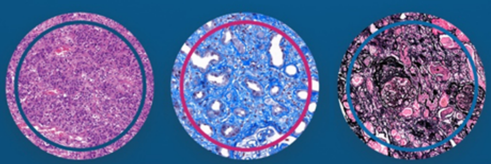
The Digital Pathology Company

CaseManager™ DX Software 3.0.0
User's Guide
v01



November 8, 2023

UG-013-DXD-3_0_0-EN-v01

Contents

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Character Types and Symbols

Example	Words or characters that appear on the screen. These include field names, screen titles, push-buttons and menu names, functions or options. Keys on the keyboard. For example, function keys (such as **F11**) or the **Ctrl+O** key combination.
Example	Cross-references to other documents or chapters within this document.
Warning!	Indicates that you need an additional module to use the feature or that there are prerequisites for the task.
Important!	Contains an important piece of information or a recommendation. The application will work if you choose not to follow the recommendation but its performance might be less than optimal.
Tip!	Contains a suggestion about using the application in some other way or to some interesting purpose.
NOTE:	A brief explanation or an extra piece of information.

1 About this Product

1.1 Intended use

The CaseManager™ DX Software application, developed by 3DHISTECH, is an in vitro diagnostic (IVD) medical device designed to exchange, identify, store and manage electronic health records, to receive, identify and manage digital images of surgical pathology and cytology slides – digital sections primarily obtained from formalin-fixed paraffin-embedded (FFPE) tissue specimens and cytology samples (vaginal smears) – produced by 3DHISTECH's PANNORAMIC® Diagnostic Scanner Software with one of the three Whole Slide Imaging (WSI) scanners (PANNORAMIC® 1000 DX Digital Scanner; PANNORAMIC® 480 DX Digital Scanner; PANNORAMIC® 250 Flash III DX Digital Scanner; PANNORAMIC® Flash DESK DX Digital Scanner) – and store those in the SlideStorageDX™ module.

It links electronic health records and medical images to cases for pathologists in a centralized database. It is intended for use by healthcare professionals (e.g.: qualified pathologists) in clinical laboratory and hospital settings on all individuals without population restrictions. The software provides tools for pathologists to manage the cases, view, interpret and analyze the linked electronic health records and the medical images in the ClinicalViewer™ module, and to write reports, while ensuring that only the relevant electronic health records and digital images can be accessed and utilized for diagnostic purposes. CaseManager™ DX Software and the ClinicalViewer™ are integrated with the Diagnostic Applications™ software which is an in vitro diagnostic (IVD) medical device designed for image-processing based evaluation of regions of digital pathology slides. The Diagnostic Applications™ software contains tools of various automation levels to support taking measurements on the digital images and contains specific algorithm modules for partial breast panel evaluation (IHC stained samples with antibodies for: ER, PR, HER2, Ki67), producing diagnostically relevant statistics via image processing means.

Pathologists using the CaseManager™ DX Software and its modules are responsible for following appropriate procedures and safeguards to ensure the validity of image interpretation. While the software assists in the diagnostic process in conjunction with other clinical and laboratory information, it should not be used as a substitution for the professional judgment of a qualified pathologist.

1.2 Vigilance

Report immediately or as soon as possible any vigilance and vigilance suspect cases, serious incidents, any unexpected event, or accident which may endanger the life of the user of the device, or which may lead or could have led to a serious deterioration in the user's health to local distributor and 3DHISTECH Service Support:

support@3dhistech.com

2 Connecting to CaseManager™ DX Software

1. Type the URL of the CaseManager™ DX Software (the local System Administrator can assist you with the proper address) in your web browser to access CaseManager™ DX Software.

> **Warning!**
>
> The supported browsers are **Google Chrome**, **Mozilla Firefox**, **Microsoft Edge** or **Opera**. Do **NOT** use other browser types as it can result in serious error in functions.

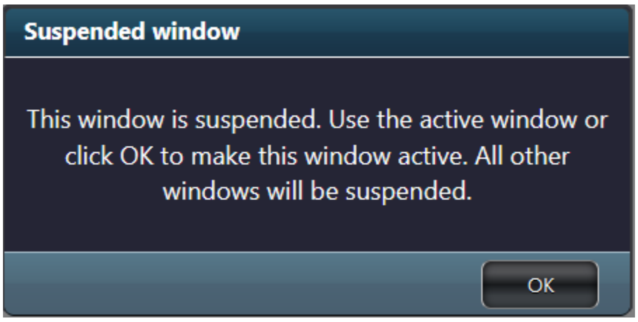
2. Enter your **Username** and **Password**, then click **Login** to access the CaseManager™ DX Software page.

Figure 1 – CaseManager™ DX Software login

After 3 unsuccessful login attempts, the user cannot login for 2 minutes. The login interface displays the number of slots available for logging in. If there is not any free slots, the user cannot log in until a slot is released.

If you have logged in successfully, after 30 minutes of inactivity, the system will log you out automatically.

If you log into CaseManager™ DX Software multiple times, the inactive CaseManager window/page/tab is suspended and the below message is displayed.



If you are logged into CaseManager and you open it again on a new tab in the same supported browser, the same session is automatically displayed.

3 CaseManager™ DX Software User Interface

The CaseManager™ DX Software user interface can be divided into 4 sections.

Section 1: Toolbar which includes the following functions: change between case lists, messages, contacts; search bar for cases; button for case registration; button for listing cases of the user logged in; name of the current user; button for user configuration; button to sign out. See *chapter 3.1 CaseManager™ DX Software toolbar* for more information.

Section 2: Summarizes the general case folders, user folders and filters. See *chapter 3.2 CaseManager™ DX Software folder panel* for more information.

Section 3: Summarizes the case list. See *chapter 3.3 Case list* for more information.

Section 4: Includes details of the selected case. See *chapter 3.4 Case details* for more information.

The structure of user interface design is shown by *Figure 4.*

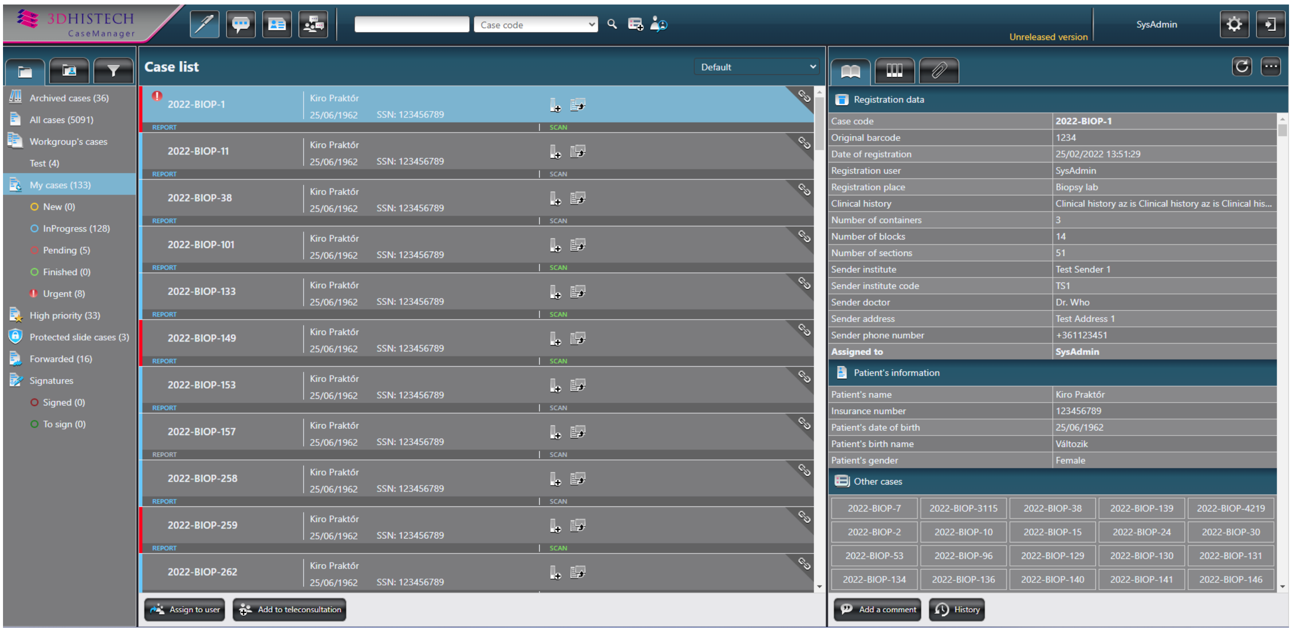


Figure 2 – User interface of CaseManager™ DX Software

NOTE: Required input fields are marked with red '*' characters throughout CaseManager™ DX Software.

3.1 CaseManager™ DX Software toolbar

3.1.1 3DHISTECH website

By clicking the  button, the user can directly navigate to the 3DHISTECH website.

3.1.2 Case list

By clicking the button, the system displays the **Case list** panel containing the folder structure, the case list of the selected folder, and details of the selected case. For more information on case list, see *chapter 3.3 Case list*.

3.1.3 Messages

Click to open the **Messages** panel. The **Messages** panel contains the following folders: **Inbox, Sent, System messages, Important** and **Archive**. The user is able to create custom folders within the messages folder. The user is able to write, read and reply, forward and delete messages. It is also available to search for the sender and/or for keywords from the message body and subject field.

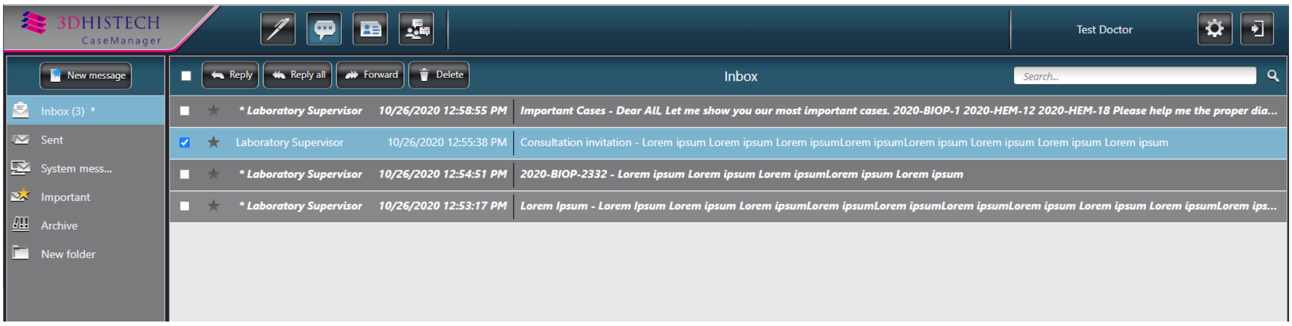


Figure 3 – Messages

The message icon will change to in case the user has received a new message or messages.

The text font style of new messages/unread messages are listed in ***bold-italic*** and the sender user name is extended with a '*' character. Unread messages are also indicated with a '*' character next to the folder (as shown in ***Figure 5***).

You can send new message to other users or workgroups after clicking the **New message** button:

- Choose the recipient (user or workgroup) from the **Recipients** drop-down list or click **To All Users** to send message to all of the users registered in the system. Required fields when sending a message are: **Recipients**, **Subject** (maximum 150 characters) and the **Text body** fields of the new message window. Click **OK** to send your message.

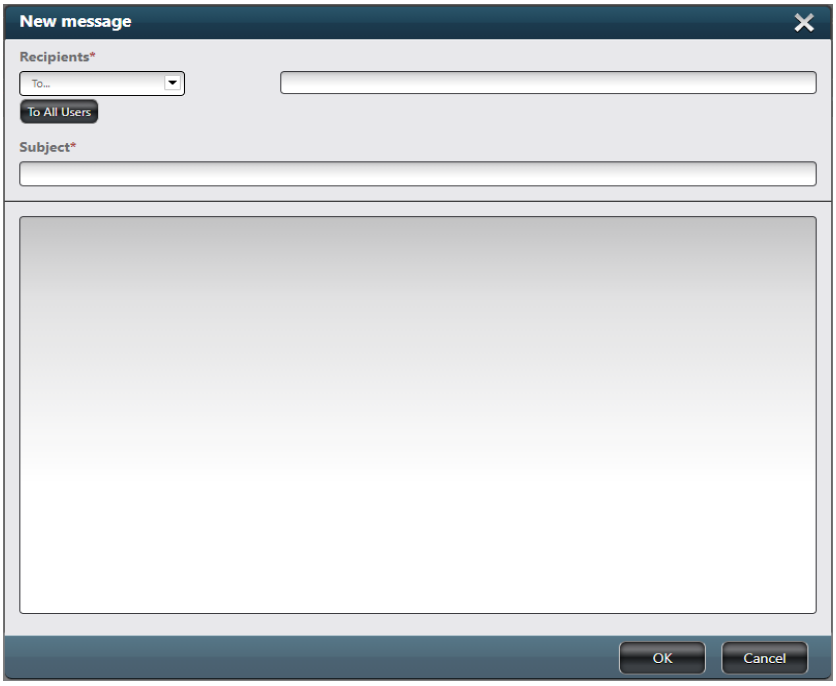


Figure 4 –New message

Mark messages as important by clicking . In such case, the message is automatically copied to the **Important** general message folder. Open message by double-clicking it, so the content of the message will be loaded into the message list location.

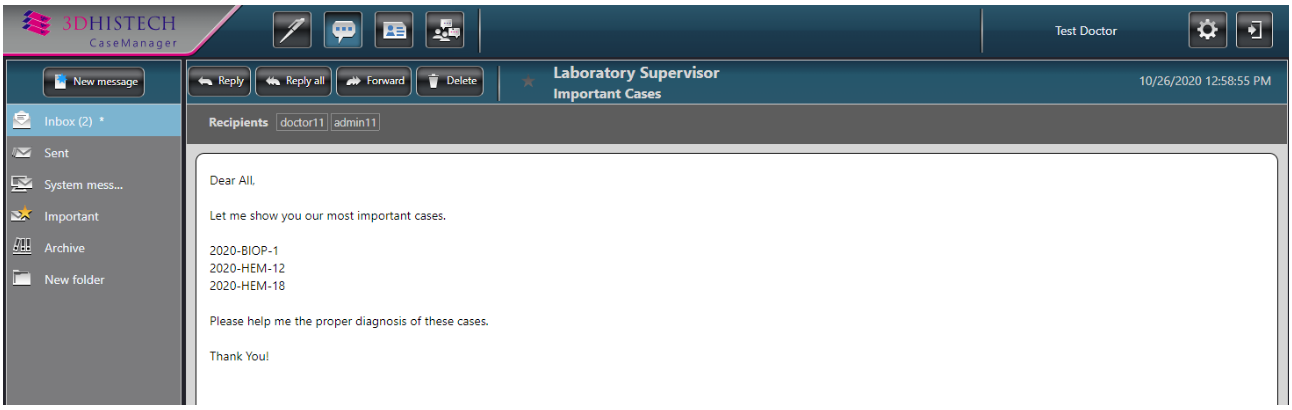


Figure 5 –Loaded message

The window of the loaded message includes the name of the sender, the subject below that, the date of sending on the right side of the window, the list of recipients, and the text body of the message.

- Answer to the received message by clicking **Reply** or **Reply all**, and forward messages with the **Forward** button. You can delete the selected message(s) by clicking **Delete**. Upon deletion, a message will be archived and the deleted message is automatically moved to the **Archive** general folder.
- Create unique message folders after clicking . A unique, user-created folder can be deleted by clicking after selection. If no folder has been selected, this button remains inactive.
- Multi-select messages on a list by clicking the checkboxes. Messages can be moved to any of the user-created message folder with the drag-and-drop mouse gesture. You can search for messages in the selected folder based on the name of the sender, subject, and text. Type your search criteria into the search input field. The search results are displayed in the bottom right corner of the screen. Filter conditions are not deleted automatically – click next to the search box to delete search criteria.

3.1.4 Contacts

> **Important!**
>
> Before creating contacts, it is important to create or define the contact group. Contacts without a related contact group cannot be created.

Contact groups can be created by clicking , and deleted by after selection.

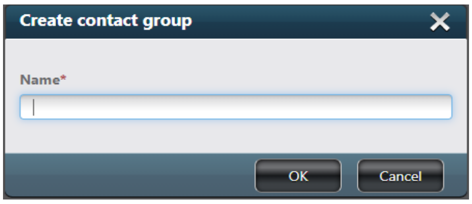


Figure 6 – Create contact group

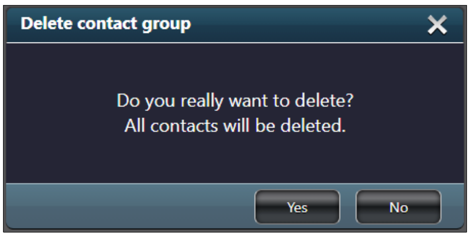


Figure 7 – Delete contact group

The maximum length of the character string is only 24 when entering the name of the contact group.

The contact group can only be deleted if selected – the icon is inactive if no contact group is selected. The name of created contact group can be edited after double-clicking its field. If you select a contact group, the system automatically lists all the contacts in the contact group in a card. The contact card contains the information of each of the contacts (for example: Department, Workplace, Phone number, etc.).

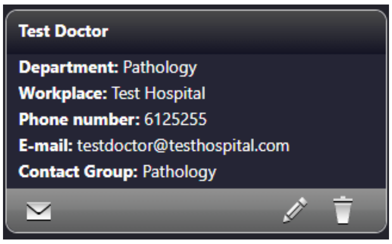


Figure 8 – Contact card

Click to send email to the selected contact, and click to edit the contact. To delete the contact, click .

Click to open **Contacts**. A **Contact** is a person created in CaseManager™ DX Software without any permission for performing tasks in CaseManager™ DX Software. In case more contacts within the same institution are saved, they are all visible for all the users of the system.

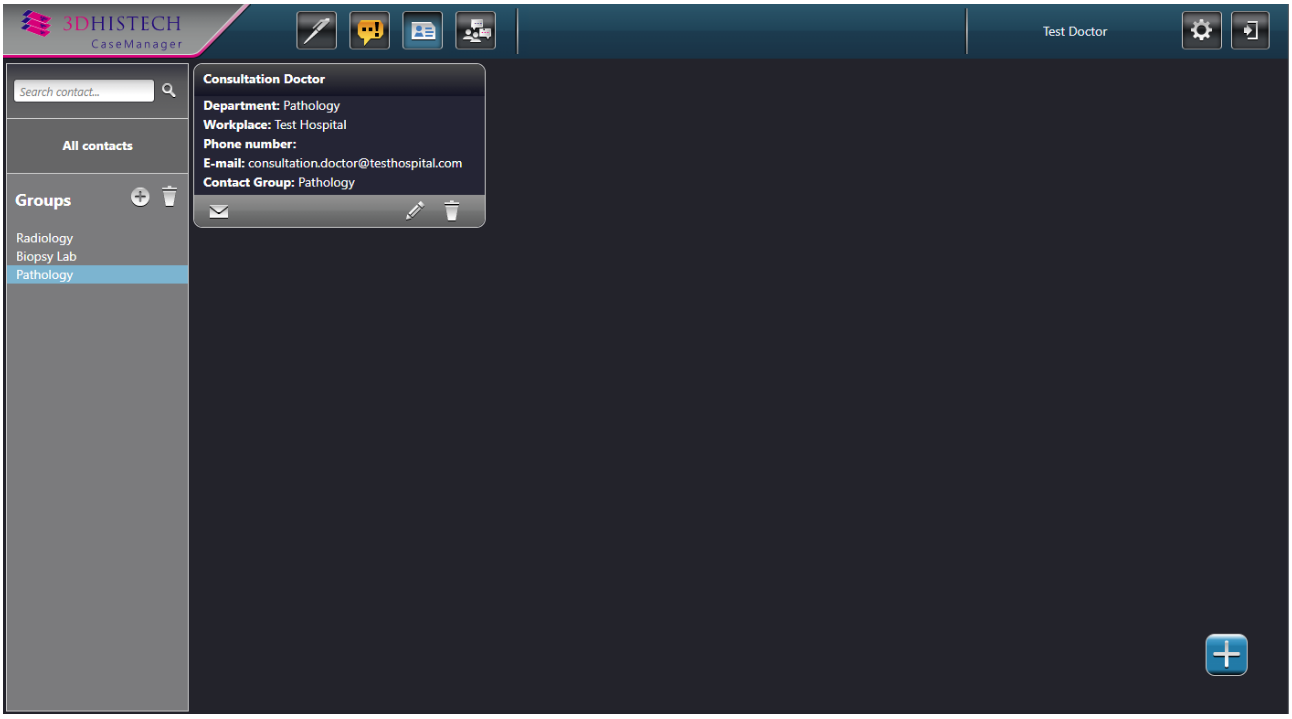


Figure 9 – Contacts

You are allowed to create , edit or delete a contact. A contact can be created only if there is at least one contact group to which the user can assign the contact. If a new contact is created, the **Name, Contact Group** and **E-mail** address input fields are required to be filled out.

Important!

Contacts with identical E-mail addresses cannot be created.

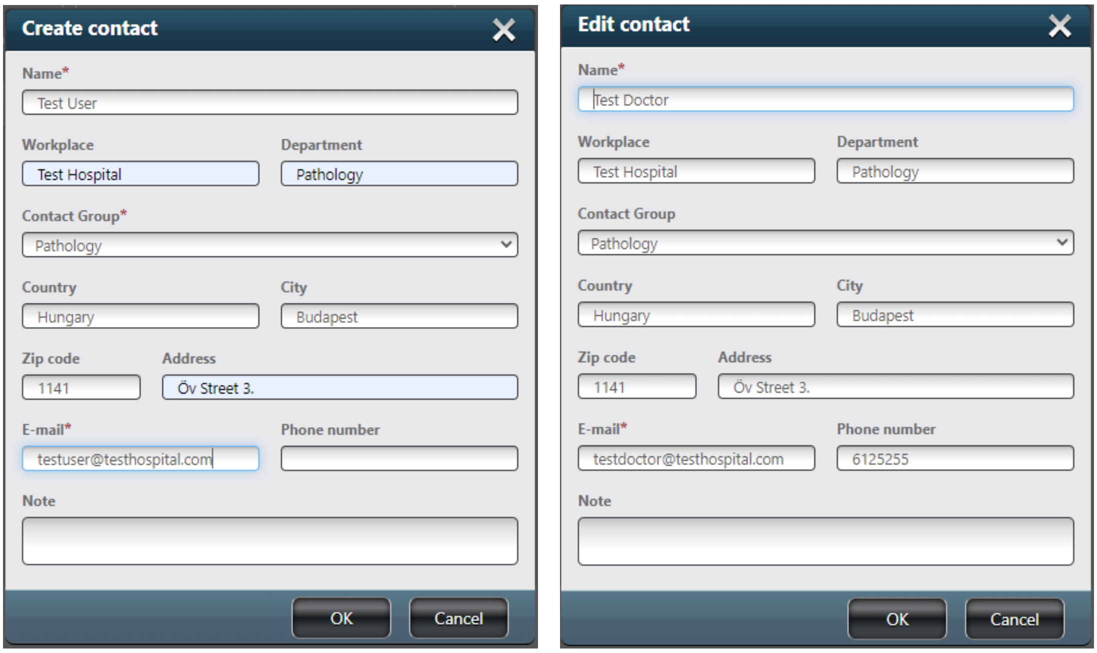


Figure 10 and 11 – Create and Edit contact

After modifying a contact, you receive a warning message from the system:

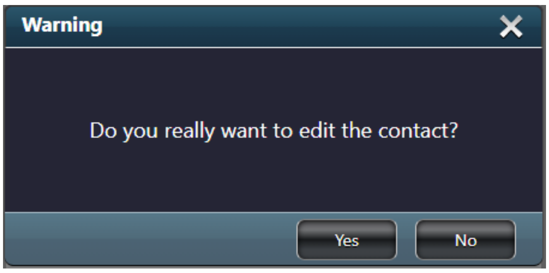


Figure 12 – Edit contact warning message

If you want to save the modification, click **Yes**, otherwise click **No**.

Search for contacts in all contact groups by entering fragment of text in the search input field. Type at least 3 characters to initiate search.

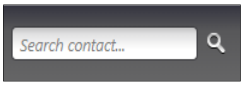


Figure 13 – Search input field

3.1.5 Teleconsultation

To access teleconsultation and display its main screen, click the button.

For more information on teleconsultation, see *chapter 5 Teleconsultation*.

3.1.6 Search bar for cases

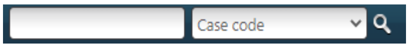


Figure 14 – Search bar for cases

By entering an ID or keyword in the search input field and by clicking , you can search in the following categories within the selected folder:

NOTE: For a successful search of **Case barcode, Sample original barcode** and **Social Security Number (SSN)**, exact values must be specified. If there is no hit, the following message appears in the case list: *'No items to show in this folder!'*

- **Case code** is a code for identifying the case. This code can be either a code as an identifier used and sent by LIS or added to CaseManager™ DX Software, generated by the institute.
- **Case barcode**: If case code is stored in barcode, the software automatically searches for the case in the database based on the recorded barcode string (that is visible in the text box).
- **Sample original barcode**: Case identifier used in other systems, search is performed based on barcode stored in Hospital Information and Laboratory Information Systems.
- **Patient's name or SSN**: Search for cases stored in the database that can be identified by the patient's name or SSN.

The above categories can be selected from a drop-down list.

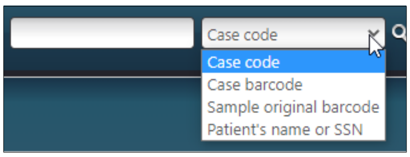


Figure 15 – Search field, drop down list, search button

NOTE: After searching the entered criteria remains active, so when clicking on another folder, the search for the entered string in the selected folder is performed again.

To delete search criteria, click at the right of the search bar.

3.1.7 Registering a new case

Click to open the **Case registration** window. You can register a new case after filling all the required data in this window.

Figure 16 – Case registration

- Type the barcode into the **Original barcode** field (maximum 160 characters). Select **Urgent** to mark case as urgent for the assignee. You cannot enter a barcode string that already exist in the database of the system.

- Fill in **Patient's data**. Click Patient search to search for the patient in the database. The patient search window includes fields for filtering name, insurance number, or year of birth of the patient you are looking for. Click to initiate search in the database.

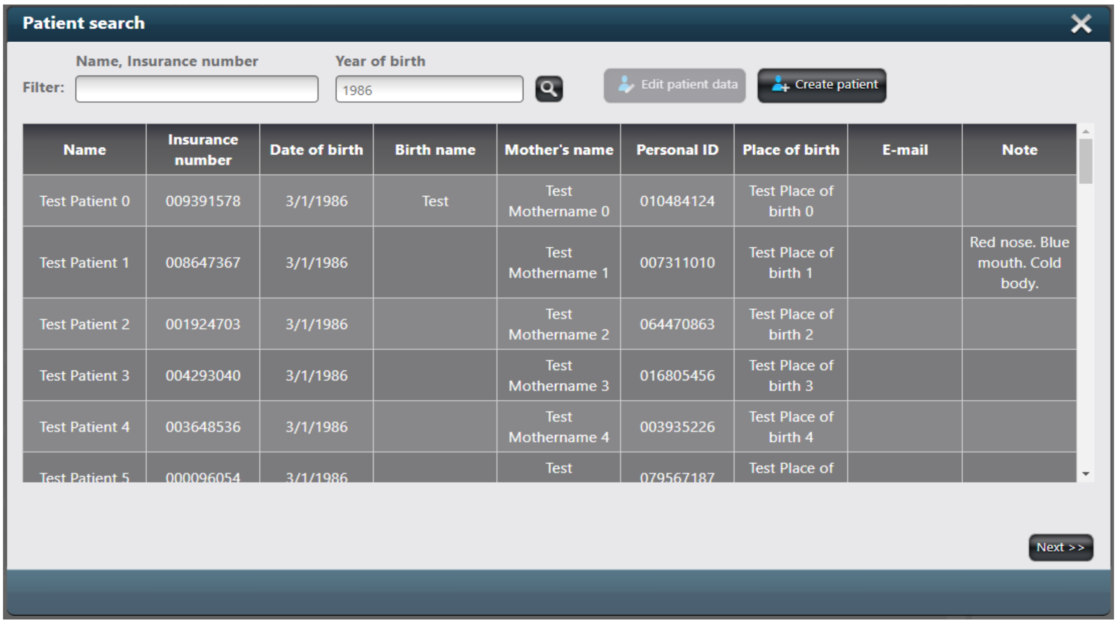


Figure 17 – Patient search

- If you want to search based on the patient's year of birth, more results may be listed. The results are displayed in a table containing a maximum of 100 records. If the number of results is more than 100, click **Next** to load the rest of the results. If you found the proper record, double-click it to register the patient for the case.

- Patient data can be edited in this window if needed after clicking Edit patient data. Click **OK** when modifications are performed, or **Cancel** to leave window without saving.

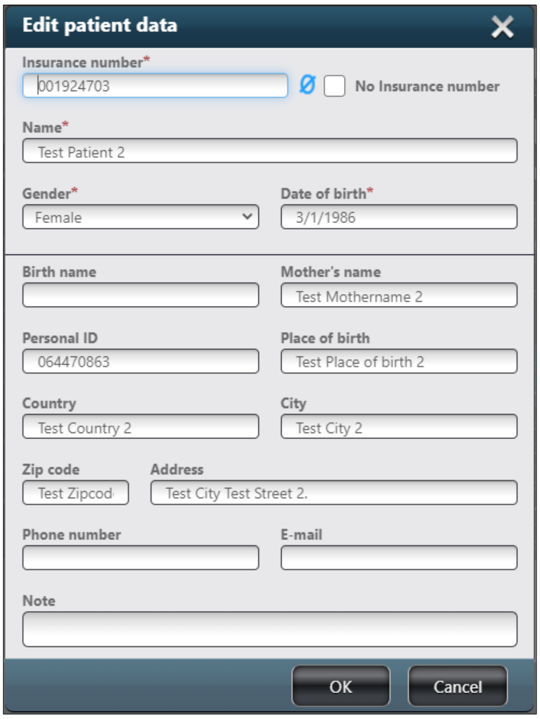


Figure 18 – Edit patient data

Type the patient's insurance number into the **Insurance number** input field and if this number already exists, the software automatically fills out patient's data that have been registered to this insurance number. If a patient has no insurance number, patient search must be used to find a specific patient. To load patient's data into the case registration window, double-click on found patient data.

If the insurance number was not registered yet, the create patient window is automatically opened.

- If you want to create a new patient record other than by typing in insurance number of the patient, is that you click Create patient to register a patient in the create patient window. Fill in all the required fields such as **Insurance number**, **Name**, **Gender**, **Date of birth.** Note that **Zip code** can be 30, **Country** and **City** can be 60 characters maximum. Click **OK** when finished. Click **Cancel** to exit from window without saving.

  NOTE: If the patient does not have an Insurance number, click select **No Insurance number** option.

- Select **Registration place** from the drop-down list and set **Date of arrival**. These values will only clear if the case registration window is closed. Select **Sender institute** from the drop-down list. **Sender institute code** input field is filled in automatically.
- This method works in the other way around, so when filling in the **Sender institute code** the appropriate **Sender institute** is selected from the list automatically. You can also specify the name of the **Sender doctor**.

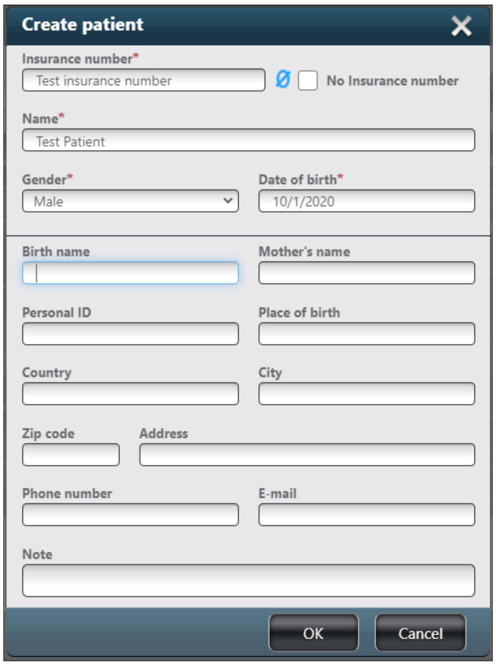
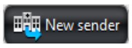


Figure 19 – Create patient

Click  to record a new sender entry. Fill in all the sender data (required fields are: **Name** of the sender, maximum 30, and **Code** of the sender, maximum 20 characters) then click **OK**. The name and code of a sender institute are unique.

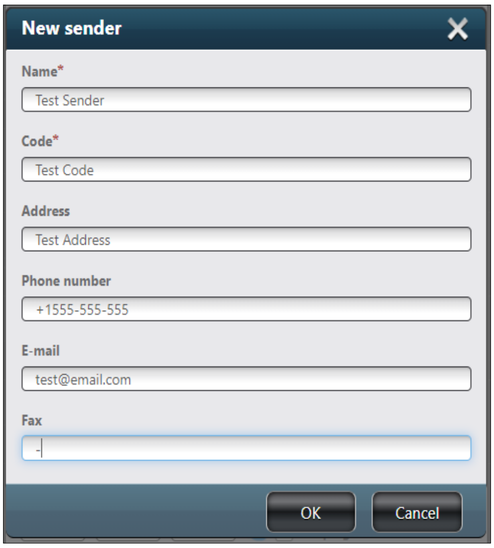


Figure 20 – New sender

- Set **Date of arrival** after clicking into the field. The default date format is: YYYY/MM/DD HH:mm, that is, Year/Month/Day Hour:Minute.

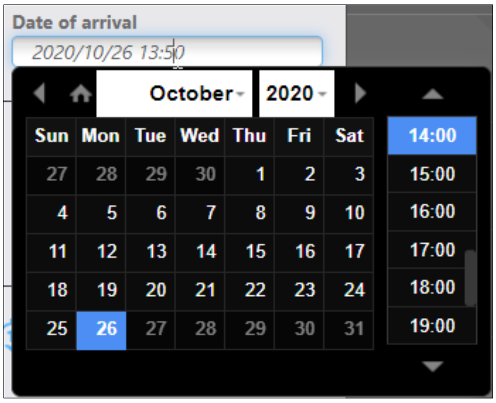


Figure 21 – Date of arrival

- Select type (**Hematology**, **Biopsy**, or other predefined entry specific for the institution, but usually a sample type) of case from the **Case code** drop-down list, and type in the case number in the **Counter** field.

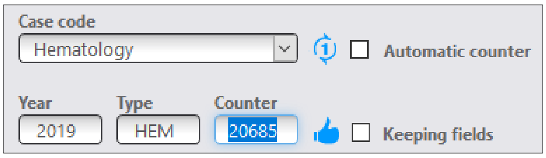


Figure 22 – Case registration, case code window

- Activate **Automatic counter** if you want the case code to be defined by the counter, and thus the number at its end will be the first available based on the numbering sequence (**Counter** field turns inactive if this option is selected). Only the selected case number can be registered if it does not already exist in the system.
- Select **Keeping fields** option if you want to leave entered data in the fields after registering the case.
- The case can be registered by clicking **Registration**. After the registration, the last registered case is indicated in the case registration panel.

3.1.8 Case list of doctors

Click to open the **Case list of doctors**.

After selecting the proper doctor and the case status from the drop-down lists, the related cases will be listed in table. The cases in status **In progress, Forwarded, Signed** and **To sign** are listed in chronological order (from oldest to latest) while the cases in **Finished** are listed from latest to oldest.

NOTE: The number of cases of the same status are indicated at the end of the entry.

Date filtering is only available for cases in **Finished** status. A case selected from the list can be opened with the **Open the case** function at the **Details** section of the table, and it can be read-only and commented.

NOTE: When listing the cases, maximum 100 cases are listed. Click **Next** to load the next 100.

If a case is urgent, the icon is displayed before the case number.

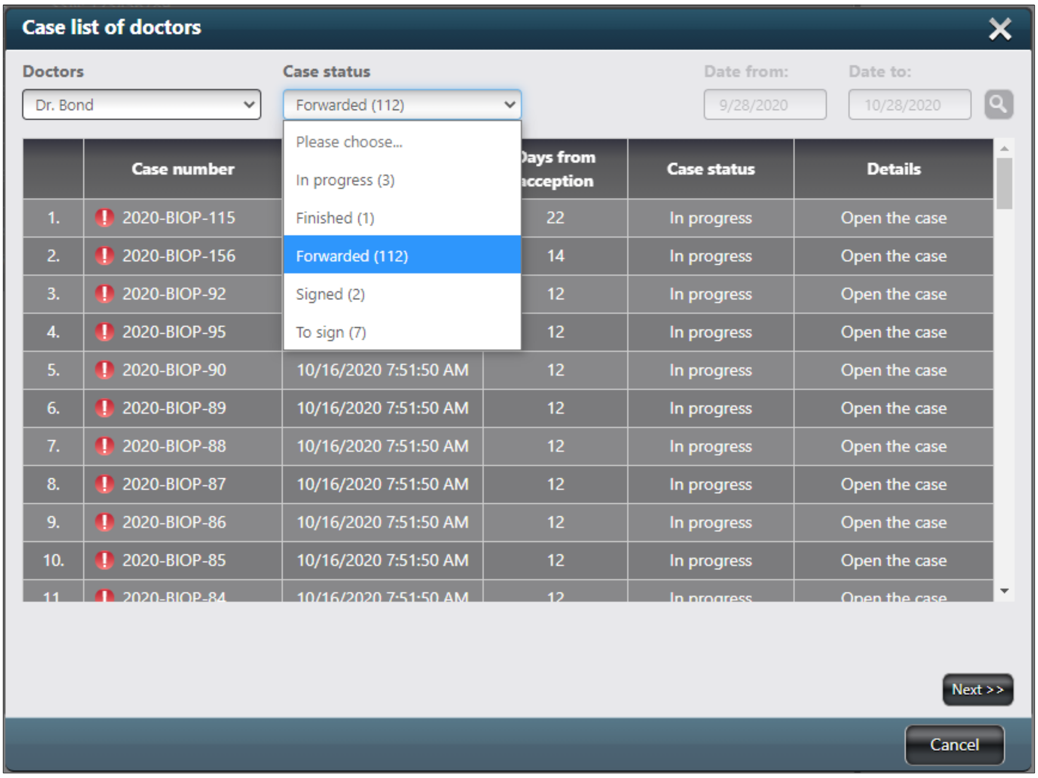


Figure 23 – Case list of doctors

3.1.9 Name of the current user

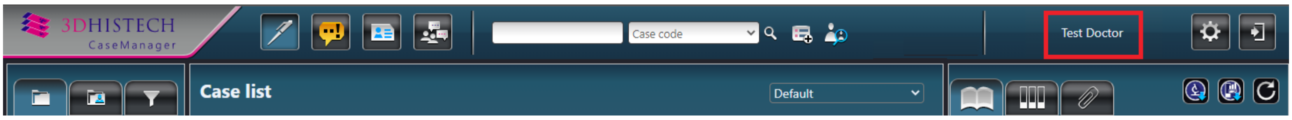


Figure 24 – Name of the current user

The Name of the current user field displays the user currently logged in to CaseManager™ DX Software.

3.1.10 Configuration

Upon clicking the  button, the main user configuration panel of CaseManager™ DX Software is displayed.

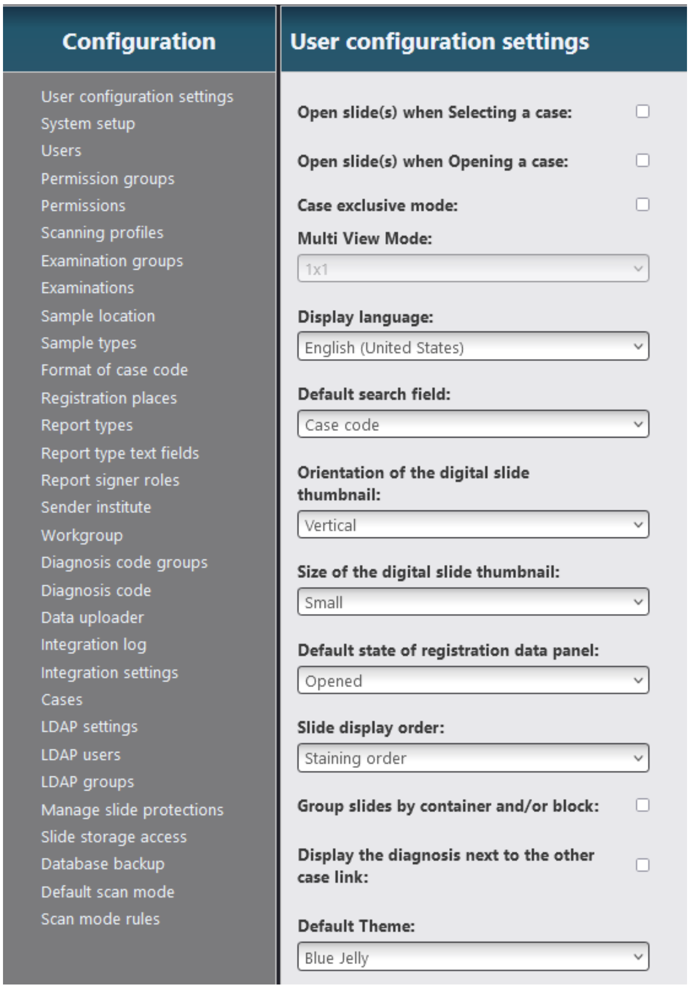


Figure 25 – Configuration panel

For more information on configuration, see *chapter 4 Configuration*.

- By clicking the  button, you can return to the home screen of CaseManager™ DX Software.
- By clicking  you can terminate the current session by signing out from the system.

3.2 CaseManager™ DX Software folder panel

This section of the interface displays the **Case folders** (general folder hierarchy), **User folders** (created by the user), and **Filter** (user-created filters).

3.2.1 Case folders

Click  to display **Case folders**. The general case folders section shows the default system folders. The main default folders are: **Archived**, **All cases**, **Workgroup's cases**, **My cases**, **High priority**, **Forwarded**, and **Signatures**.

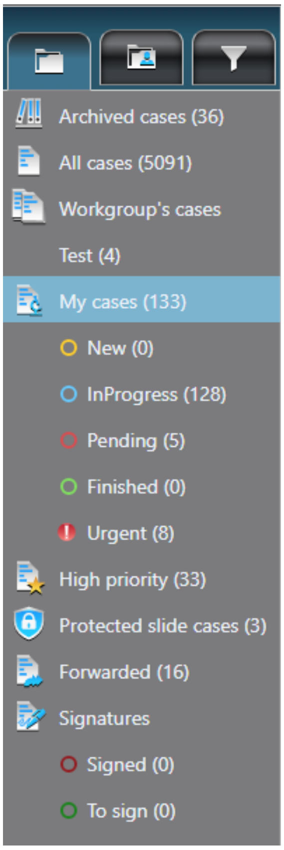


Figure 26 – Case folders

- **Archived:** This folder contains the archived cases.
- **All cases**: This folder contains all the cases that are managed by CaseManager™ DX Software.

- **Workgroup's cases**: This folder contains the cases owned by different workgroups.
- **My cases**: All cases of the user is displayed, listed by date.

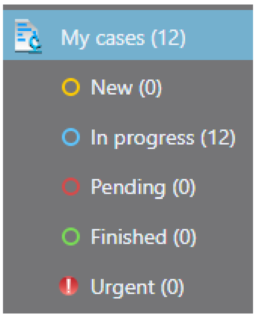


Figure 27 – My cases

  - **New:** Contains newly assigned cases to the current user.

    NOTE: When a case is viewed for the first time, it is automatically moved into the In progress folder.

  - **In progress**: Contains cases that are being processed by the pathologist.
  - **Pending**: Contains cases that are waiting for additional examinations (special requests from the pathologist) to be finished in the laboratory.
  - **Finished**: List of cases that are already closed.
  - **Urgent**: List of cases that are marked as urgent by the LIS in general. Urgent cases are very important for the pathology laboratory.

In the **In progress** and **Pending** folders, the **Case forwarding** button is available. Click **Case forwarding** and select person to forward the case to. The forwarded case is displayed in the **Forwarded** folder.

The user can close the case by clicking the **Finish case** button, which is available at the bottom of the **Details** tab if a case is in status **In progress** at the user.

Click **Finish case** to close the case once the diagnosis and the final report for the case have been created. Upon clicking this button, case status is modified automatically from **In progress** to **Finished**.

The case can be either archived by clicking the **Case archiving** button or reopened by clicking **Reopen case.**

NOTE: The **Case archiving** and **Reopen case** buttons are available in a finished folder containing case lists.

Click **Case archiving** to archive finished cases manually. Then the case status is modified automatically and the case is moved from the **Finished** to the **Archived** folder.

NOTE: Case archiving is manual by default. Automatic case archiving can be set during the installation of CaseManager™ DX Software.

At reopening, the case will be included in the **In progress** folder also changing its status from **Finished** to **In progress**.

Figure 28 – Buttons in the Finished folder

Each process is marked with a specific color; the marker color bar appears on the left side of the case card.

- **High priority***:* List of cases that the user signaled as high priority.
- **Protected slide cases**: List of cases that the user signaled as protected.
- **Forwarded***:* Forwarded cases belong to this folder. A case can be forwarded by clicking the **Case forwarding** button placed at the bottom of the interface.
- **Signatures***:* This folder contains cases that are already signed or waiting for signature. A final report may contain multiple signatures.

  NOTE: The final report must include at least one digital signature.

- **Signed***:* This folder contains cases that are signed by the user.
- **To Sign***:* This folder contains cases that are still pending.

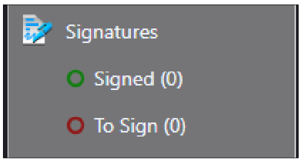
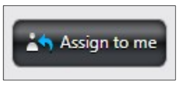


Figure 29 – Signatures

If the **Archived** folder is open, a user can take an archived case clicking **Assign to me.** The case will move to **My cases** folder.



If the **All cases** folder is open, two functions appear at the bottom of the case list:

- **Assign to me** function enables you to assign yourself a case included the **All cases** folder. If the case is already in assigned to another user, then the first user responsible for the case will receive a system message about the fact that the case has been reassigned.
- Click **Assign to user** to select a user to whom the selected case can be assigned.

3.2.2 User folders

Click to display the **User folders**. You can create a new folder by clicking the button then defining the name of the folder.

NOTE: A folder can contain a maximum of 5 sub-folders.

Cases can be dragged to a folder by the drag-and-drop gesture grabbing the case at case number region of the case bar. Multi-selection of folders is available for you with **Ctrl+click** the cases.

A folder can be deleted by selecting the folder first, then clicking the button. If the folder includes sub-folders and several cases, the sub-folders and all the cases will be deleted as well.

To delete cases from the user folder and leave the folder as it is, first select the case within the folder, then click Delete from folder. It is available for you to rename the folder by single-clicking its name, then the button. The main folder (**Folders**) is the default root folder for user folders, and therefore it cannot be deleted.

3.2.3 Filter

Click to display **Filter**. On this panel you can create, modify, and delete custom filters for searching cases.

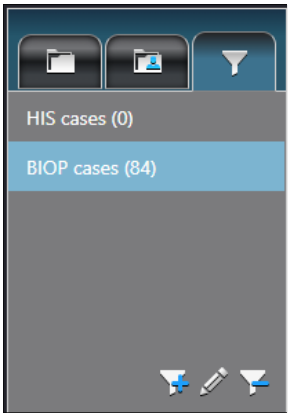


Figure 30 – Filter

Click to create a filter by defining parameters in the create filter window. Type the name of the filter you want to create into the **Name** input field. Select type from the **Field** drop-down list, set **Operation** (Equal, Not equal, Starts with, Ends with, Greater than, Less than, Greater or equals than, Less or equals than, Contains), and specify field value in the **Value** input field (maximum 100 characters).

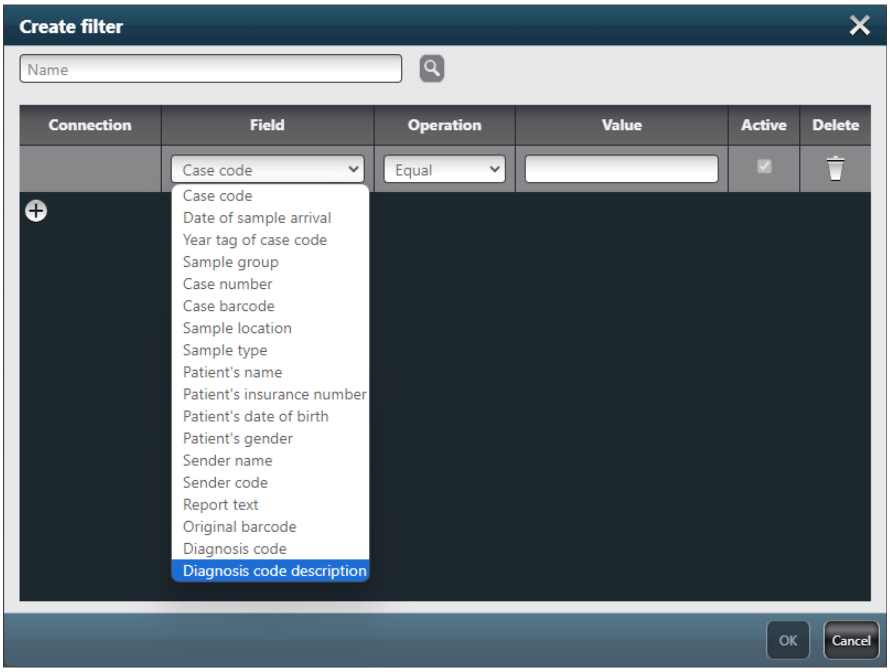


Figure 31 – Create filter

You can select any of the following **Field** types as filter condition:

- Case code (e.g. 2019-BIOP-12345)
- Date of sample arrival (specific time the sample has arrived at the pathology laboratory and the case is registered)
- Year tag of case code (2019)
- Sample group (BIOP)
- Case number (12345)
- Case barcode (123456789, created when the assistant or doctor has read the barcode with barcode reader)
- Sample location (for example: breast, brain)
- Sample type (Biopsy, Hematology)
- Patient’s name
- Patient’s insurance number
- Patient date of birth
- Patient’s gender
- Sender name
- Sender code
- Report text
- Original barcode (barcode used by HIS/LIS)

- Diagnosis code (e.g. in SNOMED coding system: M-82543)
- Diagnosis code description (e.g. in SNOMED coding system: mixed mucinous and non-mucinous adenocarcinoma)

Set **Operations**:

- Equal
- Not equal
- Starts with
- Ends with
- Contains
- Greater than
- Less than
- Greater or equals than
- Less or equals than

The **Value** field must include the character string (or part of it) that you are looking for. Make sure, that the filter condition is active or not. If filter condition is active, filtering will work based on the previous filter condition. Save the set filter by clicking **OK**, and delete an existing filter condition from the set by clicking .

NOTE: The **OK** button appears only if you have entered and set all the necessary parameters. The system automatically creates the filter, and it will be listed on the filter tab.

Figure 32 – Created filter and filtered case list

The number next to the filter name, is the number of cases that match the filtering condition. This number is automatically updated when clicked, because the actual list is queried. Upon clicking the filter, an automatic query is run according to the set filter condition.

Running a query without saving

If you do not want to save query conditions as a filter, running a query based on the set filter condition(s) is still possible. After running the query, the system automatically collects and lists the appropriate cases matching the criteria set.

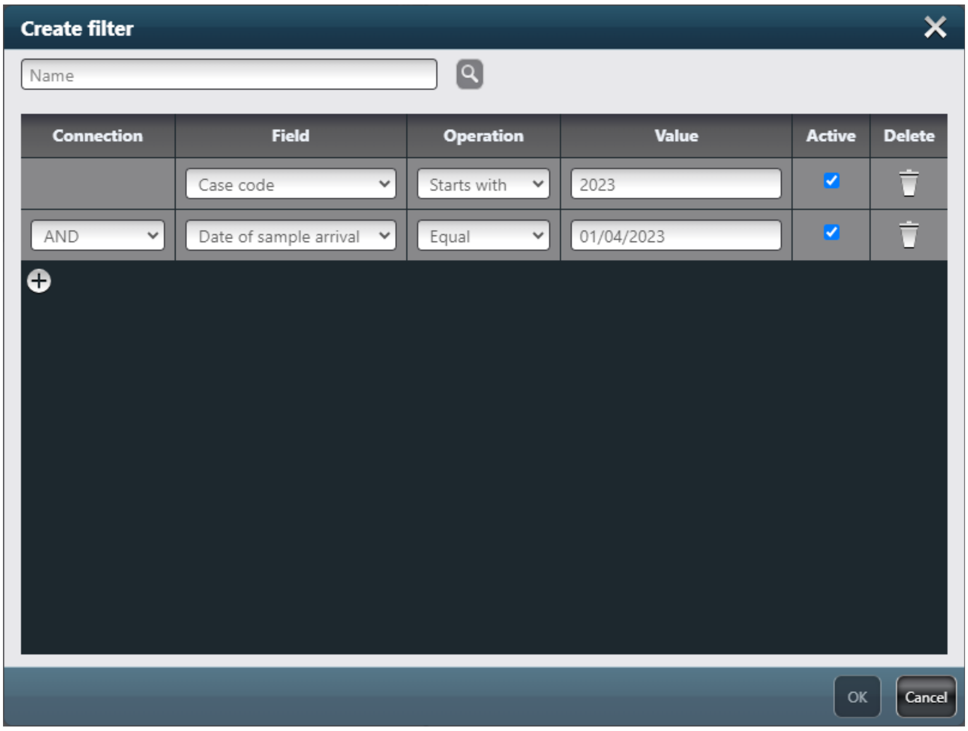


Figure 33 – Filter settings example

To link another condition, click . Prior to setting the additional component, the **Connection** type must be selected from the drop-down list, containing logical operations **AND**, and **OR**. Select **Field** type as the basis for filtering, then **Operation**, and enter **Value**. To run the query, click .

Filter components are set as **Active** by default, but can be deactivated if not needed in filtering. Each of the components can be deleted by clicking . Click **OK** to create the filter, or **Cancel** to exit from the create filter window without saving. Query filter remains inactive if filter name and value is not specified.

Filter conditions of the created filter can be edited by clicking . The created filter can be deleted if you click .

3.3 Case list

This section of the interface displays the list of case groups, which are selected in a folder group. By default, cases are arranged by date. However, it is possible to change this by clicking on the drop down menu in the top right corner of the case list. You can list cases according to the following:

- Default
- Increasing case number
- Decreasing case number
- Scanned
- Reported
- Urgent

NOTE: Scanned, Reported and Urgent cases are also arranged by date.

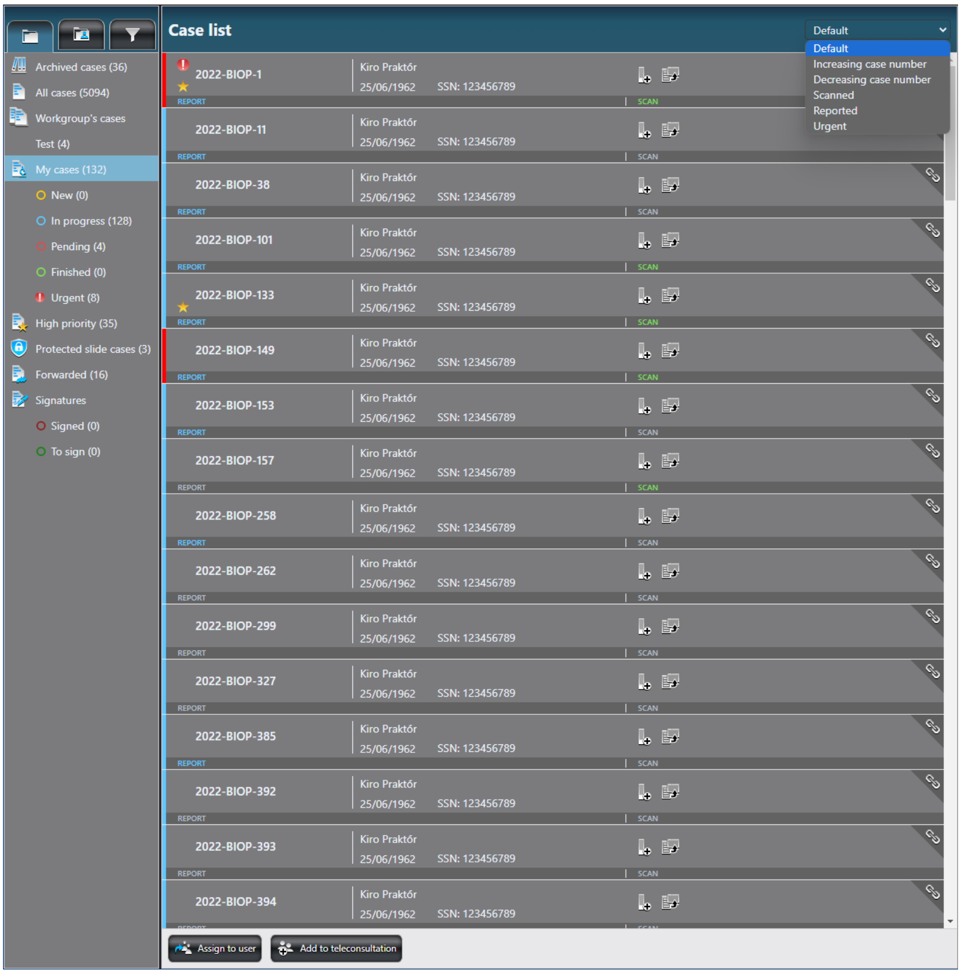


Figure 34 – Case groups and case list

On the case card the following indicator signals and buttons appear:

-  Indicator for **Urgent** status
-  Indicator for **High priority** status
-  Indicator of **Report** status
-  Indicator of **Scan** status
-  **Add section** to the case
-  **Open case for review and/or reporting**
-  **Copy case link**

The case card also displays the most important case related information such as: number of the case (Case code), name and date of birth of the patient, and Social Security Number (SSN).

Figure 35 – Case card

Processes are marked with different colors in the case list. These markings appear on the left side of the case cards indicating the type of group to which the case belongs:

Archived – violet mark on the left side of cases card

My cases group

- **New –** yellow mark on the left side of cases card
- **In progress** – light blue mark on the left side of cases card
- **Pending** – red mark on the left side of cases card
- **Finished** – green mark on the left side of cases card
- **Urgent** – exclamation mark on the cases card

Signature group

- **Signed** – dark green color on the left side of cases card
- **To sign** – claret color on the left side of cases card

Priority can be given to a case as follows:

-  – **Urgent for all users**

  An urgent case arrives via the laboratory software module (Track&Sign) marked as urgently processable. If case registration has been performed in CaseManager™ DX Software, the user can assign this flag to the urgent case.

- – **Important for the user only**

  A case can be marked as urgent by the user that is logged in (for example, to compare with other cases), thus the case is moved to the **High priority** folder. To mark a case as "*High priority*" click the icon when moving the mouse cursor over the case bar on the list.

Figure 36 – Case priority

3.3.1 Add section

By clicking the user can add extra sections to the selected case. In the **Add section** window the barcode of the section/slide and staining procedure can be specified. The user can add note for each section, this may help the work of the laboratory staff if the CaseManager™ DX Software is integrated with the local LIS. The sections can be removed from the list by clicking **Delete** in the table.

NOTE: If the selected case comes from LIS and includes containers and/or blocks, the container(s) and block(s) must be selected, too, in the **Add section** window.

NOTE: If a slide barcode already exists, the number of the barcode turns red after clicking **OK**.

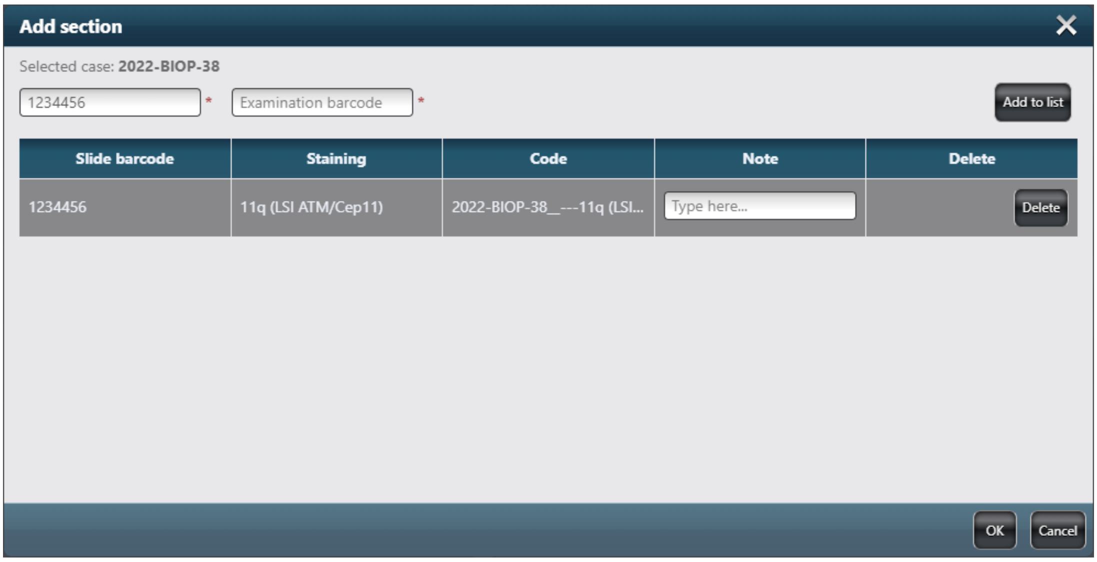


Figure 37 – Add section window

After section creation, the thumbnail of the created section appears automatically in the digital slide section.

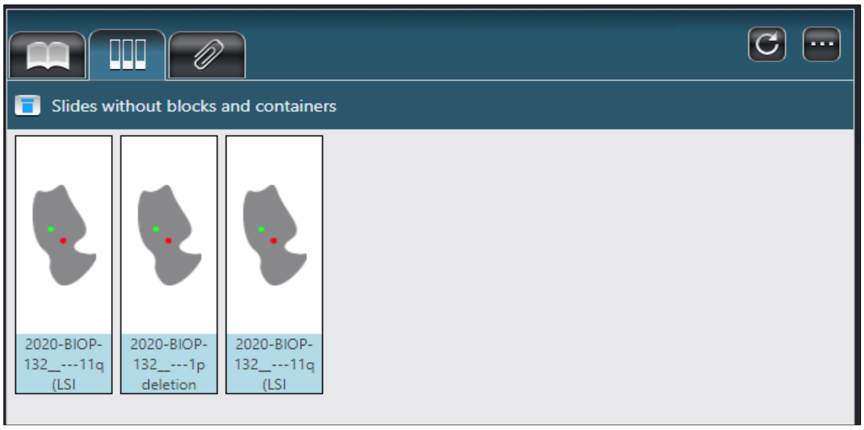


Figure 38 – Slides after section creation with generic thumbnails

After the scanning process is finished, the existing thumbnails of the sections will be replaced by the thumbnails of the scanned, digital slide. When moving the cursor over a thumbnail, the barcode and staining of the section is shown in a tooltip.

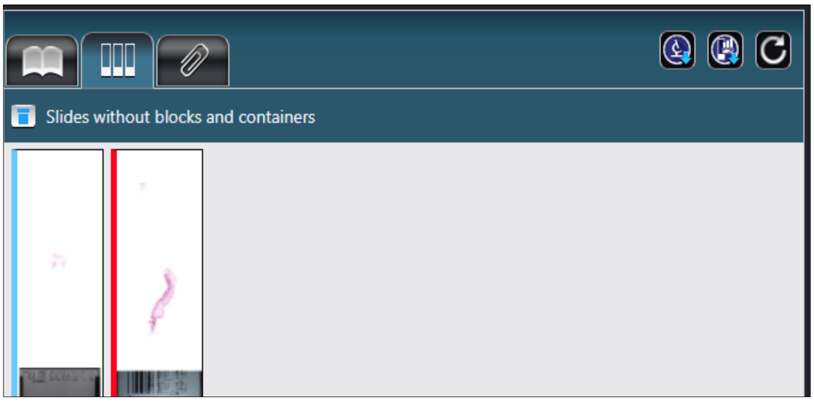


Figure 39 – Slides after scanning with real thumbnails

3.3.2 Open and review case

Click on the  button to open a case. In the middle of the page, the **Report** panel is displayed where you can create, open and review case reports.

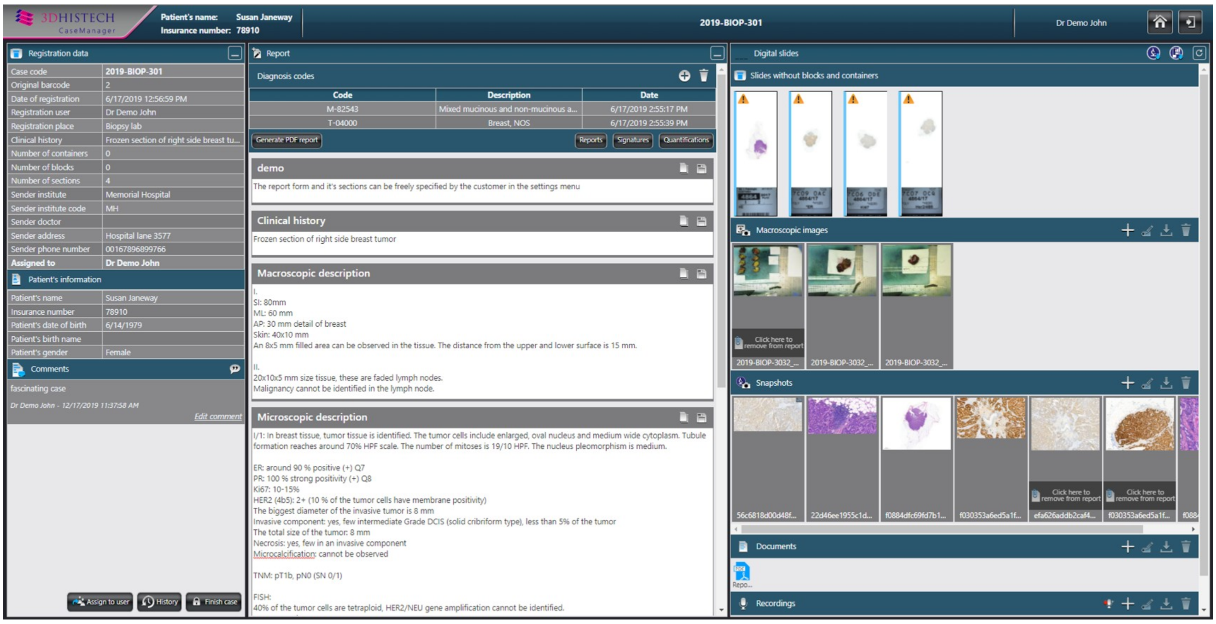


Figure 40 – Full page with Report panel

Alternatively, a case can be opened directly from the browser by entering the following information after **/CaseManager**:

NOTE: If the user is not logged in, the login page is displayed.

Sample ID	/go/Case/123
External ID	/go/Case/ExternalID/123

- If a report is already added to the case, you can review or edit it, depending on your user privileges.
- If no report is added yet to the case, click on the *Click here to create a new report* link to create a report.

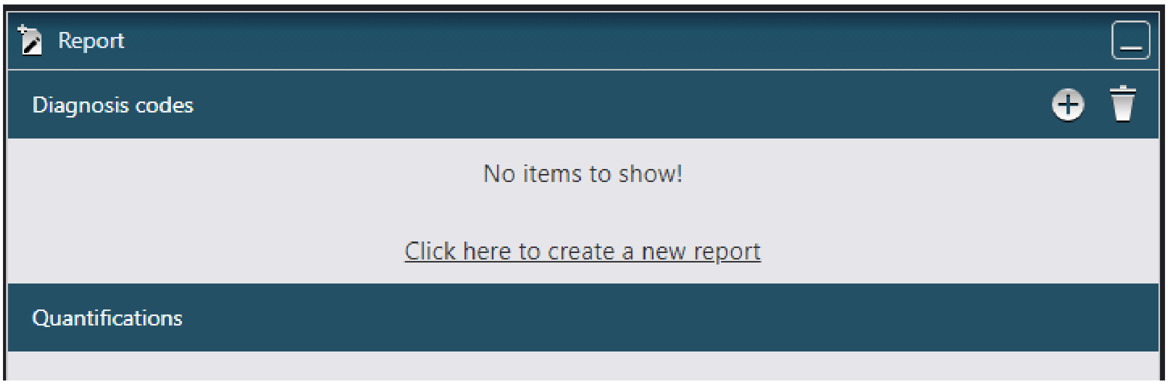


Figure 41 – Create a new report link

- Select report type from the drop down list displayed in the **Create new report** window.

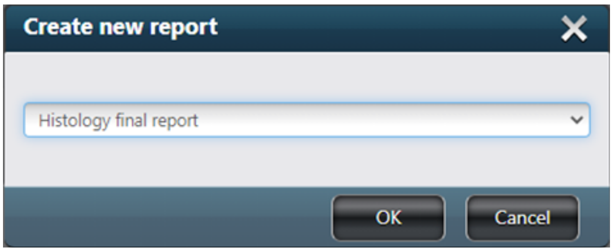


Figure 42 – Create new report window

NOTE: Registration data is displayed by default. You can hide it at the following path: *Configuration/User Configuration Settings/Default state of registration data* panel.

NOTE: You can create or edit a report only for cases which are assigned to you.

There are three types of case reports: histology, pathology and autopsy.

- A histology report includes fields such as **Clinical history**, **Macroscopic description**, **Microscopic description**, **Result of special examinations**, **Diagnosis**, and **Note**;
- A pathology report includes fields such as **Macroscopic description**, **Microscopic description**, **Diagnosis**, and **Note**.
- The autopsy report may include fields such as **History**, **External examination**, **Internal examination**, **Microscopic description**, **Cause of death**, **Circumstances of death**.

NOTE: Report types and report fields can be customized by the hospital.

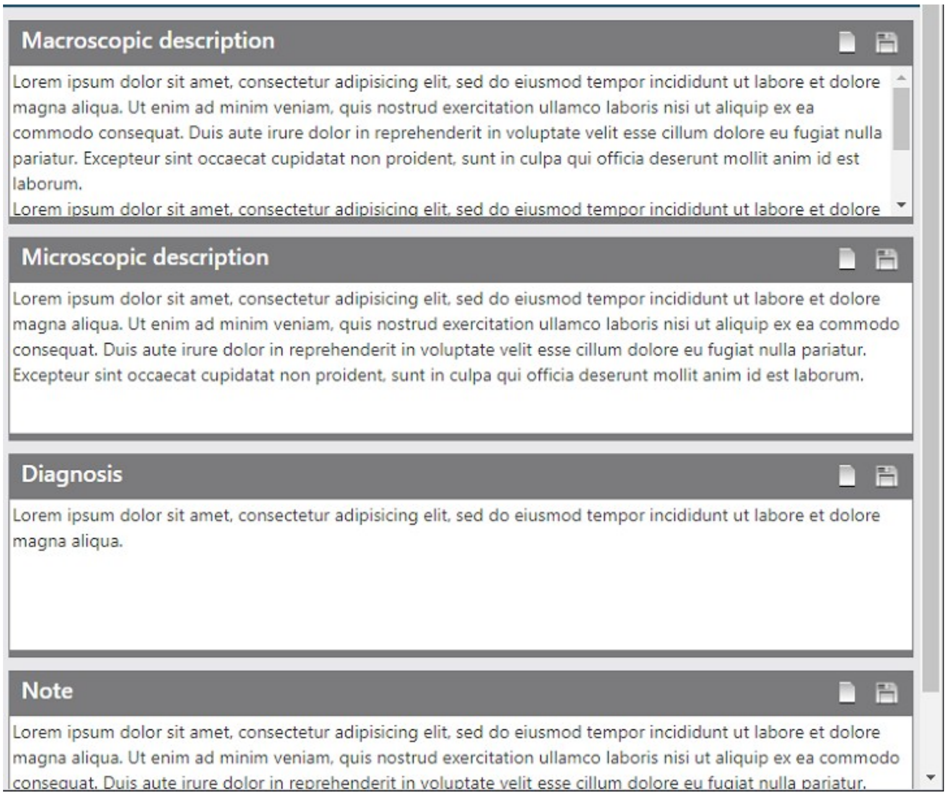


Figure 43 – Report fields section of the Report panel - example

These fields must be filled by the user. Some of these fields, for example **Clinical history** and **Macroscopic description** can be filled automatically by the CaseManager™ DX Software system, if a HIS and/or LIS integration is available.

At each field, the entered text can be saved as a template for later use by clicking the icon. The saved templates can be opened by clicking , and selecting the template you need from the drop-down list at the top of the templates window. The name of the template can be maximum 80 characters. The text can be changed, and click to save the template.

It is possible to insert template texts to the textbox by using shortcuts. Type #value# to the textbox to insert a template text, e.g.: #Temp1#. Users can use all existing templates and add more templates to a textbox.

If a template is not needed anymore, click to delete the selected template.

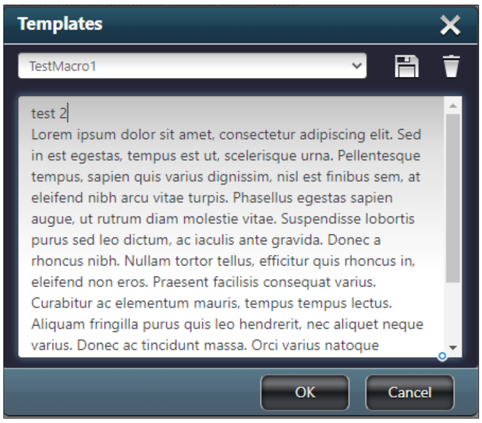


Figure 44 – Templates

Diagnosis codes can be added by clicking at the header of diagnosis codes section of the report panel.

To delete an existing code from the diagnosis code list, first select the code, then click .

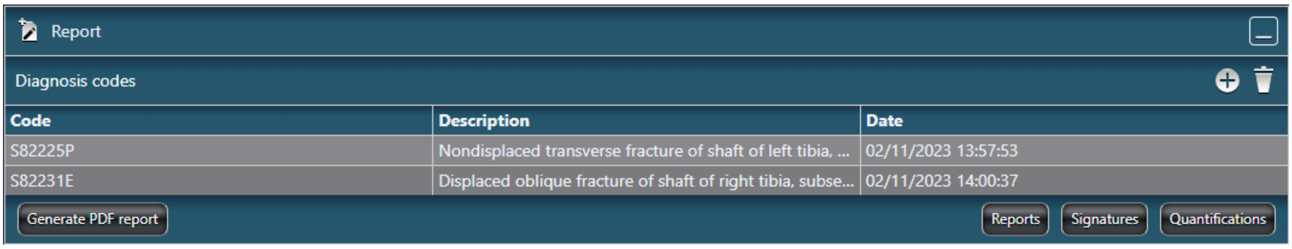


Figure 45 – Diagnosis codes section of the Report panel

To add a diagnosis code to the report sheet, type the fragment of code or text into the search field of the **Add diagnosis code** window, click to filter for possible results, select the appropriate diagnosis code from the list, and finally click **Add.**

Click **Previous/Next** to go back/forward a page.

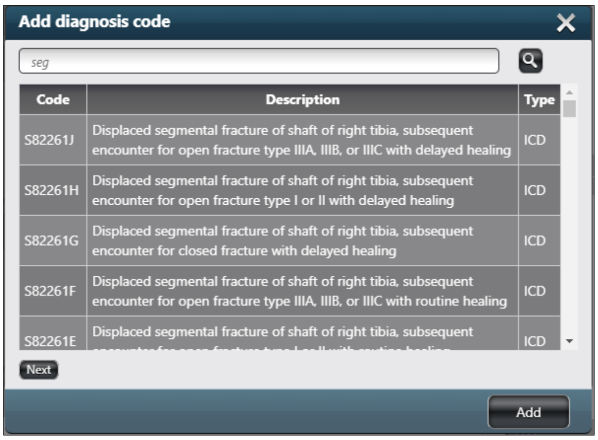


Figure 46 – Add diagnosis code

By clicking **Reports,** the reports related to the selected case are listed.

By clicking **Signatures,** it is possible to either request a signature (button) or cancel a previous signature request (**Delete** link).

NOTE: In the **Signatures** section, one can also sign a case which is assigned to somebody else who requested his/her approval for the case.

By clicking **Quantifications**, the results of a quantification process are displayed. For more information on quantifications, see *chapter 3.4.4. Opening slides in ClinicalViewer™*.

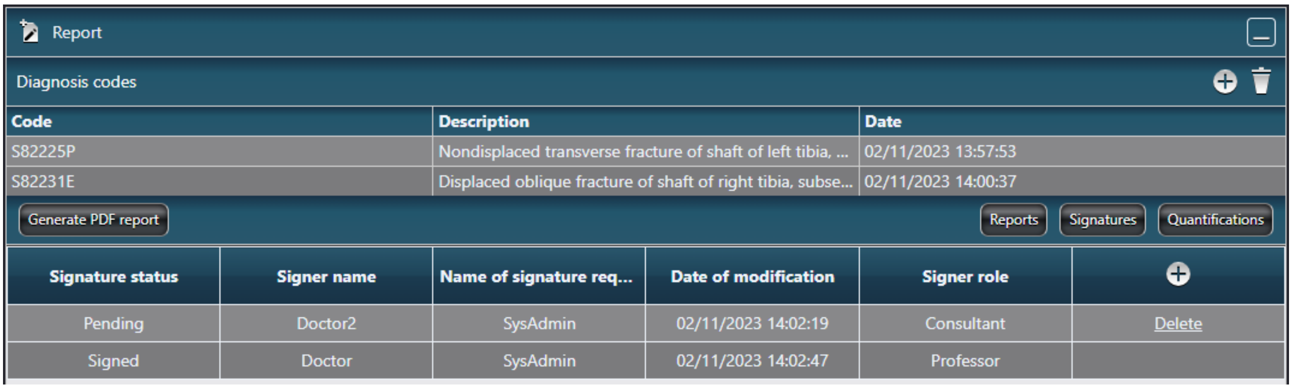


Figure 47 – Signatures

Click **Delete** to delete the signature request. Click **Sign** to sign the report. In both cases, a confirm window is displayed.

The pathologist who prepares report for a case can request a signature from a colleague as a sign of approval.

For example, a junior pathologist can ask for the approval of a more experienced colleague. Cases with severe outcome, such as amputation, in many regions require consensus and, therefore, co-signature from two or more pathologists.

After such a request, the case appears in the **To sign** folder of the signing doctor and gets to the **Signed** folder after signing.

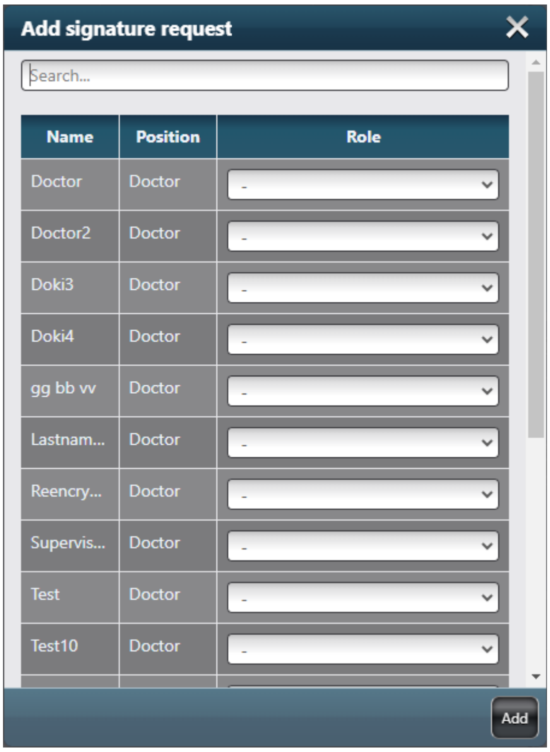


Figure 48 – Add a new signature request

Once the report is finished, the user can sign out of the case by clicking on the **Finish Case** button at the bottom of the **Registration data** panel. At the same time, a PDF file is generated with the content of the report. Alternatively, one can also click on **Generate PDF report** button to generate a PDF report before finishing the case.

Click the  button to return to the case list.

3.4 Case details

This section of the user interface displays a case in details. This area summarizes the details of a user-selected case: **Registration data**, **Patient's information, Other cases, Comments, Report,** tissue blocks in **Digital slides** and **Attachments**: macroscopic images, snapshots from ClinicalViewer™ (for more details, see *ClinicalViewer™ User's Guide*), documents, or audio recordings.

NOTE: The **Report** window is only available if the case is opened in a new tab. For more information, see *chapter 3.3.3 Create/open report* in *chapter 3.3 Case list***.**

Alternatively, case details can be opened directly from the browser by entering the following information after **/CaseManager**:

NOTE: If the user is not logged in, the login page is displayed.

Sample ID	/go/CaseDeatils/123
External ID	/go/CaseDetails/ExternalID/123
Sample Code	/go/CaseDetails/SampleCode/123
Sample Barcode	/go/CaseDetails/Barcode/123
Original Barcode	/go/CaseDetails/OriginalBarcode/123

On the header of this section, the following buttons are available:

- – Refresh case details
- – Download and Slide protections icons
  - – Download and install Viewer application icon
  - – Download and install Quantification software icon

Important!

- ClinicalViewer™ must be installed before the installation of the Quantification software.
- This function is only active if the **Extract 3DHISTECH Diagnostic Applications x64 installer component** was selected at CaseManager™ installation.

  - – Slide protections: click this icon and check the checboxes next to the slides that you want to protect from editing in the displayed **Slide protections** window.

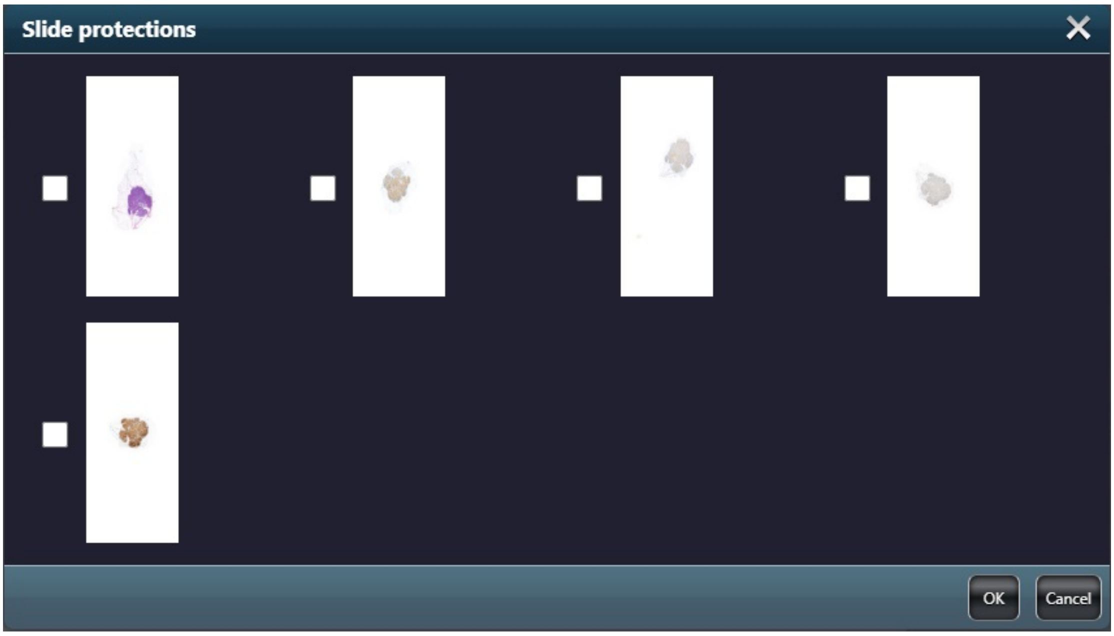


Figure 49 – Slide protections

3.4.1 Details tab

This tab summarizes various case-related data grouped into the following parts:

Note: The display of most case-related data can be customized in **User configuration settings**, see *chapter 4 Configuration*.

- **Registration data** – Data such as **Date of registration**, **Sender institute**, **Sender doctor**, **Assigned to**, etc. that come from the LIS.
- **Patient's information** – **Patient's name**, **Patient's birth name**, **Insurance number**, and **Patient's date of birth** data received from the LIS or HIS
- **Other cases / Other cases with diagnosis** – Related cases in the database can be opened in a new browser tab with one click on the case code. The related diagnosis is also displayed next to the case code. This feature can be enabled in the User configuration settings.

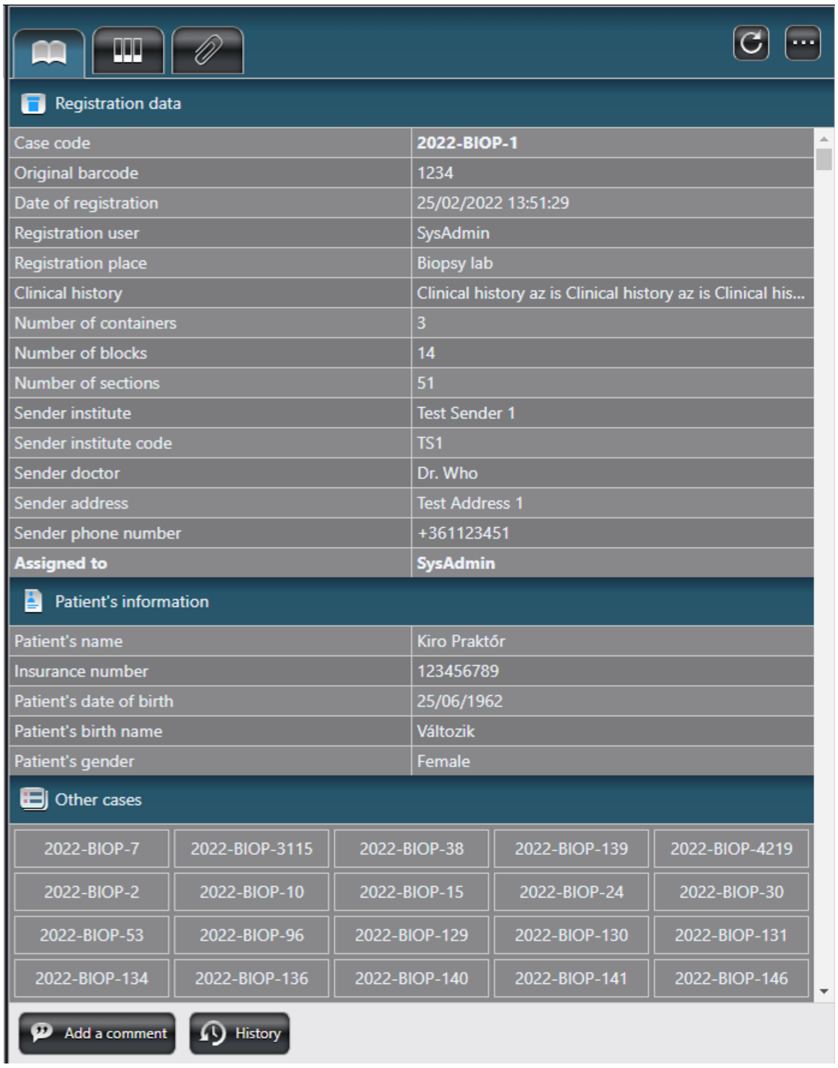


Figure 50 – Details tab

- **Comments** – This section contains comments that have been added to the case. A doctor, who is not the assignee of a case, is still able to review a case. This user cannot edit the case, but can add a comment to the bottom of the details tab after clicking **Add a comment**. Enter your comment first, then click **OK** to save. The doctor who is responsible for the case receives a message informing him/her that a new comment has been added to the case.

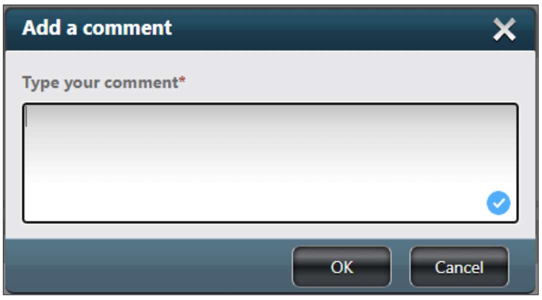


Figure 51 – Add comment

- Once you click **History**, the history table of the case is automatically opened. This table summarizes all the logged events related to the case. This table may include laboratory events as well, but for this the integration with the LIS is necessary for this information.

Figure 52 – Case history

3.4.2 Digital slides tab

This tab provides the following three functionalities:

- Lists digital slides related to the case, stored in a SlideStorageDx™ server.
- Displays the status of the digitization process.
- Offers the option to ask for special examinations for a case to make a better diagnosis.

The view of the digital slides can be customized: they can be arranged horizontally and vertically, too, at the **Orientation of the digital slide thumbnail** option selector under the **User configuration settings** menu.

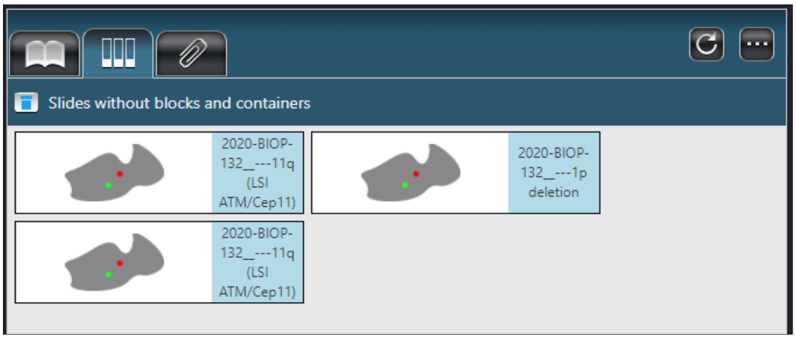


Figure 53 – Digital slides arranged horizontally

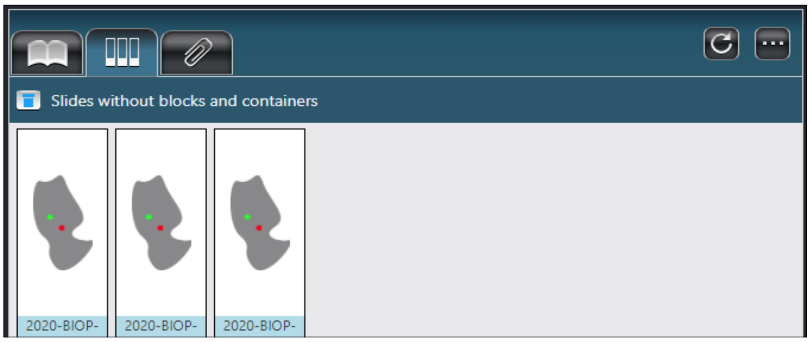


Figure 54 – Digital slides arranged vertically

NOTE: If the case is opened in a new tab, **Registration data** and **Report** panels can be minimized for a larger display of **Digital slides** and other **Attachments**.

The thumbnail size of a digital slide can be small, medium and large and can be set by the **Size of the digital slide thumbnail** option selector under the **User configuration settings** menu.

Figure 55 – Small thumbnail size of a digital slide

Figure 56 – Medium thumbnail size of a digital slide

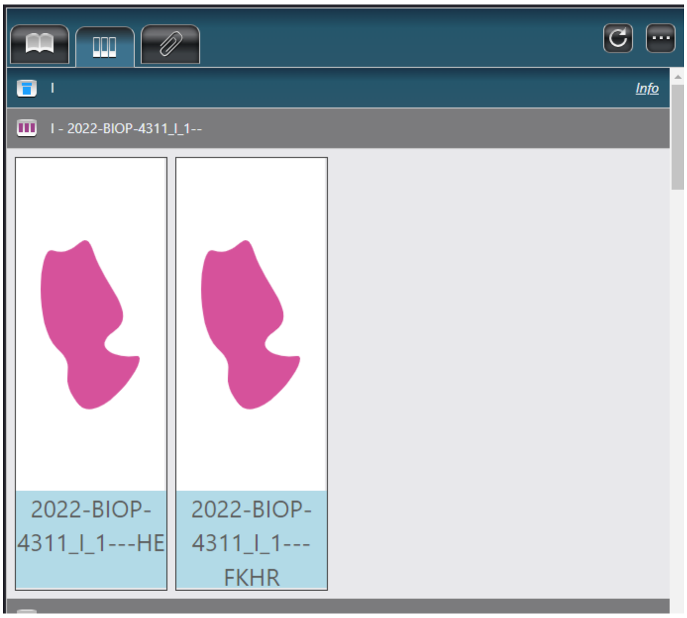


Figure 57 – Large thumbnail size of a digital slide

The slides can be displayed in three categories:

- with blocks
- with containers
- without blocks and containers

If the case involves a section that is not yet digitized, a generic schematic thumbnail image is visible. If the scanning of the slide is finished, the thumbnail of the digital slide will appear.

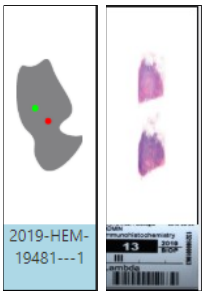


Figure 58 – Generic and real thumbnail views of a slide

If the same slide was scanned multiple times, they are arranged closer together in one cluster.

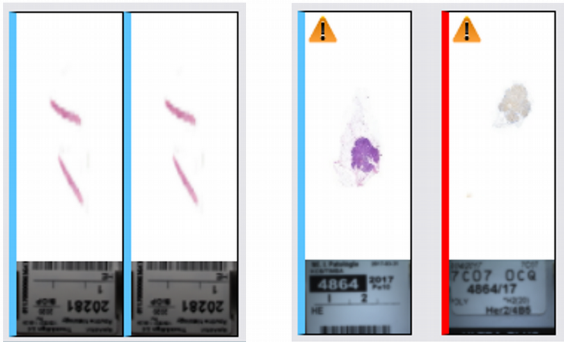


Figure 59 – Digital slide thumbnails in one cluster and separately

By moving the cursor over the thumbnail, the name, staining, barcode, status, and scanning date of the slide are shown on a tooltip.

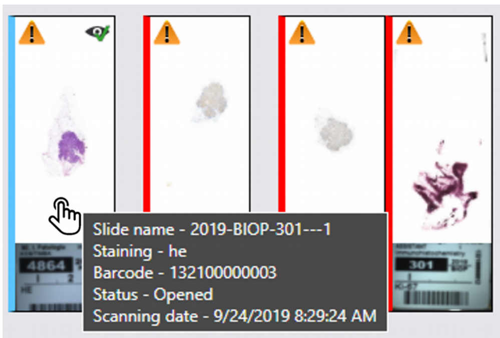


Figure 60 – Thumbnail tooltip

The label of the digital slide can be rotated by clicking on the label icon. This icon appears if the cursor is moved over the label.

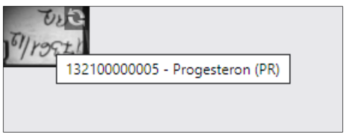


Figure 61 – Rotating icon

If CaseManager™ DX Software is integrated with LIS, LIS sends accurate information about the sections, for example, of containers and blocks:

- **Container name** – The name of the container from which the histological section is taken from.

  NOTE: Move the mouse cursor over *Info* at the container header to view additional information on sample type, location and other note.

- **Block name** – The name of the block from which the histological section is taken from.

  NOTE: Blocks and containers are primarily ranked by name. If there are more blocks/containers with the same name, they are secondarily ranked by barcode and with the same barcode by date.

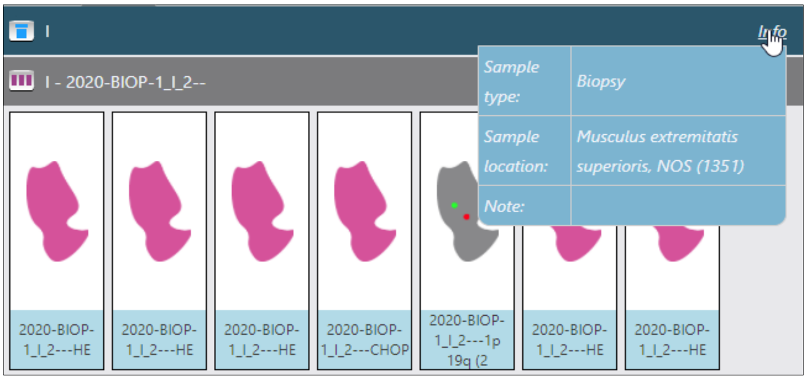


Figure 62 – Container and block name information

If integrated with Track&Sign™, to make a better diagnosis, the pathologist can also ask for special examinations for a case. The extra requests can be added to the container(s) or to the block(s) registered to the case. The Pathologist's request will be displayed in Track&Sign™ on the **Special examination** page.

- Click the icon to open the **Special examination request** window.

Figure 63 – Special examination request icon

- Select **Containers without blocks, Blocks**, **Protocol(s)**, **Examination groups** and **Examinations** and your request is added to the special examination requests list. A **Note** can also be specified. When finished, click **Send request**. If a **Special examination request** is sent, the status of the case is updated from In progress to Pending. If all **Special examination requests** are sent but the LIS process has not started yet, the status of the case is updated from **Pending** to **In progress**. If processing a **Special examination request** has not started yet by LIS, it can be both deleted and its priority can be set.

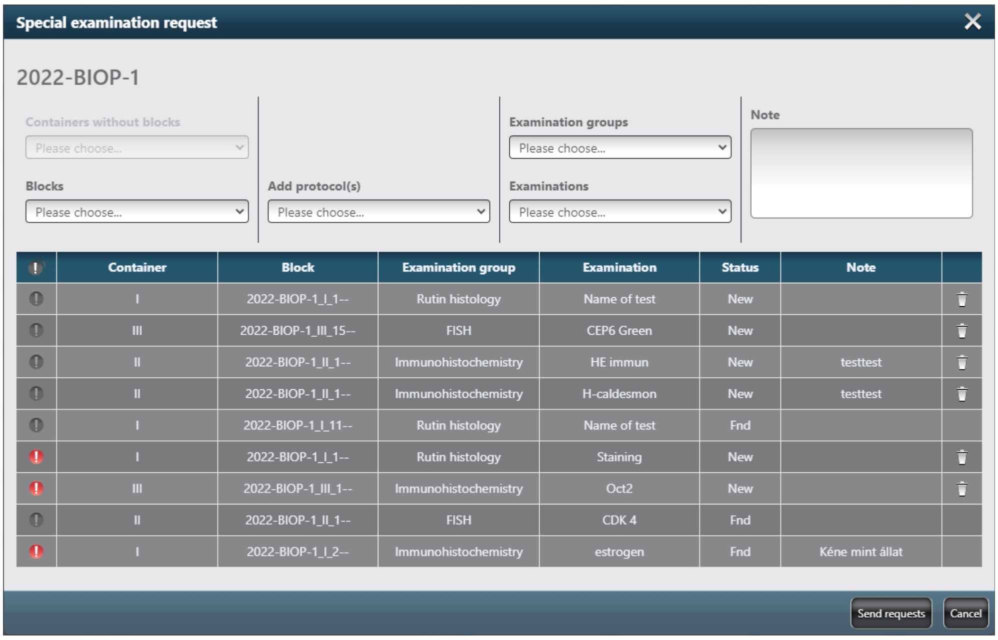


Figure 64 – Special examination request

3.4.3 Attachments tab

This panel may include **Macroscopic images**, **Snapshots**, **Documents**, and **Recordings** as attachments of the case, and any of these can be added to the case report as well.

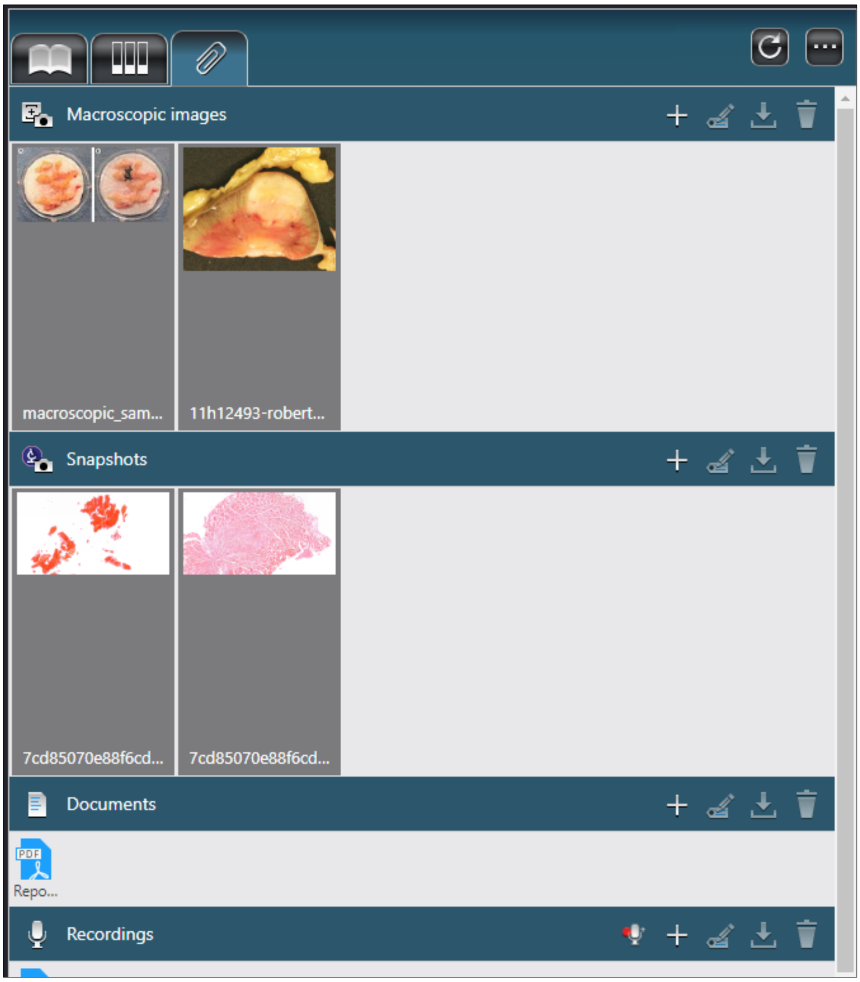


Figure 65 – Details of a selected case

At the attachment tab of the case details section the user can upload files by clicking . In the **Upload attachment** window the user can browse for one or more file(s). If you double-click an attachment, it will be open in a new browser tab.

Supported attachment types:

- macroscopic images
- snapshots
- documents
- recordings

Audio files recorded in Track&Sign™ are listed in **Recordings**, macroscopic images are listed in **Macroscopic images**, and the snapshots taken in ClinicalViewer™ are listed in **Snapshots**.

Supported file formats:

- avi
- bmp, gif, jpeg, jpg, png, tif (bmp and tif files cannot be attached to a case report)
- txt, rtf, doc/docx, ods/odt
- pdf
- mp3, wav
- xls/xlsx

A description can also be added to the selected file(s). The description appears when the cursor is moved over the microscopic/snapshot image or the appearing icon (documents/recordings). The maximum length of the character string is 250 when naming the attachment, and the maximum file size of attachments is 10MB.

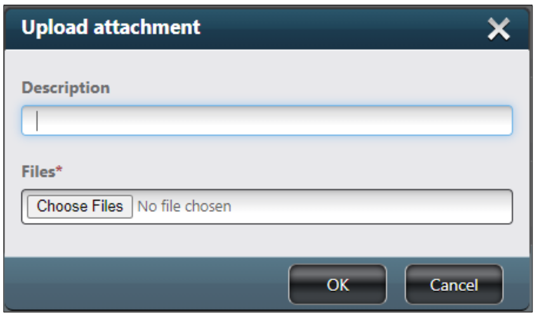


Figure 66 – Upload attachment window

By clicking the button the **Edit attachment** window opens and a previously uploaded file's **Description** and **Attachment type** can be modified.

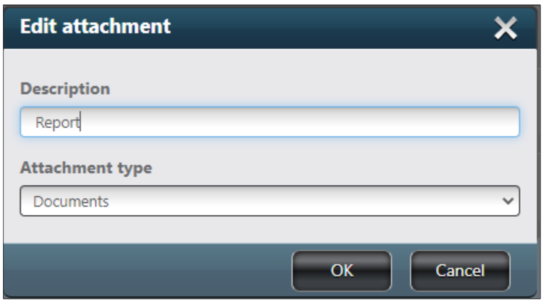


Figure 67 – Edit attachment window

By clicking , a previously uploaded file can be downloaded, and by clicking , a previously uploaded file can be deleted.

NOTE: To use the features mentioned above, you must select a file first.

Click the  button to record an audio file as an attachment to the selected case. In the **Audio recorder** window you can start, pause, stop, and save your voice recording session.

NOTE: In the file name, the case number is fixed, so it cannot be edited or deleted but a note can be added to it.

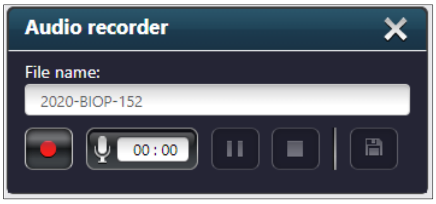


Figure 68 – Audio recorder window

NOTE: The **Audio Recorder** feature requires a secure (HTTPS) connection. The microphone must be enabled in your browser prior using it for recording.

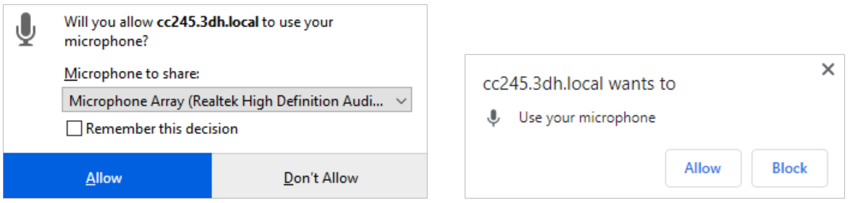


Figure 69 – Allow the site to use the microphone in Mozilla Firefox and Google Chrome

3.4.4 Opening slides in ClinicalViewer™

At the **Digital slides** panel of the **Case details** section after the scanning process, the thumbnail of the digital slides appear. Once you click on the slide thumbnail, the digital slide automatically will be opened in ClinicalViewer™.

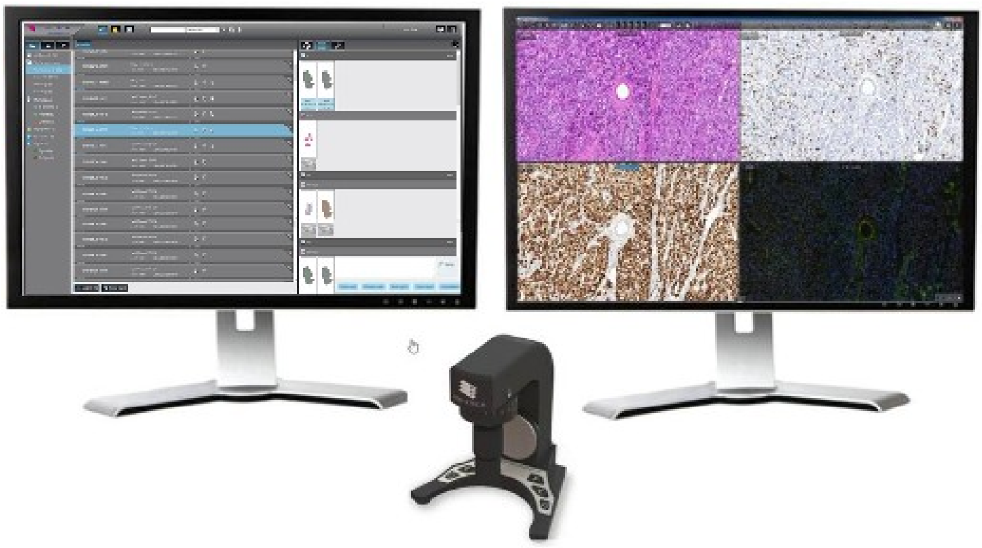


Figure 70 – Open digital slides in ClinicalViewer™

The patient and staining data is displayed in ClinicalViewer™, as well, on the actual digital slide. This feature makes the management of such data more accurate during the diagnostic process and helps to avoid any mishandling or displacement of patient data.

Digital slides can have three statuses:

1. New
2. Opened
3. Examined

- **New** – A digital slide is already scanned but the user has not opened it yet in ClinicalViewer™.
- **Opened** – The user has already opened the digital slide in ClinicalViewer™.
- **Examined** – The user has already finished examining the digital slide. Click the icon **Set as examined** (see figure below) on the slide thumbnail to set this status.

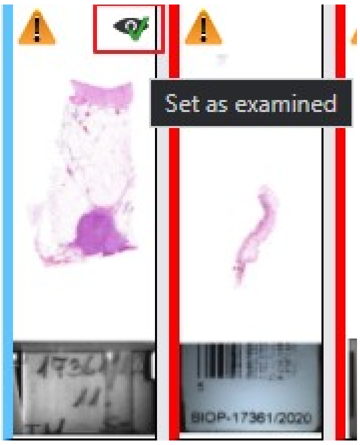


Figure 71 – Set digital slide as examined

The status of a slide is user-depending. For example, the user who has opened a slide has the slide in status **Opened** but the user who has not yet opened it has the slide in status **New**.

The status of a slide is marked with a bold, colored borderline on te left side of the slide:

- **New** – red
- **Opened** – blue
- **Examined** – green

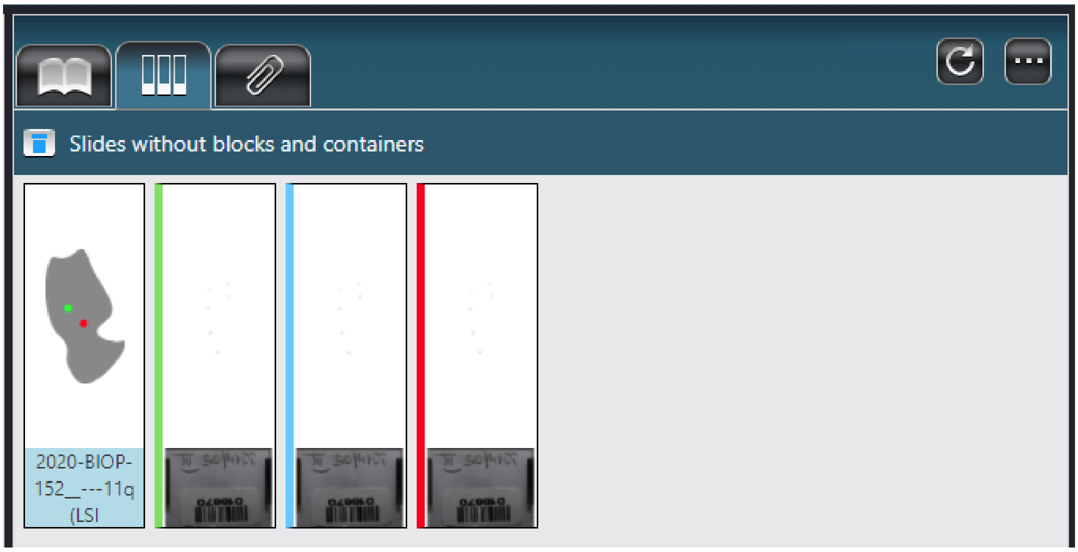


Figure 72 – Colored marking of the status of digital slides

On the slide in status **Opened**, click to set the status **Examined**.

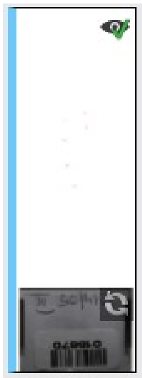


Figure 73 – Digital slide in status Opened

On the slide in status **Examined**, click to set the status **Opened**.

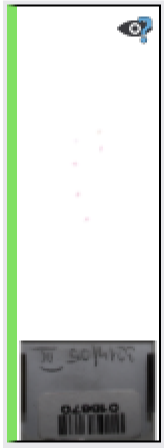


Figure 74 – Digital slide in status Examined

These icons are displayed when the related cases are in status **In progress** and **Pending**.

On a digital slide tab, the icon shows if the slide is made on a non-diagnostic (Dx) but research (Rx) scanner.

Figure 75 – Digital slide made on a non-Dx (Rx) scanner

Move your cursor over the icon to show the objective and resolution information of the slide. Note that the color of this icon varies depending on objective type. The icon shows which slide is actually open in ClinicalViewer™.

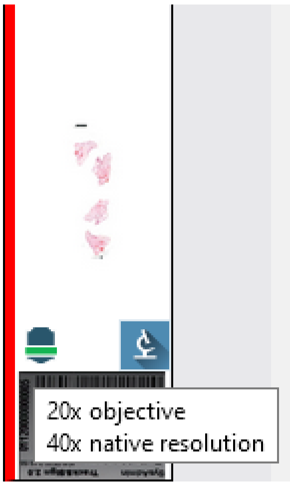


Figure 76 – Objective/Resolution info and Open in ClinicalViewer™ icons

Figure 77 – ClinicalViewer™ - patient and staining data

On slides opened from CaseManager™ DX Software, Quantification starts in a special **Diagnostic** mode. In this mode, the user can quickly perform automatic analyses of the digital slide, and the results can be sent directly to the CaseManager™ DX Software's database.

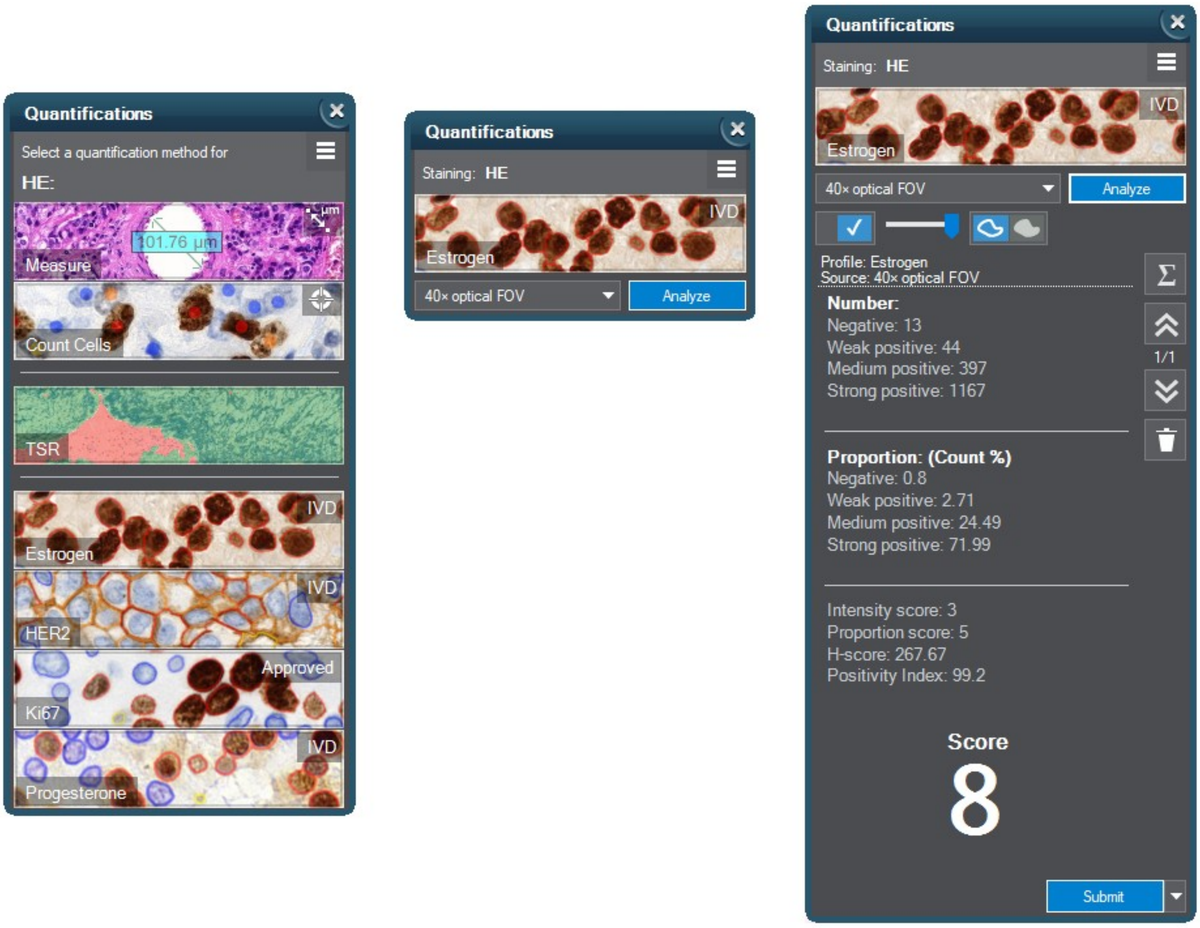


Figure 78 – Quantification – diagnostic mode, example

The Quantification results are displayed in the CaseManager™ DX Software's **Report** form under the **Quantifications** button.

On the **Report** form, the icon indicates research only quantifications, while the icon shows if the slide is made on a non-diagnostic (Dx) but research (Rx) scanner. The user can add the results of automated image analysis to the official CaseManager™ DX Software PDF report, by clicking in the **checkbox**, or, alternatively, the Quantification results can be deleted by clicking on the icon.

2020-BIOP-17361_1---HE

Name	Results	Unit
Quant name	CellQuant	
Profile name	test	
Profile type	RUO	
Software version	Diagnostic Applications 1.1.0.149481	
Start time	10/15/2021 11:23:41 AM	
Source region	Current position	
Annotation area	0.09	mm2
Mask area	0.03	mm2
Total count	2048	pcs
Relative mask area	28.68	%
Object frequency	22789.43	pcs/mm2
Positivity Index	78.66	%
Positive mask area	79.23	%
Scored object	Nucleus	
Negative	437	pcs
Weak positive	1436	pcs
Medium positive	175	pcs
Strong positive	0	pcs
Negative	21.34	%
Weak positive	70.12	%
Medium positive	8.54	%
Strong positive	0	%
Score	6	
Intensity score	1	
Proportion score	5	
H-score	87.21	

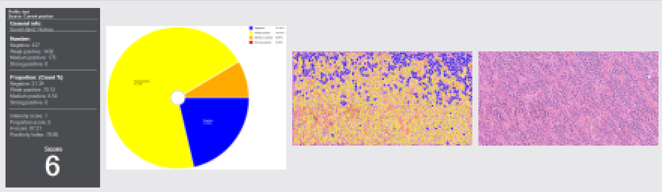


Figure 79 – Quantifications

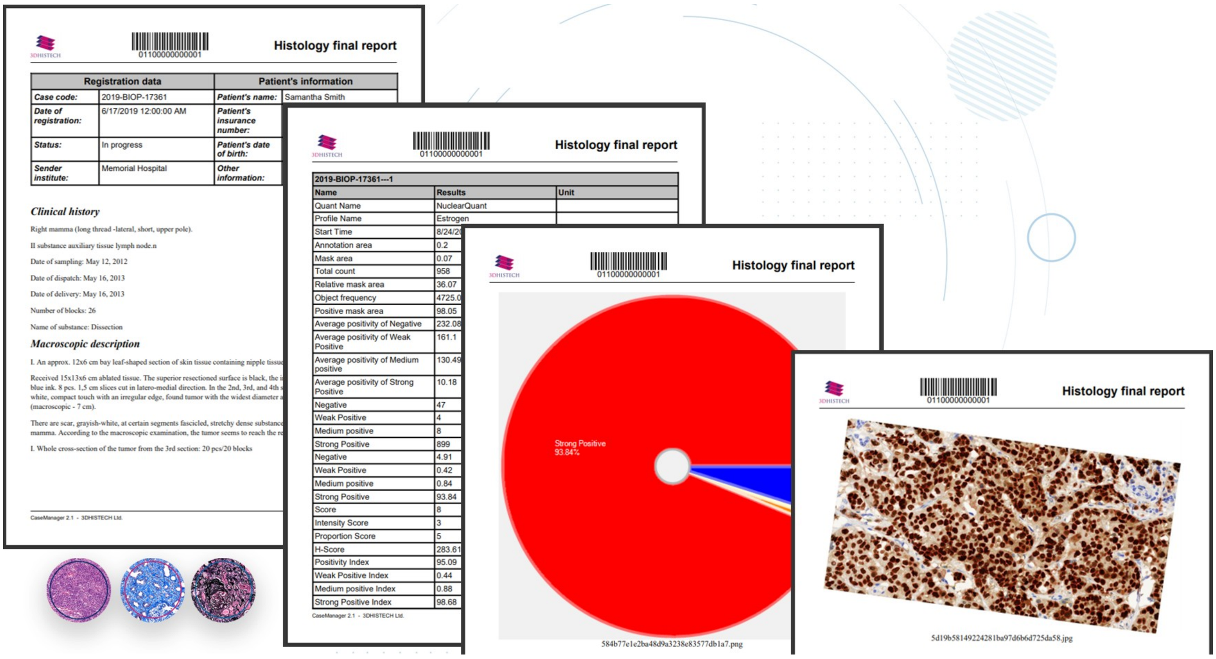


Figure 80 – Quantification data in the PDF report

4 Configuration

Click to get to the **Configuration** menu of CaseManager™ DX Software. Upon clicking this button the main user configuration panel of CaseManager™ DX Software is displayed.

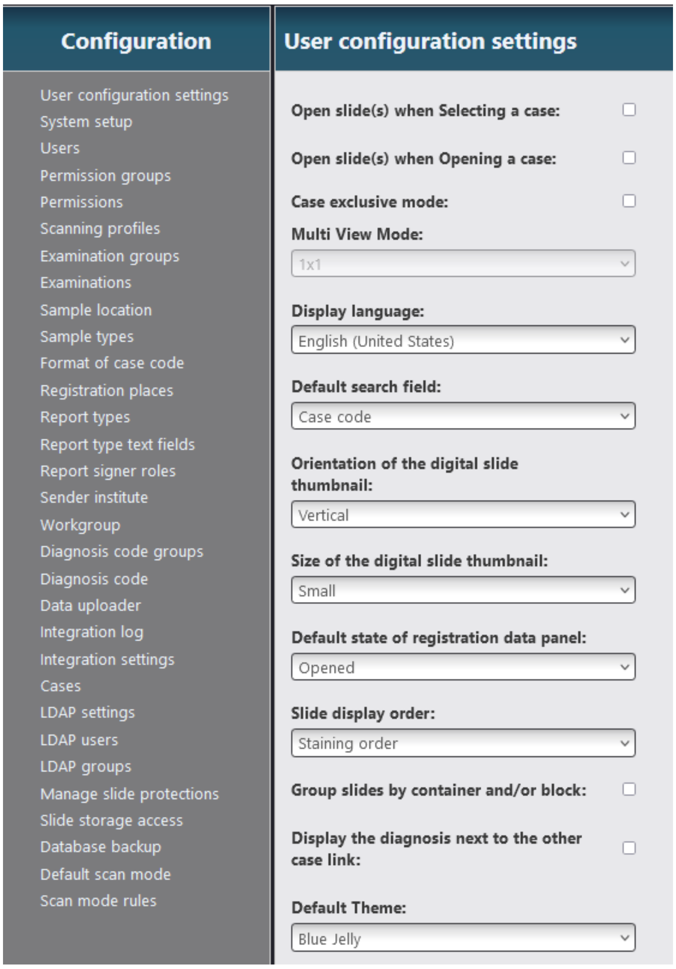


Figure 81 – Full configuration panel

In this panel you can deactivate/activate system preferences available in your permission group concerning several topics.

NOTE: Only the administrator user has access to all the configuration options. Users have access only to those options that the administrator have set for this panel.

- By clicking the button, you can return to the home screen of CaseManager™ DX Software.
- By clicking you can terminate the current session by signing out from the system.

4.1 General description of permission groups

Configuration that is available for you to see, set or modify can vary depending on the permission group you are in (**System administrator, Administrator**, **Assistant**, **Doctor** or **Supervisor doctor**).

The below table includes all the visible configuration options for each group that are set as default:

Configuration	**Administrator**	**Doctor / Supervisor doctor / Assistant**
User configuration settings	✓	✓
System setup	✓	✗
Users	✓	✓
Permission groups	✓	✗
Permissions	✓	✗
Institution(s)	✓ Only System administrator	✗
Scanning profiles	✓	✓
Examination groups	✓	✓
Examinations	✓	✓
Sample location	✓	✓
Sample types	✓	✓
Format of case code	✓	✓
Registration places	✓	✓
Report types	✓	✗
Report type text fields	✓	✗
Report signer roles	✓	✗
Sender institute	✓	✓
Workgroup	✓	✓
Diagnosis code groups	✓	✓
Diagnosis code	✓	✓

Data uploader	✓	✗
Integration log	✓	✓
Integration settings	✓	✗
Cases	✓	✗
LDAP settings	✓	✗
LDAP users	✓	✗
LDAP groups	✓	✗
Protocols	✓ Only System administrator	✗
Protocol content	✓ Only System administrator	✗
Manage slide protections	✓	✗
Slide storage access	✓	✗
Database backup	✓	✗
Default scan mode	✓	✓
Scan mode rules	✓	✓

The below table includes all the configuration options that each group can set or modify:

Configuration	Administrator	Doctor	Supervisor doctor	Assistant
User configuration settings	✓	✓	✓	✓
System setup	✓	✗	✗	✗
Users	✓ All	✓ Private	✓ Private	✓ Private
Permission groups	✓	✗	✗	✗
Permissions	✓	✗	✗	✗
Institution(s)	✓ Only System administrator	✗	✗	✗
Scanning profiles	✓	✗	✗	✓
Examination groups	✓	✗	✗	✓
Examinations	✓	✗	✗	✓
Sample location	✓	✗	✗	✓
Sample types	✓	✗	✗	✓
Format of case code	✓	✗	✗	✗
Registration places	✓	✗	✗	✗
Report types	✓	✗	✗	✗
Report type text fields	✓	✗	✗	✗
Report signer roles	✓	✗	✗	✗
Sender institute	✓	✓	✓	✓
Workgroup	✓	✗	✗	✗
Diagnosis code groups	✓	✗	✗	✗
Diagnosis code	✓	✗	✗	✗
Data uploader	✓	✗	✗	✗
Integration log	✓	✓	✓	✓
Integration settings	✓	✗	✗	✗

Cases	✓	✗	✗	✗
LDAP settings	✓	✗	✗	✗
LDAP users	✓	✗	✗	✗
LDAP groups	✓	✗	✗	✗
Protocols	✓	✗	✗	✗
Protocol content	✓ Only System administrator	✗	✗	✗
Manage slide protections	✓	✗	✗	✗
Slide storage access	✓	✗	✗	✗
Database backup	✓	✗	✗	✗
Default scan mode	✓	✗	✓	✗
Scan mode rules	✓	✗	✓	✗
Generated data uploader	✓ Only System administrator	✗	✗	✗

If Track&Sign™ is integrated with CaseManager™ DX Software, the Assistant permission group is divided into several subgroups:

- Case registration assistant
- Gross examiner assistant
- Tissue processing assistant
- Sectioning assistant
- Scanning assistant
- Report reviewer assistant

Important!

If Track&Sign™ is integrated with CaseManager™ DX Software, the Assistant permission group includes all the above subgroups throughout the document.

Note: While the administrator can set or modify all users, the doctor, supervisor doctor or assistant can only set or modify their own users.

Note: The integration log is a read-only setting that no user has access to set or modify.

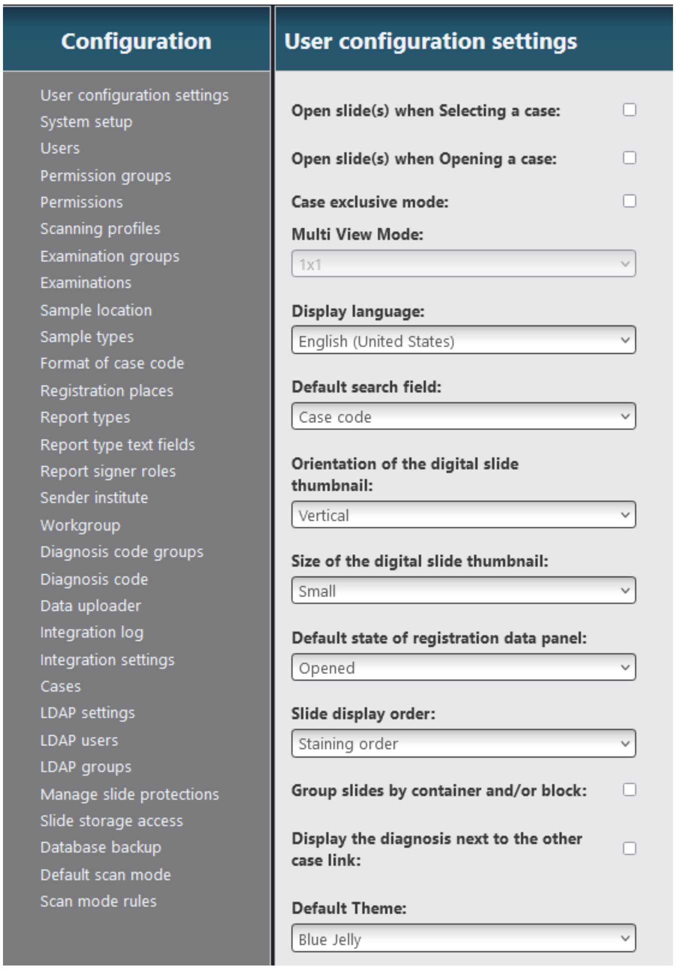


Figure 82 – Configuration menu set as default for an Administrator

Users having administrator role can modify their own password, access Slide Storage and manage user configuration settings, system setup, users and their permissions, intitution(s) (only System administrator), permission groups, saved scanning profiles, examination groups (for example: immunohistochemistry), examinations (list of staining, for example, Ki67), sample location (breast, brain), sample types, format of case code, registration places, report types, report type text fields, report signer roles, sender institute, workgroup, diagnosis code groups, diagnosis code, data uploader, integration log, integration settings, all the cases, LDAP settings, LDAP users, LDAP groups, Manage slide protections, Protocols (only System administrator), Protocol content (only System administrator), Slide storage access, database backup, default scan mode and scan mode rules.

Only the administrator has permission to delete cases and users.

Deletion is only a logical deletion, each deletion (user or case) can be reverted. If you are in administrator role, please refer to *CaseManager™ DX Software Administrator Guide* for more details.

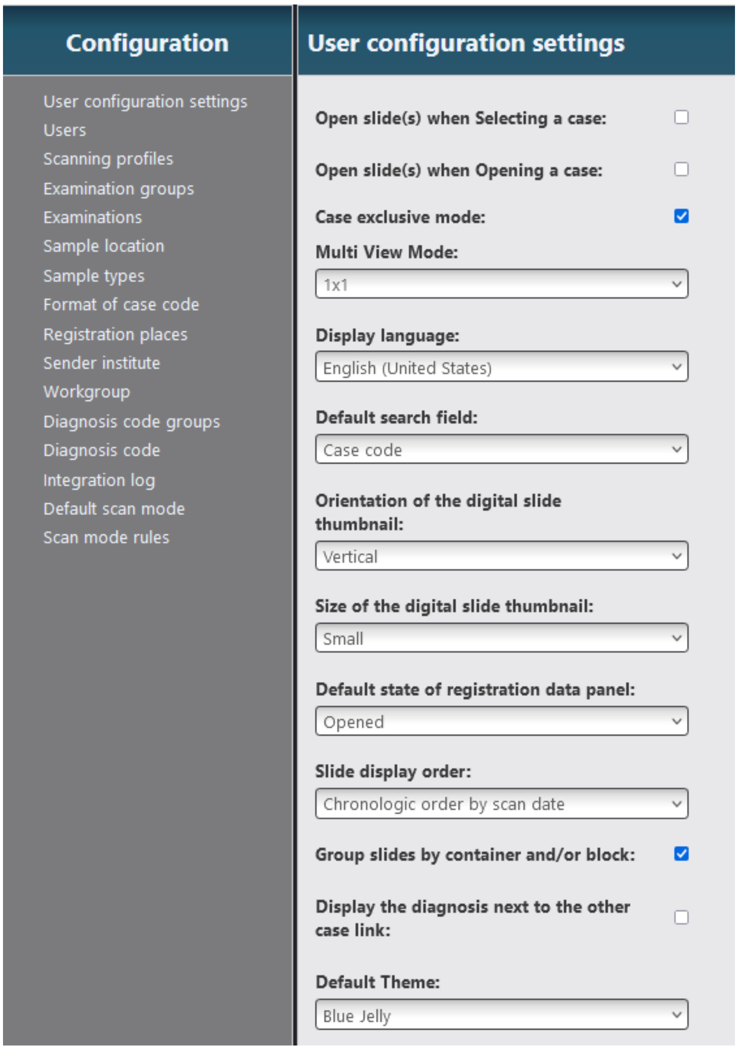


Figure 83 – Configuration menu set as default for Normal users (Doctor / Supervisor doctor / Assistant)

Normal users that belong to **Doctor / Supervisor doctor / Assistant** permission group, can modify their own password and manage user configuration settings, users, saved scanning profiles, examination groups (for example: immunohistochemistry), examinations (list of staining, for example, Ki67), sample location (breast, brain), sample types, format of case code, registration places, sender institute, workgroup, diagnosis code groups, diagnosis code, integration log, default scan mode and scan mode rules.

NOTE: Required input fields are marked with red '*' characters throughout CaseManager™ DX Software.

4.2 Configuration options for normal users

4.2.1 User configuration settings

On this panel, the users can set their own User configuration settings.

> **Important!**
>
> All changes must be saved by clicking **Save** at the bottom right corner of the panel. When a new item can be created on a configuration panel, the **Create new** button can be found there. You can find the **Back to list** button on **Create**, **Edit** and **Delete** panels at the bottom left corner.

- **Open slide(s) when Selecting a case** – You can activate the function to automatically open the slide with ClinicalViewer™ when selecting the case. As soon as the case is selected, the digital slide is opened in ClinicalViewer™.
- **Open slide(s) when Opening a case** – This function automatically opens the slide with ClinicalViewer™ when opening the case in full screen.
- **Free mode**

> **Important!**
>
> **Free mode** is automatically active if **Case exclusive mode** is not marked.

In **Free mode**, any slide can be opened from any case in CaseManager™ DX Software. This mode is very useful to compare, for example, already diagnosed slides with ones that are actually being examined. **Free mode** makes it possible to handle slides in **Mixed case mode**. In this mode, the case information bars are displayed in different colors in ClinicalViewer™ indicating that the slides belong to different cases. The case information bar of the selected case is displayed in blue (see the middle panel in the picture below).

Figure 84 – Mixed case mode

> **Note:**
>
> The case information bar color of the slide is also displayed in Slide View in CaseManager™ DX Software in the icon on the related slide.

- **Case exclusive mode**

  In **Case exclusive mode**, slides can be opened from only one specific case in CaseManager™ DX Software. In this mode, the opened slides will be closed in ClinicalViewer™ when changing between cases and the following message is displayed on the screen:

If there is a change between **Free mode** and **Case exclusive mode** in CaseManager™ DX Software, ClinicalViewer™ must be closed for the new setting to take effect.

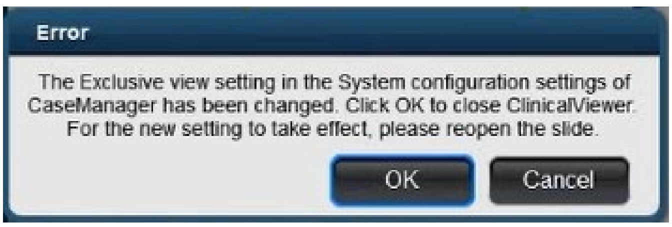


Figure 85 – Exclusive view setting changed error message

Multi View mode – The multiview of slides in ClinicalViewer can be configured here, too, in a drop-down menu. A maximum of nine slides can be opened in a multiview grid from 1x1 to 3x3 views/panes. You can open a set of slides here consecutively by clicking any slide of a selected case. For more information on the ClinicalViewer™ functionalities, see ***ClinicalViewer™ 2.9 User's Guide.***

- **Display language** – Select the language of the interface.
  - English (United States)
  - English (United Kingdom)
  - German – (Germany)
  - Hungarian (Hungary)
  - Italian (Italy)
  - Spanish (Spain, International Sort)
- **Default search field** – Set type of field used by default in searching.
  - Case code – e.g: 2019-HEM-1234
  - Case barcode – e.g: 12345678910
  - Sample original barcode – e.g: barcode received from the LIS or HIS
  - Patient's name or SSN – e.g: patient's information
- **Orientation of the digital slide thumbnail** – Set orientation of the digital slides.
  - Vertical
  - Horizontal
- **Size of the digital slide thumbnail** – Set default size of the digital slide thumbnails on the digital slides tab of the **Case details** panel.
  - Small (default, matching earlier software versions)
  - Medium (1.5x)
  - Large (2x)
- **Default state of registration data panel** – Set default state of registration data panel when you open a case in new browser tab.
  - Opened – Registration data is visible
  - Closed – Registration data is hidden
- **Slide display order** – Set the display order of slides on the Digital slides tab here. The following values can be set by clicking the drop-down menu:
  - Chronological order by scan date
  - Staining order
  - Alphabetical order

- ◦ **Group slides by container and/or block** – Mark this checkbox to group slides by container and/or block. Unmark the checkbox to display the slides without any grouping. This option is ideal for cases with a lot of slides (30-50), it is optimized for the best use of the available screen size.
- ◦ **Display the diagnosis next to the other case link** – If this checkbox is ticked, the diagnosis is displayed next to Other cases after saving.
- ◦ **Default Theme** – The following default themes can be selected from the drop-down menu:
  - BlackJellyDark
  - BlackJellyBlue
- ◦ **Case details customization** – Customize case details information on the **Registration data, Patient's information**, **Other cases** and **Comments** panels.

  Note: For safety reasons the Case code, Patient's name and Insurance number fields cannot be disabled by the user in the User configuration settings.

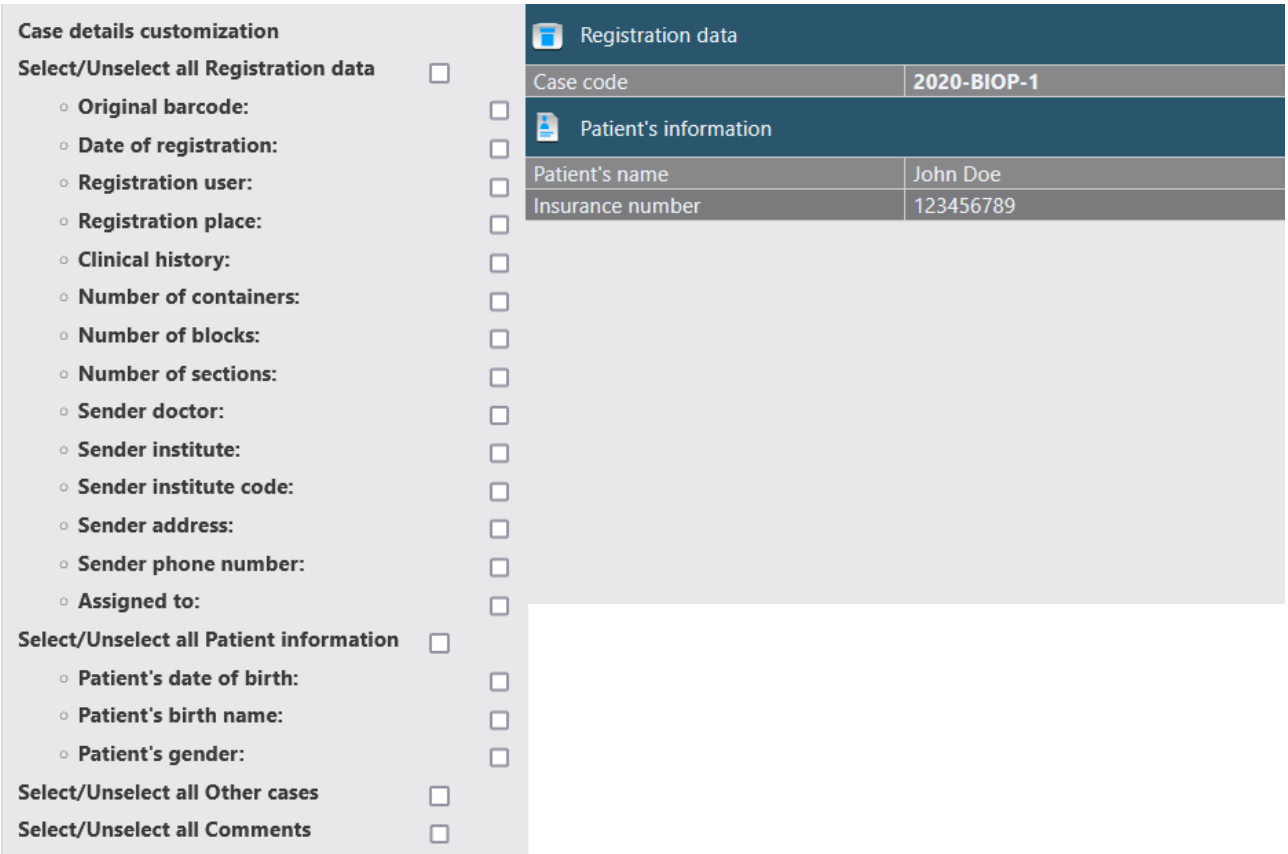


Figure 86 – Case details customization – basic view

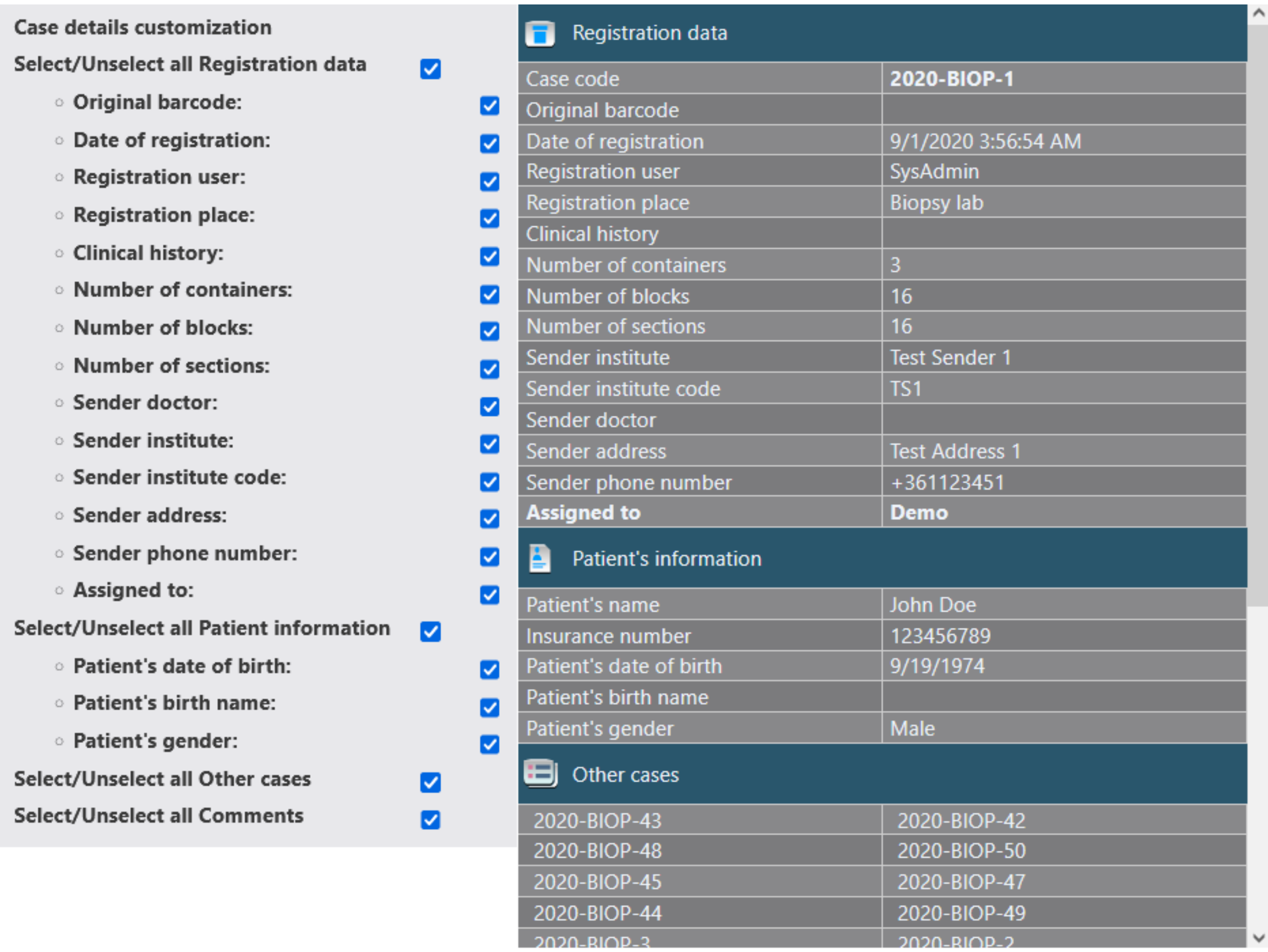


Figure 87 – Case details customization – full view

4.2.2 Users

The **Users** panel contains the list of registered users in the system. Supervisor doctor, doctors, and assistants are allowed to view the list of users by default.

Users

Name	Username	Permission gr...	Workgroup	Date of creati...	E-mail	Phone number	Country	City	Zip code	Address	License number	Note	
SysAdmin	SysAdmin	SysAdmin	Administrators	25/02/2022 01...	admin@admin...								Change password Edit Delete
Administrator	Administrator	Administrator	Administrators	25/02/2022 01...	Administrator...								Edit Delete
HIS	HIS	Administrator	Administrators	25/02/2022 01...	hisuser@hisus...								Edit Delete
Doctor	doctor	Doctor	Doctor	28/02/2022 08...									Edit Delete
user	user	Doctor	Administrators	12/04/2022 09...									Edit Delete

Figure 88 – Users panel

- You can edit your own user data, and change your password if needed. Click **Edit** to modify your personal details, and click **Change password** if you would like to change your password. Enter your old password first, then type in your new password and confirm it.

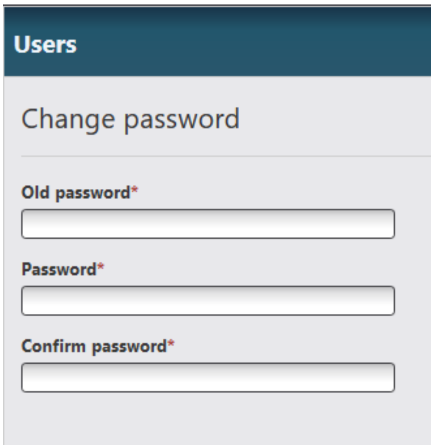


Figure 89 – Change password

If you edit user data, consider that the maximum characters are 30 for **Username**, 10 for **Zip code** and 50 for **License number**.

After the first login, all users must change their password. It is very important from security and data protection point-of-view.

NOTE: It is recommended that the password is at least 8 characters long, and it contains at least one lowercase and an uppercase character, and a number.

Only the administrator can create, edit or delete other users. The **User position**, **Workgroup** and **Permission group** of a registered user can only be edited by the administrator, too, after clicking **Edit**. A user can be deleted only if the user does not manage any case that is "In progress" status.

4.2.3 Scanning profiles

If you are a supervisor doctor, doctor, or an assistant, you can list the saved scanning profiles. An administrator or an assistant can create or edit scanning profiles but only an administrator can delete them. A normal user is allowed to check the saved scanning profile used for scanning.

NOTE: The default scanning profile cannot be deleted. If a user creates a new default scanning profile, this new one functions as default.

Scanning profiles

Default	Name	Description	Data	Xslt	Xmls	Scanner ID	Profile ID	
✓	Default	Default	Default			1	1	Edit Delete

Figure 90 – Scanning profiles

4.2.4 Examination groups

If you are a supervisor doctor, doctor, or an assistant, you can list the saved examination groups. These examination groups have been defined and created by the hospital before installation. The reference code of an examination group is unique. Examination groups can be as follows: **Immunohistochemistry, Routine Histology, FISH, Routine Cytolgy**, etc.

An administrator or assistant can create or edit examination groups but only an administrator can delete them. Maximum 10 examination groups can be created.

Warning!

If you delete an examination group, the examinations attached to the group are also deleted.

Examination groups

Reference code	Name of examination group	
IHC	Immunohistochemistry	Edit Delete
GP	General Processing	Edit Delete
FSH	FISH	Edit Delete
MLC	Molecular (hematology)	Edit Delete
RTC	Rutin cytology	Edit Delete
RTH	Rutin histology	Edit Delete

Figure 91 – Examination groups

4.2.5 Examinations

The examinations are already defined by the hospital before installation. For example: **CD21, Ki67, HER2, HER2 FISH**, etc. The table lists staining types of an examination group, and this list can be customized by the hospital.

Examinations

Examination group	Name	Default scanning profile	
Rutin histology	Name of test		Edit Delete
Rutin histology	Staining		Edit Delete
FISH	11q (LSI ATM/Cep11)	Default	Edit Delete
Immunohistochemistry	CD41	Default	Edit Delete
Rutin histology	218	Default	Edit Delete

Figure 92 – Staining types of an examination group

An administrator or assistant can create or edit examinations but only an administrator can delete them. Supervisor doctors and doctors can only list the saved examinations (staining types).

NOTE: The name of an examination within an examination group must be unique.

4.2.6 Sample location

If you are a supervisor doctor, doctor, or an assistant, you can list the saved sample locations. The table lists sample location names and codes of sample locations. The code of a sample location is unique. These sample locations (for example: **Breast, Brain, Ren, Vena cerebralis, Ductus choleduchus**, etc.) have been defined by the hospital. An administrator or assistant can create, edit, or delete sample locations.

Sample location

Name	Code	
Female, NOS (00XX0)	00XX0,	Edit Delete
Musculus extremitatis superioris, NOS (1351)	1351,	Edit Delete
Musculus flexor digitorum, NOS (1356)	1356,	Edit Delete
Musculus dorsi, NOS (1360)	1360,	Edit Delete
Musculus pectoralis major, NOS (1400)	1400,	Edit Delete
Musculus intercostalis, NOS (1409)	1409,	Edit Delete

Figure 93 – Sample location

4.2.7 Sample types

A sample type can determine the middle part of a case code, for example: 2019-**BIOP**-12345 (where BIOP stands for Biopsy, and HEM for Hematology) but a user can define a different format of case code as well. The name of a sample type is unique.

The supervisor doctor, doctor and assistant users are allowed to list the sample types. These sample types have been defined by hospital. An administrator or assistant can create, edit or delete sample types.

Figure 94 – Sample types

4.2.8 Format of case code

The supervisor doctor, doctor and assistant users have access to the list of case code formats. Case codes have been defined by hospital and is responsible for determining the format. CaseManager™ DX Software can be adapted to the format sent by the LIS. Only the administrator user can create and edit the format of case code.

If you edit the **Format of case code**, consider that the maximum length of the character string is 50 for **Sample type,** 10 for **Short format** and 2 for **Step values**.

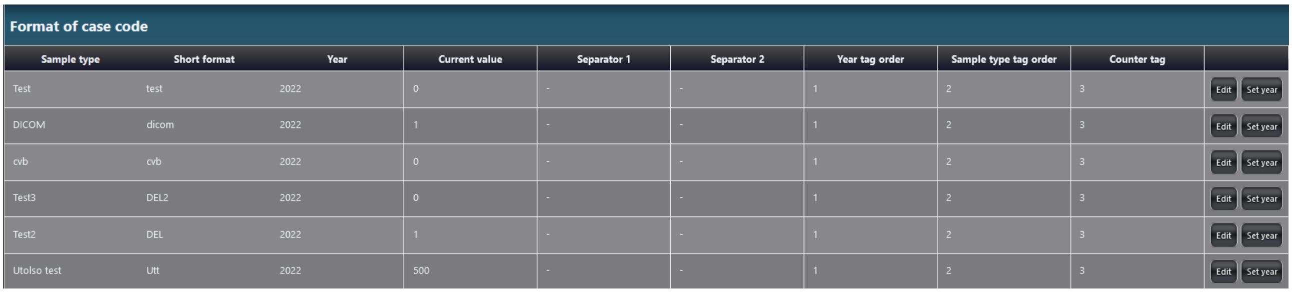


Figure 95 – Format of case code

NOTE: Sample type 'HIS' can neither be edited or deleted.

NOTE: When starting a new year, in case of older format of case codes, the year can be modified by clicking **Set year.** After modification, the current value is set to the default value 1.

4.2.9 Registration places

The supervisor doctor, doctor and assistant users have access to the list of registration places (location where the registration was performed). Registration places have been defined by the hospital. The name of a registration place is unique and is maximum 60 characters long. This list can be customized by the hospital, and CaseManager™ DX Software can be adapted to the format sent by the LIS. Only the administrator user can create, edit and delete list records.

Registration place

Name	
Biopsy lab	Edit Delete
Gross processing lab	Edit Delete
Office	Edit Delete
Prof XY lab	Edit Delete
Orange lab	Edit Delete

Figure 96 – Registration place

4.2.10 Sender institute

Sender institutes play important role in case registration. The supervisor doctor, doctor and assistant users have access to the list of sender institutes (institutes where the samples are received from). CaseManager™ DX Software can be customized and adapted to use sender institute record sent by the LIS. All users are allowed to create, edit and delete sender institute records. The name and code of a sender institute are unique.

Sender institute

Name	Code	Address	Phone number	E-mail	Fax	
Test Sender 1	TS1	Test Address 1	+361123451	Test@Email.com	02153551	Edit Delete
Test Sender 2	TS2	Test Address 2	+368452182	Test@Email.ch	32151512	Edit Delete
IIS	IIS2					Edit Delete
ORGANIZATION D	DD	Street Or Mailing Address Sydney 6721 ...	063012345678			Edit Delete
SzÃ¶vettan (3DHISTECH)	191225413					Edit Delete
ORGANIZATION NAME	Code	Street Or Mailing Address City 4732 95	06301234567			Edit Delete
012345678901234567890123456789	01234567890123456789	Öv 3	+0611000000	demo@demo.com.cs		Edit Delete
ORC.21.1-D_Sender-Name-3DHISTECH	ORC.21.1-A_Sender-ID-3DH	Street Or Mailing Address City 4732 95	06301234567			Edit Delete
Sender-Name-3DHISTECH	Sender-ID-3DH	SenderAddress_Öv_utca_3 SenderCity_Bu...	00 36 1 467 56 00	integration@3dhistech.com	00 36 1 467 56 00	Edit Delete

Figure 97 – Sender institute

4.2.11 Workgroup

The supervisor doctor, doctor and assistant users have access to the list of workgroups. These workgroups determine the workgroup-related general folders and the folder management. The name of a workgroup is unique. Only the administrator user can create, edit and delete list records.

Figure 98 – Workgroup

4.2.12 Diagnosis code groups

This list includes all the diagnosis code groups used in the system for each case. A normal user is only allowed to list code groups. Creating, editing and deletion of diagnosis code groups can be performed exclusively by administrator users. The name of a diagnosis code group is unique.

Figure 99 – Diagnosis code group

4.2.13 Diagnosis code

Important!

Before creating a diagnosis code, you must specify the diagnosis code group first.

This list includes all the diagnosis codes used in the system for each case. Use **Filter** input field to search for a code in the group selected from the **Diagnosis code group** drop-down list. A diagnosis code is unique.

NOTE: When filtering diagnosis codes, only the first 100 hits are listed.

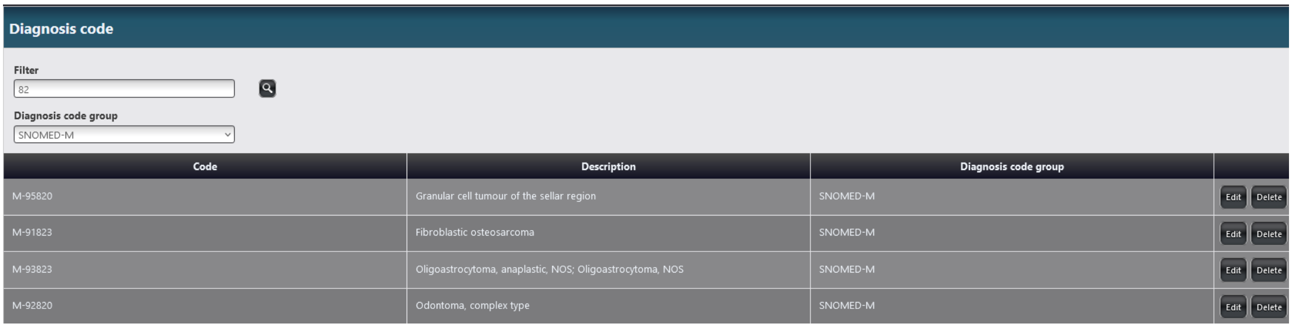


Figure 100 – Diagnosis code

A normal user is only allowed to list codes. Creating, editing and deletion of diagnosis codes can be performed exclusively by administrator users.

Warning!

If you delete a diagnosis group, the groups attached to the diagnosis group are also deleted.

4.2.14 Integration log

The logging of events and interactions between CaseManager™ DX Software and the HIS/LIS is very important. This list displays events that have been logged in the previous day, but you can widen the time interval when searching for older logs (for example, you can set a two-week period or more). Logs are displayed in a page containing a maximum of 100 entries, and click **Next** to go to the following page.

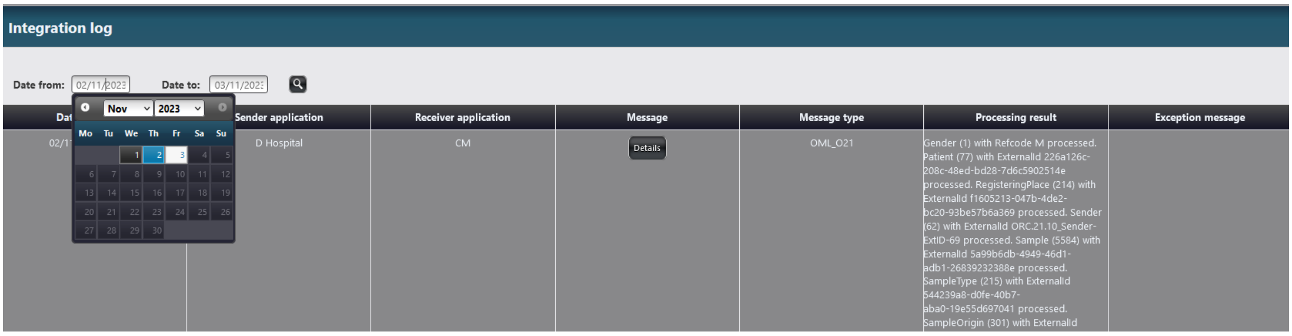


Figure 101 – Integration log

4.2.15 Default scan mode

On the **Default scan mode** panel, the user with permission from the administrator can set each setting of the scan mode as default for all slides handled by CaseManager™ DX Software.

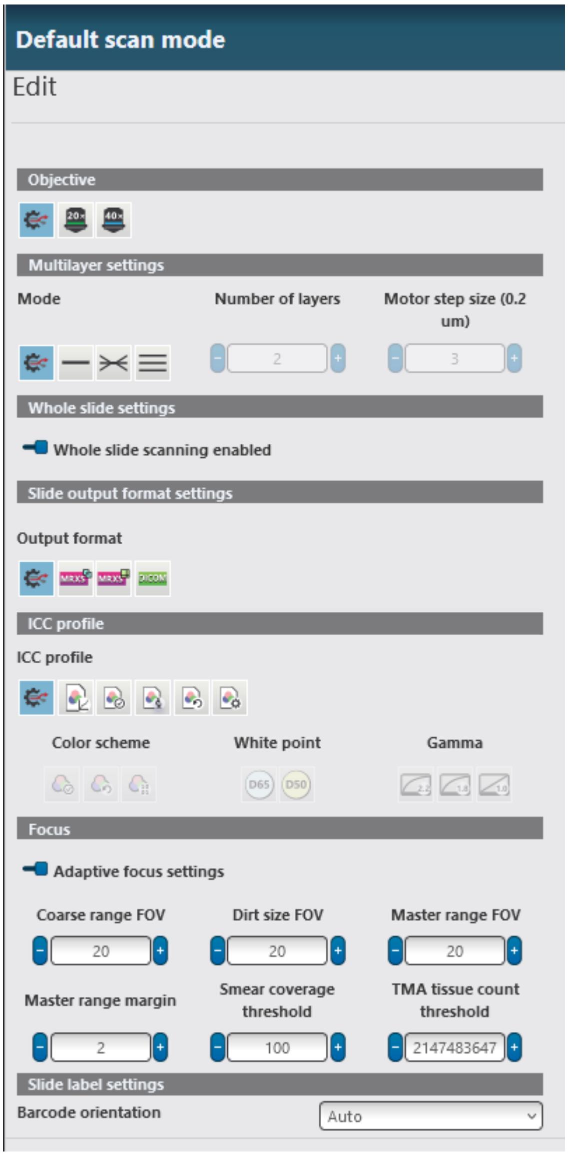


Figure 102 – Default scan mode

See the default scan mode options listed below:

- **Objective**
  - Not set
  - 20x

    - 40x

- **Multilayer settings**
    - Mode
        - Not set
        - Single layer – Select this option if you want to scan a single layer of the slide.
        - Extended focus – The software selects the sharpest image from each focus level for each image field, and combines them into one single image. Therefore, those parts that were blurry in auto/manual focus will also be sharp. This method guarantees the maximum depth of sharpness; however, it reduces digitization speed.
        - Z-Stack – With this method, separate layers are created and stored, and can be opened with ClinicalViewer™. The Z-Stack slide contains the extended focus layer.
    - Number of layers – Both for Extended focus and Z-Stack scanning methods, you can determine the desired number of focus levels with the Number of layers slider. The current focus value is the starting point. If you set 5 for example, one current, two focus levels above and below FOVs are captured. Therefore, it is advised to choose an odd number for the focus levels.
    - Motor step size – It determines the spacing between focus levels. One step is around 0.2 µm.

NOTE: The **Number of layers** and **Motor step size** settings only take effect if either the Z-Stack or Extended focus multilayer settings option is selected.

- **Whole slide settings** (three-state slide switch)
    - Whole slide scanning enabled – If activated, the system performs whole slide scanning. Note that the scanning area can be modified in the related scanner software.
        - Disable
        - Scanner’s default
        - Enable

  - Output format
    - Not set
    - MRXS
    - DICOM
- **ICC profile**
  - ICC profile – Select an applicable preset color profile to be used for Brightfield scanning. Settings according to the profile has effect on the color set, color temperature, and gamma value of the scanned image.
    - Not set
    - Calibrated linear – Color scheme is defined by calibration (Gamma value is not included).
    - sRGB standard – Color scheme is defined by calibration (standard Gamma value -2.2- is applied).
    - sRGB microscope like – Color scheme is defined by calibration (standard Gamma value / White Point: D50).
    - Legacy –
    - Custom – The parameters are freely customizable.
  - Color scheme
    - Not set
    - Calibrated – The scheme is defined by the color calibration slide.
    - v119 legacy
    - Raw – The color information of the recorded raw image is applied.
  - White point
    - Not set
    - D65 – Color temperature according to a standard illuminant D65 white point value is applied (6500K / daylight).

        - D50 – Color temperature according to a standard illuminant D50 white point value is applied (5000K / horizontal daylight)
    - Gamma
        - Not set
        - Standard – A value of 2.2 is used.
        - Medium – A value of 1.8 is used.
        - Off – A value of 1.0 is used.
- **Focus** (three-state slide switch)
    - Adaptive focus settings
        - Disable
        - Scanner's default
        - Enable
    - Coarse range FOV
    - Dirt size FOV
    - Master range FOV
    - Master range margin
    - Smear coverage threshold
    - TMA tissue count threshold
- **Slide label settings**
    - Barcode orientation
        - Automatic
        - Normal
        - Upside down

4.2.16 Scan mode rules

On the **Scan mode rules** panel, the user with permission from the administrator can define a specific scan mode rule and overwrite the default scan mode.

A newly created scan mode rule applies only to slides registered in the system after saving the new rule. Similarly, if a scan mode rule is deleted, it applies only to slides registered in the system after deletion.

Slides registered between the creation and deletion of a scan mode rule keep the properties of the given rule even after the rule was deleted. It is not possible to override a scan mode rule for one or more specific slides in the system.

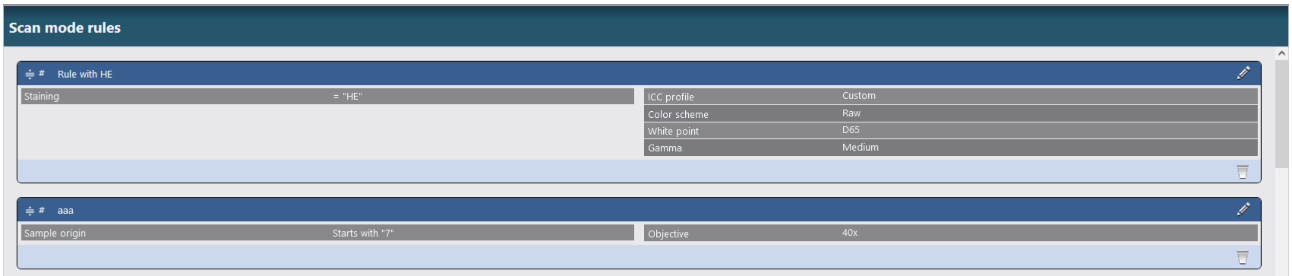


Figure 103 – Scan mode rules

To create a scan mode rule, click **Create**. The new rule is then added to the end of the queue (bottom of screen).

Click ![edit] to edit the scan mode rule. The **Edit scan mode rule** window is displayed.

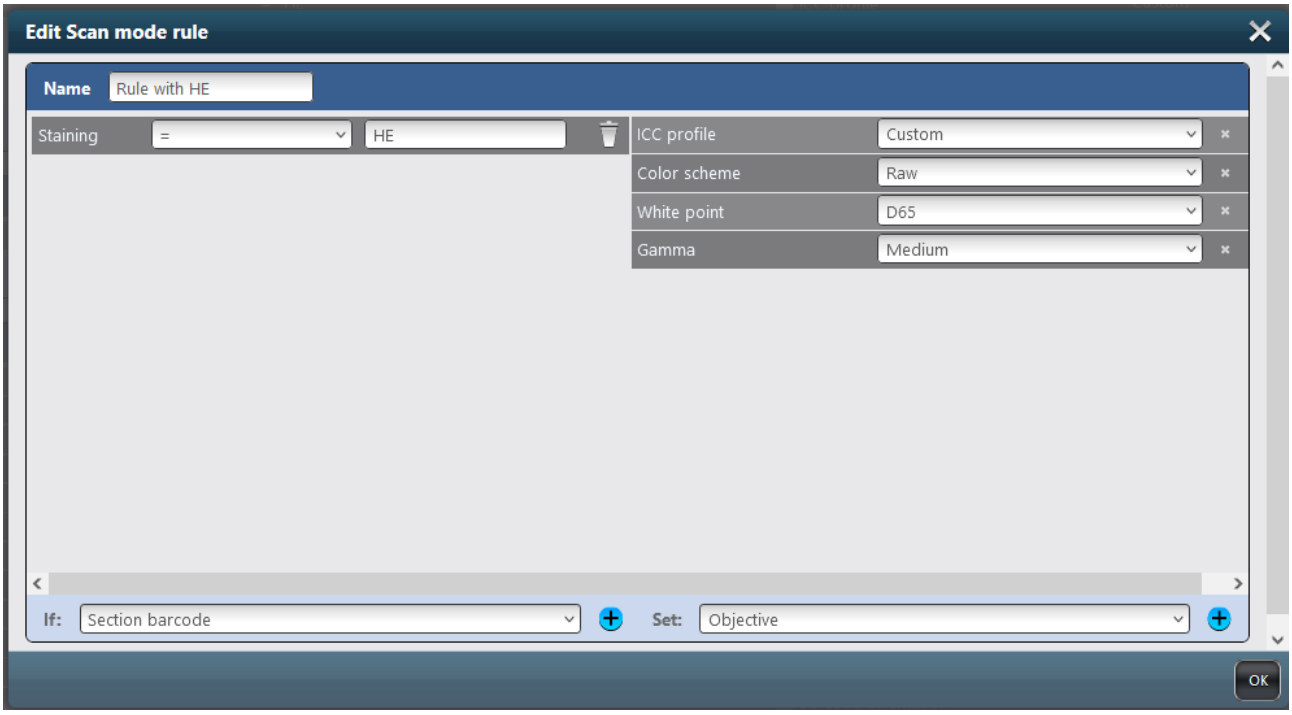


Figure 104 – Edit scan mode rule

Enter the name of the rule in the **Name** text field. In the first column displayed below **Name**, set the **If** value in the drop-down menu.

You can select from the following **If** values: Section barcode, Section code, Section note, Block code, Block note, Block part 1, Block part 2, Block part 3, Sample code, Sample barcode, Sample code middle part, Sample urgent, Sample origin code, Sample origin, Sample type, Patient gender, Patient note, Staining group, Staining, Container note.

Click to add the search condition to the queue. Select category from the drop-down menu displayed and enter the value.

In the second column, set the **Set** value in the drop-down menu.

You can select from the following **Set** values: Objective, Apply output format of the slide, Output format, Mode, Number of layers, Motor step size, Whole slide scanning enabled, ICC profile, Color scheme, White point, Gamma, Adaptive focus settings, Barcode orientation.

Click to add the search condition to the queue. Select category from the drop-down menu displayed. Click **OK** to approve the changes.

You can delete a Scan mode rule by clicking . Click **Save** to save the changes.

5 Teleconsultation

The teleconsultation (TC) feature allows CaseManager™ DX Software users the following functionalities:

- Create, start and join live TC sessions.
- Share patient and registration data
- Use reporting tools
- Share macroscopic images overtaken from the LIS
- View digital slides simultaneously
- Chat with other attendees

To access teleconsultation and display its main screen, click the  button.

On this screen, the user can **Start**, **Finish** or **Join** an existing TC session by clicking on the respective buttons.

Also here it is possible to create and schedule a new teleconsultation by clicking on the  button.

Figure 105 – The main screen of teleconsultation

5.1 Create teleconsultation

By clicking the button, the **Create teleconsultations** panel is displayed.

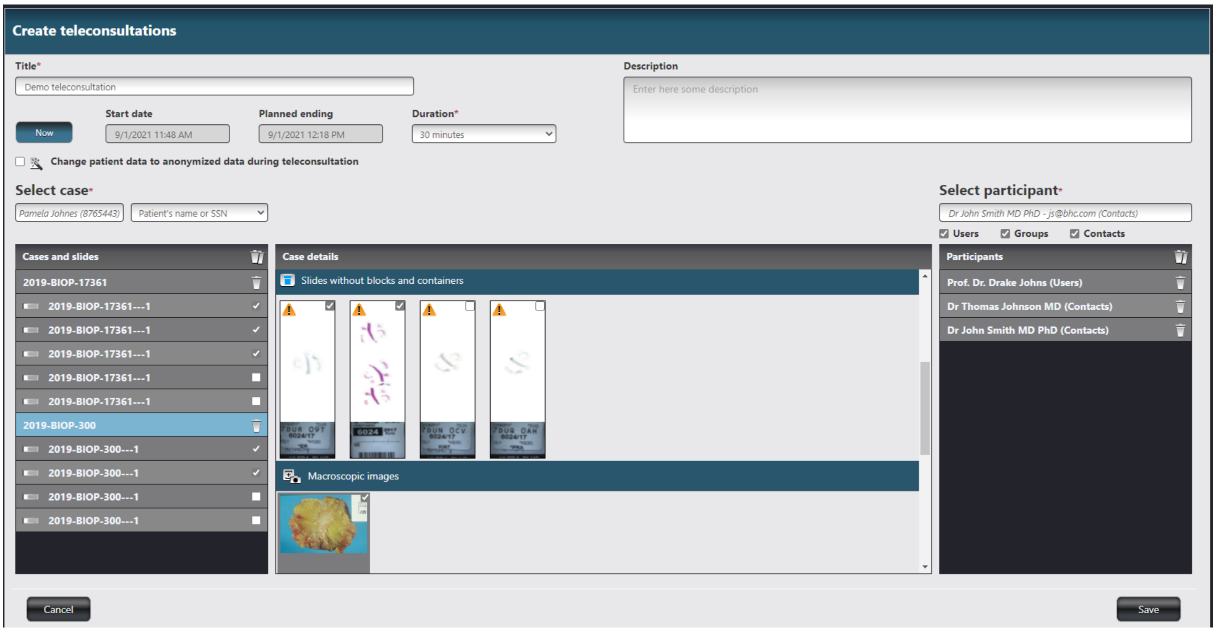


Figure 106 – Create teleconsultation

Write in the **Title** of the TC to the related text box. Select **Start date** in the calendar by clicking into its box.

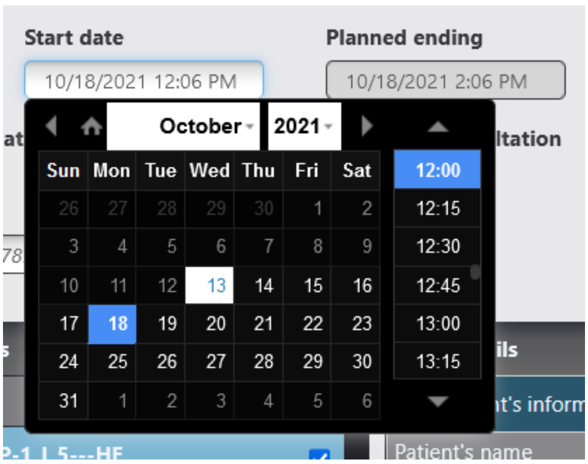


Figure 107 – Teleconsultation calendar

Select **Duration** from the drop-down menu. The **Planned ending** box is filled in automatically.

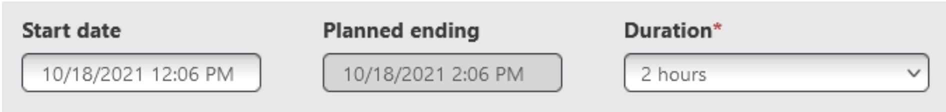


Figure 108 – Time details of teleconsultation

If you don't want that the participants can see patient data during the TC session, mark the **Change patient data to anonymized data during teleconsultation** checkbox.

Optionally, enter some description of the case to the **Description** text field.

By entering an ID or keyword in the **Select case** search input field, you can search in the following categories within the selected folder:

NOTE: For a successful search, exact values must be specified.

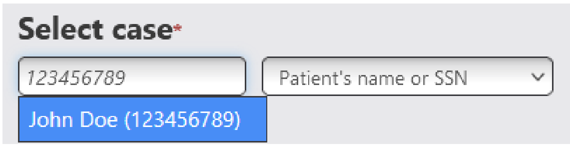


Figure 109 – Select case

- **Case code** is a code for identifying the case. This code can be either a code as an identifier used and sent by LIS or added to CaseManager™ DX Software, generated by the institute.
- **Case barcode**: If case code is stored in barcode, the software automatically searches for the case in the database based on the recorded barcode string (that is visible in the text box).
- **Sample original barcode**: Case identifier used in other systems, search is performed based on barcode stored in Hospital Information and Laboratory Information Systems.
- **Patient's name or SSN**: Search for cases stored in the database that can be identified by the patient's name or SSN.

To activate search criteria, press **Enter** on the keyboard. The search results are displayed on the **Cases and slides** panel.

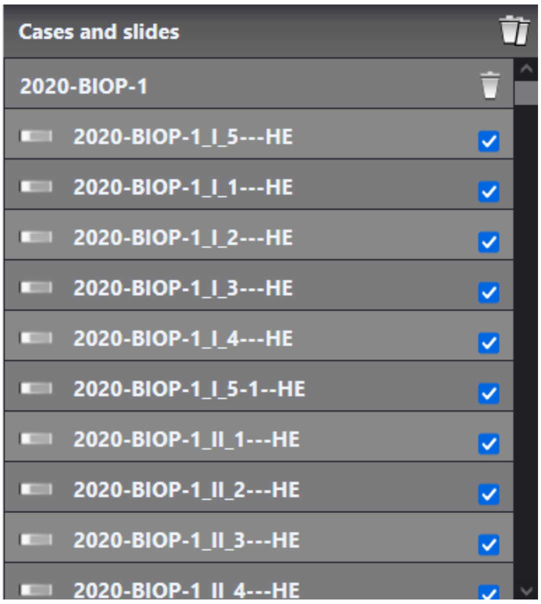


Figure 110 – Cases and slides

Select a case or slide to display **Case details** in the middle panel of the **Create teleconsultations** panel.

Mark the checkbox next to the slide that you want to delete from the TC and click . Click  to delete all selected slides.

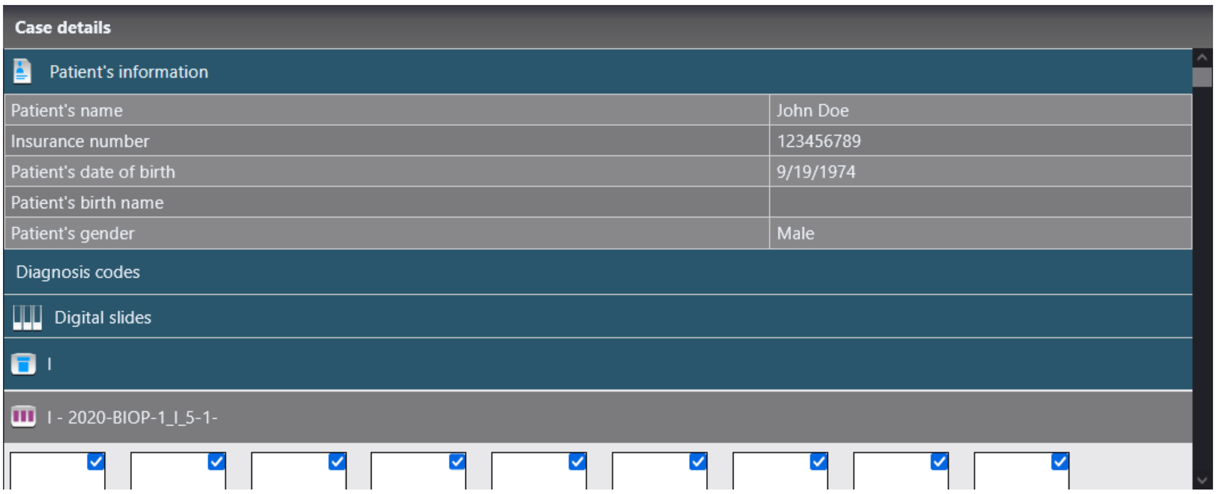


Figure 111 – Case details

Case details include the following information:

- Patient's information
- Diagnosis codes
- Digital slides
- Macroscopic images
- Snapshots
- Documents

You can mark and delete items on the Case details panel, too.

Select participants for the TC.

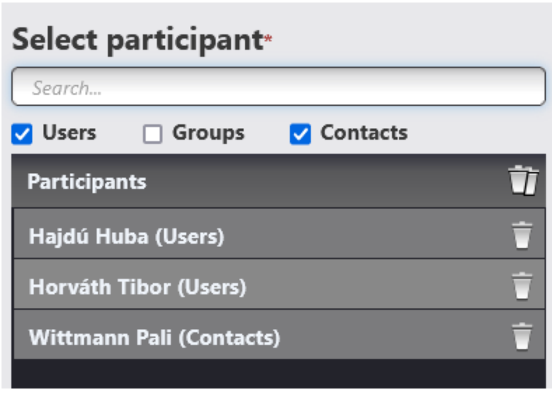


Figure 112 – Select TC participant

Mark the checkboxes **Users**, **Groups** or **Contacts** depending on where you want to search for. Start typing any fraction of the name of the participant in the Search box to list related hits.

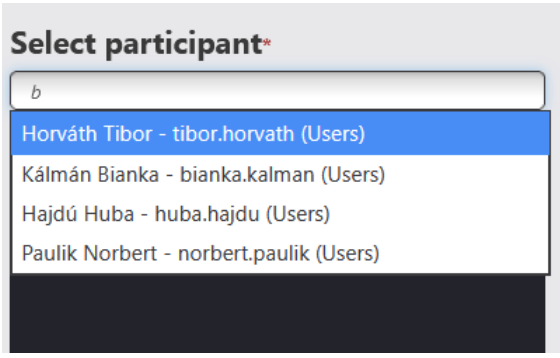


Figure 113 – Searching for a TC participant

Select a participant to add to the list of **Participants**. To delete a participant, click and click to delete all.

NOTE: The TC contacts do not need to be CaseManager™ DX Software users.

When all details of the TC are set, click **Save** in the bottom right corner of the **Create teleconsultations** panel. If you want to exit without saving, click **Cancel** in the bottom left corner.

5.2 The teleconsultation session

5.2.1 Host's side

When the teleconsultation is running, the host can see the screen below.

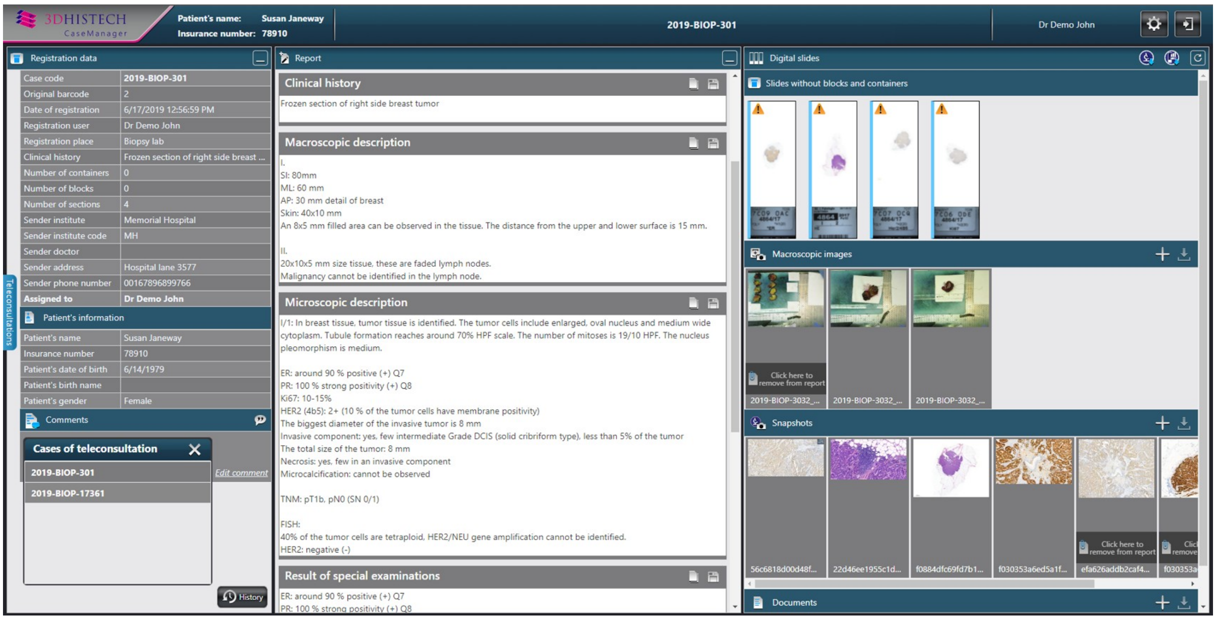


Figure 114 – Teleconsultation: host's screen

If more cases are included in the TC, the host can change case in the **Cases of teleconsultation** window. The host has the permission to edit the report items and open the slides of the TC case in ClinicalViewer™.

For more information on handling teleconsultation in ClinicalViewer™, see *ClinicalViewer™ User's Guide*.

5.2.2 Participants's side

When the teleconsultation is running, the participant can see the screen below.

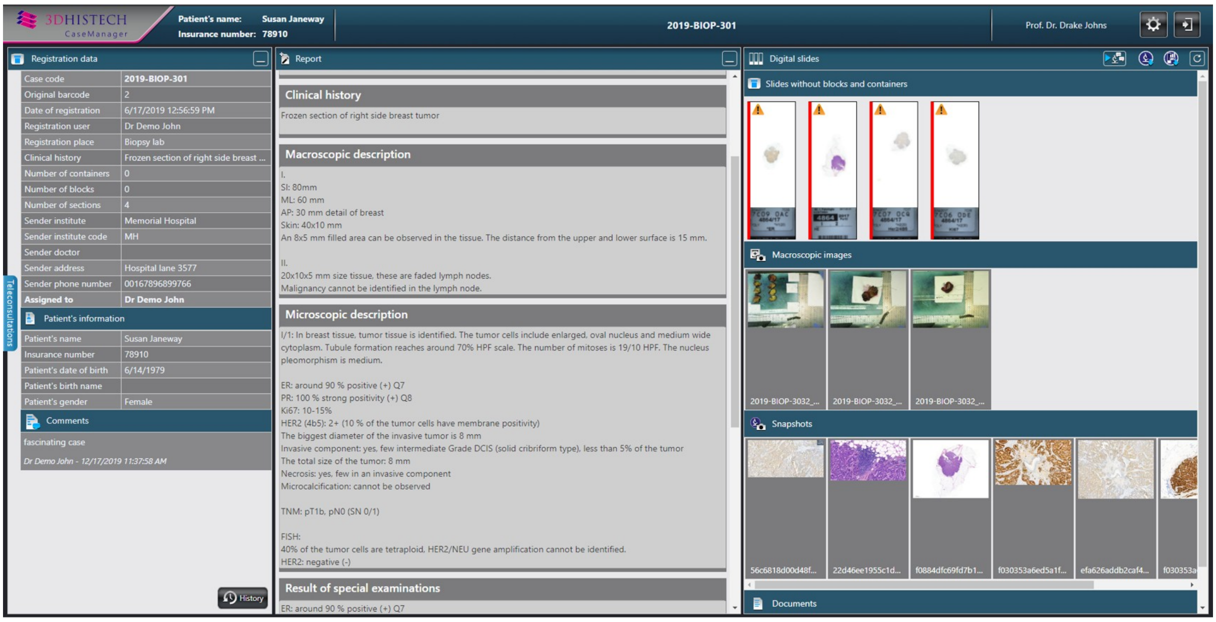


Figure 115 – Teleconsultation: participant's screen

The participant only has view rights on this screen, except the permission to join a ClinicalViewer™ session by clicking the icon.

For more information on participating a teleconsultation in ClinicalViewer™, see *ClinicalViewer™ User's Guide*.