

Downloading NBIA Images

Downloading the NBIA Data Retriever

After you search for images of interest and add them to your data basket, you can download them.

The most convenient method of downloading is by using the NBIA Data Retriever. You must install the NBIA Data Retriever before you begin downloading. You only have to install it once to use it in future downloading sessions.

Consult the [NBIA Data Retriever FAQ](#) for more information about NBIA Data Retriever versions and usage.

Get the NBIA Data Retriever

Platform	File
Windows	NBIA Data Retriever-4.4.msi
Mac	NBIA Data Retriever in the Mac App Store
Linux (tested on CentOS)	NBIADataRetriever-4.4.1.x86_64.rpm To run this file, type the following at the command prompt: <code>sudo yum -v -y remove NBIADataRetriever-4.4.x86_64.rpm;sudo yum -y install NBIADataRetriever-4.4.1.x86_64.rpm</code>
Linux (tested on Ubuntu)	nbia-data-retriever-4.4.1.deb To run this file, type the following at the command prompt: <code>sudo -S dpkg -r nbia-data-retriever-4.4.deb;sudo -S dpkg -i nbia-data-retriever-4.4.1.deb</code>



The following new and updated features are available in NBIA Data Retriever 4.3, which was [released](#) in April 2021.

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- Any version of the NBIA Data Retriever that is below the minimum version configured on the server or has an unknown version will be prompted to upgrade to the latest version.
- A resume downloading feature is now part of the [command line interface](#) (CLI) of the app.
- The policy window is read-only.

Installing the NBIA Data Retriever

You can install the NBIA Data Retriever on Windows, Mac, or Linux.

To install the NBIA Data Retriever on Windows

1. Download the installer package for Windows using the [Windows link above](#).
2. Save the installer package file to your computer.
3. Install the app by double-clicking the installer package file.
4. Agree to the terms in the License Agreement and click **Install**.
5. When the Setup Wizard ends, click **Finish**.

To install the NBIA Data Retriever on Mac



The Mac version of the NBIA Data Retriever is only available through the iOS App Store. It requires a manifest file to work. You can download the app first or create a manifest file first. If you download the app first, right-click the manifest file and select **Open With Downloader App**. If you create a manifest file first, right-click it and select **Open With App Store**. This installs the app and then opens the manifest file in the app.

1. On your Mac, find the [NBIA Data Retriever on the Mac App Store](#).



The NBIA Data Retriever is free but still requires you to log in to download it. Consider changing your iOS Password Settings so that you can download free software without having to log in separately for it.

2. Click **Get**, then click **Install App**. The NBIA Data Retriever is free.
The app starts downloading to your Mac. When the download is complete, you can open a manifest file with the NBIA Data Retriever.

To install the NBIA Data Retriever on Linux (centOS or Ubuntu)

You must have the sudo privilege on your computer and a sudo password to install the NBIA Data Retriever on CentOS and Ubuntu.

1. Download the installer package for CentOS or Ubuntu using the [links above](#).
2. Save the installer package file to your computer.
3. Open a command window and go to the location where you saved the installer.

Downloading Images Using the NBIA Data Retriever

When you download images you have added to your cart, TCIA provides a list of these images in a manifest file (`manifest-xxx.tcia`). You must have already [installed](#) the NBIA Data Retriever to open this manifest file and download the images.



You can share the manifest file with collaborators, so that they can download the same images that you have added to your cart. Collaborators must also install the NBIA Data Retriever to open the manifest file.

If you want to share a manifest file that includes links to **private** image collections, you must first manually [install the latest NBIA Data Retriever](#). The latest version of the NBIA Data Retriever controls access to private collections. In addition, your collaborators must have the same access to those private collections as you do. Otherwise, your collaborators will not be able to download images from those collections.

To download images using the NBIA Data Retriever

1. [Search](#) for images of interest.
2. [Add](#) those images to your cart.
3. Click the cart icon in the top-right of the page _____.
The cart contents appear.
4. Click _____.
A message appears reminding you to download the NBIA Data Retriever. If you have already downloaded it, click **Do not show this message** again and click _____. Otherwise, click _____ to go to a page with links for downloads for each operating system.
5. Open the `manifest-xxx.tcia` file.
The Data Usage Policy notification appears.
6. Click **Agree**. You must agree to the data usage policy before you can proceed with downloading the data in your cart. Note that this policy is included in the license file accompanying your download.
 - If you have added limited-access series to your cart, the NBIA Data Retriever login window appears. Enter your user name and password and click **Submit**.
 - If all of the series you have added to your cart are public, the NBIA Data Retriever appears, showing the items you added to your cart in the Downloads table.

Notes:

- To verify the integrity of the download, select **File > Checksum Verification** prior to clicking **Start**. This calculates the checksum value of files you are downloading, comparing it with the same data in the database. If a mismatch is detected, an error message will appear, and you can also click the three dots in the Status column for more information. If you do not select Checksum Verification, the NBIA Data Retriever will still verify the download by comparing the file size of the series you are downloading against the database.
- If there are series in your download that have commercial use restrictions, the NBIA Data Retriever displays a message referring you to the license information for these series.
- You can hover your mouse over the Patient ID, Study Instance, and Series Instance columns to reveal the complete corresponding IDs. You can also resize a column by selecting and dragging the column border.
- If you do not want to download any of those items, select them in the Downloads table and then click **Delete**. When you remove an item from the Downloads table, it stays in your cart in the Radiology Portal.



If you close the NBIA Data Retriever in the middle of a download, NBIA Data Retriever remembers the partial download. When you restart the NBIA Data Retriever, choosing the same download directory as before, and click **Start**, you are prompted to specify whether you want to download just the missing series or download all of the series in the original manifest file.

If you choose *Download all*, the existing download folder will be overwritten with all of the series in the original manifest file. If you choose *Download missing series*, only those series you have not previously downloaded appear in the Downloads table in the NBIA Data Retriever window, then download only those series.



NBIA Data Retriever File Naming System

The file naming system used by the NBIA Data Retriever provides a natural ordering of the files within each series. The DICOM files are first ordered by ordinal position of acquisition number and then by ordinal position of instance number. The files are then assigned numbers with the lowest acquisition being 1 and the lowest instance number within that acquisition being 1, separated by a dash. The numbers are incremented by 1 as the next values are encountered. All values are left-padded with zeros to provide for the ordering within the file system.

As an example, a series with 2 acquisition numbers with each acquisition having 42 instance numbers would start with 1-01.dcm for the lowest acquisition number and the lowest instance number in that acquisition. The last file in that acquisition would be 1-42.dcm. Then the second acquisition would start with 2-01.dcm, ending with 2-42.dcm, in that acquisition. For the purposes of ordering, an empty value in either acquisition number or instance number is lower than an file having a value for those number.

7. Click **Browse** to navigate to the destination where you want the images/annotations to be downloaded.
8. Click **Start** to begin the download. You can monitor the status of the full download in the progress bar on top, and for each collection in the Progress column. The Status column indicates when the download for each item is complete.

At any point in the process, you can click the **Pause** and **Resume** buttons to temporarily stop and restart the process.

The downloaded files are stored in a child folder under the destination folder such as Collection Name > Patient ID > part of Study Date + part of Study ID + part of Study Description + last 5 digits of Study Instance UID > part of Series Number + part of Series Description + last 5 digits of Series Instance UID.



Network Error?

If network errors occur during large downloads, the NBIA Data Retriever retries downloading the series in the manifest file the number of times that your administrator has configured. The default is four times.

After the automatic retries, you have the option of retrying just the failed series, saving an error report, which you can share with the [TCI A help desk](#), and exiting.

Downloading Private Data

If you are downloading any private data, you are prompted to log in.

Once you log in, the NBIA Data Retriever appears.

If you do not have permission to access even one of the collections/sites to which the images you have in your manifest file, you are prompted to contact the [TCIA help desk](#) to request permission to access all of the images.

