STEP-5: VISUALISE RESULTS

(User guide for DeepKymoTracker)

Goal: Step 5 allows you to bring to the screen all main charasteristics (the shapes, the areas, the perimeters, the circularities, the positions in the lineage) of a specific cell for each frame where it is present (see the last figure in this tutorial). By using the provided slide bar, you can see how those characteristics change from frame to frame dynamically.

Soft points:

- The creation of those beautiful images might take a long time though (for very long movies, or for movies with a big number of cells in them). Therefore, a timer is provided for the user to get the sense of the estimated remaining time. It is recommended to leave the algorithm running for the whole night if the remaining time is really big.

  The good news is that you have to go through this painful process only once: once the visualisation images have been created, they are stored in the folders, so when/if you want to have a look at them for a second time, the algorithm will just upload them to the screen (which takes some time, too, but it is an absolutely reasonable time).

- You cannot interrupt the creation process, it needs to be done in one go. The functionality allowing you to stop the algorithm and come back later to finish it , will be implemented in the near future.

Input requirements:

You can apply this step to the movie which have already gone through STEP-3 or STEP-4 (i.e. the movie has been tracked and segmented).

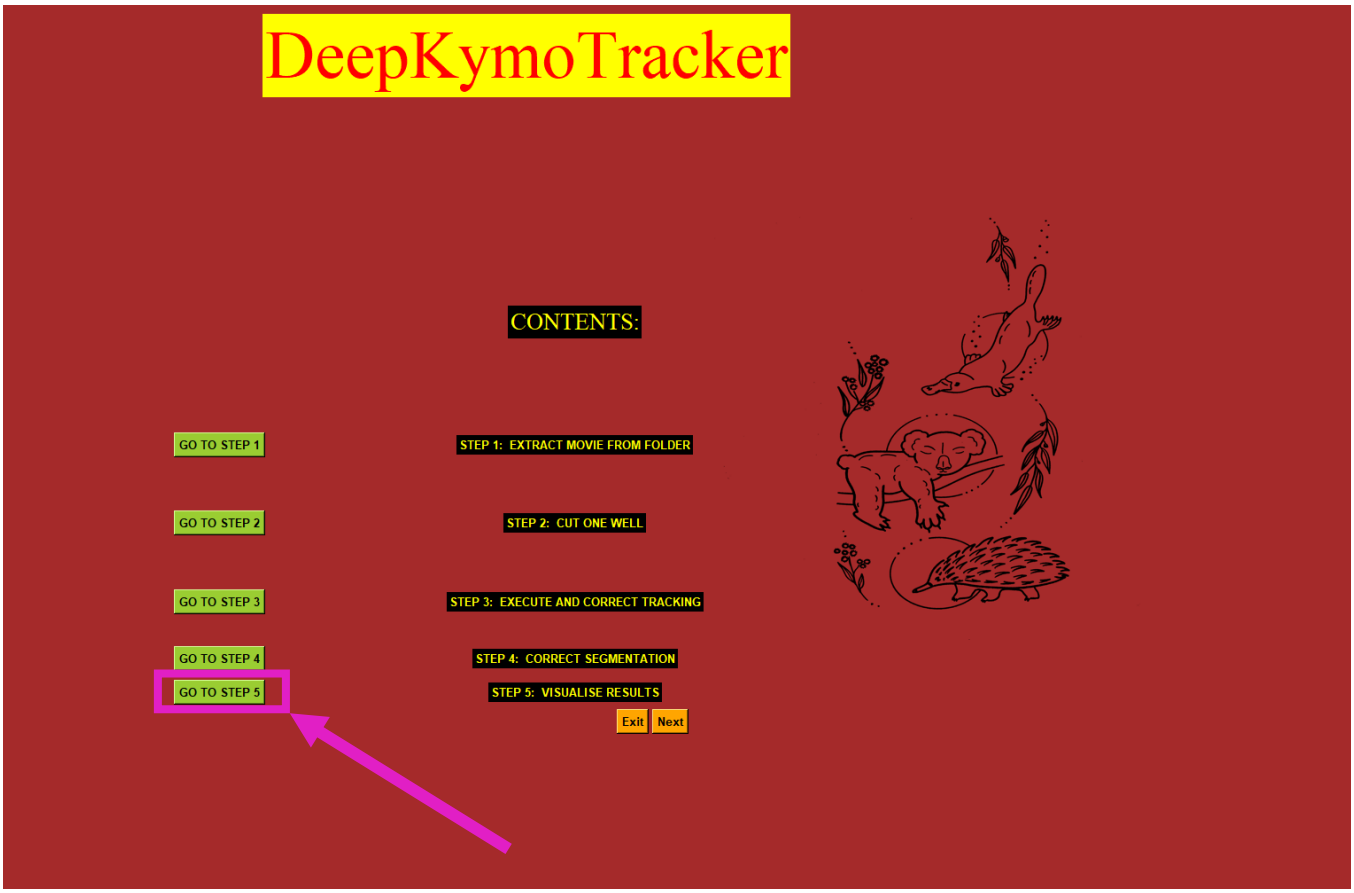
Output: The output will be seen right on your screen.

Also, if you are interested in loking at the visualistaion images in folders, they are stored in

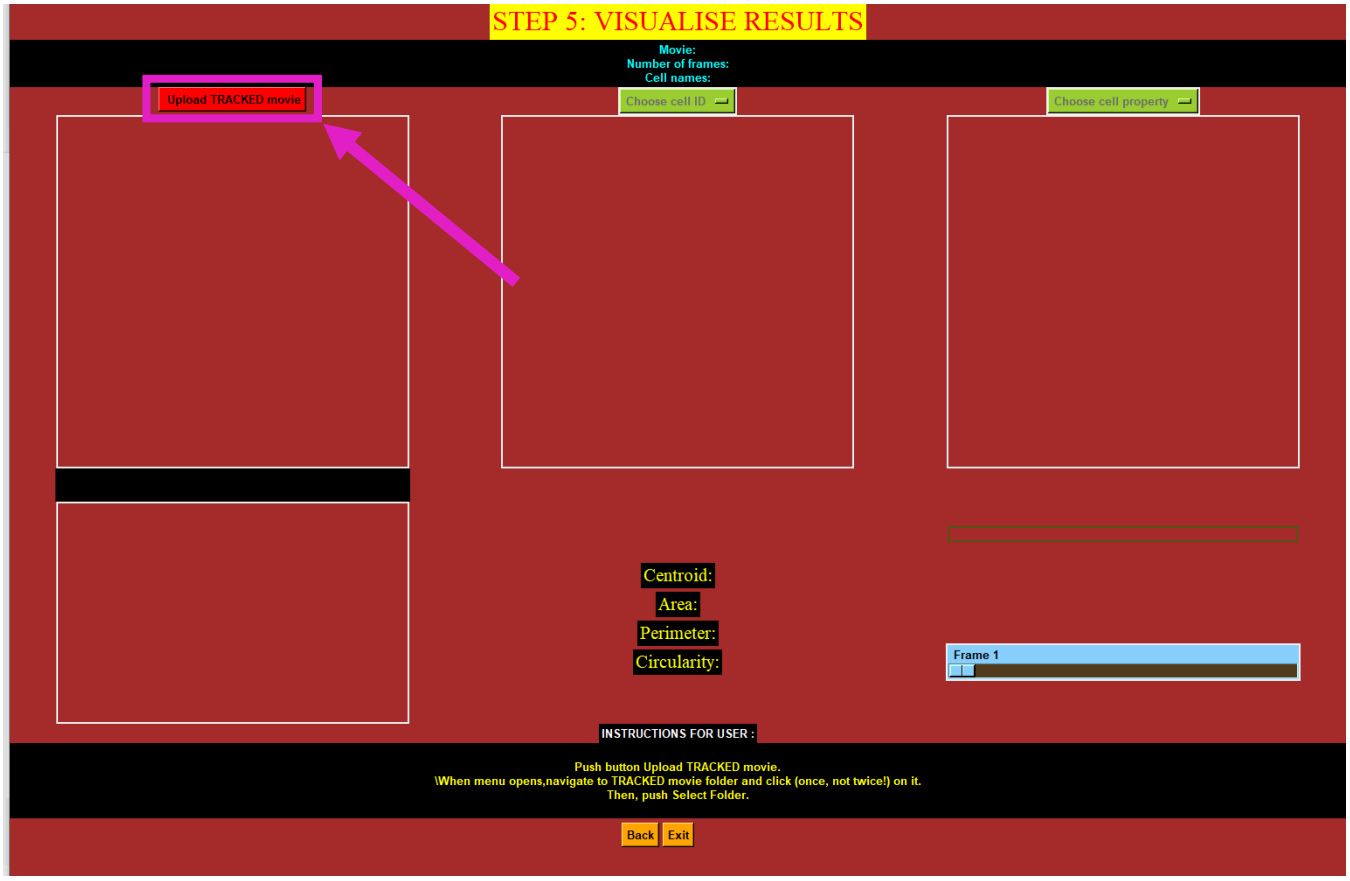
"\HELPER_FOLDERS_(NOT FOR USER)\VISUALISATION_HELPERS".

Instructions:

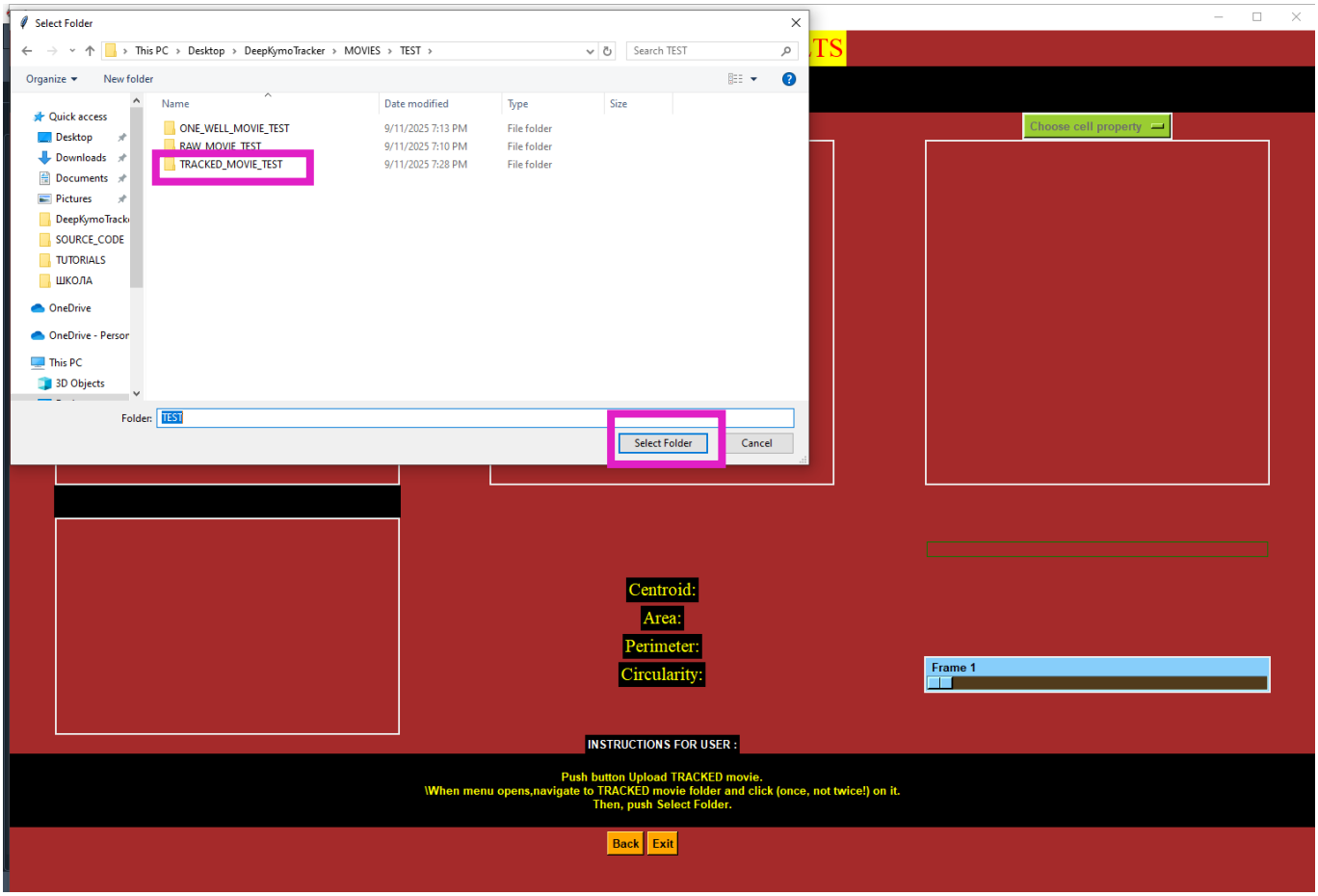
Lauch DeepKymoTracker and press **GO TO STEP 5** in the titile page:



You will be directed to the page STEP-5: VISUALISE RESULTS. Press button **Upload TRACKED movie**:



In the open menu, navigate to TRACKED_MOVIE_{your movie name}, click on it once (not twice), and then click **Select Foder**:



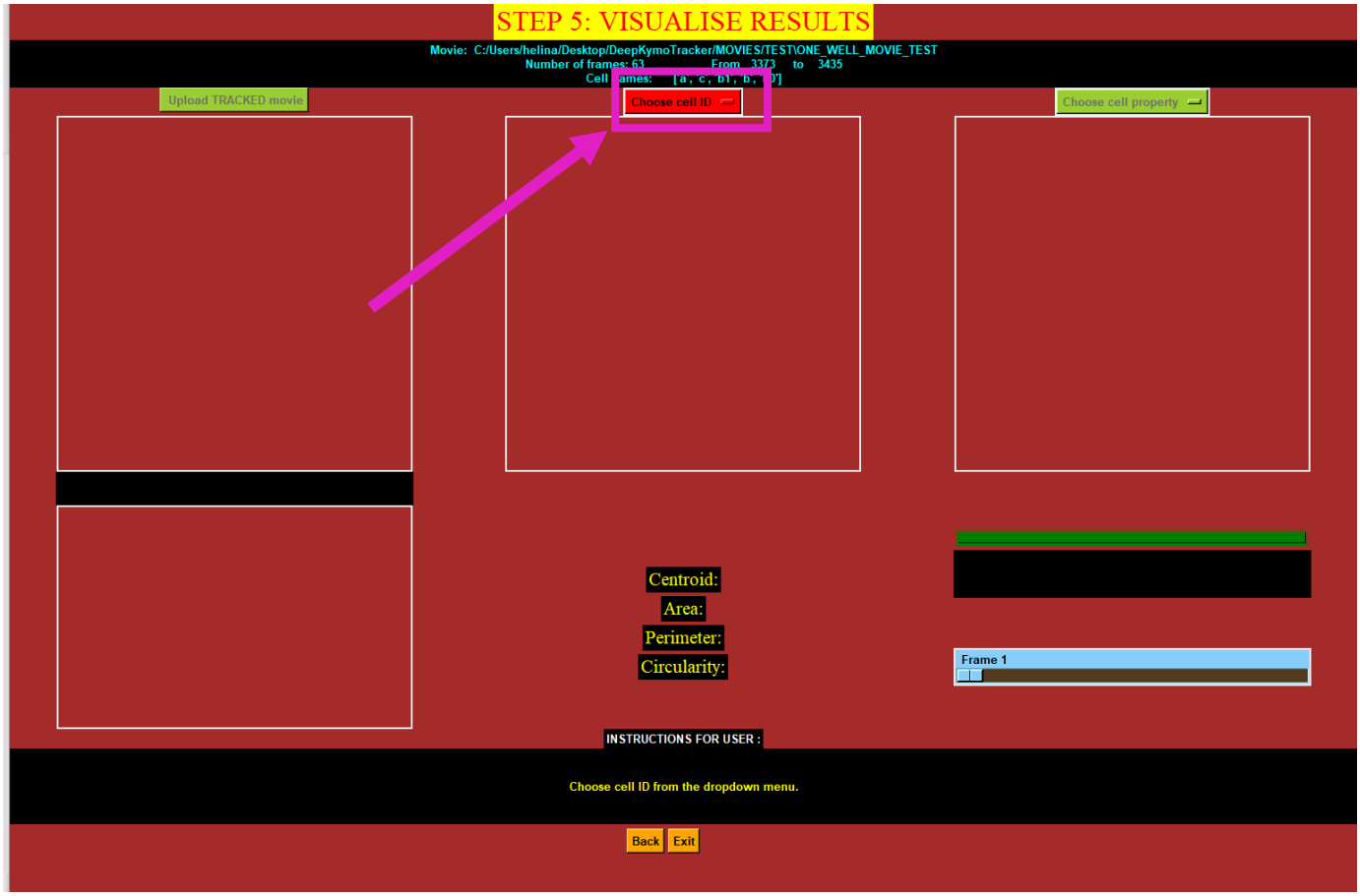
If you are dealing with the movie for the first time (and therefore, faced with the time-consuming process of creating the visualisation images), the warning will pop up on the screen (see the figure below) . Press **OK** to proceed.

If you already created all the necessary visualisation images before, the popup would notify you of this, too. In this case, the next step described in this tutorial will be skipped.

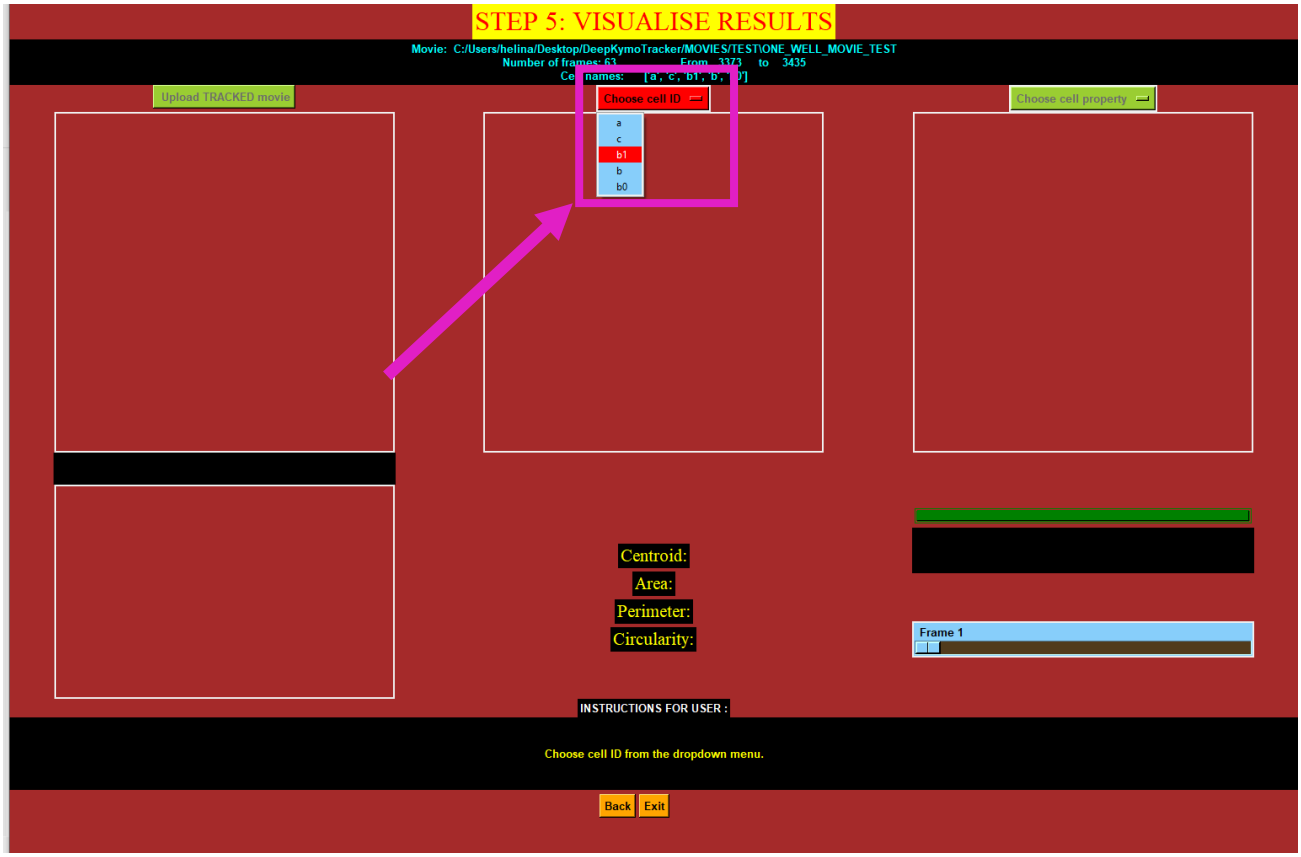
Creation of the visualisation images begins. To enable you to monitor the progress and get a sense of how much time is left, the estimated remaining time is provided, along with the list of cell names where cell names change their colours dynamically: once a particular cell is processed, its colour is modified from red to cyan. By the end, all colours have become cyan.

After all cells have been processed (and stored in folders), the algorithm starts uploading them. It takes some time, too, but nothing like in the previous stage.

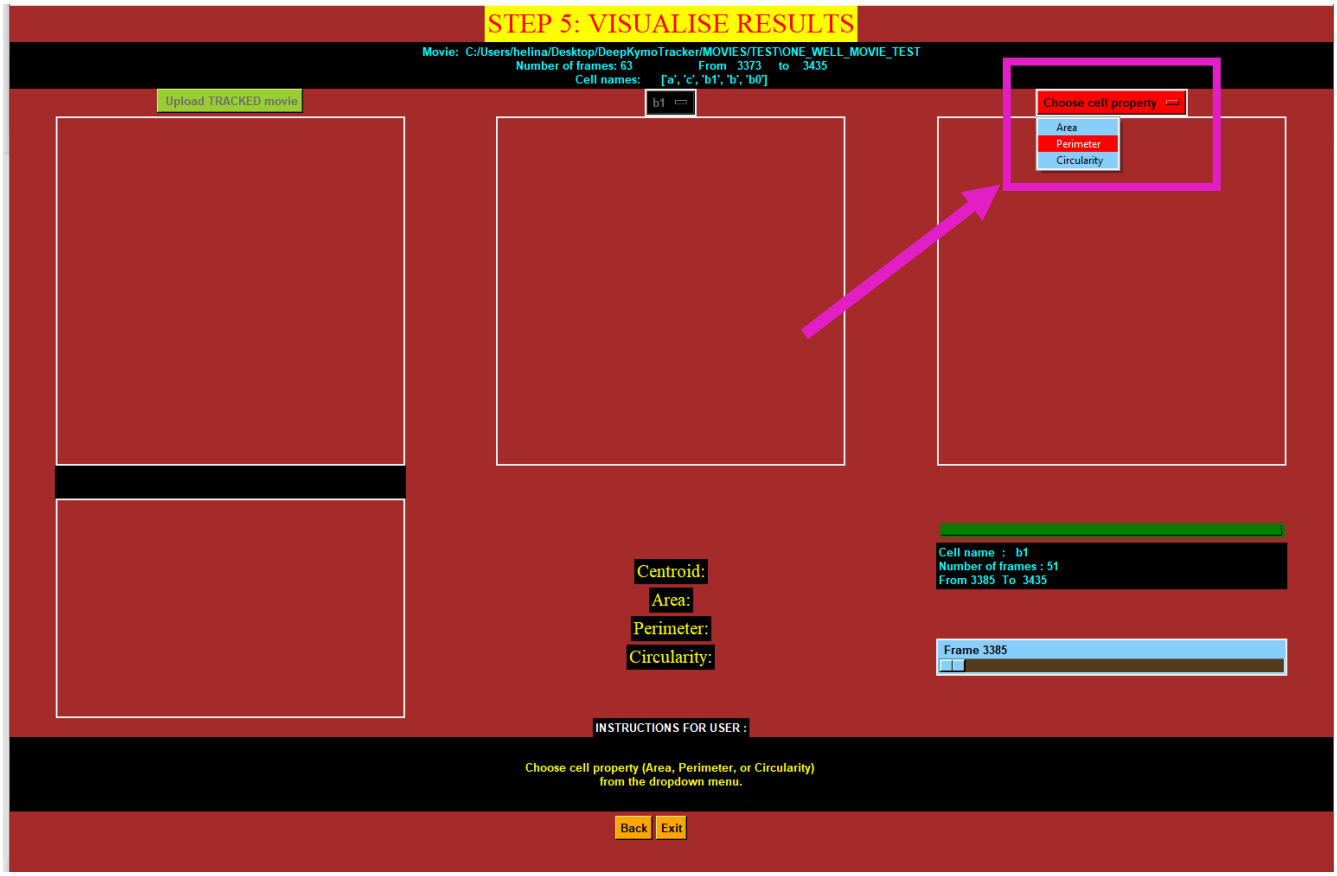
Once all the images are uploaded, the **Choose cell ID** button starts flashing:



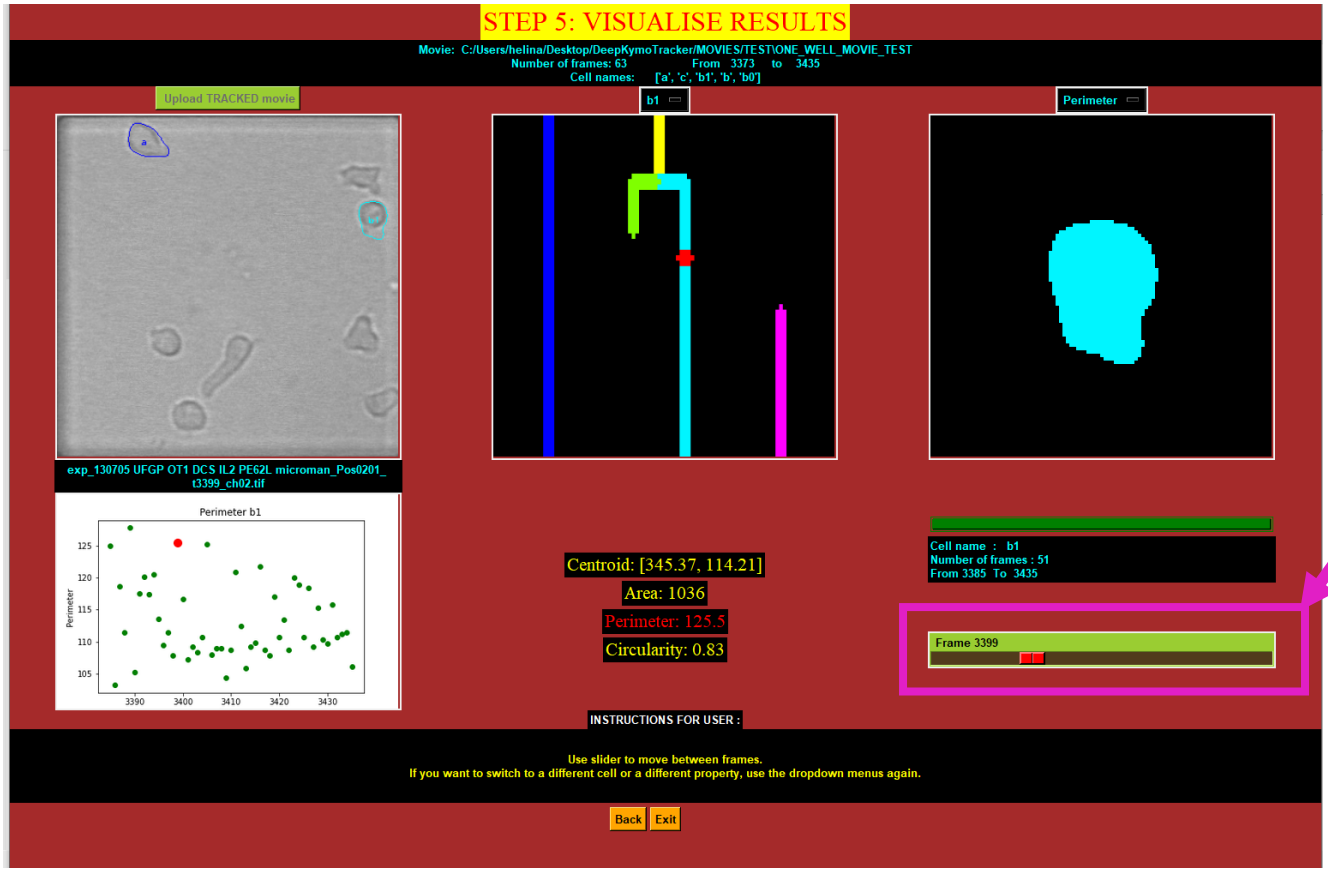
Choose the cell of interest from the dropdown menu:



Choose the required characteristic from another dropdown menu (**Choose cell property):**



By using the slide bar, you can now scroll through frames to see how the features of the cell are changed from frame to frame.


STEP 5: VISUALISE RESULTS
Movie: C:/Users/helina/Desktop/DeepKymoTracker/MOVIES/TEST\ONE_WELL_MOVIE_TEST
Number of frames: 63 From 3373 to 3435
Cell names: ['a', 'c', 'b1', 'b', 'b0']
Upload TRACKED movie
b1
Perimeter
exp_130705 UFGP OT1 DCS IL2 PE62L microman_Pos0201_t3399_ch02.tif
Perimeter b1
Perimeter
125
120
115
110
105
3390
3400
3410
3420
3430
Centroid: [345.37, 114.21]
Area: 1036
Perimeter: 125.5
Circularity: 0.83
Cell name : b1
Number of frames : 51
From 3385 To 3435
Frame 3399
INSTRUCTIONS FOR USER :
Use slider to move between frames.
If you want to switch to a different cell or a different property, use the dropdown menus again.
Back
Exit