Otsu's method

Global image threshold using Otsu's method

Syntax

```
T = graythresh(I)
```

```
[T,EM] = graythresh(I)
```

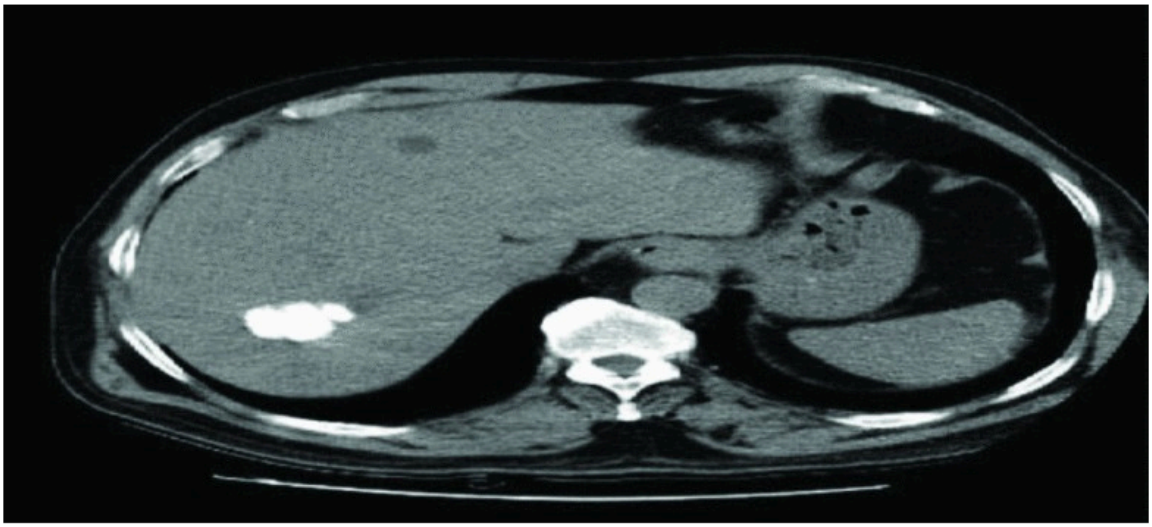
Description

`T = graythresh(I)` computes a global threshold `T` from grayscale image `I`, using Otsu's method . Otsu's method chooses a threshold that minimizes the intraclass variance of the thresholded black and white pixels. The global threshold `T` can be used with `imbinarize` to convert a grayscale image to a binary image.

`[T,EM] = graythresh(I)` also returns the effectiveness metric, `EM`.

Read a grayscale image into the workspace.

```
I = imread('E:\matlab_code\original.jpg');
imshow(I);
```



Calculate a threshold using graythresh. The threshold is normalized to the range [0, 1].

```
level = graythresh(I)
```

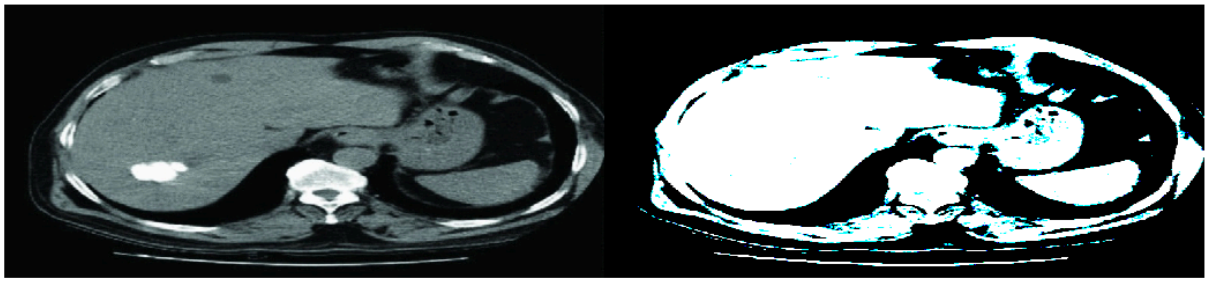
```
level = 0.2745
```

Convert the image into a binary image using the threshold.

```
BW = imbinarize(I,level);
```

Display the original image next to the binary image.

```
imshowpair(I,BW,'montage')
```



```
Warning: Image is too big to fit on screen; displaying at 67%
```