

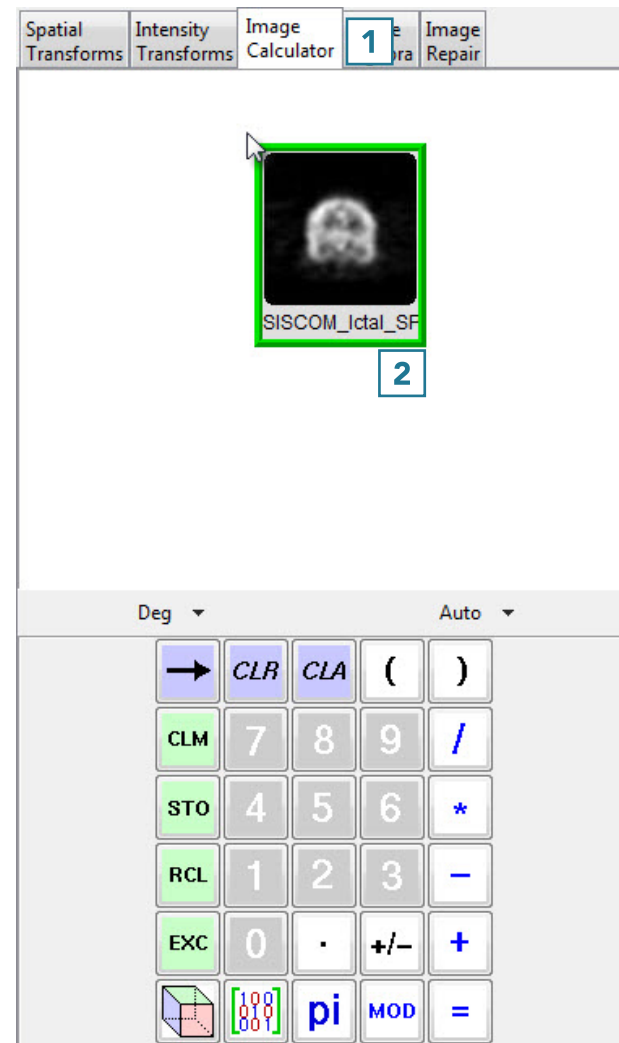
## Creating a Difference Map

A good example of Image Calculator use is in the creation of a difference map between ictal and interictal SPECT data sets, typically acquired in the study of epileptic seizures. These difference maps can be used to study regions of hypo- and hyperperfusion.

To follow along, download the SISCOM\_Ictal\_SPECT\_Nrm and SISCOM\_Interictal\_SPECT\_Coregistered\_Nrm data sets from [analyzedirect.com/data](http://analyzedirect.com/data) and load into Analyze using Input/Output.

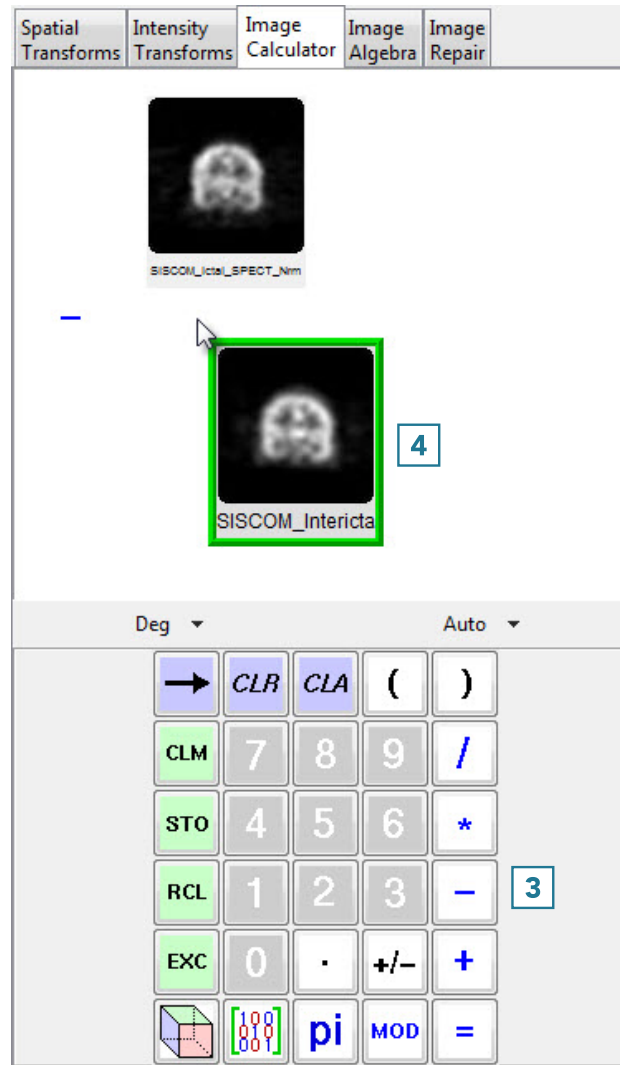
The SPECT data inputs for this exercise have already been registered and normalized so that they can be compared.

- Open Transform and navigate to Image Calculator [1].
- Drag and drop the ictal data set into the calculator window [2].

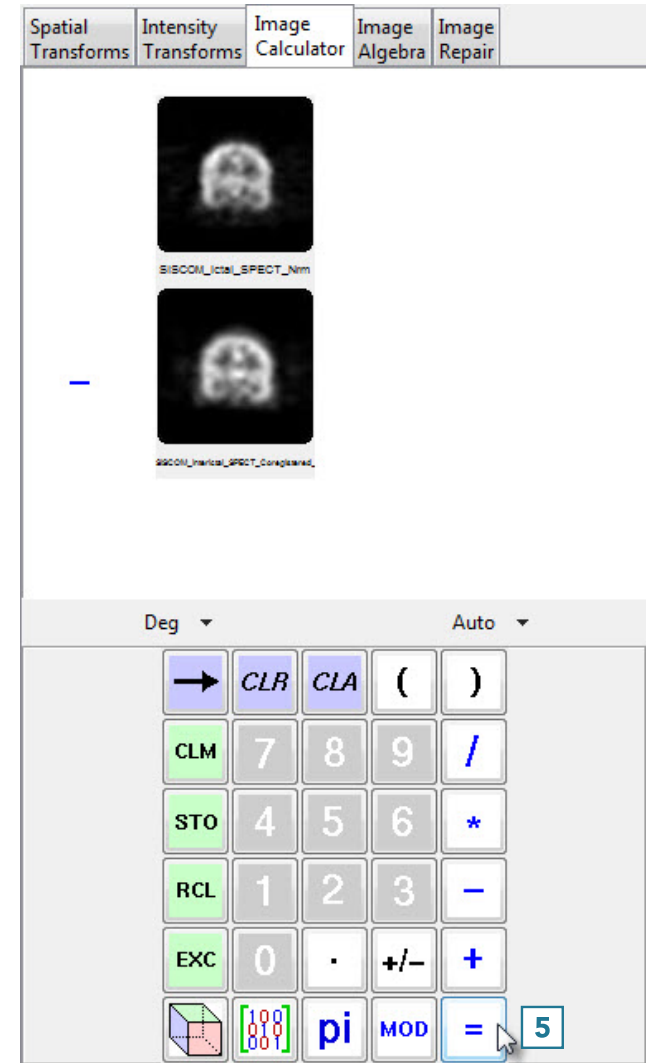


## Creating a Difference Map (continued)

- Press the minus key [3].
- Drag and drop the interictal data set into the calculator window [4].



- Press the equals key [5] to complete the subtraction.



## Creating a Difference Map (continued)

- Click Save Volume [6] to save the difference map.
- In the Save Transformed window, choose to create a new workspace volume [7] and rename [8].
- Click Save Volume [9].
- Close Transform.

The difference map is now saved to the Analyze Workspace and is available for use in other modules.

