In this brief manual you will found 5 simple steps to run the 2 TCM which it is in its beta version

1) **Load Data:** The first step is to load Data. At this link http://www.uimcimes.es/QModeling_help/html/load_data.html it is described how to proceed.

For the 2-tissue compartmental model case, the mask with the ROIs must contain one ROI for the plasma activity data (*reference region)* and one or more ROIs representing specific-uptake areas for the preprocessing step (*region of interest)*

2) **Preprocessing:** Once the "2TCM: Two-tissue compartmental model" option is selected from the dropdown list, a new window will be opened in order to configure the preprocessing step.

Here, it is possible to load the TAC of whole blood activity for spillover correction (see Figure 1).

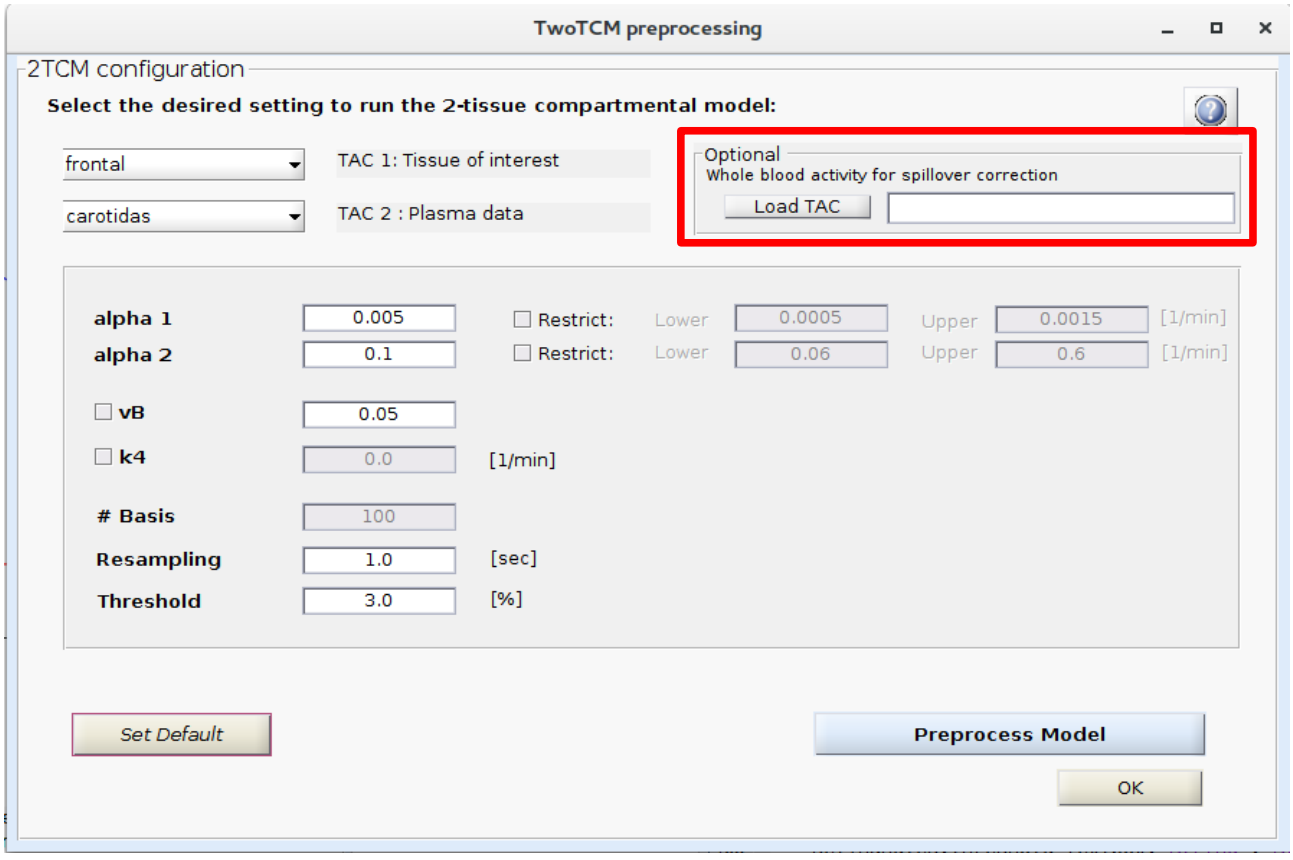

Figure 1

By default, the showed values for *alpha 1*, *alpha 2*, *vB* and *k4* parameters will be used. If we want to fit *vB* or *k4*, just click on the corresponding checkbox (see Figure 2)

Instead of fix *alpha 1* or *alpha 2*, a logarithmic range for this two parameters could be obtain selecting the *Restrict* checkboxes. The number of elements of each range will depend on the number of basis functions, *# Basis* (see Figure 3).

The *Resampling* and *Threshold* parameters have the same functionality as in the SRTM model. Thus, more information about these parameters can be found at http://www.uimcimes.es/QModeling_help/html/help_SRTM.html#4

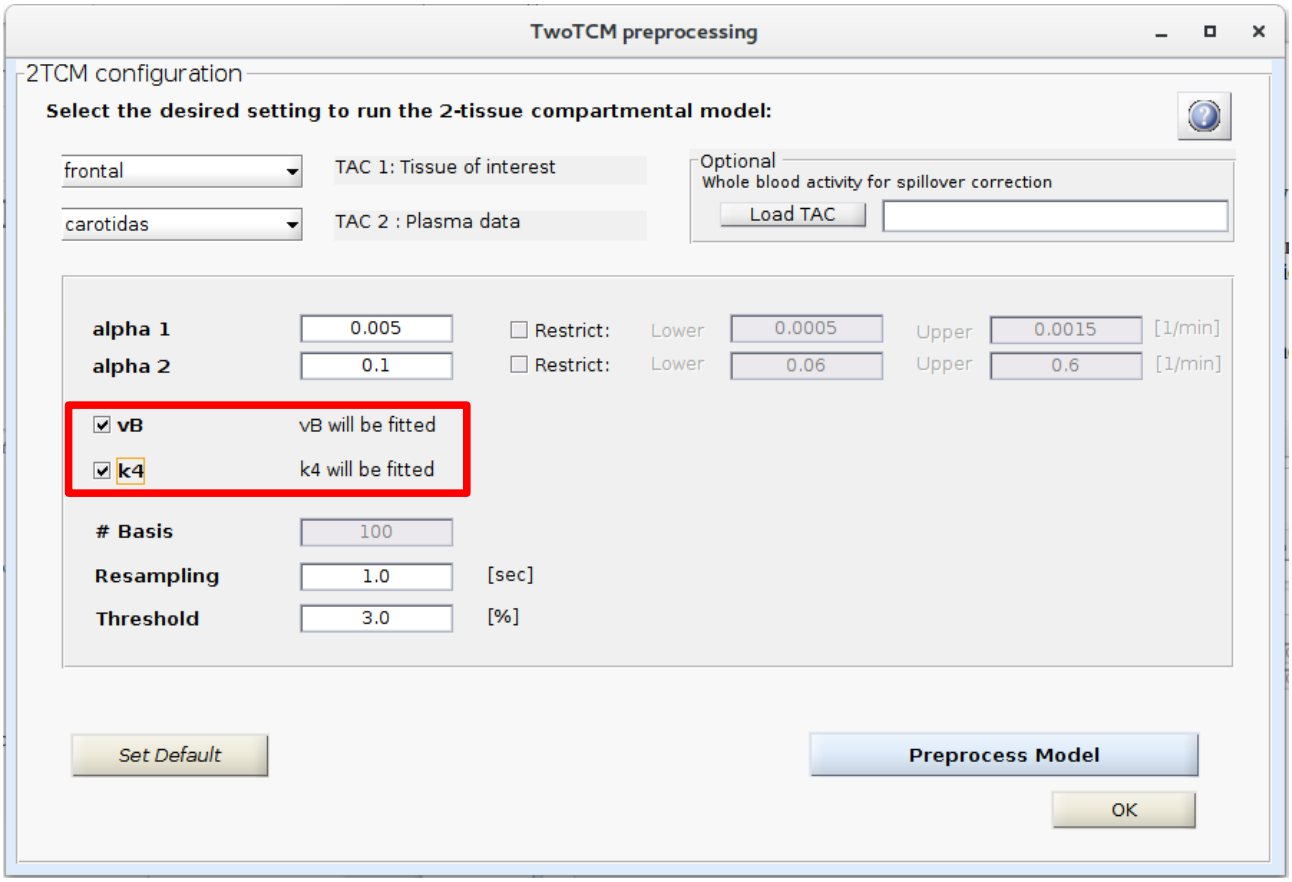

Figure 2

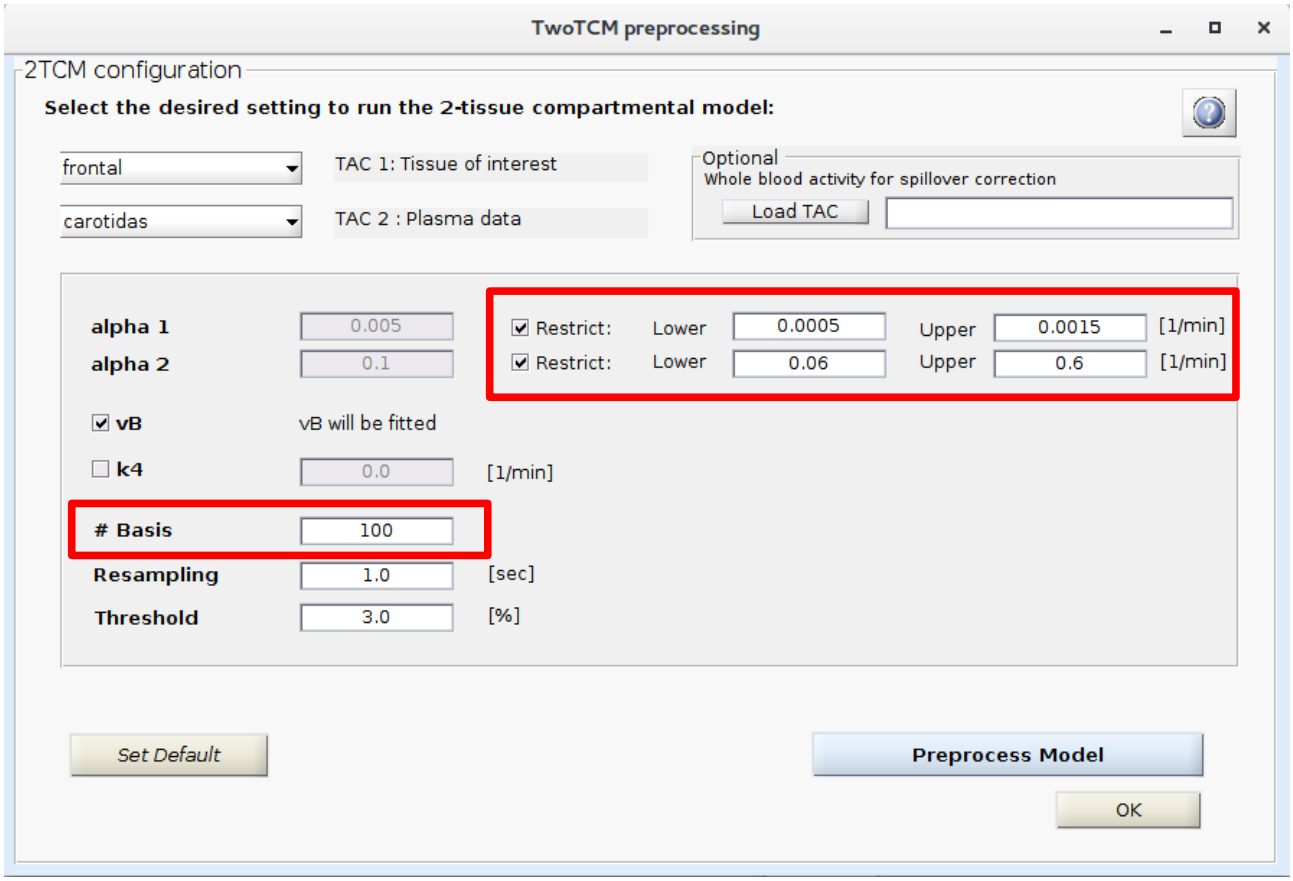

Figure 3

Clicking the *Preprocess Model* button, the model will be fitted to the data and the fitted parameters will be shown along with the fitted TAC (see Figure 4)

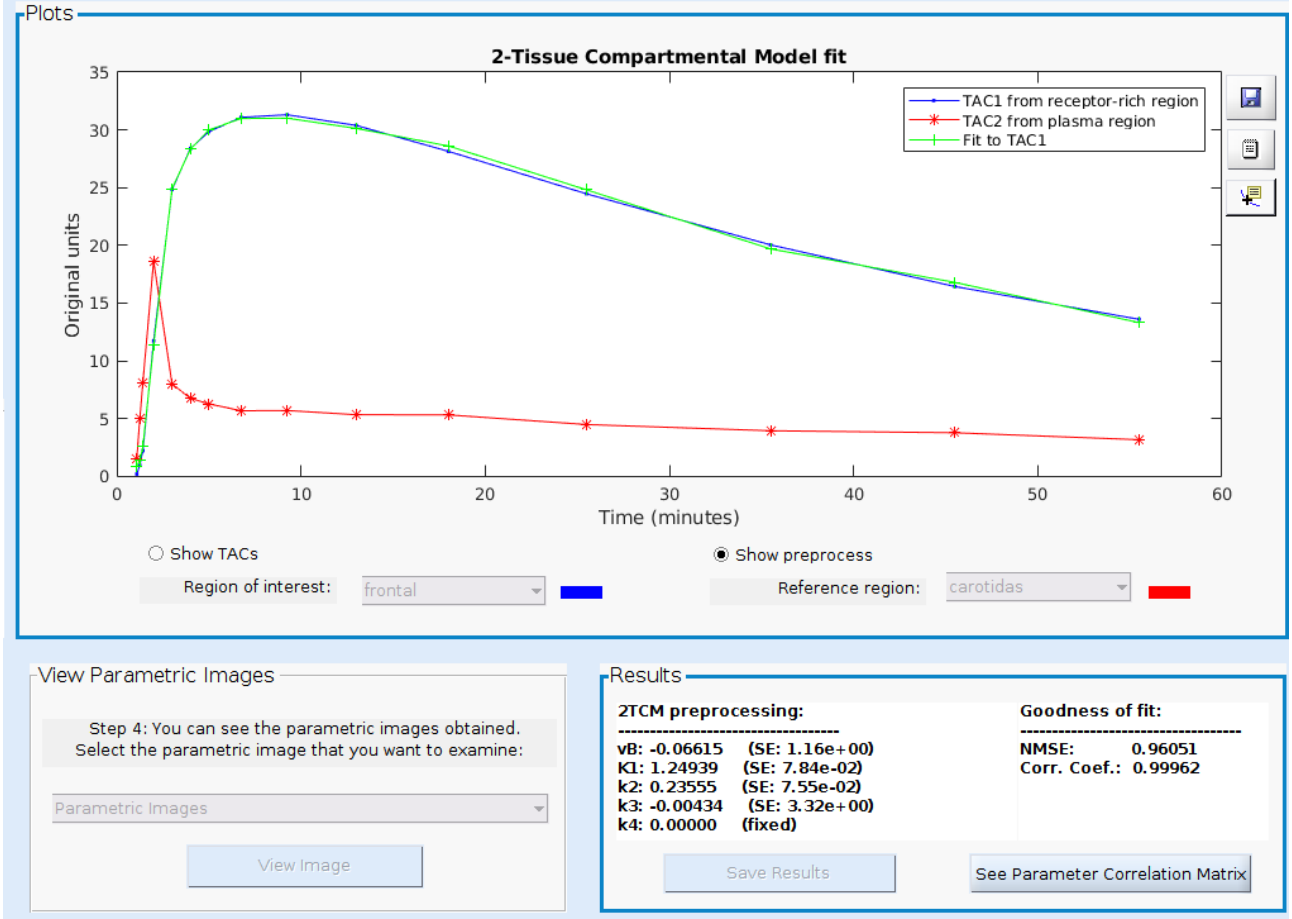

Figure 4

4) **Pixel-wise calculation:** To obtain the parametric images, from the preprocessing step, push the *Set Map Parameters* button. In the Figure 5 it is shown the new window will be opened.

In this new window, you can select the images you can obtain and save. More general information at http://www.uimcimes.es/QModeling_help/html/pixel_calculation.html

If the *k4* parameter was fixed to 0 at the preprocessing step, the images related to this parameter can not be calculated, that is, their checkbox will be disabled as we can see in Figure 5.

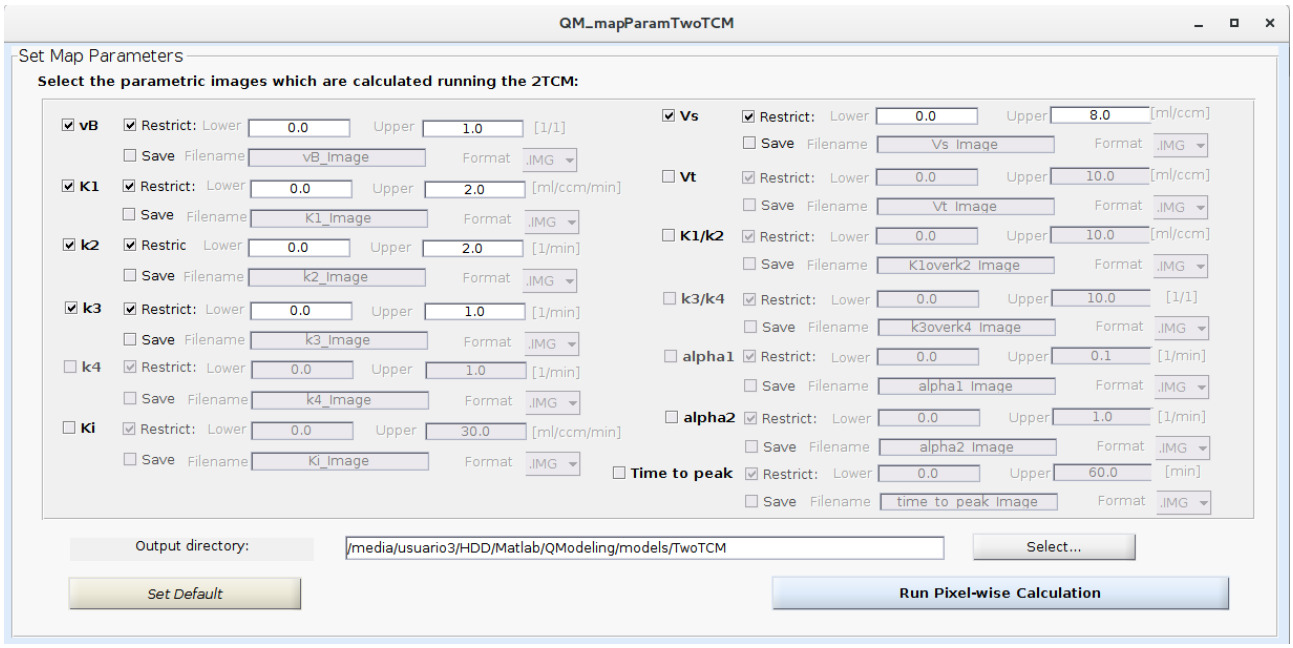

Figure 5

5) **View parametric images:** Go to http://www.uimcimes.es/QModeling_help/html/view_images.html