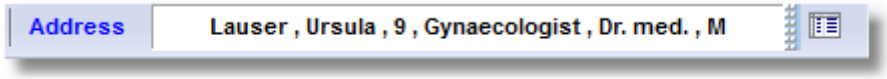
Figure 229



To get to this dialogue, use "Settings -> database -> Configure address lookup fields". To move an entry, click it with the mouse, keep the mouse button pressed and draw the entry to the desired position.

Example print page:

Figure 230



11.11 Print template generation (template)

The print template editor quickly and comfortably creates templates with placeholders for database fields and images. The scope of functions corresponds to state-of-the-art text processing programmes with paragraph control, table generation, letterhead and foot, placeholders for date, page indications, etc.

If you have already generated templates in the WORD or RTF format, you may simply import them and assign the required placeholders. If you call the template you are currently editing on the print page as well, you can verify your changes at once with the data inserted. Images are placed by simple Drag&Drop and the image size can be defined freely.

To customise your printouts, you may also firmly integrate images and logos in the document.

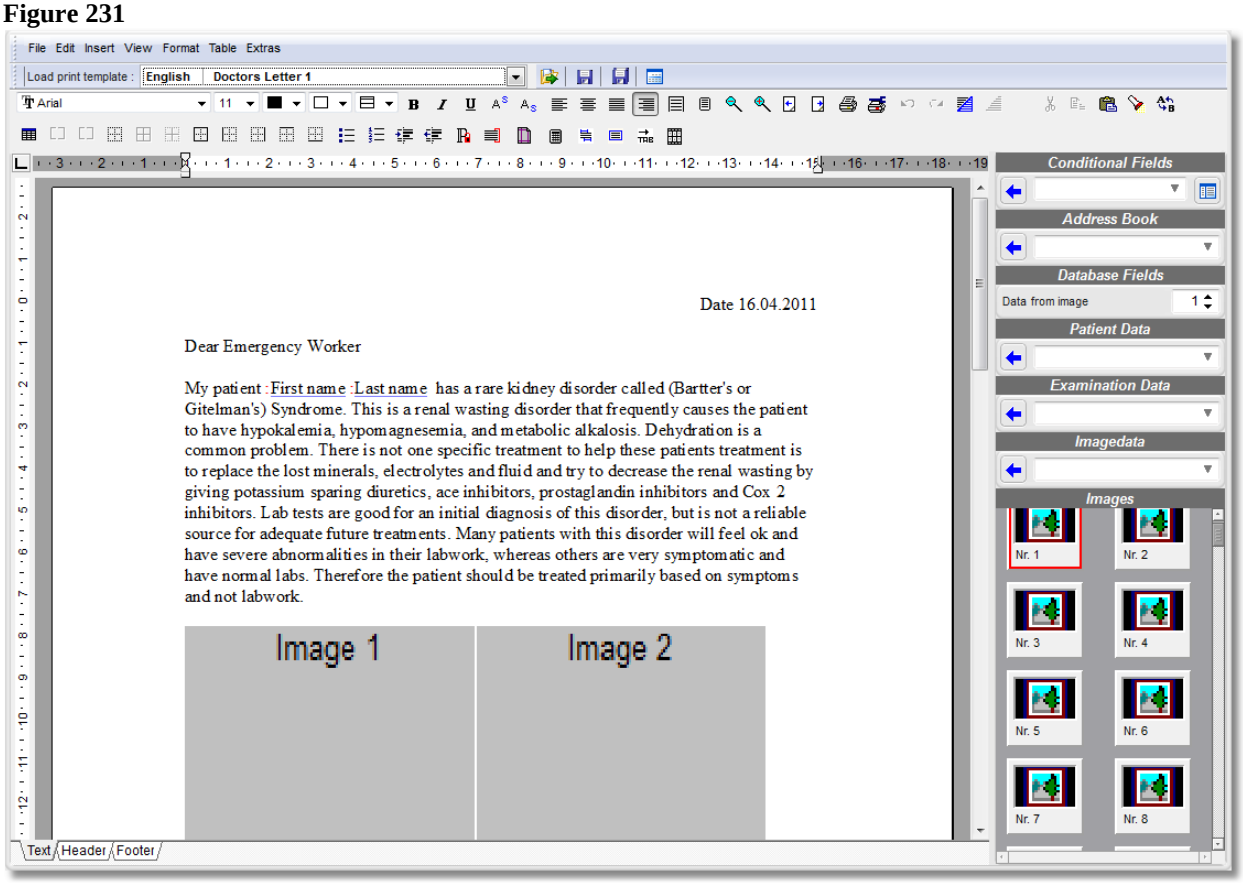
Another peculiarity is the option to perform simple calculations in tables.

Use the function "Conditional fields" to have any text inserted in the document depending on the value of a database field. For example, your colleagues can be addressed "Dear Mr / Dear Ms " if you enter the field form of address or gender in the corresponding database.

In combination with the address book, you may very comfortably contact physicians or health insurances and refer to the respective patients – if desired including image and findings.

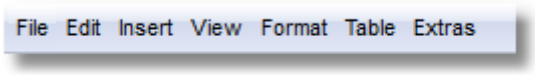
Use the button "Print templates configuration" to sort all print templates into groups.

Figure 231



11.11.1 Menu

Figure 232



11.11.1.1 File

Figure 233

11.11.1.1.1 New

Creating a new template. Any template currently open will be closed.

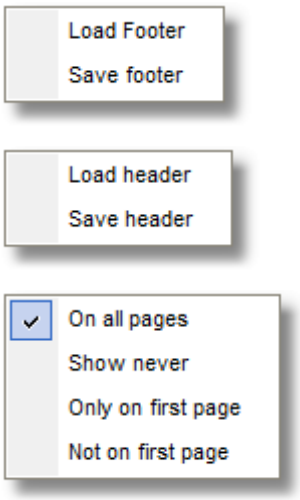
11.11.1.1.2 Open file

Use this menu item to load present Word or RTF documents from a data carrier and to expand them into a print template.

11.11.1.1.3 Save

Saving the open template on a data carrier, e.g. to complete it later.

11.11.1.1.4 Footer – Header

Figure 234 	Use these items, e.g. to load a present letterhead or to save one on a data carrier. The letter's header or footer is a common text or RTF file like the main document. Use the expanded settings to specify where the letter's header/footer is to be printed in case of multi-page documents. At the lower end of the edit window, there are three tabs to switch between the different areas for editing.

11.11.1.1.5 Printer set-up

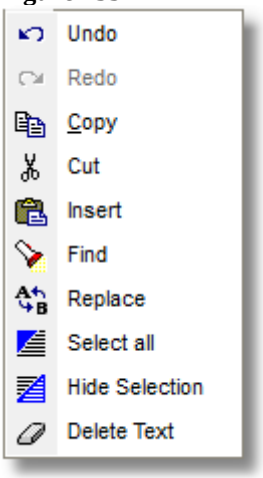
Opens the dialogue for print settings like paper orientation, number of copies, etc.

11.11.1.1.6 Print

The current print template is sent to the printer.

11.11.1.2 Edit

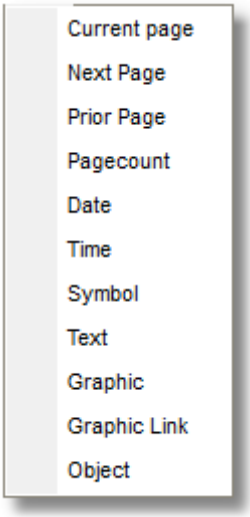
Figure 235



The menu items under "Edit" correspond to those of the common text processing programmes and work with the Windows clipboard.

11.11.1.3 Insert

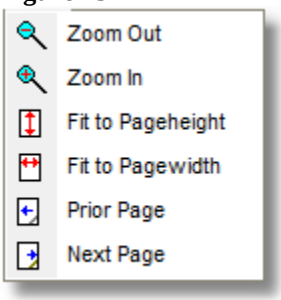
Figure 236



The menu "Insert" offers a selection of placeholders (page count, date…) or special objects (graphic, symbol …) to be embedded in the document.

11.11.1.4 View

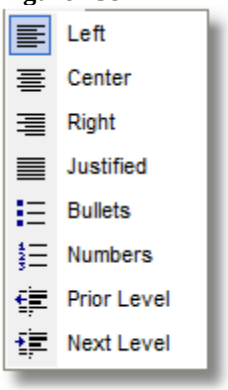
Figure 237



The menu view controls the way the document is displayed on the screen.

11.11.1.5 Format

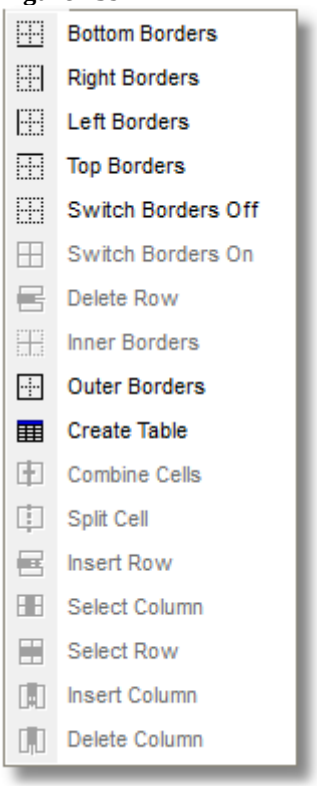
Figure 238



Format provides access to the usual formatting functions in text processing programmes, such as justify or numbers.

11.11.1.6 Table

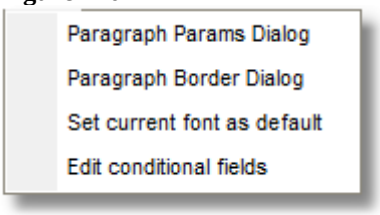
Figure 239



This menu permits entering a table in the document or changing present tables. To change a present table, just place the cursor in the corresponding field and select the function.

11.11.1.7 Extras

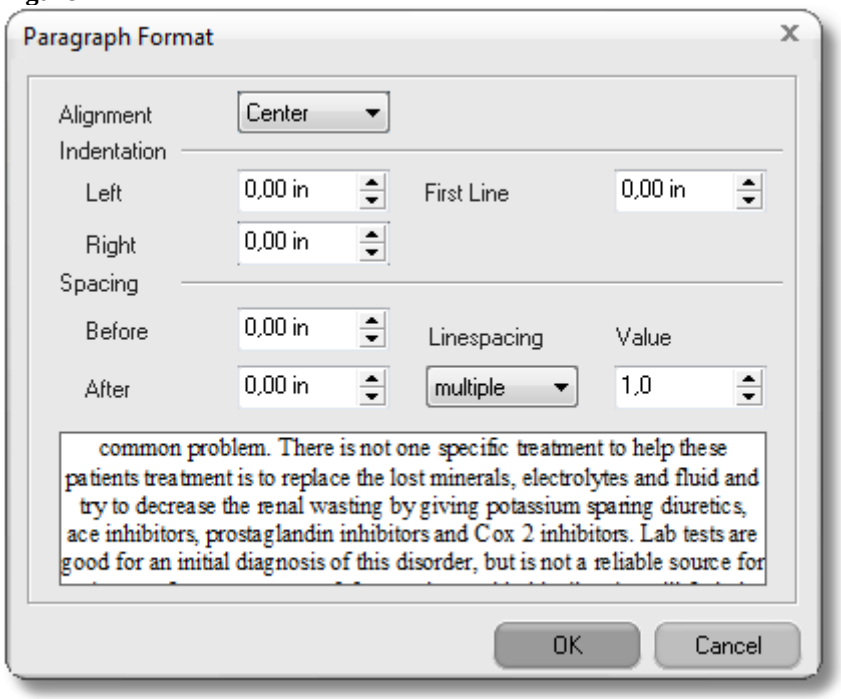
Figure 240



11.11.1.7.1 Paragraph dialog

This menu item opens a dialogue to set the parameters of the current paragraph.

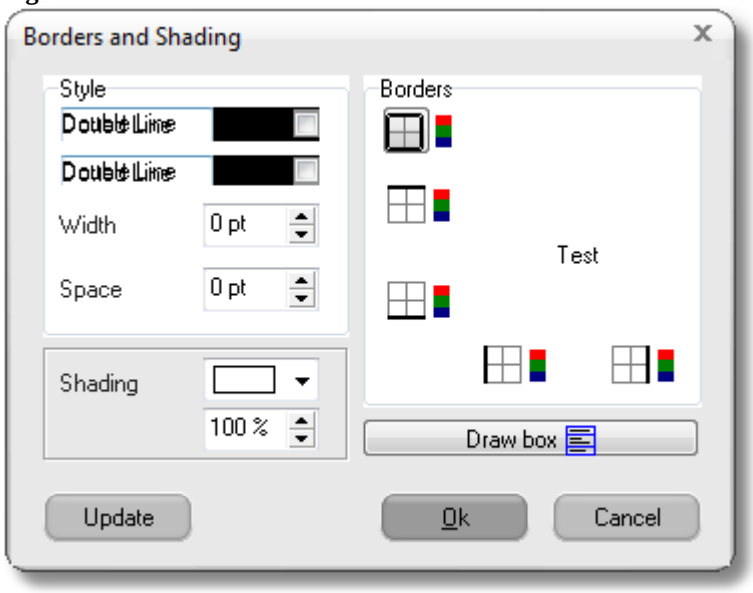
Figure 241



11.11.1.7.2 Paragraph border dialogue

This menu item opens a dialogue to set special parameters of the current paragraph, such as borders and shading.

Figure 242



11.11.1.7.3 Set current font as default

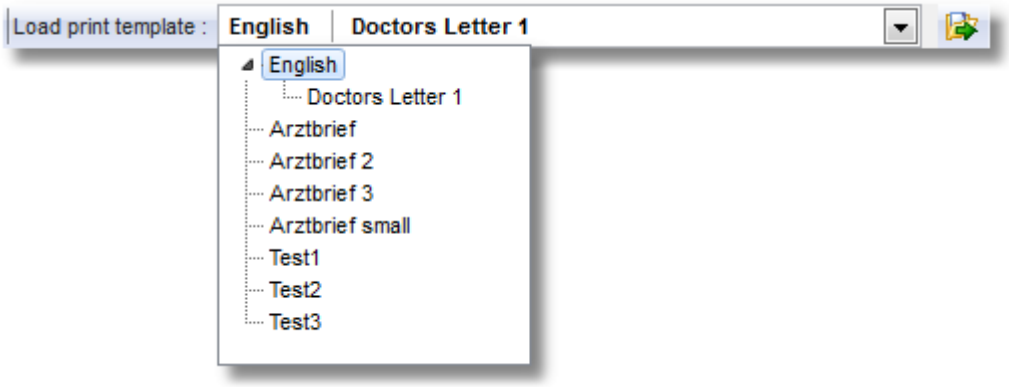
The font you see in the font selection box becomes the standard font. Whenever you set up a new document, it will be used first.

11.11.1.7.4 Edit conditional fields

See "Configure conditional fields".

11.11.2 Tool bar "Load/save template "

Figure 243



11.11.3 Load template

Use the selection box "Load template" to load and edit one of the available templates from the database.

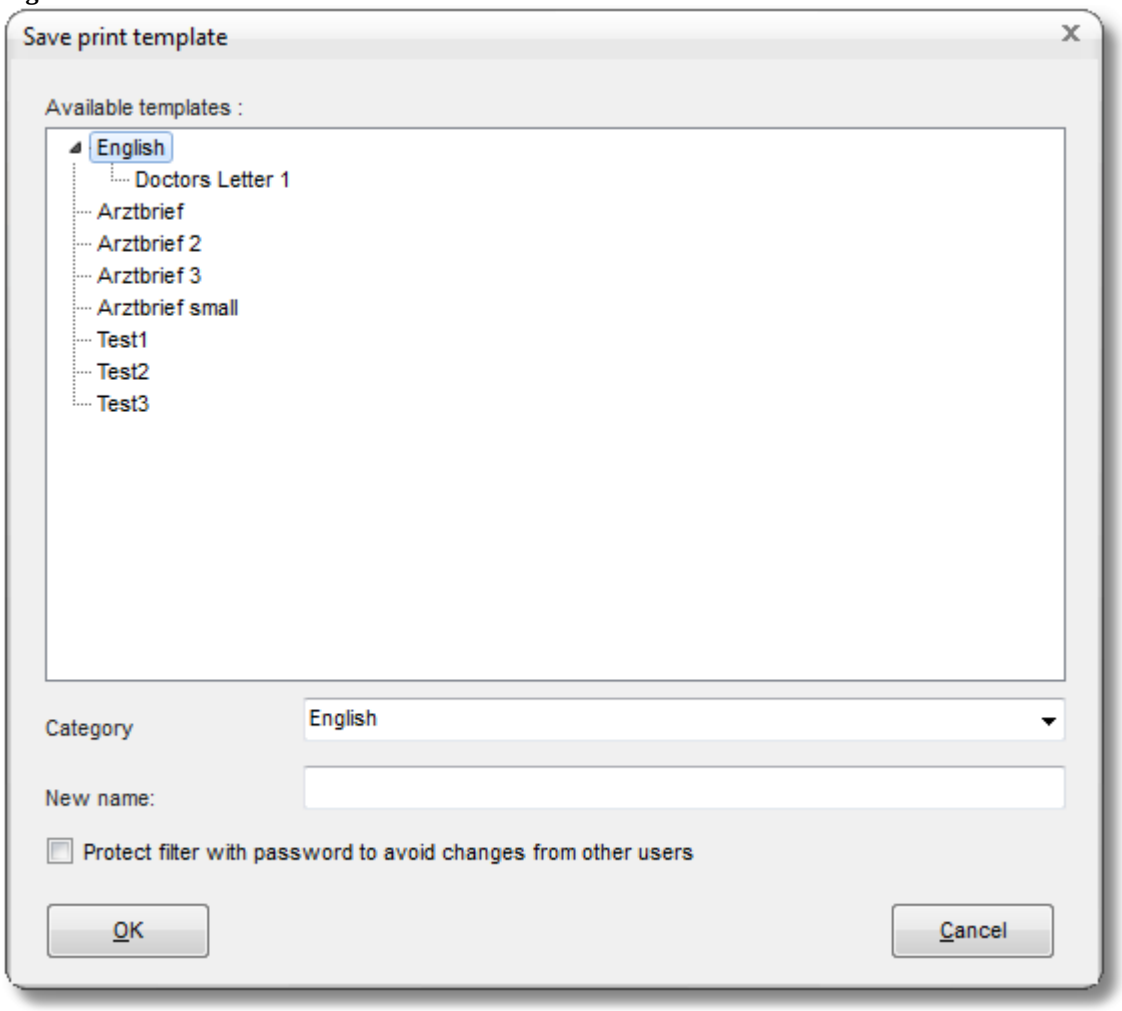
11.11.4 Save template

The changes to the current template are saved under the current name without prompting.

11.11.5 Save template as

Opens a dialogue in which you can save the current template under a new name.

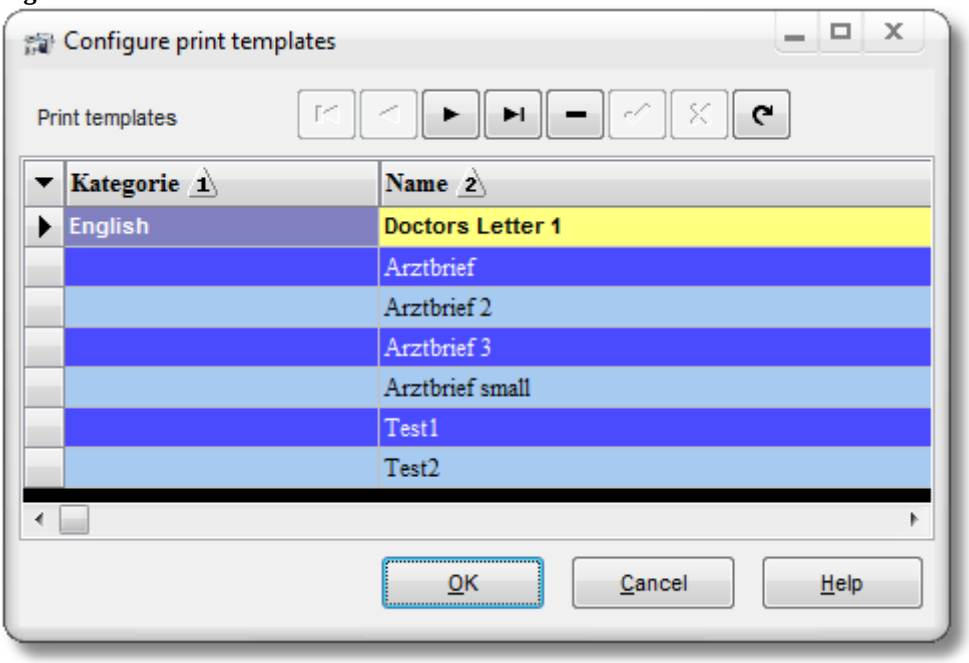
Figure 244



11.11.6 Manage templates

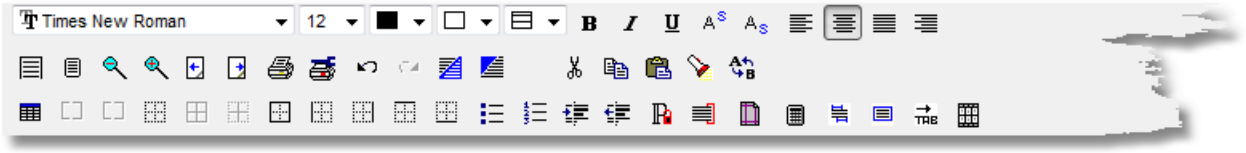
Opens a dialogue in which you can comfortably rename, delete or move all present templates in different categories. Just click the corresponding field of the data grid to edit an entry and enter the new designation.

Figure 245



11.11.7 Editor tool bar

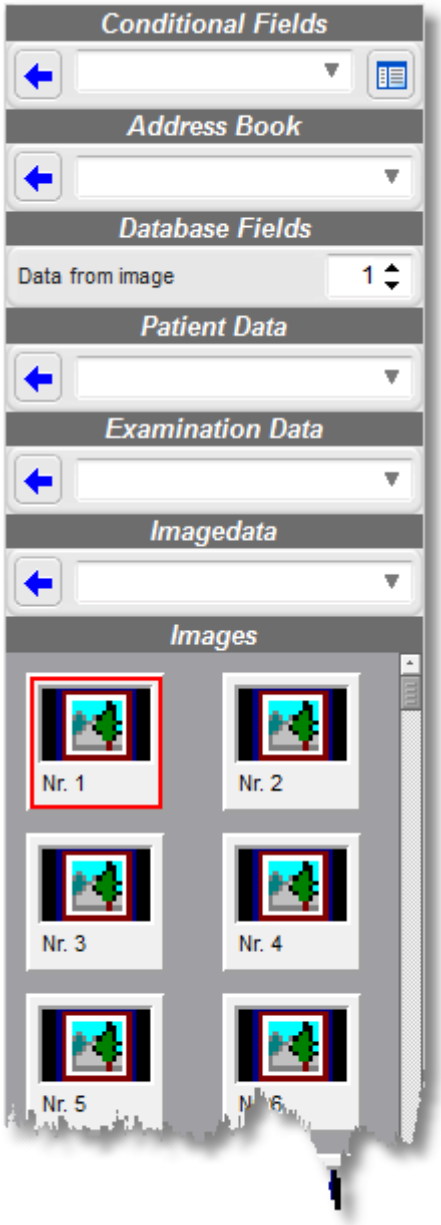
Figure 246



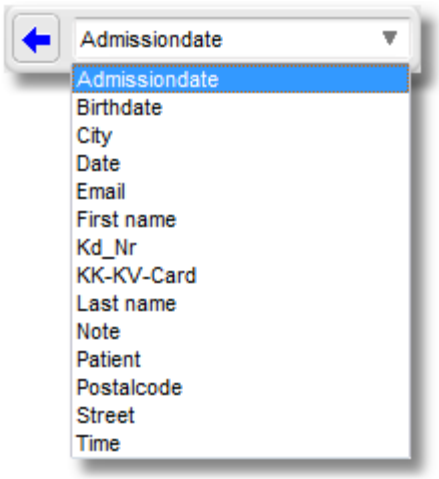
The editor tool bar provides quick access to most functions of a state-of-the-art text processing programme. All functions have short notes that appear when you move the mouse above them and are mainly self-explanatory.

11.11.8 Creating a print template

Figure 247



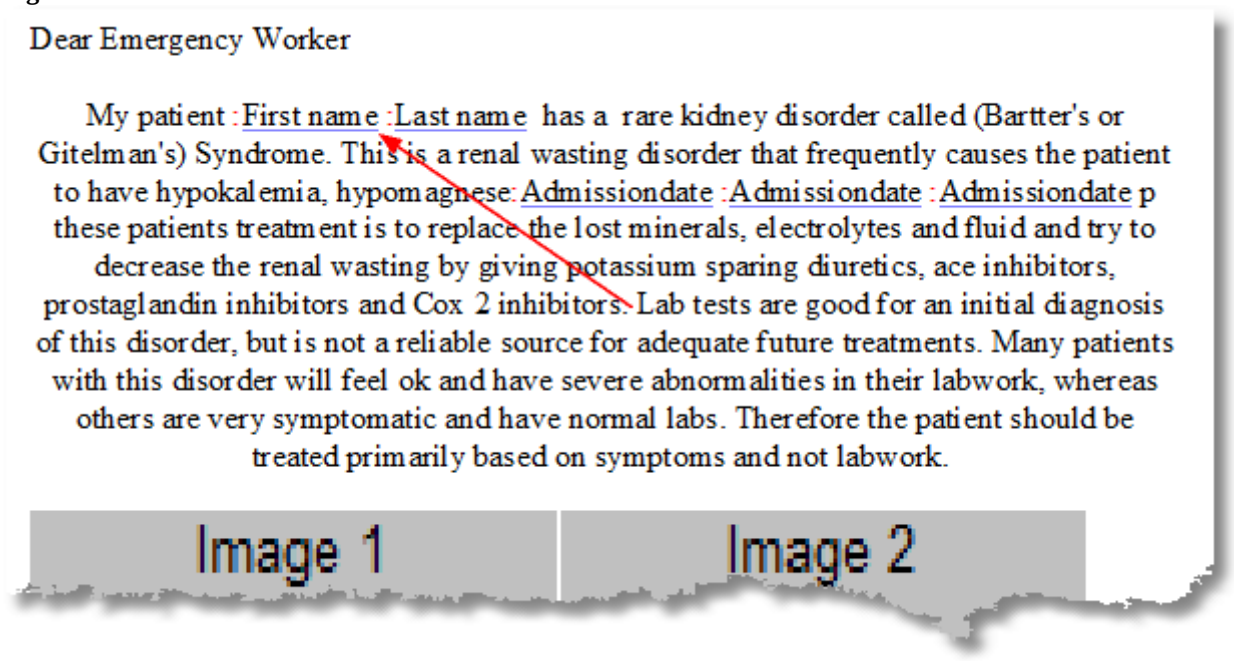
List of patient fields:



11.11.8.1 Inserting a database placeholder

To insert a placeholder for database fields, first place the cursor where the data is to appear later. Fold open the selection list of the corresponding table and select the corresponding field. Now you will see an entry underlined in blue in the document with a red colon in front of it. In the example below this is "first name last name". These placeholders are replaced with the patient data during printout later.

Figure 248

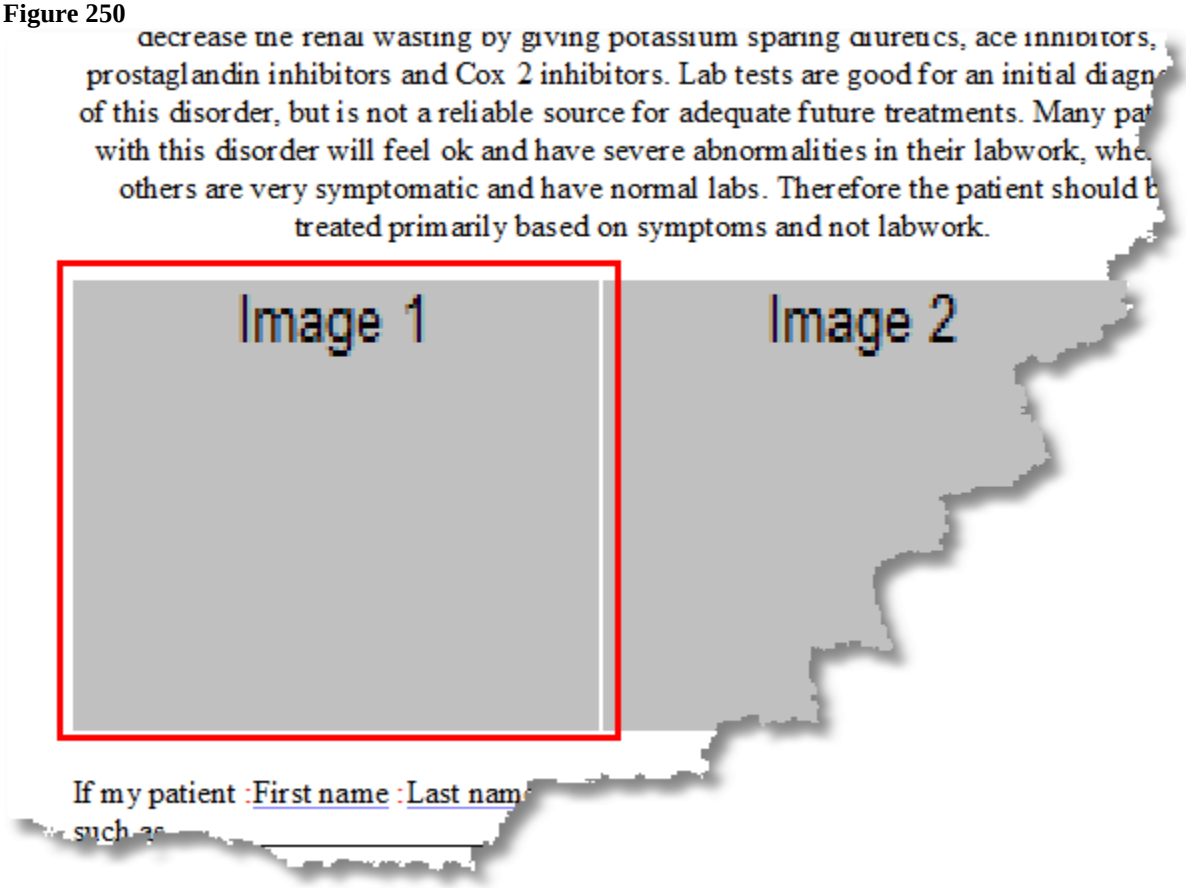


11.11.8.2 Inserting a placeholder for an image

To insert a placeholder for an image, click the slide with the corresponding image number and draw it to the position in the document where it is to appear later with the mouse button pressed. To insert an image in the document several times, you may also draw, e.g., "Figure 1" into the document several times.

Figure 249

Figure 250



11.11.8.3 Creating letterhead and footer

To create a header or footer, click the corresponding tab at the bottom of the document preview and enter your text. In the menu "File", you can specify where the header and footer are to be printed on multi-page documents.

Figure 251

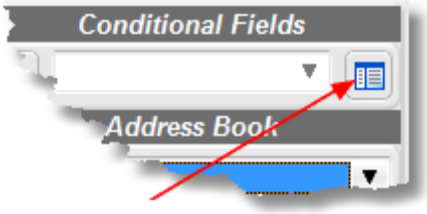
11.11.8.4 Special features when creating a serial letter template

When creating serial letter templates, the studies and image tables, as well as insertion of image placeholders, must not be used.

11.11.9 Configure conditional fields

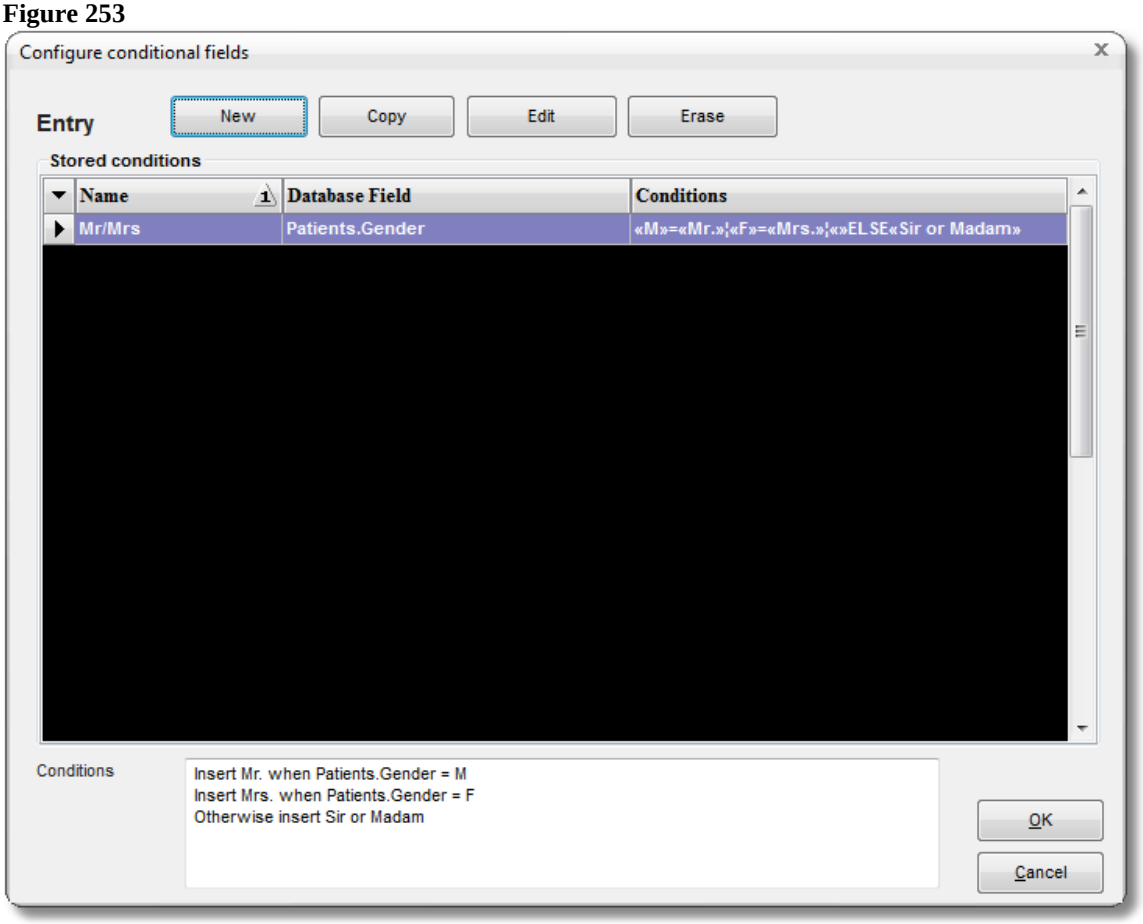
Conditional fields are placeholders for fixed terms inserted depending on a database field value. Example: "Dear Mr …", "Dear Ms …", depending on the value in the field "Gender". The dialogue below permits definition of these differences and saving them in the database. Clicking a button as indicated in the figure below will open the configuration dialogue.

Figure 252



This dialogue lists all conditional fields set up by you in a table. The condition is displayed understandably in the lower text field.

Figure 253

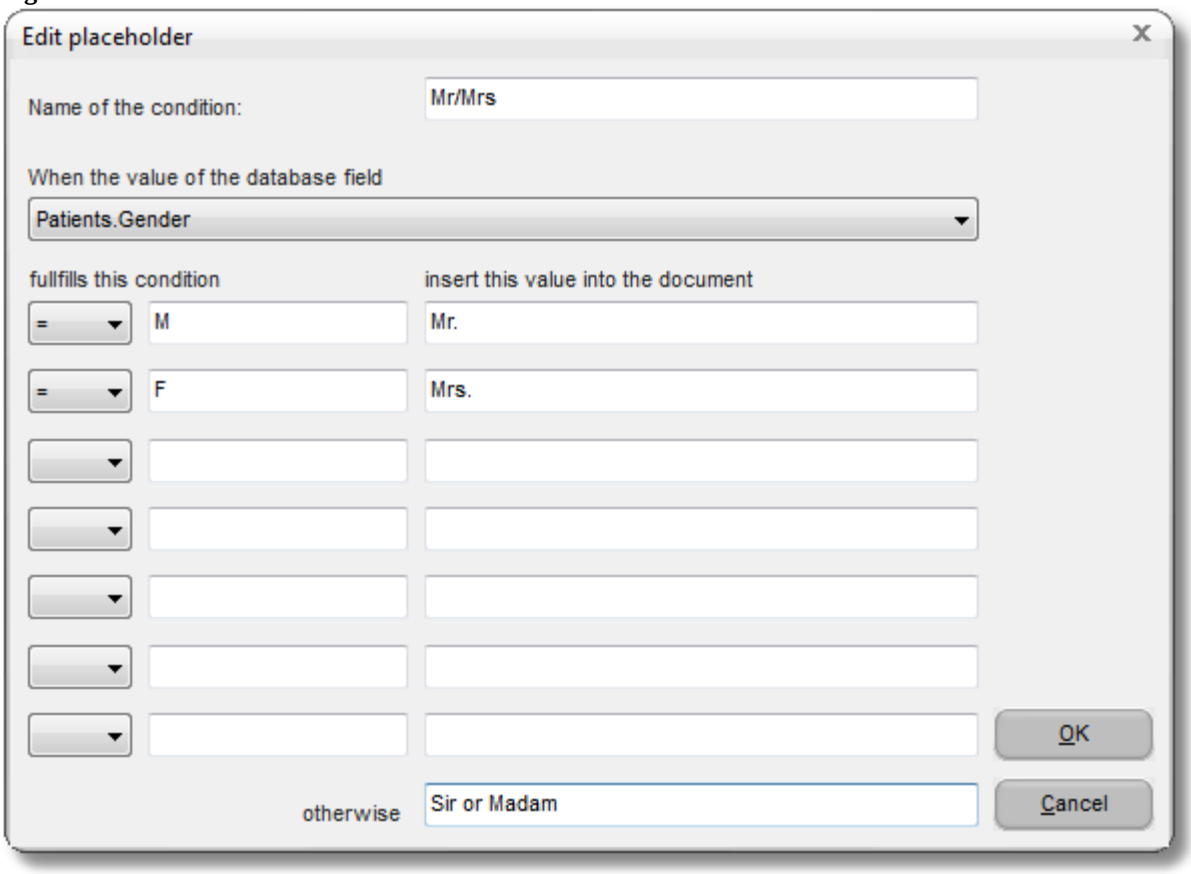


Use the button "entry" to define new conditions edit or delete present ones and use "Copy" to apply the selected condition as template for a new one. The following dialogue appears:

11.11.9.1 Edit placeholder

Enter an indicative name for the condition as "Name of the condition". The list below lists all available database fields that can be used as conditions, in the example below, the instructions for the programme are: "If the database field gender in the patient table has the value 'F', set "Ms", for the value 'M' use "Mr."; otherwise, use "Sir or Madam". Apart from "=", "larger than" and "smaller than" are available as comparative operators as well.

Figure 254



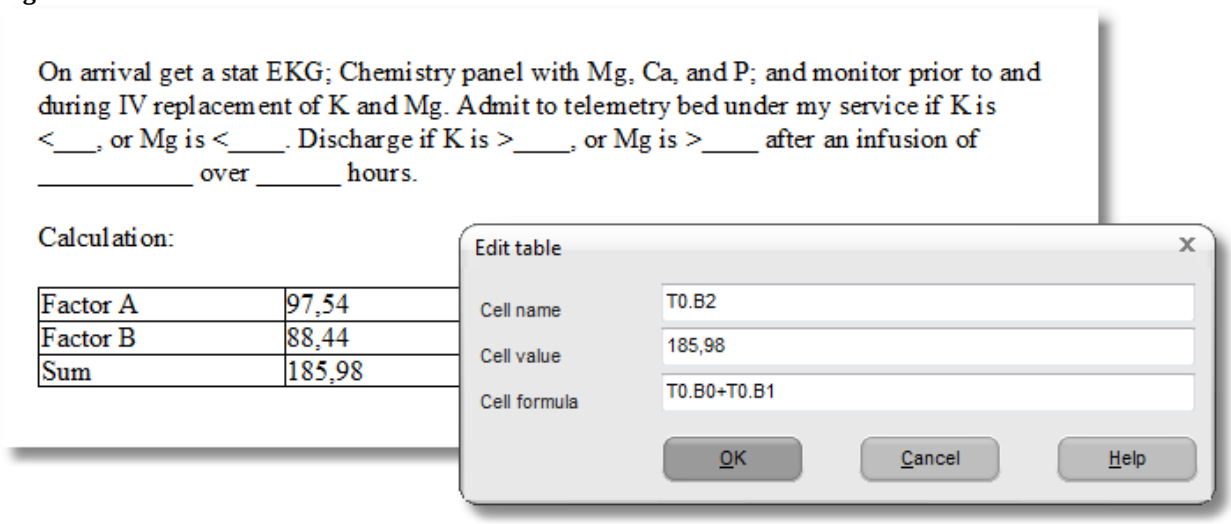
Once you have entered your data and terminated the dialogue with OK, you may now access this placeholder using the list of conditional fields:

Figure 255

11.11.10 Calculations in tables

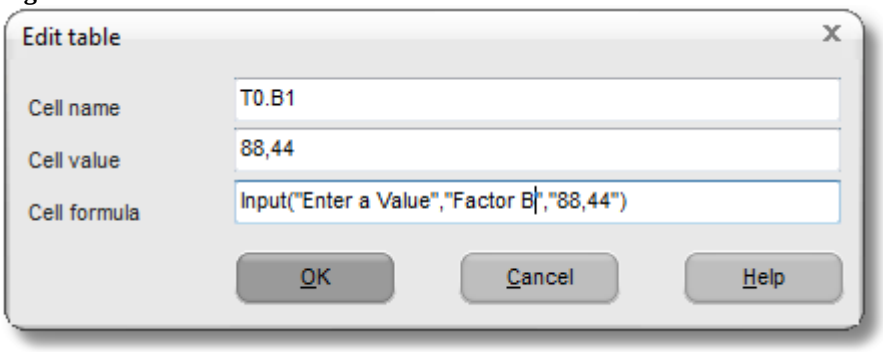
You may enter simple formulas in connection with tables and call input dialogues for values. Double-clicking a table cell, you can enter a name for the cell, a default value or a sum formula.

Figure 256



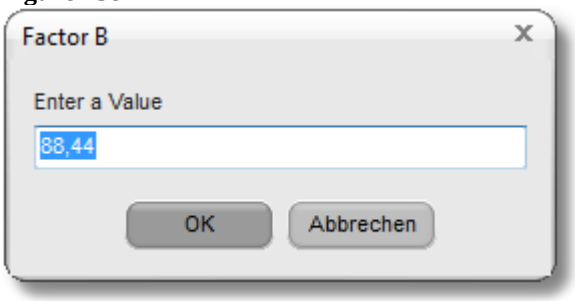
To generate an input dialogue, use the keyword "Input", followed by "designation", "title" and "default value".

Figure 257



This input generates the following dialogue:

Figure 258



11.12 HD-video recording

The module "HD-video recording" was developed specifically to record high definition video via the HDMI-interface with full resolution and frame rate, with the great benefit being in real time compression in the H264 format. This is achieved by using the very high-performance GPU (Graphics Processing Unit) of an ATI-HDxxxx graphics card to compress the video signal. This permits using cost-efficient current standard PCs.
The second important requirement is using an HDMI video card by "Blackmagic". TI has an HDMI input as well as an HDMI output to connect large LCD displays.
The videos are recorded at a bit rate of 8 megabit, leading to a file size of 1 megabyte/second. This way, one hour of video will require 3.6 gigabyte of data.

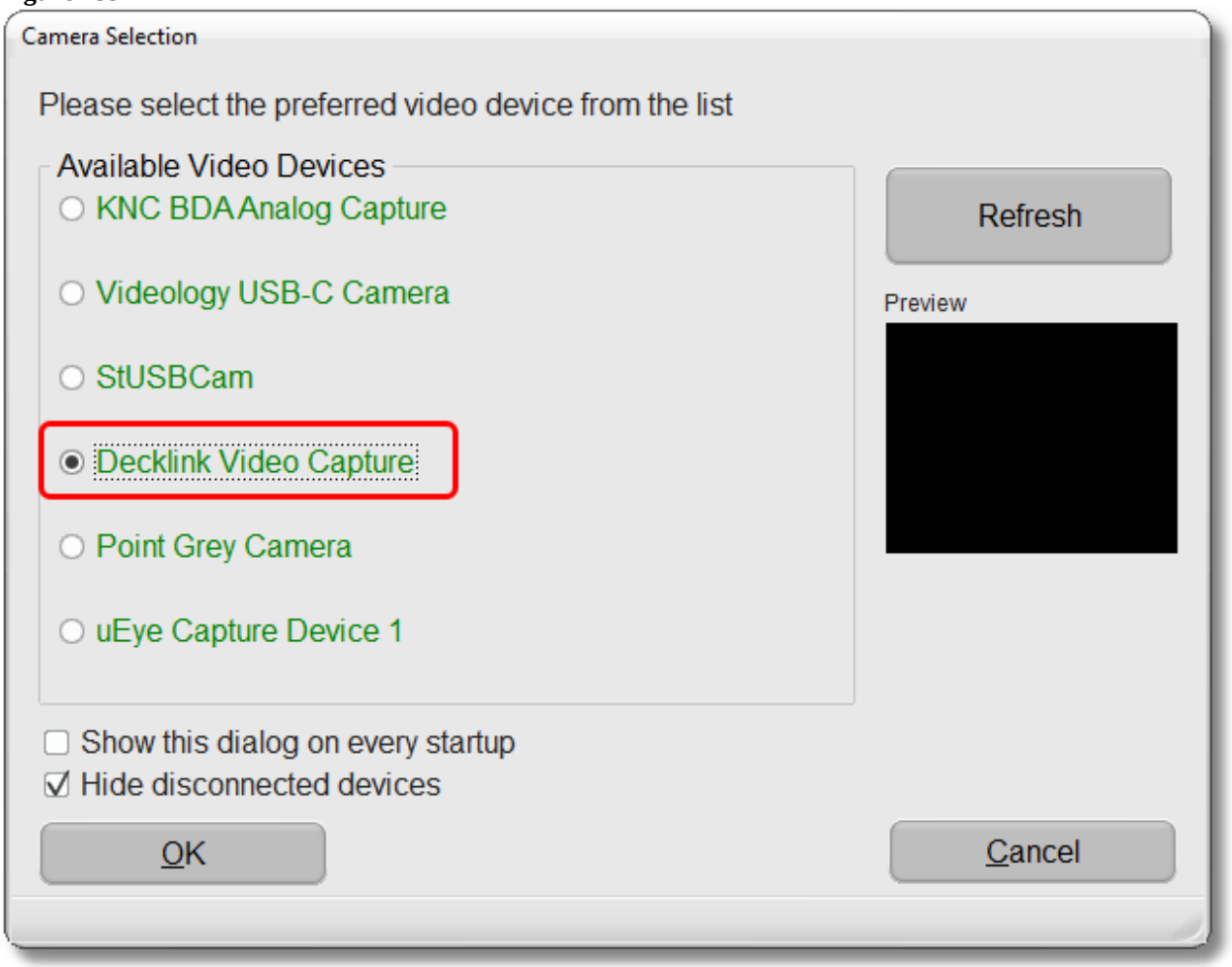
11.12.1 Hardware installation

The minimum version of the ATI HD graphics card is HD4xxx. After installation of the card, always install the latest Catalyst drivers as well as the matching ATI-AVIVO/XCODE version.

11.12.2 Camera selection

Select the entry "Decklink Video Capture" in the camera selection dialogue

Figure 259

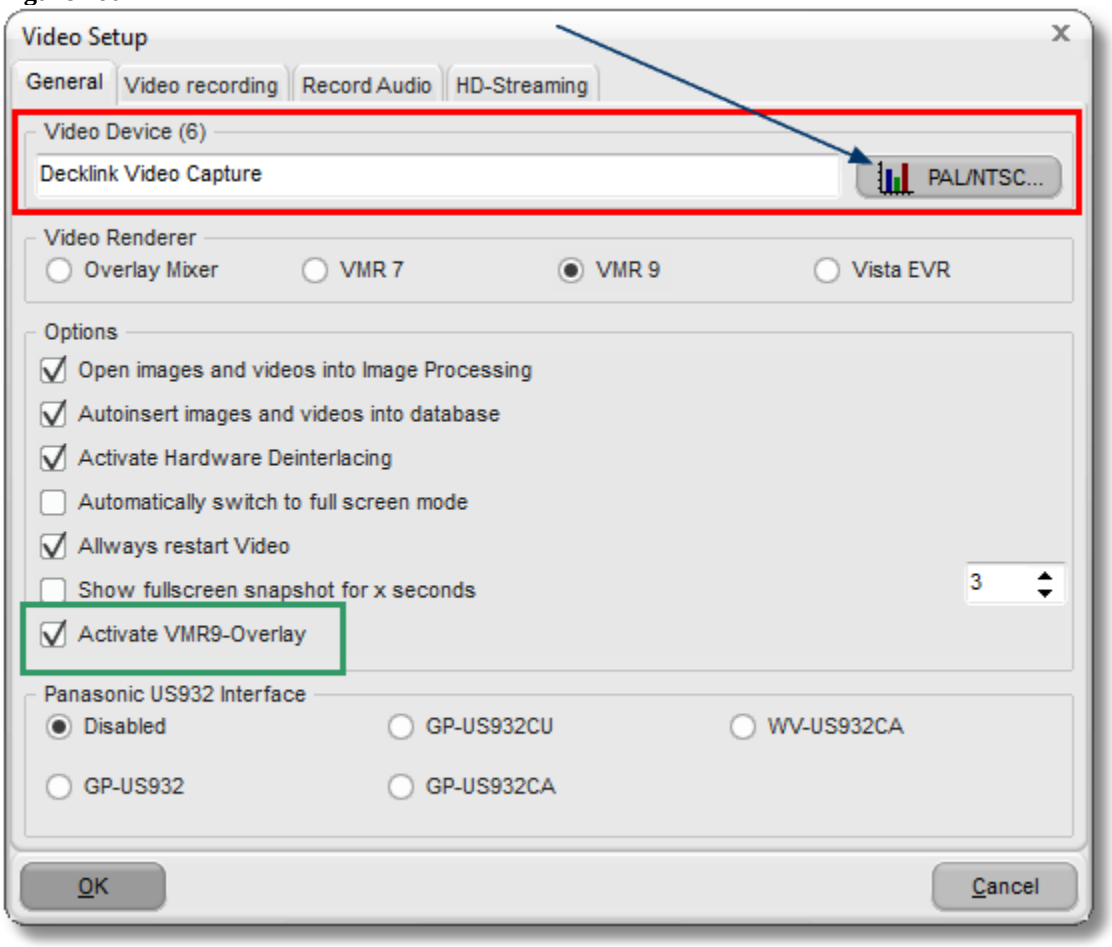


11.12.3 Dialogue video settings

Use the button "Options" on the video page to get to the dialogue video settings:

11.12.3.1 Tab general

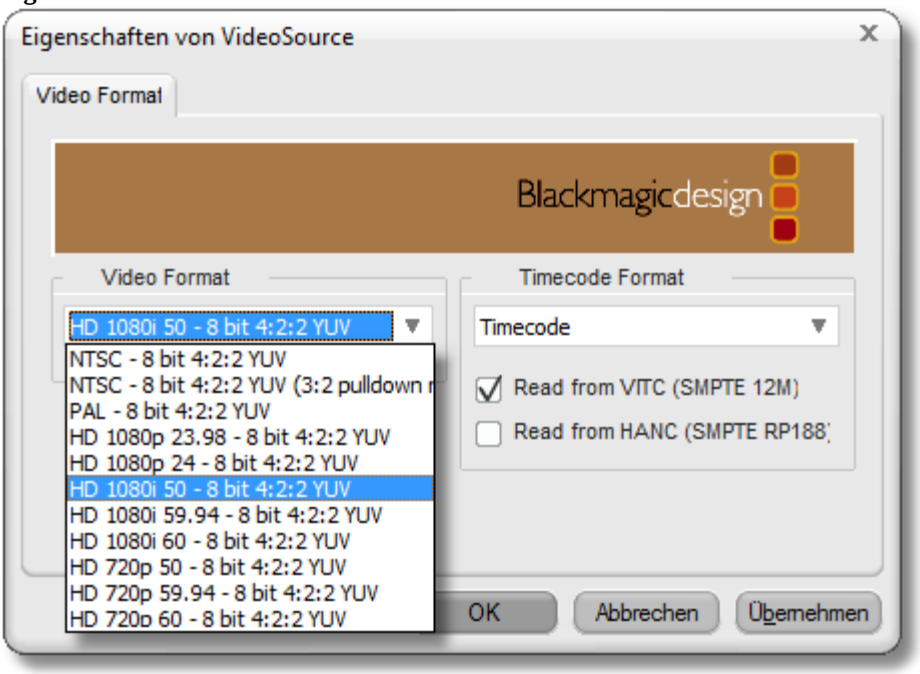
Figure 260



11.12.3.1.1 Setting the video format

Click the button "PAL/NTSC" to get to the following dialogue:

Figure 261



Select the video format provided by your camera from the list "video format".

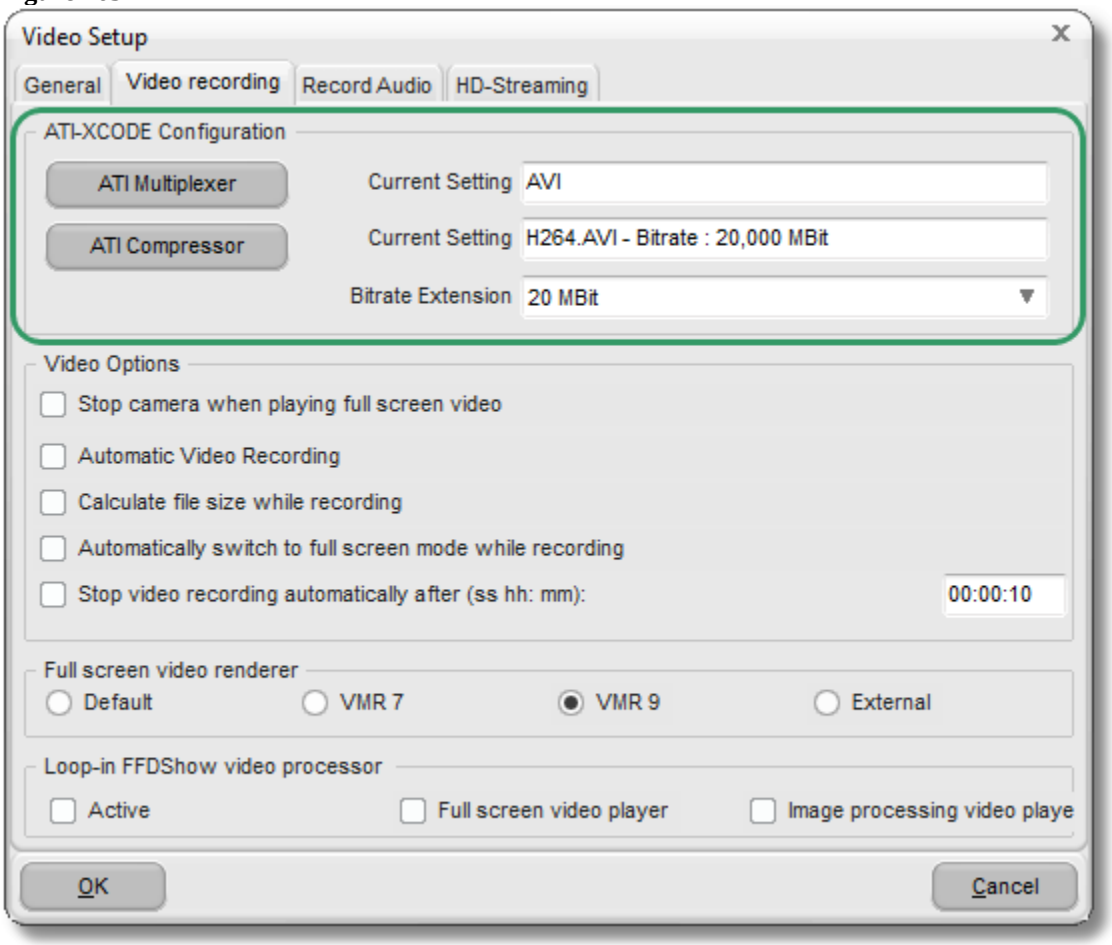
11.12.3.1.2 Setting the video renderer

Figure 262

The best video renderer selection strongly depends on the graphics card used and its drivers and therefore must be tested from case to case. The best results are expected, however, when using the overlay modes, because this means that image data will be transferred to the graphics card directly rather than taking the detour via the Windows-API.

11.12.3.2 Tab video recording

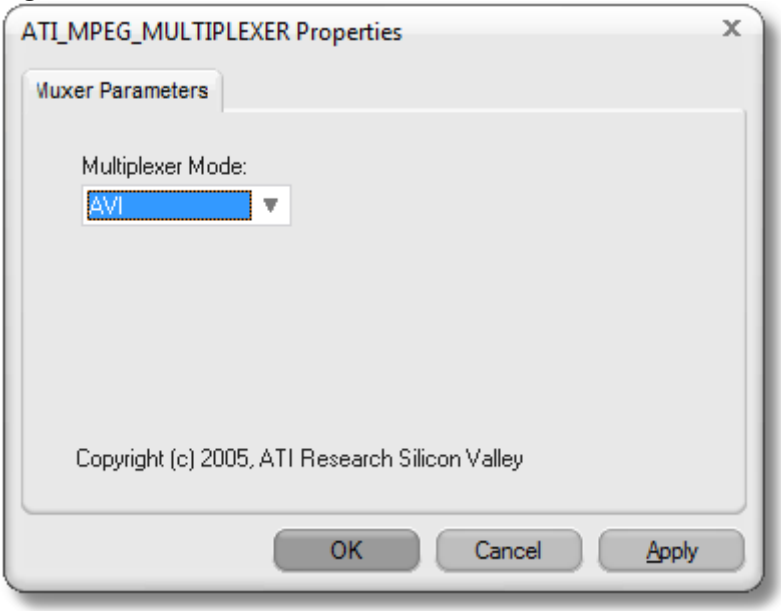
Figure 263



11.12.3.2.1 ATI multiplexer

Use the button "ATI-Multiplexer" to set the video file type:

Figure 264

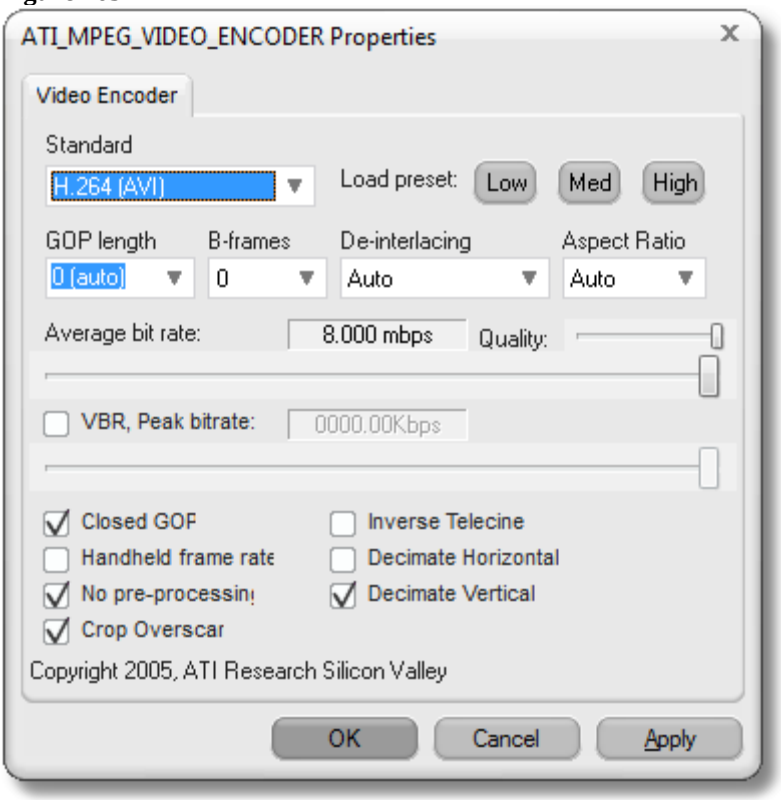


The specification here is "AVI" and should only be changed upon coordination with the manufacturer.

11.12.3.2.2 ATI compressor

Use the button "ATI compressor" to set the video codec and compression parameters:

Figure 265



The requirements here are "H264" with best quality and bit rate. These settings provide best quality at the lowest possible file size. These settings also should only be changed if the standard settings do not provide the desired results. In particular for highly demanding formats like 1080p50/60, the compression method may have to be changed, e.g. to MPEG-4.

11.12.4 Extended bitrate

If the quality of the recorded videos is not sufficient, you can use this selection box to set a higher bit rate. Observe that this will increase file size. Increasing the bit rate may be sensible if a less effective video codec must be used.

11.13 Canon EOS HD-video recording

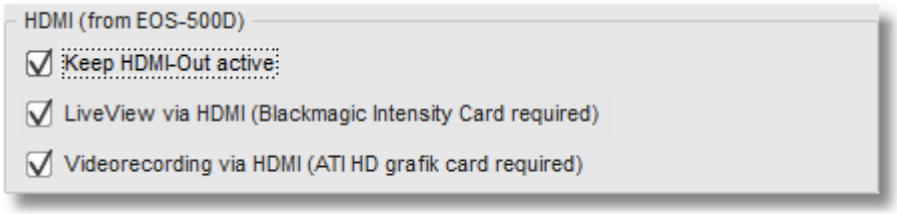
When using a Canon EOS SLR camera, the live image will usually be transferred via the camera's LiveView function. The camera signals are transmitted via the USB interface, which has two problems: On the one hand, the resolution is limited to approx. 800x600 pixels; on the other hand, the frame rate is at approx. 12 frames per second.

These limitations can be avoided with the module "Canon EOS HD-video recording". The video signal is sent to the video capture card "Blackmagic Intensity Pro" via the camera's HDMI connection, leading to a resolution of 1920x1080 pixels (Full-HD) and frame rate of up to 60 frames per second. This leads to a considerable quality increase both for LiveView preview and video recording.

The second decisive item in this version is use of an ATI graphics card to encode the video signals in the H264 format. This is the best currently available compression method, cutting the file size in half as compared to MPEG2 while leaving the quality intact.

11.13.1 HDMI configuration

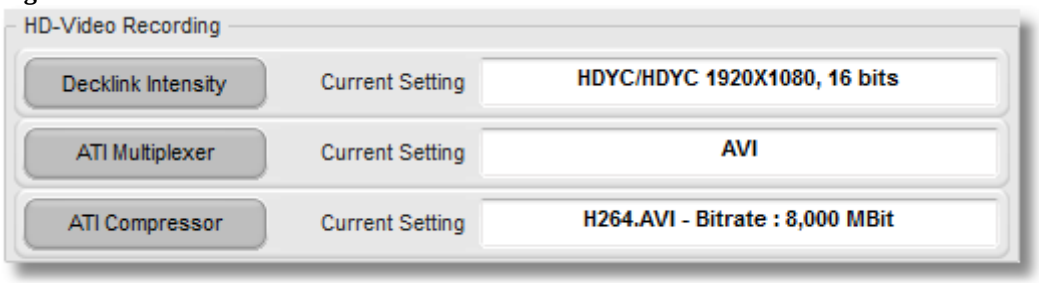
Figure 266



See 11.7.5.7 page 11-170.

11.13.2 HD recording configuration

Figure 267



The recording parameter configuration is explained in detail in the section HD-video recording:

11.13.2.1 Decklink Intensity

See 11.12.3.1.1 page 11-201.

11.13.2.2 ATI multiplexer

See 11.12.3.2.1 page 11-203.

11.13.2.3 ATI compressor

See 11.12.3.2.2 page 11-204.

11.14 HD-video streaming

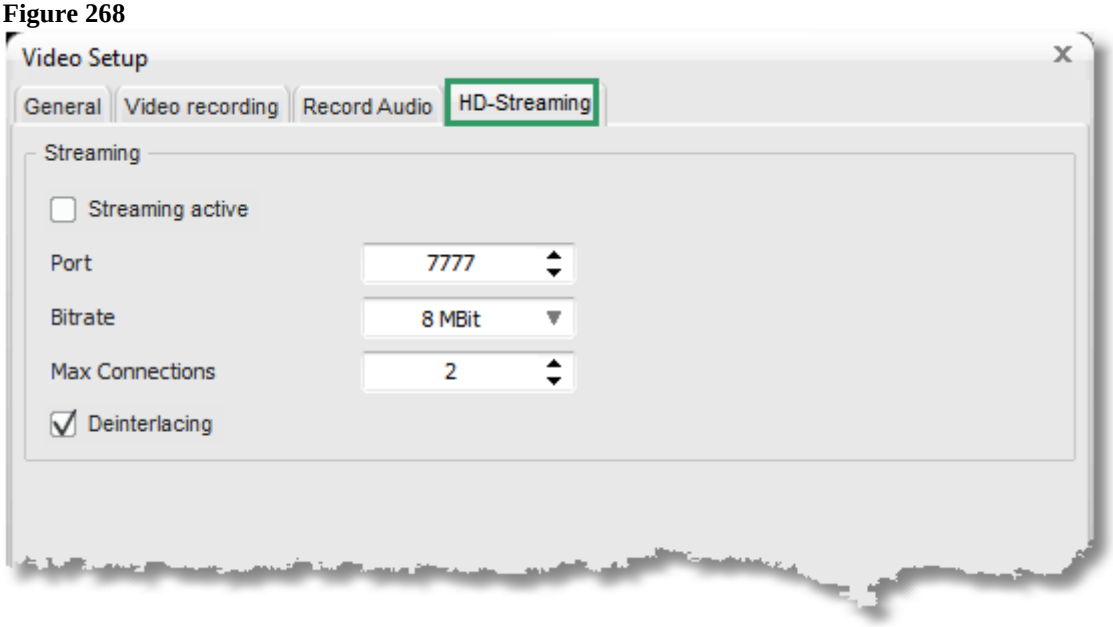
The module "HD video streaming" permits streaming of the audio and video files of the HD camera into a network in real time and full HD resolution. This way, the processes, e.g. during surgery, can also be viewed on computers outside of the operating room. The highly effective compression of the data in MPEG-4 format also permits transmission via a standard-WLAN network.

Caution:

This module is only available when using the module "HD-video recording". Additionally, at least one quad core processor (as of Intel Core-I5 or AMD Phenom II X4) and 3.5 GB DDR3 memory are needed.

You can get to the settings for this module with the button "Options" on the video page:

Figure 268



11.14.1 Streaming active

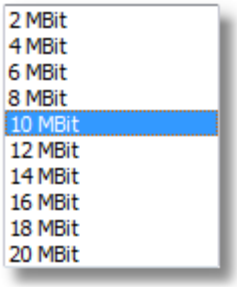
Activates or deactivates HD live streaming. Please deactivate streaming if you do not need it, because the live video will otherwise be permanently compressed and cause considerable strain on the CPU.

11.14.2 Port

This is the port through which the transfer takes place. You may enter any value between 100 and 65000 here. It is important that this port is also set on the streaming player/s.

11.14.3 Bit rate

Figure 269



The selection box "Bitrate" permits specification of the transmission quality. The higher the bit rate, the lower the computer's CPU load.

Preferably, select a high bit rate as long as no interferences or problems on the player page occur.

11.14.4 Maximum connections

Enter the maximum permissible number of connections.

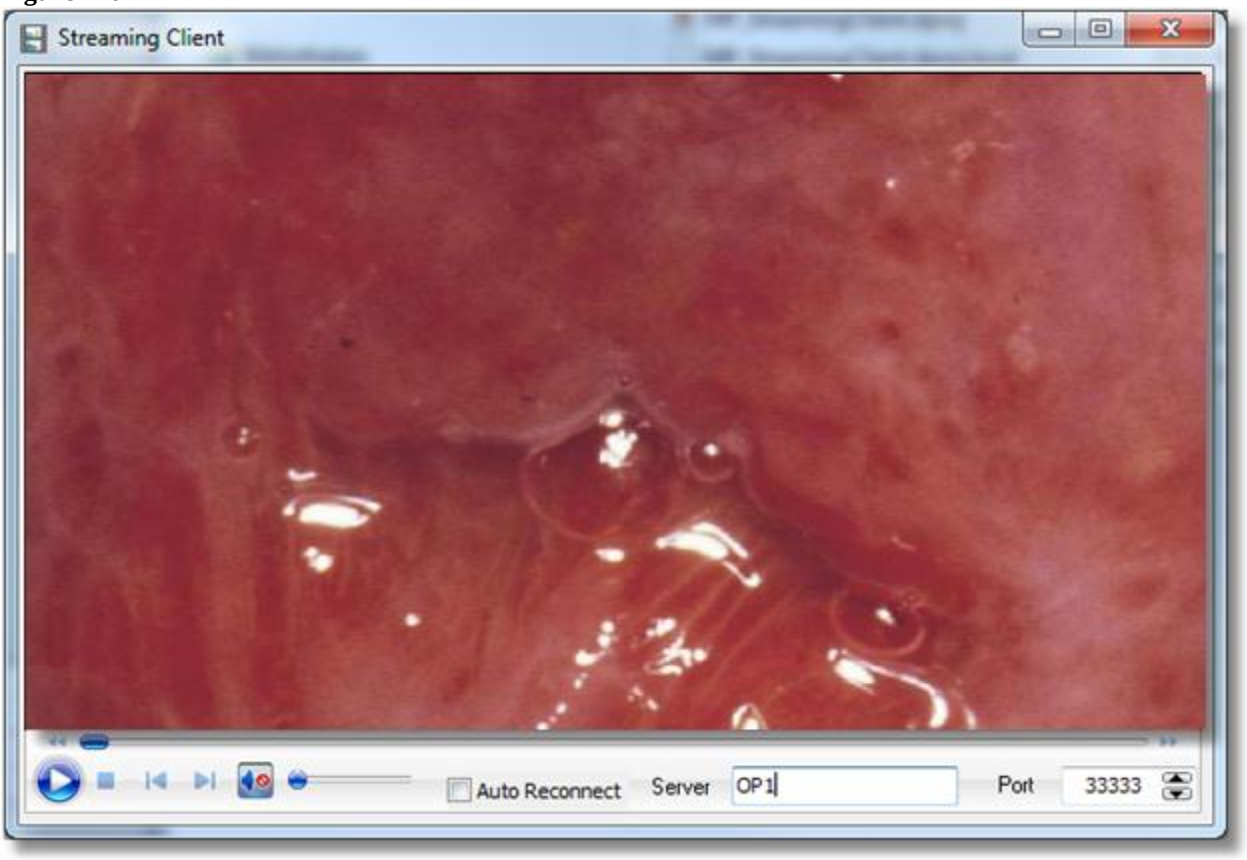
11.14.5 Deinterlacing

When using HD-cameras with an interlaced format like 1080I50, activation of this option considerably improves image quality. When using full-image formats (e.g. 1080P50), this option should be deactivated.

11.14.6 HD-Streaming Client

The "HD Streaming Client" is a separate programme to be installed on the computer with which you receive and play back the live stream.

Figure 270



11.14.6.1 Auto Reconnect

"Auto Reconnect" causes the streaming player to automatically try to re-establish connection to the server if it is interrupted.

11.14.6.2 Server

Enter the network name of the computer to which the camera is connected in this field.

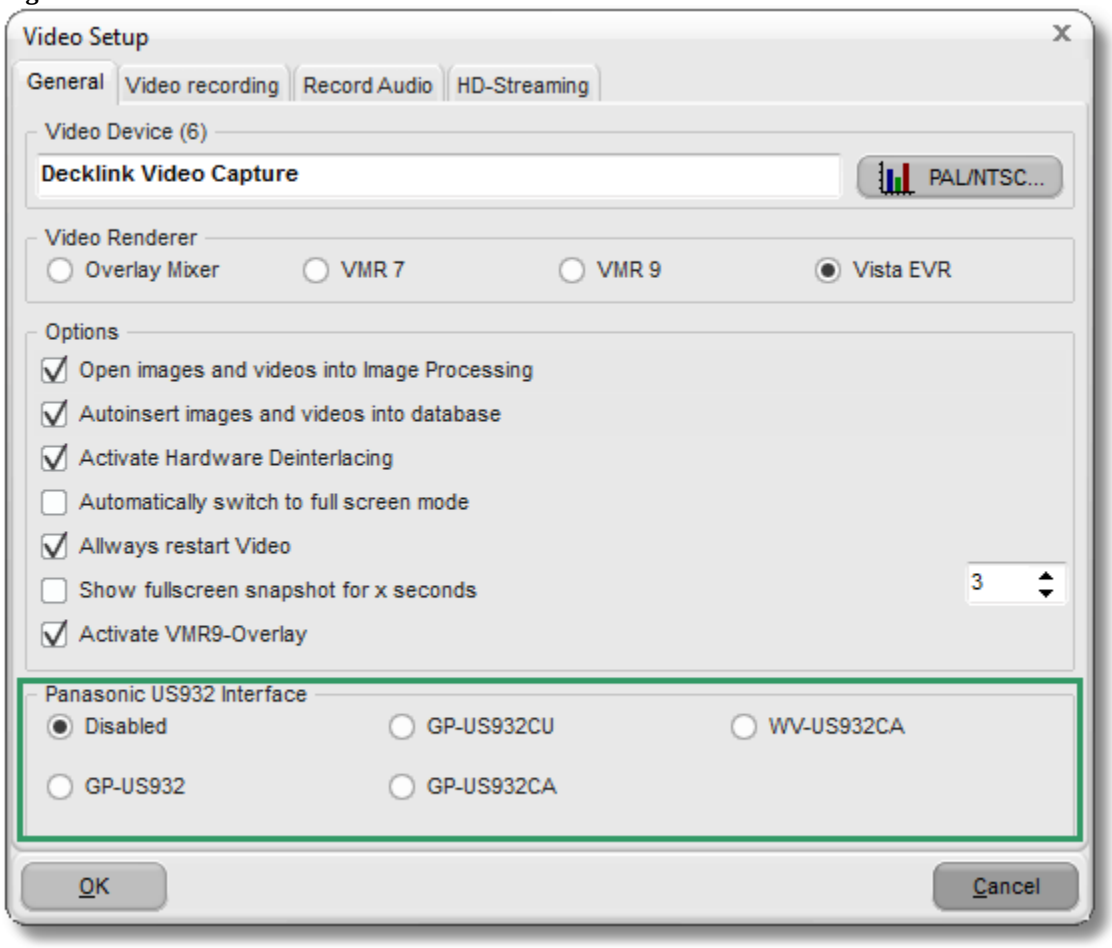
11.14.6.3 Port

Enter the same port that you have set for the main computer.
See 11.14.6.3 page 11-207.

11.15 Panasonic HD-camera direct control

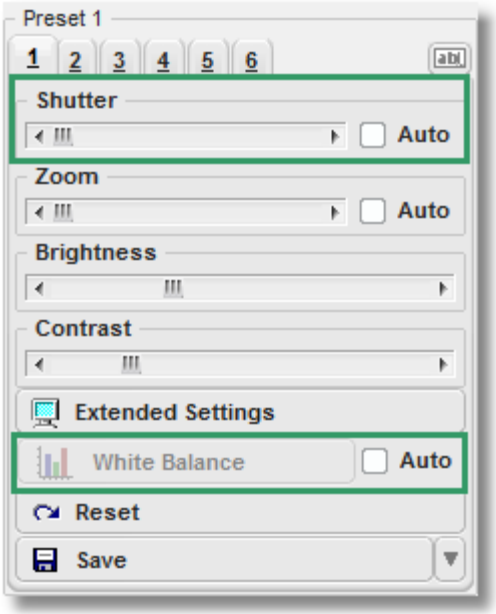
This module permits controlling a Panasonic camera type US932 via the software. For this purpose, the camera must be connected to the computer's COM-interface with a serial cable and the camera must be switched to "control per software". Activate the module by selecting the type of the camera used in the dialogue "video settings".

Figure 271



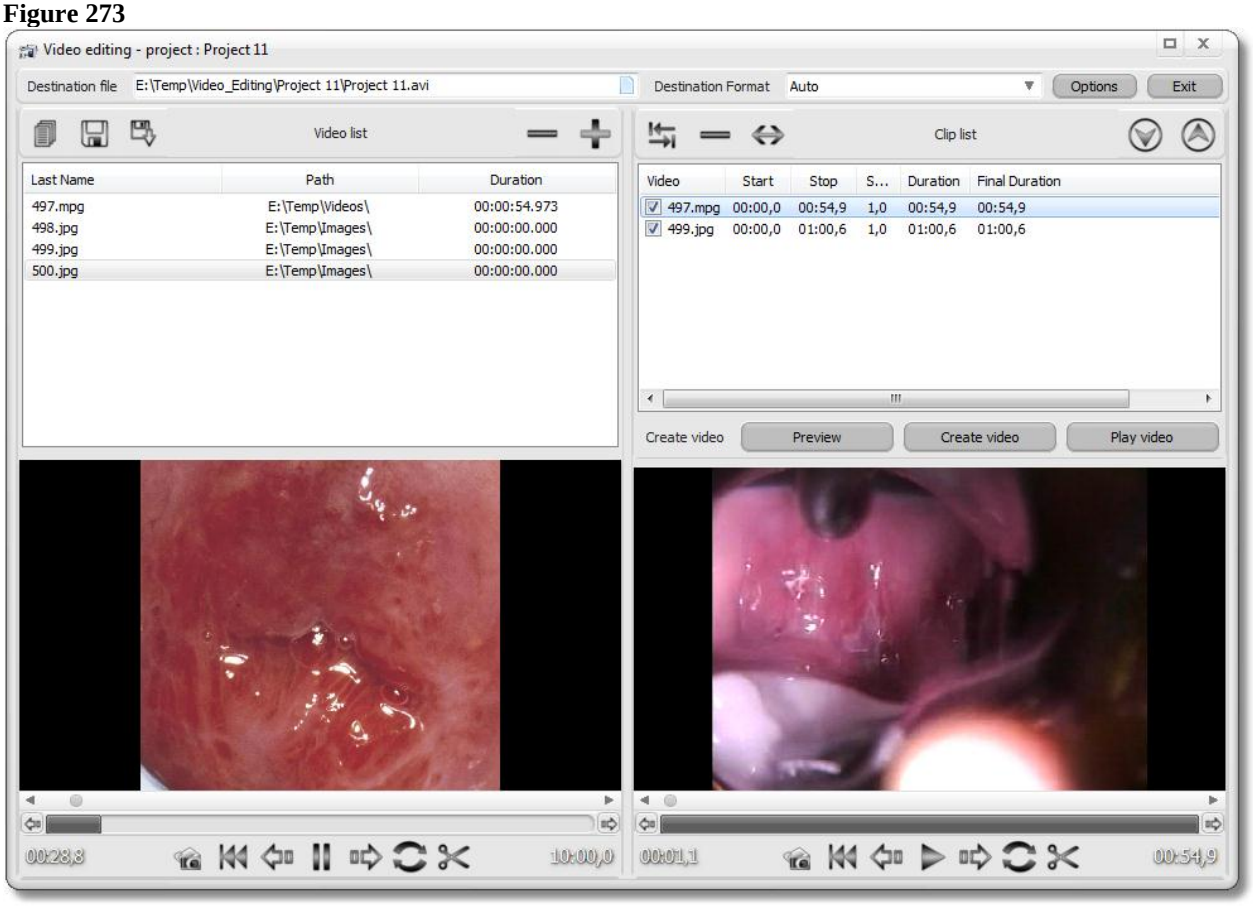
Then the following operating elements are available:

Figure 272



11.1 HD video processing (video cutting)

Figure 273



12 Frequently asked questions

12.1 What settings are needed for multi-user operation?

The programme is fully network-capable; this means that you can operate several workstations with one database so that all users can access the same data master at the same time. Additionally, you may remote-control, e.g. the computer in the treatment rooms with the computers in the reception area if you have several stations connected. Only two settings are necessary for this:

12.2 Setting the database path

A computer in the network must be configured as server for the database. For this, only the "Firebird database server" must be installed, and the database files must be present on the computer. Both is the case if the programme is entirely installed once. Write down the server's network name and the path to the database. In the default condition, this always is

"C:\Program Files\<Company>\<Programme name> <Version>\Data\patients.fdb".

Enter this data into all other computers in the network and set "Connection remote".

12.3 Bad image quality

12.3.1 Deinterlacing filter off

Check that the item "Hardware deinterlacing" is active in the "video options".

12.3.2 Video in half resolution only

In "Video options", check the information in the field video format. The resolution should be at least 720x576. If required, activate "Adjust video format manually". Now a button appears behind "video format"; you may use it to select the best resolution from a list.

12.4 The camera is not operated with a "USB 2.0" connection

Some older computers do not have any "USB 2.0 Interface" yet. You will not be able to achieve satisfactory function in these computers. If in doubt, check the manual of your computer.

12.5 Video amplifier misadjusted

See "First steps– initialising the video amplifier"

12.6 Only stripes in the live image after recording

Some video boxes and cameras require activation of the option "Always initialise video" in the video options.

12.7 No signal with the USB box

Some USB video boxes use a setting deviating from the standard for the video input. In most cases, you can set this in the dialogue you get to with the button "video device" in the video options.

12.8 Black bars in the recorded image

Some cameras will show black bars at the sides of the recorded image. Switch off "Use overlay mixer" in the video set-up in this case.

12.9 Foot switch is not working

See foot switch.

12.10 Programme runs in demo mode

See dongle installation.

13 Index