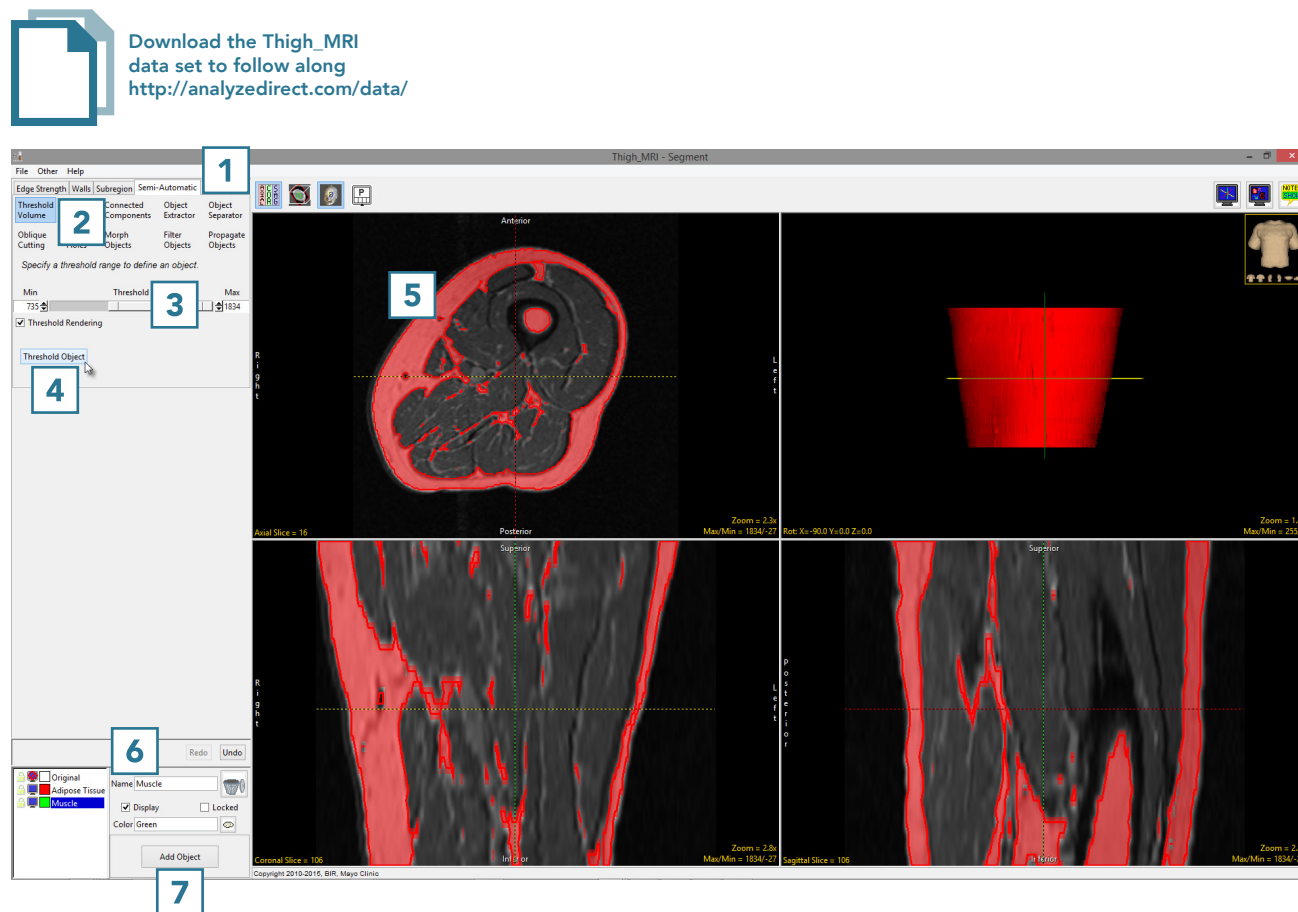


## 14. Using Fill Holes for Segmentation

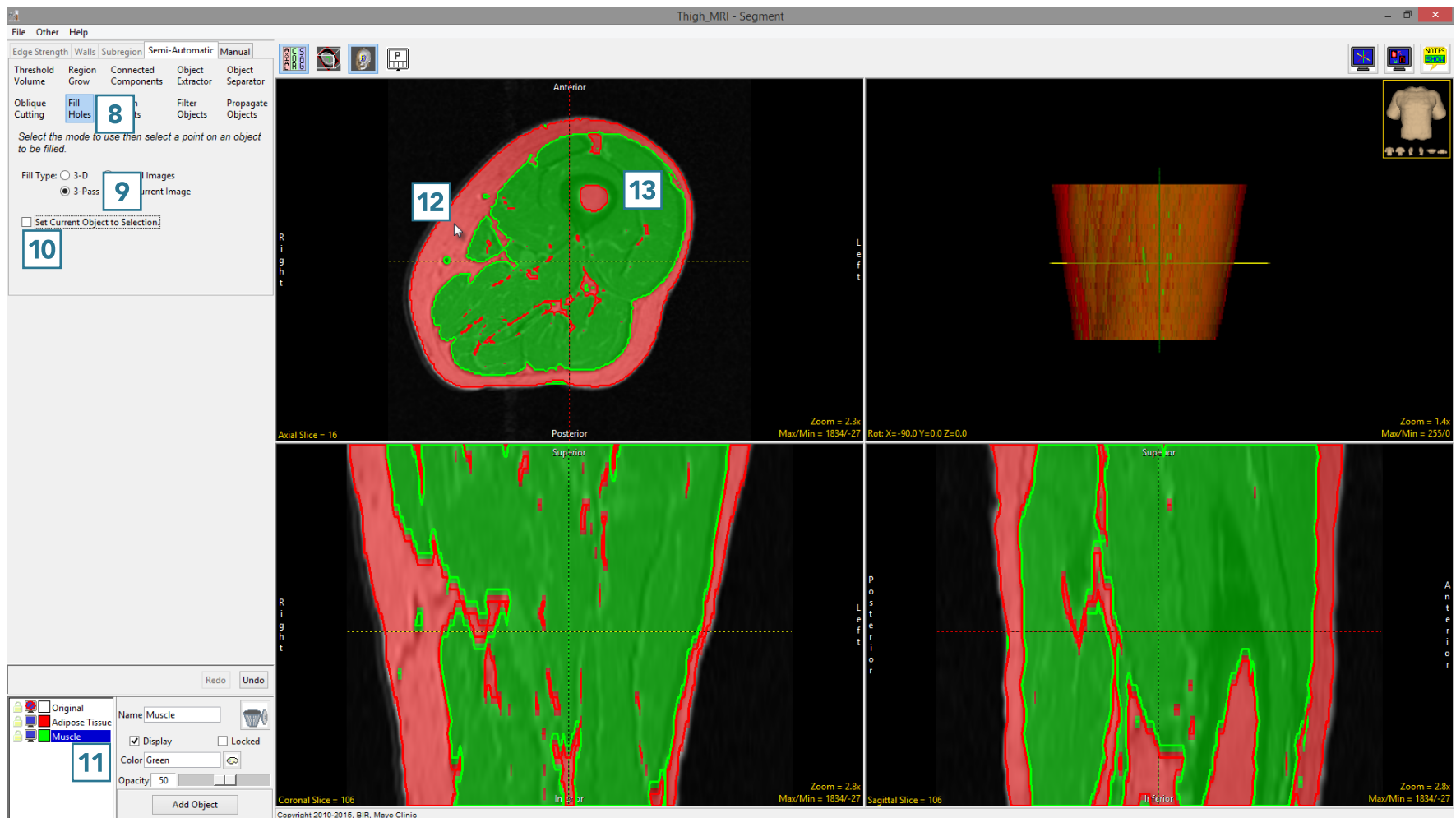
The fill holes option can also be used as a strategy to segment multiple objects. In this example we isolate the adipose tissue via threshold-based segmentation from a water-suppressed MRI data set. We will then use fill holes to create the muscle object and the intramuscular adipose tissue object.

- Select the data set and open Segment.
- Select Semi-Automatic **1** and choose Threshold Volume. **2**
- Set a threshold range **3** to globally segment the adipose tissue and click Threshold Object. **4**
- The adipose tissue will be segmented. **5**
- Rename the object, **6** add a new object **7** and name the object Muscle.





- Select Fill Holes **8** and set the Fill Type to 3-Pass. **9**
- Uncheck the Set Current Object to Selection **10** checkbox.
- Ensure that the Muscle object is selected **11** and click on the Adipose Tissue object. **12** The voxels inside the Adipose Tissue object currently assigned to the Original object will be reassigned to the Muscle object. **13**





- To assign the voxels labeled as Adipose Tissue within the Muscle object to Intramuscular Adipose Tissue (IMAT).
- Add a new object **14** and name it IMAT.
- Click on the Muscle object to fill it. **15** The voxels inside the Muscle object currently assigned to the Adipose Tissue object will be filled and assigned to the IMAT object. **16**
- Select File > Save Object Map to save your work.

