

Zed Doctor for Referrers

Zed Technologies Pty. Ltd. 2017 - 2023



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Version History

Review Date	Why	Who
13/09/2021	Created for Version 3.7.1	RL
16/11/2021	Updated Intended Use and version	RL
27/07/2022	Updated Intended Use and for Version 3.10.0	RL
19/02/2023	Updated for Version 3.11.	

Notices

Trademarks

Zed Technologies and the Zed Technologies logo, Zed Doctor, Zed Patient, My Film Bag, Zed Link, Zed Link Patient Portal, Zed Link Doctor Portal and Zed Link Referrer Portal are registered trademarks or trademarks of Zed Technologies Pty Ltd.

Third-party Trademarks

Microsoft, Windows, Windows Server, SQL Server, Internet Explorer, .NET and .NET Framework are registered trademarks or trademarks of Microsoft Corporation.

All other brand names, product names and trademarks belong to their respective holders.

INTENDED USE

Zed Link™ is a SaMD image storage and sharing system to allow viewing and sharing of radiology images and reports by clinicians and patients. The software includes functionality for taking measurements of anatomical features for the purposes of appropriately trained medical professionals making clinical decisions. Zed Link™ is not intended to be used as the sole tool to diagnose serious or life-threatening health conditions.

Caution: Federal law restricts this device to sale by or on the order of a physician.



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manufacture

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ZEDLINK



Caution



Consult
instructions
for use

Data and Privacy Statement

Zed Technologies is committed to ensuring protection of all personal information that we hold, and to provide and to protect all such data. We recognise our obligations in updating and expanding our policies to meet the requirements of data protection law in any countries that we operate in.

Warnings/Precautions

Ensure when sharing scans and/or reports you check that the recipient details are correct as intended.

Ensure you do not share your password with anyone as this may lead to unauthorised access to your account.

Contraindications

Do not use the device as a sole tool for diagnosis.

About Zed Doctor

Zed Doctor is used to deliver images and reports to external referring doctors. Large hospitals also use Zed Doctor to provide doctors with 'anywhere' access to images from any computer.

System Requirements

Minimum Requirements

Desktop

- Mac 10.10+ or Windows 7 or above
- Intel Core i5/8GB RAM or more
- 32-bit colour display
- Screen resolution of 1280 x 1024
- Network requirements
 - Internet connectivity
 - Maximum latency of 100ms from source to destination

Mobile

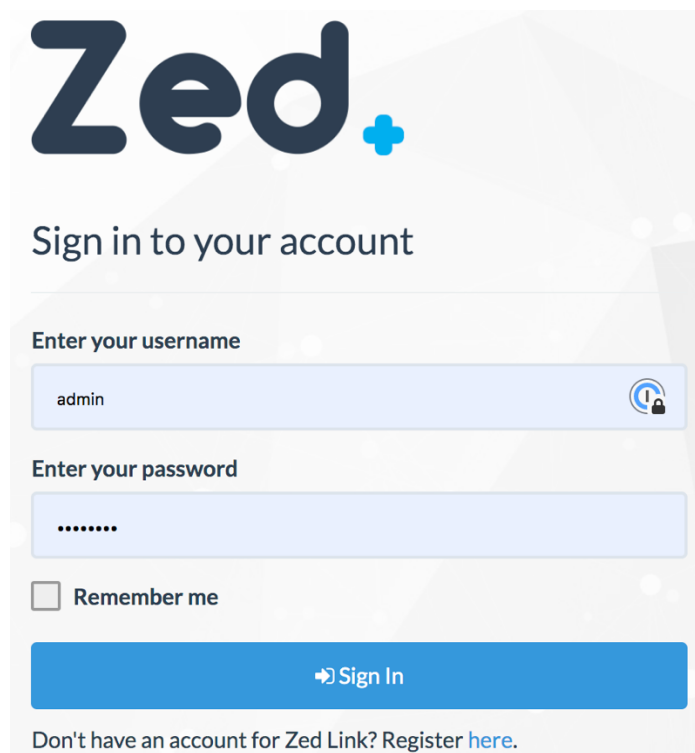
- iOS 12+ or Android 10+
- Network requirements
 - Internet connectivity
 - Maximum latency of 100ms from source to destination

Your Account

Signing In

This is a web based which means you will always have access to the latest version immediately after an upgrade is performed. This is particularly important when critical updates are loaded.

When you access the system, you will be presented with a sign in page. Due to cybersecurity reasons, signing in requires you to have a valid and enabled account. The System Administrator at the radiology clinic is responsible for managing user accounts.

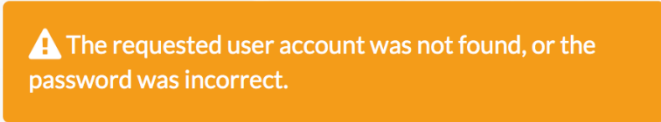


The screenshot shows the Zed. sign-in interface. At the top is the Zed. logo. Below it is the heading "Sign in to your account". There are two input fields: "Enter your username" with the text "admin" and a lock icon, and "Enter your password" with masked characters ".....". Below the password field is a checkbox labeled "Remember me". A blue "Sign In" button is at the bottom of the form. At the very bottom, there is a link: "Don't have an account for Zed Link? Register [here](#)."

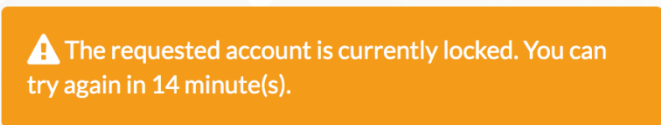
For security purposes, you will be logged off automatically if your session remains inactive for a length of time. This period is configured by the radiology clinic.

Common Sign-In Errors

Occasionally, the following errors may be encountered when a user signs into Zed Link.



This error implies that the account details were not found. You should ensure the username or email address and password were entered correctly. If the issue persists, please contact the site administrator for further assistance.

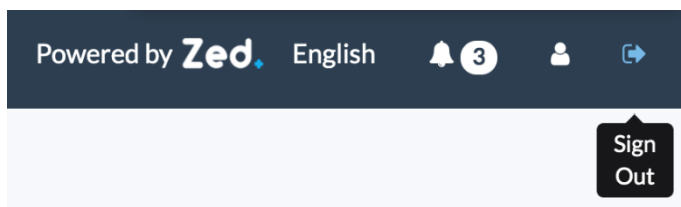


This error arises if you enter an incorrect username/password combination more than the permitted number of times. This imposes a lockout period. The maximum number of sign in attempts and 'lockout period' are configured by the Administrator. The Administrator can also unlock the account before the lockout period has elapsed.

Signing Out

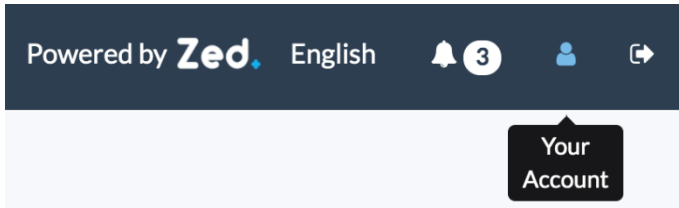
If you are using a shared workstation/computer, you should always ensure you correctly sign out of Zed Doctor.

To sign out of Zed Link, move your cursor to the top right of the page. Simply click the **Sign Out** button to end your session. You will be taken back to the sign in page.



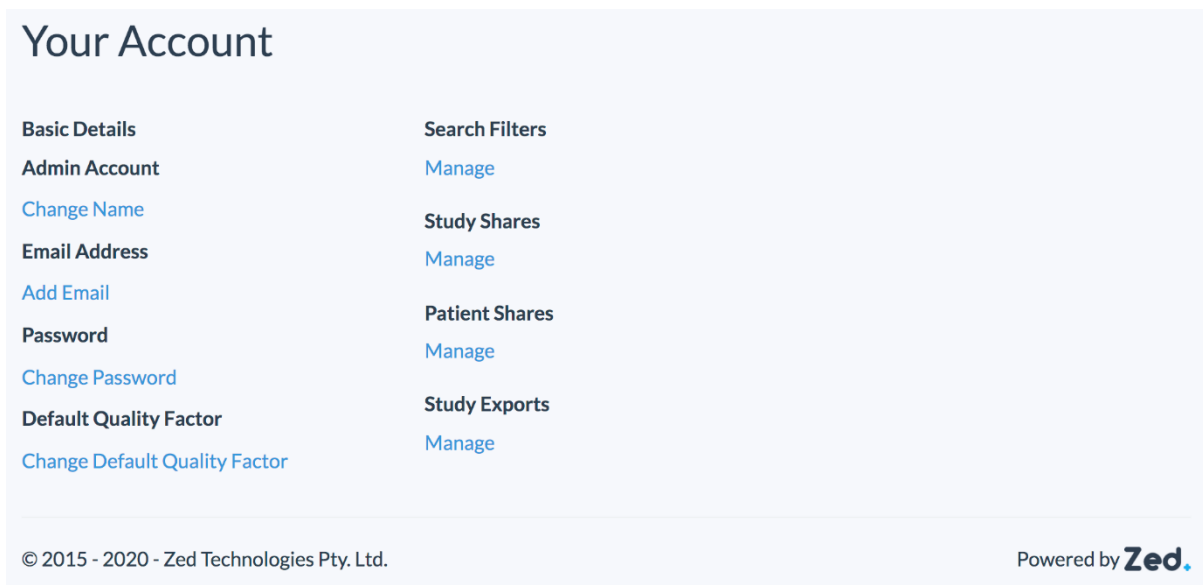
Managing Your Account Settings

Zed Doctor allows you to manage your account settings. Click the **Your Account** button at the top-right of the screen to manage your account settings.



From here you can manage settings such as:

- Account name
- Email address
- Password
- Default quality factor
- Search filters
- Study share
- Patient shares
- Export settings



Change Name

A user can change their first and last name at any time in Zed Link.

When you change your name, you will see two text boxes pre-filled with your first and last name. Simply enter a new first and last name and click **Update**.

The screenshot shows a 'Change Name' form with a light blue header. At the top left is a blue link with a left-pointing arrow: '< Return to Your Account'. Below this are two text input fields. The first is labeled 'First Name' and contains the text 'Admin'. The second is labeled 'Last Name' and contains the text 'Test'. At the bottom of the form are two buttons: a grey 'Cancel' button on the left and a blue 'Update' button on the right.

Change Email

A user can change their email at any time in Zed Link.

Simply enter a new email address and the account password and click **Update**.

The screenshot shows a 'Change Email' form with a light blue header. At the top left is a blue link with a left-pointing arrow: '< Return to Your Account'. Below this is a text input field labeled 'Email Address' containing 'admin@gmail.com'. Below the field is the text 'Please enter your new email address above.' The next section is labeled 'Current Password' and features a password input field with seven black dots. Below this field is the text 'Please enter your current password above.' At the bottom of the form are two buttons: a grey 'Cancel' button on the left and a blue 'Update' button on the right.

Change Password

A user can change their password at any time in Zed Link.

Simply the enter the current password, new password and re-enter the new password in the 'Confirm Password' textbox and click **Update**.

Change Password

[< Return to Your Account](#)

Current Password

Please enter your **current password** above.

New Password

Please note the following are requirements:

- The password **must** be a minimum of 5 character(s) long.

Please enter your **new password** above.

Confirm Password

Please confirm the password by entering it again.

Change Default Quality Factor

The quality factor determines the resolution used to display images in the Zed viewer. The higher the quality factor, the higher the resolution.

Enter a value between 0 and 101 and click **Update**.

Note: higher quality requires a good internet service. Zed recommends a default value of 80.

Change Default QualityFactor



[< Return to Your Account](#)

Please enter your new default quality factor. Enter 0 to go use the system default value of 80.

Manage Search Filters

When you save search criteria for frequently performed searches. You will be required to enter a name for the search filter. Saved filters are displayed as a clickable button at the top of the Quick Search panel. With time, you may need to adjust or even delete saved search filters.



When you **Manage** your search filters, you will be presented with several options on the *Manage Search Filters* page:

Action	Function
+ Create / Add	<p>Create a filter and select the filter criteria for the data of interest. When you create a filter, you must set the filter type first. Select:</p> <ul style="list-style-type: none"> • Study • Order
	<p>Displays the <i>Update Search Filter</i> page, allowing users to adjust the filter criteria of the selected filter. Select:</p> <ul style="list-style-type: none"> • Cancel – to abandon changes and return to the <i>Manage Search Filter</i> page • Update Filter – to save changes and return to the <i>Manage Search Filter</i> page
	<p>Displays the <i>Delete Search Filter</i> page, allowing users to permanently delete the unwanted selected filter. Deleted search filters cannot be recovered.</p>

Manage Study Shares

You can share individual studies, giving the recipient access to the selected images. This is referred to as a *Study Share*. When sharing, you have the option to specify an expiry date, after which the share code is no longer valid. You can review current shares and revoke these at any time if necessary.

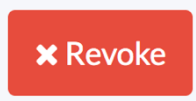

When you **Manage** your study shares, you will be presented with several options on the *Manage Study Shares* page:

Action	Function
	Allows users to revoke shares on mass. The shares to be revoked can be selected by checking the tick-box at the left of each share. The Revoke button is only enabled when one or more shares are selected.
	Displays the <i>Study Share Details</i> page for the selected study. From here, users have the option to: <ul style="list-style-type: none"> • Revoke – to revoke the selected study share • View – to view the mages for the shared study using Zed’s zero-footprint viewer

Manage Patient Shares

In addition to sharing individual studies (Study Share), you also have the option to share all studies for a patient. This is referred to as a *Patient Share*. When sharing, you have the option to specify an expiry date, after which the share code is no longer valid. You can review current shares and revoke these at any time if necessary.



When you **Manage** your patient shares, you will be presented with several options on the *Manage Patient Shares* page:

Action	Function
	Allows users to revoke shares on mass. The shares to be revoked can be selected by checking the tick-box at the left of each share. The Revoke button is only enabled when one or more shares are selected.
	Displays the <i>Study Share Details</i> page for the selected study. From here, users have the option to: <ul style="list-style-type: none"> • Revoke – to revoke the selected study share • View – to view the mages for the shared study using Zed’s zero-footprint viewer

Manage Study Exports

You can export studies as DICOM files, giving the recipient the ability to download the files for import into their own DICOM viewer or PACS. This is referred to as a *Study Export* or *DICOM Share*. When sharing, you have the option to compress the images, anonymise the data and specify a maximum number of downloads. You can also specify an expiry date, after which the share code is no longer valid. You can review current shares and revoke these at any time if necessary.

When you **Manage** your study exports, you will be presented with several options on the *Manage Study Shares* page:

Action	Function
	Allows users to revoke the selected DICOM share
	Displays the <i>Study Export Details</i> page for the selected study. From here, users have the option to: <ul style="list-style-type: none">• Revoke – to revoke the selected study export• View – to view the images for the exported study using Zed’s zero-footprint viewer

Doctor Portal

Studies Page

When you sign into Zed Doctor, the *Studies* page is displayed by default. This shows a list of patient studies referred by you. There is a separate row for each study, even if they are for the same patient.

By default, only 10 studies are displayed per page. You can increase the number of studies per page by selecting a value from the **Page Size** drop down list. You can also browse the pages by using the navigation buttons at the bottom of the page.

Filtering and Sorting Studies

Quick search tools allow you to locate studies of interest based on search criteria provided. Commonly performed searches can be saved for use later.

Patient Name	Patient ID	Accession No.	Description	Referring Physician	Study Date From	Study Date To	Modality	Page Size
Last, First	Patient ID	Accession No.	Description	Referring Physician	Study Date From	Study Date To	All Modalities	10

You can locate a study by searching on:

- Patient Name (last, first) – to find all studies for a patient name of interest
- Patient ID – to find all studies for a patient ID of interest
- Accession No. – to find the single study of interest
- Description – to find all studies containing a specific word in the study description
- Study Date From and Study Date To – to find studies within a specific date range
- Modality – you can restrict the list to specific modalities

Field	Format	Example Value
Patient name	The patient’s name format is SURNAME, FIRST NAME	Appleseed, John
Patient ID	An alphanumeric string of characters.	123456
Accession Number	An alphanumeric string of characters.	2016Z0000001
Description	An alphanumeric string of characters.	MR BRAIN
Referring physician	The referring physicians name format is SURNAME, FIRST NAME	Appleseed, John
Study date to	The date format is dd/mm/yyyy	01/01/2020
Study date from	The date format is dd/mm/yyyy	01/01/2020
Modality	Checkboxes (can select multiple values)	CT, MR, DX

Study List

A list of studies the main part of the page. By default, the list is unfiltered, and displays studies in study date and time order. The most recent studies are displayed at the top of the list. You can click a column heading to resort the studies by the selected value.

	Patient Name	Patient ID	D.O.B.	Accession No.	Study Date	Study Time	Description	Series	Images	Modality	Referring Physician	
	ANONYMISED, PATIENT	pt-1611047101	03/12/2019	ac-875555431	02/10/2019	13:12	US Baby Hips	1	19	US	UNKNOWN, UNKNOWN	
	ANONYMISED, PATIENT	pt-105	01/01/2001	ac-1342329180	04/07/2019	09:53	US Injection > 15 Mins	1	4	US	UNKNOWN, UNKNOWN	
	ANONYMISED, PATIENT	pt-104	01/01/2001	ac-196870230	04/07/2019	08:32	US Abdomen	1	47	US	UNKNOWN, UNKNOWN	

Icons on the Study List

Icons are used to provide additional information for each study. These are described as follows:

- indicates a report for the selected study is available
- indicates attachments are available for viewing
- indicates there are related studies for the patient
- indicates the study was imported or uploaded by the patient or from CD






Study Status

All studies on the Studies list, have a status indicator to the right. These describe progress in transferring the images from PACS to Zed Link. Statuses include:

- Online (green circle) – images are available in Zed and ready for immediate viewing
- Pending (yellow circle) – images are being retrieved from PACS and will be ready for viewing shortly
- Offline (red circle) – images are not currently available for viewing online. Click these studies to retrieve the images from PACS.

Study Page Actions

When you select a study, several actions are possible. These are represented by buttons at the top of the list.

Main Actions	Function
	Opens the images for the selected study for viewing in the Zed HTML5 viewer.
	Opens the report for the selected study. The report can be viewed, downloaded as a PDF or printed.
	Opens a drag and drop window allowing you to upload a report attachment. Accepts JPG/JPEG, PNG, PDF files up to 500MB each. Uploaded report attachments can be viewed and downloaded by clicking the Show Report button.
	Allows referrers to access studies which they would not routinely be granted access to. More about <i>Break Glass</i> to follow.
	Allows you to share the study via a number of methods. More about <i>Sharing Studies</i> to follow.

More Actions	Function
Attachments	Opens the Attachments page, allowing you to upload JPG/JPEG, PNG, PDF files up to 500MB. Uploaded study attachments can be viewed and downloaded by clicking the Attachments button.
Create E-Referral	Opens the Create E-Referral page, allowing you to create an electronic referral. More about <i>Zed E-Referrals</i> to follow.
RIS Actions	For sites with Zed RIS enabled, allows you to create an order or match an existing order.
Details	Displays the <i>Study Details</i> page for the selected study. More about <i>Study Details</i> to follow.
Export	Opens the <i>Study Export</i> page, allowing you to DICOM share the study via email, with the option to include a DICOM viewer. More about <i>Study Export</i> to follow.

Break Glass

Data Access rules (DARS) are configured to ensure that authorised users can only access studies of the patients they are managing. This ensures that patient confidentiality is always maintained.

In some cases, a referrer might need to urgent access a study for a patient they did not refer. The *break glass* function allows you to by-pass the DARS and access a study.

The *Break Glass* button appears at the top of the list of patients, along with view, show report, and so on.



You should be aware of some important facts when using *Break Glass*:

- When *Break Glass* is used, the study will be available immediately, however you may need to wait a few moments if the study needs to be retrieved from PACS
- *Break Glass* studies will appear in your study list
- By default, *Break Glass* access will expire after 24 hours. Expired studies will no longer be displayed on your study list.
- System administrators at the radiology clinic can audit and revoke access

How to use *Break Glass*

1. From the Studies page, click **Break Glass**. This will display the Break Glass Request screen.

Break Glass Request

⚠ This feature allows you to view studies for which you were not granted automatic access.

⚠ I understand that I am about to access information for a patient for whom I am not the primary referring physician on record. I acknowledge that I am doing so only for medical reasons and for the sole benefit of the patient, and in doing so am bound to keep this information private and confidential.

I acknowledge and accept the terms of this confidentiality agreement.

Access Studies

2. Tick the ‘acknowledge’ option to enable use of the option
3. Complete the access details:
 - Select access by either patient ID or surname and date of birth
 - Provide a reason for accessing the study
4. Click **Access Studies**. This will display the *Break Glass Confirm* page.
5. On the *Break Glass Confirm* page, select the study you wish to access, and click **Confirm**

Break Glass Confirm

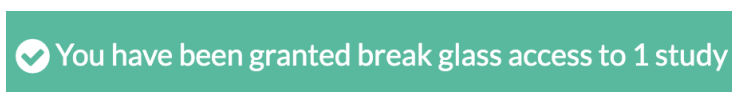
⚠ Please select the patient details that best match the search.

Patient ID	Patient Name	Patient DOB
ACH-000	Sneeze ACHOO	01/01/1950

1

Cancel Confirm

When you access a study using *break glass* function, you will see the following notification:



Sharing Studies

Zed Link provides authorised users with a number of options when sharing studies.

- Via link
- Via email
- With another user
- Temporary account
- Patient
- Report only

Sharing via Link

This option will generate a share link which can be given to another person. The link gives temporary access to the images via Zed’s HTML5 viewer.

When you select this option, you must set an expiration date for the link, after which the link will no longer be active. The default period is 7 days. You can leave the *Set Expiration* field blank to provide a permanent share. You can also check or uncheck the *Include Report* tick-box depending on whether you wish to include the report.

When you click **Share**, a share link will be generated. This link should be securely shared with the recipient.

```
✔ Below is the share link to access the study:  
  
https://doctor03.zed.link/viewer/share?  
code=13ac374d931206c899bc46659a742fadf2db622aef894b6a6cbb0e3a48d878530d3e0dd96cb273e7d15996cdcd5f480d4a9251612b6e80f43ea2b5d73aec42
```

Sharing via Email



This option will generate a share link which can be sent via email. In addition to specifying expiration date and whether you wish to include the report, you will be required to specify the recipient's email address. You also have the option to add a note for the recipient.





When you click **Share**, a share link will be generated. The recipient will receive an email containing the link and study details.

✔ The selected study has successfully been shared with samuel@zedtechnologies.com.au!

Please [click here](#) or find below the share link to access the study:

<https://doctor03.zed.link/viewer/share?code=7192d3be4450765f066885a3b338e1f5d5ca3ac0fe05ea0490b1da8b33c721e4ccddfcacd11f61b5ce6b952e1f74bfa3d4c66d774dca7c6e2ce1b816513453>

Zed Link has shared a study with you Inbox x  

 **no-reply@zedtechnologies.com.au** 9:20 AM (2 minutes ago)   

to me ▾

English | [Vietnamese](#)

Admin Test wants to share the following study with you.

Patient Name ANONYMISED, PATIENT
Patient ID pt-1611047101
Accession ac-875555431
Study Date 02/10/2019
Study Description US Baby Hips

Note:
Email study share

Click [here](#) to view the study. Alternatively, copy the link below:

<https://doctor03.zed.link/viewer/share?code=7192d3be4450765f066885a3b338e1f5d5ca3ac0fe05ea0490b1da8b33c721e4ccddfcacd11f61b5ce6b952e1f74bfa3d4c66d774dca7c6e2ce1b816513453>

Access to this share will expire on **02/06/2020 23:59**.

Images are best viewed in a desktop internet browser.

Sharing with Another User

This option allows you to share the study with another Zed Doctor user in the same system. For example, a GP may want to share a study with a specialist. In this case the study will automatically appear on the specialist's study list, and there is no need to issue any share link.

When sharing with another user, you can specify the recipient(s) in the *Select users you would like to share the study with* field.

Sharing with a Temporary Account

This option allows you to create a temporary Zed Doctor account for a recipient, to share the study. Note that this option will only be displayed for users that have the security permission to create accounts.

When creating a temporary account, you will be required to specify *First Name*, *Last Name* and *Email Address* of the person you would like to share the study with. The recipient will receive an email with a temporary username and password which will grant them access to the study. The account will remain active for seven days.



no-reply@zedtechnologies.com.au

to me ▾

9:56 AM (0 minutes ago)

Admin Test wants to share the following study with you.

Patient Name ACHOO, Sneeze

Patient ID ACH-000

Accession 5005340

Study Date 15/05/2020

Study Description Sneeze

Click [here](#) to sign in and access the study.

<https://doctor03.zed.link/viewer?id=d284e89a-29c8-4b84-ac39-1953c955ebda>

Your temporary username and password are:

Username samuel@zedtechnologies.com.au

Password nWivnCdX

Please note your account is temporary and will expire on **02/06/2020**.

Patient Share

In some instances, a patient may have many studies that need to be shared at the same time. Patient share allows users to share all studies for the selected patient.

Patient share works in the same manner as *Sharing via Email*, however the link generated will produce a list of studies for the patient. Recipients can view each study as required.



Thank you for referring this patient.

Available Studies

Select a study from the list below and click on **view**. Alternatively, **double-click** on a study to open the viewer.

Patient Name	Patient ID	D.O.B.	Accession No.	Study Date	Study Time	Description	Series	Images	Modality	Referring Physician	
ANONYMISED, PATIENT	pt-102	01/01/2001	ac-512662877	04/07/2019	08:33	Lymphatic Scan	6	157	CT,NM	UNKNOWN, UNKNOWN	
ANONYMISED, PATIENT	pt-102	01/01/2001	ac-908604649	04/07/2019	08:16	Lymphatic Scan	2	50	CT,NM	UNKNOWN, UNKNOWN	

View

Report Only Share

Allows you to share just the report for the selected study.

Report only share works in the same manner as *Sharing via Email*, however the link generated will only display the report for the study. Recipients have the option to view or download the report.

Study Export

In addition to the sharing options described above, it may be necessary from time to time to share studies as a DICOM dataset. Zed Link provides a *Study Export* feature allowing system administrators to DICOM export studies, with the option to include a DICOM viewer as part of the download.

To export a study:

1. Sign into Zed Link and ensure the **Studies** page is displayed
2. Select the study to be exported, and from the *studies toolbar*, click **More Actions**. From the drop-down list, select **Export**. This will display the *Study Export* page.
3. Complete the Study Export details
 - Specify the recipient email address
 - Tick Include DICOM viewer with the download if required
 - Click + *Show Advanced* to specify additional options, if required
4. Click Export Study
5. Note the *download code*, and provide this to the recipient so they can download the study

Study Export

The study you requested below is currently being exported. The recipient will receive a notification when the export is available to download.

Please provide the recipient with the following code so that they can download the study:

0055503942

You can close this page.

Patient Name	D.O.B.	Patient ID	Accession No.	Description	Study Date	Referring Physician
ANONYMISED, PATIENT	11/02/2020	pt-2059982833	ac-2020694565	XRAY PELVIS	11/02/2020 16:16	UNKNOWN, UNKNOWN

Windows

A Windows compatible DICOM viewer, Weasis, can be [downloaded here](#) to open the study.

[Download the Weasis Windows Guide \[PDF\]](#)

Mac

A Mac compatible DICOM viewer can be downloaded and installed.

We recommend Horos which can be downloaded [here](#).

[Download the Horos Viewer Guide \[PDF\]](#)

Close

When DICOM sharing the study, the recipient will receive an email notification when the export is ready to be downloaded.

Study has been exported Inbox x



zedlink@zedtechnologies.com.au
to sam

5:24 PM (6 minutes ago) ☆ ↶ ⋮

Study has been exported.

A Windows compatible DICOM viewer, Weasis, can be [downloaded here](#) to open the study.

[Click to download the Windows Viewer guide.](#)

Mac - We recommend **Horos** DICOM viewer for Mac if you do not already have your own installed. You can download Horos [here](#).

[Click to download the Horos Viewer guide.](#)

Patient Name ANONYMISED, PATIENT

Patient ID pt-2059982833

Accession ac-2020694565

Study Date 11/02/2020

Study Description XRAY PELVIS

Click [here](#) to download the study. Alternatively, copy the link below:

<https://doctor.zedtechnologies.com.au/download?exportCode=83ab8b8df30812187138fec9c846c621860905a569cfda4e5a8db5573e051b667e090eac815b4b5ef4edbbe7a680c86c16b4502bd56faa0a05569e9afe8383>

NOTE:

This link will expire on 18/05/2020.

To protect personal health data, a download code is required to download this study. This code should have been provided separately by the sender of this email.

If you do not have a download code, you will need to contact the sender to request one.

↶ Reply all

↶ Reply

➦ Forward

Study Download

Zed Link provides an easy process to perform a real-time download of the DICOM datasets without having to perform a *Study Export*.

To download a study:

1. Sign into Zed Link and ensure the **Studies** page is displayed
2. Select the study to be exported, and from the *studies toolbar*, click **More Actions**. From the drop-down list, select **Download**. This will display the *Study Export* page.
3. Click *+ Show Advanced* to specify additional options, if required
4. Click Download









Viewing Images











Double clicking on a study will launch the viewer.









Tools

Toolbar

All tools and viewer options are outlined below.

Icon	Tool / Option Name	Description
	Scroll	Scroll through the images available in the image box by dragging up and down.
	Window/Level	Changes the contrast of the image. You can either use the pre-set settings when you click the button or left clicking and dragging up or down on an image will also change contrast.
	Zoom	Lets you zoom in and out of the images by left clicking and dragging up or down on an image.
	Panning	Lets you move the images around by left clicking and dragging on an image.
	Invert	Inverts the colour of the current selected image.
	Zoom Fit	Changes the zoom ratio for the existing display set to fit the images entirely in the window.
	Flip Vertical	Flip the image vertically.
	Flip Horizontal	Flip the image horizontally.

	Reset	Removes changes that have been made to images by other tools.
	Split Option	Choose how multiple image series are displayed on screen. A series are grouped images (an example would be multiple images from a CT scan).
	No Split	Change the image series layout to 1 x 1.
	Split Vertically	Change the image series layout to 1 x 2.
	Split Horizontally	Change the image series layout to 2 x 1.
	Split Grid	Change the image series layout to 4 x 4.
	Measure Length	Allows you to measure the length of the images on the screen by allowing you to draw a ruler on an image.
	Measure Angle	Allows you to measure the angle of the image son the screen by drawing two lines.
	Measure Cobb Angle	Allows you to measure the Cobb angle of the images on the screen by allowing you to draw a ruler on an image.
	Measure Polygonal ROI	Allows you add anchor points to measure the polygonal ROI.

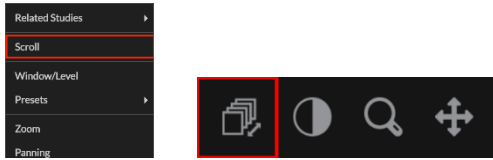
	Measure Cardiothoracic Ratio	Allows you measure the cardiothoracic ratio of the images on the screen by allowing you to draw a ruler on an image.
	Clear Measurements	Clear all the measurements on the selected view.
	Sync Scroll	Allows image synchronisation when scrolling through images. This can be either image number or slice location.
	3D Cursor	Allows you to locate a point in space across all image planes.
	Show/Hide Overlay	Show or hide the technical details around the edge of images.
	Play Cine	Scrolls automatically through a selected image series.
	Export/Share	Allows you to export the selected image as a jpeg with or without the overlay. There is also an option to take you to the export page where you can export to a series of jpegs, video or DICOM.
	Show/Hide Report	Show or hide the radiologist report. Please note this button will only appear if there is a report associated with the scan.

Context Menu

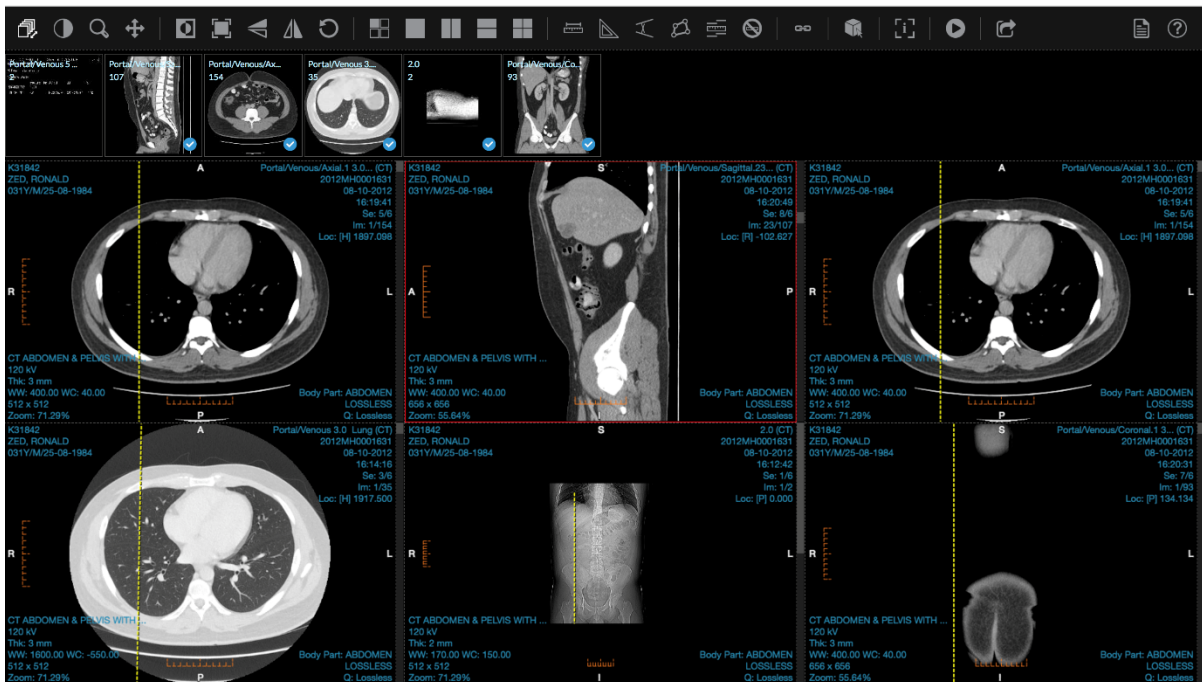
- Scroll
 - Scroll through the images available in the image box by dragging up and down.
- Window/Level
 - Changes the contrast of the image. You can either use the pre-set settings when you click the button or left clicking and dragging up or down on an image will also change contrast.
- Zoom
 - Allows you to zoom in and out of the images by left clicking and dragging up or down on an image.
- Panning
 - Allows you to move the images around by left clicking and dragging on an image.
- Hounsfield Unit
 - Displays the actual pixel value or Hounsfield Unit (HU) of where the cursor is clicked for the image in the bottom right overlay.
- Measure Length
 - Allows you to measure the length of the images on the screen by allowing you to draw a ruler on an image.
- Measure Angle
 - Allows you to measure the angle of the images on the screen by allowing you to draw rulers on an image.
- Measure Cobb Angle
 - Allows you to measure the Cobb angle of the images on the screen by allowing you to draw rulers on an image.
- Measure Polygonal ROI
 - Allows you add anchor points to measure the polygonal ROI.
- Measure CTR
 - Allows you to measure the cardiothoracic ratio of the images on the screen by allowing you to draw rulers on an image.
- Clear Measurements
 - Clears the measurements on the image.
- 3D Cursor
 - Allows you to locate a point in space across all image planes.
- Export Image
 - Allows you to export the selected image.
- Export Image with Overlay
 - Allows you to export the selected image with the overlay.

Scroll

1. Select the “Scroll” button on the tool bar or context menu and drag up and down on the display set with the left mouse button.

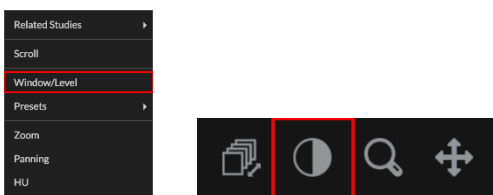


- 2.
3. Scroll up and down on the display set with the mouse wheel.
4. Drag the scroll bar at the side of each display set.



Window/Level

1. Select the “Window/Level” button on the tool bar or context menu and drag around on the image. Dragging up increases the “level” (or window center), while dragging down decreases it. Dragging left reduces the window width and dragging right enlarges it. Combining both dragging motions will adjust both the window width and level simultaneously.



- 2.

Zoom

1. Select the “Zoom” button on the tool bar or context menu and drag up and down on the image.



Pan

1. Select the “Pan” button on the tool bar or context menu and drag around the image.

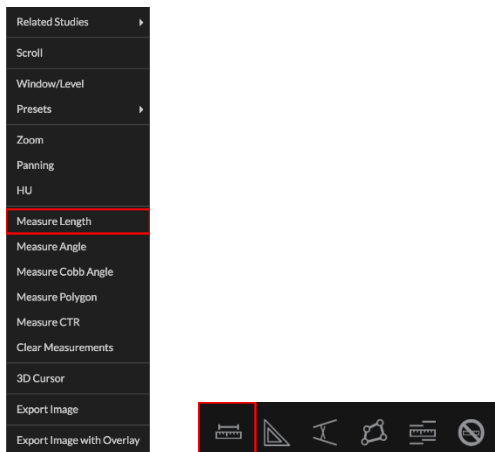


Measurements

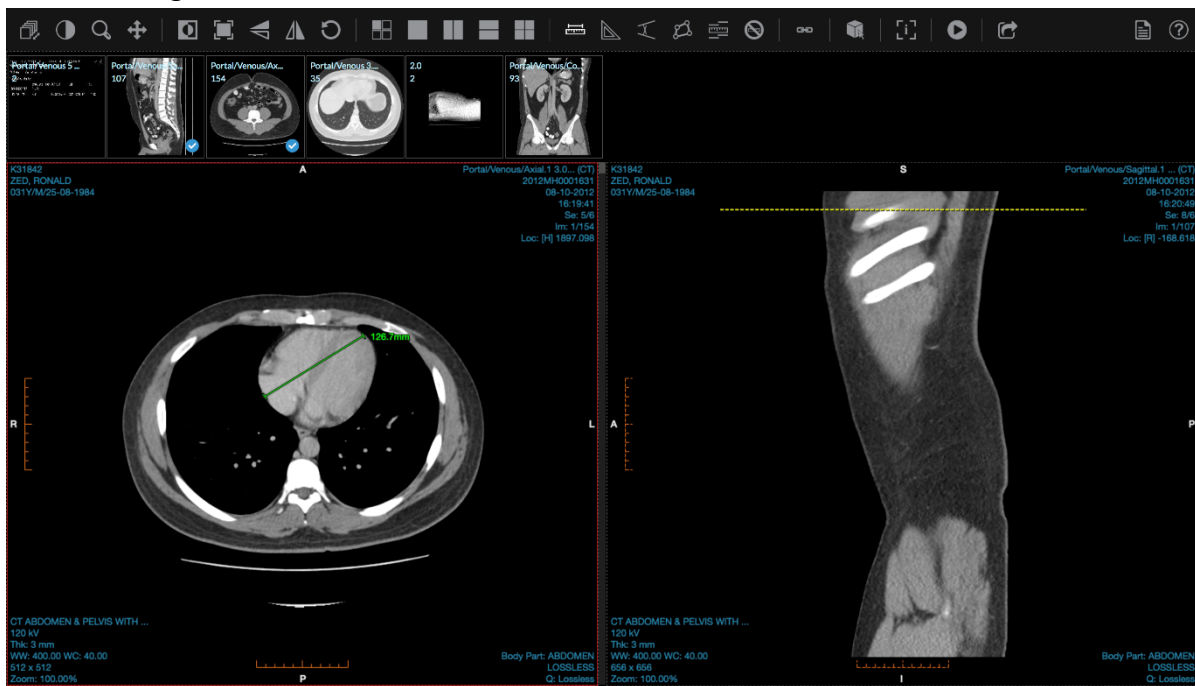
Length

Adding Measurement

1. Click on the “Measure Length” button on the tool bar or context menu.

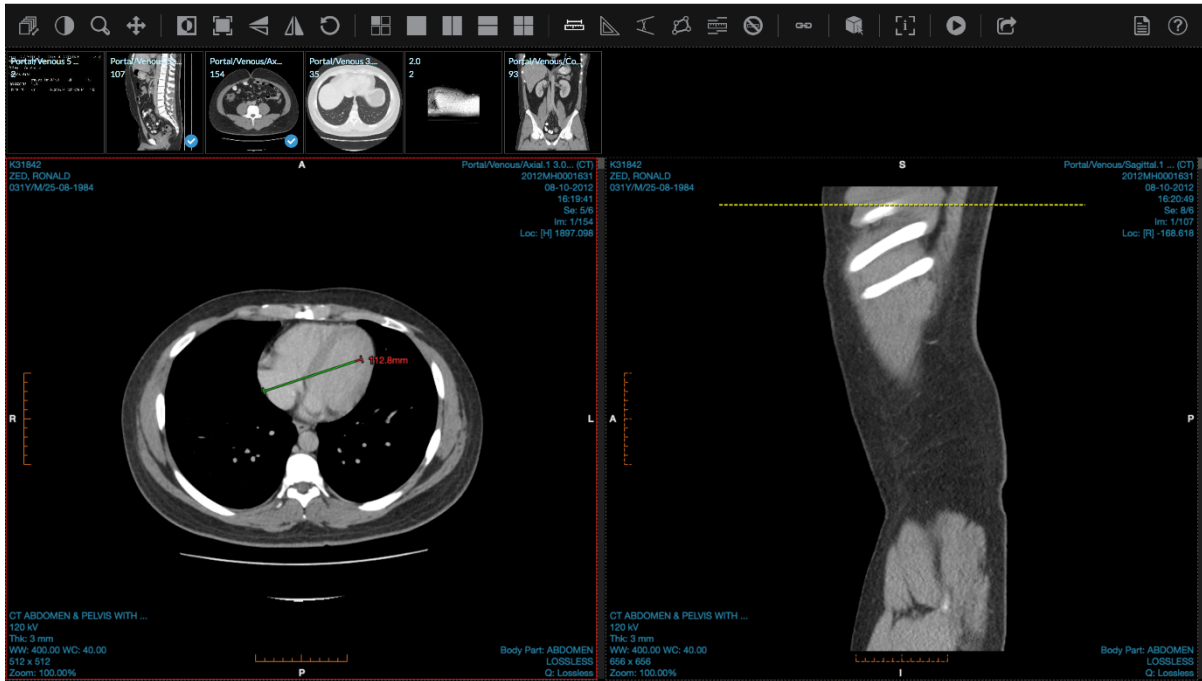


2. Click and hold on the image where you want the measurement to begin. Release when necessary to calculate length.

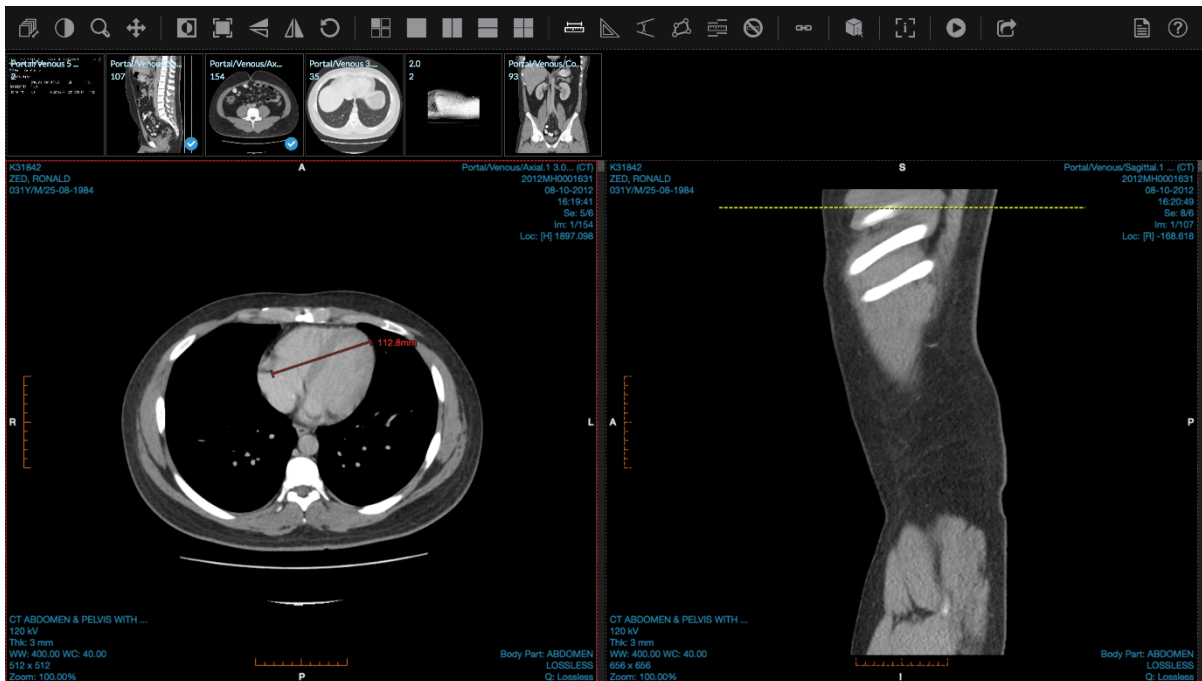


Modifying Measurement

1. To resize, hover the mouse over one of the anchor points the click and drag as necessary.



2. To move, hover the mouse over one of the lines (not the anchor point), then click and drag to the new location.

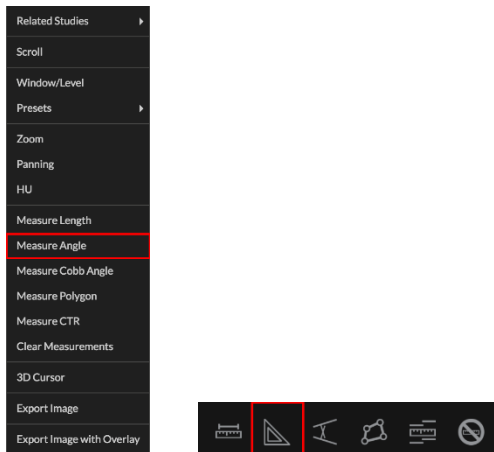


3. To delete, click on one of the lines or anchor point and then press the backspace button on your keyboard or click the "Clear Measurements" option on the toolbar or context menu.

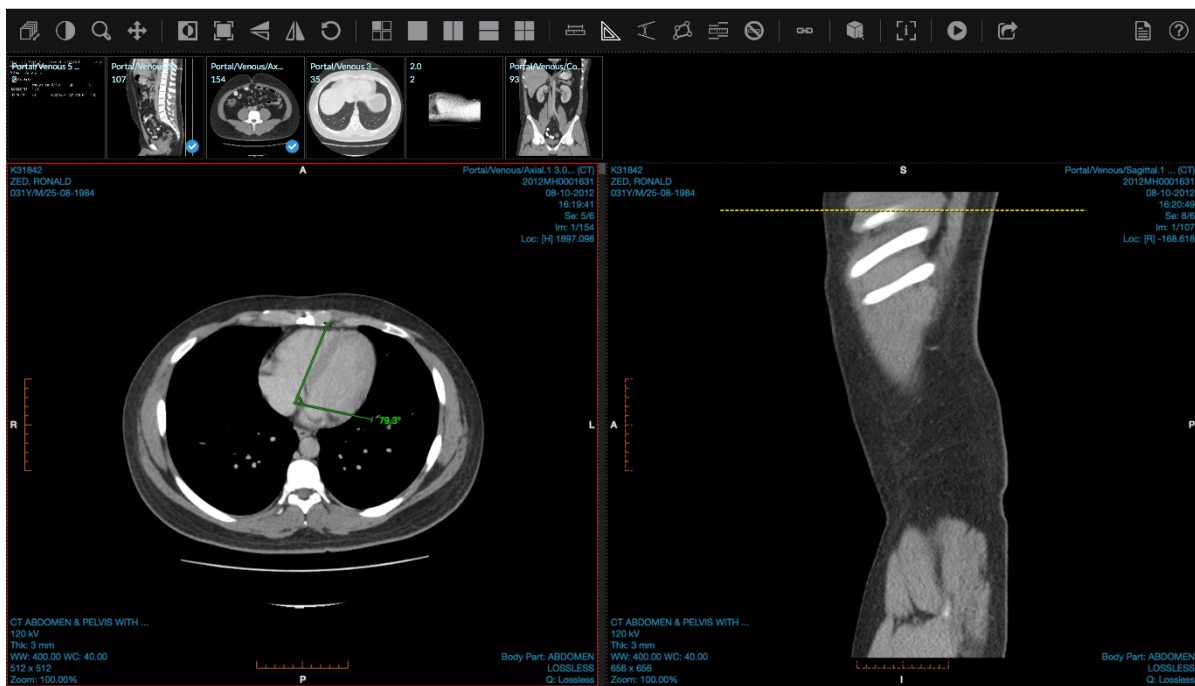
Angle

Adding Measurement

1. Click on the “Measure Angle” button on the tool bar or context menu.



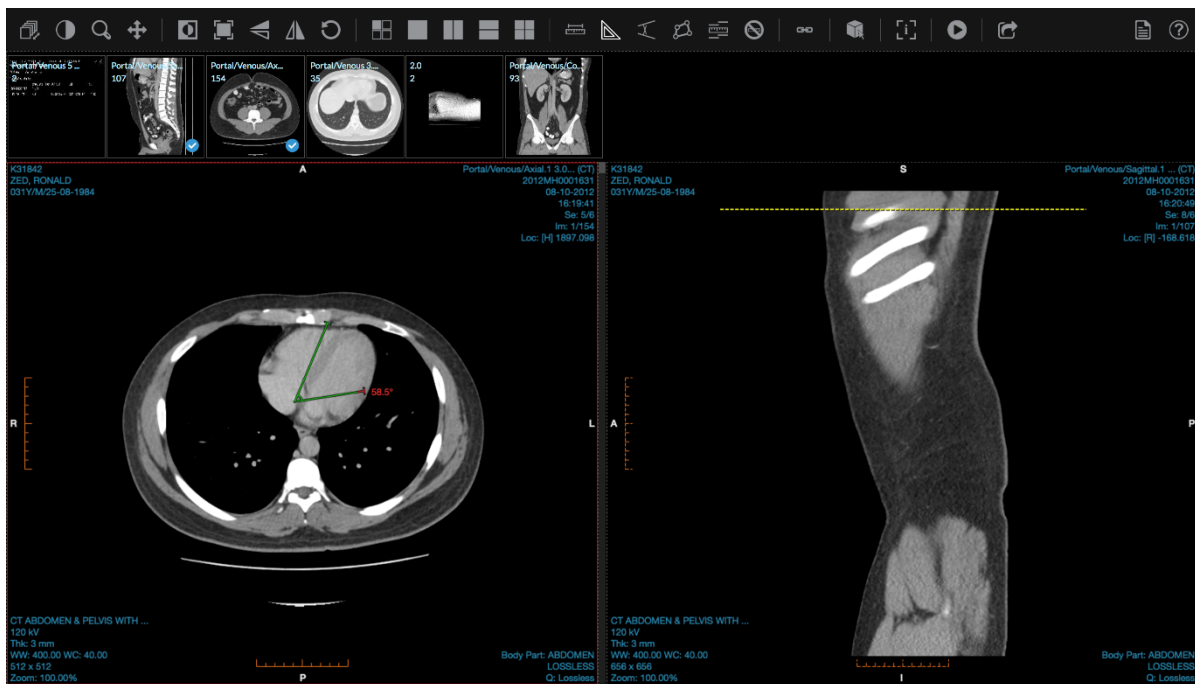
2. Click and hold on the image where you want the measurement to begin. This lays down the measurement's first anchor point. Release when necessary.
3. Move the mouse to where you want the next anchor point to be located. Click and release again.



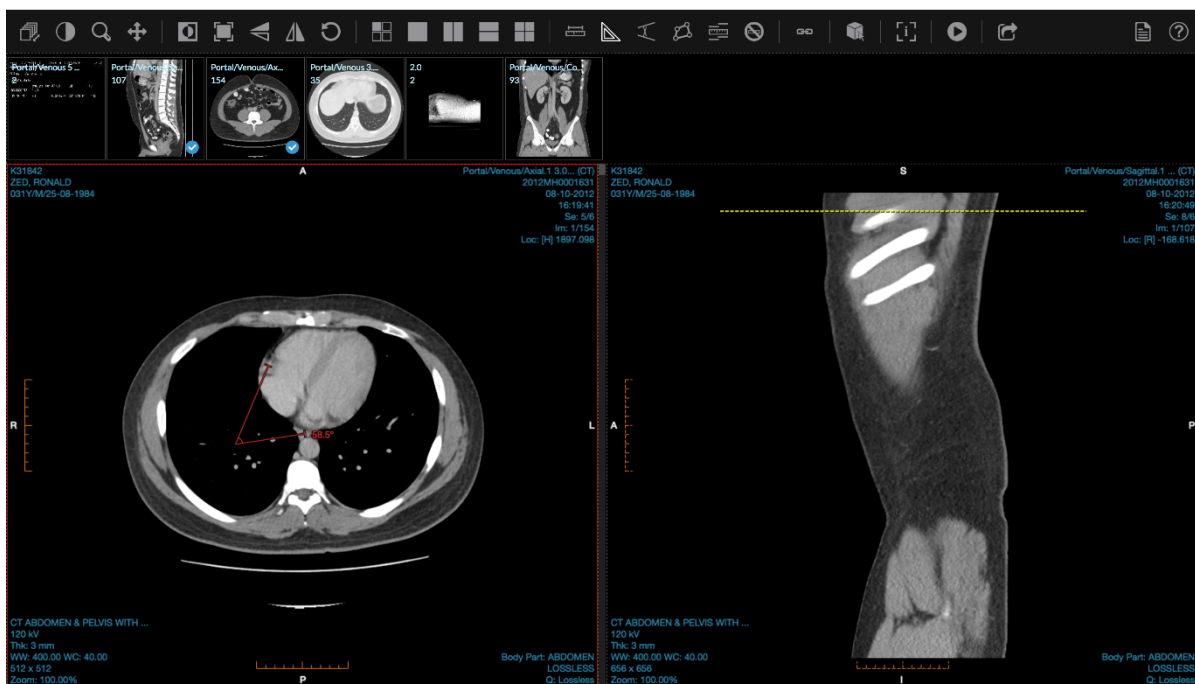
Modifying Measurement

1. You cannot add/remove anchor points.

- 2. To resize, hover the mouse over one of the anchor points the click and drag as necessary.



- 3. To move, hover the mouse over one of the lines (not the anchor point), then click and drag to the new location.

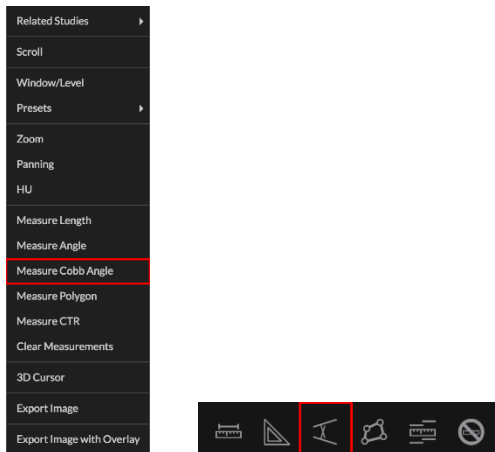


- 4. To delete, click on one of the lines or anchor point and then press the backspace button on your keyboard or click the “Clear Measurements” option on the toolbar or context menu.

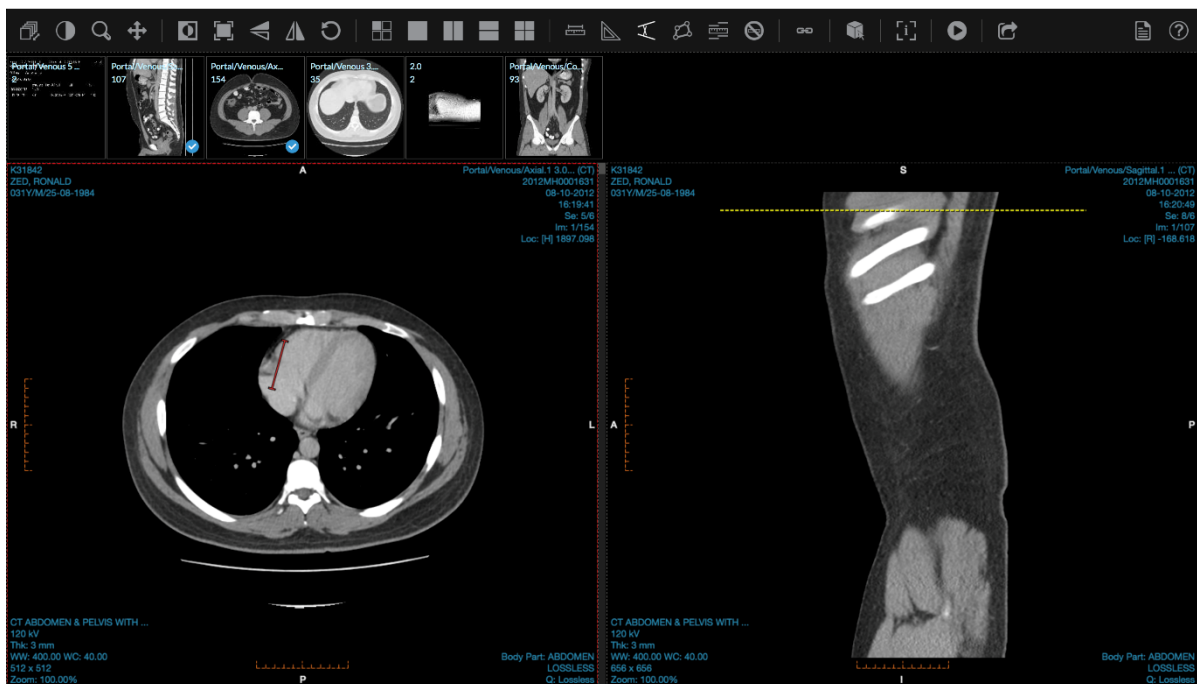
Cobb Angle

Adding Measurement

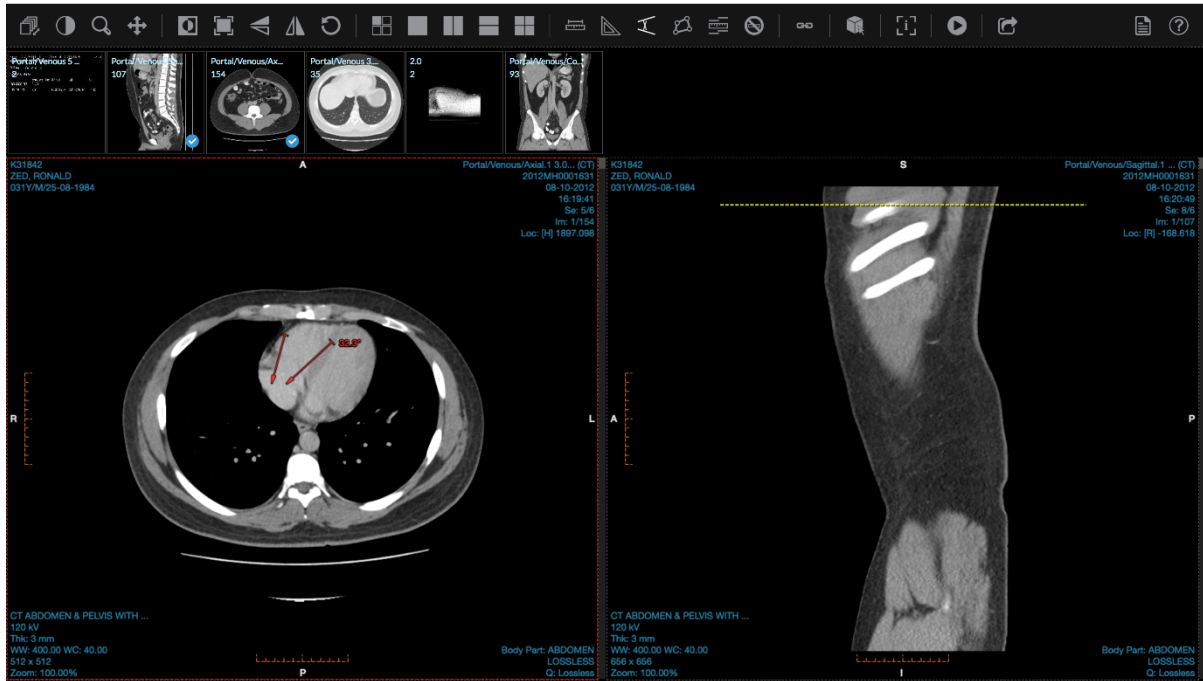
1. Click on the “Measure Cobb Angle” button on the tool bar or context menu.



2. Click and hold on the image where you want the measurement to begin. This lays down the measurement's first anchor point. Release when necessary.

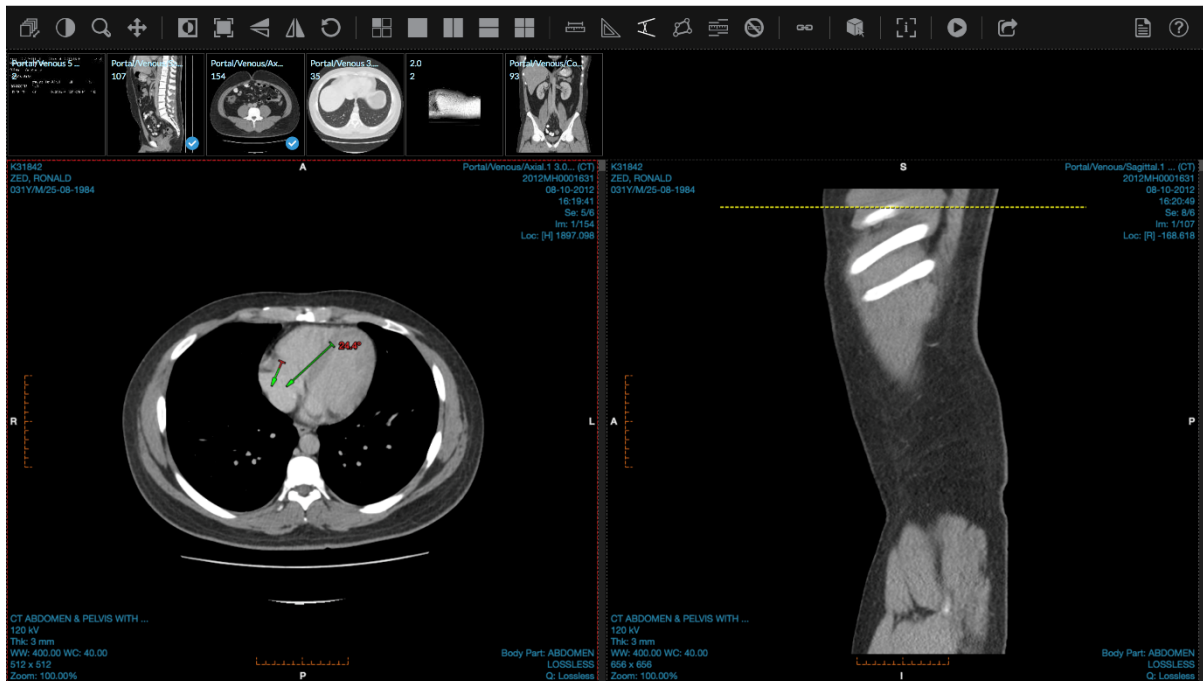


- Repeat step 2 for second anchor point to calculate cobb angle.

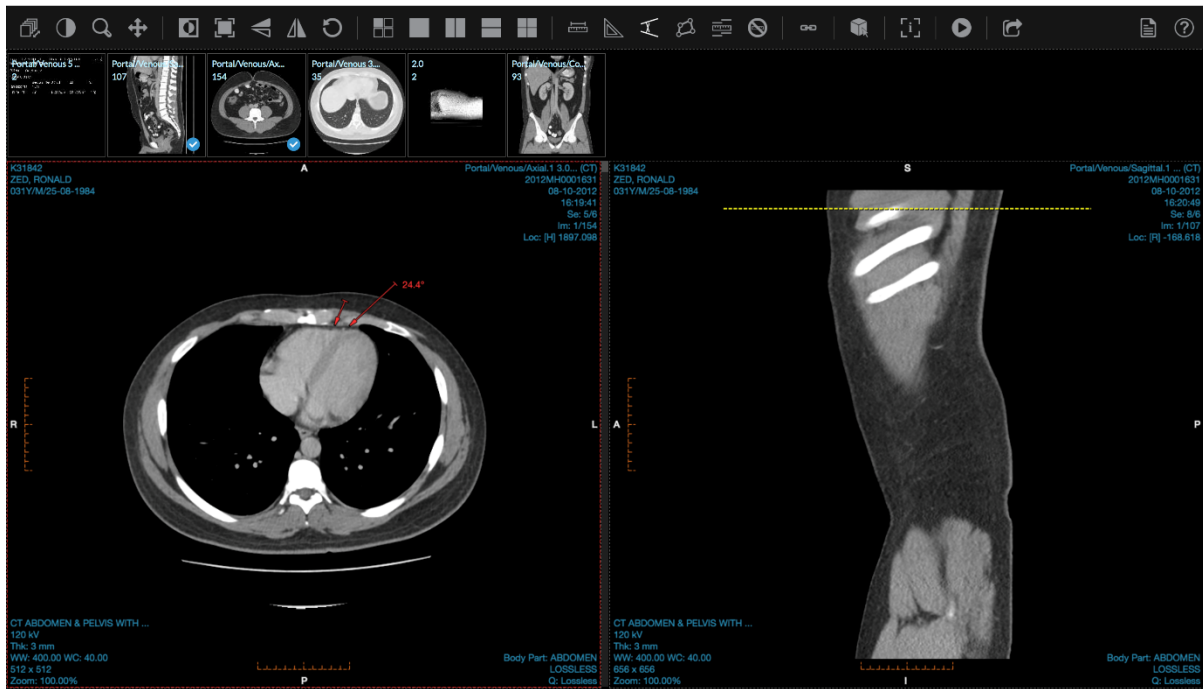


Modifying Measurement

- You cannot add/remove anchor points.
- To resize, hover the mouse over one of the anchor points the click and drag as necessary.



- 3. To move, hover the mouse over one of the lines (not the anchor point), then click and drag to the new location.

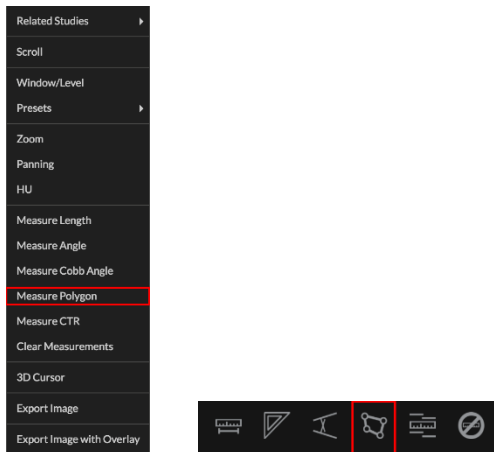


- 4. To delete, click on one of the lines or anchor point and then press the backspace button on your keyboard or click the “Clear Measurements” option on the toolbar or context menu.

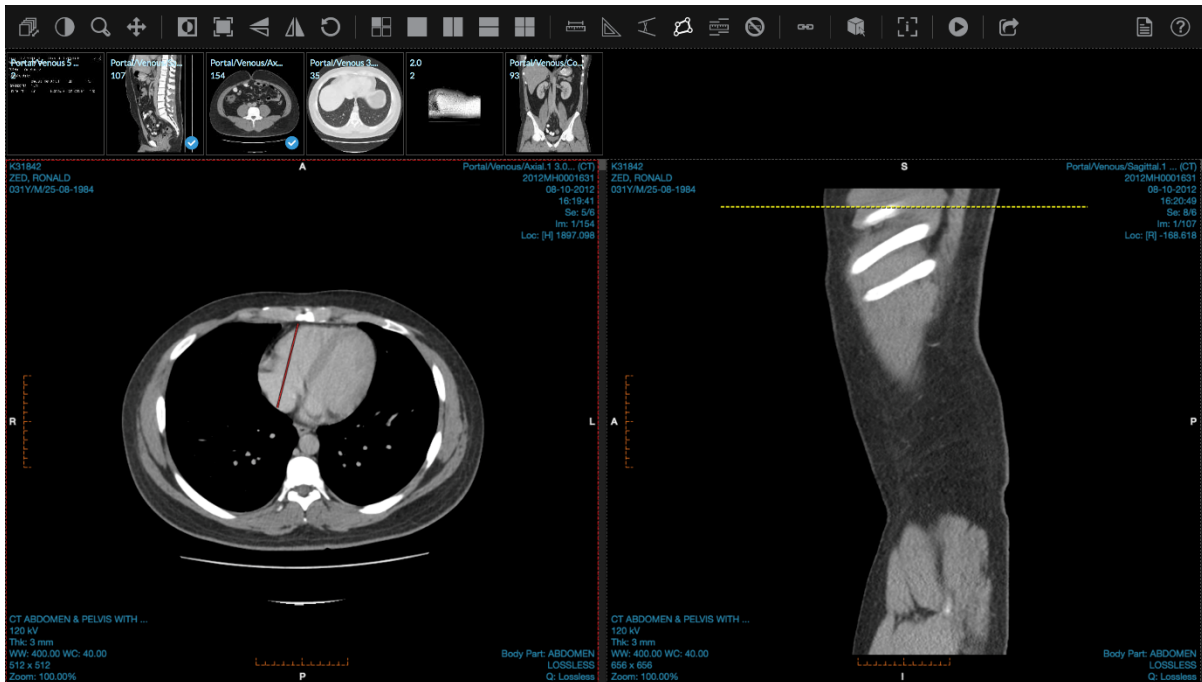
Polygonal ROI

Adding Measurement

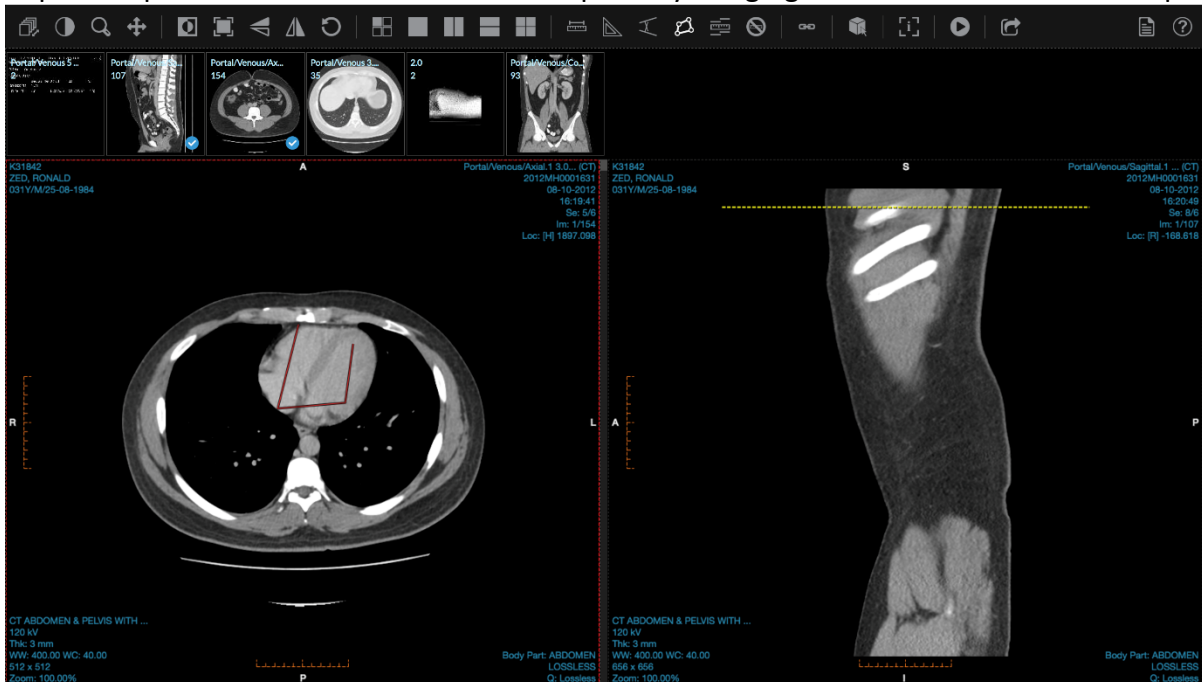
- 1. Click on the “Measure Polygon” button on the tool bar or context menu.



- 2. Click on the image where you want the measurement to begin. This lays down the measurement's first anchor point. Note that you can just click and release. It is not necessary to hold.

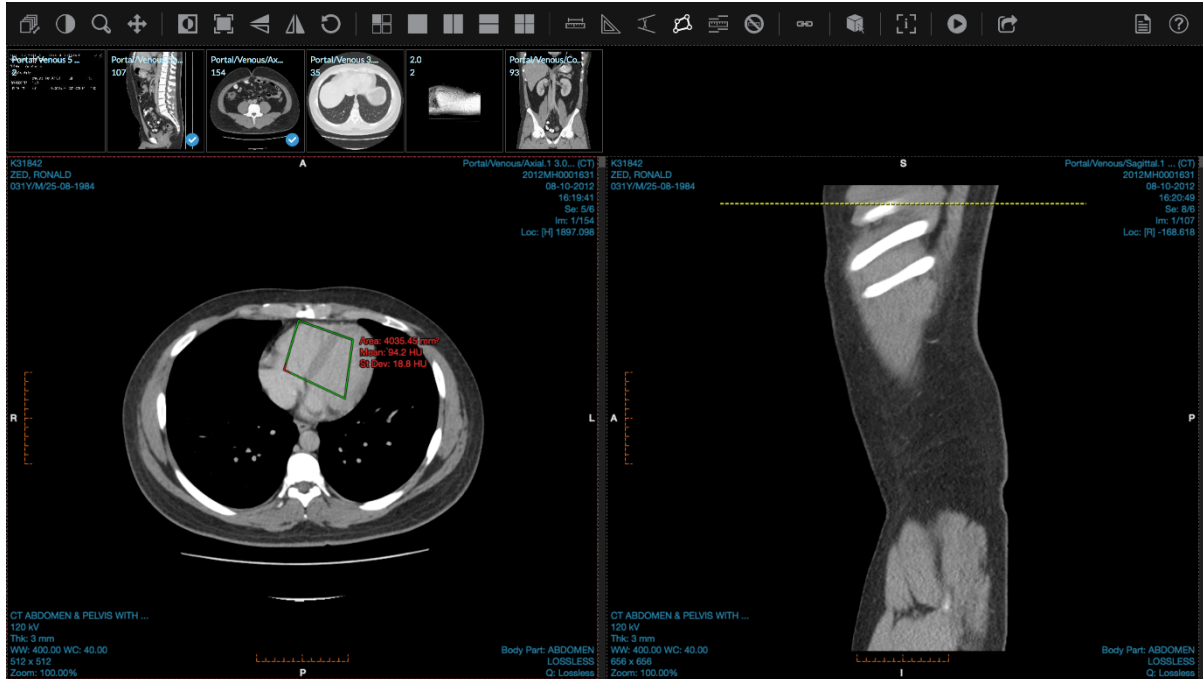


- 3. Move the mouse to where you want the next anchor point to be located. Click and release again.
- 4. Repeat step 3 until the measurement is complete by bringing the mouse back to the first point.

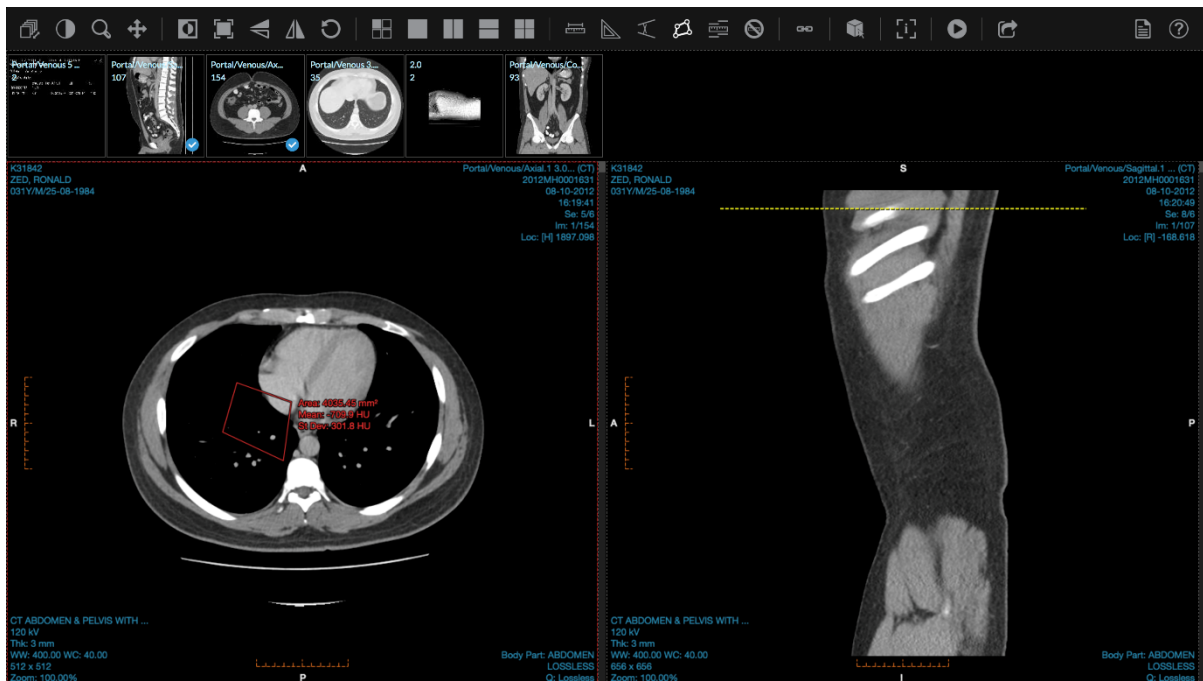


Modifying Measurement

1. You cannot add/remove anchor points.
2. To resize, hover the mouse over one of the anchor points the click and drag as necessary.



3. To move, hover the mouse over one of the lines (not the anchor point), then click and drag to the new location.

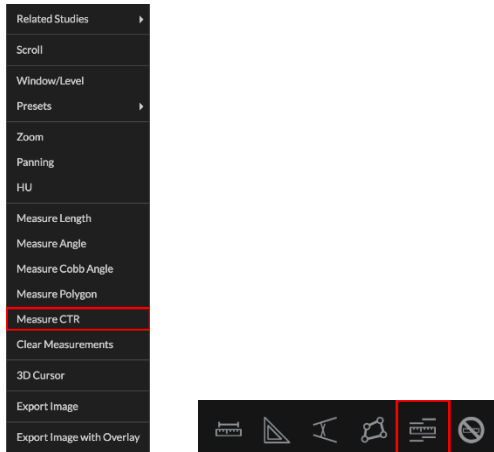


4. To delete, click on one of the lines or anchor point and then press the backspace button on your keyboard or click the “Clear Measurements” option on the toolbar or context menu.

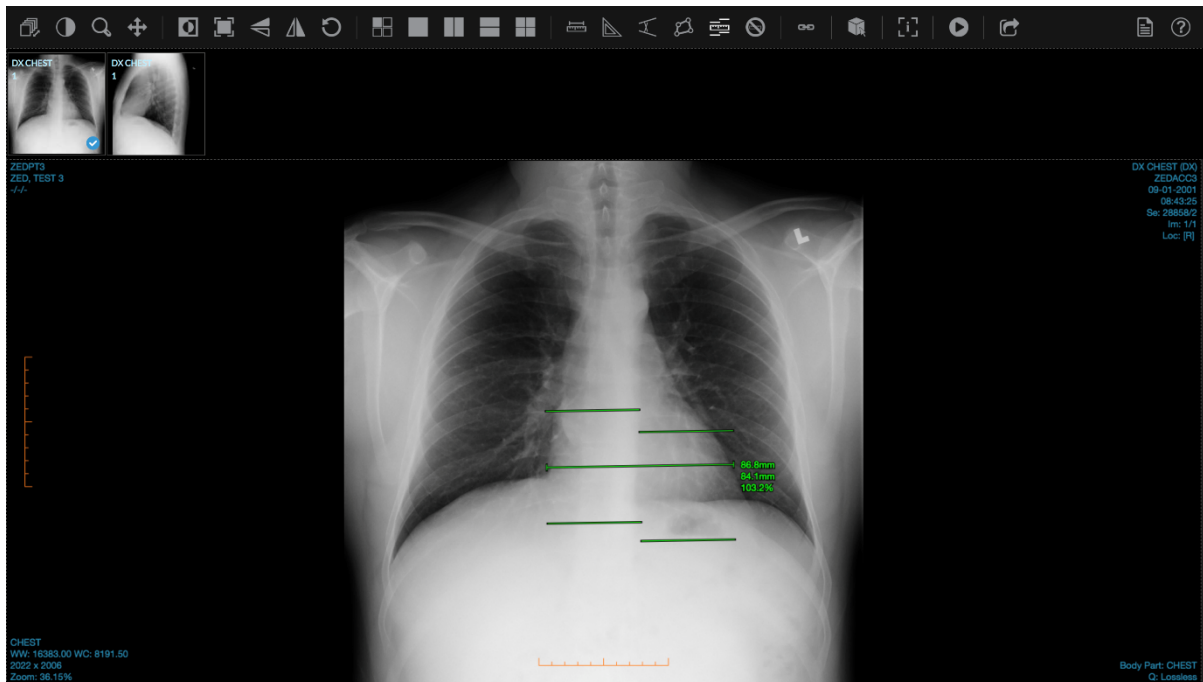
Cardiothoracic Ratio

Adding Measurement

1. Click on the “Measure CTR” button on the tool bar or context menu.

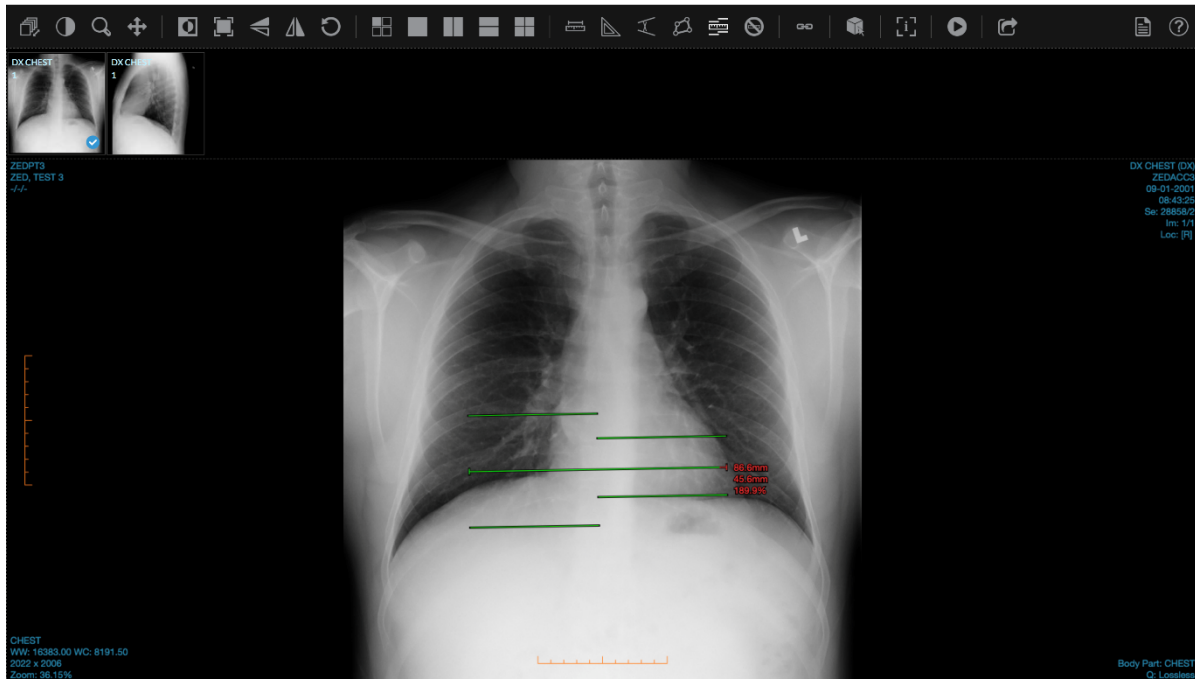


2. Click and hold on the image where you want the measurement to begin. This will create the start and end anchor points. Release where you want the measurement to end.

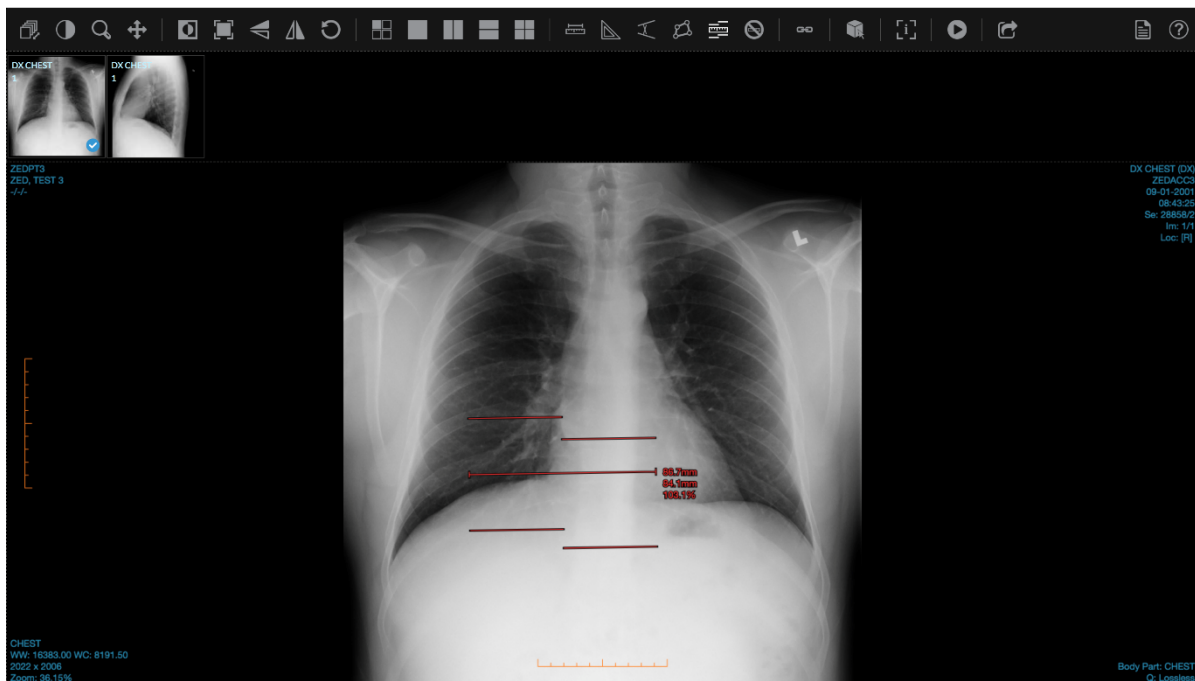


Modifying Measurement

1. To resize or rotate, hover the mouse over the start or end anchor points and then click and drag as necessary.



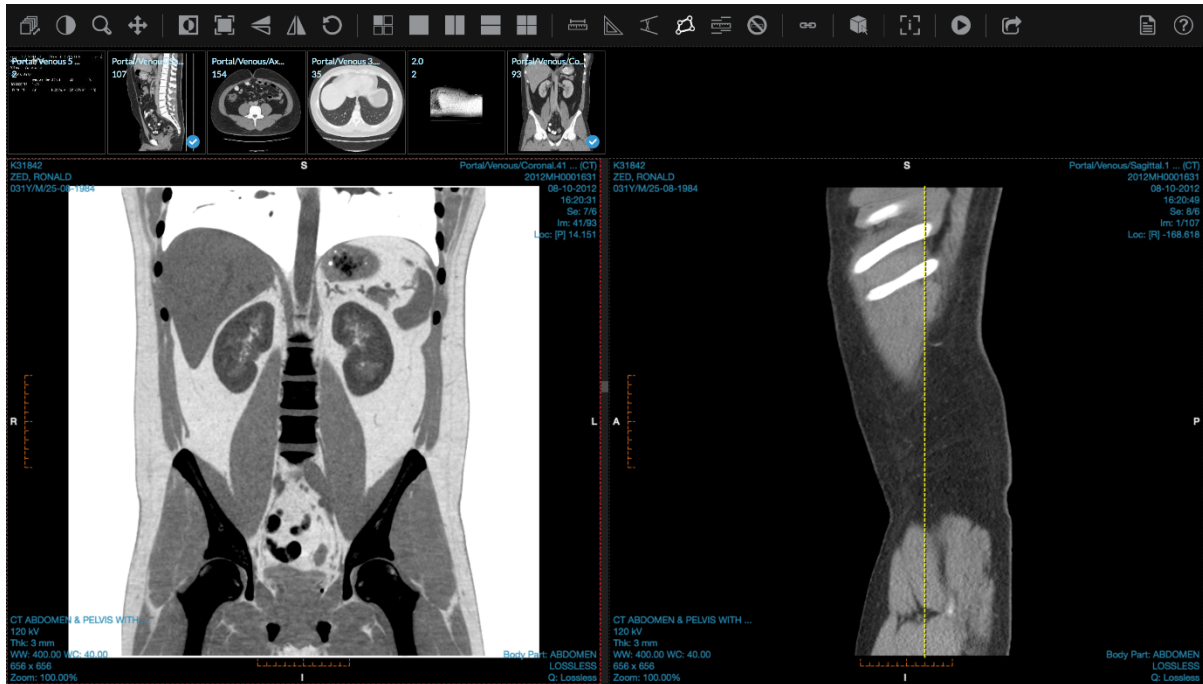
2. To move, hover the mouse over one of the lines (not the anchor point), then click and drag to the new location.



3. To delete, click on one of the lines or anchor point and then press the backspace button on your keyboard or click the "Clear Measurements" option on the toolbar or context menu.

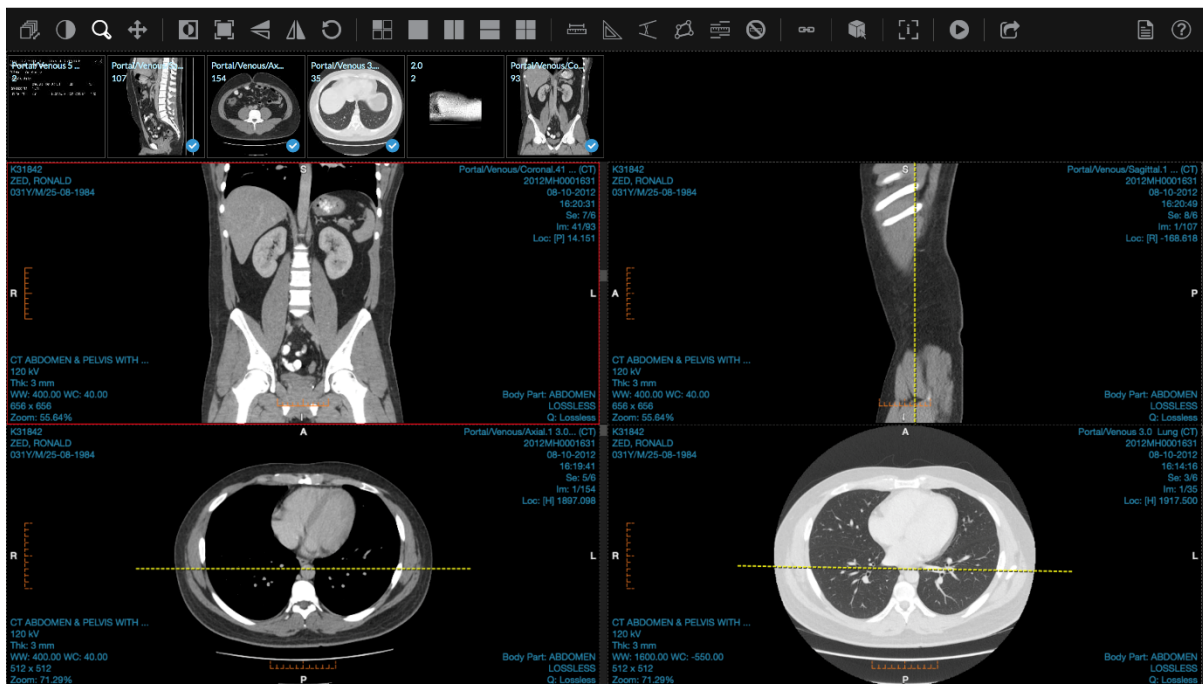
Invert

1. Click on one of the display sets to select it and then press the “Invert” button on the tool bar to invert the image.
2. Invert will cause low values to become brighter and high values to become darker.



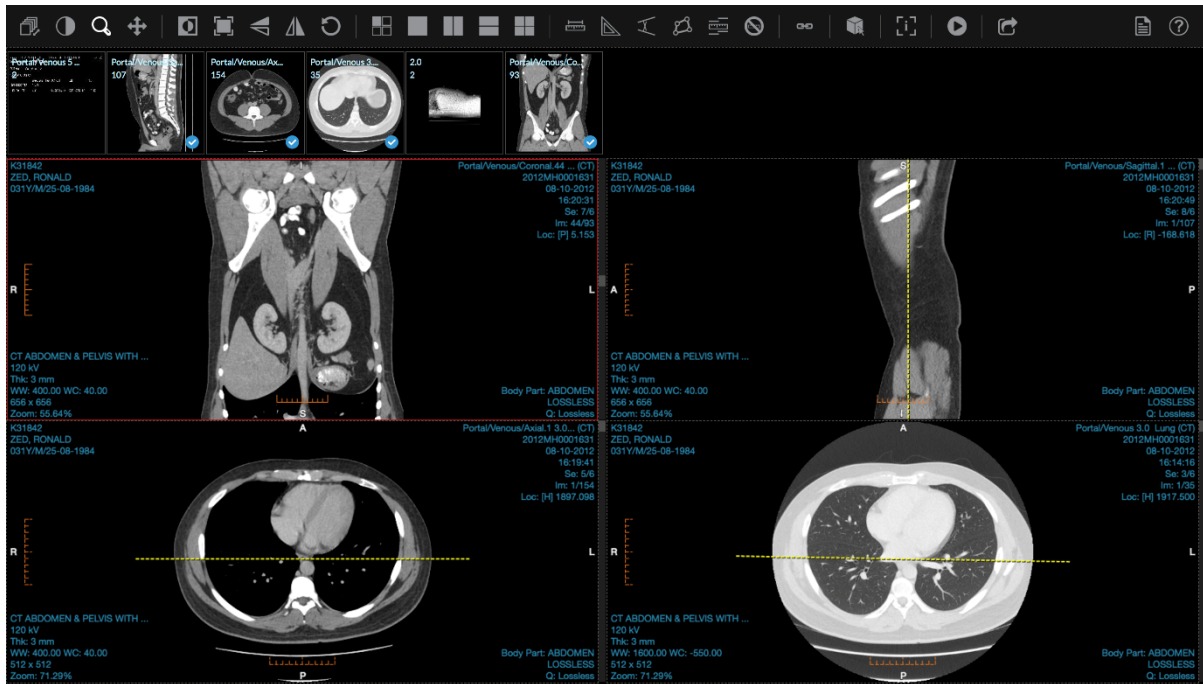
Zoom Fit

1. Click on the “Zoom Fit” button on the tool bar to fit to apply the correct zoom to all display sets so that the image is displayed entirely.



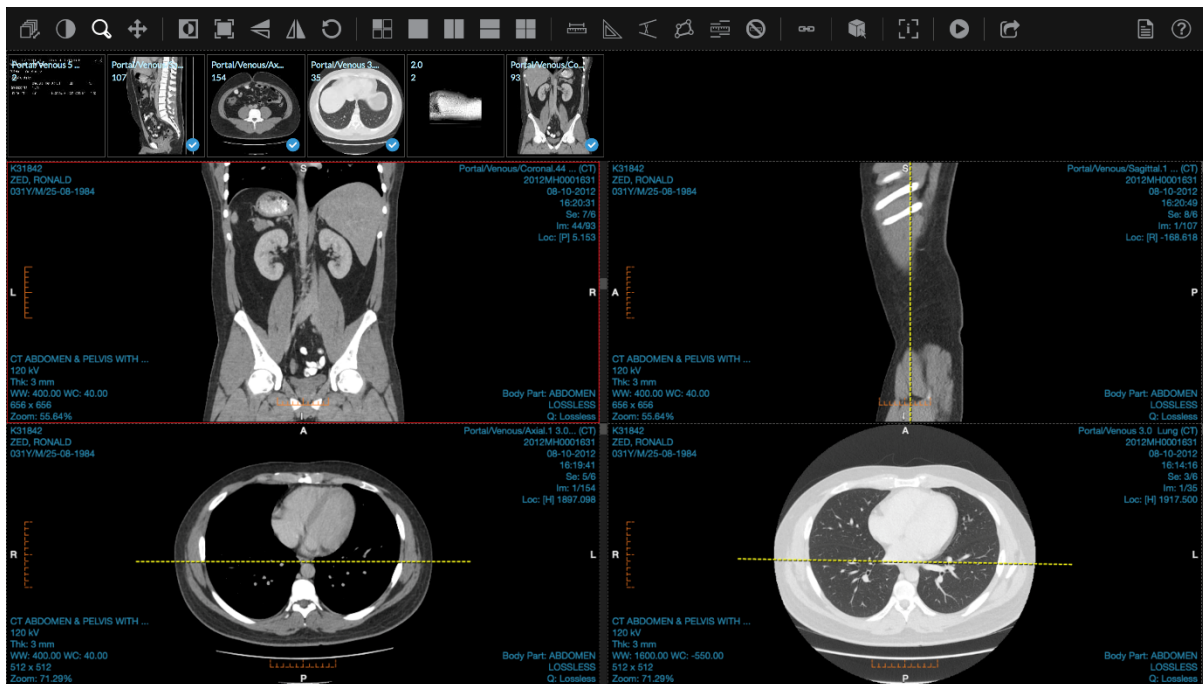
Flip Vertical

1. Click on the "Flip Vertical" button to flip the selected image box.



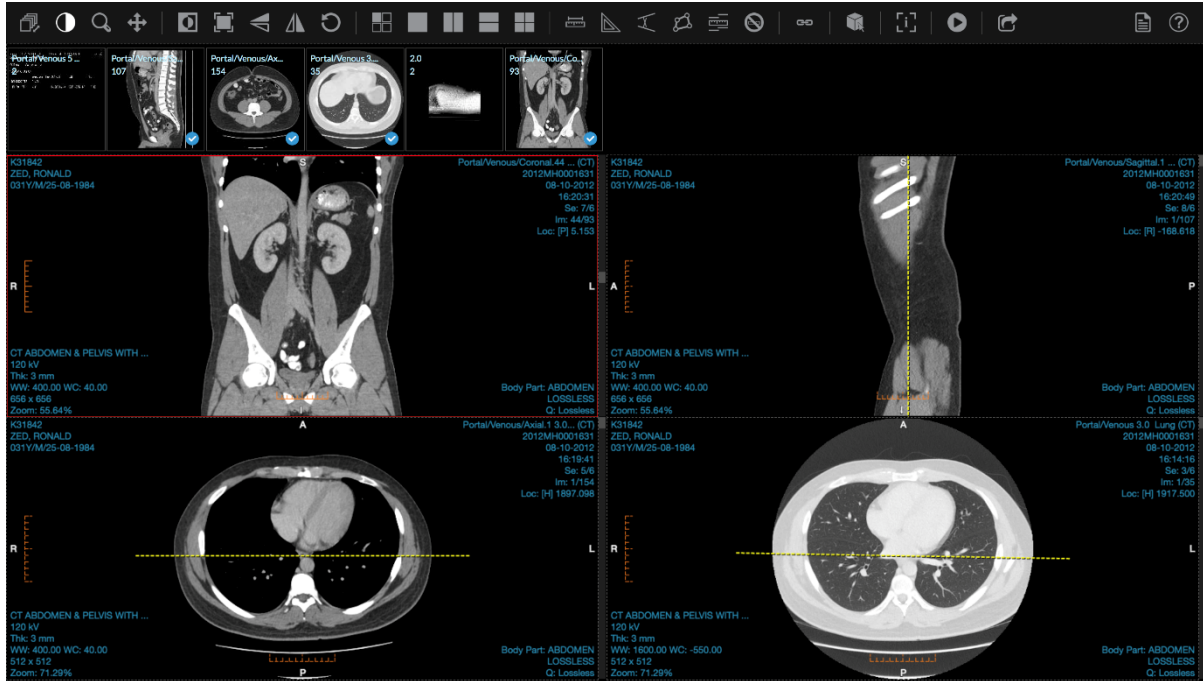
Flip Horizontal

1. Click on the "Flip Horizontal" button to flip the selected image box.



Reset

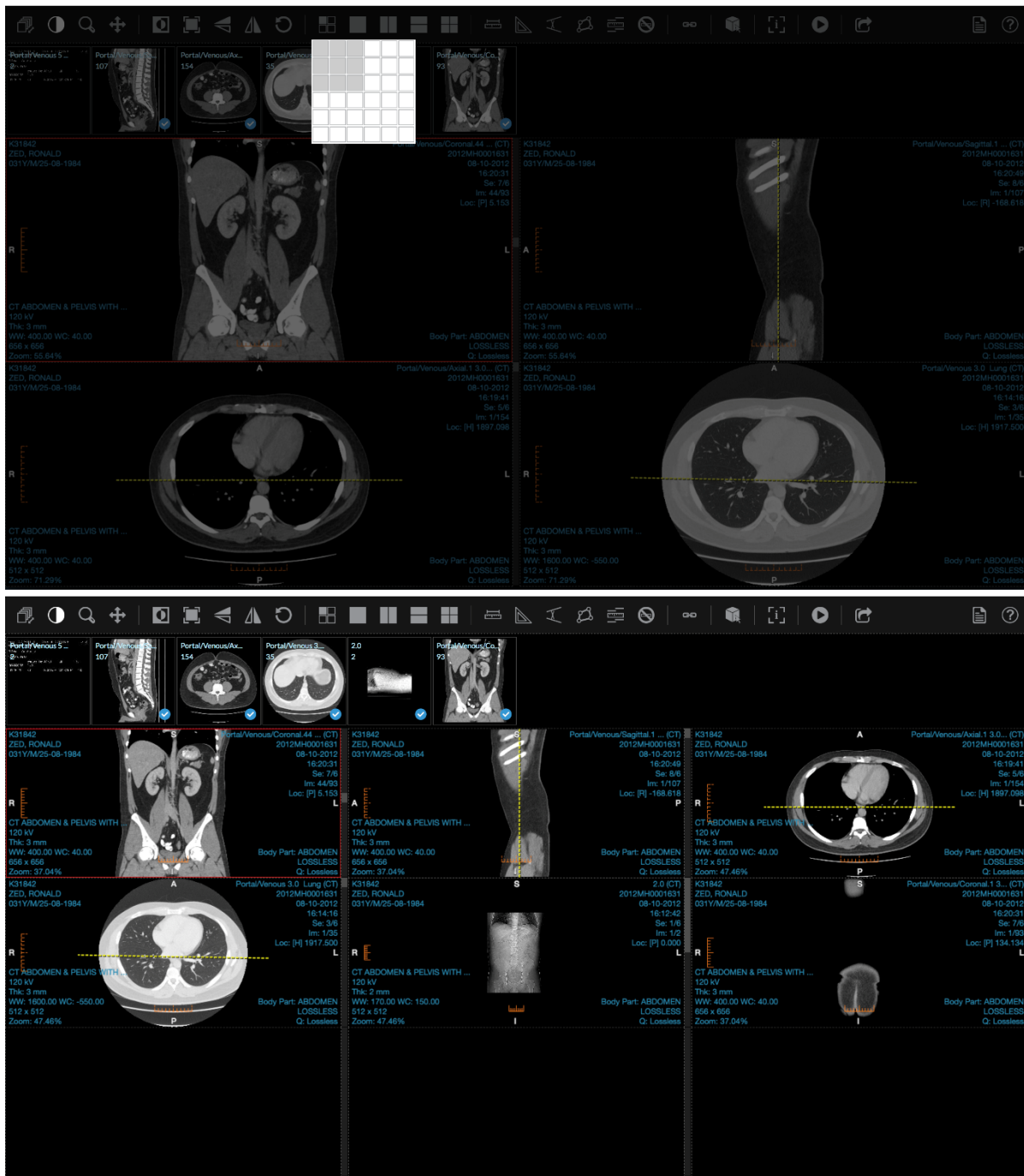
1. Click on the "Reset" button to reset the image back to the original zoom, position, geometric orientation, window/level and invert back to default.



Layout

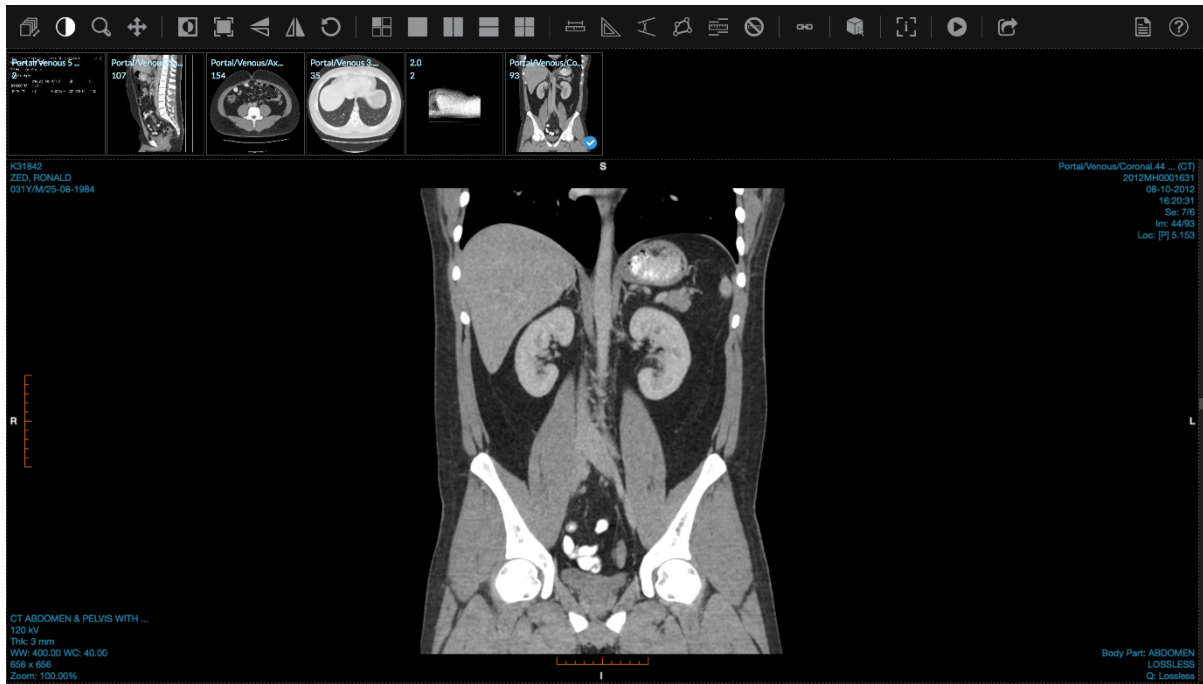
Grid

1. Click on the "Grid" button to specify the image box layout.



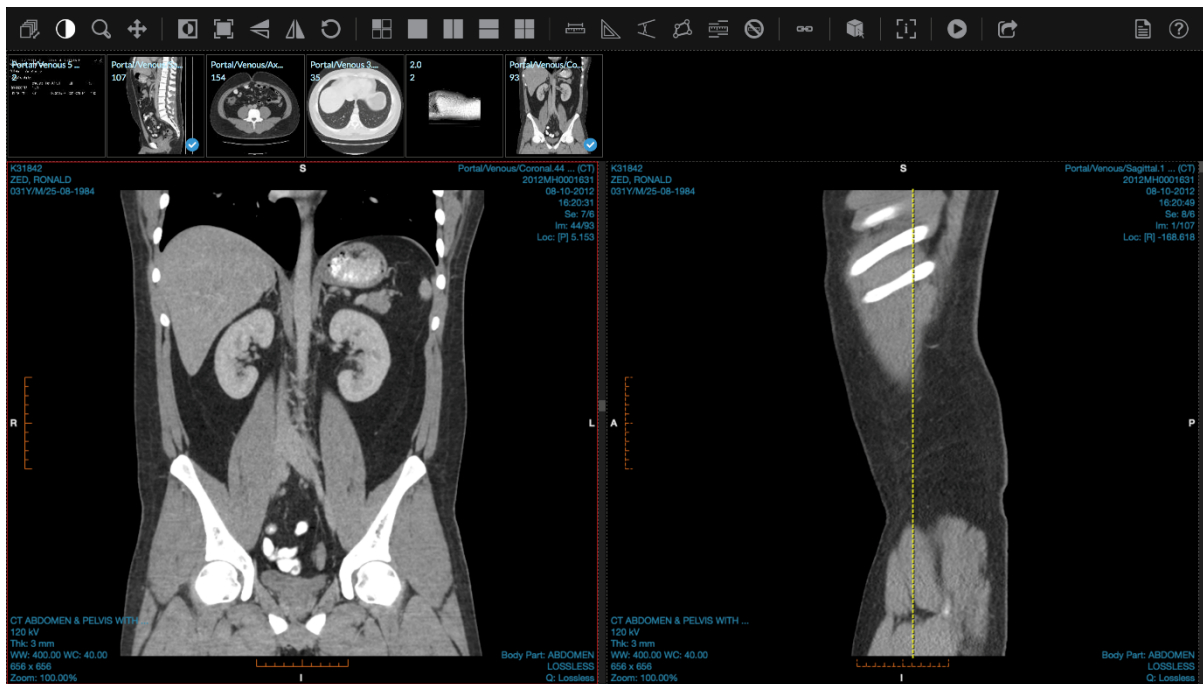
No Split

1. Click on the “No Split” layout button to specify a 1x1 layout.



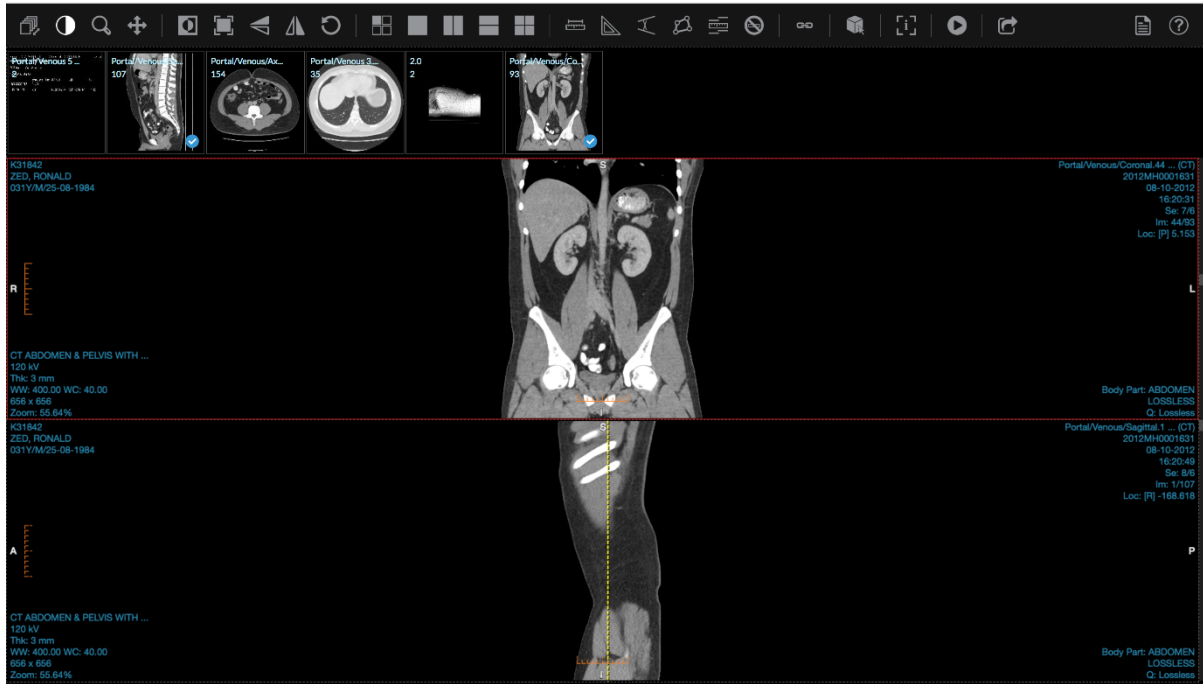
Split Vertical

1. Click on the “Split Vertical” layout button to specify a 1 x 2 layout.



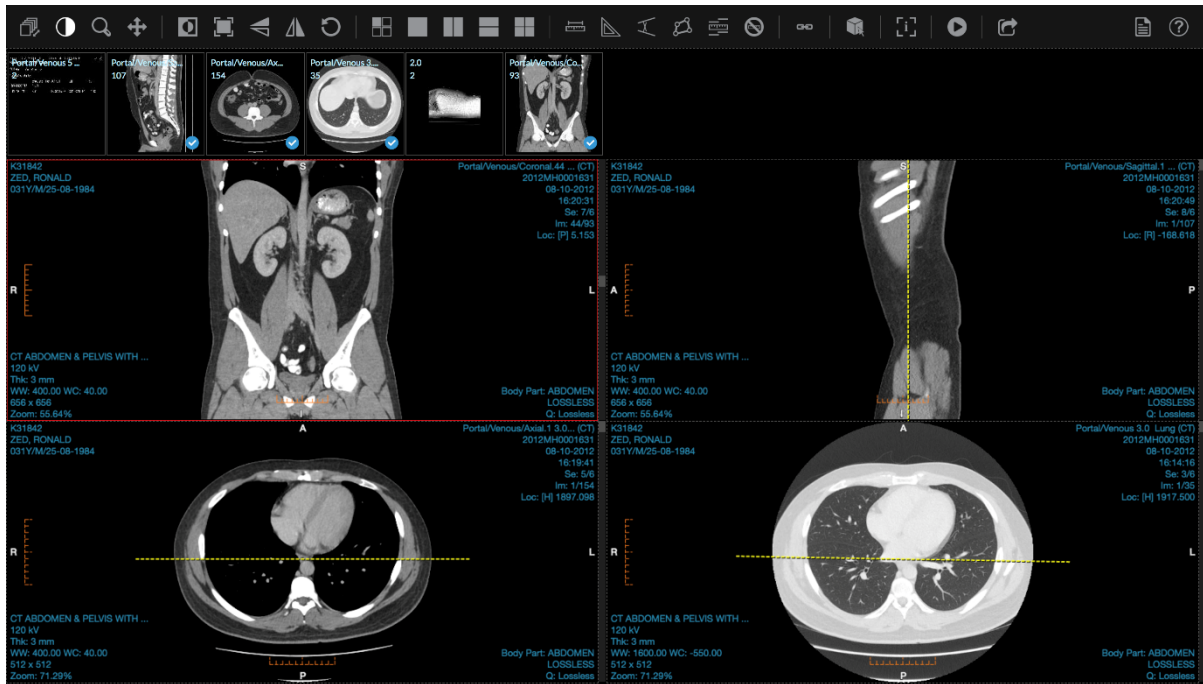
Split Horizontal

1. Click on the "Split Horizontal" layout button to specify a 2 x 1 layout.



Split Grid

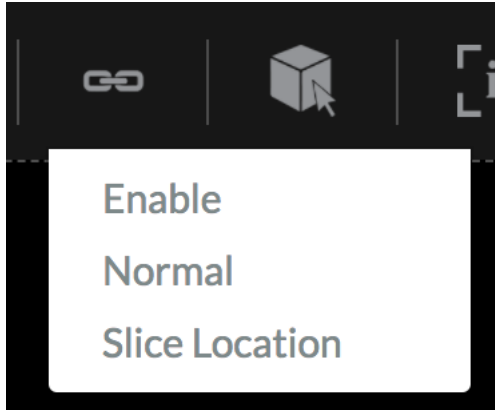
1. Click on the "Split Grid" layout button to specify a 2 x 2 layout.



Sync Scroll

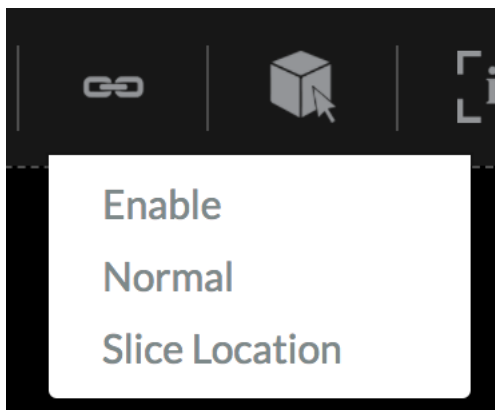
Normal

1. Click on the “Sync Scroll” button on the tool bar and select “Enable” or “Normal” to activate sync scrolling based on image number.



Slice Location

1. Click on the “Sync Scroll” button on the tool bar and select “Slice Location” to activate sync scrolling based on slice location.

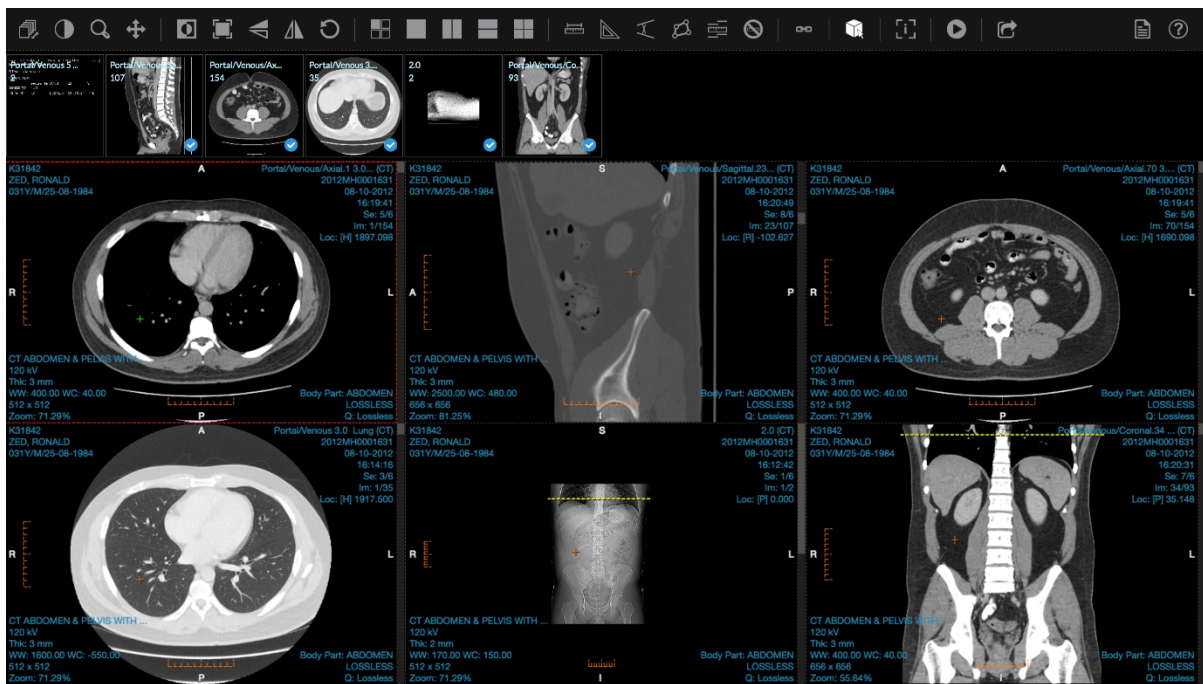


3D Cursor

1. Click on the “3D Cursor” button on the tool bar or context menu.



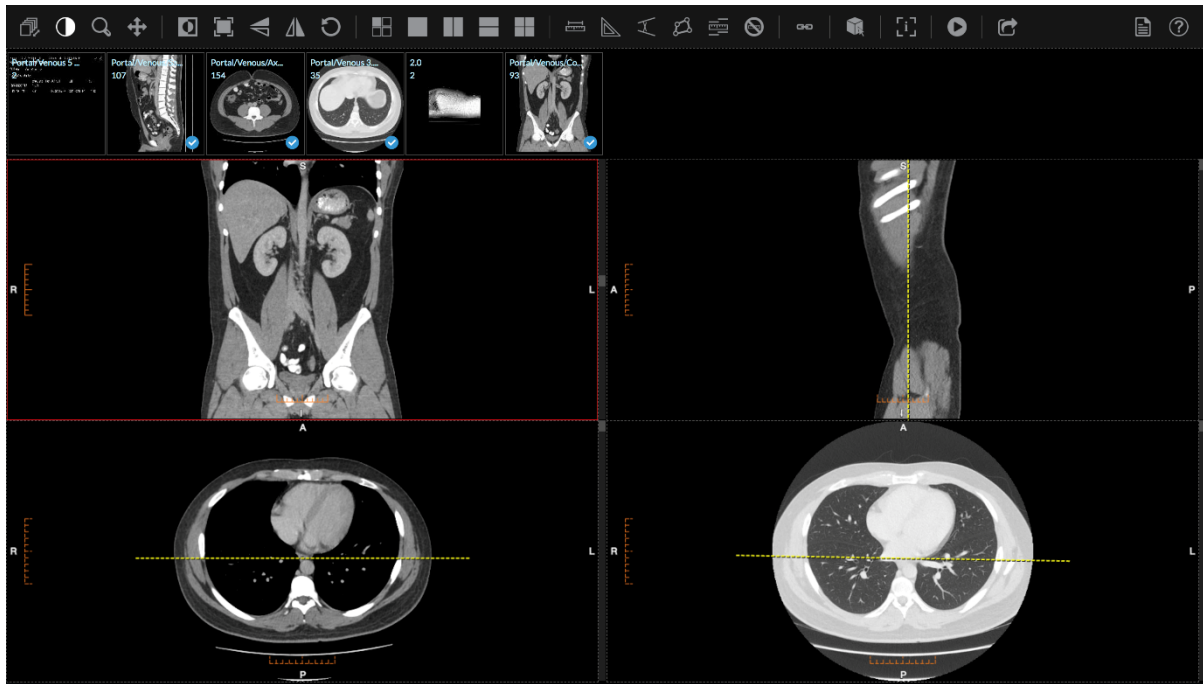
2. Click on the point of interest, the same point will then be marked in orange by a cross hair in the other series and the location will also be updated. The point of interest in the selected display set will be marked with a green cross hair.



Show/Hide Overlay

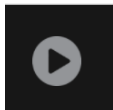
1. Click on the “Show/Hide Overlay” button on the tool bar to show or hide overlays.



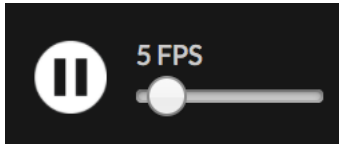


Play Cine

1. Press the “Play” button to play images in a cine loop.



2. Clicking on “Play” will change the button to the Stop icon and will also allow you to specify the FPS.



E-Referrals

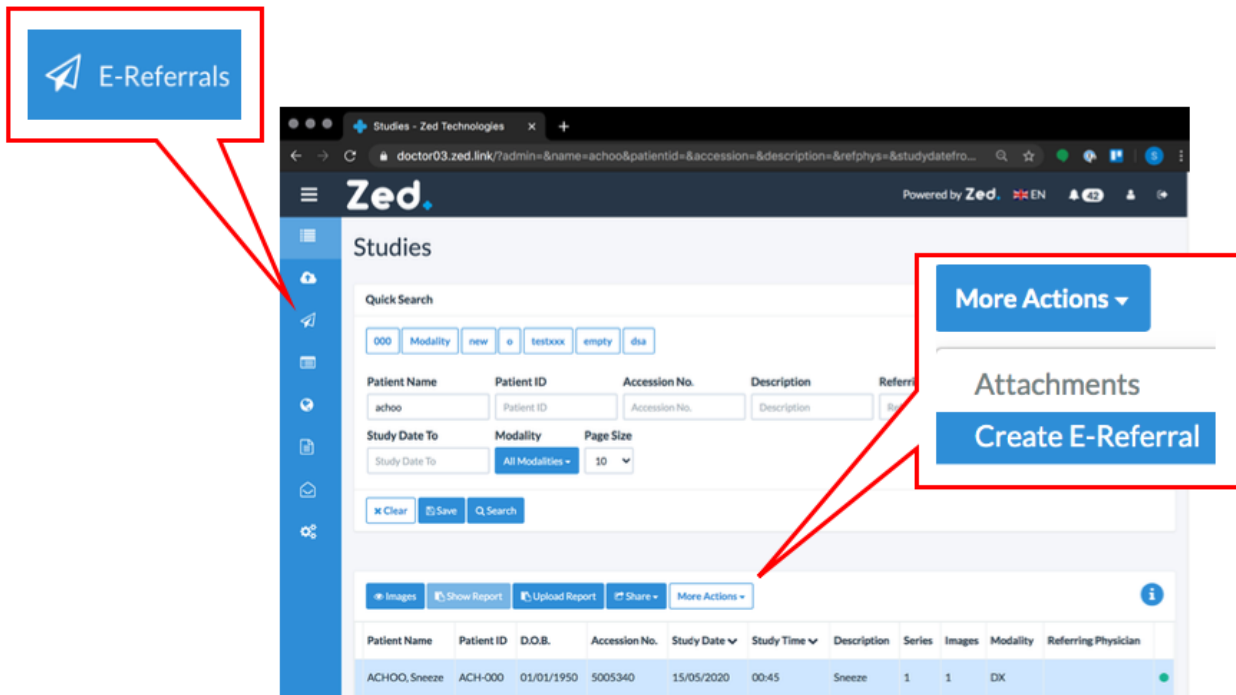
Zed E-Referrals

E-Referrals is a module in Zed Doctor that offers basic electronic ordering of imaging services. Note that E-Referrals may not be provided by your radiology service provider.

When you create an E-Referral, your request will be submitted to the radiology clinic. Bookings staff at the radiology clinic will monitor the *E-Referrals* page, which will include E-Referrals submitted by you. They will contact the patient to book the appointment.

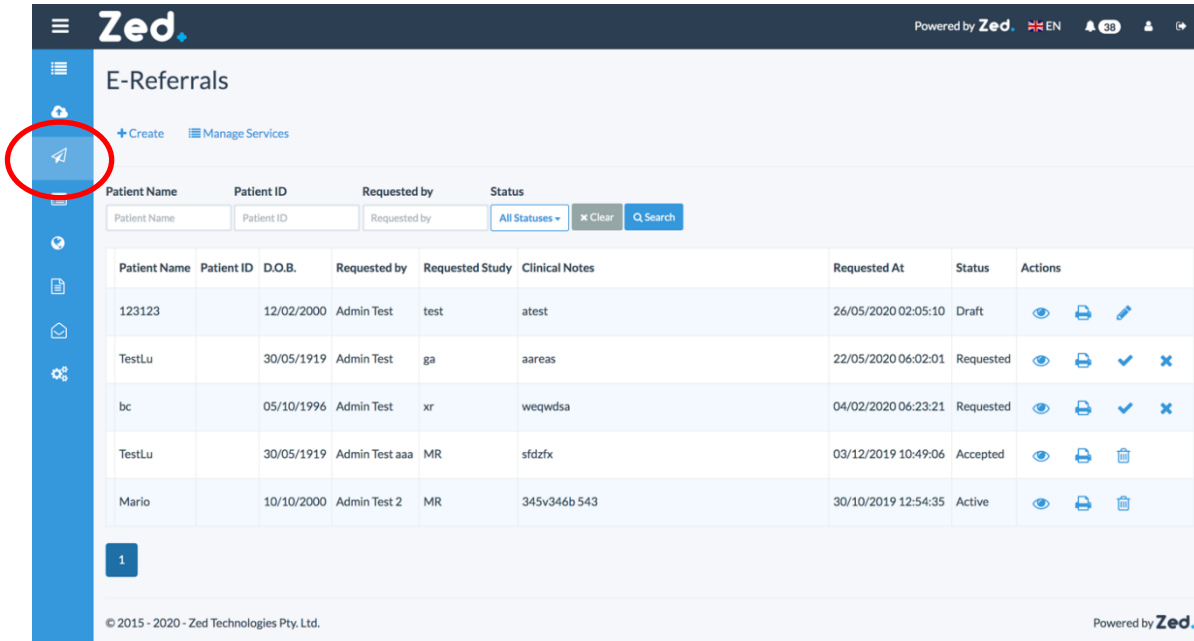
You can access E-Referrals via two options:

- E-Referrals page – for new patients
- Studies page – for patients with an existing record



The E-Referrals Page

On the main menu, click **E-Referrals**. The *E-Referrals* page displays a list of existing referrals and their statuses. You can manage existing E-Referrals or **+ Create** new referrals.






E-Referral Status

Each E-Referral can be described in terms of a status. The following statuses are possible.

Status	Function
Draft	The E-Referral has been created in Zed Link, but remains incomplete and/or has not been submitted to the radiology practice
Requested	The E-Referral has been submitted to the radiology practice, and has not yet been approved
Cancelled	The E-Referral has been cancelled by the requesting clinic
Accepted	The E-referral has been accepted by the radiology practice
Rejected	The E-referral has been rejected by the radiology practice

E-Referral Actions

The E-Referrals page allows you to manage your E-Referrals. When you select an E-Referral, you have several possible options.

Action	Function
 View	Displays the E-Referral details including requester’s details, patient details, any attached documents, and internal notes. When viewing the E-Referral details, you also have the option to print the referral and any attached documents. Print options include physical printer or PDF.
 Print	Provides the option to print the E-Referral and any attached documents. Print options include physical printer or PDF.
 Edit	Displays the Edit E-Referral screen, allowing you to change the E-Referral details <ul style="list-style-type: none"> • Update – to save changes made to the E-Referral • Print – to view the E-Referral and print • Cancel – to abandon any changes and return to the E-Referral page. The status of the E-Referral remains unchanged.
Cancel	Displays the option to cancel the E-Referral. Note that cancelled E-Referrals cannot be uncanceled. You must provide a reason when cancelling an E-Referral. Click cancel to return to the E-Referral page without cancelling the E-Referral.
+ Create	Displays the Create E-Referral page, allowing you to complete and submit the E-Referral. See <i>Creating an E-Referral</i> below.

Creating an E-Referral

Referrers have two options when creating a new referral, depending on whether the patient has a pre-existing record in Zed Doctor.

If the patient already has a record in Zed Doctor:

1. Sign into Zed Doctor account. By default, the *Studies* screen will be displayed.
2. Search for, and select the patient of interest
3. On the *Studies* toolbar, click **More Actions**, and from the drop-down list, select **Create E-Referral**. This will display the *Create E-Referral* screen, with the selected patient details automatically filled.
4. Complete the E-Referral details. Note the following:
 - Mandatory fields are denoted with a red asterisk
 - *Requester Name*, *Phone Number* and primary *Provider Number* will be auto filled if these details are recorded in your account
 - Select correct provider from the drop-down list in the *Provider Number* field
 - Requested service field allows free text input as well as selection from predefined list
 - Optionally attach any supporting documentation (JPEG/JPG or PDF only)
 - Ensure *I hereby certify that I am a health professional* is ticked
5. Click any of the following options:
 - Cancel – to discard the details
 - Print – to print the E-Referral
 - Save – to save the E-Referral in Draft status, and not submit it to the radiology provider
 - Send & Print – to submit the E-Referral to the radiology provider, and print a copy to be retained on file
 - Send – to submit the E-Referral to the radiology provider

If the patient does not have a record in Zed Doctor:

1. Sign into Zed Link using your Zed Doctor account
2. On the menu panel, click **E-Referrals**. This will display the E-Referrals page.
3. At the top of the screen, click **+Create**. This will display the *Create E-Referral* page.
4. Complete the E-Referral details, as described above
5. Click any of the following options, as described above



E-Referral

Patient Details

Patient Name	Robert, Builder		
Patient D.O.B.	12/12/2000	Gender	M
Phone Number	+61413123456	Medicare Number	78945612345-1

Examination Details

Preferred Date/Time	29/04/2020 16:00:00 +00:00
Requested Study	Chest Xray
Clinical Notes	Persistent cough, 4 weeks

Referrer Details

Name	Sam General-Practitioner	Phone Number	+61413186264
Provider Number	111111Y	Other Notes	
Signed By	Sam General-Practitioner (samgp)	Date	28/04/2020 22:00:43 +00:00