

Using CMRR Calendar Dicom (Cornerstone)

Cornerstone via the CMRR Calendar

CMRR website

Log in to Calendar

Dicom tab

Click Browse Naxos Dicom button



View Data Sets by Date

You will be viewing by date. You can easily see the most recent scans at the top of the list.

CMRR DICOM by Date

Browse by Project

Date	Total Size	Institute	Station	Project	
02/26/16					
20160226-ST001-Spine	81M	CMRR 3T-B	MRC35460	Claim	View
02/25/16					
20160225-ST001-XFL_3TB_Phantom_04	78M	CMRR 3T-B	MRC35460	10133	View
20160225-ST001-Ute_160215_K	367M	CMRR 7T/PS	SEPTET	388	View
20160225-ST001-metzger_volunteer7T_CPtest	1.2G	CMRR 7T/AS	7TAS	390	View
20160225-ST001-Feotus_F064_18wk	268M	CMRR 7T/PS	SEPTET	10181	View
20160225-ST001-bylee_subject197_022516	2.7G	CMRR 7T/AS	7TAS	306	View
20160225-ST001-bylee_subject196_022516	2.7G	CMRR 7T/AS	7TAS	306	View
20160225-ST001-ASL_KNEE_VOL_Q2	140M	CMRR 3T-B	MRC35460	10210	View
20160225-ST001-ASL_KNEE_VOL_Q1	124M	CMRR 3T-B	MRC35460	10210	View
20160225-ST001-Arcan_Swine_02	937M	cmrr	ARRAY105	10025	View
02/24/16					
20160224-ST001-MFP92362_01	1.3G	CMRR 3T-B	MRC35460	10068	View
20160224-ST001-LNPI-7436_252	3.8G	CMRR 3T-B	MRC35460	10169	View
20160224-ST001-gosia_AS_C-010	207M	CMRR 7T/AS	7TAS	10194	View

View Data Sets by Project

Click on Browse by Project. You will see unclaimed data sets first, then projects with claimed data alphabetically by PI last name.

CMRR DICOM by project

Browse by Date claimed only and archived

Unclaimed	Total Size	Institute	Station	Last Seen	Project	
20160226-ST001-Spine	81M	CMRR 3T-B	MRC35460	02/26/16		<input type="button" value="Claim"/> <input type="button" value="View"/>
20160221-ST013-PhantomBasti	2.5M	CMRR 3T - B	MRC35460	02/26/16		<input type="button" value="Claim"/> <input type="button" value="View"/>
Adriany, Gregor 10025 10.5T Hardware/Software Maintenance	Total Size	Institute	Station	Last Seen	Project	
20160225-ST001-Arcan_Swine_02	937M	cmrr	ARRAY105	02/26/16	10025	<input type="button" value="View"/>
Bolan, Patrick 10037 Technical Development for Bolan Group - Commitment Pool Funded	Total Size	Institute	Station	Last Seen	Project	
20160209-ST001-McKay_Subject	720M	CMRR 3T-A	TRIO	02/26/16	10037	<input type="button" value="View"/>
20160205-ST001-McKay_phantom	167M	CMRR 3T-A	TRIO	02/26/16	10037	<input type="button" value="View"/>
20160127-ST001-McKay_phantom	355M	CMRR 3T-A	TRIO	02/26/16	10037	<input type="button" value="View"/>
20160122-ST001-McKay_Subject	2.4G	CMRR 3T-A	TRIO	02/26/16	10037	<input type="button" value="View"/>
20160114-ST001-McKay	1.2G	CMRR 3T-A	TRIO	02/26/16	10037	<input type="button" value="View"/>

View by Project, Search/Filter Data Sets

Enter a search term. It will match the project number, project title, PI name, data set name, institute, or station. To clear the search term, click Show All.

CMRR DICOM by project

Browse by Date claimed only and archived

Bolan, Patrick 10037 Technical Development for Bolan Group - Commitment Pool Funded	Total Size	Institute	Station	Project	
20160209-ST001-McKay_Subject	720M	CMRR 3T-A	TRIO	10037	<input type="button" value="View"/>
20160205-ST001-McKay_phantom	167M	CMRR 3T-A	TRIO	10037	<input type="button" value="View"/>
20160127-ST001-McKay_phantom	355M	CMRR 3T-A	TRIO	10037	<input type="button" value="View"/>
20160122-ST001-McKay_Subject	2.4G	CMRR 3T-A	TRIO	10037	<input type="button" value="View"/>
20160114-ST001-McKay	1.2G	CMRR 3T-A	TRIO	10037	<input type="button" value="View"/>
Bolan, Patrick 10085 Magnetic Resonance Spectroscopy of Breast Cancer Using Model-Based Localization	Total Size	Institute	Station	Project	
20160106-ST003-testcsi_Sudhir	311K	CMRR 3T-A	TRIO	10085	<input type="button" value="View"/>
Bolan, Patrick 10252 The Effect of High Intesity Interval Training on Liver Fat and Insulin Sensitivity in Adults with Ob	Total Size	Institute	Station	Project	
20160125-ST001-MR3	884M	CMRR 3T-A	TRIO	10252	<input type="button" value="View"/>

To see archived data, click on "and archived". Records for archived data will show in yellow, along with the date it was last seen on Naxos. If you need archived data recovered, email help@cmrr.umn.edu.

Claim Data Sets for a Project

Data is *unclaimed* when it is sent to Naxos. You need to *claim* your data sets. This assigns them to a project. You can organize/reorganize your data sets under projects as you see fit. To claim a data set for your project, click the Claim button in one of the browse listings or on the view page.

CMRR DICOM by Date

Browse by Project

02/26/16	Total Size	Institute	Station	Project	
20160226-ST001-Spine	81M	CMRR 3T-B	MRC35460	Claim	View
02/25/16	Total Size	Institute	Station	Project	
20160225-ST001-XFL_3TB_Phantom_04	78M	CMRR 3T-B	MRC35460	10133	View
20160225-ST001-Ute_160215_K	367M	CMRR 7T/PS	SEPTET	388	View
20160225-ST001-metzger_volunteer7T_CPtest	1.2G	CMRR 7T/AS	7TAS	390	View

You will be able to claim your data. By default, the browser looks at one of the dicom files and checks the magnet schedule for that day. If it can guess the project based on the time of day and instrument, that will be the default. Or you can claim the data for any of your other projects however you want to organize it. Click save to claim the data set.

CMRR DICOM - claim data for project

Browse by Project Browse by Date

Unclaimed	Institute	Station	Acquired	Time	Last Seen	
20160226-ST001-Spine	CMRR 3T-B	MRC35460	02/26/16	8:08am	02/26/16	View

These Projects were on the 3.0T-B that day

8:00am-9:00am Elvendahl, Wendy 10022. 3T-B Hardware/Software Maintenance

Save

Claim data for My Project

10022 3T-B Hardware/Software Maintenance (Ending 06/30/16)

Save

Once a data set is claimed for a project, project members have more access to the data and non-project members have less access.

Important: Data sets that are wrongly claimed must first be set to *unclaimed* before it can be claimed by another user. If your data was wrongly claimed by another user, contact them directly or email help@cmrr.umn.edu for assistance. CMRR staff may assign your data to a project and unclaimed data may be assigned to an administrative project. **Claim your data as soon as possible after sending it to Naxos.**

View Data Set, Unclaimed

Unclaimed data sets show a limited amount of information. There is a listing of where it was acquired and the names of the series and total size. Click Claim to claim this data set.

CMRR DICOM

Unclaimed	Institute	Station	Last Seen	Project
20160226-ST001-Spine	CMRR 3T-B	MRC35460	2016-02-26	<input type="button" value="Claim"/>

Series in this data set	
Series Name	Series Size
Total	81M
./MR-SE001-localizer	4.9M
./MR-SE002-t2_tse_sag_384	5.7M
./MR-SE003-t1_tirm_dark-fluid_sag_p2	4.4M

View Data Set, Claimed for another Project

For claimed data sets, project members have more access. Non-members see a link to the download page, but no password. There is also a button to change the project but it only explains the process.

CMRR DICOM

Project members can also download and view this data set.

Collaborators can download and view, too.
<https://www.cmrr-umn.edu/dicom/208/download.php>
(Project login and password will display here if you are on this project.)

Metzger, Greg	Institute	Station	Last Seen	Project
208 MRI of the Prostate at 7 Tesla	CMRR 7T/AS	7TAS	2016-02-26	208
20160114-ST001-Prostate7T_046	CMRR 7T/AS	7TAS	2016-02-26	208

Series in this data set	
Series Name	Series Size
Total	3.5M
./MR-SE022-B1map_2TR_40d_16sl_PF0	3.5M

Clicking on the Change Project button, if you are not a member of the project, will display this screen explaining the process. Any of the project members can make the data unclaimed again.

CMRR DICOM - claim data for project

Metzger, Greg					
208 MRI of the Prostate at 7 Tesla	Institute	Station	Acquired	Time	Last Seen
20160114-ST001-Prostate7T_046	CMRR 7T/AS	7TAS	01/14/16	10:01am	02/26/16

You are not a member of this project.
Project members can change the project number or make it unassigned again.
Please contact the PI above or one of the project members.
Or you can contact help@cmrr.umn.edu if this data is yours.

View Data Set, Claimed

For claimed data sets, project members have more access. You can open the Cornerstone Dicom viewer, download the data set as a zip file, and visit a special download page for this project's data. You can also easily email this download link to the data with a collaborator.

CMRR DICOM

Collaborators can download and view, too.
<https://www.cmrr.umn.edu/dicom/10037/download.php>
User Name: project10037 Password: XXXXXXXXXX

Email download info to collaborator:

Bolan, Patrick				
10037 Technical Development for Bolan Group - Commitment Pool Funded	Institute	Station	Last Seen	Project
20160209-ST001-McKay_Subject	CMRR 3T-A	TRIO	2016-02-26	10037

Series in this data set	
Series Name	Series Size
Total	720M
./MR-SE001-localizer	5.0M
./MR-SE002-T1_FL3D_AX_NoFS	98M
./MR-SE003-T13DFL_AX_TEST_FS	19M

Downloading Data Sets

Easier downloads than before. If all you want is the data, you can download directly via the data set view or project download links. You don't need the VPN, to connect to the internal CMRR network, have a CMRR server password, or connect to a Windows/Samba server share.

Collaborators can now download without being registered. You may have a remote collaborator you just want to share data with. No need for them to register with the CMRR. Email them the download link. That is all they need to download your project's data. Here's what they'll see on the project download link.

CMRR Dicom Download Project 10037

DICOM viewer for this project

20160114-ST001-McKay

Download

20160122-ST001-McKay_Subject

Download

20160127-ST001-McKay_phantom

Download

20160205-ST001-McKay_phantom

Download

20160209-ST001-McKay_Subject

Download

Plan ahead for space. Note the total uncompressed size of the download in the series list. Make sure you have enough room on your local disk to download and decompress the data. The file download is zipped, but may still be large. For example, 6gb data set may download as a 3.5gb zip.

Use a fast network. Make sure you are on a fast enough network to download efficiently. For example, a 3.5gb zip may download in about 10 minutes on a 1gb wired campus network connection, but may take hours over a wireless plus VPN connection.

Watch your data sizes. Zip files larger than 2gb may give you errors if you try to unpack them on 32-bit machines. Unpack large archives on 64-bit machines. Contact help@cmrr.umn.edu if you are having trouble.

Dicom Summary of the Data Set

For project members, a dicom summary may also be viewable. This is prepared for each series and can be used to check the data for PHI.

(Note: it takes some time for this to be prepared, especially for large series.)

Important: There should be no PHI entered into the CMRR magnets and no PHI on naxos data sets. The dump of this data is not guaranteed to show all PHI in a data set, but it can be used as a to help double-check to see if someone has accidentally entered PHI. PHI can also be found burned into images by software, in binary data not displayed, in image-equivalent reconstructions of facial features, and other means. ***PHI is your responsibility. Please handle your data with care.***

DICOM Summary of this data set <i>There should be no PHI entered on the magnet or shown below.</i>		
Tags	Data	Description
(0008,0020) DA #8	20160114	Study Date
(0008,0021) DA #8	20160114	Series Date
(0008,0022) DA #8	20160114	Acquisition Date
(0008,0050) SH #0		Accession Number
(0008,0060) CS #2	MR	Modality
(0008,0070) LO #8	SIEMENS	Manufacturer
(0008,0080) LO #10	CMRR 7T/AS	Institution Name
(0008,0081) ST #58	Sixth Street SE 2021,Minneapolis /483542/,Chicago,US,5	
(0008,0090) PN #0		Referring Physician's Name
(0008,1010) SH #4	7TAS	Station Name
(0008,1030) LO #16	metzger^prostate	Study Description
(0008,103E) LO #22	B1map_2TR_40d_16sl_PF0	Series Description
(0008,1040) LO #10	Department	Institutional Department Name
(0008,1050) PN #0		Performing Physician's Name
(0008,1070) PN #8	gmetzger	Operators' Name
(0008,1090) LO #26	Investigational_Device_7T	Manufacturer's Model Name
(0010,0010) PN #14	Prostate7T^046	Patient's Name
(0010,0030) DA #8	19-0101	Patient's Birth Date
(0010,0040) CS #2	M	Patient's Sex
(0010,1010) AS #4	064Y	Patient's Age
(0010,1020) DS #16	1.036091667	Patient's Size
(0010,1030) DS #14	1.6047038048	Patient's Weight
(0018,0020) CS #2	GR	Scanning Sequence
(0018,0021) CS #2	SP	Sequence Variant

Cornerstone Dicom Viewer

Cornerstone is a free, open source dicom viewer library that works entirely in the browser using HTML5 and javascript. It is the basis for over 50 viewer projects.

The Cornerstone Dicom Viewer has been installed and may work well for you. Please try it out!
(Note: The viewer works best on a huge monitor and browser window. You may have issues trying it on a smaller screen.)

On the view dataset or project download page, click on the DICOM Image Viewer button. You will see the study list for this project. There is one line for each of the data sets in the project. On the right hand side, you can see the number of images in each data set.



Cornerstone						Help	About
Study List							
Patient Name	Patient ID	Study Date	Modality	Study Description	# Images		
McKay	16.01.14-15:08:54-STD-1.3.12.2.1107.5.2.43.67055	20160114	MR	Bolan*Breast Development	6150		
McKay*Subject	16.01.22-10:17:20-STD-1.3.12.2.1107.5.2.43.67055	20160122	MR	Bolan*Breast Development	8886		
McKay*phantom	16.01.27-08:53:57-STD-1.3.12.2.1107.5.2.43.67055	20160127	MR	Bolan*Breast Development	1902		
McKay*phantom	16.02.05-16:37:20-STD-1.3.12.2.1107.5.2.43.67055	20160205	MR	Bolan*Breast Development	882		
McKay*Subject	16.02.09-13:53:29-STD-1.3.12.2.1107.5.2.43.67055	20160209	MR	Bolan*Breast Development	2390		

As data sets are claimed for a project, they are added to the cornerstone study lists for your project. (Rebuilding the study list happens on an hourly basis, so there may be some delay before you see your studies here.)

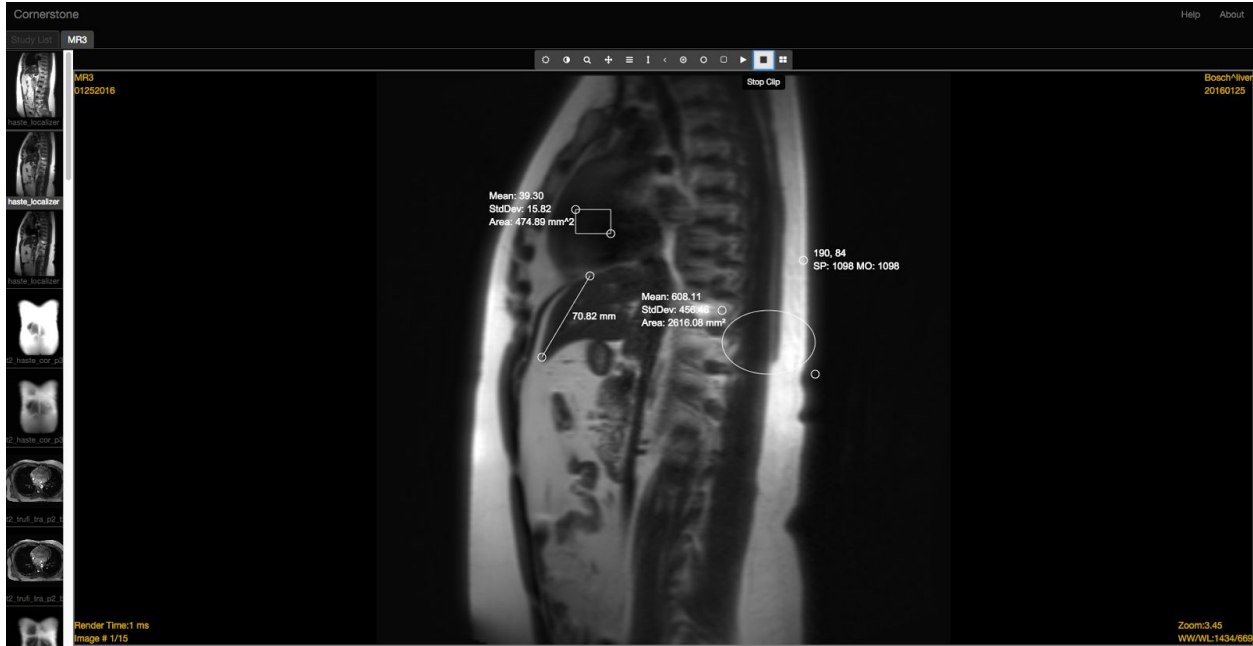
Cornerstone Dicom Viewer Image Window

Click on one of the data sets. You will see each series of the data set on the left, and a main window showing the series.

(Note: The viewer can take some time to load the series thumbnails and images. The larger the series, then longer it takes to download. When you view a series, all the images are downloaded to build the image stack. Please be patient.)

Viewer icons. You can window and level (click and drag, left-right and up-down), invert the images, zoom, pan, enable the mouse wheel to scroll through the image stack, measure length, angles. You can click to set a pixel probe, average an elliptical or rectangular ROI, play the image stack as a clip (and stop it), and compare image series to each other with the window layout button.





You can see the number of images in the stack (lower left) and zoom, window, level (lower right).

The Cornerstone viewer we've installed is their demo software and we may replace it or improve it as time permits. It is a web-based dicom viewer, and may be useful for a preview of your data set. Compared to a local dicom viewer such as Osirix, it will be slower and has limited features.