

SC PACS SERVER USER GUIDE



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Software version – 2.3.0.0

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Sofia, Bulgaria

This document can be found on the installation CD
SOFIA 1407, 9 „Kozyak“ street



SC PACS Viewer is class lib certified which allows
for its use as a medical software for diagnostic purposes.

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TABLE OF CONTENTS

Document history	4
SC PACS Server.....	6
System requirements and installation	8
Hardware requirements	8
Software requirements.....	8
Hospital Informaton System/HIS Integration	8
Worklist modality.....	8
Installation	8
Starting the SC PACS Server	9
Viewing log files.....	9
Registration	10
Information about SC PACS Server	10
SC PACS Server Options	10
Option description	10
How to use SC PACS Server	13
Install plugin locally to run SC PACS ZFP on two screens with option to add SC PACS Server IP address	13
SC PACS Server – SC PACS WEB VIEWER	17
Requirements	17
User interface.....	17
Annotation and image processing tools	25
Report	32
Notes.....	38
USER ACCOUNTS AND RIGHTS	42
Known issues	49

DOCUMENT HISTORY

Version	Author	Date	Description of the change
0	Miroslav Nikolov Valentin Tafrajiiski	Dec 2012	Initial version SC PACS Server v. 1.1.0.0
1	Miroslav Nikolov Valentin Tafrajiiski	Dec 2013	SC PACS Server version 1.2.0.0 – bug fixes were introduced
2	Miroslav Nikolov Valentin Tafrajiiski	Dec 2015	SC PACS Server 1.3.0.0 – big fixes; added new features - Patient Editor and Licensing method
3	Miroslav Nikolov Valentin Tafrajiiski	Dec 2016	SC PACS Server 1.4.0.0 – big fixes; added new features – Worklist Modality (page 5), AE Title check (page 8); Prior retrieval/ import folders (page 9)
4	Miroslav Nikolov	13/11/2017	SC PACS Server 2.0.0.0 – added new features and detailed SC PACS Web Viewer instructions – page 11
5	Miroslav Nikolov	02/04/2018	SC PACS Server 2.1.0.0 – added new features in SC PACS Web Viewer (page 21, 22, 23, 24)
6	Maria Atanasova	16/10/2019	SC PACS Server 2.0.0.1 Changed build version – p. 5 Changed screenshots by reason of different current view – p. 13, 14, 15, 16, 17, 22

			Added description of Magnifying Glass, Magnifying Glass Settings – p. 19, Arrow – p. 20, Show Scale – p. 21, File Upload – p. 21 Added information and screenshots in Report all over – from p. 24 Added section User Accounts and Rights – p. 30
7	Maria Atanasova	31/07/2020	Updated new features on pages: p. 5 - DICOM store of a separate device, p. 17 - clicking on the series, p. 20 - manually entering pre-defined parameters, p. 21 – MPR functionality, p. 23 - Switch to next series buttons, p. 30 – Save as jpeg button, p. 31 – Export to AVI, p. 33- duplicated patient ID interface, p. 32- Save study to another server while importing, p. 34 – users have the right DICOM import Added known issues – page 36
8	Maria Atanasova	16/06/2021	Updated new features on pages: p.15 - added new view of the calendar for filtering the Study Date p.26 – Added functionality for saving image with or without patient data p.28 – Added Google Speech-to-Text p.30 – Added print QR code and Barcode 128 buttons p.35 – Added information about Help menu p.41 – Added functionality for appointments
9	Maria Atanasova	19.07.2021	Updated new feature: p.41 to p.44 – DYMO Barcode
10	Maria Atanasova	04.10.2022	Added section “Install plugin locally to run SC PACS ZFP on two screens with option to add SC PACS Server IP address” – p.12

11	Maria Atanasova	12.03.2023	Added information about the device according to MDR requirements
12	Maria Atanasova	03.04.2023	Changed company address

SC PACS SERVER

The intended purpose of the SC PACS software is related to the archiving of medical imaging studies, communication of imaging studies with medical imaging devices, visualization and management of imaging studies, statistics, recording of studies on electronic means and their printing on medical printers.

The biggest consumers of SC PACS are hospitals. SC PACS main purpose is to replace hard film copies with digital images that can be used and seen by several different medical professionals and different medical automation systems simultaneously.

The SC PACS Server contains the image database. The SC PACS Viewer connects to the SC PACS Server through a local area network (LAN) or a wide area network (WAN).

SC PACS is a medical device according Rule 11 of MDR.

SC PACS is produced by Software Company Ltd., Bulgaria.

Address: SOFIA 1407, 9 „Kozyak“ street.

Websites: <https://novotika.com>, www.pacs.bg

SRN: BG-MF-000024466

Basic UDI-DI: 380060000681SCZFP2PQ

Notified body: KIWA CERMET ITALIA

SC PACS Server ver. 2.3.0.0 is based on the DICOM (Digital Imaging and Communications in Medicine) standard published by the ACR (American College of Radiology) and the NEMA (National Electrical Manufacturers Association). The server implements all the basic protocols, services and data types of this standard:

- It stores DICOM files sent by any DICOM client application (through a local network or the Internet)
- It stores any received DICOM information in a database

- It stores large amounts of patient studies and provides direct access to them; the minimum storage capacity is 5 TB per year
- It can do DICOM store of a separate device / modality to a separate folder or device
- It retrieves any requested DICOM information from a database
- It responds to a Query and Retrieve request from any client applications that support DICOM
- It shows various types of useful information to the user while the application is running

A DICOM server is defined by the following:

- IP-number (or host name) of the computer on which the DICOM server is running
- Port number to which the server is listening
- Application Entity Title (AET) which has been assigned to the server

SYSTEM REQUIREMENTS AND INSTALLATION

HARDWARE REQUIREMENTS

The hardware requirements depend on the type of operating system. For the server application to run on an MS Window environment, it is required to have a server computer with a 2GHz dual-core processor and 8GB of RAM or more.

SOFTWARE REQUIREMENTS

OS Microsoft Windows Server
Microsoft SQL Express 2012 x64 or later
.Net Framework 4.7 or later
Windows Installer 4.5

HOSPITAL INFORMATION SYSTEM/HIS INTEGRATION

It is possible to have integration with a HIS (Hospital Information System) with the help of the HL7 standard. The Server uses MPPS (Modality Perform Procedure Step) functions to send the status of a study and the respective report to the HIS.

It is possible to have integration through the DICOM standard. The system is compatible with API interfaces of other PACS / HIS providers.

WORKLIST MODALITY

This is used for the creation of an electronic schedule to plan upcoming exams. The submission of the schedule data to the digital imaging devices is done via the DICOM Worklist Provider.

This module is also used to set-up devices that support the function Worklist. The module sends the planned patient's data to the imaging device with completed patient ID, date of birth, age, etc.

INSTALLATION

Start the Setup.exe file. First, if necessary the SC PACS Server installer will install some additional applications. After that the Welcome screen will appear. Click on Next. Please read the license agreement carefully and if you agree, check "I agree" and click on Next. Fill in the registration information and press Next. Select the folder where you want the DICOM server to be installed and press Next. Finally, you will see the Confirmation screen. Press Next to complete the installation. During the installation process a window asking for connection to HIS will appear.

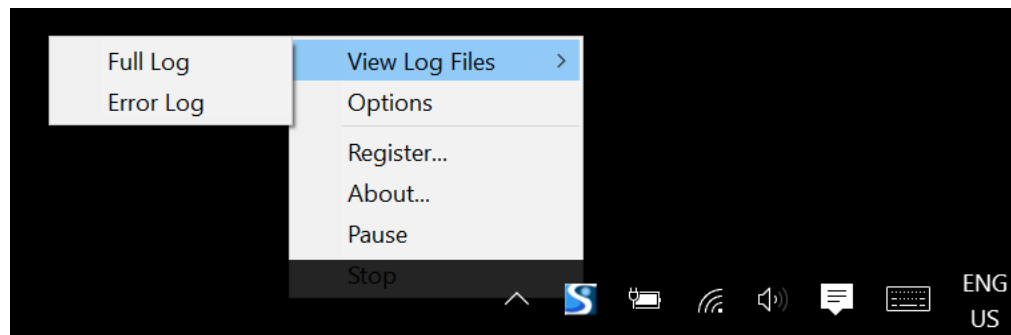
Then, the user will have to create a data base or select an existing one. Create/select your database and press OK. Wait until the installation is complete, and then press Close.

As part of the SC PACS Server installation, there is a parallel MS SQL Express installation and configuration.

STARTING THE SC PACS SERVER

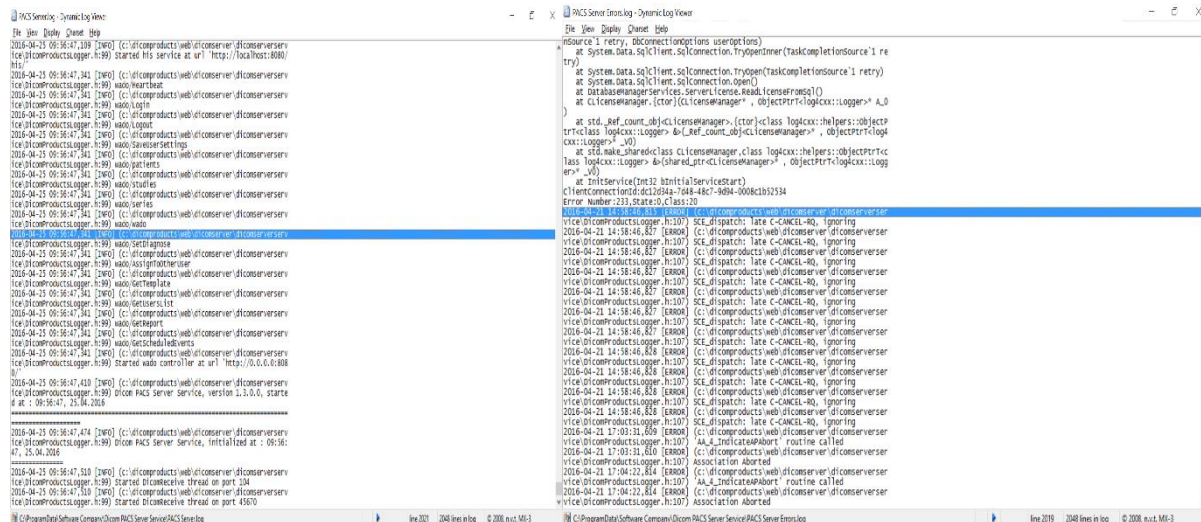
Press the Start button and choose Software Company – SC PACS Server. Once started, the server application will start automatically every time you start your computer.

After you start the Server, its icon will appear on the task bar. Now you can open the context menu – right-click on the SC PACS Server icon.



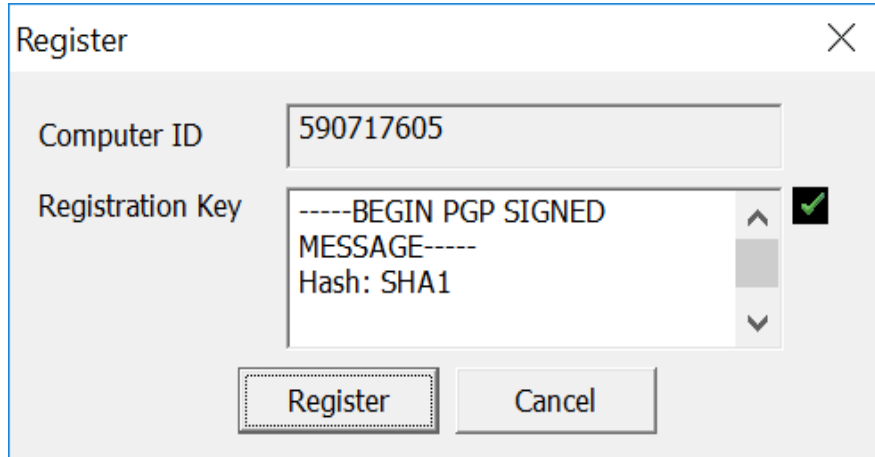
VIEWING LOG FILES

To view the log files of the SC PACS Server, select View Log Files – Full Log / Error Log from the context menu. The log files are displayed in the following way:



REGISTRATION

To see the Register window, select Register from the DICOM Server context menu. The Register window will appear:



INFORMATION ABOUT SC PACS SERVER

About – this command gives information about the Server – version, manufacturer, website,

Pause – this command pauses all processes currently running on the Server

Stop – this command saves all progress achieved so far and stops all DICOM Server processes

SC PACS SERVER OPTIONS

OPTION DESCRIPTION

This button opens the Options window. To be able to use the server options, the user needs to have a user name and password with active admin rights. Once logged in correctly, the user will see the following:

SC PACS Server Options

Dicom Server Settings

Port Number: 104,456,70

AE Title: SCPACS

Local Host Name: Petrov

Local IP Address: 192.168.147.1

Connection string: server=(local)\SQLEXP

Logging/Messaging

Message Port Number (Server/Viewer communication): 9000

☒ Log all events to: C:\ProgramData\Software Company\Dicom\...

Database

Data Storage(s)

Move records

Delete records

Edit records

Administrative Tools

Report Template

SMTP Server

Notifications

OK Cancel

- **TCP / IP Port Number** – by default the SC PACS Server uses ports 104 and 45670 for communication with SC PACS Web and SC PACS Viewer.
- **Application Entity Title (AE Title)** – the SC PACS Server and the applications it communicates with establish a safe connection by verification of the AE Titles. SC PACS is the AE Title used to store information on the SC PACS Server.

The settings established so far allow for medical images to be transferred to digital imaging workstations and for remote viewing by a physician based on defined rules and without limitation to the number of connected workstations and modalities.

- **Connection string** – shows the connection to the database.
- **Message Port Number** – this is the port used for communication between SC PACS Server and Viewer.
- **Log all events to** – if this option is ticked, the log file will be created while the Server is running; we can set up the path to the log file manually.
- **Data Storage(s)** – in this section we can set up the automated transfer of medical images to a remote centralized storage space for long-term archiving.
- **Move Records** – give the option for automated image transfer; the user can select various filters – from / to a certain date, from / to directory, by the type of modality

MoveTaskEditDialog

Start date/time: 25/ apr 2016 13:17

☐ From data storage
C:\ProgramData\Software Company\Dicom PACS !

To data storage
C:\ProgramData\Software Company\Dicom PACS !

☐ Run interval 1 days

Series Date

☒ Any

☐ Older than 0 days

☐ After 2016/04/25

☐ Before 2016/04/25

☐ Between 2016/04/25 2016/04/25

☐ Modalities

☐ AS ☐ CP ☐ DD ☐ DOC
☐ BI ☐ CR ☐ DF ☐ DS
☐ CD ☐ CS ☐ DG ☐ DX
☐ CF ☐ CT ☐ DM ☐ EC

< >

OK Cancel

- **Delete records** – deletes records from the database (patients, studies, and series). Only authorized users can delete records

Delete records

Patient search filters

Patient ID: Patient Name: Search

Patients:

ID	Name	Date of Birth	Sex
100	Unknown_MR		M
101	Unknown_CT		M
102	Unknown_XA	20061122	M
103	Unknown_MR_Movie	19360513	M
104	Unknown_MG	20030601	F
105	Unknown_US		N
106	Unknown_CR		O
111111		19520308	F
200	Tect	20010309	M

Studies:

Study ID	Study Date	Description
176	20060616	

Series:

Modality	SeriesNumber	SeriesDescription
MR	1	1
MR	2	2
MR	3	3
MR	4	4

Images:

InstanceNumber
1
10
11
12
13

Delete Record(s)

Close

After we have selected the date we want to delete, we must confirm that with the **Delete Record(s)** button.

- **Edit Records** – gives the option to edit a patient record or patient's data (ID number, study, move the study/series).
- **Report Template** – gives the option to work with templates.
- **SMTP Server** – this button is used to set up the Outgoing Mail Server parameters (Port Number, IP Address, User Name, and Password). In the empty field, the user should fill out the Web Service Address.
- **Notifications** – automatically generated emails which report on free storage space.

HOW TO USE SC PACS SERVER

SC PACS Server runs as a service in the background. When we want to make changes, we should start the desktop application. Once installed, the service loads automatically as soon as the computer is started. You can use different DICOM client applications to store and retrieve data from the SC PACS Server. The conditions are:

- AE Title of the client needs to correspond to the AE Title of the server
- The computer on which the SC PACS server is running has to be registered correctly at the client's site

SC PACS Server allows for prior retrieval of digital images from a centralized storage or from a long-term archive. For more information, please contact at support@pacs.bg

INSTALL PLUGIN LOCALLY TO RUN SC PACS ZFP ON TWO SCREENS WITH OPTION TO ADD SC PACS SERVER IP ADDRESS

1. 1. The MDE folder is copied locally on the computer
2. 2. The manifest.json file is edited, in which we add the SC PACS Server IP address in two places

},

"permissions": [

"system.display",

"storage",

"activeTab",

"scripting",

"tabs"

],

"externally_connectable": {

"matches": ["http://localhost:40057/*", "http://localhost/*", "http://demo.pacs.bg/*", "http://192.168.55.92/*"]

```

},
"host_permissions": [
  "http://localhost:40057/*",
  "http://localhost/*",
  "http://demo.pacs.bg/*",
  "http://192.168.55.92/*"
]
}

```

3. 3. Open Chrome in Developer mode -> Load unpacked and select the MDE plugins directory -> D:\MDE
4. 4. In Extensions we now see the Multi Desktop Full Screen 0.1.0 plugin - select Details and copy the ID code that was generated **ID**
nacpngoeloiomipijabhplafenommhn5
5. We need to replace the copied ID in two places in the _LoginPartial.cshtml file

```

if ((navigator.userAgent.indexOf("Chrome") != -1) ||
    (navigator.userAgent.indexOf("Edge") != -1)) {

    chrome.runtime.sendMessage('pdgpbhpeinpgbepejmgngkainablnage',
    {message: 'visible'}, function (response) {
        var lastError = chrome.runtime.lastError;
        if (lastError) {
            return;
        }
    })

    .....

    if (chrome.runtime === undefined)

        return;

        bFullSize = true;

        //window.onresize = null;

        chrome.runtime.sendMessage('pdgpbhpeinpgbepejmgngkainablnage', {
        message: "fullsize" }, function () {

            var lastError = chrome.runtime.lastError;

```

```

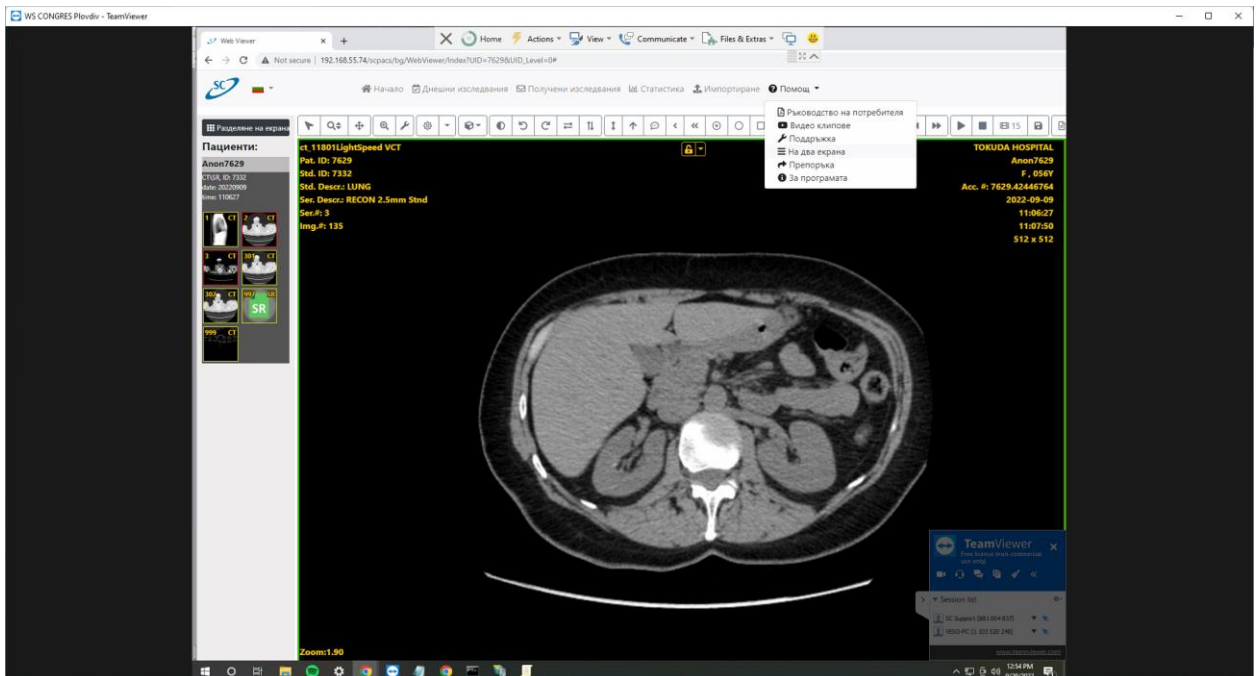
if (lastError) {
    return;
}

});

```

//when the old calculated window and the new window has the same coordinates chrome.runtime.sendMessage do not resize the window, in this case is necessary to call `resizeViews()` to resize the panes

- Open SC PACS ZFP through the IP address of the server and delete the browser cache with Ctrl+F5
- We divide the screen into two columns and select the On two screens button



Important!!!

SC PACS Server identifies Information objects (patients, studies...) by their ID/UID according to the DICOM standard. If the server receives an image that has conflicting relationships with previously received images with regards to the DICOM model of the real world then such images will be rejected by the server. If such an issue occurs you should contact technical support. Additionally if through a typo or another means the patient ID of the image has the wrong value it can be

associated with another patient (that has the corresponding patient ID). In any case if such an image was sent to the server the user should not attempt to fix the issue (by sending the image again or otherwise), but should instead contact an administrator or technical support.

SC PACS SERVER – SC PACS WEB VIEWER

REQUIREMENTS

- ✓ To start the SC PACS WEB Viewer, your work station requires an up-to-date version of any browser.

USER INTERFACE

- ✓ To load the SC PACS WEB Viewer page, you need to type the address of the server and add a slash and scpacs in your browser, for example: `http://192.168.1.1/scpacs`
Once the page is loaded, you should see the following window:



- ✓ SC PACS WEB VIEWER is available in Bulgarian and English languages. The language can be selected from the dropdown menu in the top left corner.
- ✓ When this page is loaded, you need to enter your username and password. If you already have a registration for the SC PACS Viewer, you can use your existing log-in details for the mobile version too
- ✓ If you enter a wrong username or password, you will immediately get a notification for “incorrect username or password”.

Login



Username

Password

Incorrect username or password.

Login

✓ If you have entered your log-in details correctly, the Search window will load:


Home Today's Studies Assignments Statistics Help
user

Studies List
Filters Settings

Patient's Name
Patient's ID
Patient's Date of Birth

Description
Modality
-

Study Date (From)
Study Date (To)
Diagnosis

All locations

Clear Search Today's Studies

Show 25 entries
First Previous Next Last

Patient's ID	Patient's Name	Patient's Date of Birth	Sex	Description	Date	Time	Modality	Body Part Examined	Location
No data available in table									

Showing 0 to 0 of 0 entries
First Previous Next Last

- ✓ The username used to log into the system is displayed in the top right corner

SC PACS WEB Viewer interface showing the 'Studies List' search form. The form includes fields for Patient's Name, Patient's ID, Patient's Date of Birth, Description, Modality, Study Date (From), Study Date (To), and Diagnosis. A 'Search' button is highlighted in blue. The top right corner shows a user profile icon labeled 'user'.

- ✓ Once logged into SC PACS WEB Viewer, you can do a search based on multiple criteria such as – “patient name”, “patient ID”, “date of birth”, “description”, “modality”, “body part”, “study date” (from ... to, from a specific date), “diagnosis”, “department” (that has referred the patient).
- ✓ If the selected search criteria is “date of birth “or “study date” (from..., to..., from ... to), a calendar will be displayed so that you can select your dates.

SC PACS WEB Viewer interface showing the 'Studies List' search form with a calendar displayed for the 'Study Date (To)' field. The calendar is for August 2019, with the 21st highlighted. The 'Search' button is highlighted in blue. The top right corner shows a user profile icon labeled 'user'.

SC 🇺🇸 🏠 Home 📅 Today's Studies ✉ Assignments 📊 Statistics 📄 Import 🔗 Help demo

Studies List Filters Settings

✕ Clear
🔍 Search

Show entries

Patient's ID	Patient's Name	Patient's Date of Birth	Sex	Description	Date
No data available in table					

Showing 0 to 0 of 0 entries

Today

Yesterday

Last 7 Days

Last 30 Days

This Month

Last Month

Custom

June 2021							July 2021						
Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su
31	1	2	3	4	5	6	28	29	30	1	2	3	4
7	8	9	10	11	12	13	5	6	7	8	9	10	11
14	15	16	17	18	19	20	12	13	14	15	16	17	18
21	22	23	24	25	26	27	19	20	21	22	23	24	25
28	29	30	1	2	3	4	26	27	28	29	30	31	1
5	6	7	8	9	10	11	2	3	4	5	6	7	8

06/16/2021 - 06/16/2021 Cancel Apply

- ✓ **Modality:** once this field is selected, you will see a drop-down menu with all available modalities and ECG. From the drop-down menu you can select the desired modality/modalities or select the first blank option to search all modalities.

SC 🇺🇸 🏠 Home 📅 Today's Studies ✉ Assignments 📊 Statistics 🔗 Help user

Studies List Filters Settings

Show entries

First Previous Next Last

Patient's ID	Patient's Name	Patient's Date of Birth	Sex	Description	Date	Time	Modality	Body Part Examined	Location
No data available in table									

Showing 0 to 0 of 0 entries

First Previous Next Last

- ✓ The search panel has three main options:
 - “Search” – searches the database by the selected filters
 - “Clear” – clears the selected filters
 - “Today’s studies” - displays the studies done today

SC Home Today's Studies Assignments Statistics Help user

Studies List Filters Settings

Show 25 entries

First Previous Next Last

Patient's ID	Patient's Name	Patient's Date of Birth	Sex	Description	Date	Time	Modality	Body Part Examined	Location
No data available in table									

Showing 0 to 0 of 0 entries

First Previous Next Last

- ✓ Once you have entered the desired search criteria and hit “Search”, you will get the relevant studies as results:

SC Home Today's Studies Assignments Statistics Help user

Studies List Filters Settings

Show 25 entries

First Previous 1 Next Last

Patient's ID	Patient's Name	Patient's Date of Birth	Sex	Description	Date	Time	Modality	Body Part Examined	Location
123456	Lili Ivanova	1980-10-13	M	Test	2019-08-21	10:26:45	CT	HEAD	
123456	Lili Ivanova	1980-10-13	M	Test	2019-08-21	11:22:30	CT	HEAD	

Showing 1 to 2 of 2 entries

First Previous 1 Next Last

- ✓ Now you have two options to select and view patient studies:
- 1) Click on “Patient ID” – this will open all studies for this patient
 - 2) Click on “Date” – open a specific study

SC Home Today's Studies Assignments Statistics Help user

Studies List Filters Settings

Show 25 entries

First Previous 1 Next Last

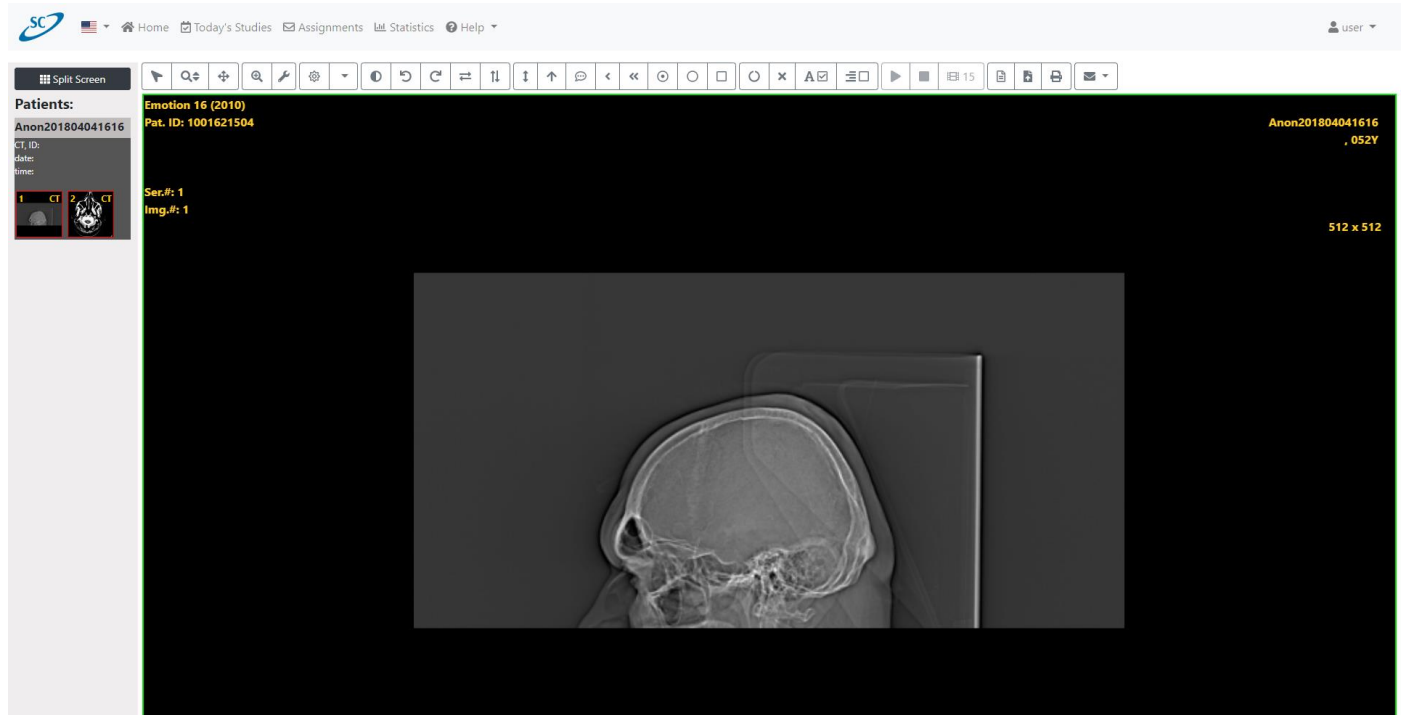
Patient's ID	Patient's Name	Patient's Date of Birth	Sex	Description	Date	Time	Modality	Body Part Examined	Location
123456	Lili Ivanova	1980-10-13	M	Test	2019-08-21	10:26:45	CT	HEAD	
123456	Lili Ivanova	1980-10-13	M	Test	2019-08-21	11:22:30	CT	HEAD	

Showing 1 to 2 of 2 entries

First Previous 1 Next Last

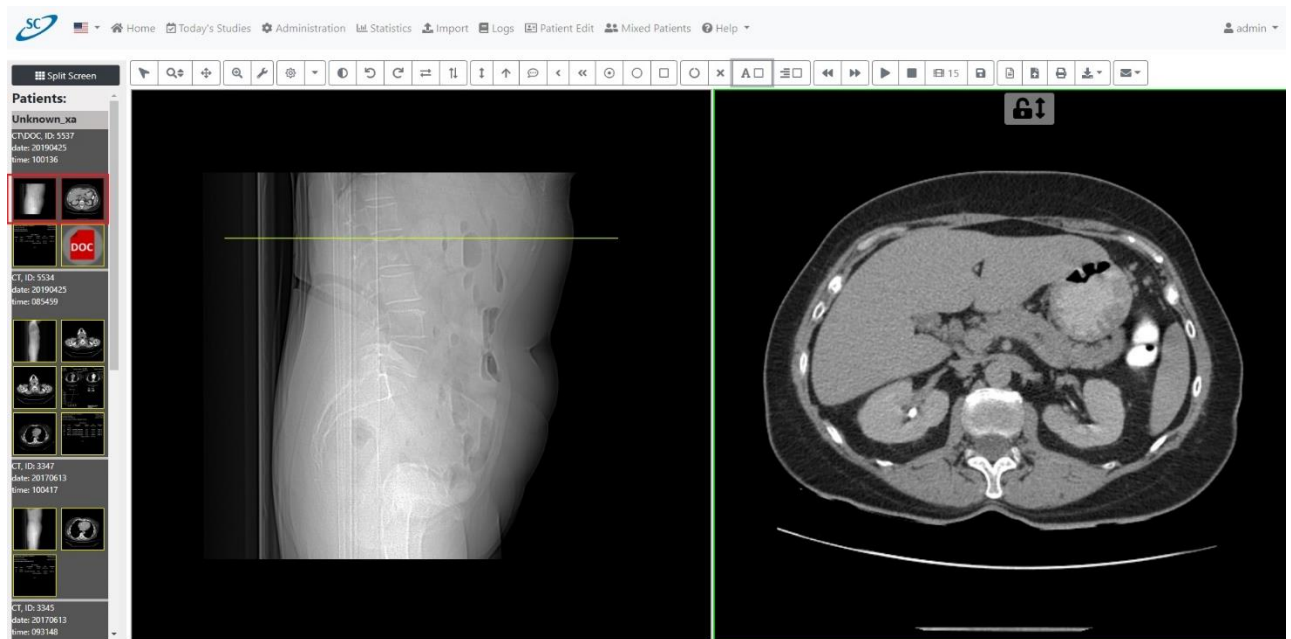
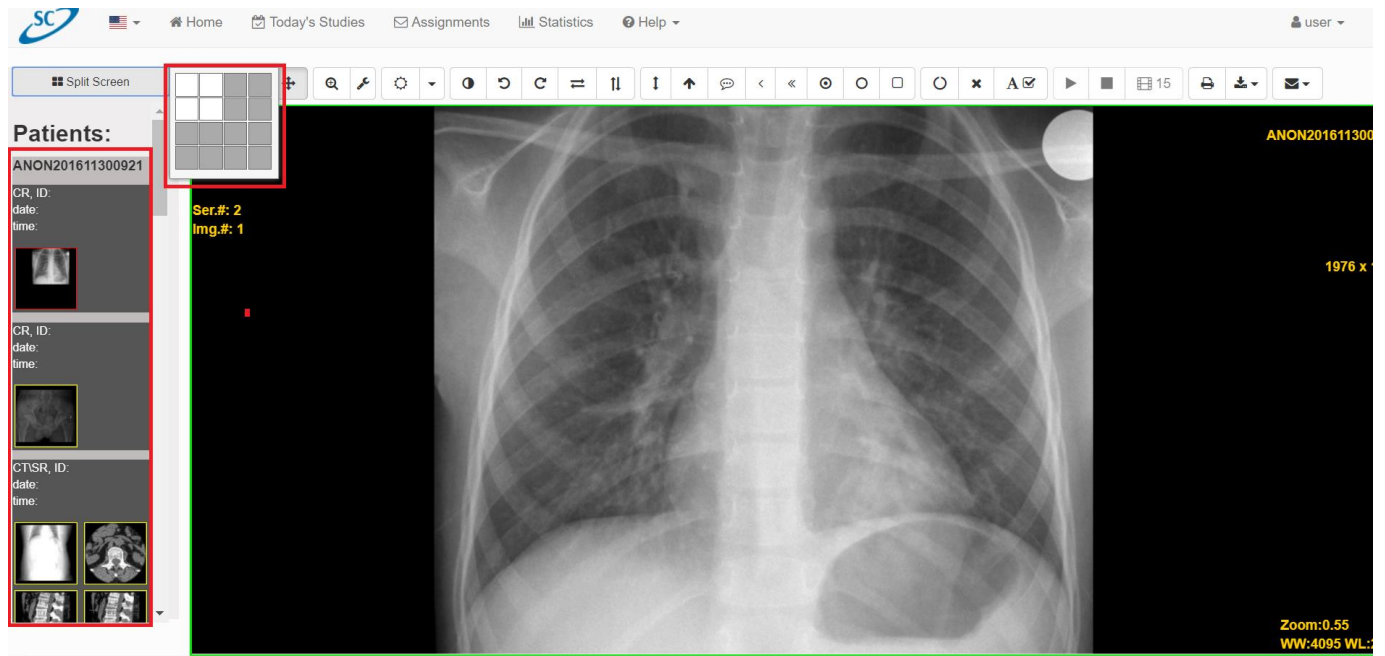
Note: SC PACS Web supports VOI Lut

- ✓ Once the study is open, the window below will be display its first image:

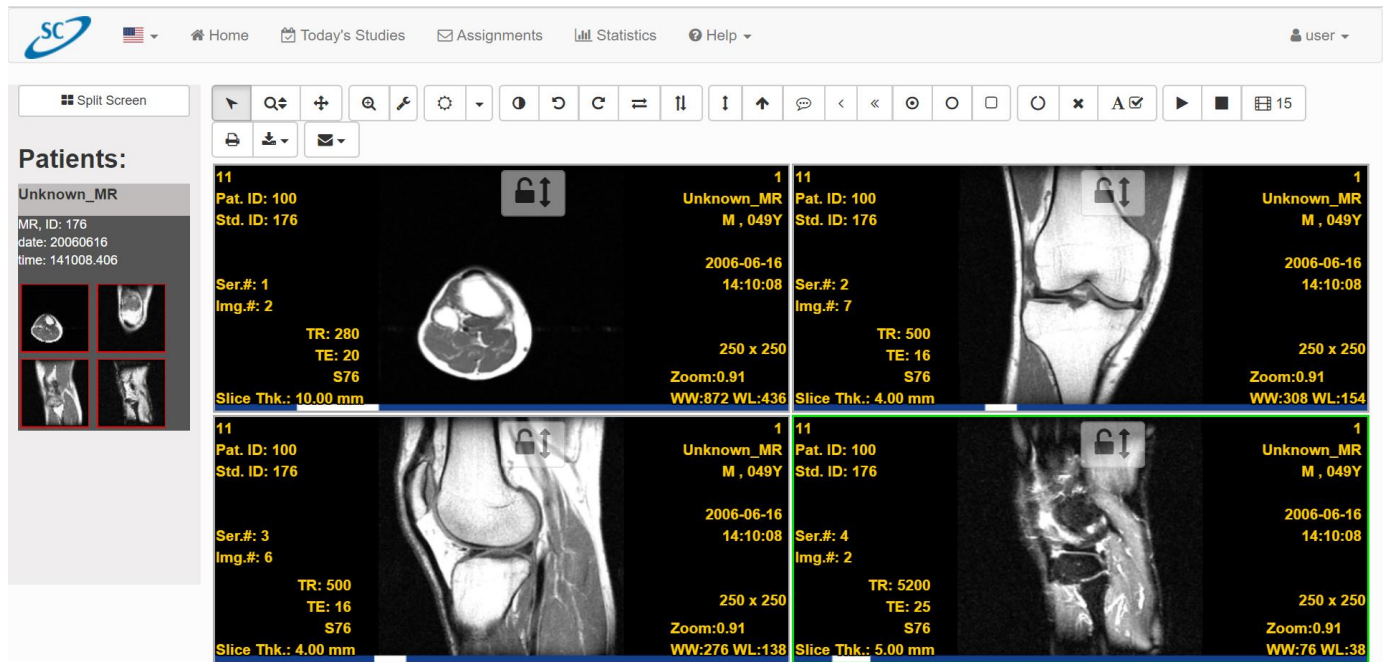


- ✓ The study series will be displayed on the left hand side if you have opened the study from the column "Date". If you have opened the study from the column "Patient ID", you will see all studies and their series for this patient again on the left hand side.
- ✓ Via the section "Series", you can select a multiple-series view of this study and customize this multiseries view. Once in "Series", you can choose the number of row and columns you want to see by clicking on the buttons under the numbers to activate the split screen.

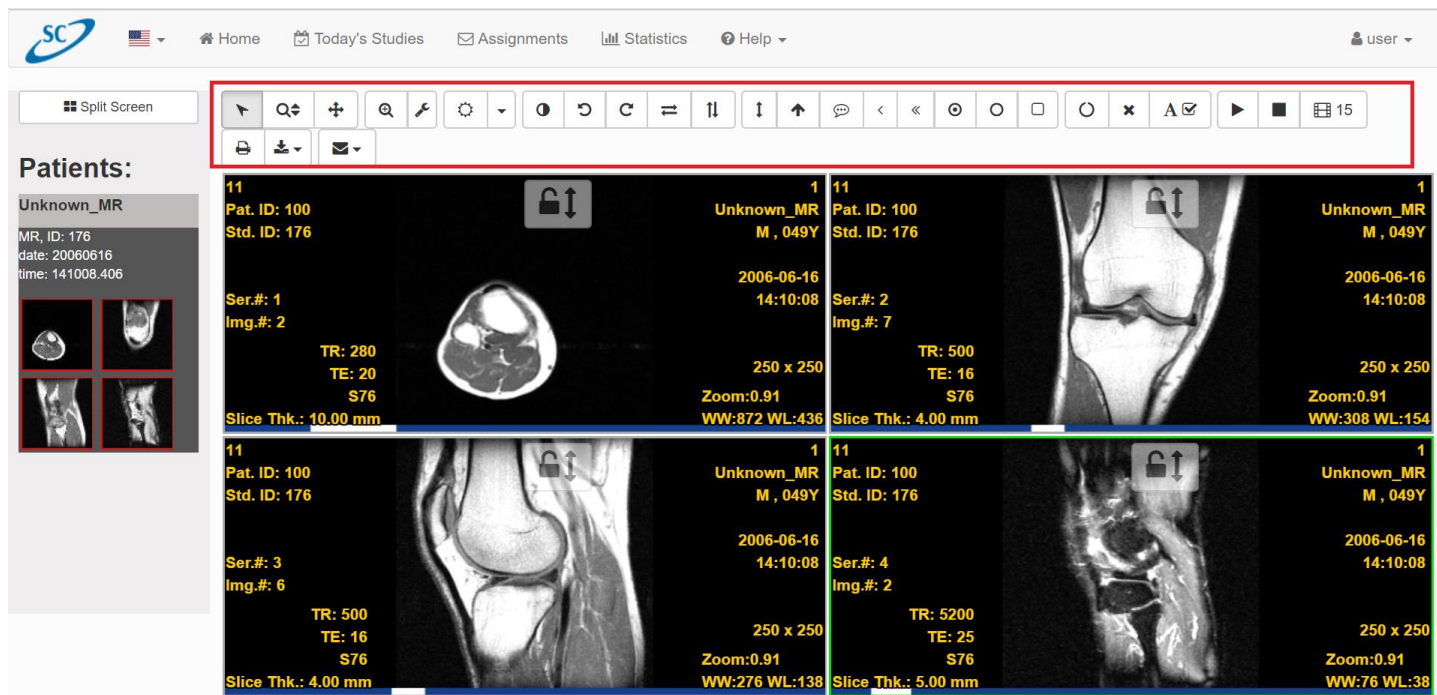
Note: in the multiseries view you can load the series in the main window either by **dragging** them to this window or by clicking on the series



- ✓ Once you have selected the type of multiseries view, you should select the series you would like to see. To view each series separately, you should place the mouse pointer on top of it and scroll (using the mouse scroll). The white rectangle on the bottom of the image shows where this image is compared to the rest of the study:



- ✓ In the upper part of the screen there is a set of tools available with which the users can annotate or process images:



ANNOTATION AND IMAGE PROCESSING TOOLS



- Zoom in/ zoom out – to use this tool, the user should left-click on the magnifying glass and scroll up or down using the mouse scroll wheel.



desired direction.

- Pan (Move) – this tool can be used to move the image. Once this tool is selected, the user should left-click on the “Move” icon and move the mouse in the



- Magnifying Glass – to use this tool, the user should left-click on the magnifying glass and then click on the image.

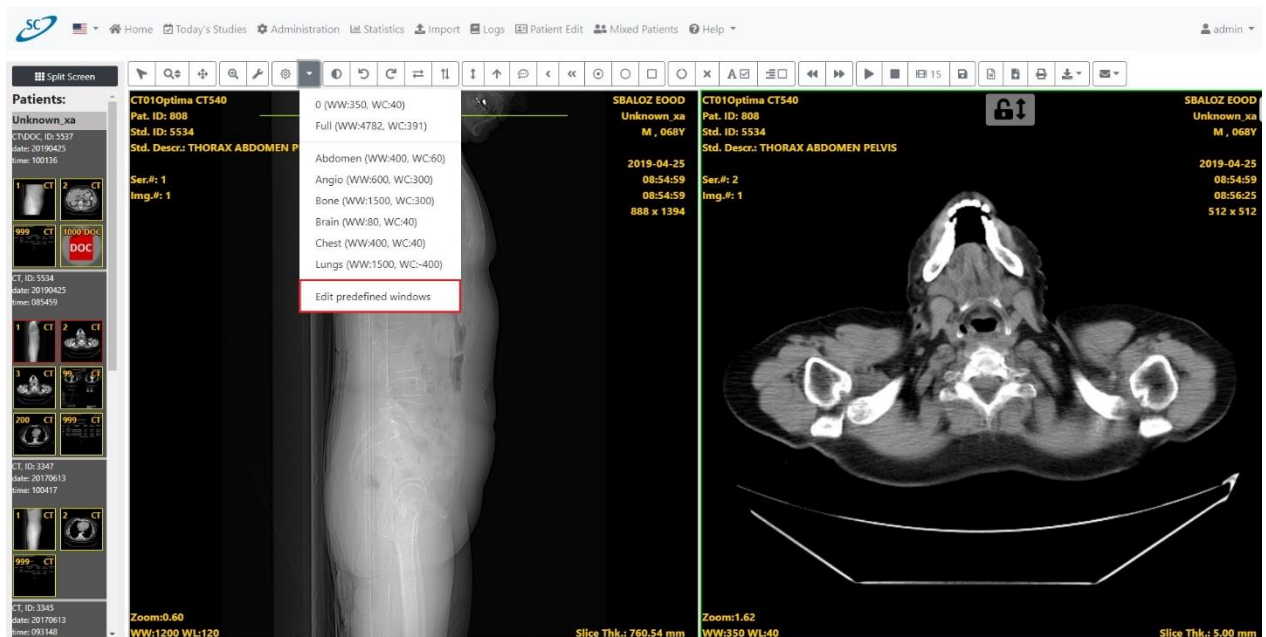


- Magnifying Glass Settings– shows a dialog where the user can set the Magnification Level and Magnification Glass Size

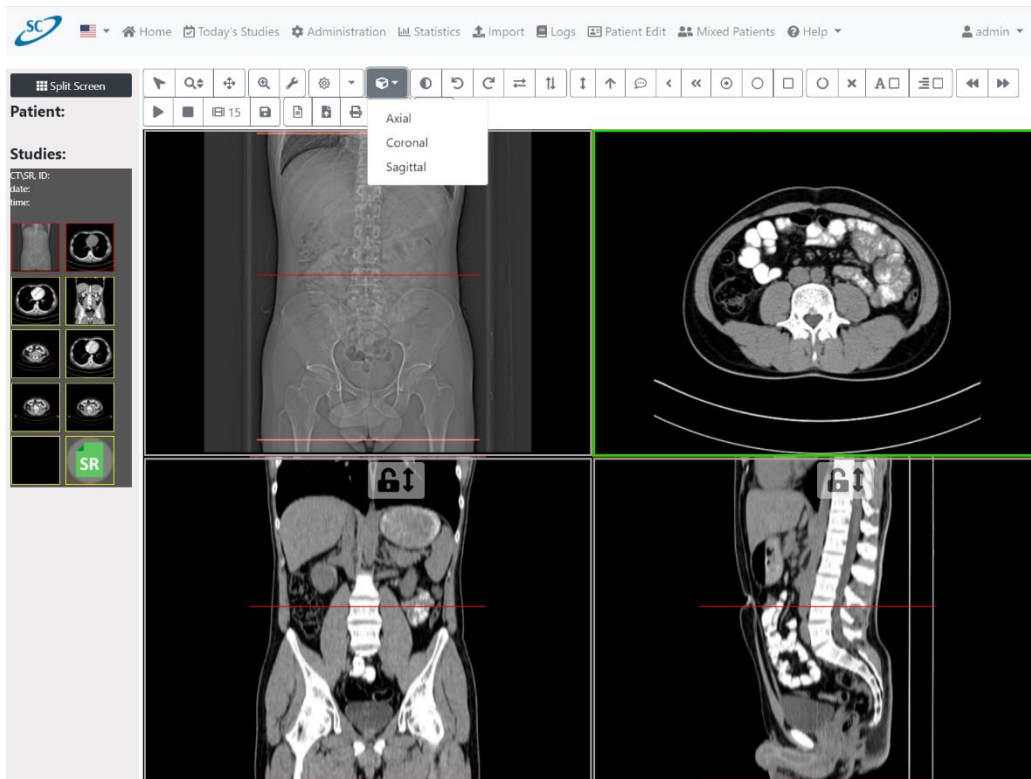


- WW/WC - this tool is used to adjust the contrast level of the image; once selected, the user should left-click and move the mouse up or down, or select from the pre-determined contrast levels in the drop-down menu.

You can manually enter pre-defined parameters of the window:



With the release of version 2.2.0.0, the MPR functionality has been added, which is accessed via the button shown in the following screenshot. After selecting a study by dragging or clicking in the left panel, you can display it in axial, coronal or sagittal planes.



- Invert color – this tool is used to invert the colors of the image



- Rotate left – image rotation 90° to the left



- Rotate right – image rotation 90° to the right



- Horizontal flip - flips the image horizontally



- Vertical flip - flips the image vertically



-Length – this tool can be used to measure lengths



an arrow on the images

- Arrow – this tool can be used to draw



- Annotation – this tool can be used to add comments



- Simple angle – to draw and measure simple angles



- Cobb angle - to draw and measure Cobb angles



- Probe (Density meter) – to measure density based on one pixel and display information on the pixel value and

density



- Ellipse – draws an ellipse and provides information on area, mean and standard deviation



- Rectangle - draws a rectangle and provides information on area, mean and standard



- Reset view – restores the image view to its original state (including contrast, size and position)



- Clear toolbar – removes all used tools (annotations, lines, etc.)



- Show overlay – shows/hides patient data, including patient ID, National Identification Number, date of birth, study date



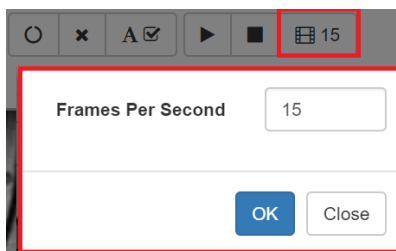
- Show scale – shows/hides horizontal and vertical scale on the image



- Play – mainly used for angiographic studies and it can be used to play the series as a video clip; can be used to play series from other modalities with multiple images

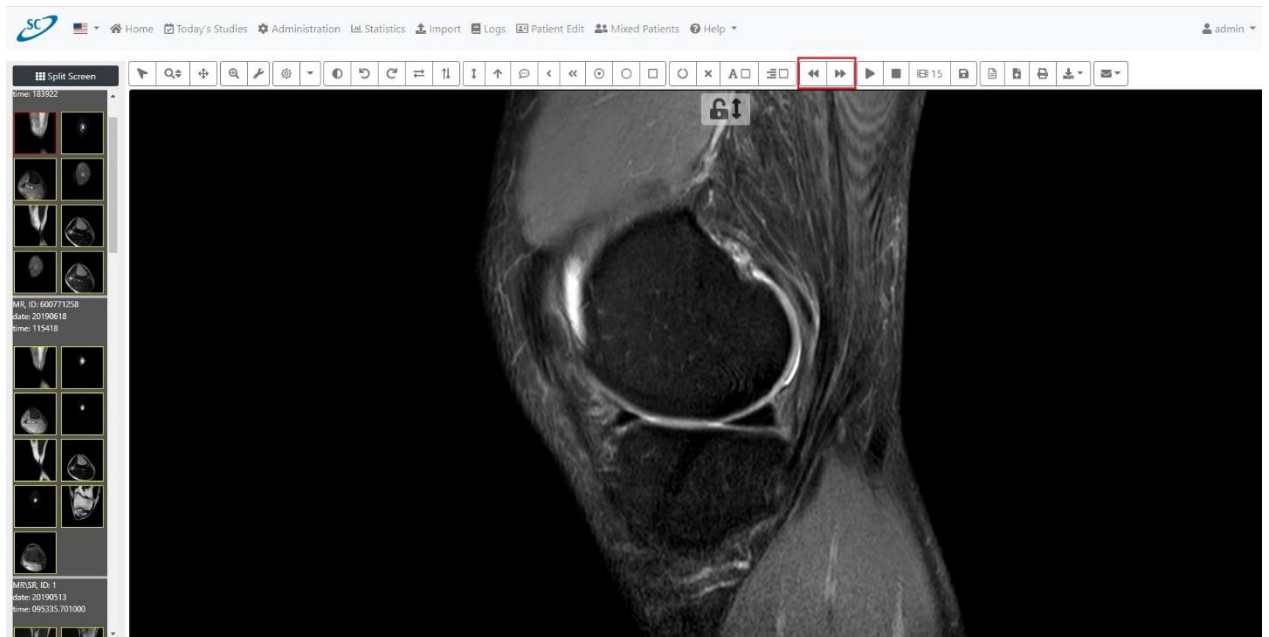


- Stop – stops the video that is playing



Adjust the number of frames per second

"Switch to next series" buttons on the toolbar:





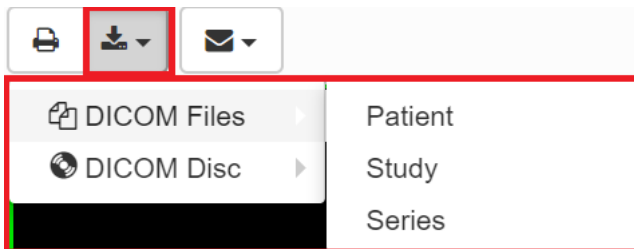
- Synchronous viewing of two series at the same time. You need to lock this icon from the multi-serial view and view the images by scrolling with your mouse for both series at the same time.



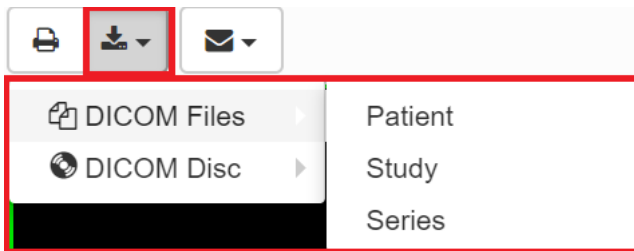
- File upload



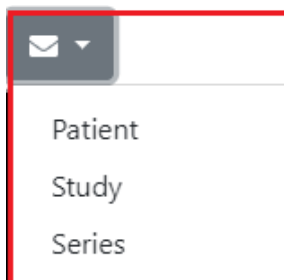
- Print the current image of an office printer.



- Download of patient data, study, series in DICOM format on the local computer on which SC PACS Web viewer is open



- Download of patient data, study, series in DICOM format on the local computer on which SC PACS Web viewer is open with CD Viewer view on of the downloaded study



- Assign to another user – this tool can be used to send a patient/study/series to an existing SC PACS user or as an email for a consult or any other task

- When you choose one of the options for sending data, you are shown the following screen:

Assign to another user

New user:

☐ E-Mail

Existing User:

User : Test@test

Message:

Validity (days):

1

Assign Close

In this screen:

"New user" – this option allows the user to send a link with the patient images via email to any other user

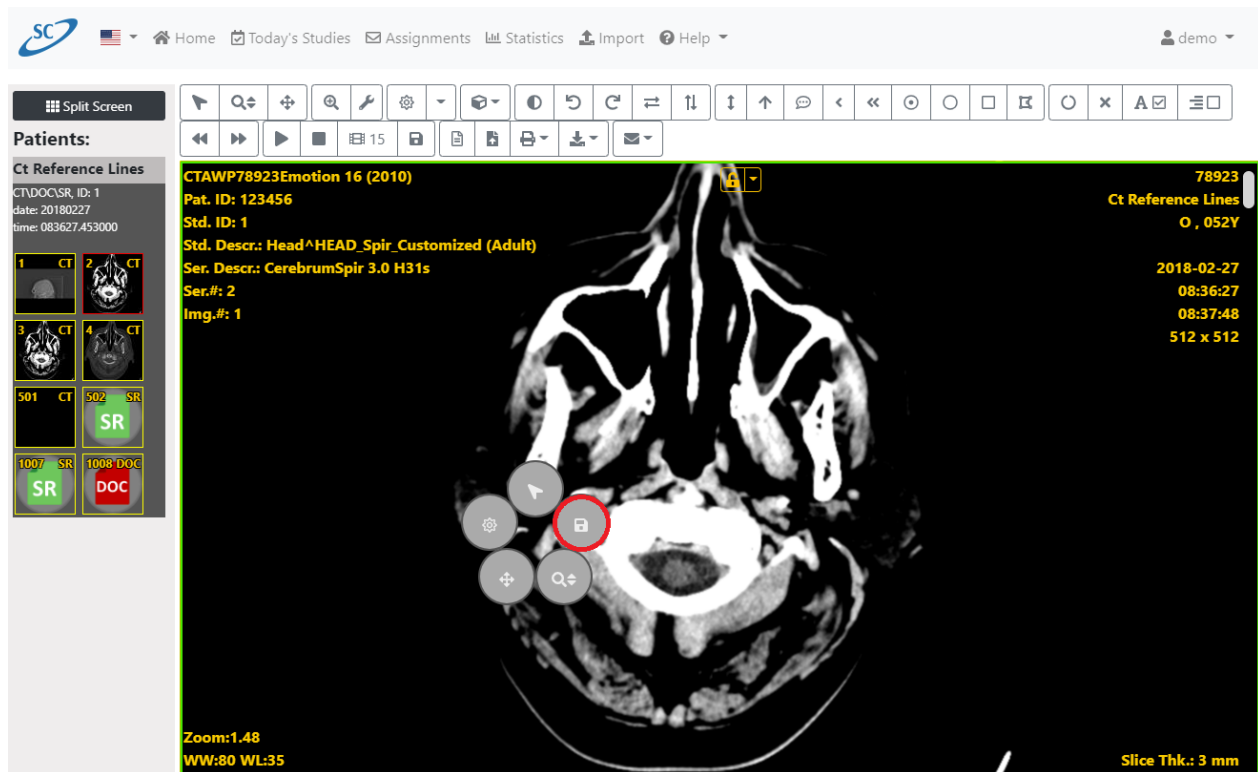
"Existing user" - this option allows the user to send the patient's images to an existing user of the SC PACS system as an assignment.

"Message" – this gives the user space to enter text describing the image, purpose of

the email, etc.

"Days valid" – this allows the user to define the validity of the link with the images / the assignment measured in days.

- Save the current image as JPEG, with or without patient information:



When you right-click on the image, icons are displayed. When you click the floppy disk icon, the image is saved as jpeg. If patient information is displayed, it will be saved in the saved jpeg file.

REPORT



- Clicking on the Report button in the toolbar brings up a new window in which the user can create and save a patient report on the server.

The information to be included in the report is divided into several tables, as follows:

Patient Information about patient includes Patient Name, Patient ID, Date of Birth, Age, Sex, Weight, Size, Phone number, E-mail and Address.

Report

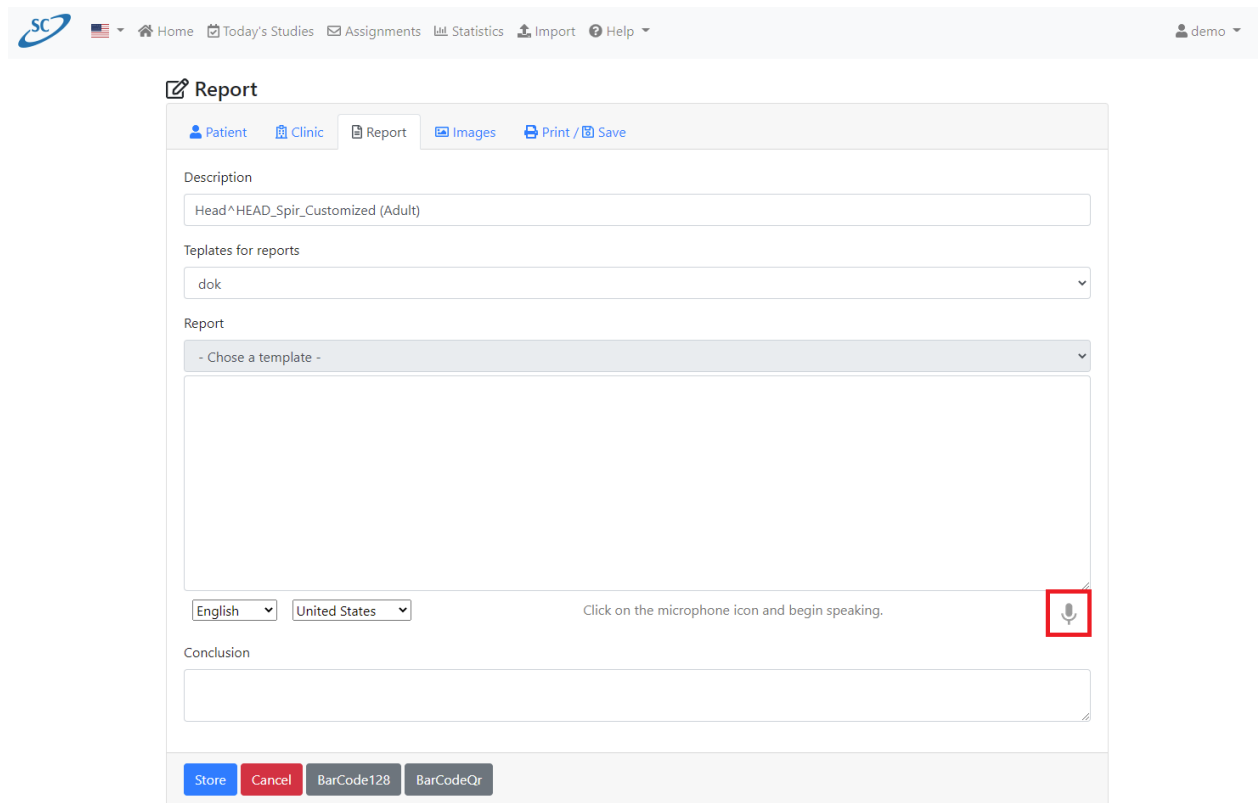
 Patient  Clinic  Report  Images  Print /  Save			
Patient's ID		Patient's Name	
123456		Мария Атанасова	
Patient's Date of Birth		Age	Sex
1969/08/21		050Y	Male
Weight	Size	Phone number	
68			
E-Mail		Address	
Store Cancel			

- Clinic – there are two fields Institution Name and Performing Physician

Report

 Patient  Clinic  Report  Images  Print /  Save	
Institution Name	Performing Physician
ALEXANDROVSKA	Administrator
Store Cancel	

- Report – this page contains Description field, a possibility the report to be based on a chosen template and a field to write the conclusion:



The screenshot shows a web application interface for creating a report. At the top is a navigation bar with a logo, a language dropdown (US flag), and links for Home, Today's Studies, Assignments, Statistics, Import, and Help. A user profile 'demo' is in the top right. Below the navigation bar is a 'Report' section with tabs for Patient, Clinic, Report, Images, and Print/Save. The 'Report' tab is active. The form contains the following elements:

- Description:** A text input field containing 'Head^HEAD_Spir_Customized (Adult)'.
- Teplates for reports:** A dropdown menu showing 'dok'.
- Report:** A large text area with a dropdown menu showing '- Chose a template -'.
- Language and Location:** Two dropdown menus for 'English' and 'United States'.
- Microphone:** A microphone icon in the bottom right corner of the Report text area, highlighted with a red box. Below it is the text 'Click on the microphone icon and begin speaking.'
- Conclusion:** A text input field.
- Buttons:** At the bottom are four buttons: 'Store' (blue), 'Cancel' (red), 'BarCode128' (grey), and 'BarCodeQr' (grey).

A microphone icon is displayed in the lower right corner. If you have one, when you click this icon, the Google Speech-to-Text functionality will be activated. At this point, if you speak English, your words will be recognized and written as text.

- Images – here the user can decide whether to include the images in the Patient Report, set the number of columns, set whether to show the images' overlay.

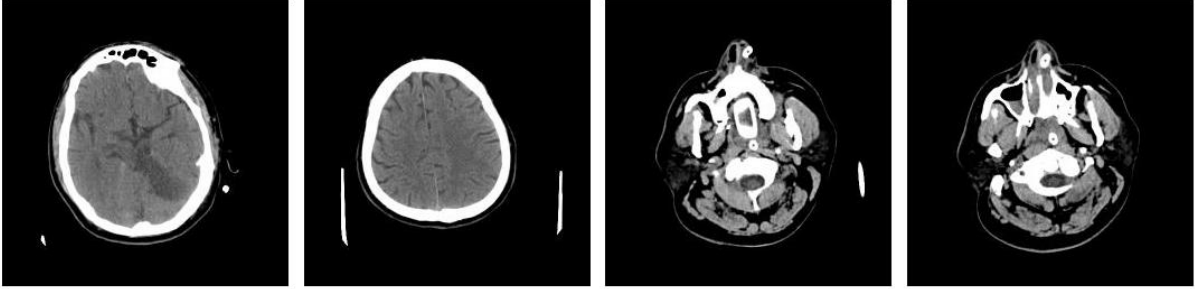
Report

[Patient](#)
[Clinic](#)
[Report](#)
[Images](#)
[Print / Save](#)

☒ Include images

[Columns](#)

☒ Show Overlay



[Store](#)
[Cancel](#)

-
- Print/Save – two buttons are available – Preview/Print and Download

Report

[Patient](#)
[Clinic](#)
[Report](#)
[Images](#)
[Print / Save](#)

[Preview/Print](#)
[Download ▾](#)

[Store](#)
[Cancel](#)

Clicking on the Print/Preview button shows the report in the way it would look printed. It can be sent to the print using the context menu over the report.

In the latest version of the product, buttons for printing Barcode 128 and QR code have been developed.

🇺🇸 Home 📅 Today's Studies 📧 Assignments 📊 Statistics 📁 Import 🗑️ Helpdemo

Report

👤 Patient 🏥 Clinic 📄 Report 🖼️ Images 🖨️ Print / 💾 Save

Description

Head^HEAD_Spir_Customized (Adult)

Templates for reports

dok

Report

- Chose a template -

English United States Click on the microphone icon and begin speaking. 

Conclusion

Store Cancel BarCode128 BarCodeQr

 Report

 Patient
  Clinic
  Report
  Images
  Print /  Save

 Preview/Print
  Download



**УНИВЕРСИТЕТСКА МНОГОПРОФИЛНА БОЛНИЦА
ЗА АКТИВНО ЛЕЧЕНИЕ**
• СВЕТА МАРИНА - ПЛЕВЕН •

ГР. ПЛЕВЕН , ул. "Българска Армия" №88
 Тел.: 064 / 805 666 , 064 / 81 81 , 064 / 806;838 ; Web site: www.svmarina.com ; E-mail: info@svmarina.com

ОБРАЗНО ИЗСЛЕДВАНЕ

Име и Фамилия:	Мария Атанасова
Възраст:	050Y
Дата:	Thursday, August 22, 2019
Изследване:	
Техника:	

Находка:

ЗАКЛЮЧЕНИЕ:

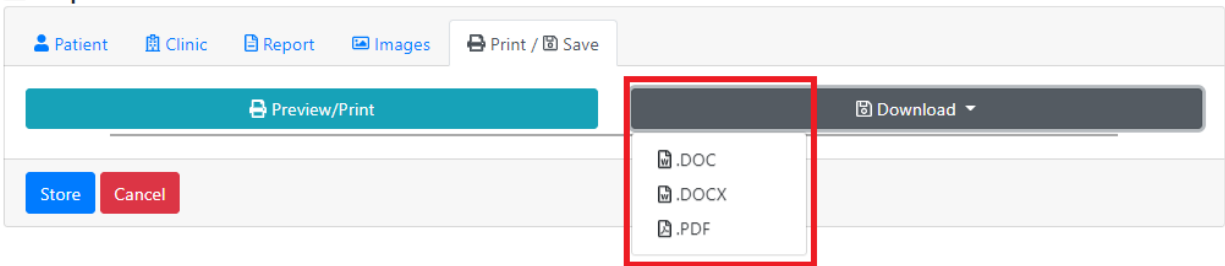
Провел изследването:
 Administrator

Подпис:
 SiteAndPin

 Store
  Cancel

Clicking on the Download button shows the following drop-down menu:

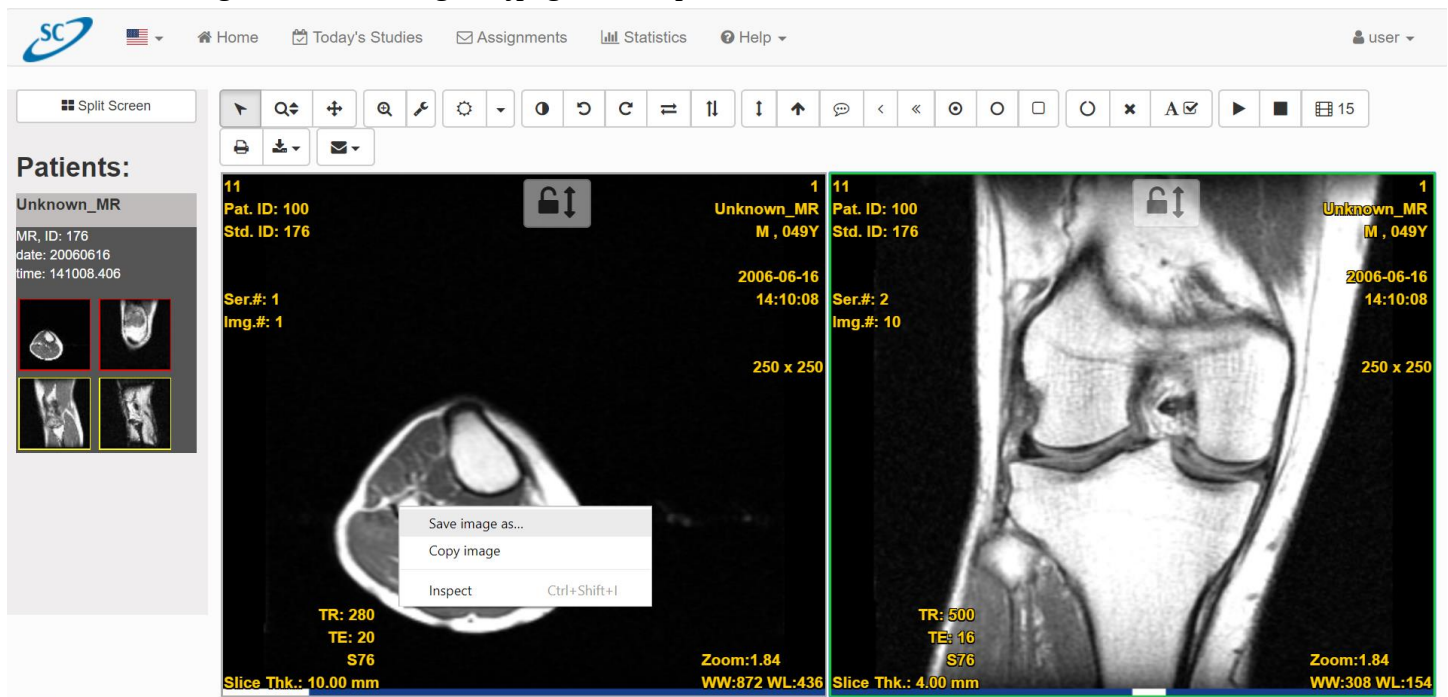
Report



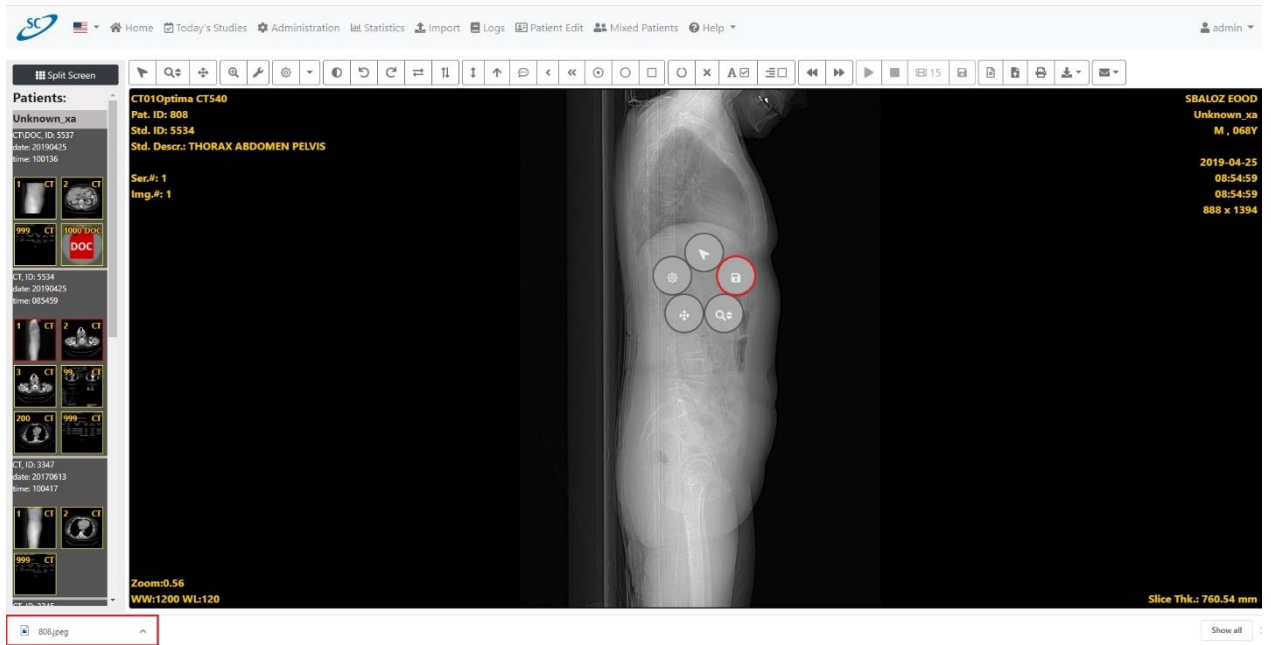
Thus the report could be saved in MS Word or PDF format.

The Store button saves the report to the server. Cancel hides the report without saving the changes and shows the main SC PACS window.

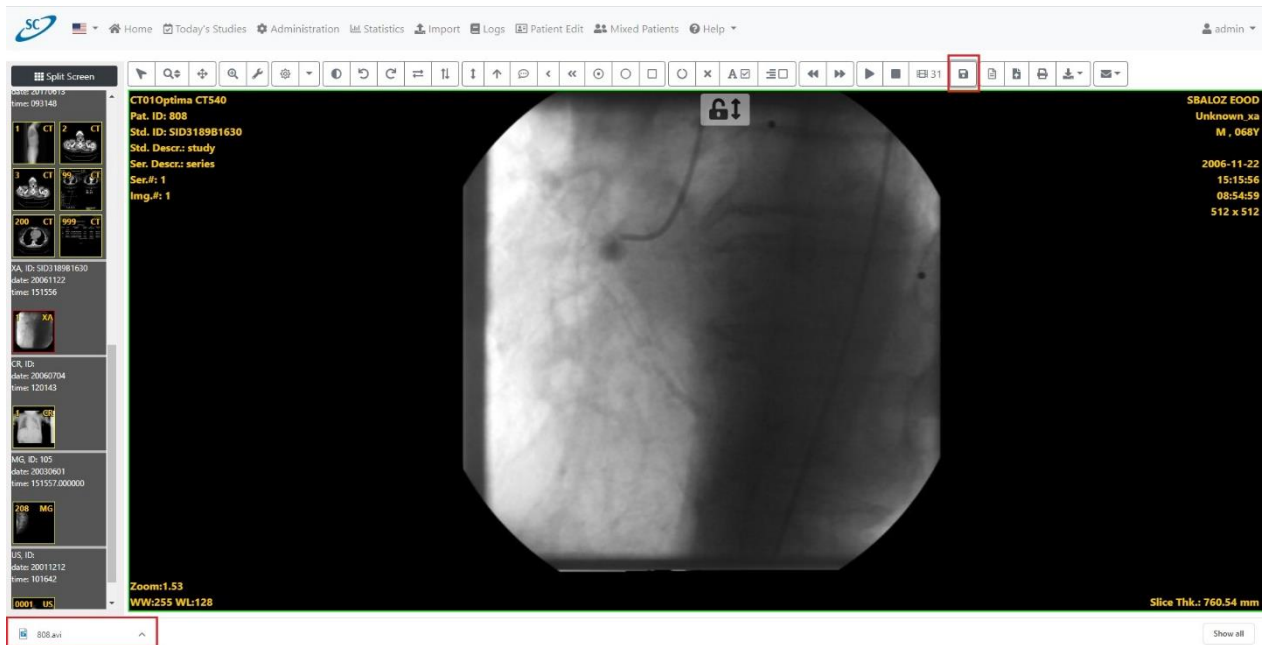
✓ Saving the current image as jpeg with no patient data



Right clicking on the image shows shortcut buttons among which there is a button for saving as a jpeg:

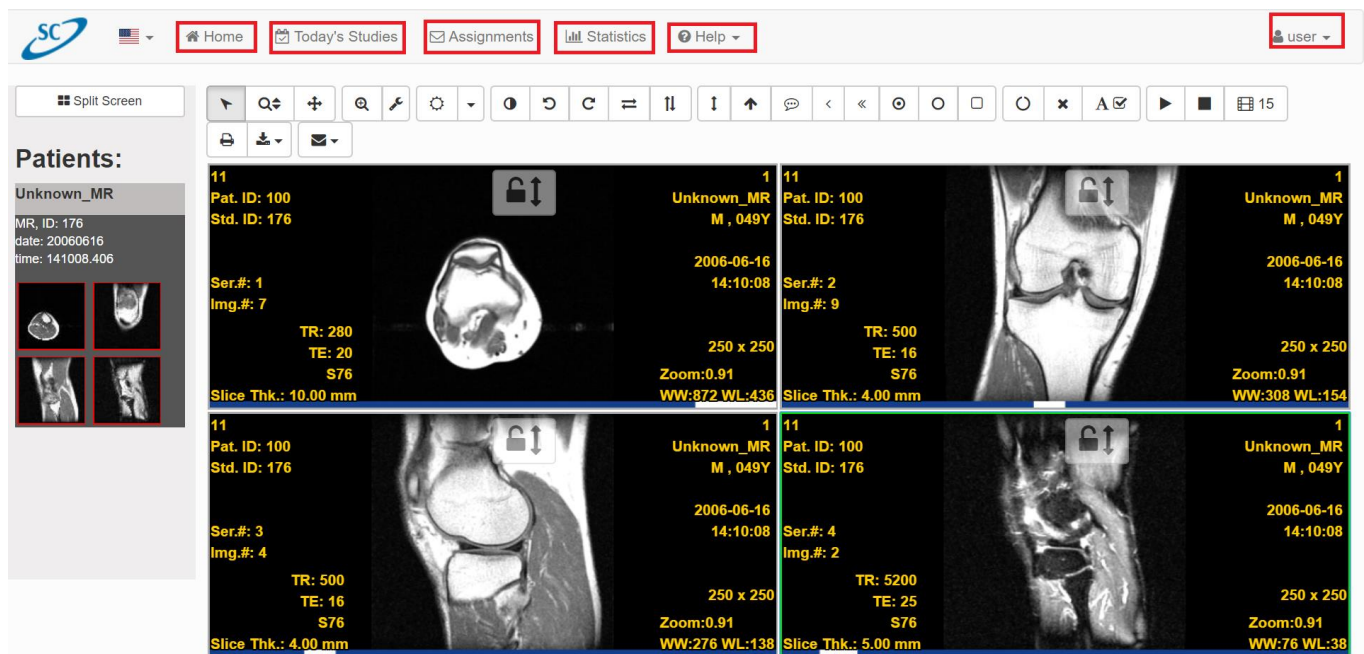


A possibility to export a multiframe FX, XA studies into AVI format exists. To do this, press the button which is in red frame in the screenshot below.

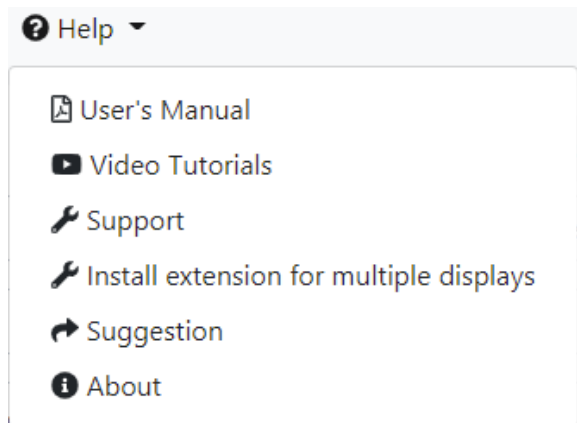


- ✓ When using annotations / notes - each of them can be removed by right-clicking on it
- ✓ If you want to open another series, you should simply select it from the column to the right

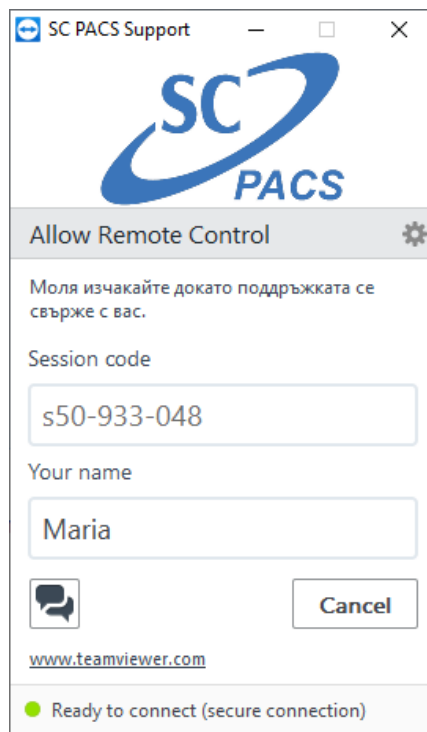
- ✓ At the top of the screen, you can see buttons that facilitate your work, as well as a Sign-out button:
 - Home button – back to the default start position (studies list)
 - Today's studies
 - Assignments – all assignments given to us (studies sent to us by other users of the system)
 - Statistics – statistical data on the studies
 - Logout – signs the current user out



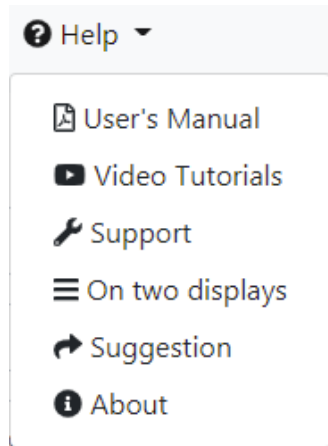
- Help - the following menu appears when pressed:



- User's Guide - selecting this option displays the SC PACS User's Guide
- Videos - links to SC's YouTube channel
- Support - refers to a connection via TeamViewer with the support team



- Install extension for multiple displays - this option appears if you are working with more than one monitor. When selected, a plug-in is installed that allows the image to be stretched on two monitors. After installing the plugin, the menu will look like this:



- Suggestion - selecting this option opens a screen where you can put your suggestion and send it to SC PACS support:

A screenshot of the 'Suggestion' form in the SC PACS application. The form is titled 'Suggestion' and is located below a navigation bar. The navigation bar includes the SC logo, a language dropdown (set to US), and links for Home, Today's Studies, Assignments, Statistics, Import, and Help. A user profile 'demo' is visible in the top right. The form itself has several input fields: 'Hospital:' with a text box containing 'Hospital', 'City:' with a text box containing 'City', and 'Subject:' with a text box containing 'Subject'. Below these is a large text area for 'Message:' with the placeholder text 'Message (required)'. At the bottom of the form, there is a 'Files:' section with a 'Choose Files' button and the text 'No file chosen'. A 'Save' button is located at the very bottom of the form.

USER ACCOUNTS AND RIGHTS

There several types of users, who have different rights:

- ✓ Admin
- ✓ User
- ✓ Sec
- ✓ Reg
- ✓ User with assignments

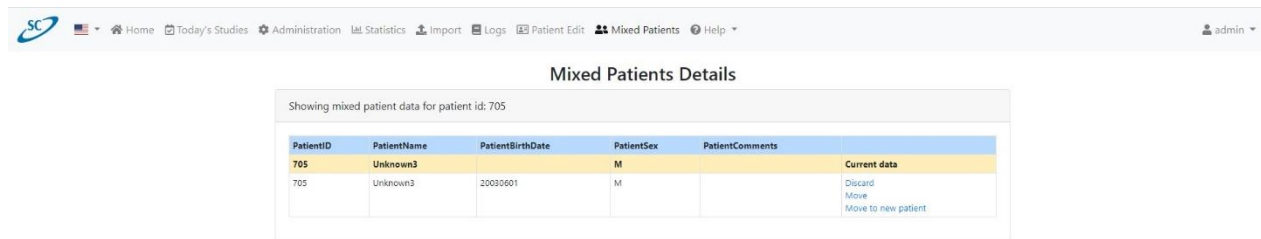
Admin – a user of this type has the following options when logged on:

The screenshot shows the 'Users' management interface. At the top, there's a navigation bar with 'Administration' selected. Below it, a search bar allows filtering by Account Name, Username, E-Mail, Host, and AE Title. The main table lists the following users:

Account Name	Username	E-Mail	AE Title	Disabled	Role	Created by	Actions
User	user		CISCO_AE	☐	User	.	[Edit] [Delete]
Registrator	reg			☐	Registrator	.	[Edit] [Delete]
radiant	radiant	radiant@r.r	RADIANT	☐	User	1. admin	[Edit] [Delete]
plamen	plamen	pl@l.c	RADIANT2	☐	User	1. admin	[Edit] [Delete]
sec	sec	sec@q		☐	Not Defined	1. admin	[Edit] [Delete]
WebUser	vk@nob.c	vk@nob.c		☒	WebUser	.	[Edit] [Delete]
RADIANT_C2	RADIANT_C2	RADIAN@T.C2	RADIANT_C2	☐	User	1. admin	[Edit] [Delete]
vv	vv		RADIANT_VV	☐	User	1. admin	[Edit] [Delete]
WebUser	murcielago12v60@gmail.com	murcielago12v60@gmail.com		☐	WebUser	.	[Edit] [Delete]
WebUser	123@abc.com	123@abc.com		☒	WebUser	.	[Edit] [Delete]

At the bottom, there is a 'Create a New User' button.

With the release of version 2.2.0.0, a new functionality has been added to manage a problem that occurs when a patient ID is duplicated. The two names are recorded in the database and the interface to solve the problem shown in the screenshot below is available to the system administrator.

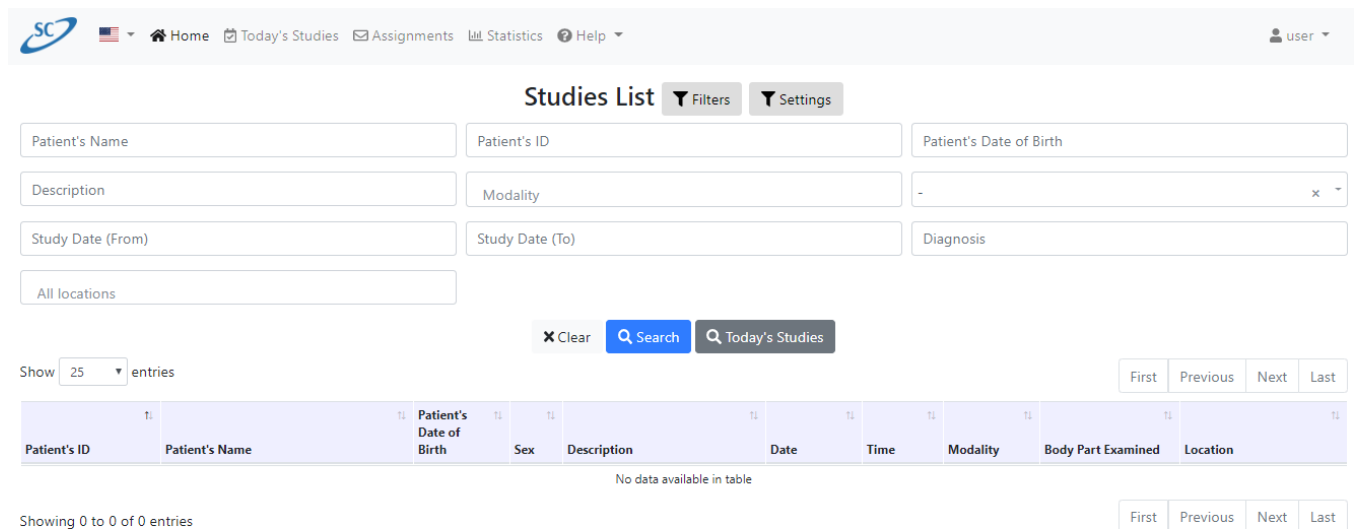


Showing mixed patient data for patient id: 705

PatientID	PatientName	PatientBirthDate	PatientSex	PatientComments	Current data
705	Unknown3	20030901	M		Discard Move Move to new patient

Furthermore there is an import functionality in the case when SC PACS Web imports a study into the server and it sends data to another server, the study to be sent to the second server.

User – a user of this type has the following options when logged on:



Studies List **Filters** **Settings**

Patient's Name Patient's ID Patient's Date of Birth

Description Modality - x

Study Date (From) Study Date (To) Diagnosis

All locations

Clear Search Today's Studies

Show 25 entries

First Previous Next Last

Patient's ID	Patient's Name	Patient's Date of Birth	Sex	Description	Date	Time	Modality	Body Part Examined	Location
No data available in table									

Showing 0 to 0 of 0 entries

First Previous Next Last

With the release of version 2.2.0.0, web users have the option to choose the DICOM import.

Sec – a user of this type has the following options when logged on:

SC Voice Recordings sec

Voice Recordings

Show entries Search:

Upload Date	Physician	Patient's ID	Patient's Name	Study ID	Description	
8/28/2018 3:05:04 PM	User	SOtNwu	INCISIX	A10020176376	Tete^ Dental (Adulte)	
8/28/2018 3:12:26 PM	User	SOtNwu	INCISIX	A10020176376	Tete^ Dental (Adulte)	
8/16/2019 6:23:11 PM	User	7301163201	DIMITAR^DIMITROV	25359		
8/23/2019 12:05:39 PM	User	7301163201	DIMITAR^DIMITROV	25359		

Showing 1 to 4 of 4 entries Previous **1** Next

Reg – a user of this type has the following options when logged on:

SC Home Export Import Help reg

Show entries First Previous Next Last

Patient's ID	Patient's Name	Patient's Date of Birth	Sex	Select
No data available in table				

Showing 0 to 0 of 0 entries First Previous Next Last

Results: 1

Aug 19 – 25, 2019

	Mon 8/19	Tue 8/20	Wed 8/21	Thu 8/22	Fri 8/23	Sat 8/24	Sun 8/25
06:00							
06:30							
07:00							
07:30							
08:00							
08:30							
09:00							
09:30							
10:00							
10:30							
11:00							

There is a developed functionality for saving appointments with the approval of the doctor who received the requests, which works as follows:

Select a day and time in the calendar at the bottom of the screen by highlighting with the mouse.

The screenshot displays a web application for managing medical requests. At the top, there's a navigation bar with 'SC' logo, flags, and links for Home, Export, Requests, Import, and Help. Below this is a search bar with fields for Phone number, Patient's Name, Date (From), and Date (To), along with a Search button. A table lists patient requests with columns for Patient's Name, Phone number, Date, Time, E-Mail, and a Select button. The table shows three entries for patients Nina, Nina Ivanova, and Plamena. Below the table, there's a section for Patient's ID, Patient's Name, Patient's Date of Birth, and a Consultation button. Another table below this shows no data available. Further down, there's a section for Patient's ID, Patient's Name, Patient's Date of Birth, Sex, and a Select button. Below this is a section for Patient's ID, Patient's Name, Patient's Date of Birth, Age, and a Create button. At the bottom, there's a calendar for June 21 - 27, 2021, with a grid showing days of the week and times from 08:30 to 10:30. A blue box highlights the time slot 09:30 - 10:00 on Wednesday, June 23.

From the table with requests, select the one you want to specify and click the button with the hand icon in the rightmost column of the selected request:

This screenshot shows the same interface as the previous one, but with the 'Add a procedure' button highlighted in the rightmost column of the selected request (Nina Ivanova, 2021/06/17, 17:00). The button is a blue icon of a hand. The calendar at the bottom remains the same, showing the week of June 21 - 27, 2021, with the 09:30 - 10:00 slot on Wednesday highlighted.

After pressing this button, the following dialog is displayed, where the information has to be filled in. Fields marked with an asterisk are required.

Add a procedure

Patient

Patient's ID * Patient's Name * Patient's Date of Birth Sex

Nina Ivanova Female

Procedure

Date (From) * Time (From) * Date (To) * Time (To) *

2021/06/17 17:00 2021/06/17 17:00

Priority Requesting Physician Referring Physician Station

STAT - - TEST (testq)

Payment Contrast

- ml.

Description

Save

DYMO Barcode

To add a DYMO pattern, an administrator shall edit a user, then press Choose file in the DYMO label section

Edit a user

Account Name * Username * Password * E-Mail

Host Port AE Title UIN Role *

Label Template File

MPR

☐ Disabled

Add this user to groups

Filter stations

Save Back to users

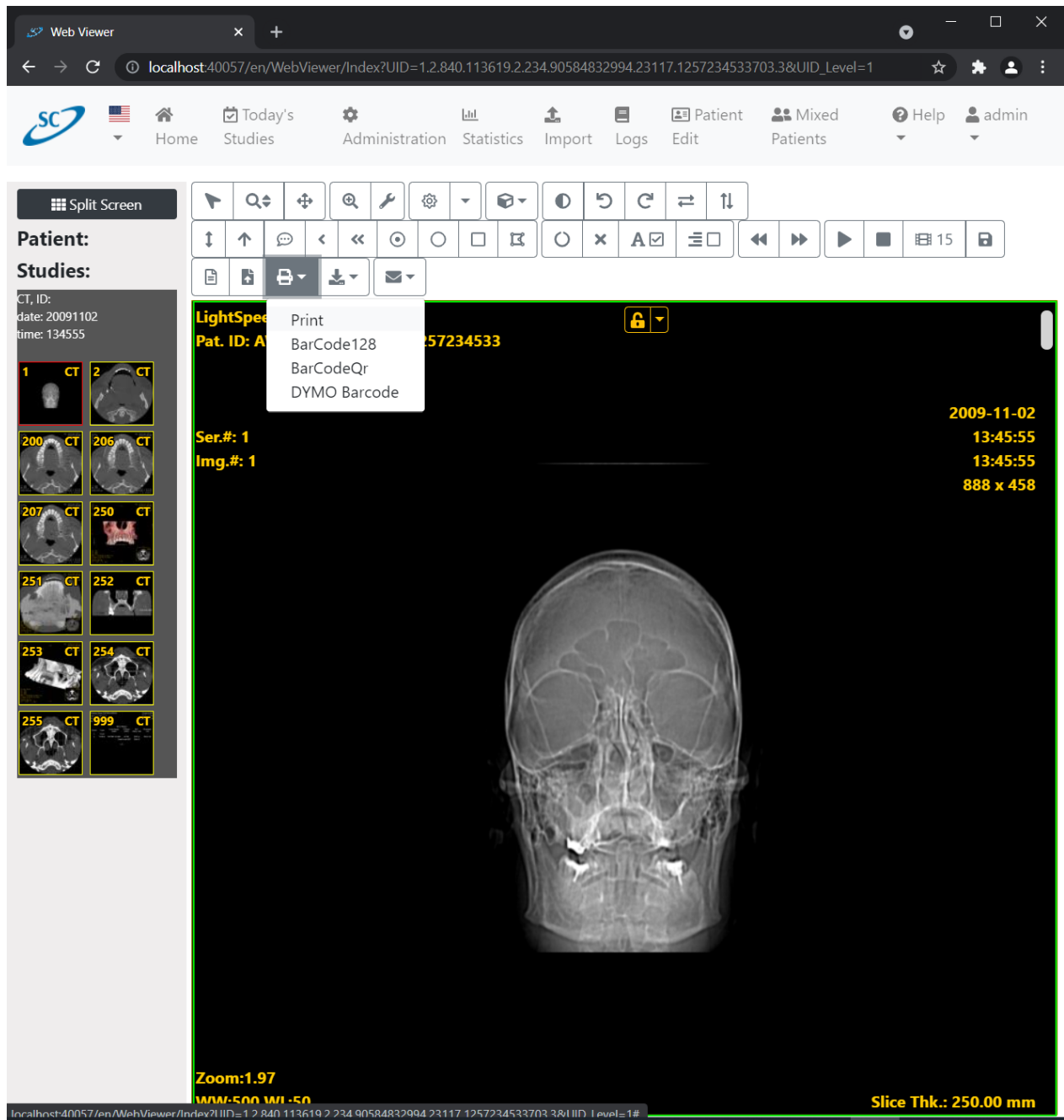
Modalities

☒ AS	☒ BI	☒ CF	☒ CD	☒ CR
☒ CT	☒ CP	☒ CS	☒ DG	☒ DF
☒ DM	☒ DS	☒ DX	☒ DD	☒ EC

Permissions

☒ DICOMDIR	☒ Burn_CD_DVD	☒ DICOMPrint
☒ SendAssignment	☒ DICOMStore	☒ ImportImages
☒ Graphic_Ellipse	☒ Graphic_Linear	☒ DICOMDump

After that the user will have a DYMO Barcode option for printing:



When you choose it, the following dialog appears and you can choose either QR Code or Bar Code to print:

Report - Google Chrome
localhost:40057/en/WebViewer/BarcodeQuickPrint?patientId=AW1399875886.665.1257234533&PatientName=undefined

SC Home Today's Studies Administration Statistics Import Logs Edit Patient Mixed Patients Help admin

Print BarCode

Patient's ID	Patient's Name
AW1399875886.665.1257234533	
PIN	Patient's Date of Birth
51d8555a	YYYY/MM/DD

Cancel BarCode128 BarCodeQr

User with assignments:

SC Home Help murcielago12v60@gmail.com

Assignments

NIKOLAY, GEORGIEV, RUSATEV	Search	Print	Patient
AHMED^SEBILE^SALI	Search	Print	Patient
φrñ	Search	Print	Patient
afdsdfa	Search	Print	Patient

KNOWN ISSUES

- When MPR is on there is a delay in the reconstruction **WORKAROUND** – wait until the reconstruction is complete