



MEDSYS PACS

Picture Archive and Communication System

User Manual

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Introduction

Overview

Visual MEDSYS PACS is developed in the Philippines. It speeds up processing of results and avoids lost plates. It digitally stores images for years and connects to virtually all modalities.

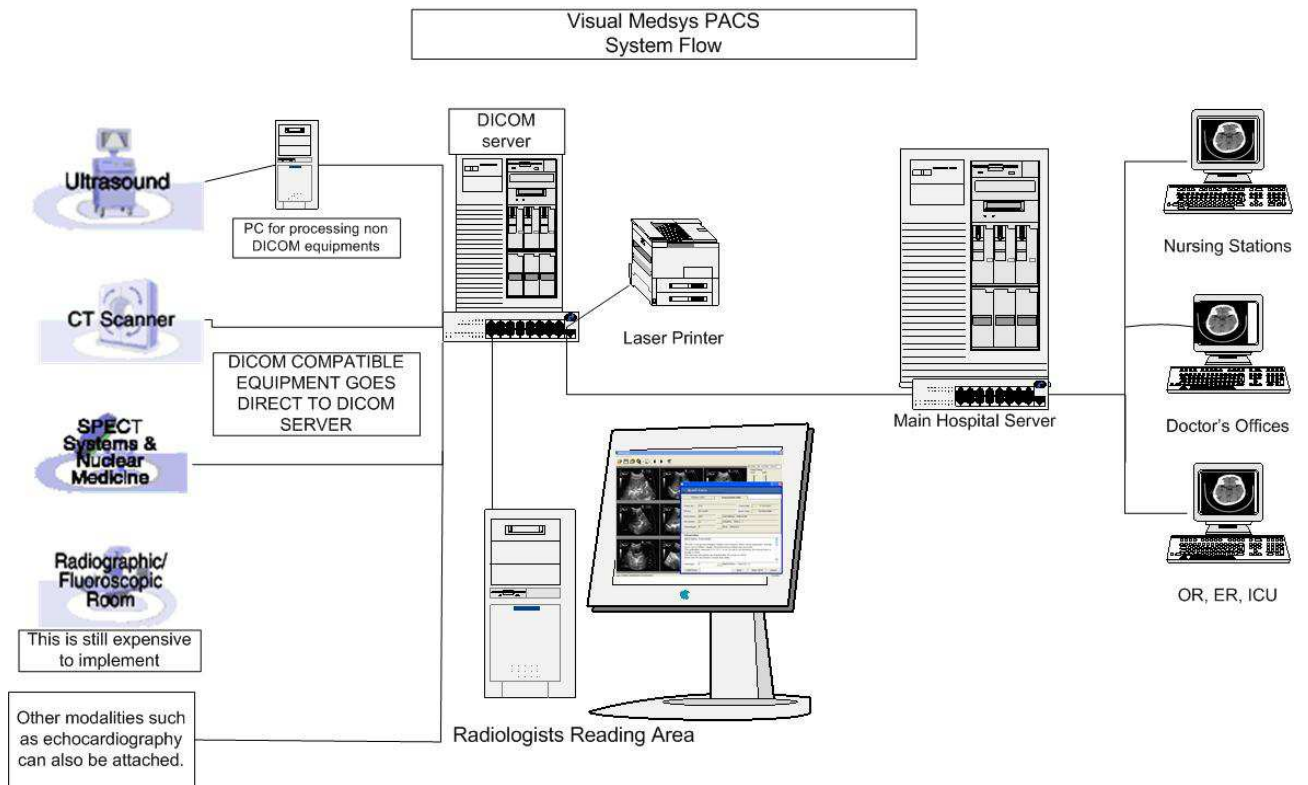
Objectives

- Modernize your Radiology Department
- Digitally store images for years
- Speed up processing of results & avoid lost plates
- Save on film costs
- Speed up processing of results
- Connects to virtually all modalities.
- CT / MRI / Ultrasound / Digital X-Rays / Nuclear / etc
- Affordable and customizable
- Save Interpretation/impression
- Send Result/Interpretation through e-mail

Features

- Capture and store Video/Images/Audio from machines and store on the PACS Server
- Connects to machines with a video signal (e.g. Endoscopy, Laparoscopy, C-Arm, etc.)
- Convert images to DICOM format
- Print images to paper or film
- (DICOM) compatible
- Allows storage from DICOM-compliant modalities. e.g.: X-Ray (CR/DR), CT, Ultrasound, MRI, etc.
- View images over Web.
- Modality Worklist – the Machine can access pending requests (no need to enter patient demographic data on the machine interface) – now read directly from the HIS, reduces entry errors and saves time
- Print past images transactions to DICOM film printer
- Send Email and SMS (w/ MEDSMS feature) of Image and Interpretation. Soon: Send images to mobile devices via MMS
- Burn images to CD (w/ free mini DICOM Viewer)
- View results in stations

MEDSYS PACS FLOW



Getting Started

How to Start the Program

- 1 Click on **MEDSYS PACS LAUNCHER Program** executable file icon located in your computer desktop.
- 2 The **Login** window will display asking you to type your employee number and password for security purposes.



Login Window

How to Change Password

- 1 From the **Login** window, type your employee number and then press <Enter>.
- 2 Under the **Password** entry, press <F12>. Pressing this function key will invoke the **Change Password** window.

The screenshot shows a standard Windows-style dialog box titled "Change User Password". The background is light gray. At the top, the title bar contains the text "Change User Password" and a close button (X) on the right. The main area of the dialog is white and contains the following text and controls:

- User ID:** 8
- User Name:** santos ,abad cruz
- Old Password:** followed by an empty text input field.
- New Password:** followed by an empty text input field.
- Confirm Password:** followed by an empty text input field.
- At the bottom right, there are two buttons: "Save" and "Close".

Change Password Window


3 Under the **Change Password** window, type the following data.

- **Old Password** - Type your existing password.
- **New Password** - Type your new password not exceeding to 15 characters.
- **Confirm Password** - Retype your new password to confirm and then press <Enter> or you can click the Save button.

How to End the Program

It is important for users to close the program when they are done to end-up their session. Other users might use the open program using the same password.

There are two ways to close the program.

- Click on  button located at upper right corner of the main window (if no other window is open) or
- Press **Esc (Escape)** on keyboard.

Program Operation

Viewing Patient List

After logging in, the list of patients for the day will display automatically on the screen. You can also search patients by **Lastname**, **Accession/Req.Number**, **File/Study Number**, **Hosp.Number/Patient ID**, or by **Firstname**.

Status	ALLStz	Accession	Patient ID	Last Name	First Name	Middle N.	Birth Date	Sex	Exam Name	Exam Date Time	Referring Physician
Printed	O		12-01815	BALIAT	MARIOUS		10/28/2010	M	Chest Supine APL CHES	2/27/2012 10:45 PM	
Printed	O		11-04735	TOLENTINO	ISAGANI		11/26/1933	M	Chest Supine AP CHEST	2/27/2012 10:00 PM	
Printed	O		12-00143	TUPAZ	EDUARDO		11/16/1951	M	Chest Erect AP CHEST	2/27/2012 9:38 PM	
Printed	O		11-08359	GALERA	RENE	GERARD	3/23/1982	M	Chest Erect PA CHEST	2/27/2012 9:36 PM	
Printed	O		12-01811	TONSAY	MA SALOME		9/21/1931	F	L-Spine AP LSPINE	2/27/2012 9:24 PM	
Printed	O		11-03147	GUADES	LAWRENCE		1/1/1900	M	Chest Erect LAT CHEST	2/27/2012 9:21 PM	
Printed	O		12-01814	GONZALES	ALFONSO JR		5/8/1975	M	Chest Erect PA CHEST	2/27/2012 8:42 PM	
Printed	O		12-01813	VILLEGAS	ANA	MARIE	5/23/1965	F	Chest Erect PA CHEST	2/27/2012 8:28 PM	DR, YARISANTOS
Printed	O		11-02449	LAYGO	MARIBEL		5/31/1948	F	Upper Ribs AP BREAST	2/27/2012 8:22 PM	DR, GRAGEDA
Printed	O		12-248	TONSAY	MA SALOME		9/21/1931	F	CHEST/UPPER ABD W/	2/27/2012 8:18 PM	DR, PENEYRA
Printed	O		11-01798	ESMALE	FELICSIMO		8/6/1955	M	Chest Erect PA CHEST	2/27/2012 8:16 PM	
Printed	O		12-01812	LUZON	CHRISTIAN		12/21/1981	M	Chest Erect LAT CHEST	2/27/2012 8:12 PM	
Printed	O		12-01810	LUZON	BLESILDA		5/2/1983	F	Chest Erect PA CHEST	2/27/2012 7:59 PM	
Printed	O		12-01811	TONSAY	MA SALOME		9/21/1931	F	T/L-Spine AP LSPINE	2/27/2012 7:40 PM	
Reported	O		12-01809	TAGUINES	ARNIE PAULINE		5/29/2004	F	Chest Erect AP CHEST	2/27/2012 6:48 PM	DR, TAMAYO
Printed	O		12-01808	SANTAMARIA	A	MELADEI	5/31/1968	F	Chest Erect PA CHEST	2/27/2012 6:42 PM	
Printed	O		12-01807	BUENAFE	MARICOR		8/8/2010	F	Chest Supine AP CHEST	2/27/2012 6:30 PM	
Reported	O		12-001802	PASCUAL	ANGELITA		8/2/1949	F	TM Joint PA JAW	2/27/2012 6:09 PM	DR, DELA ROSA
Printed	O		11-03107	GARBO	ALICIA		12/26/1965	F	Chest Erect APICO CHE	2/27/2012 5:51 PM	
Reported	O		11-05587	FABIO	LEOKURT		1/20/1984	M	Calcaneus Axial FOOT	2/27/2012 5:31 PM	
Printed	O		12-01041	PAREDES	RUDY		10/25/1946	M	FOOT APO FOOT	2/27/2012 4:53 PM	
Printed	O		12-01493	ABRIL	JHEROME		11/4/2001	M	Forearm AP ARM	2/27/2012 4:42 PM	
Reported	O		12-01806	BANAL	MAY ANN		2/25/1967	F	C-Spine AP CSPINE	2/27/2012 4:30 PM	DR, BALATBAT
Printed	O		12-01805	CONCORDIA	MARIE		9/27/1990	F	Chest Erect PA CHEST	2/27/2012 4:15 PM	
Printed	O		12-01802	GUERRERO	JESILMA		4/20/1971	F	Chest Erect PA CHEST	2/27/2012 3:55 PM	
Reported	O		12-01803	SALOMON	BENNEDIK		12/15/1981	M	Chest Erect PA CHEST	2/27/2012 3:13 PM	
Printed	O		12-01801	FLORES	SUNI PAZ		6/12/1976	F	Upper Ribs AP BREAST	2/27/2012 3:03 PM	
Reported	O		12-009	PALCONIT	CLARISSA		1/1/1900	F	Chest Erect PA CHEST	2/27/2012 2:59 PM	
Printed	O		12-00946	BARRAMEDA	RODEL		12/26/1983	M	Wrist APL HAND	2/27/2012 2:56 PM	
Reported	O		11-06815	CHAN	VONN PATRICK		2/15/1980	M	Ankle APL ANKLE	2/27/2012 2:43 PM	dr, pagaran

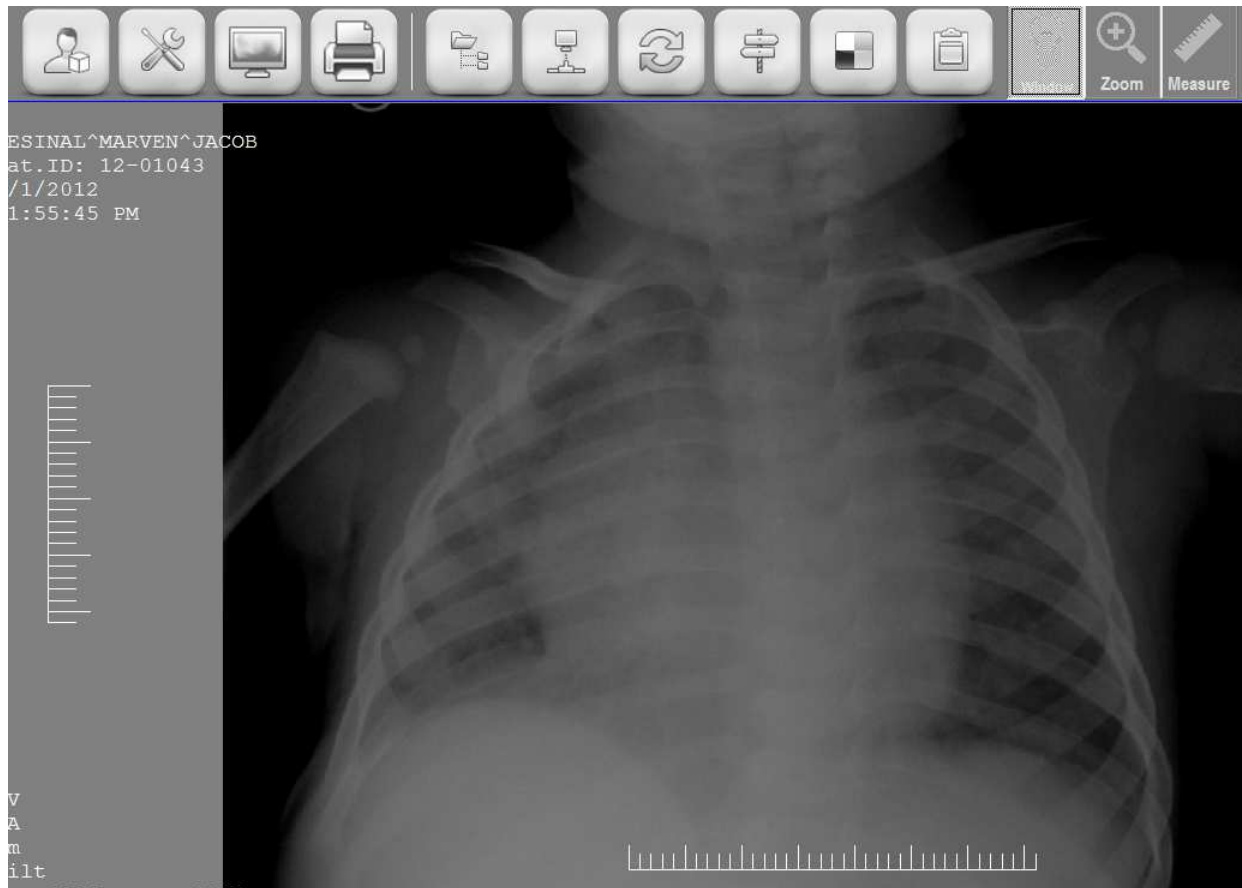
By default, the patient with the latest procedure processed is displayed on top of the list. List of patients can be arranged also by **Last Name**, **First Name**, **Middle Name**, **Status**, etc.

To view all patients from previous dates to the current one, click on **All Dates** button and all the list of patients will be displayed on the screen.

Viewing Patient Images

Double-click on patient's name to view image.

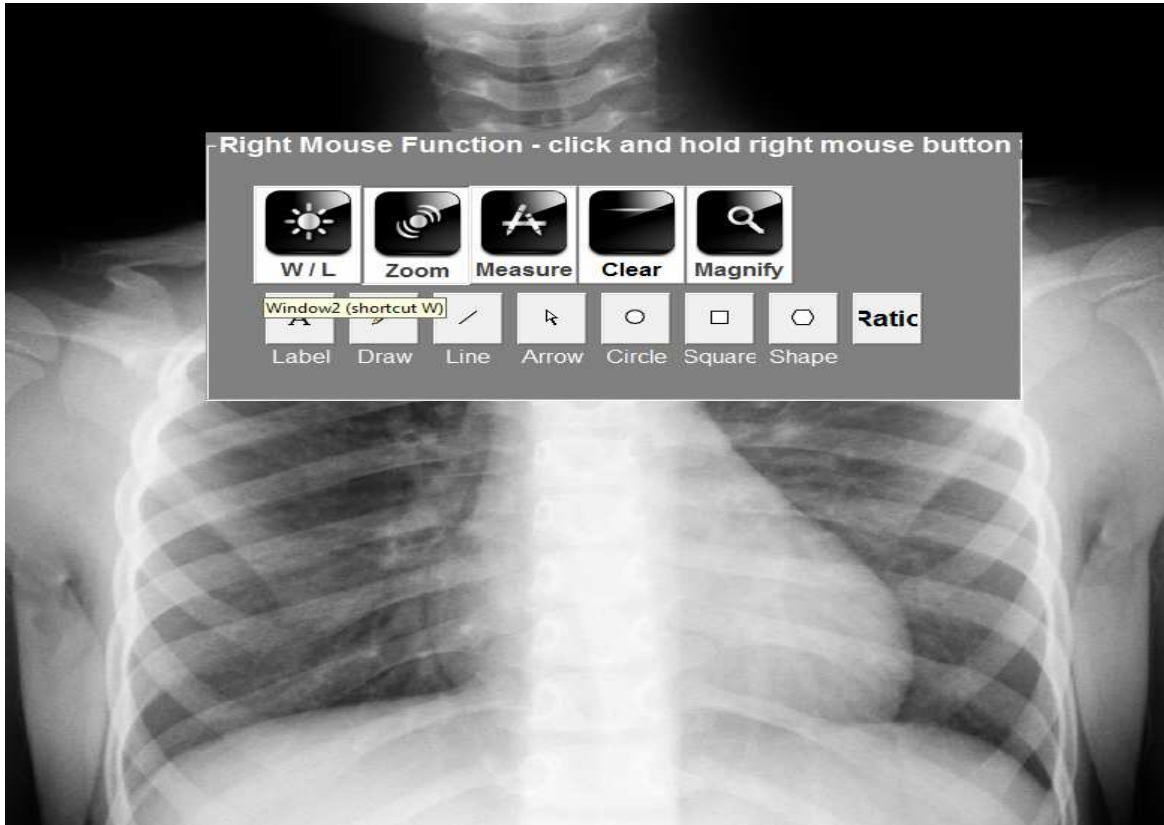
Status	ALLSta	Accession	Patient ID	Last Name	First Name	Middle N	Birth Date	Sex	Exam Name	Exam Date Time	Re
Reported	O		12-01043	VESINAL	MARVEN	JACOB	6/25/2011	M	Chest Supine AP CHEST	2/01/2012 11:55 PM	
Reported	O		CT12-123	INGAL	MILA		5/17/1949	F	CT CRANIAL CHEST	2/01/2012 11:03 PM	
			12-00985	LAPEÑA	JOSE III		8/27/1972	M	Chest Erect APICO CHE	2/01/2012 10:59 PM	



Note: By default, user can **Zoom In** and **Zoom Out** image by using the mouse scroll or by holding and dragging the right mouse function.

Right Mouse Functions

Single right-click on mouse to view different functions like zooming, windowing and others. Choose one by left-clicking on the mouse. Hold and drag it up, side, down to apply the selected option.



Right Mouse Functions:

W/L – adjust brightness and contrast of image

Zoom – zoom in and out image

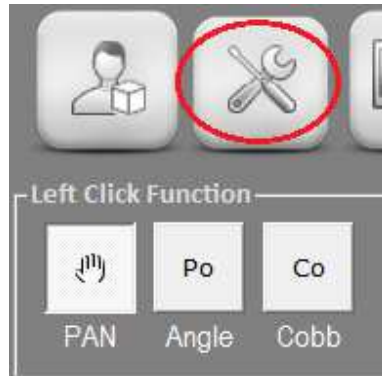
Measure – measure certain areas of image

Clear – clear applied options on image like measurement, labels, lines, etc.

Magnify – magnify image

Left Mouse Functions

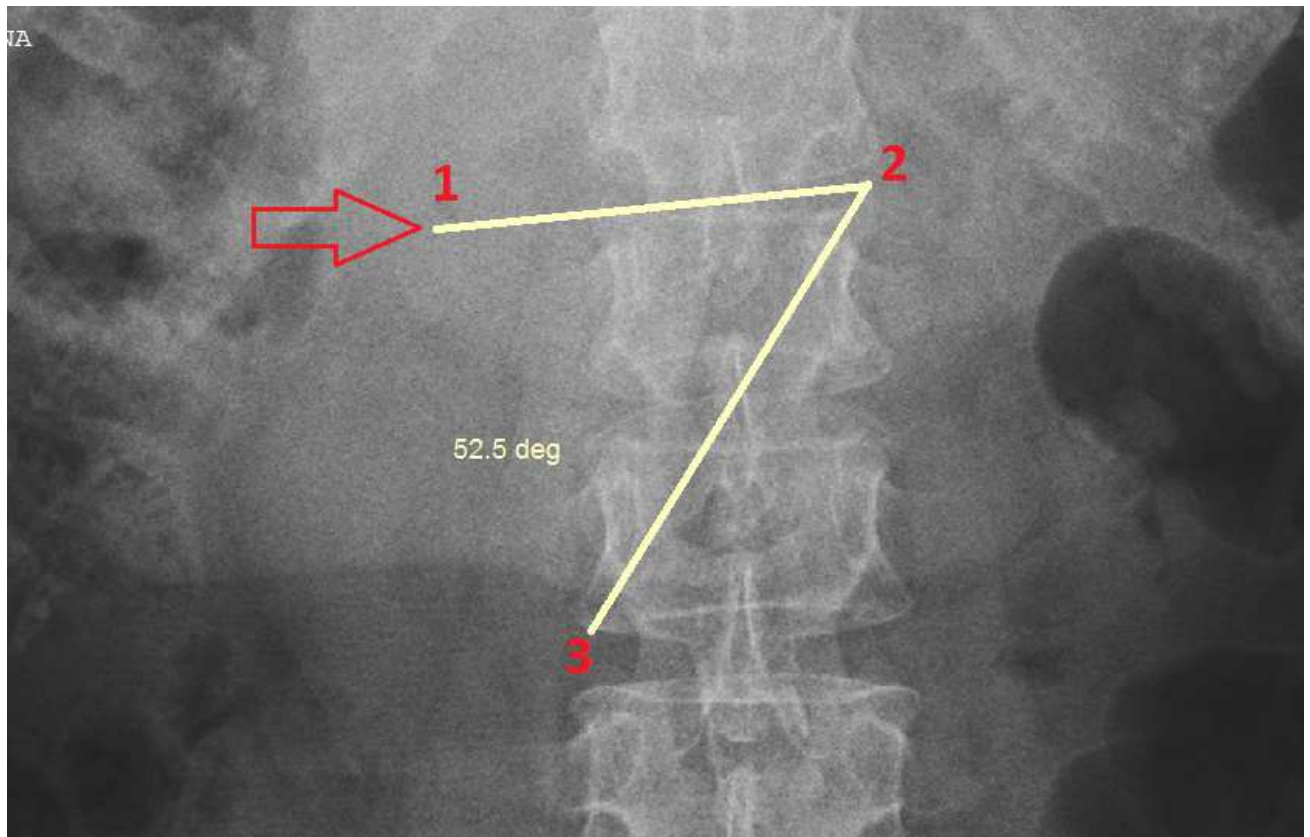
Point mouse on **Adjustment** icon (located at the top) to view the Left Click functions. Hold and drag Left key mouse button to apply selected option.



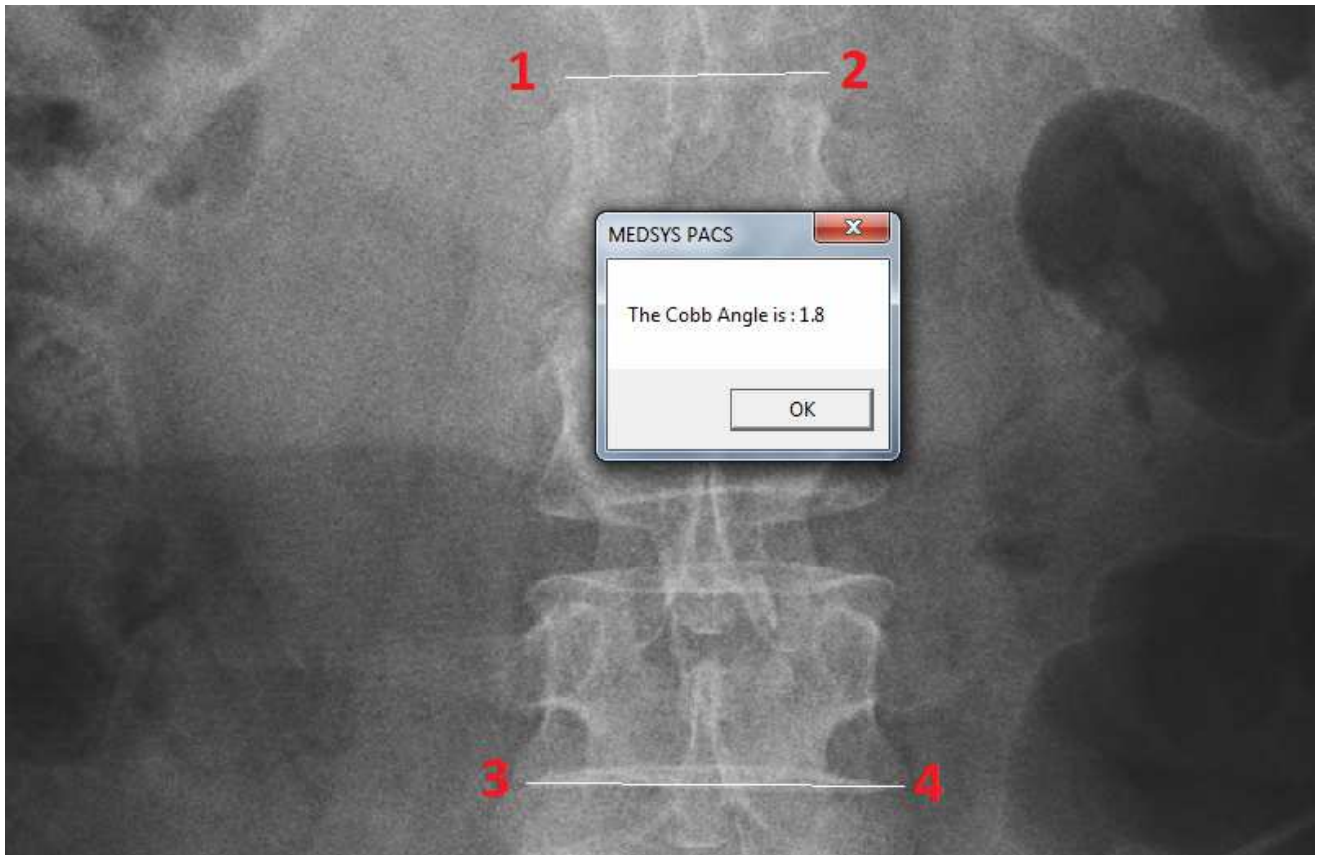
Left Click Functions:

PAN – default settings for left click function. Use this function to pan or move image to certain directions.

Angle – use this function to get Angle of image



Cobb – use this function to get Cobb Angle of image

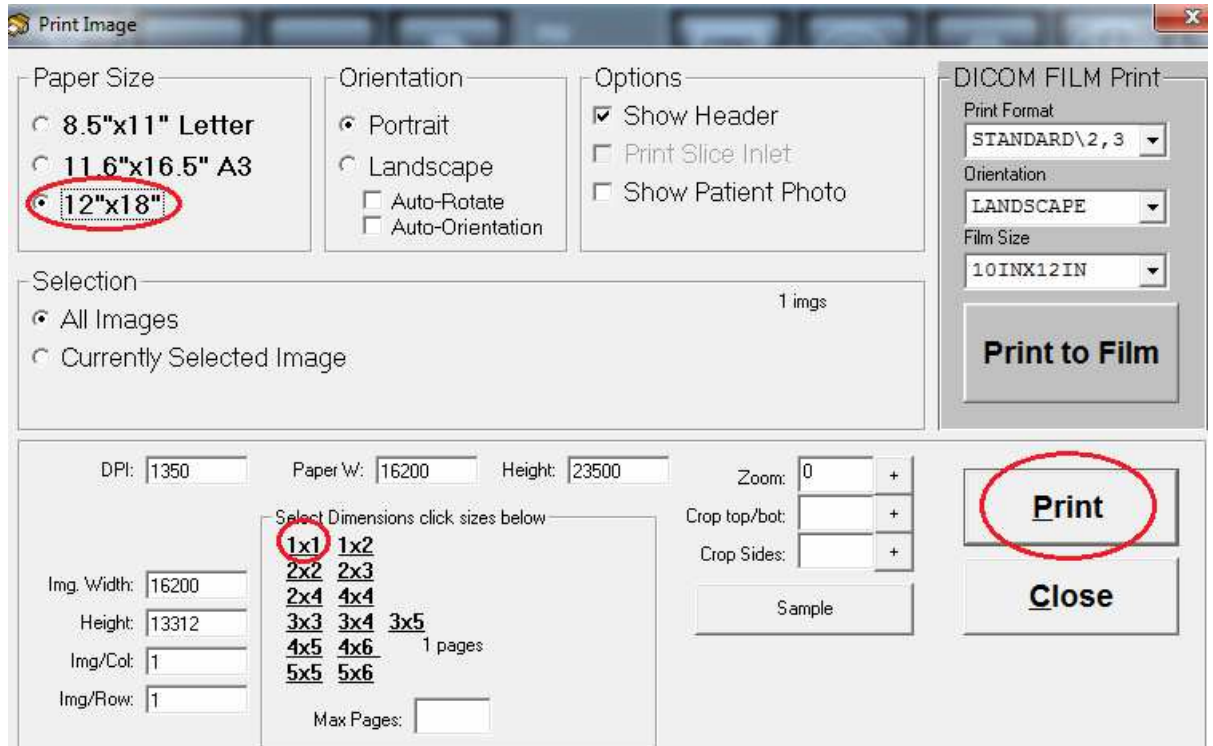


Apply Cobb function by clicking the areas Four (4) times. The Cobb Angle will be automatically computed.

Printing of Images

○ Using Paper

Open patient's image and hit **Ctrl+P** on keyboard to print the image of patient.



Settings:

Paper Size: 12"x18" – usually used for A3 or large papers.

Selection: **All Images** – print all images on the study/folder.

Currently Selected Image – print ONLY selected images on the study/folder.

Orientation: **Portrait** – print image on Portrait layout.

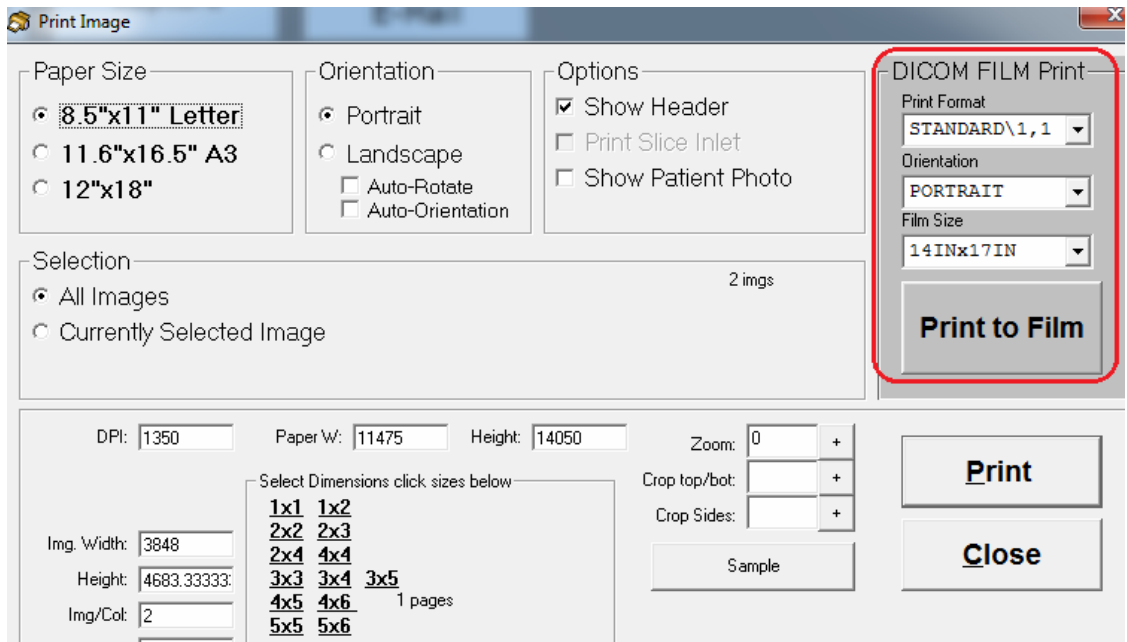
Landscape – print image on Landscape layout.

Options: **Show Header** – select when printing images with header.

Dimensions: **1x1** – usually used in printing A3 or larger paper size images.

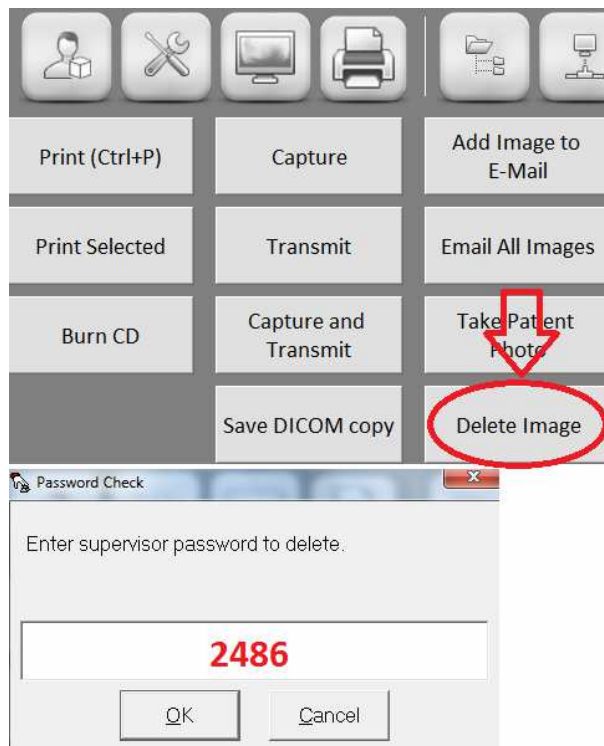
2x2 – usually used in printing Mammogram images (4 images)

o **Using FILM**



Select on **Print to Film** (located on the left side of the Print Image window) to print images of patient using film.

Deleting of Images



Password: 2486

Go to **Print/Output** and select **Delete Image**. Supervisor password will be required.

Comparing of Images

To COMPARE previous image of patient to the current image, click on **Previous Images Found** icon and patient's past record will be displayed.



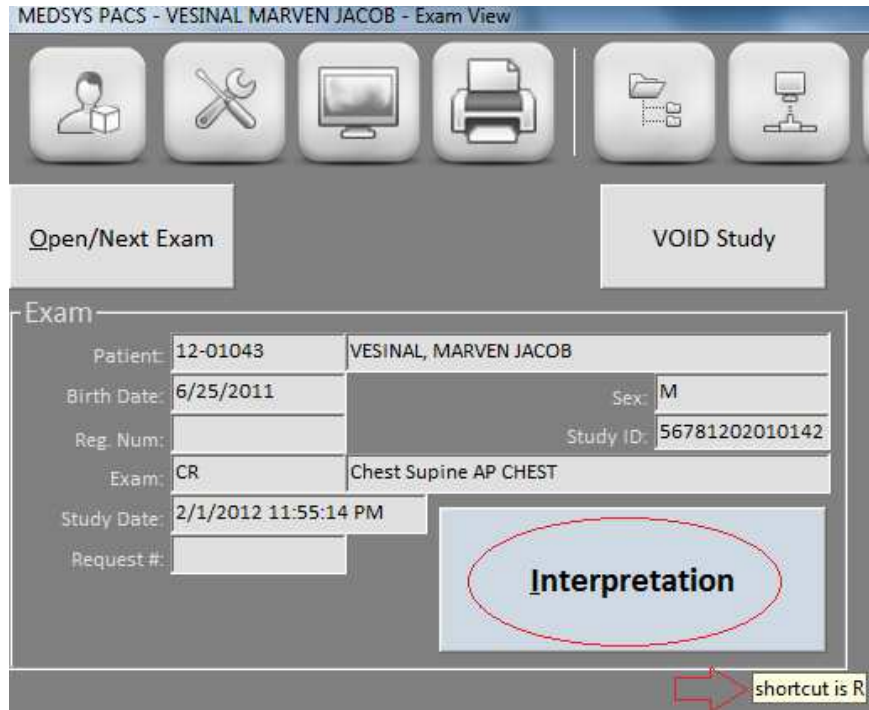
Note: If the patient has no previous exam or history found on the system, the encircled icon below (no previous found) will be the one to appear.



Note: For **Radiologist workstation**, the system could be set automatically in detecting patient's previous exam.

Result Entry / Inquiry

To ENTER, EDIT or VIEW patient's exam result, point your mouse on Exam icon (or Press "R" on keyboard for shortcut) and the options below will appear.



Note: NOT all users can access the Result. ONLY those who were given rights can access it.

Click on the **INTERPRETATION** button to enter, edit or view patient's result. Information of patients entered on the machine will automatically appear here.

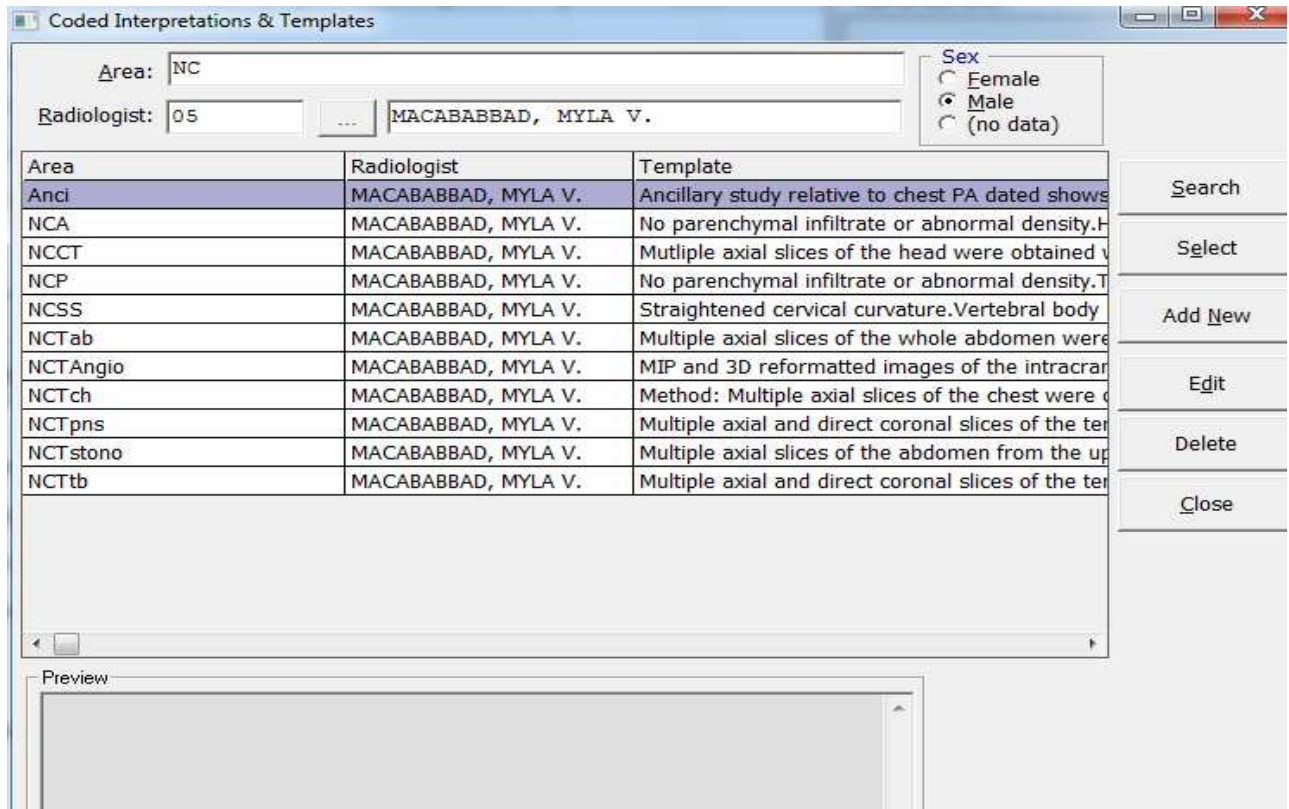
Patient Info Exam Info HIS Diagnosis Other				HIS & RIS Info: IDNum: <input type="text"/> Clos	
Patient ID: <input type="text" value="12-01043"/> Age: <input type="text" value="6/25/2011 (007M)"/> Room: <input type="text"/>		First Name: <input type="text" value="MARVEN"/>		Sex: <input type="radio"/> Female <input checked="" type="radio"/> Male <input type="radio"/> (no data)	
Middle Name: <input type="text" value="JACOB"/>		Last Name: <input type="text" value="VESINAL"/>			
Interpretation Voice Rec Voice Play Reset Dictation Start Stop				CHEST - -	
Radiologist-Sonologist: <input type="text" value="05"/> ... <input type="text" value="MACABABBAD, MYLA V."/>				Template / Coded Exam Normal Result Result 2	
No focal lung infiltrates or areas of consolidation. The heart is not enlarged. Hemidiaphragms and sulci are intact. Osseous structures are unremarkable. IMPRESSION: ESSENTIALLY UNREMARKABLE STUDY OF THE CHEST				<input type="checkbox"/> Use Template box	
User Role: Technologist		<input type="button" value="Save"/> <input type="button" value="Save / Print & Close"/> <input type="button" value="Re-Print Saved Data"/>		Copies: <input type="text" value="1"/> <input type="checkbox"/> Print Signature <input type="button" value="E-Mail Saved Data"/>	

Result Entry Window

The user can directly enter result of the study if she/he will not use the coded templates or interpretation. Click **Save/Print & Close** to save and print the result or simply hit **Alt-P** on keyboard. Reprint result by selecting on the **Re-Print Saved Data** button.

Using Templates / Coded Interpretations

Click on the **Template / Coded Exam** on the main **Result Entry** window to view doctor's templates.



Coded Interpretation & Templates Window

To search for a specific template, enter the template's name on the **Area** search box then click **Search**. Click **Select** to choose the desired template or simply double click the template.

Once you have selected the result template, it will go back to the main result entry window.

The screenshot shows the 'Result Entry' window for a patient named MARVEN JACOB VESINAL. The 'Patient Info' tab is active, displaying fields for Patient ID (12-01043), Age (6/25/2011 (007M)), Room, First Name, Middle Name, Last Name, and Sex (Male). The 'Interpretation' section contains a text area with the following text: 'No focal lung infiltrates or areas of consolidation. The heart is not enlarged. Hemidiaphragms and sulci are intact. Osseous structures are unremarkable. IMPRESSION: ESSENTIALLY UNREMARKABLE STUDY OF THE CHEST'. The 'CHEST - -' section has three buttons: 'Template / Coded Exam', 'Normal Result' (highlighted in green), and 'Result 2'. At the bottom, there are buttons for 'Save', 'Save / Print & Close', and 'Re-Print Saved Data', along with a 'Copies' counter set to 1 and an 'E-Mail Saved Data' button.

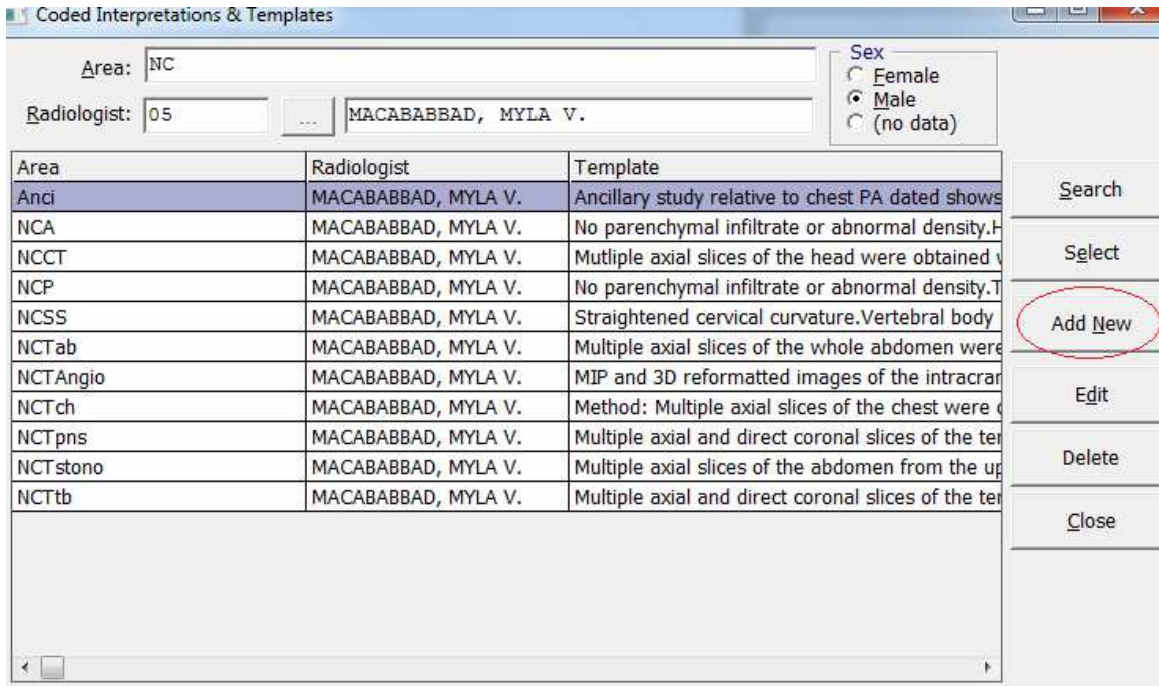
Result Entry Window

Click **Save/Print & Close** to save and print the result or simply hit **Alt-P** on keyboard. Reprint result by selecting on the **Re-Print Saved Data** button.

Adding Templates / Coded Interpretation

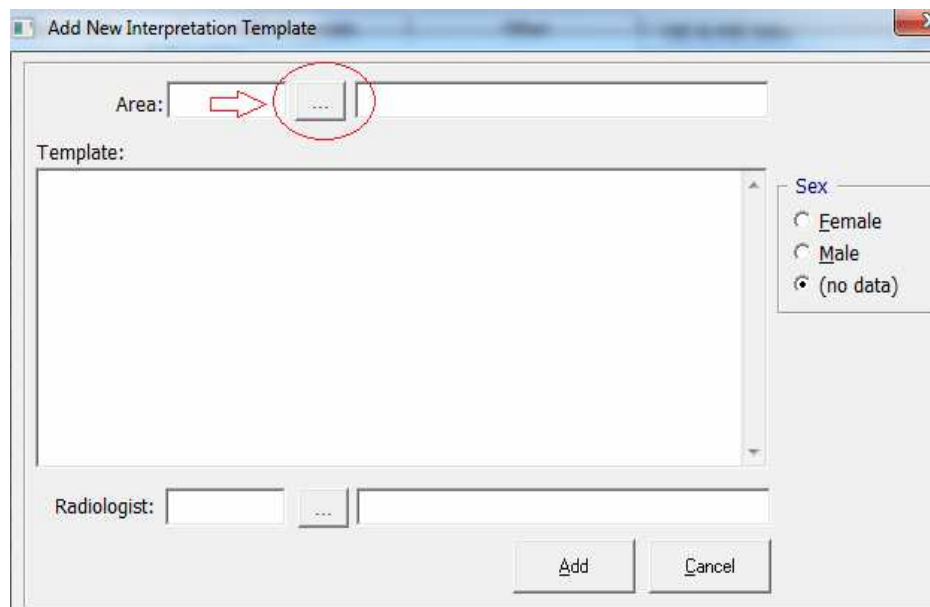
Open the main **Result Entry** window. Click on **Template / Coded Exam** button to open the Template window.

This screenshot is similar to the previous one but for a different patient, KARA SACREZ. The 'Patient Info' tab shows Patient ID (11-09846), Age (6/26/2009 (002Y)), Room, First Name, Middle Name, Last Name, and Sex (Female). The 'Interpretation' section contains: 'Lungs are clear. Heart is not enlarged. Both sulci are intact. Delineated bone structures are unremarkable.' The 'CHEST - -' section has three buttons: 'Template / Coded Exam' (circled in red with a red arrow pointing to it), 'Normal Result', and 'Result 2'. The 'Use Template box' checkbox is unchecked.



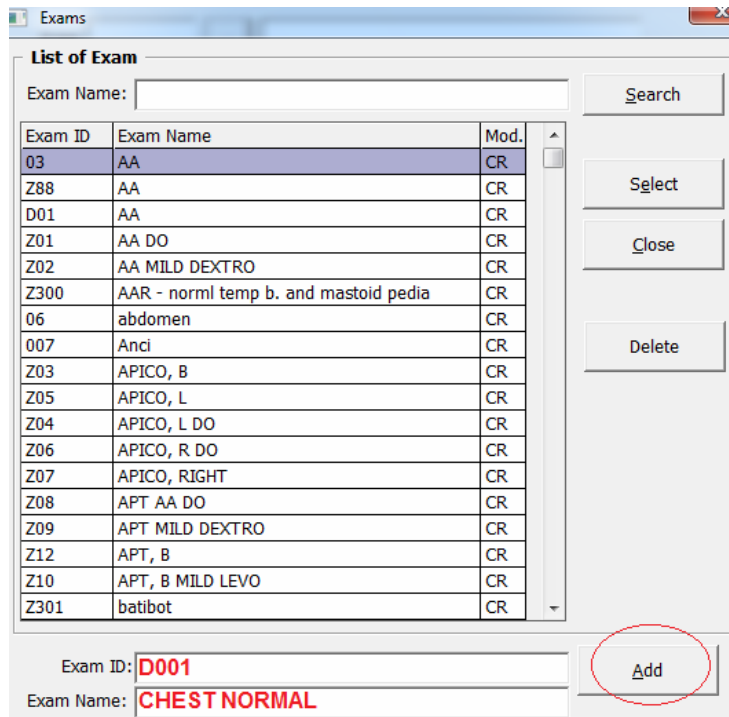
Coded Interpretation & Templates Window

Click on **Add New** button (located on the left side) to add templates and coded interpretations.



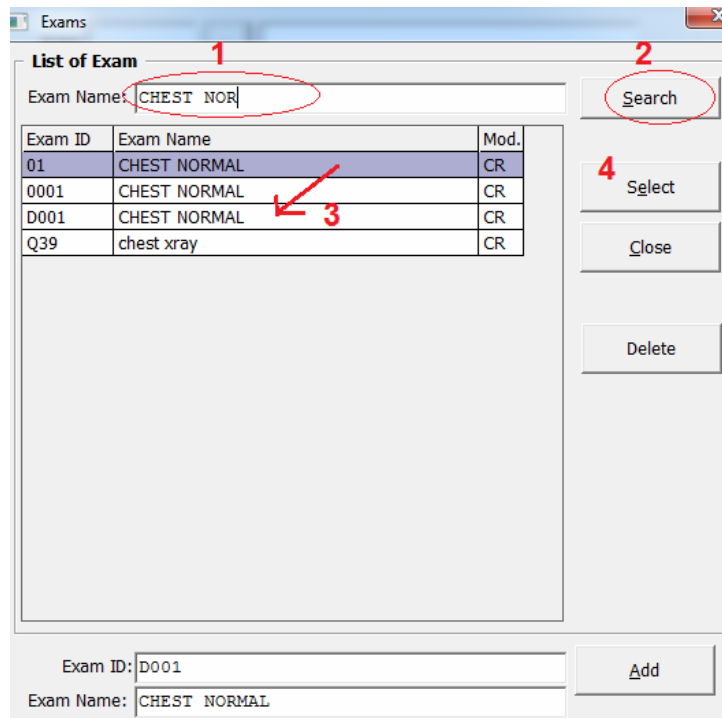
Add New Interpretation Template Window

Click on **Area** button to display the list of **Exams/Templates** name.



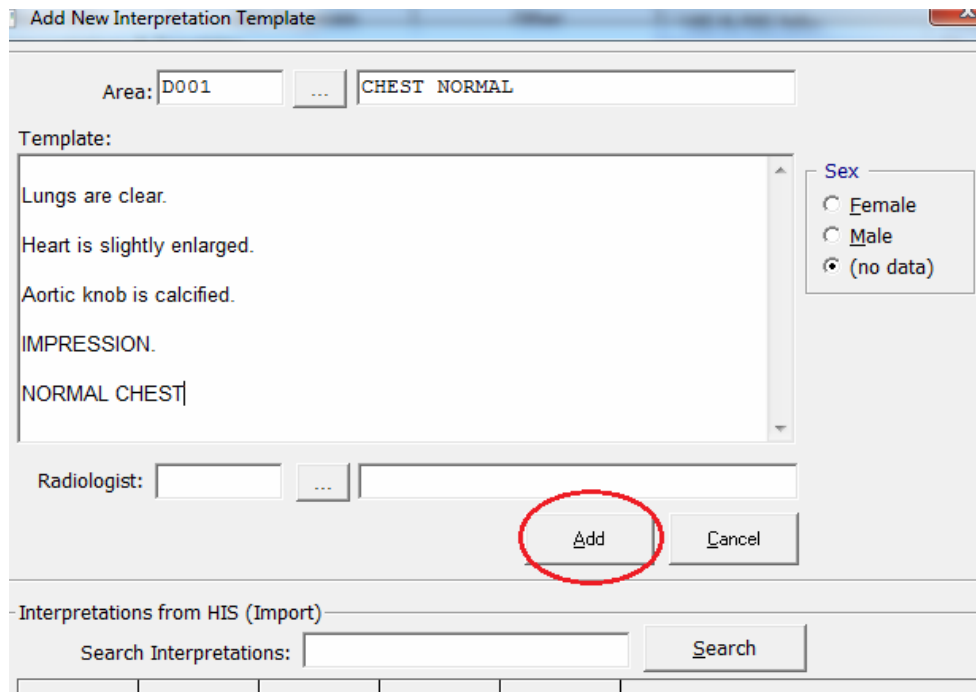
Exams Window

Enter desired **Exam ID** (should not be repeated if existed already) and **Exam Name** (template name). Click **Add** button to add the template name.



Search the newly created template name on the **Exam Name** search bar located on the

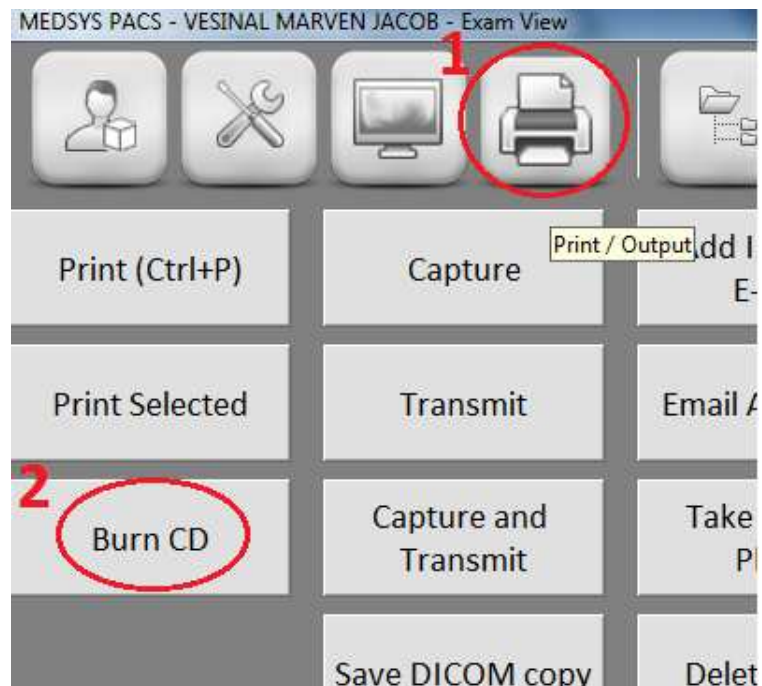
top of the window. **Double-click** or click on **Select** button to choose it.



Enter the template content. Click on **Add** button when finished.

CD Burning

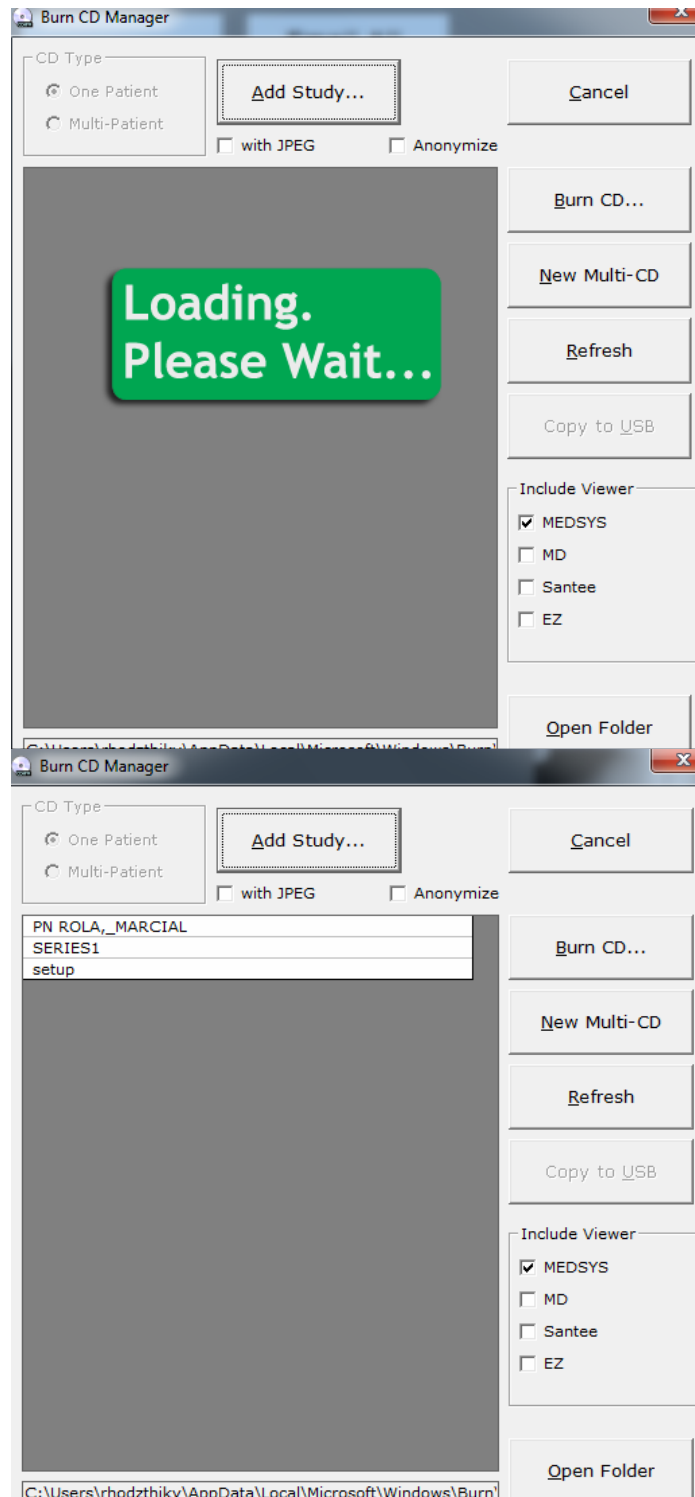
Open patient's image and mouse-point on **Print/Output** icon.



- **Burning Images of a Single Patient (Single Study)**

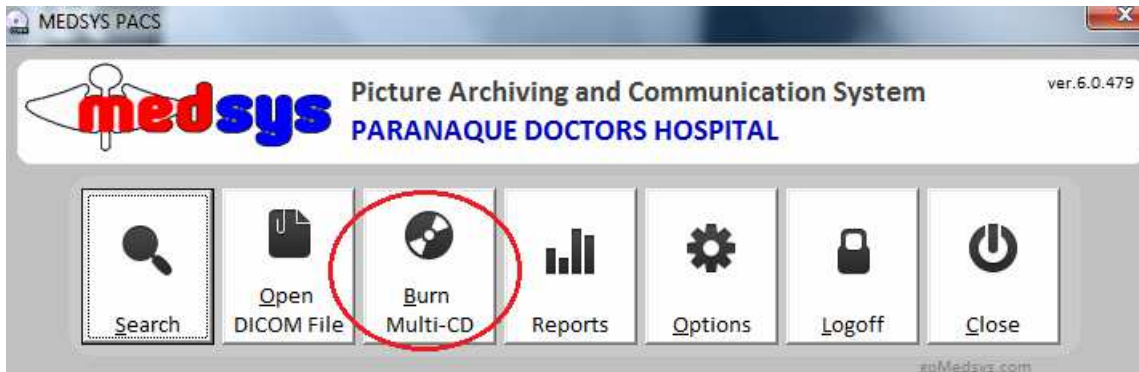
Click on **Burn CD** button to open **Burn CD Manager**.

Wait for the image to load..

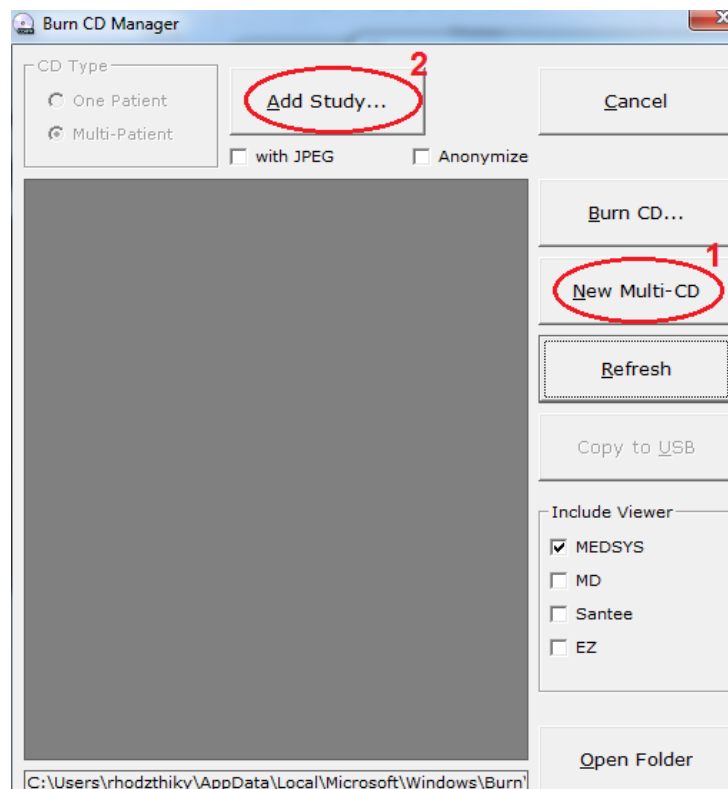


Once loaded, click on **Burn CD** button located on the right side of the window to burn the image study of patient.

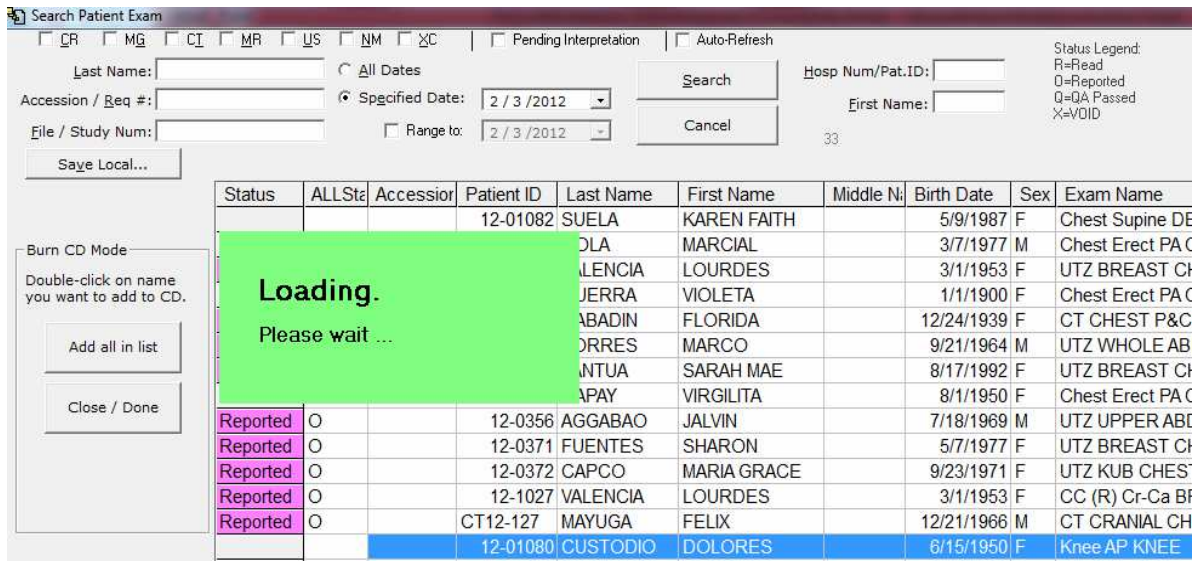
- **Burning Images of Multiple Patients**



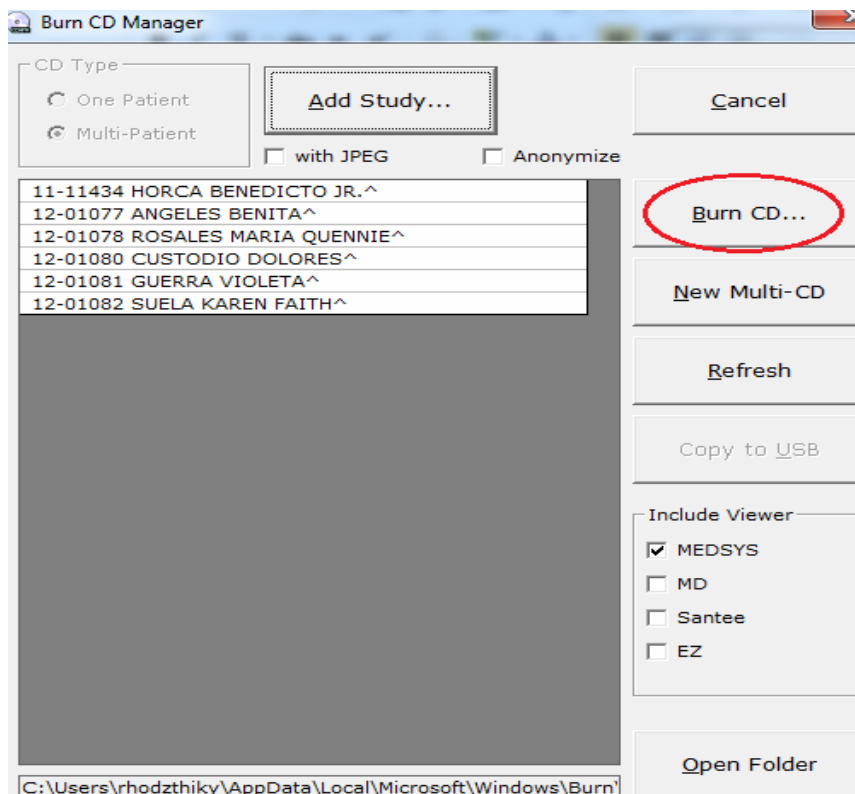
Click **Burn Multi-CD** button to open **Burn CD Manager**.



To create new multi-study, click on **New Multi-CD** located on the right side of the window. Then **Add Study** to choose patients to be burned on CD.



Search patients to be added on Multi-CD. **Double-click** on patient's name to add them to the list of patients to be burned. Once finished, click on **Close/Done** button located on the left side of the window.



Click on **Burn CD** button to burn images of multiple patients.