



## **Picture Archive and Communication System (PACS)**

### **What is PACS?**

PACS stands for Picture Archiving and Communication System and is the system that has replaced x-ray film with digital images. PACS also links the reports for imaging studies with the imaging study making it easy to view both the images and the associated report at the same time. The name of our PACS is Synapse and there is a Synapse icon on the desktop of all hospital computers.

### **What is the purpose of PACS?**

PACS resolves many of the problems that were associated with film. Film could only be available in one place at a time and would frequently result in delayed patient care if it was not immediately available to the referring physician. With PACS, patient studies can be viewed from any computer at any of our facilities or from a referring physician's office. PACS also allows the radiologists to read studies performed at any of our facilities, from any of our facilities, making them much more efficient and greatly reducing the turn around time for report dictation.

### **Who should have access to PACS?**

Any hospital employee who has a legitimate need to view patient images to provide patient care will be given access to PACS.

### **How will access be granted for PACS?**

Clinical staff can request access to PACS by calling the PACS Hotline at 5PACS (57227). Other staff, requiring access to PACS, must request it through their supervisor, manager or director.

### **Who should I contact if I need more in depth training on PACS?**

Contact the PACS Hotline by calling 5PACS (57227). The PACS Hotline is located in the Medical Imaging department and is answered by Medical Imaging personnel 24 hours a day, 7 days a week.

### **Who should I contact if I encounter issues while working with PACS?**

If the issue is related to logging into PACS or using the PACS program call the PACS Hotline at 5PACS (57227) and a Medical Imaging employee will assist you. If the issue is related to computer hardware, call the Information Systems Helpdesk at 56560.

## How Tos for PACS

### HOW TO INSTRUCTIONS

#### Log in to PACS



Double click the Synapse icon on your computer's desktop.  
If there is no icon, call 56560 and ask to have Synapse installed.



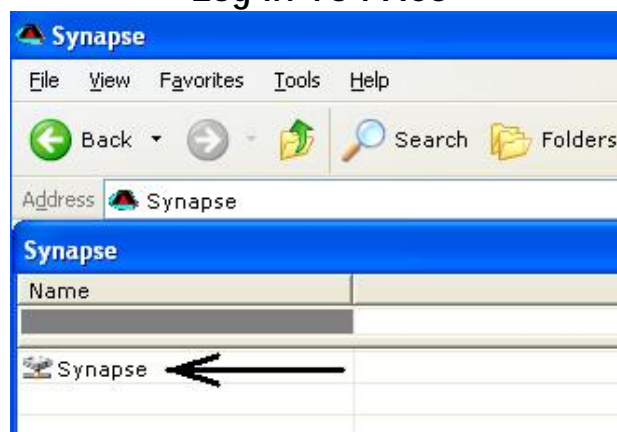
Enter CMC\ in front of your network login name.

Be sure to use a back slash, not a forward slash.

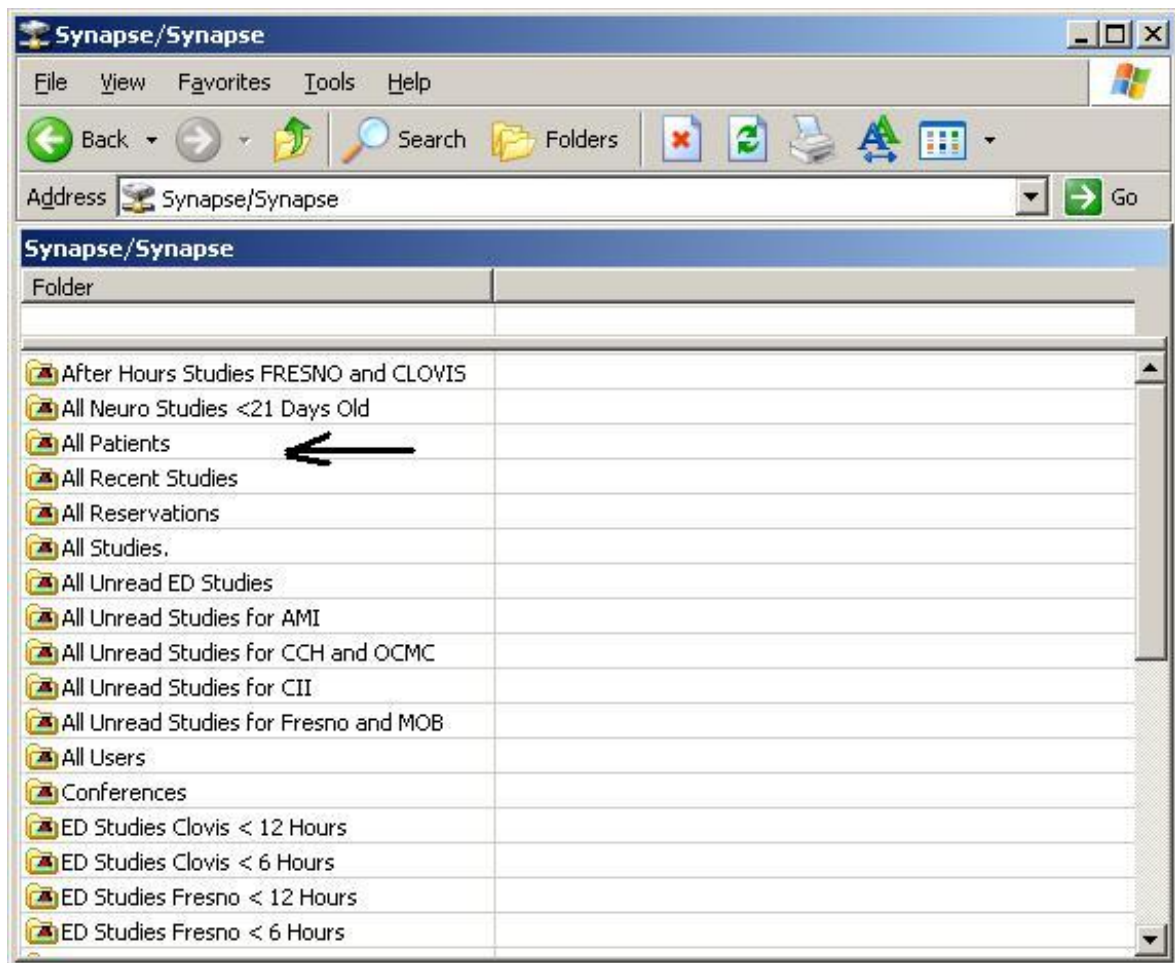
The back slash key is located right below the back space key on your keyboard.

Your network login name is typically your first initial and your last name,  
but may have a number after it if you have a common first and last name.

## Log In To PACS

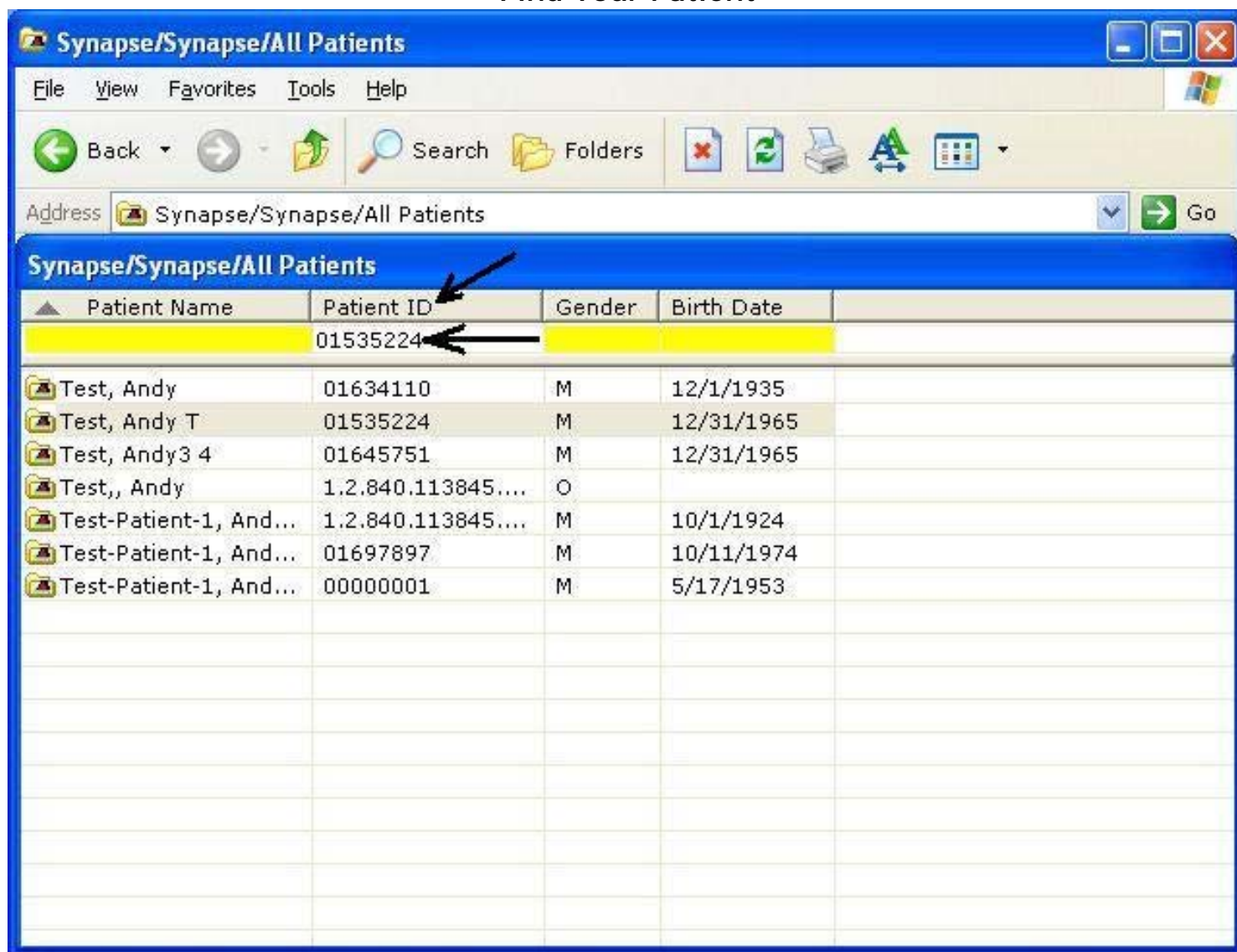


Double click the Synapse Network icon.



When you first log in to Synapse, you will see a list of folders. These folders will help you to quickly find your patient. In most cases, you will use the All Patients folder. Double click the folder and the folder will open.

## Find Your Patient



The screenshot shows a web application window titled "Synapse/Synapse/All Patients". The window has a menu bar with "File", "View", "Favorites", "Tools", and "Help". Below the menu bar is a toolbar with buttons for "Back", "Forward", "Search", "Folders", and other navigation tools. The address bar shows "Synapse/Synapse/All Patients". Below the address bar is a table with the following columns: "Patient Name", "Patient ID", "Gender", and "Birth Date". The table contains several rows of patient data. The first row is highlighted in yellow, and an arrow points to the "Patient ID" column header. Another arrow points to the "Patient ID" value "01535224" in the first row.

| Patient Name           | Patient ID         | Gender | Birth Date |
|------------------------|--------------------|--------|------------|
|                        | 01535224           |        |            |
| Test, Andy             | 01634110           | M      | 12/1/1935  |
| Test, Andy T           | 01535224           | M      | 12/31/1965 |
| Test, Andy3 4          | 01645751           | M      | 12/31/1965 |
| Test,, Andy            | 1.2.840.113845.... | O      |            |
| Test-Patient-1, And... | 1.2.840.113845.... | M      | 10/1/1924  |
| Test-Patient-1, And... | 01697897           | M      | 10/11/1974 |
| Test-Patient-1, And... | 00000001           | M      | 5/17/1953  |

Type your patient's Medical Record number in the Patient ID field and press Enter or click the Patient ID button above the Medical Record Number. This will open your patient's Study Folder. Patient studies can also be found by typing in the patient's name or by opening other folders such as the ED Studies folders, which are designed to display specific types of patients.

## Find Your Patient's Study

The screenshot shows the Synapse software interface. The title bar reads "Synapse/Synapse/All Patients/Test, Andy T 01535224 M". The menu bar includes File, View, Favorites, Tools, and Help. The toolbar contains icons for Back, Forward, Home, Search, Folders, and various document actions. The address bar shows the path "Synapse/Synapse/All Patients/Test, Andy T 01535224 M" with a Go button.

| Docs | Description                      | Study Date            | Mod | # Img | Status    | Accession # |
|------|----------------------------------|-----------------------|-----|-------|-----------|-------------|
|      | Skull Complete 4 or More Views   | 3/29/2007 1:31:30 PM  | CR  | 1     | Dictated  | 2215090     |
|      | US Abdomen Complete              | 1/9/2007 11:39:03 AM  | US  | 5     | Cancel    | 2055547     |
|      | Chest Tube Placement             | 11/3/2006 1:00:00 PM  | XA  | 0     | Cancel    | 1920688     |
|      | MRI Knee With & Without Contrast | 10/29/2006 3:15:00 PM | MR  | 0     | Finalized | 1925811     |
|      | Ultrasound Soft Tissue           | 10/17/2006 4:55:00 PM | US  | 0     | Cancel    | 1902670     |

On the left, a sidebar contains icons for Study Info, Report, Notes, Docs, and Series. The main area below the list shows detailed information for the selected study (Skull Complete 4 or More Views).

| Study Info          |                                | Order |           |
|---------------------|--------------------------------|-------|-----------|
| Site ID             | FCH                            |       |           |
| Patient             | Test, Andy T                   |       |           |
| ID                  | 01535224                       |       |           |
| DOB                 | 12/31/1965                     |       |           |
| Order #             | 2215090                        |       |           |
| Accession #         | 2215090                        |       |           |
| Procedure           | Skull Complete 4 or More Views |       |           |
| Date                | 3/29/2007 1:31:30 PM           |       |           |
| Reason              | N/A                            |       |           |
| Ordering Physician  | Physician, Test                | Phone | <unknown> |
| Referring Physician | Physician, Test                | Phone | <unknown> |
| Attending Physician | Unknown, Unknown               | Phone | N/A       |
| Visit #             | 110747215                      |       |           |
| Class               | 0                              |       |           |
| Pregnancy           | N/A                            | LMP   | N/A       |
| Admission Date      | 10/4/2006                      |       |           |
| Prim. Loc           | UNKNOWN ID                     |       |           |
| Current Loc         | UNKNOWN ID                     |       |           |
| Additional Info     |                                |       |           |

The upper portion of the Patient Study folder displays a list of all the patient's studies with the most recent studies at the top. A single click on any study in the upper portion will display that study's information in the lower portion. The lower portion displays the study information for the highlighted study by default. Clicking on the Report, Notes, Documents or Series icons on the left will display the associated information for the study selected. Use the slider on the right to scroll through the study list.

Double click on the study you wish to view to open the study and display the images.



## View Your Patient's Study

**Synapse/Synapse/All Recent Studies/** CR Chest PA & Lateral

File View Favorites Tools Help

Address: Synapse/Synapse/All Recent Studies/ CR Chest PA & Lateral

Synapse One CR Study Single CR

7/20/1969 M

Chest PA & Lateral  
CHEST PA  
11/2/2007 7:24:44 AM

7/20/1969  
CHEST LATERAL  
11/2/2007 7:25:38 AM  
2644981

**Click to reopen the PowerJacket.**

**Click to close.**

**Patient Information for Chest PA & Lateral**

| Docs | Description        | Study Date             | Mod | # Img | Status    | Accession # |
|------|--------------------|------------------------|-----|-------|-----------|-------------|
|      | Chest PA & Lateral | 11/2/2007 7:22:36 AM   | CR  | 2     | Finalized | 2644981     |
|      | Portable Chest     | 10/31/2007 11:11:30 AM | CR  | 1     | Finalized | 2641757     |
|      | Portable Chest     | 10/30/2007 10:30:56 AM | CR  | 1     | Finalized | 2639255     |
|      | Portable Chest     | 10/28/2007 6:09:36 AM  | CR  | 1     | Finalized | 2635062     |
|      | Portable Chest     | 10/27/2007 5:06:28 PM  | CR  | 1     | Finalized | 2635009     |
|      | Portable Chest     | 10/27/2007 3:59:58 PM  | CR  | 1     | Finalized | 2634974     |
|      | Portable Chest     | 10/27/2007 11:58:51 AM | CR  | 1     | Finalized | 2634831     |

☐ List studies with Same Modality first Compare Off Compare Open Update

**Clinical Exam Notes**

DOB: 07/20/1969 Age: 38 Y, 3 M Sex: M MRN: 00649284  
 Exam: Chest PA & Lateral Org: FCH  
 Status: Finalized Perf. Resource: DIAG-VR

**Clinical Info** Memos

**FINDINGS:**

The right chest tube is unchanged in position. There is a moderate sized pneumothorax, mostly at the apex similar in size to the prior study. Atelectasis/infiltrate in the right base is again noted. The left lung is clear.

**IMPRESSION:**

Moderate sized right pneumothorax without significant change since 10/31/07. Chest tube in place.

**Related Exam List**

|  | ACC     | Sts | Exam      | Date/Time           | Mod | Anat  |
|--|---------|-----|-----------|---------------------|-----|-------|
|  | 2641757 | F   | RADCHPORT | 10/31/2007 11:25 AM | CR  | CHEST |
|  | 2639255 | F   | RADCHPORT | 10/30/2007 10:30 AM | CR  | CHEST |

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S: 419  
Z: 0.18  
C: 514  
W: 937  
IM: 1003

When a study is opened, a window called the PowerJacket opens in front of the images. The PowerJacket contains the patient's studies at the top, the report (if it has been transcribed) in the center and links to reports for related exams at the bottom. To close the PowerJacket click the X in the upper right corner. To reopen it, click the PowerJacket icon in the upper left corner.



## View Your Patient's Study and Use Tools

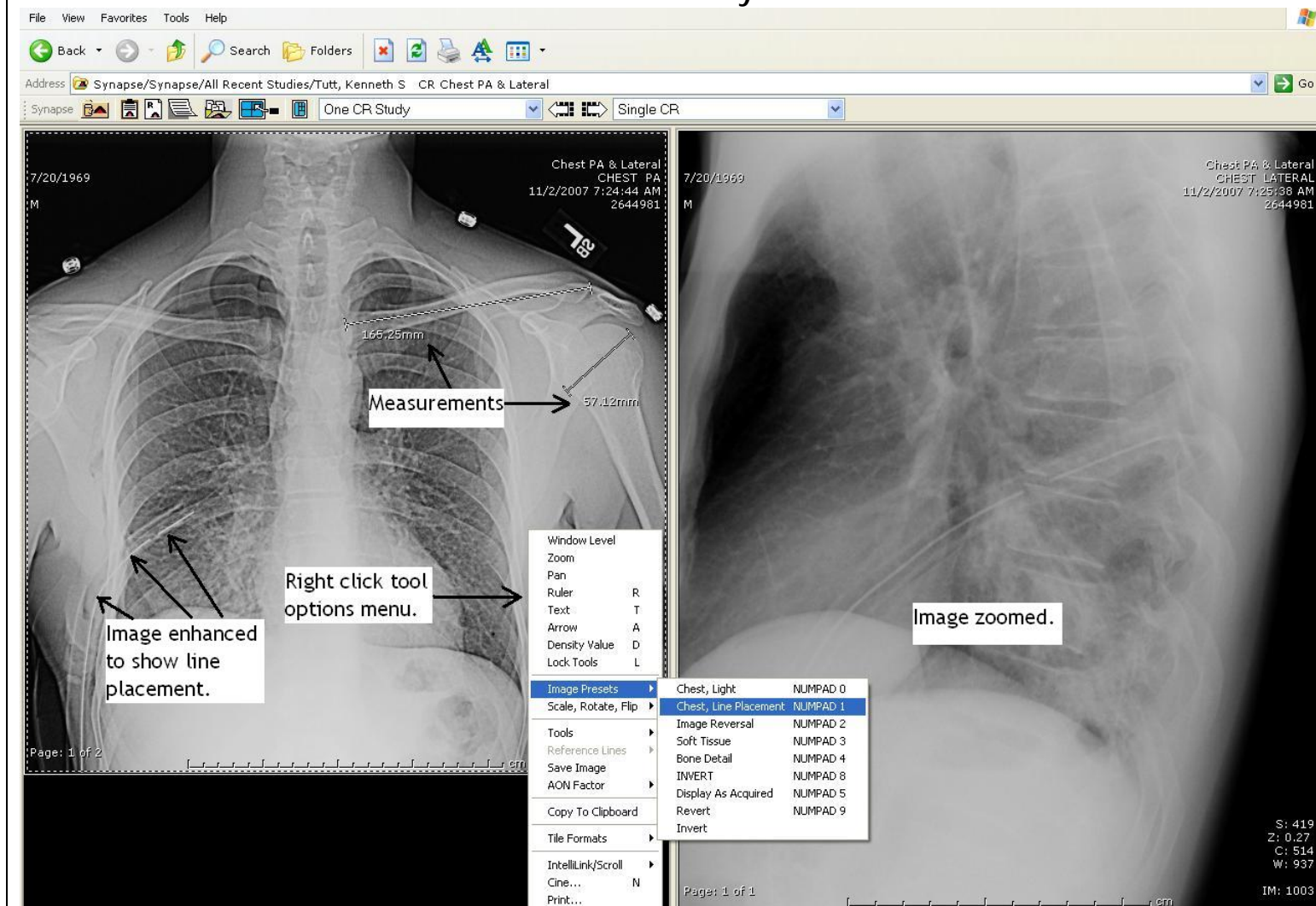


Image enhancement tools can be selected from a drop down menu by right clicking on the image and left clicking the desired tool. The most commonly used tools are displayed at the top of the menu and include Window Leveling, Zoom, Pan and Ruler. If you are viewing a study with multiple images, such as a CT or MRI scan, you can scroll through the images by scrolling your mouse wheel or by pressing and holding your mouse wheel and sliding your mouse up and down.

## Additional Information and Help

The screenshot displays the Synapse software interface. At the top, a blue title bar reads "Synapse/Synapse/All Recent Studies/ CR Chest PA & Lateral". Below this is a menu bar with "File", "View", "Favorites", "Tools", and "Help". The "Help" menu is open, showing options: "Is this copy of Windows legal?", "About Windows", and "Synapse Help". The "Synapse Help" option is selected, opening a window titled "Synapse Help". This window has a "Contents" tab and a search bar. The "Contents" list includes: Foreword and Disclaimer, General Safety Notification for Synapse, End User License Agreement, Quick Reference Guide, Keyboard Shortcut Reference, Troubleshooting, What's New!, Synapse General Concepts, Synapse Workstation Property Settings, Starting/Ending Synapse, Viewing Patients/Studies List, Explorer Toolbar and Synapse Icons, Using PowerJacket and CommonView, Reading Protocol and Display Format, Viewing & Manipulating Series and Images, Workflow, AON (Access Over Networks) Features, Printing, Document Scanning, Using 3rd Party Products, and Administration. The main content area of the "Synapse Help" window displays the "SYNAPSE® Users Manual" for "Software Version 3.1.1" (Manual Revision: ENG-0007630-C). It features the CE mark and a link to "What's new! Synapse 3.1.1". The background of the Synapse window shows a chest X-ray. In the bottom right corner, technical data is visible: "S: 419", "Z: 0.27", "C: 514", "W: 937", and "IM: 1003".

The Synapse Users Manual can be accessed from the Help menu at the top of the Synapse window. If you would like additional training please call the

**PACS Hotline @  
5PACS (57227)**



# COMMUNITY