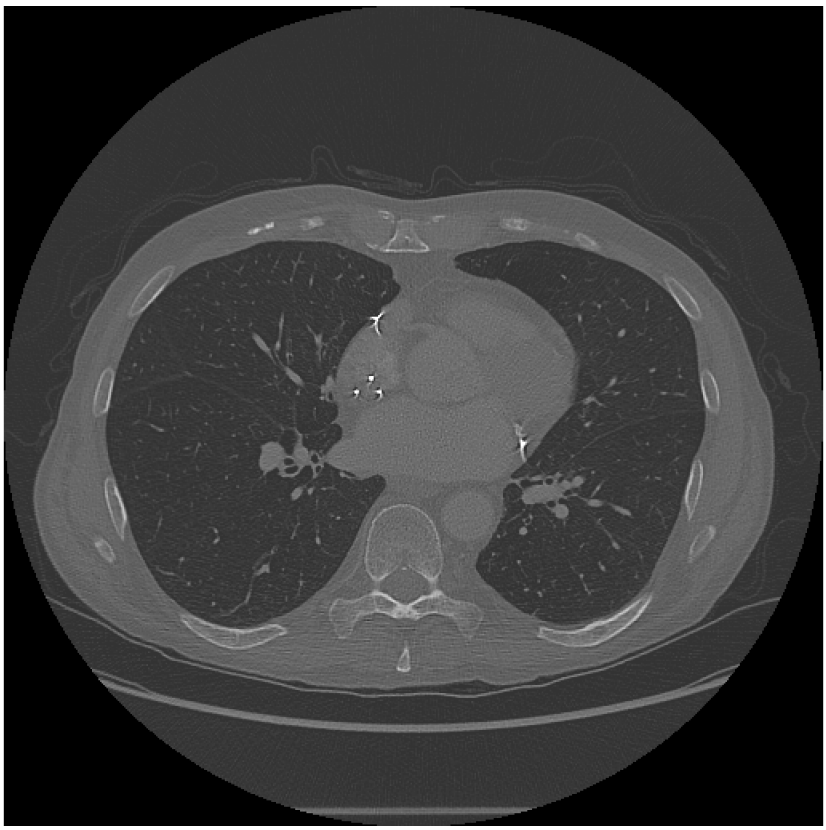
Task-01

```
clc
clear
load chestVolume.mat
whos
```

```
  Name        Size                    Bytes  Class    Attributes

  V         512x512x318            166723584  int16
```

```
XY=squeeze(V(:,:,160));
imshow(XY,[],'Border','tight')
```

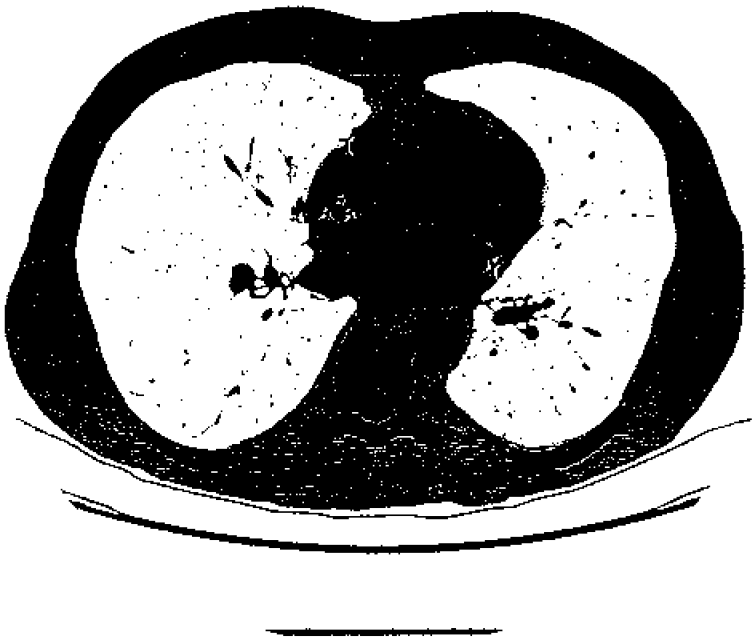


```
level=thresh_tool(uint16(XY),gray)
```

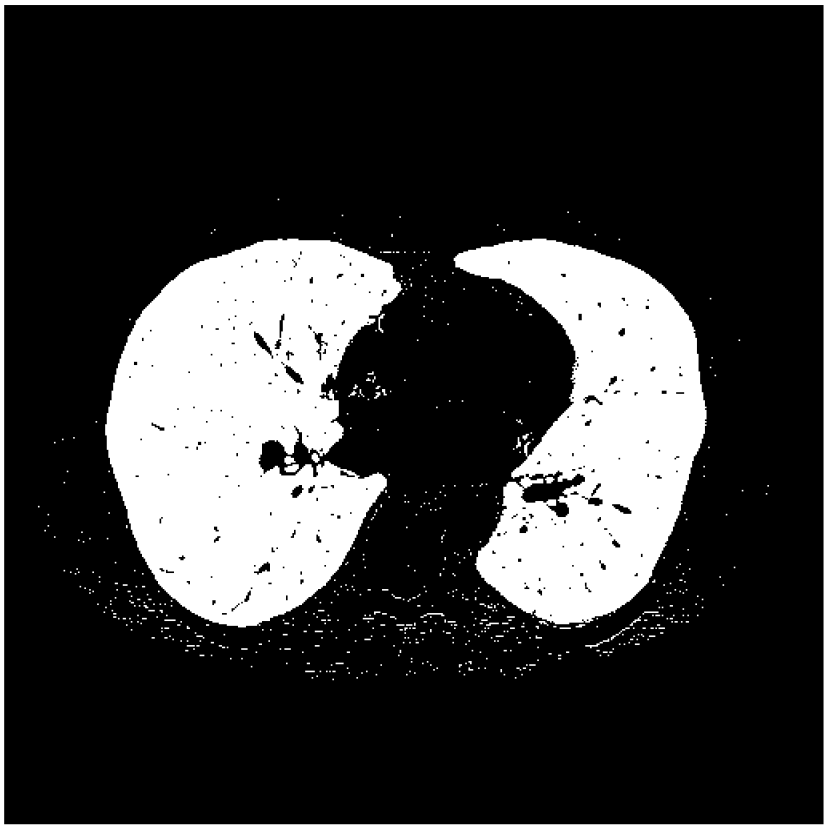
```
level = 715.5879
```

```
BW=XY>level;
imshow(BW,[])
```

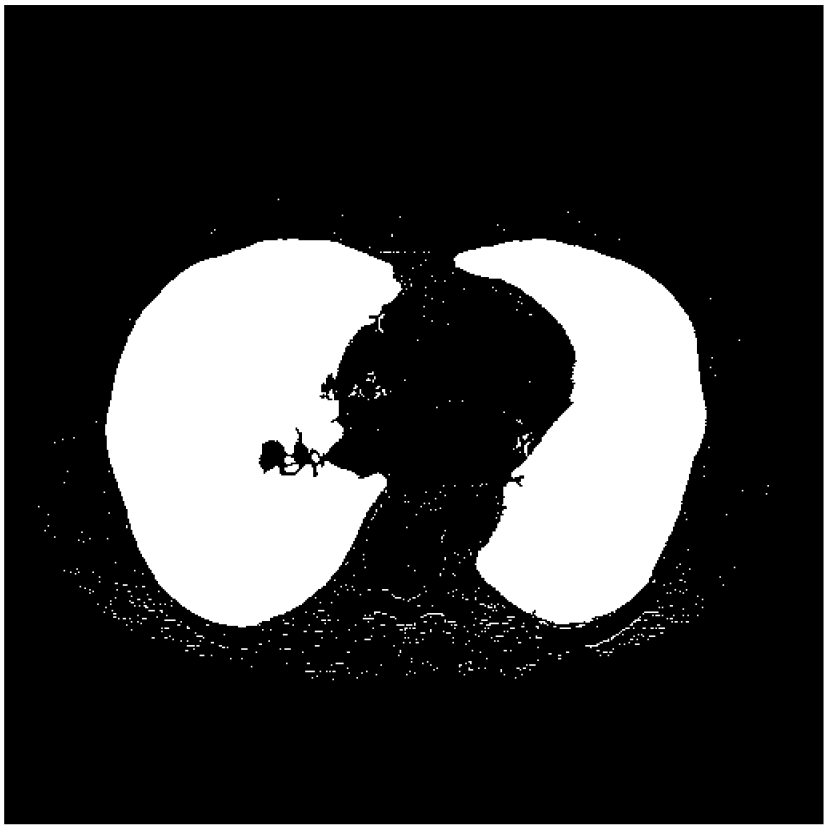
```
BW=imcomplement(BW);
imshow(BW,[])
```



```
BW=imclearborder(BW);
imshow(BW,[])
```

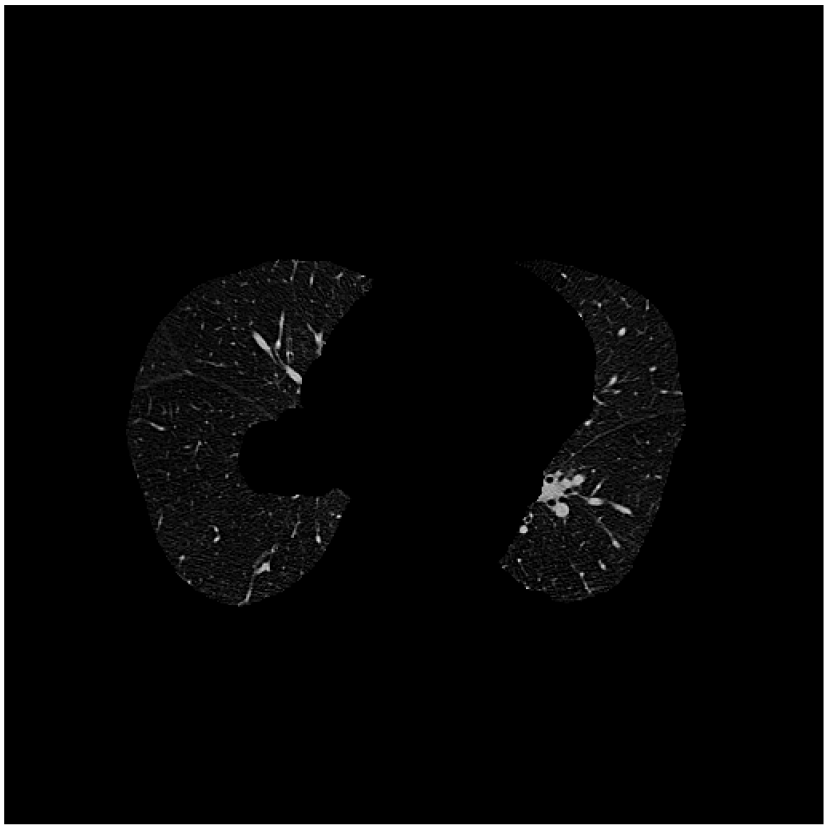


```
BW=imfill(BW,'holes');
imshow(BW,[])
```



```
radius=13;
decomposition=0;
se=strel('disk',radius,decomposition);
BW=imerode(BW,se);
imshow(BW,[])
```

```
maskedImageXY=XY;
maskedImageXY(~BW)=0;
imshow(maskedImageXY,[])
```



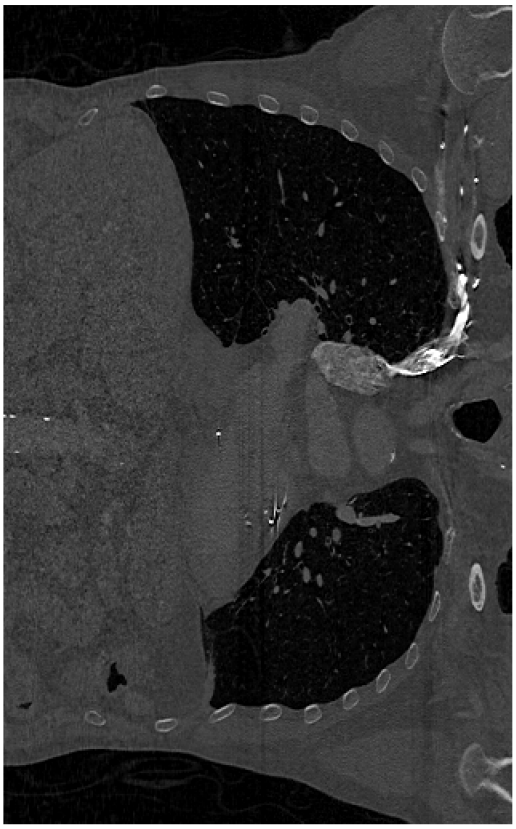
Task-2

```
clc
clear
close
load chestVolume.mat
whos
```

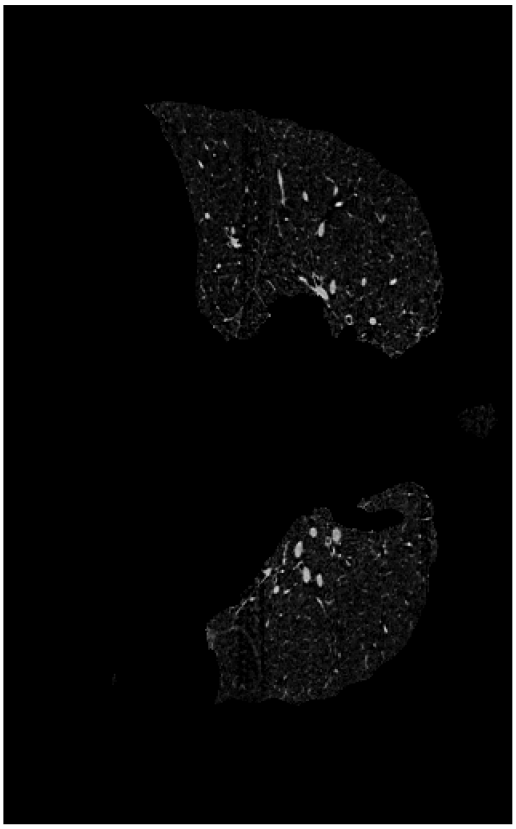
```
  Name        Size                    Bytes  Class    Attributes

  V         512x512x318            166723584  int16
```

```
V=im2single(V);
XZ=squeeze(V(256,:,:));
imshow(XZ,[])
```



```
imageSegmenter(XZ)
```

```
imshow(BW,[])
```

```
imshow(maskedImage)
```