MetsFunctioon_HW3

```
function metsFraction = MetsFunction_HW3(imgName)
```

Read the image file

```
rgbImg = imread(imgName);
```

```
Not enough input arguments.

Error in MetsFunction_HW3 (line 7)
rgbImg = imread(imgName);
```

Set a layer using the green plane set at the index of 2

```
gLayer = rgbImg(:,:,2);
```

Computes a global threshold using the new green layer created, then converts it to a binary image

```
tissueMask = ~im2bw(gLayer,graythresh(gLayer));
```

Removes large marks/artifacts around the tissue

```
tissueMask = imclearborder(tissueMask);
```

Removes small marks/artifacts conatining fewer than 200 pixels round the tissue

```
tissueMask = bwareaopen(tissueMask,200);
```

Fills the holes in the binary image

```
tissueMask = imfill(tissueMask,'holes');
```

Set a layer using the red plane, set at index 1, to find metastasis

```
rLayer = rgbImg(:,:,1);
```

Apply a mask to remove artifaccts around the tissue

```
rLayer(~tissueMask) = 255;
```

Set the sepeation threshold to 85% to distiguish the dark spots in the image

```
threshold = round(mean(mean(mean(rgbImg)))*0.85);
```

Convert to binary image using the red layer and threshhold value to select the darkest spots

```
metsMask = ~im2bw(rLayer,threshold/255);
```

Calculates the percentage of the the dark spots in the image

```
metsFraction = nnz(metsMask)/nnz(tissueMask);
```

Prints the file names and their calculated percentages of soft metastisis in the cell tissues in the images

```
fprintf('Image (%s): %.3g%% \n',...
```

```
    imgName,100*metsFraction);
```

Published with MATLAB® R2015b