Clinical*Express*®
Operator's Guide

version 6.1
for general radiography
and mammography

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- The equipment is used in accordance with the instructions in this manual.
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Contents

Intended Use

ClinicalExpress is intended for forwarding a DICOM image from a medical image digitizer to either DICOM print class provider or a storage class provider. The target population is user's wishing to use a medical film digitizer to scan analog or transmissive films to a DICOM workstation using a traditional teleradiology approach and users wishing to make duplications of film prints using digital technology in DICOM and postscript protocols.

About this manual

This manual provides step-by-step instructions for using ClinicalExpress®. The manual is organized around these topics:

- **About ClinicalExpress** describes ClinicalExpress as part of a typical DICOM radiography or mammography system.

- **Using ClinicalExpress** shows how to digitize films, transmit images and create copies.

Conventions used in this manual

- Special keys you press on the keyboard are shown using SMALL CAPITALS. For example, when you read the word ENTER in the text, press the corresponding key on your keyboard.

- Menu names and menu commands appear in **block letters**. For example, the **File** menu contains the **Open** command. In this manual, commands are expressed in a shorthand notation. For instance, **File > Exit** means select the **Exit** command in the **File** menu.

- Windows, buttons, dialog boxes and other on-screen features are named in **bold** type. For example, the **ClinicalExpress Login** window (below) contains **User Name** and **Password** fields, and buttons labeled **OK** and **Cancel**.
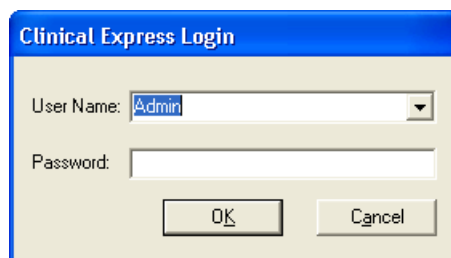
About Clinical*Express*®

ClinicalExpress 6.1 is a Windows-based program that digitizes films and transmits film images. The program incorporates General Radiography and Mammography modes, and can be purchased for General Radiography only, for Mammography only, or for both modes.

Digitizing. Using a VIDAR film digitizer for input, ClinicalExpress displays film images and associates them with a patient and study. The program provides a set of controls for examining an image for quality control and adjusting its characteristics.

Indications for use. General radiology images digitized using ClinicalExpress meet or exceed the ACR and DICOM standards for use of secondary capture images for consultation, review and final interpretation.

Mammography images digitized using ClinicalExpress as DICOM MG are to be used as reference or comparison only, and not for primary diagnosis.

Options

These options can be purchased separately:

Modality Work List. This option enables imaging modalities to download work list information about scheduled procedures and related data, present this information to the modality operator, and assure that DICOM images contain consistent descriptive data. Instructions for using the Modality Work List in ClinicalExpress are provided in this manual. Integration details are provided in the DICOM Conformance Statement.

PDI. This option includes the DICOM Media Import/Export (for reading and writing DICOM CDs), Flat Bed Paper Scanning and Patient Query (for searching patient information on storage devices).

System overview

A typical ClinicalExpress film capture and transmission workstation consists of:

- **VIDAR film digitizer** to create digital images from films.

- **Windows® XP 32-bit or Windows 7 32- or 64-bit computer** running the ClinicalExpress program.

Notes

- The ClinicalExpress workstation is **NOT** a diagnostic workstation. For diagnostic tasks, use an appropriate workstation (see diagnostic workstation's installation and operation guide for instructions).

- Mammography images digitized using ClinicalExpress shall be used only for reference and review, and must not be used for primary diagnosis.

General Radiography Mode

For image transmission, the workstation outputs to a data connection, which delivers image data to a remote workstation or system. For copying, the workstation connects to a film printer or non-film output device. Additional input can be provided by an optional document scanner.
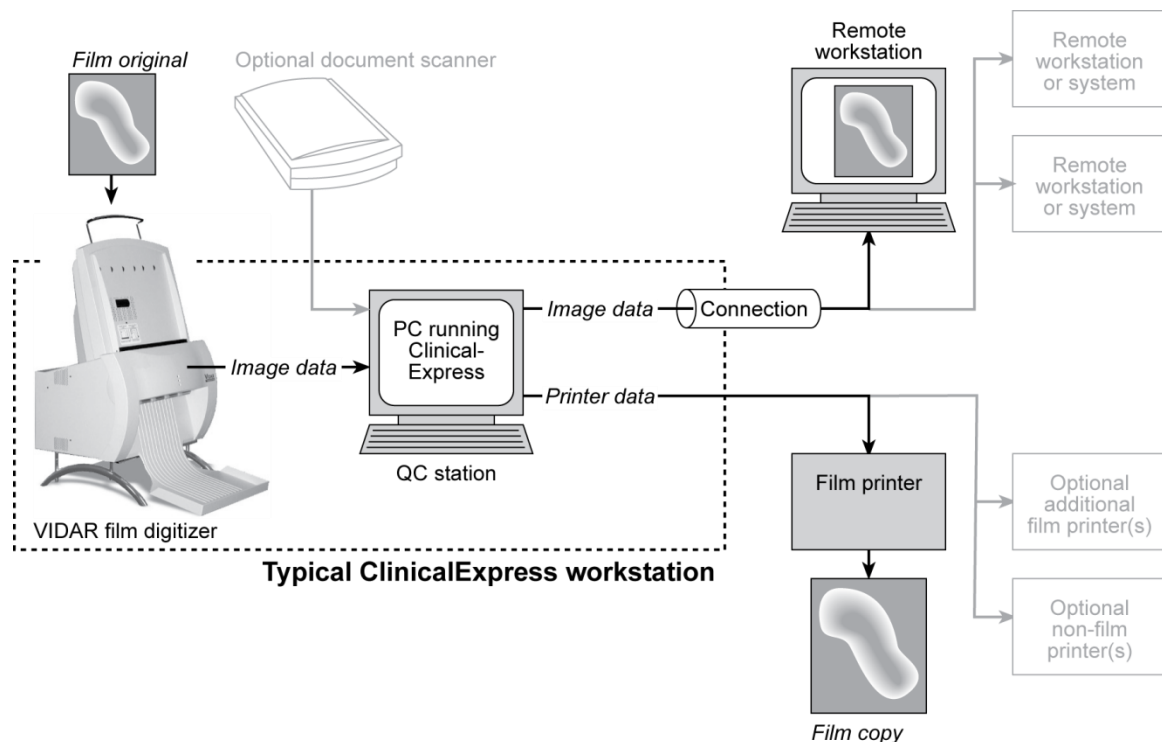
Typical ClinicalExpress workstation
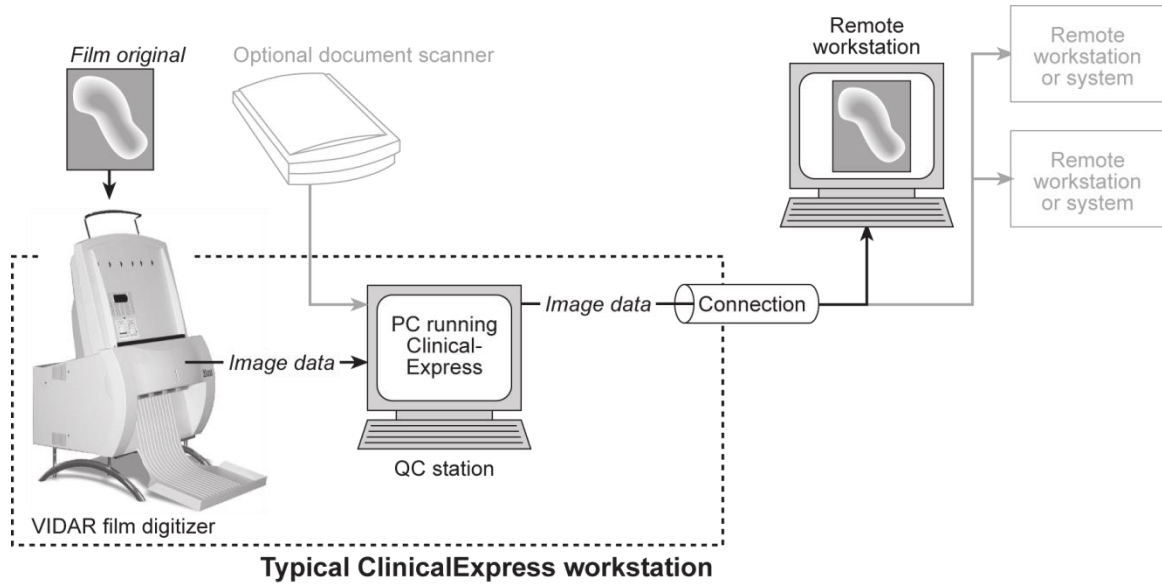
Mammography Mode

For image transmission, the workstation outputs to a data connection, which delivers image data to a remote workstation or system.

Typical ClinicalExpress workstation

What you can do with ClinicalExpress

ClinicalExpress 6.1 is your primary point of control for film capture, transmission and copying. With the program, you can:

- Digitize
  - Designate a patient and study, or create a new patient record and/or study.
  - Using the Modality Work List option (available separately) to pull in patient information from an external source (instead of typing patient data).
  - Set basic digitizing parameters: bit depth and resolution.
  - Digitize one or more films.
  - Perform quality check on the image created from the film before sending or copying it.
  - Manipulate the image: set window and level, rotate, flip, invert tonal values, split images, magnify a region of interest, zoom and redact sensitive information.

- Transmit
  - Select a remote workstation or system (the "target").
  - Send digitized images to the selected target.
  - Digitize and send in one operation.

- Copy (General Radiography Mode only)
  - Select a printer (if multiple printers are connected to the system).
  - Set the number of copies to be made from each film original.
  - Initiate printing.
  - Combine multiple images on one film.
  - Digitize and print in one operation.

- Import from, and export to, DICOM standard CDs.

ClinicalExpress is licensed on a feature/function basis. All licenses include the digitizing function as well as DICOM Send (sending to DICOM Service Class Providers, workstations/PACS) and Copy (printing to DICOM printers and /or Postscript devices). Additionally, you can purchase licenses for:

- **Modality Work List.**

- **PDI.** CD burning from DICOM viewer to Media Export, Media Import/Export, Patient Query and Paper Document Scanner.

New features in ClinicalExpress 6.1

- New date format options.
- DICOM mammography Derived/Primary tag support for compatibility with GE sites.
- Mammography tag date acquisition support for compatibility with Siemens sites.

Using Clinical*Ex*press®

Introduction

This chapter provides detailed instructions for using ClinicalExpress. Sections within the chapter cover:

- Starting the program.

- The ClinicalExpress main window.

- Digitizing films, a multi-step process that includes:
  - Identifying the patient, study and series.
  - Setting image characteristics and digitizing films.
  - Setting display characteristics, and modifying images.
  - Selecting a target, then sending or copying images.

- Working with retained studies.

- Importing and exporting media.

Starting the ClinicalExpress program

1. Normally, the ClinicalExpress **Login** window appears after the computer boots up. When using Windows 7, the auto launch feature will not work unless the User Account security settings have been lowered to Never Notify. If you don't see the **Login** window, then:
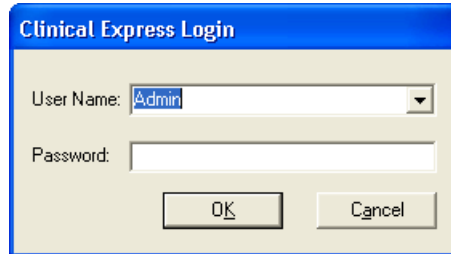
   Double-click the ClinicalExpress icon on the desktop.
   or
   Start > Programs > ClinicalExpress.

2. In the **Login** window, select your **User Name** and enter your **Password**. (User name and password are provided by your ClinicalExpress administrator.)

3. The main ClinicalExpress window will appear (see next pages).

   > **Note:** ClinicalExpress is normally installed on a workstation dedicated to capturing and sending image studies. ClinicalExpress is the only application available on the computer, unless the computer is operated by an administrator or if the administrator permits other applications to run.

Main window

General Radiography Mode

The left panel in the ClinicalExpress window is organized around the four basic steps needed to identify, capture, adjust and send/copy an image or study (see below). Each step is covered in detail later in this chapter.
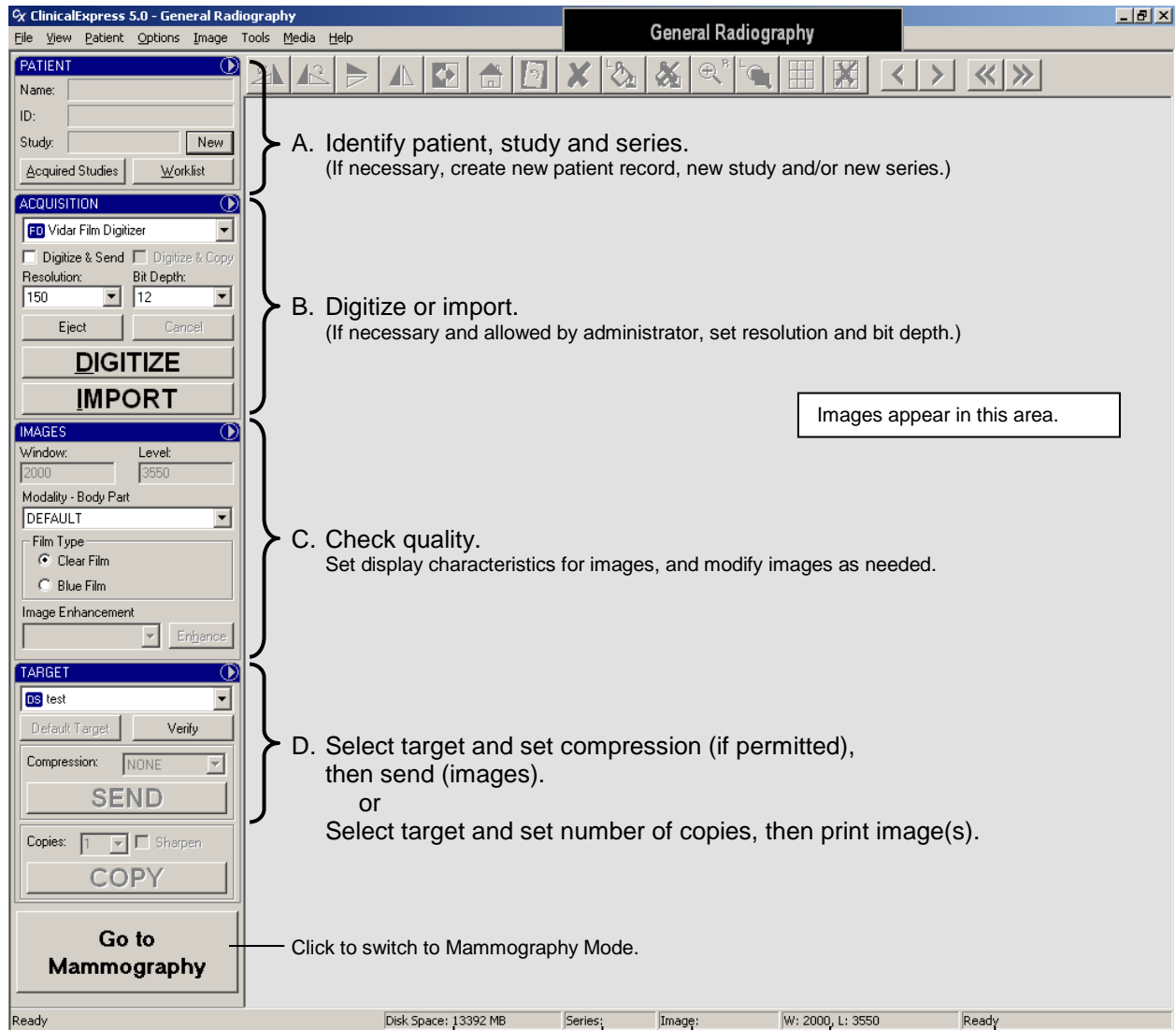
A. Identify patient, study and series.
(If necessary, create new patient record, new study and/or new series.)

B. Digitize or import.
(If necessary and allowed by administrator, set resolution and bit depth.)

Images appear in this area.

C. Check quality.
Set display characteristics for images, and modify images as needed.

D. Select target and set compression (if permitted), then send (images).
or
Select target and set number of copies, then print image(s).

Click to switch to Mammography Mode.

Brief command descriptions.

Space available for image storage on this system.

Series name.
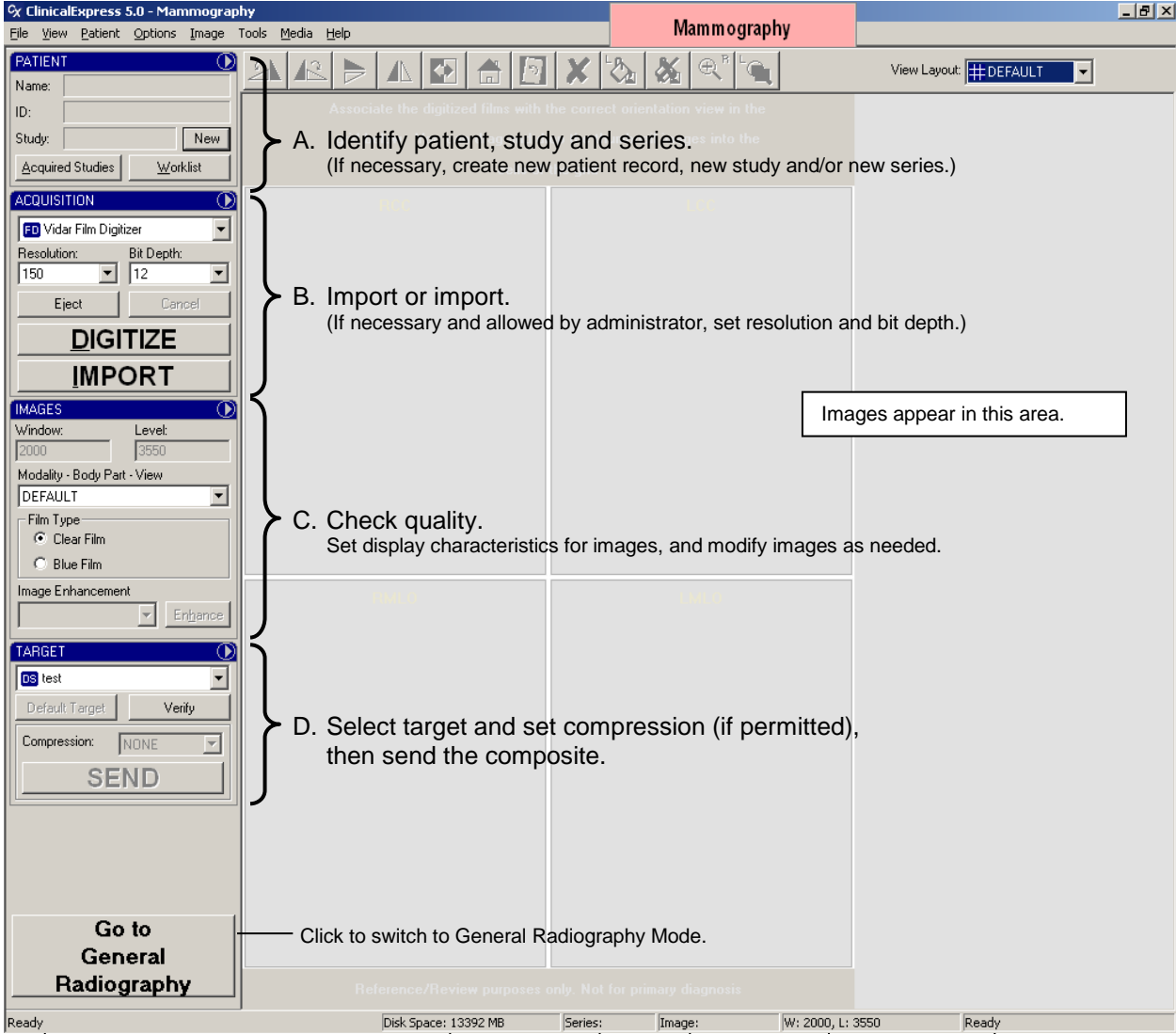
Image sequence number within this study.

Window and Level settings.

Information about the digitizing process.

Note: It is also possible to acquire a study, but delay sending it until a later time. This variation is described in "Working with retained studies," near the end of this chapter.

Mammography Mode

The left panel in the ClinicalExpress window is organized around the four basic steps needed to identify, capture, adjust and send/copy an image or study (see below). Each step is covered in detail later in this chapter.

A. Identify patient, study and series.
   (If necessary, create new patient record, new study and/or new series.)

B. Import or import.
   (If necessary and allowed by administrator, set resolution and bit depth.)

Images appear in this area.

C. Check quality.
   Set display characteristics for images, and modify images as needed.

D. Select target and set compression (if permitted), then send the composite.

Click to switch to General Radiography Mode.

Brief command descriptions.

Space available for image storage on this system.

Series name.

Image sequence number within this study.

Window and Level settings.

Information about the digitizing process.

Note: It is also possible to acquire a study, but delay sending it until a later time. This variation is described in "Working with retained studies," near the end of this chapter.

Telling ClinicalExpress what you want to do

ClinicalExpress provides multiple ways to initiate most operations, including menu bar commands, pane menu commands, buttons and keyboard shortcuts. Suppose you want to identify a new patient. You can:
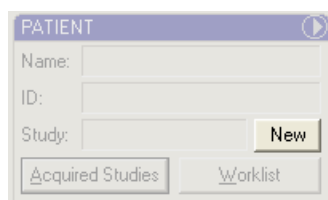
■ Use the menu bar command: Click **Patient**, then click **New Patient** in the menu.
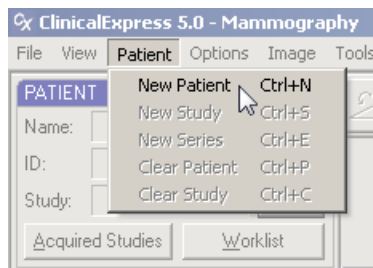
■ Use the pane menu: In the **Patient Pane**, click , then click **New Patient** in the pane menu.
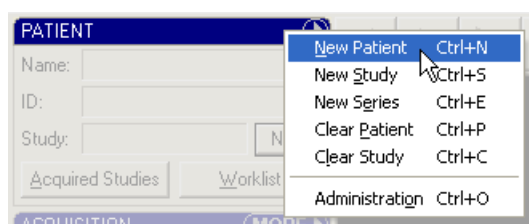
■ Use the button (provided no patient name is displayed): In the **Patient Pane**, click the **New** button, then click **Patient** in the pop-up menu.

■ Use the keyboard shortcut: Press CTRL-N (that is, press the CTRL and N keys simultaneously).

  Keyboard shortcuts are listed in menu bar, pane and button menus (see above).

You are encouraged to try the various methods to find the actions that best suit your working style.

A. Identify the patient, study and series.

In step A, you will:

a. Enter new patient data manually.
    or
    Select an existing patient record.
    or
    Import existing patient data using Modality Work List.

b. Enter new study and series information.

Each of these operations is covered in a separate section in step 1. Additionally, you can edit patient data and delete patient records, as described in the "Manage patient data" section at the end of step 1.

> **Tip:** "Preparing to digitize," in the Appendix, summarizes the different ways of entering patient, study and series data.

Getting started

■ *To clear patient data from the main window:* **Patient > Clear Patient**.

> **Note:** Clearing patient data from the main window also clears the current study. The patient record remains in the Acquired Studies List.

■ *To clear study data from the main window:* **Patient > Clear Study**.

> **Note:** Clearing the study from the main window leaves the current patient in the Patient pane.

Enter new patient data manually

a. **Patient > New Patient**.

> **Tip:** If no patient is displayed in the **Patient** pane, clicking the **New** button is the same as the **Patient > New Patient** command.

This opens the **Patient/Study/Series Information** window.

b. Fill in the **Patient/Study/Series Information** window. At minimum, you must:
   - Fill in mandatory fields in the **Patient Information** section.
   - Fill in mandatory fields in the **Study Information** section.

Optionally, you can fill in the **Series Information** section, if you are starting a new series.

> **Note:** Bold field names are mandatory. In the example below, the **Patient ID**, **Last Name**, **First Name** and several other fields are mandatory. Your screen may have different mandatory fields.

c. Click **OK**.

d. The patient's name, ID and study now appear in the main window:

Open an existing patient record from Acquired Studies

Use this method if the patient is already in the Acquired Studies list.

a. **View > Acquired Studies**.
   or
   Click **Acquired Studies** in the **Patient** pane.

   This opens the **Studies Information** window, **Acquired Studies** tab.

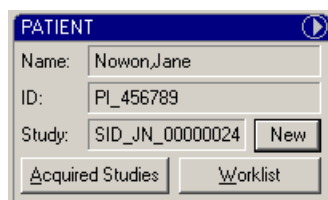**Tip:** When this window appears, the most-recently-digitized patient is at the top of the list.

b. *To open the patient record without creating a new study:* Double-click the patient's row, or click the patient's row and click the **Open** button.
   or
To create a new study: Click the **New Study** button.

c. In the **Patient/Study/Series Information** window, fill in the **Study Information** section.

Optionally, you can fill in the **Series Information** section, if you are starting a new series.

d. Click **OK**.

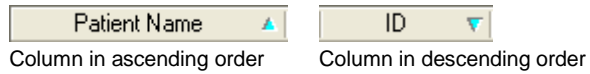e. The patient's name and ID (and study ID, if entered) now appear in the main window:

Customizing the Acquired Studies list

To change sort order: Click column heading (arrow in heading indicates ascending or descending order).
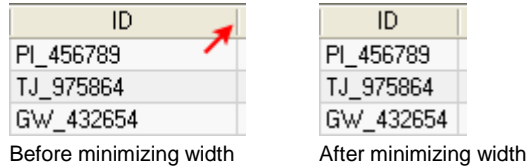
Column in ascending order   Column in descending order

To change column width: Drag column separator.

Drag column separator ↑ left or right
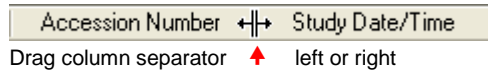
To minimize column width: Double-click separator to right of column (see arrow).

Before minimizing width   After minimizing width
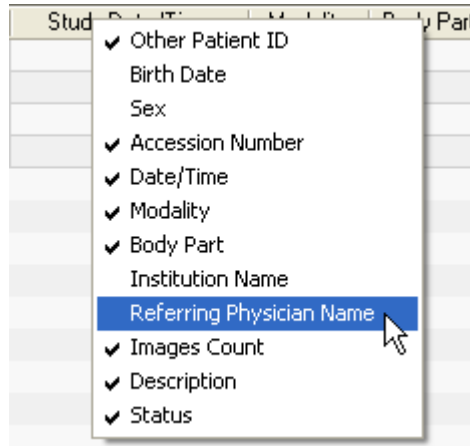
To rearrange columns: Drag column heading to new location.

Note: You cannot move the **Patient Name** or **ID** columns.

Dragging Body Part column to new location
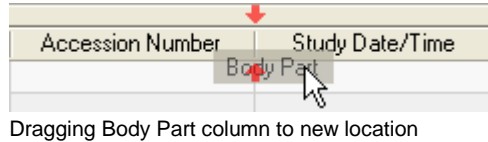
To show or hide columns: Right-click in column headings, check (to show) or uncheck (to hide) column name.

Import existing patient data using Modality Work List

> **Note:** The DICOM Modality Work List function can save time and increase accuracy. ClinicalExpress DICOM Modality Work List functions are optional and are available separately from VIDAR Systems Corporation. Before you can use Modality Work List, the software must be installed and set up by the ClinicalExpress administrator.

> **Note:** Some data fields in the **Patient Information** window may not be filled from the Modality Work List target. Data other than patient information will be omitted when the **Use Only Patient Information** option is activated in the MWL target specification (see "Defining targets" in the "Installing and Configuring ClinicalExpress" manual).

    a. **View > Worklist**.
        or
       In the **Patient** pane, click the **Worklist** button.

       This opens the **Studies Information** window, **Worklist** tab.

    b. Search for existing patient data:

- In the **Worklist** tab, enter enough information to identify the patient (wildcards are acceptable; see "About wildcards," below).

  You can enter
  - Last Name and/or First Name, and/or
  - Patient ID, and/or
  - Accession Number.

About wildcards

(The configuration of the connected MWL target may limit wildcard search options.)

- Use an asterisk (*) to represent any number of unknown characters. For example, if you search for the last name "john*", the results might include data for patients with the last names John, Johns, Johnson, Johnston and Johnstone.

- Use a question mark (?) to represent one unknown character. For example, if you search for the last name "john?", the results might include data for patients with the last name Johns, but not John or Johnson.

- Click the **Worklist** button, then click the Modality Work List target name (as assigned by the ClinicalExpress administrator).

- Click the **Query** button.

c. *To cancel the search:* Click the **Cancel** button (same button as **Query**).

d. If Broad Query has been enabled by your administrator, you can search using more specific details about the patient:
  - Requested Procedure ID.
  - Modality.
  - Schedule Station AE Title. (This refers to the ClinicalExpress Workstation's AE. The default is "ClinicalExpress," but it can be changes by the administrator.)
  - Scheduled Procedure Start Date.

e. The **Procedures** section lists matching patient records.

f. In the **Procedures** list, click the desired patient record, then click the **Import** button.

g. The patient's data now appears in the **Acquired Studies** tab of the **Studies Information** window.

Tip: To edit patient information, click the patient row in the **Acquired Studies** tab, then click the **Edit Patient** button.

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h. Go to "Enter new study information" next in step A.

Enter new study information

Follow the instructions in this section if you have not already entered study information for a patient.

> **Note:** You must identify a patient before you can enter study information. See "Enter new patient data manually," "Open an existing patient record from Acquired Studies" and Import existing patient data using Modality Work List," earlier in step A.

a. **Patient > New Study**.

> **Tip:** If no study is displayed in the **Patient** pane, clicking the **New** button is the same as the **Patient > New Study** command.

This opens the **Patient/Study/Series Information** window.

b. Fill in the **Study Information** section.

Optionally, you can fill in the **Series Information** section, if you are starting a new series.

> **Note:** A new series can only be added during the initial digitization of a study. Once the study is closed, no new series can be added.

c. Click the **OK** button.

Enter new series information

Follow the instructions in this section if you have not already entered series information for a study.

a. **Patient > New Series**.

> **Tip:** If no study is displayed in the **Patient** pane, clicking the **New** button is the same as the **Patient > New Study** command.

This opens the **Patient/Study/Series Information** window.

b. Fill in the **Series Information** section.

c. Click the **OK** button.

> **Note:** A new series can only be added during the initial digitization of a study. Once the study is closed, no new series can be added.

Manage patient data

■ *To edit patient data:*

a. **View > Acquired Studies**.

   This opens the **Studies Information** window, **Acquired Studies** tab.

b. In the **Studies** list, click the patient record, then click the **Edit Patient** button.

c. In the **Patient/Study/Series Information** window, edit the data as needed, then click **OK**.

> **Note:** Changes made to patient information will be applied to all studies still stored on the ClinicalExpress workstation, whether they have been sent or not. Studies already sent will not be resent automatically. If you must resend a study with corrected information, you must first delete the study from the receiving station.

■ *To delete a patient record:*

a. **View > Acquired Studies**.

   This opens the **Studies Information** window, **Acquired Studies** tab.

b. In the **Studies** list, click the patient record, then click the **Delete** button.

c. You will be asked to confirm the deletion:
   ● *To complete the deletion:* Click **Yes**.
   ● *To cancel the deletion and keep the patient record:* Click **No**.

# B. Set image characteristics, then digitize.

1. In the **Acquisition** pane of the main window (see above), select a film digitizer, or (if one is attached to your system) a document scanner.

2. Select a **Resolution** and **Bit Depth** for the image.

   > **Note:** If the **Resolution** and **Bit Depth** fields are gray, you cannot change them. These preset values are matched to the target selected at the bottom of the main window, and have been established as appropriate by the ClinicalExpress administrator.

3. If desired, activate **Digitize & Send** to capture images and transmit them in one step.
   or
   If desired, activate **Digitize & Copy** to capture images and copy them in one step.

4. Stage one or more films in the digitizer (see the digitizer manual for operating details).
   or
   Place a document in the desktop scanner.

5. Click the **Digitize** button.

- *To cancel digitizing:* Click the **Cancel** button. (This button is available after digitizing has started.)

- *To eject a film from the digitizer:* Click the **Eject** button. (This button is available when a film is in the digitizer.)
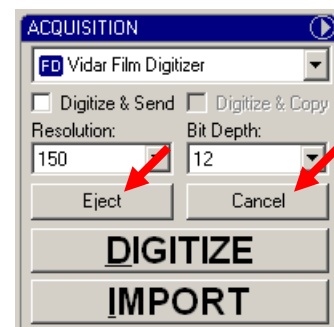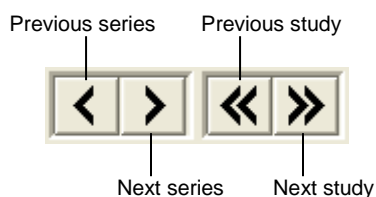
Working with images in General Radiography Mode

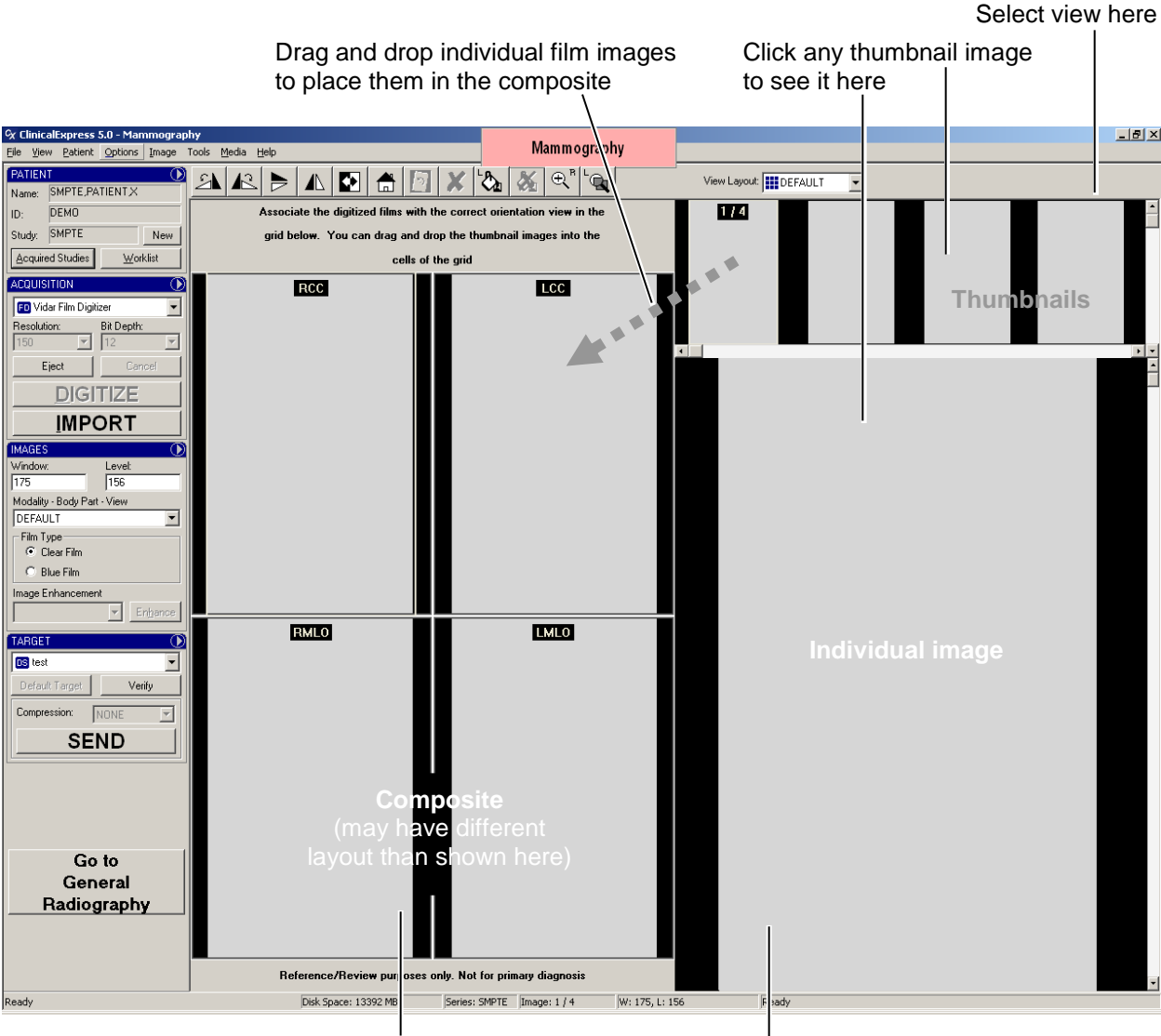Images are available for review on-screen one at a time.

■ *To view a different image:* Click the image's thumbnail along the right side of the ClinicalExpress window.
     or
Scroll using the mouse wheel.

■ *To view images in a different series or study for the current patient:* Navigate using the buttons in the tool bar:

Previous series   Previous study

          Next series   Next study

> **Tip:** The series ID and image sequence number (i.e., the number of the image within the series) are displayed in the status bar, along the bottom of the main window.

Working with images in Mammography Mode

When digitizing is complete, you can view the images and add them to the composite layout.

Drag and drop individual film images to place them in the composite

Click any thumbnail image to see it here

Select view here

Click any image in the composite to see it here

Double-click any image to have it fill the viewing area.
Double-click again to view thumbnail/composite/individual images.

C. Set display characteristics, and modify images.
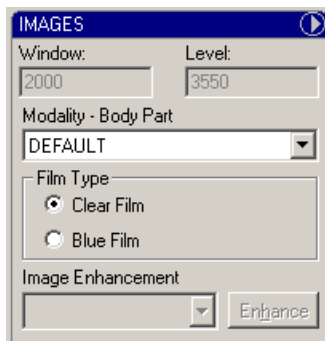
Display characteristics control how images appear when viewed on-screen. The **Modality - Body Part** selection you make controls the **Window** and **Level** values in the **Images** section. The administrator can preset the **Window** and **Level** values.

> **Note:** This section is optional. If images do not need modifications, skip to step D.

Change Window and Level values

■ *To set Window and Level based on film type:* Select **Clear Film** or **Blue Film** (corresponding to the digitized film type).

If you need to adjust Window and Level settings further, follow the instructions below.

> **Note:** The **Window** and **Level** values may be preset by the **Modality - Body Part** selection. You can accept the **Window** and **Level** values or modify them, as described here.

■ *To set the display characteristics for an image:*

a. Select the image.

b. Select the **Modality - Body Part** for the image.

■ *To set an image's Window value:* <u>Right</u>-drag the cursor left or right. (**Image > Window/Level** must be activated.)

> **To <u>right</u>-drag:** Press and hold the <u>right</u> mouse button, then drag the mouse.

■ *To set an image's Level:* <u>Right</u>-drag the cursor up or down. (**Image > Window/Level** must be activated.)

> **Tip:** When changing **Window** and **Level** values, the current values are displayed in the status bar as well as the **Images** pane.

Changing your view of an image

ClinicalExpress provides several ways to control how an image is displayed on-screen. Use the techniques below to help you determine whether displayed images have the required quality, window values and level values.

> ClinicalExpress is not a viewing program. Use the actions below only to check gross characteristics. Examine resolution, sharpness and other characteristics on a workstation equipped for that purpose. ClinicalExpress cannot be used for diagnosis.

- *To pan an image:* Drag the image right, left, up or down.

- *To zoom in a specific amount:* **Image > Zoom 200%** or **Image > Zoom 500%**.

- *To zoom in an arbitrary amount:* Activate **Image > Zoom**, then <u>right</u>-drag up or left (to zoom in) or <u>right</u>-drag down or right (to zoom out). Current magnification is shown in the status bar. (**Tip:** After zooming, activate **Image > Window / Level** to use <u>right</u>-dragging to change those characteristics.)

- *To magnify part of the image:* **Image > Magnify 200%** or Image > **Magnify 500%**. Drag to position the magnifier.[*]

- *To set the magnifier size:* **Image > Magnifier Small** or **Image > Magnifier Large**.[*]

- *To remove all view changes and transformations:* **Image > Reset**, or click the **Reset** button in the **Acquired Images** section of the main window.

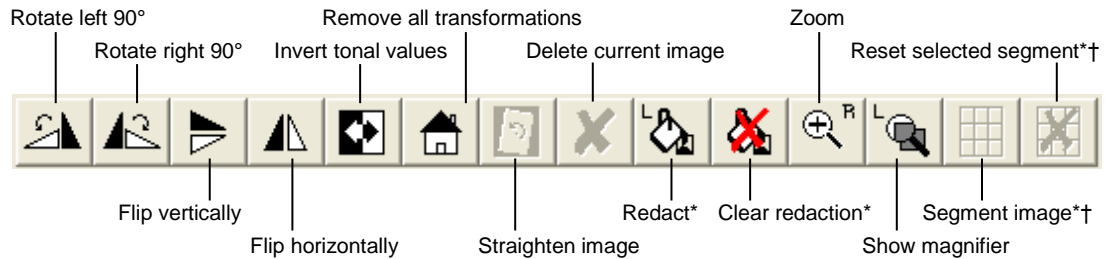> **Tip:** These commands are also available in the pane menu:
> IMAGES

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[*] When image is zoomed in, magnifier can only view portion of image displayed on monitor. To view another portion, pan image, then use magnifier again.

Transform an image

> **Note:** You must straighten an image before making other changes. If you straighten an image after making changes, the changes may be lost.

Display an image, then apply one or more transformations as shown below.

Rotate left 90°
Rotate right 90°
Remove all transformations
Invert tonal values
Delete current image
Zoom
Reset selected segment*†

Flip vertically
Flip horizontally
Straighten image
Redact*
Clear redaction*
Segment image*†
Show magnifier

*Described in one of the following sections.   †General Radiography Mode only.

> **Tip:** Corresponding commands are in the **Image** menu.

Redact

Redacting covers sensitive information in an image to preserve patient privacy (it's the visual equivalent of *anonymizing*, which removes or replaces patient data). You might, for example, redact the patient information block in an image.

When you redact an image using ClinicalExpress, you cover sensitive information with a black, opaque rectangle, as shown here:

Before redacting
(patient information visible)

After redacting
(patient information covered)

You can redact multiple areas of an image, and you can remove redactions you apply within ClinicalExpress. Redacting doesn't permanently change the original image. However, if you redact an image, then send it to a target, the redactions are a permanent part of the copy received by the target. A receiving workstation, for example, cannot remove redactions.

Unlike anonymizing, which is applied automatically to patient data when required (as set up by the ClinicalExpress administrator), you must decide when and where to redact an image. The need to redact will be determined by (among other considerations), your organization's patient privacy and HIPAA-compliance policies.

ClinicalExpress provides two methods for redacting:
- **Basic**, in which redacting affects the current image.
- **Uniform**, in which redacting applied to the current image is automatically applied in the same location of all images in the series.

Basic redacting: redacted area on one image does not appear on other images in the series
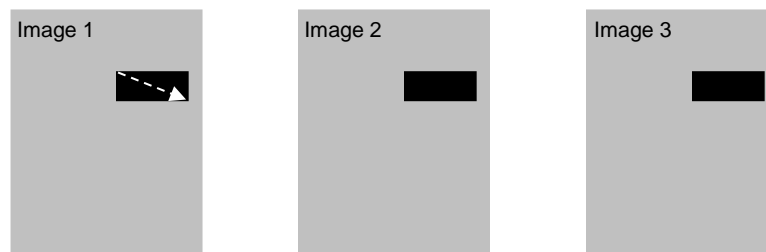
Uniform redacting: redacted area on one image automatically appears in same place on other images in the series

■ *To redact an image:*

    a. *To redact the current image:* **Tools > Redact**, or click the **Redact** button in the tool bar.
       or
     To redact all images in the current series: **Tools > Uniform Redact**.

    b. Drag diagonally across the area to be redacted:

    c. Repeat as needed for other areas of the image.

■ *To clear a redaction:* Click the redaction, then **Tools > Clear Redaction**, or click the **Clear Redaction** button in the tool bar.

■ *To clear all redactions:* **Tools > Clear All Redactions**.

Segment an image (General Radiography Mode only)

Some films, such as those output by CT and MRI systems, contain multiple images on a single film. Often, it is easier to work with individual images rather than moving around a composite image on the receiving diagnostic workstation. ClinicalExpress' segmenting function enables you to divide a composite image into individual images.

You can choose either of two methods for segmenting an image:

- **Automatic segmenting:** ClinicalExpress analyzes the image and determines where the image should be divided. This method is quick, and works well for most composite images. If you are not satisfied with the result, then try...

- **Manual segmenting:** You specify where the image should be divided. This takes longer than automatic segmenting, but you may prefer the results.

> **Note:** For images that will be segmented, VIDAR recommends digitizing films at 12 bit depth and 300 dpi resolution.

1. Display the composite image you want to segment.

2. **Tools > Segment Image**.
   or
   Click .

   This initiates automatic segmenting.

3. A box now surrounds each image within the composite.
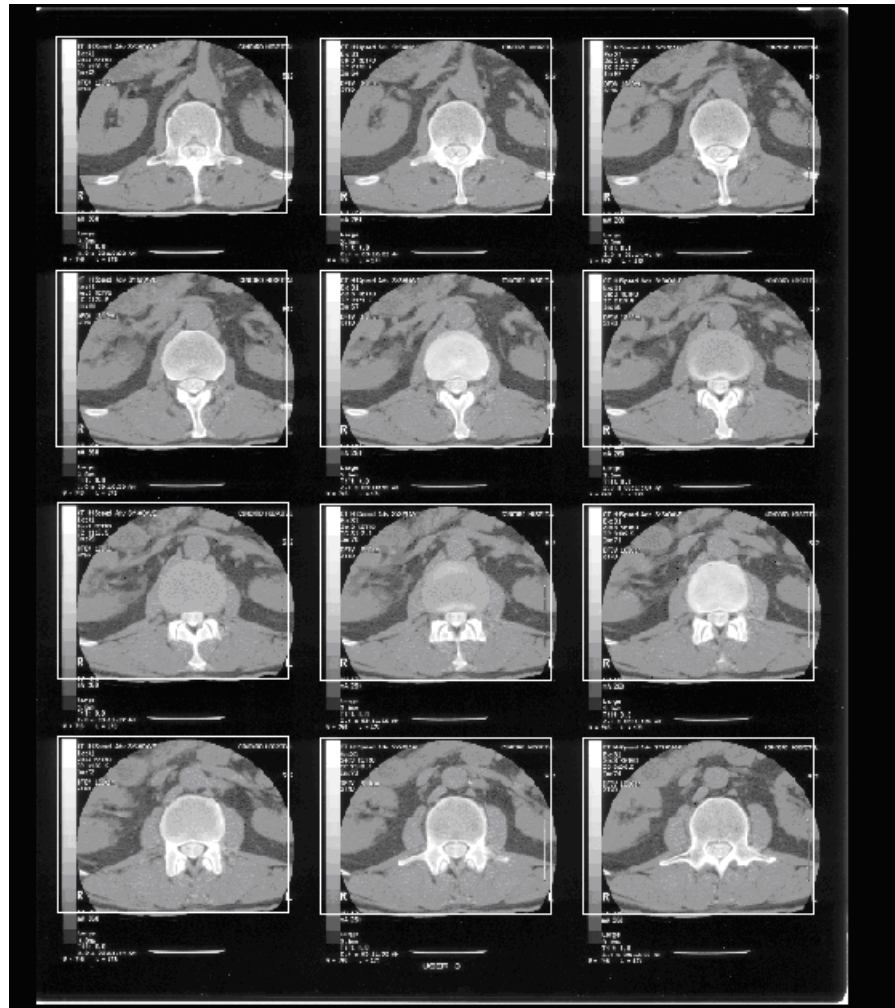
4. Right-click the image, then:

- If segmenting is acceptable, click **Split** in the pop-up menu. Go to step 8.

- If you want to stop segmenting, click **Cancel** in the pop-up menu.

- If segmenting is unacceptable, and you want to manually segment the image, click **Reset Cells** in the pop-up menu, then continue in step 5.
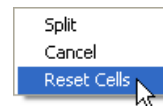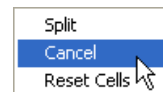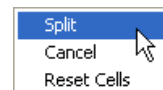
5. Drag diagonally across the top left image in the composite.
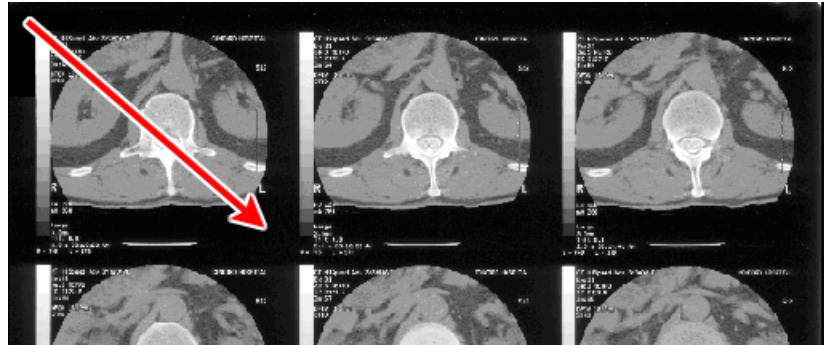
This produces a series of boxes on the image:
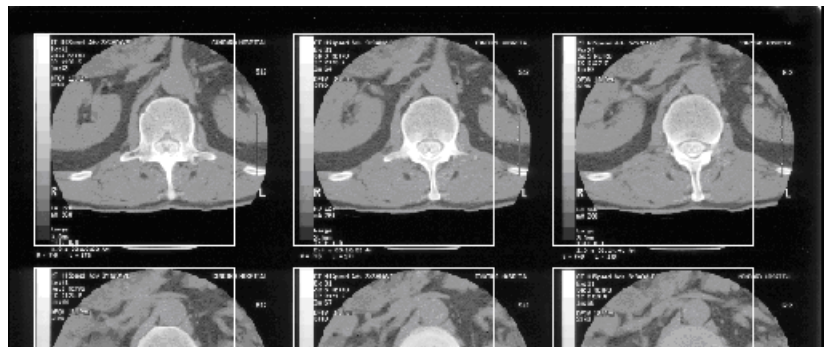
6. Adjust the size and spacing of the top left box (this automatically changes the other boxes). You can perform adjustments in any order, and you can repeat adjustments until you are satisfied with the proposed segmenting.

   ■ *To adjust horizontal spacing between boxes:* Drag the space to the right of the top left box.
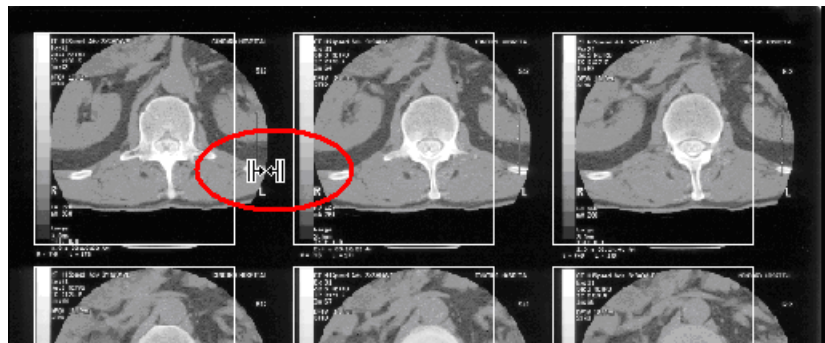
■ *To adjust vertical spacing between boxes:* Drag the space below the top left box.
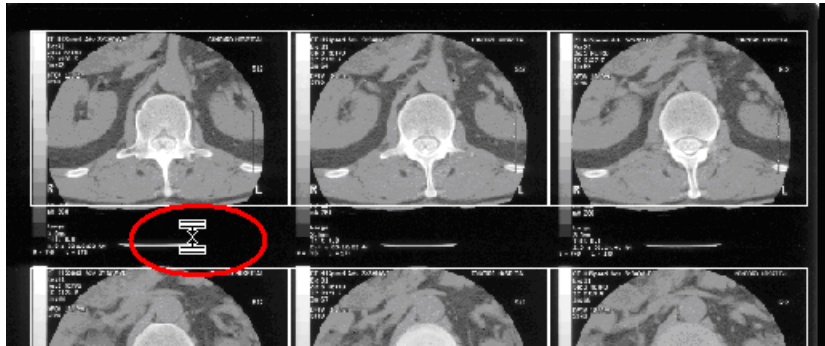
■ *To adjust box height:* Drag the bottom edge of the top left box.
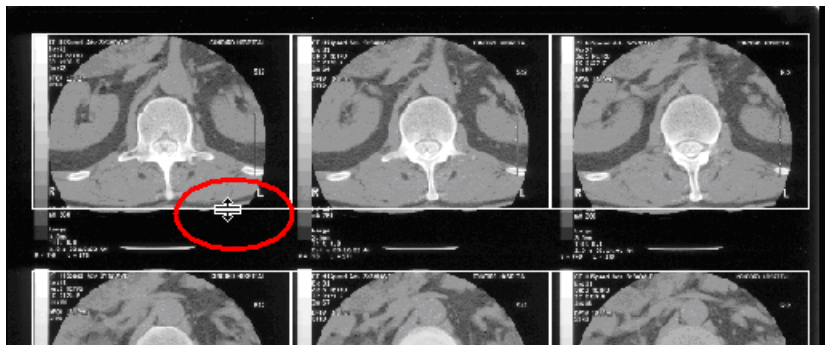
■ *To adjust box width:* Drag the right edge of the top left box.
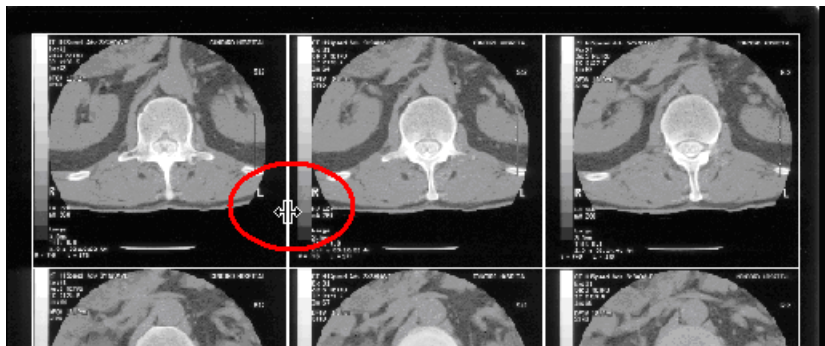
■ *To move the entire set of boxes:* Drag the upper left corner of the top left box.
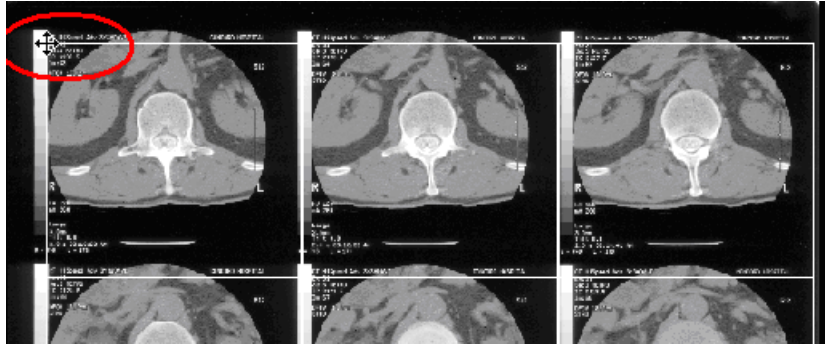
7. <u>Right</u>-click the image, then:

■ If segmenting is acceptable, click **Split** in the pop-up menu. Go to step 8.

■ If you want to stop segmenting, click **Cancel** in the pop-up menu.

■ If segmenting is unacceptable, and you want to again manually segment the image, click **Reset Cells** in the pop-up menu, then continue in step 5.
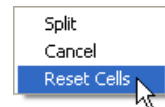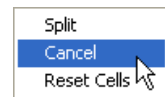
8. After segmenting the composite, use the scroll bar, click thumbnails or use the tool bar navigation buttons to view individual images.
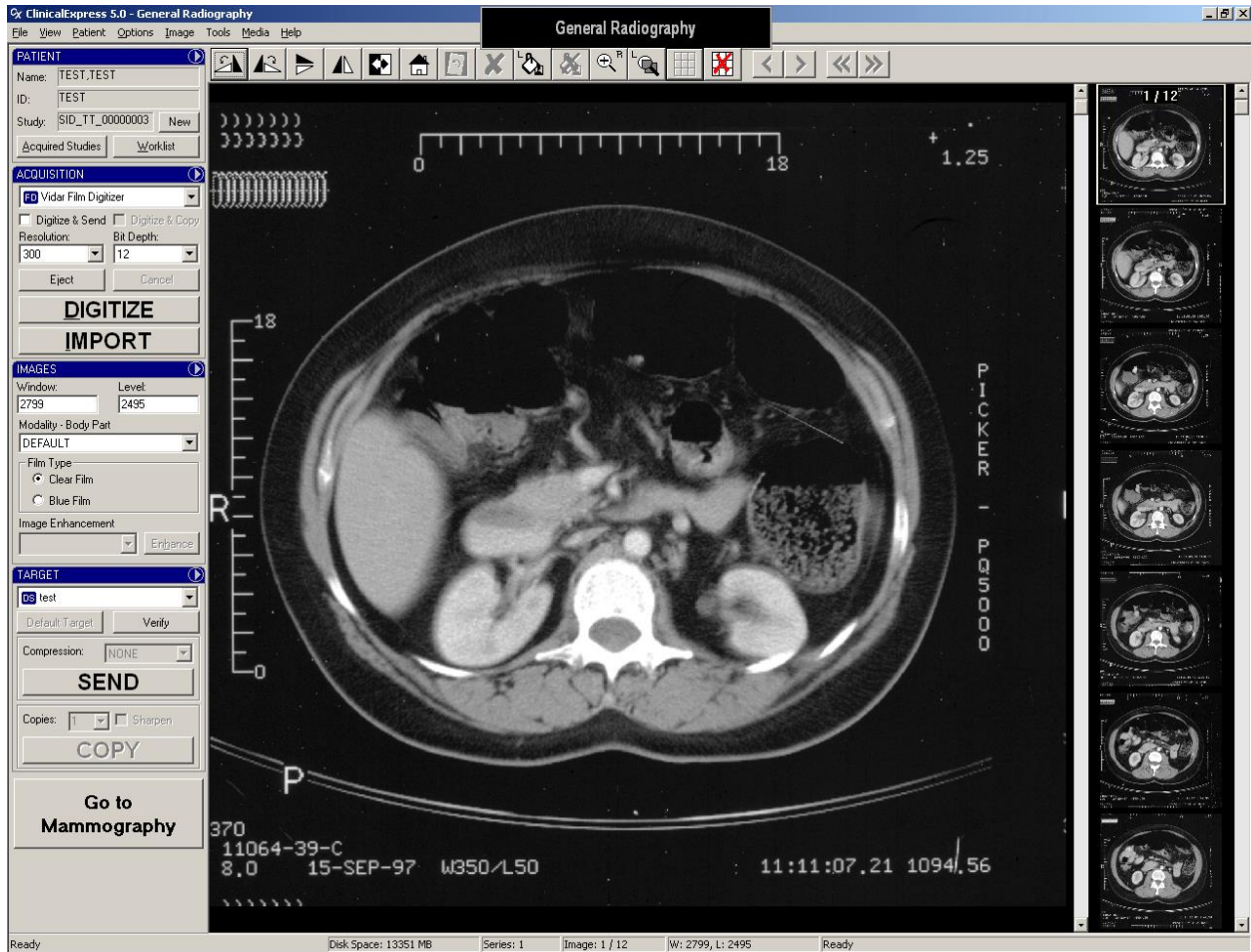
When scrolling through individual images, they are presented in left-to-right, then top-to-bottom order. For the example we have been following, individual images would be displayed in this order:
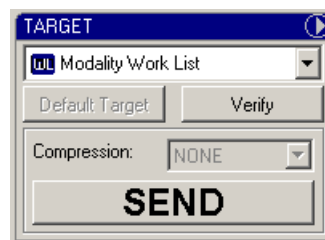
1	2	3
4	5	6
7	8	9
10	11	12

- *To cancel a segmentation:*

  a. Click the **Reset Segments** button .

  b. You will be asked to confirm the reset:
      - *To complete the reset:* Click **Yes**.
      - *To cancel the reset and keep the segments:* Click **No**.

D. Select a target, then send the composite.

General Radiography Mode

Mammography Mode

When the images are ready to send (or copy, in General Radiography Mode):

a. Select a **Target** or click the **Default Target** button (see above).

> **Note:** If you are not certain where the study should be sent, click the **Default Target** button. The default was selected by the administrator as the most likely target.

b. Select a **Compression**: **None** or **Lossless** (i.e., Baseline JPEG Lossless).

> **Note:** Compression reduces image file size, thus reducing transmission time. If the **Compression** list is grayed, the administrator has preset compression or no compression for the target.

c. *To send the images:* Click the **Send** button.
     or
   *To copy the images:* Click the **Copy** button.

d. *To monitor image transmission:* **View > Acquired Studies**. Pending transmissions are listed in the lower portion of the window. For details, see "Working with retained studies," next in this chapter.

Working with retained studies

Acquired studies are retained by ClinicalExpress (unless the administrator has chosen to have them automatically deleted). You can view, send (or resend), copy and delete retained studies via the **Studies Information** window.
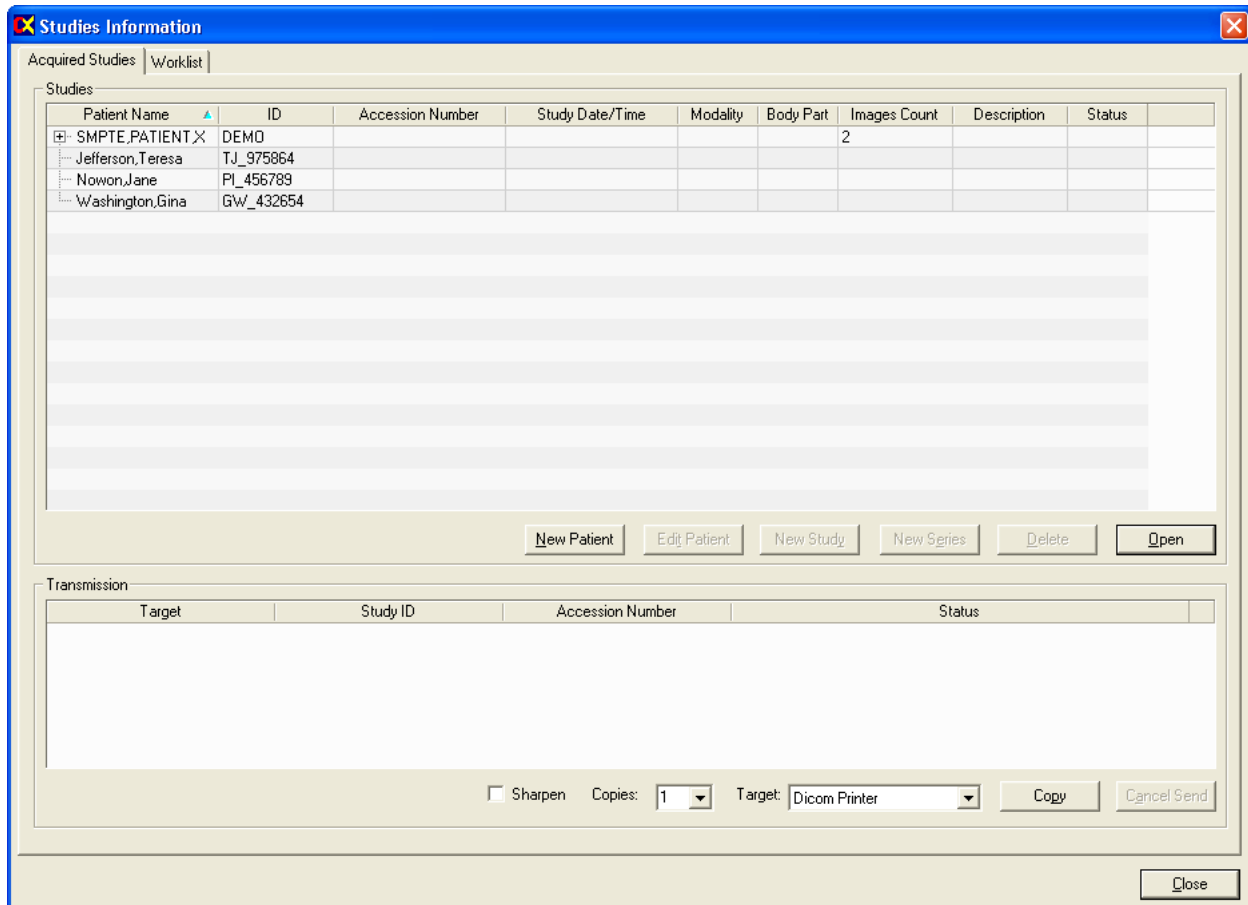
- *To open the Acquired Studies window:* **View > Acquired Studies**.

  Note: Only studies that contain digitized images will appear in the **Acquired Studies** window.

- *To view a study in the main window:* Select the study, then click the **Open** button.

- *To delete a study:* Select the study, click the **Delete** button, then confirm the deletion.

  Note: If you aren't sure whether retained studies should be deleted, contact the administrator.

■ *To send or copy a study:*
   a. In the **Studies** list, select the study. Then in the **Transmission** section...
   b. Select a **Target**.
   c. Set options (these vary, depending on the target selected).
   c. Click **Send** or **Copy**.

   During the transmission, the **Status** column in the **Transmission** section displays status information.

■ *To stop a transmission in progress:* Click the **Cancel Send** button.

Media import and export

> **Note:** The ClinicalExpress Media Import/Export option can be purchased separately.

ClinicalExpress can import studies from, and export studies to, a CD using the DICOM standard CD format.

■ *To import studies:*

   a. Insert an IHE PDI DICOM compliant CD in the CD drive.

   b. In the **Acquisition** panel of the main ClinicalExpress window, click **Import**. (This button is disabled until an IHE PDI DICOM compliant CD is inserted.)
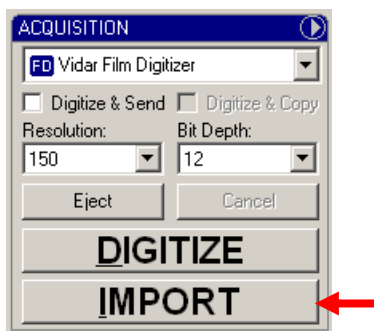
   c. In the **Open** window, select the patient studies you want to import, then click the **Open** button.

■ *To export a study:*

   a. Acquire a study, or open a retained study.

   b. Place a blank CD in the computer's CD drive.

   c. **Media > Export**.

   d. Select the number of copies you want to make.

   e. If prompted, verify the CD drive letter.

   f. After verifying that there is enough space on the CD, ClinicalExpress will ask permission to continue.

   g. The status bar at the bottom of the screen displays export progress.

   h. When recording is complete, the CD will be ejected.

The CD will contain the DICOM DIR, DICOM images and a DICOM viewer that will enable the recipient to view the images.

Scanning documents

While ClinicalExpress is designed for handling digitized film images, it can also accept images from a customer-supplied document scanner. This capability enables you to copy and send images of paper documents such as reports and patient records.

To scan documents, generally follow the instructions provided in "Using ClinicalExpress," with these changes and precautions:

- In step B1 (under "Set image characteristics, then digitize"), open the drop-down list in the **Acquisition** pane, then select the document scanner (under VIDAR Film Digitizer).

- When using the Mammography application and paper scanning, you must create a layout containing the paper option to properly identify the image as a secondary capture image when it is sent to PACS. If you have more than one document you must create more than one paper window in the layout.

> **Note:** Scanned documents cannot be printed.

Appendix

Preparing to digitize

There are several ways to load patient, study and series data before you digitize films.

Index