Ortho Disarticulation

Ortho-Disarticulation – Workflow Overview

Overview:

Orthopedic studies that need disarticulation for joint review can be easily post processed utilizing the musculoskeletal protocol and the sculpt tool. This allows quick separation of the structures for analysis.

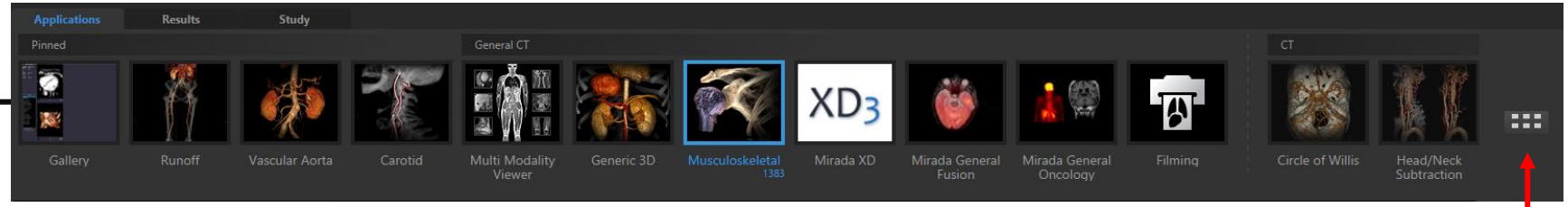
The Steps:

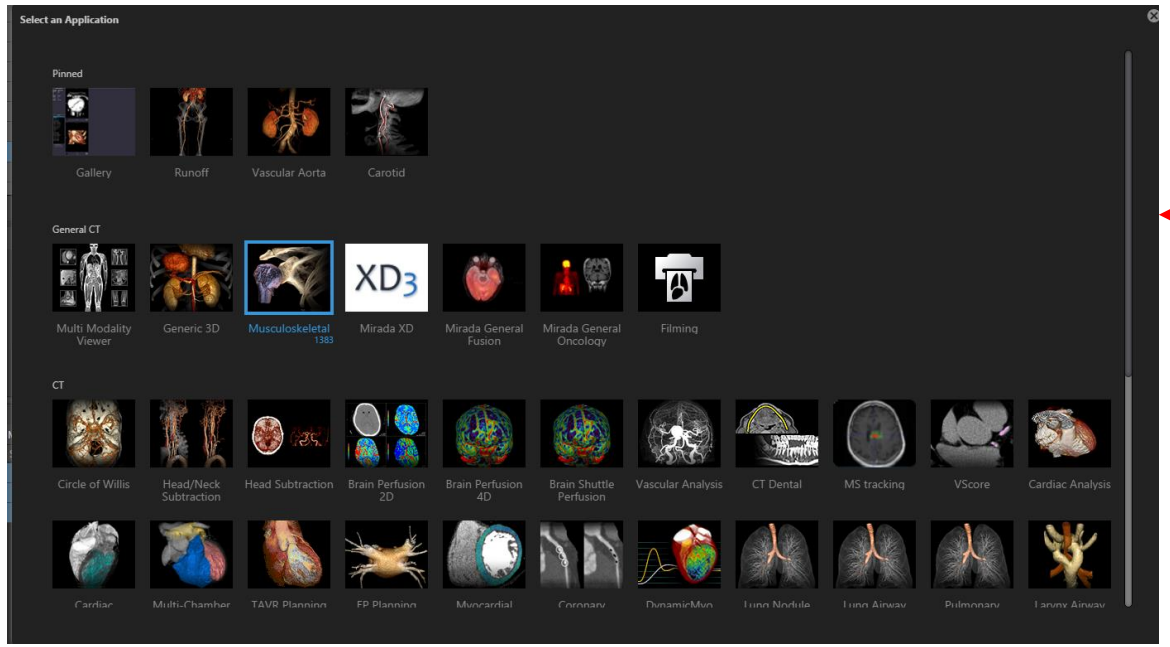
- **Load** the data and select the **Musculoskeletal CT protocol.**
- **Click** 3D Analysis.
- **Select** the Sculpt Tool.
- **Draw** contours around the anatomy to segment.
- **Add to** folder and choose or type a new name.
- **Edit** the MPRs when unwanted anatomy is present.
- **Adjust** transparency of Base anatomy to demonstrate union of anatomy.
- **Create** a snapshot.
- **Create** 3D Batch Rotation of volume rendered image with transparency.
- **Export** the images to a selected destination.

Ortho-Disarticulation – Load Series

Select Patient

Double-click to select the application or single-click on thumbnail and then click Open.



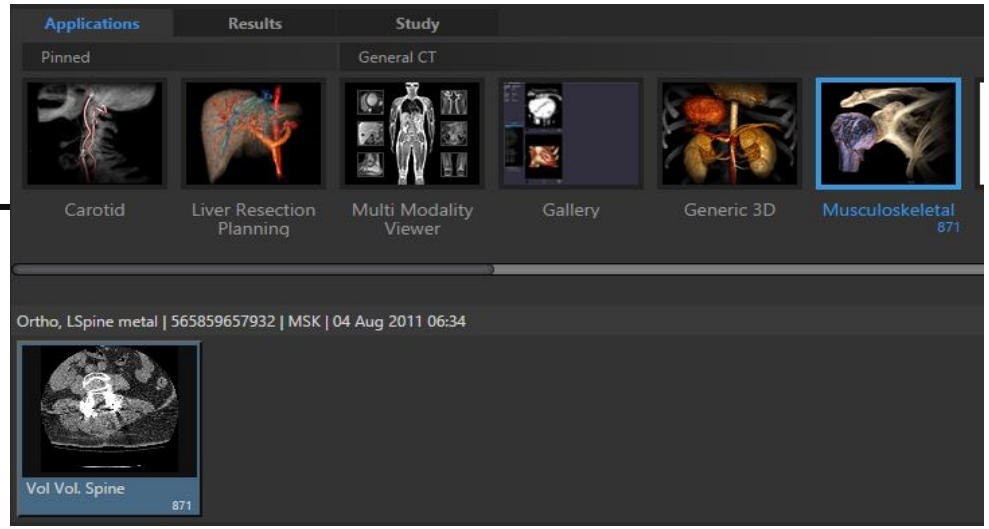


Option: Click on grid to open applications in full window

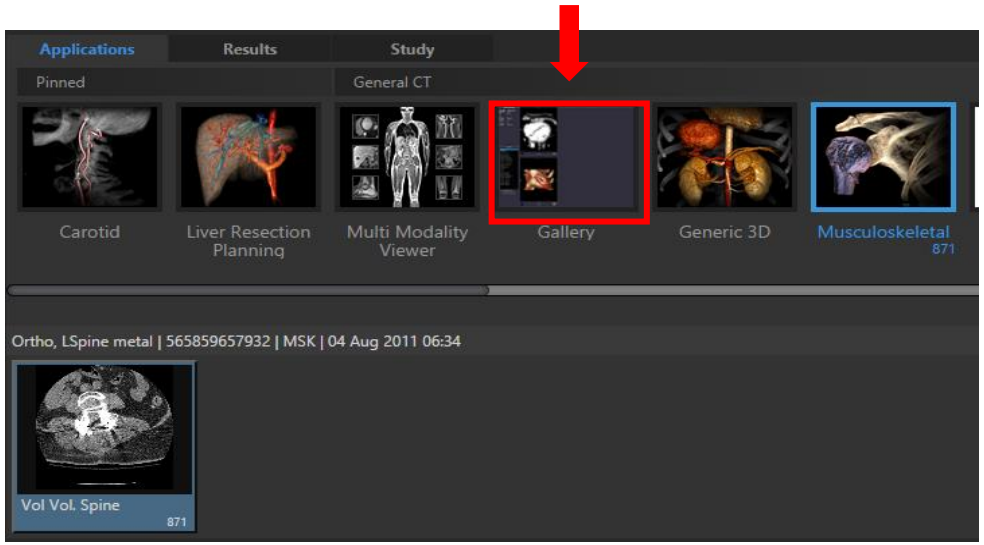
Tip: Right-click on application to pin application. This will place application in first row.

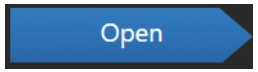
Ortho-Disarticulation – Load Study

The series are automatically located below the application thumbnails.
Select the desired data set and click on **Open**.

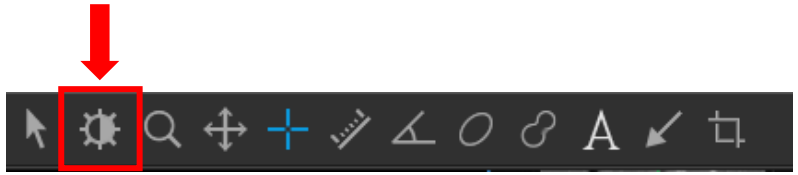


Option: **Click** on Gallery and choose the MSK application.





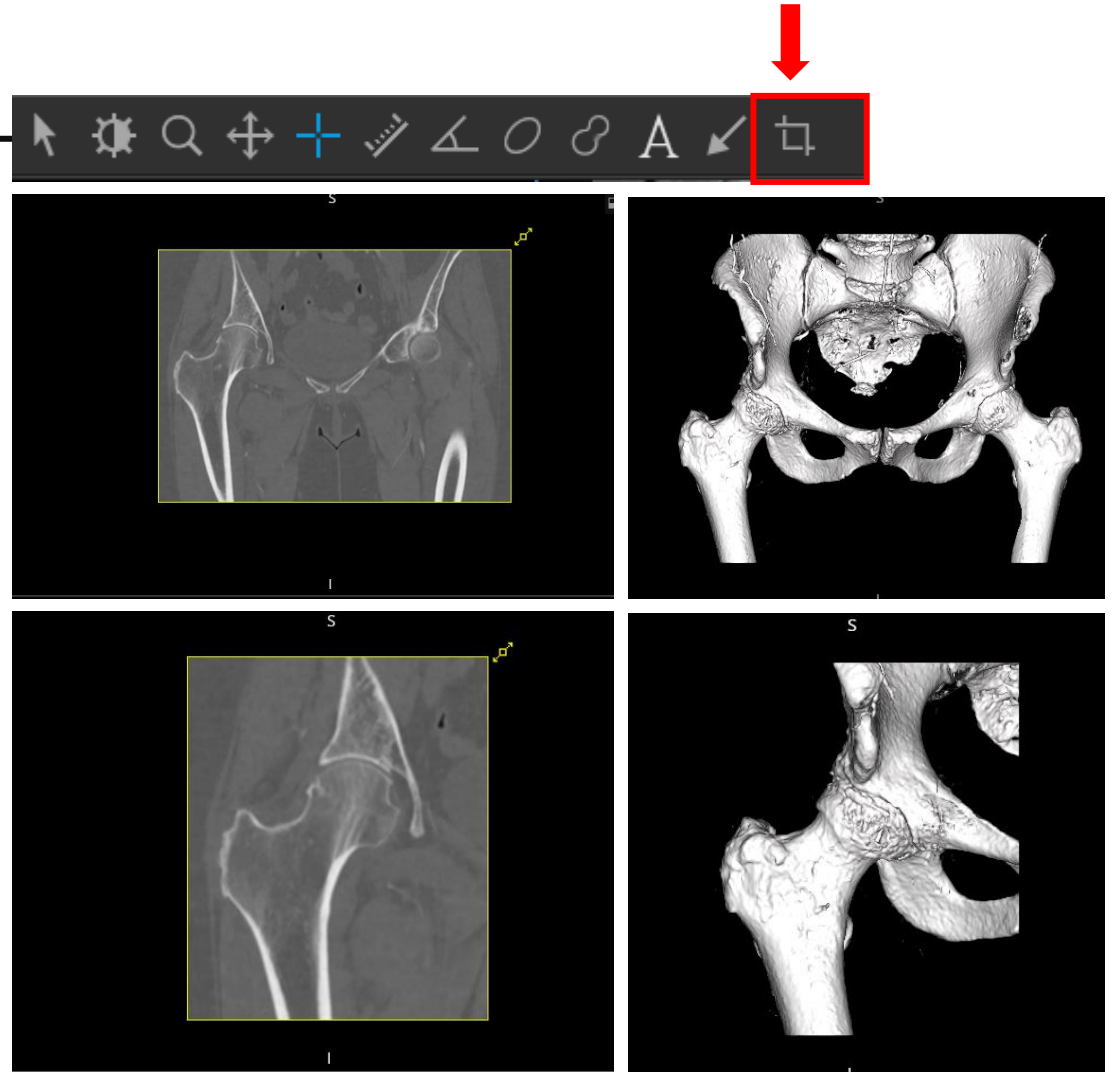
Ortho – Joint Disarticulation



Click on window/level icon. Left click and drag up and to the right in the image to remove soft tissue.

Ortho – Isolate the Joint with Trim Tool

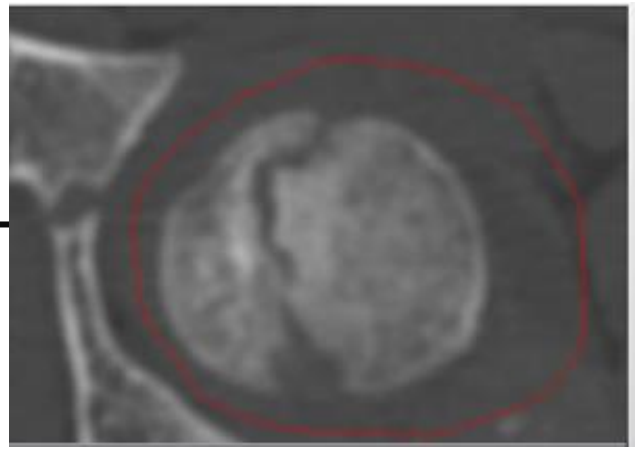
Select the Trim icon on top tool bar. Left-click and drag the yellow lines to trim to area of interest.



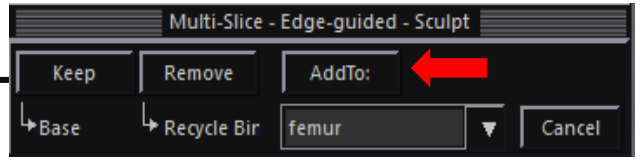
Ortho – Isolate the Joint

Click **Sculpt**

Click and Draw contours around the hip and femur in the 2D image.
Scroll down a few slices and draw again.
Continue this process through the anatomy.



In the Multi-slice box - type in name and click Add To.

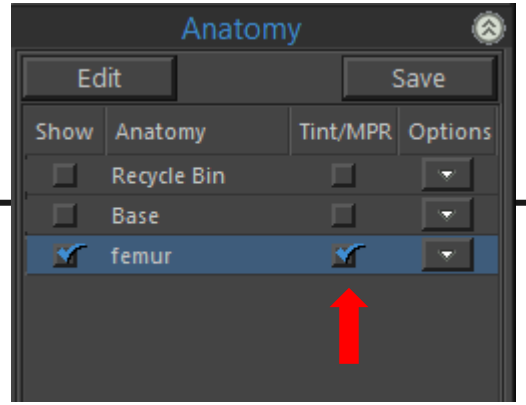


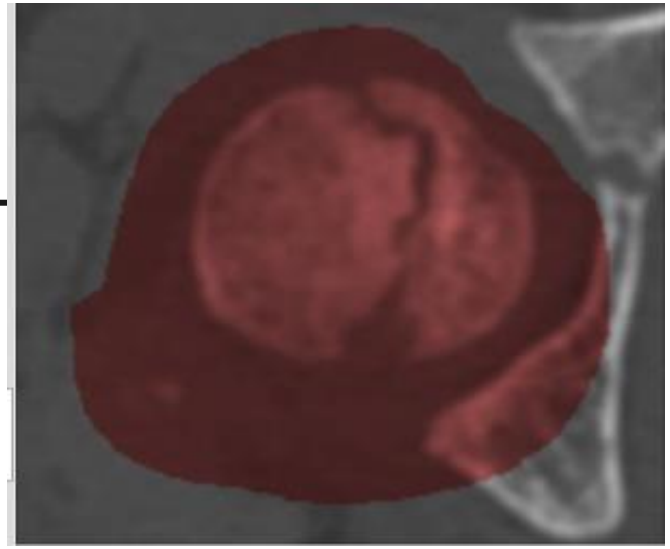
Tip: For best results - **Create** contours as the anatomy changes size, shape, or location. Create contours that are not tight around the anatomy of interest, but not so large that they incorporate other anatomical structures. Vitrea **interpolates** between contours.

Ortho – Edit on MPR 2D

Select Femur

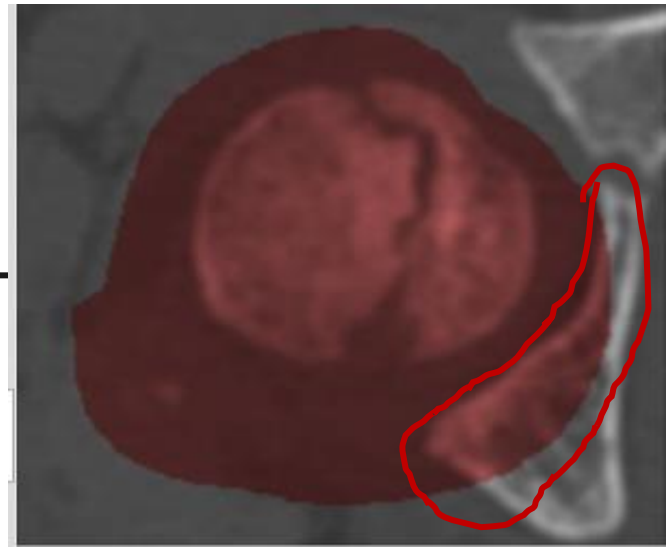
Click Tint/MPR





Scroll through the axial images to examine the regions.

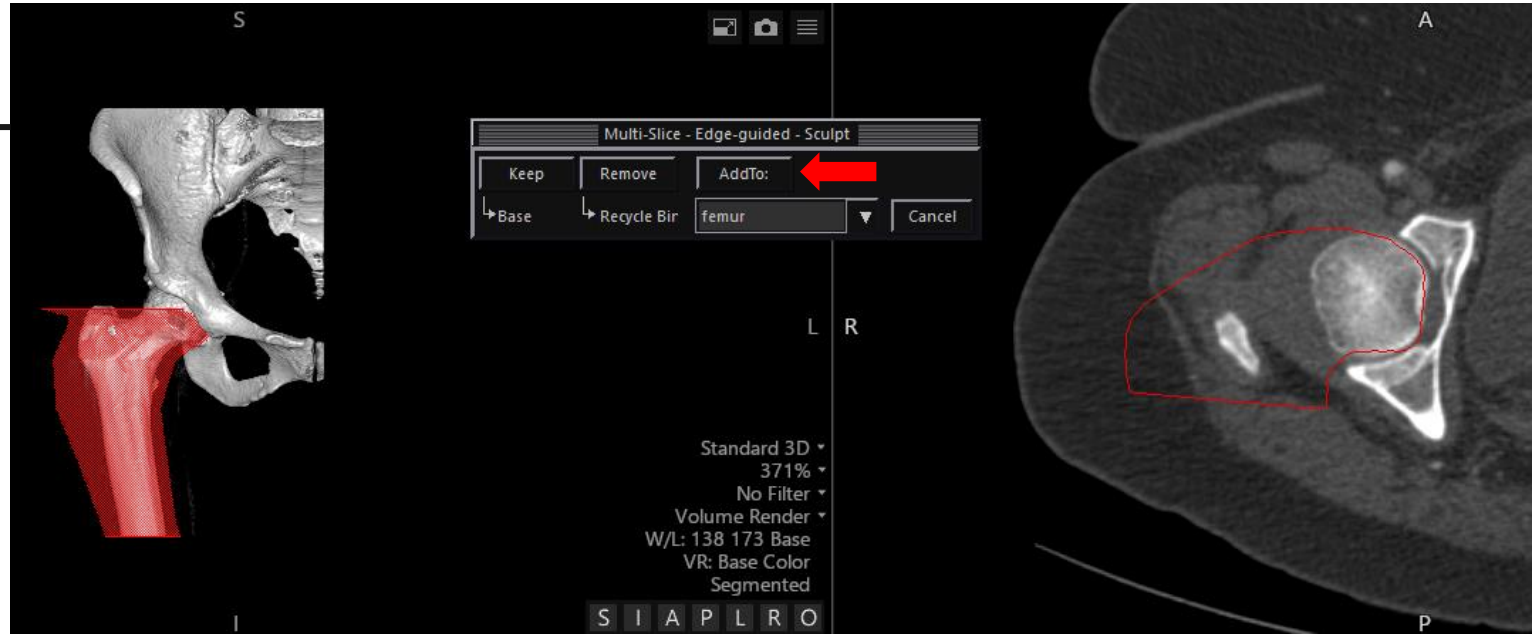
Click **Sculpt.**
Left-click and draw to edit the regions.



Ortho – Volume Rendered View

As you sculpt in 2D it will also display in the 3D view.

In the Multi-slice box - click on Add To for adding to Anatomic section.



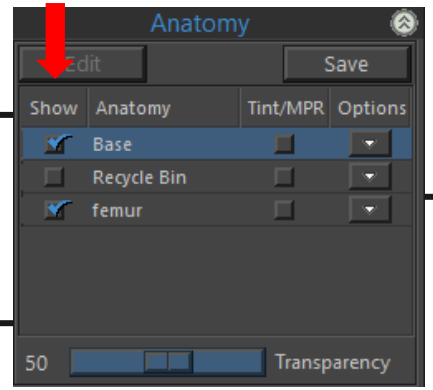
Ortho – Adjust Transparency

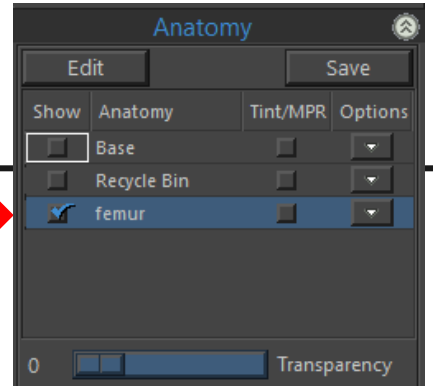
Click **show** in the Base and Femur.

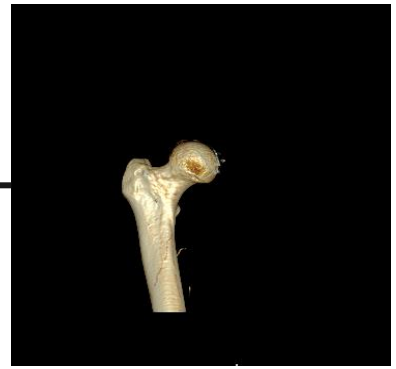
Drag transparency bar to 50.

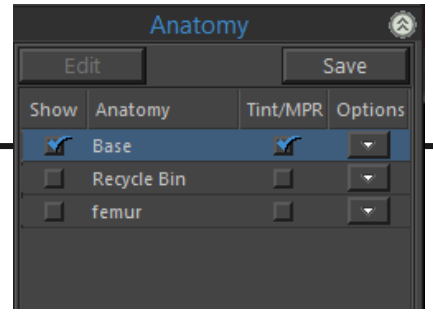
To view femur only - **check** show for the femur.

To view pelvis only - **check** show for the base.









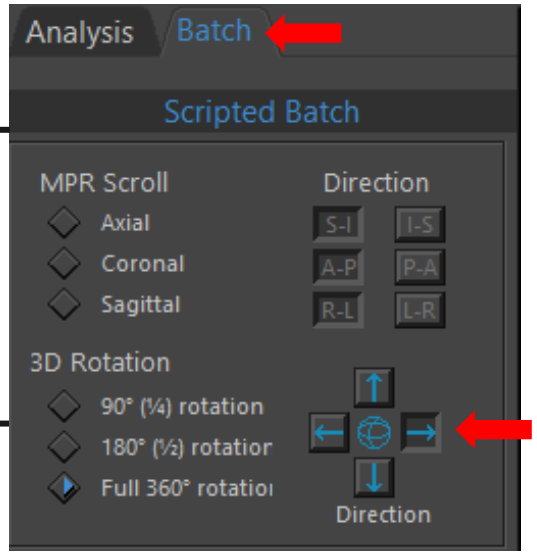
Ortho-Hardware – Batch Rotation

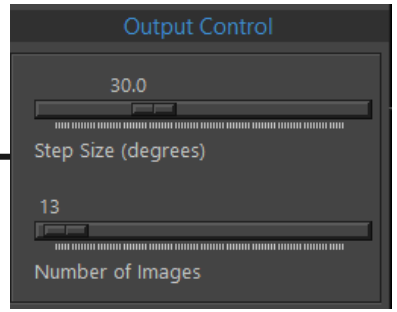
Select Batch to create a 3D Batch rotation.

Select the degree of rotation and choose the direction of the rotation.

Move the slider bar to the desired number of images or degree between images.

Click **Batch** for PACS. Click **Movie** to create an avi file.



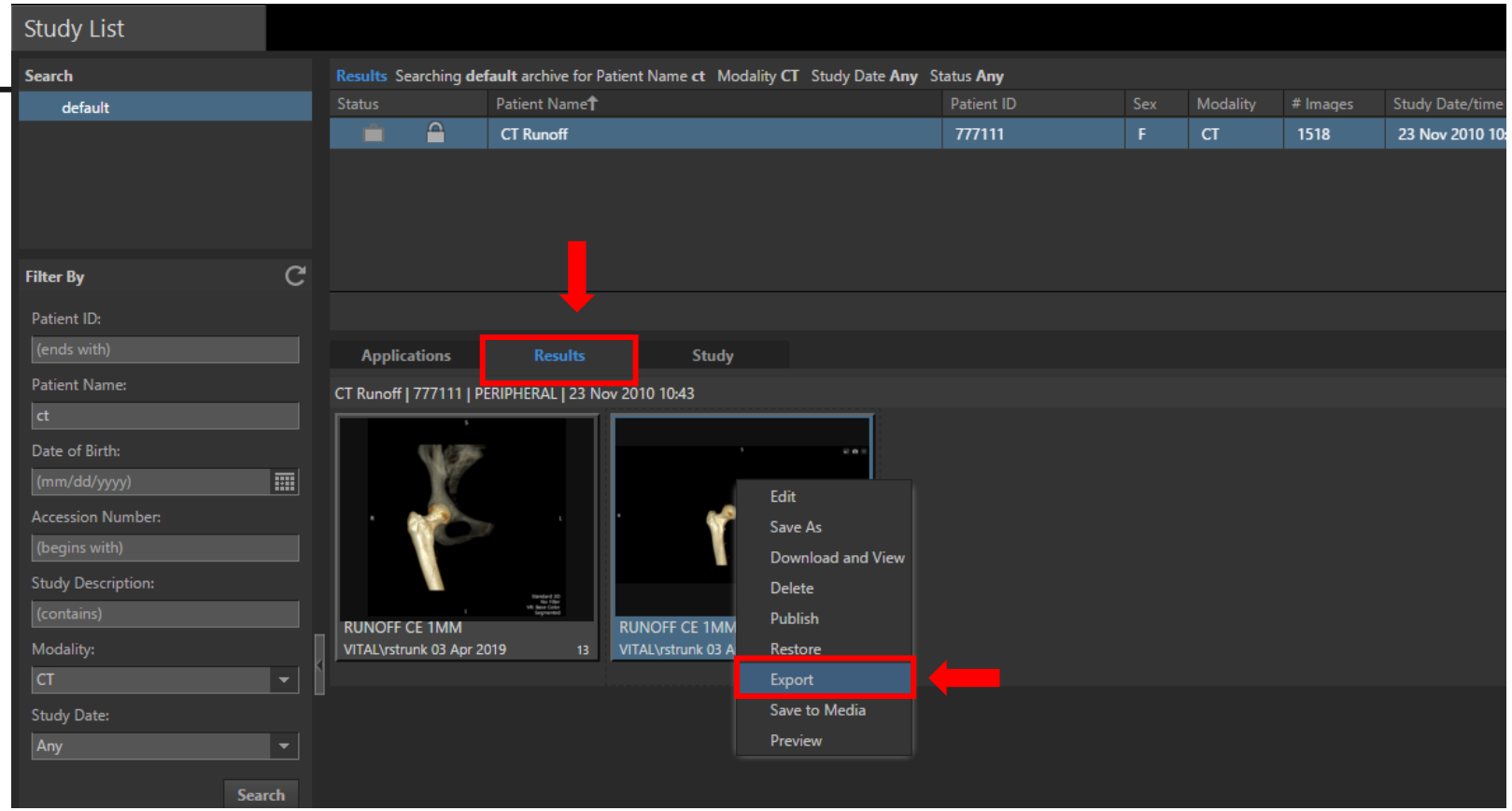


Ortho – Export

From the Study List - Select the **Results Tab.**

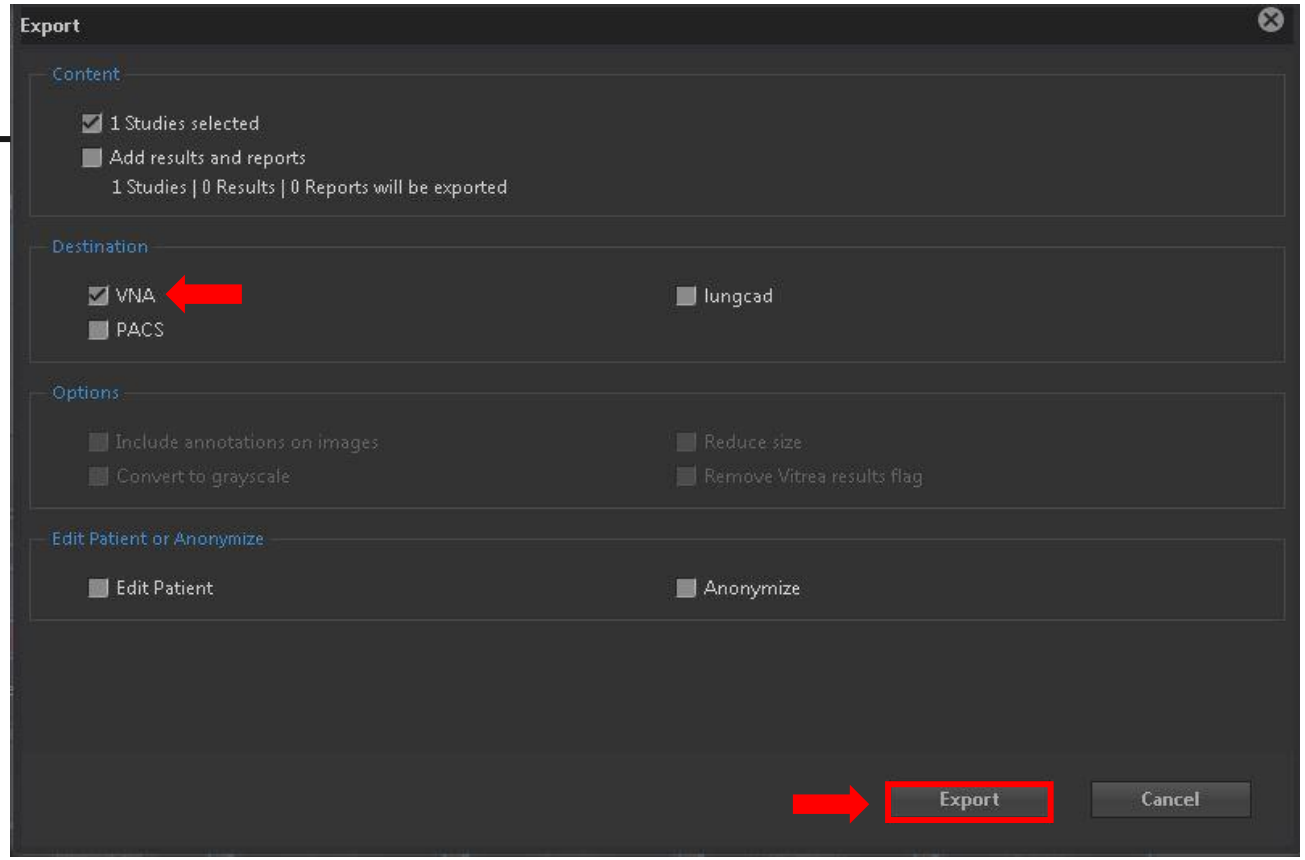
Each Snapshot and Batch is displayed in the Findings tray. Click and hold CTRL will add additional images.

Right mouse click on images to Export to PACS.



Ortho-Hardware – Export

Export locations are listed in the Destination section. **Choose** desired destinations, click Export.



Ortho-Disarticulation – Workflow Summary

Summary:

Using the Musculoskeletal Application or Musculoskeletal Protocol you can:

- **Quickly** separate the axial skeleton from the extremities.
- **Review** joint spaces by removing articulating anatomy.
- **Create** 360-degree Batch rotations of Volume Rendered images for exporting.
- **Create** a 3D semi-transparent Batch Rotation.
- **Capture** images for documentation with Snapshot.
- **Export** to PACS or other destinations.

Note: **Remember to take a snapshot**. A snapshot can be restored at a later date to continue manipulating the data.