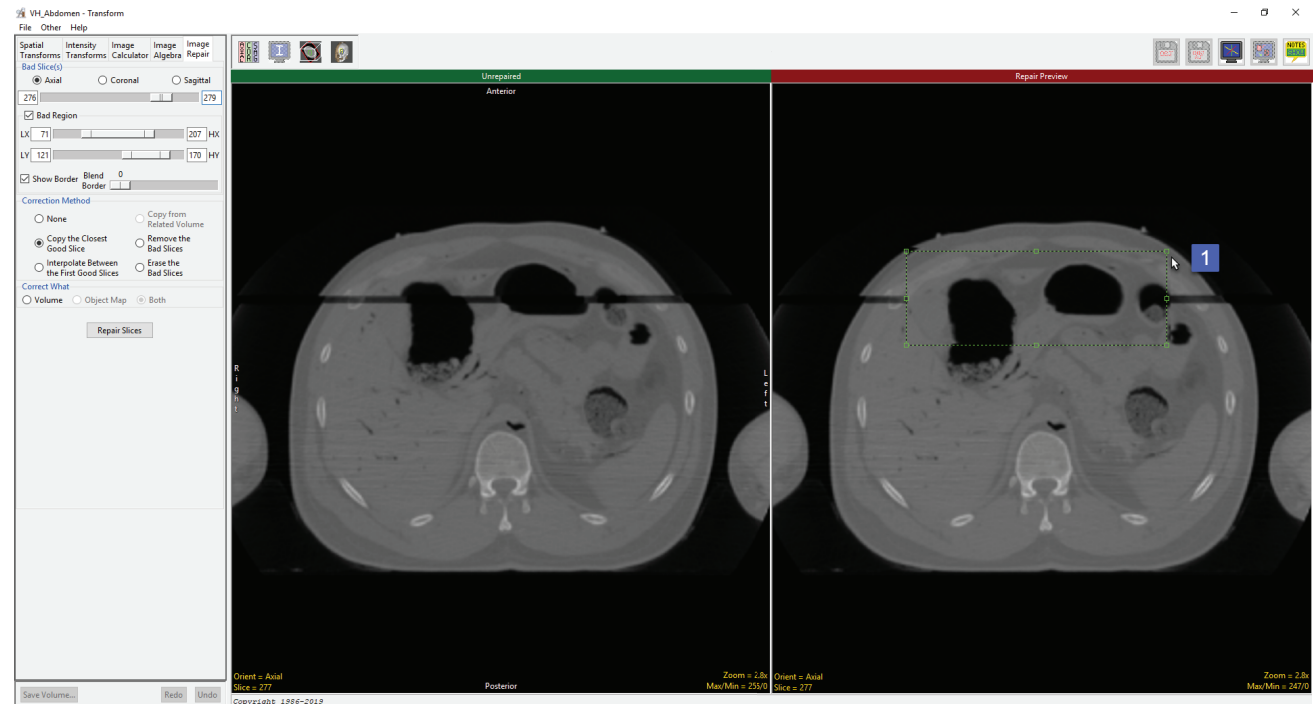


Image Repair

The Image Repair tool includes the ability to designate bad slices or subregions that can be repaired by copying voxels from neighboring slices, interpolating across neighboring slices, copying from a related volume or removing bad regions from the volume. Subregion repair includes the ability to blend voxels at the edge of the region. Available options are as follows:

Bad Slice(s): This option allows users to specify a range of bad slices or an area of corrupt data.



Axial, Coronal, Sagittal: Allows a range of slices to be selected in the Axial, Coronal or Sagittal orientations.

Slider: The Bad Slices(s) double-ended slider allows users to specify a range of bad slices in the selected orientation.

Bad Region: Enables the specification of a region in the image data to repair. The region is defined by the following options:

- LX: Specifies the lowest X coordinate of the bad region.
- HX: Specifies the highest X coordinate of the bad region.
- LY: Specifies the lowest Y coordinate of the bad region.
- HY: Specifies the highest Y coordinate of the bad region.

Alternately, users can use the green selection area shown on the Repair Region image to define the region to repair [1].

Image Repair Options

Bad Region (continued)

- **Show Border:** Displays a rectangular box around the region defined by the Bad Region X and Y parameters.
- **Blend Border:** The blend border options allows for the specification of a region around the bad region where the corrected image information is slowly blended with the current image intensities. Move the slider button to adjust the Blend border size. Set this value to zero if no transition area is desired.

Correction Method: Allows users to select an appropriate correction methodology. Select from the following options:

- **None:** No correction will occur.
- **Copy the Closest Good Slice:** Copies all the pixel values from the closet non-bad image.
- **Interpolate Between the First Good Slice:** Use Linear interpolation to calculate a replacement slice for each bad slice. The value of each voxel is computed using information for each of the good slices on each side of the bad slices. The percentage of each image uses is calculated based on the distance from the bad slice to each good slice.
- **Copy from Related Volume:** Only available if a related volume is loaded. This option copies all pixel values from the related volume. Commonly used with a mirrored and registered copy of the input volume to symmetric features in regions.
- **Remove the Bad slices:** The slices are removed and the slices after the last bad slice are shifted to the area removed. This option leave blanks in the last few images for the selected orientation.
- **Erase the Bad Slices:** The selected range of bad slices are just set to the minimum data type value.

Correct What: The correct what options allows user to correct the original image data (Volume), a loaded object map (Object Map), or both the original image data and object map (Both).

Repair Slices: Applies the selected correction method to range of the bad slices, or regions within those slices.

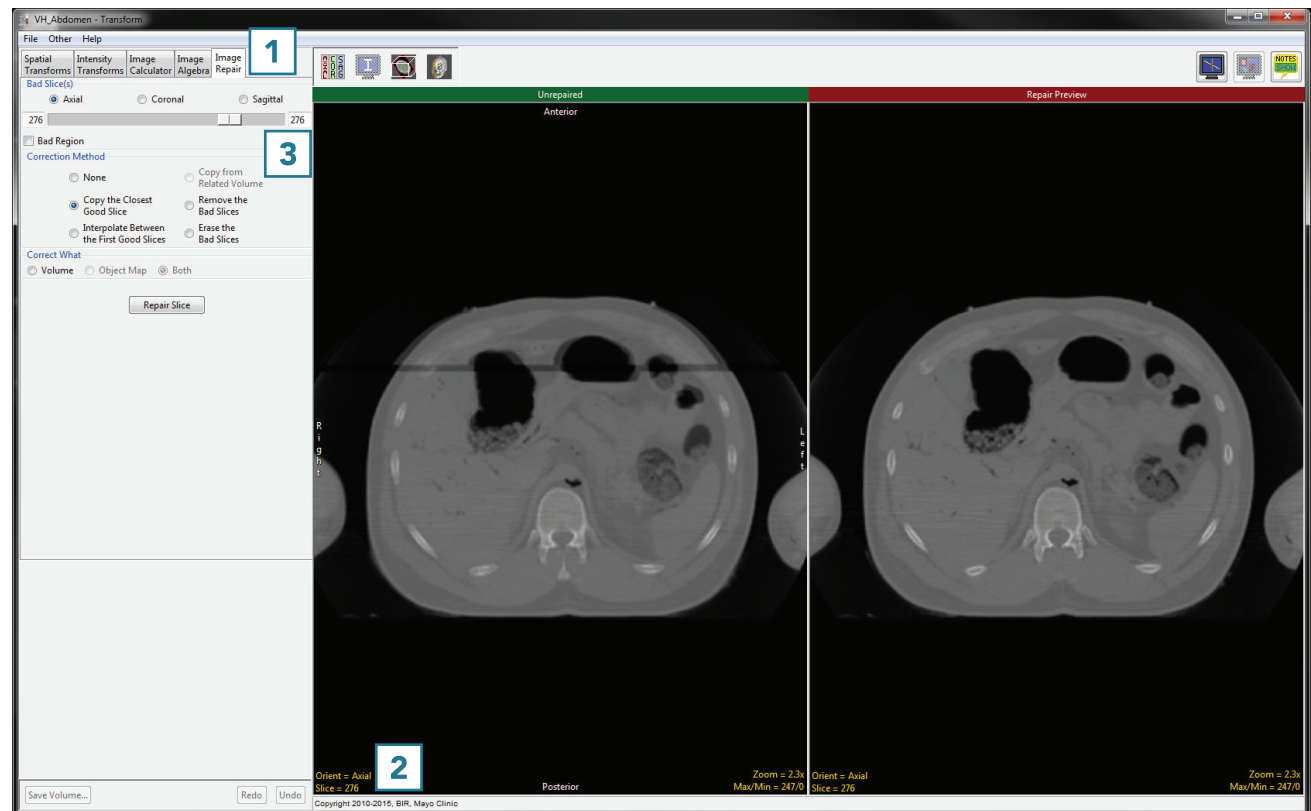
Repairing an Image

Here we will repair an image that has a series of corrupt slices.

Repairing an Image

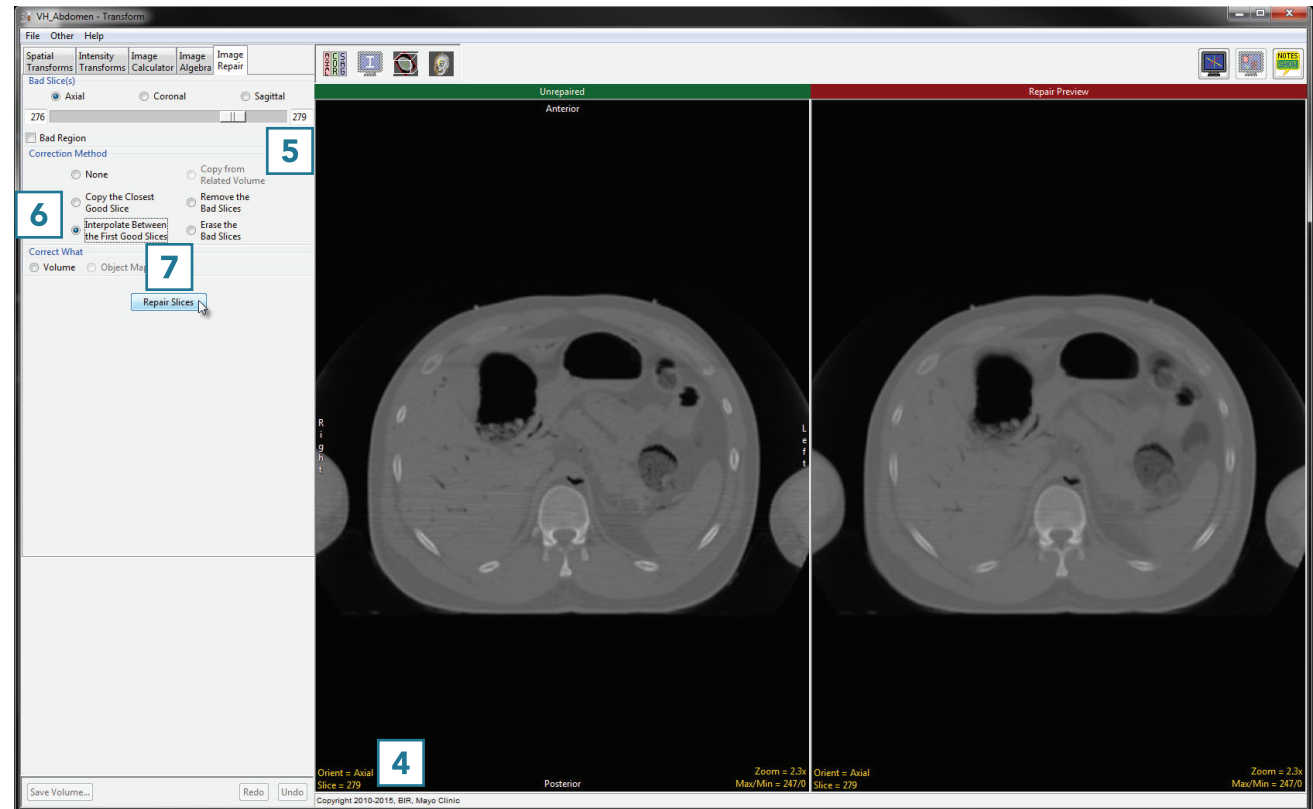
To follow along, download the VH_Abdomen data set from analyzedirect.com/data and load into Analyze using Input/Output.

- Open Transform and navigate to Image Repair [1].
- Navigate to the first corrupt slice in the data set, which for this example is slice 276 [2].
- Move the lower limit of the bad slices slider bar to 276 [3].



Repairing an Image (continued)

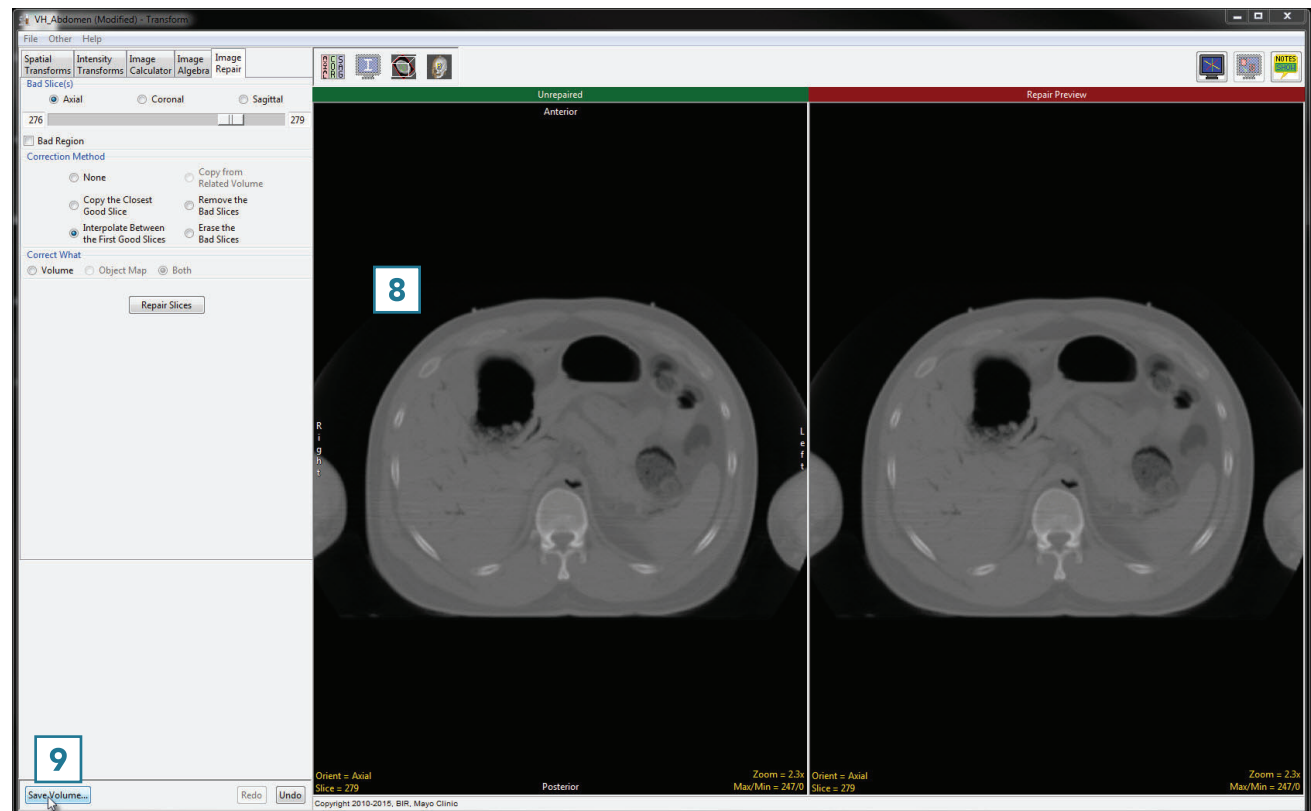
- Navigate to the last corrupt slice in the data set, which for this example is slice 279 [4].
- Move the upper limit of the bad slices slider bar to 279 [5].
- Set the correction method to Interpolate Between the First Good Slices [6].
- Click Repair Slices [7] to apply the correction.



Repairing an Image (continued)

Note that the repaired version now appears on the left side of the window [8]

- Click Save Volume [9] to save the corrected data set.



- In the Save Transformed window, choose to create a new workspace volume [10] and rename [11]
- Click Save Volume [12].
- Close Transform.

