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Read im images

```
%benign images
benign_1 = imread('mdb001.pgm');
benign_2 = imread('mdb002.pgm');

%malignant images
malignant_1 = imread('mdb023.pgm');
malignant_2 = imread('mdb028.pgm');
```

Block image

```
%call blockImg function
benign1 = blockImg(benign_1);
benign2 = blockImg(benign_2);
malignant1 = blockImg(malignant_1);
malignant2 = blockImg(malignant_2);
```

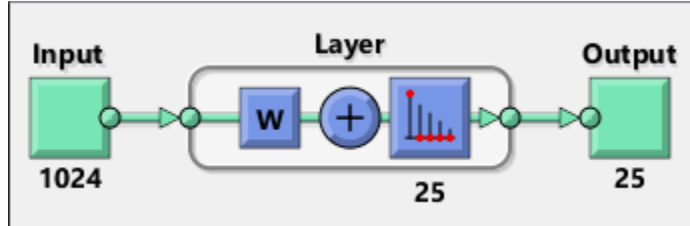
Benign image 2 5x5 Network

```
b1_network_1 = selforgmap([5,5]);
```

```

[b1_network_1, tr1] = train(b1_network_1, benign1);
view(b1_network_1)
b1_window_1 = b1_network_1(benign1);
b1_result_1 = vec2ind(b1_window_1);
B11 = reconstruct(b1_network_1, 32, b1_result_1);

```



Show Benign Image 1 5x5 Network

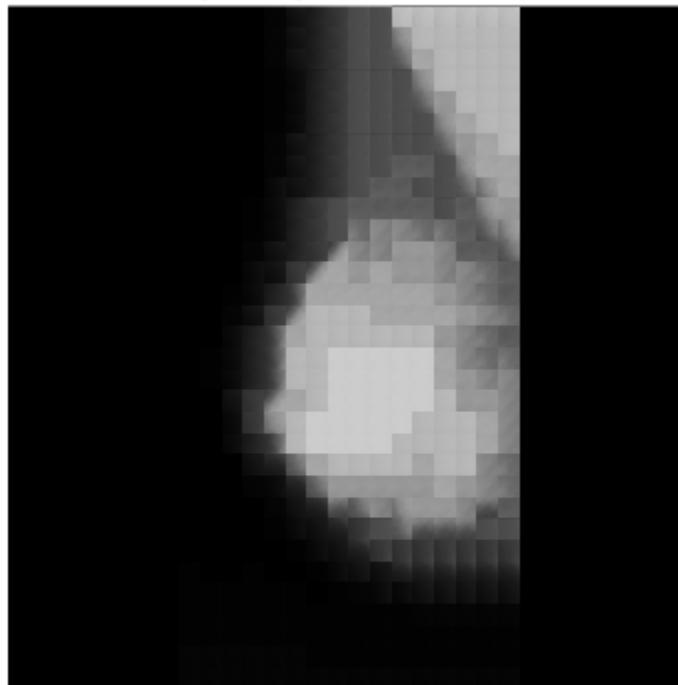
```

hFig = figure; hAxes = gca;

hImage = imshow( uint8(B11), 'Parent', hAxes );
title( hAxes, 'Benign Image 1 of 5x5 Network' );

```

Benign Image 1 of 5x5 Network



Benign Image 1 10x10 Network

```

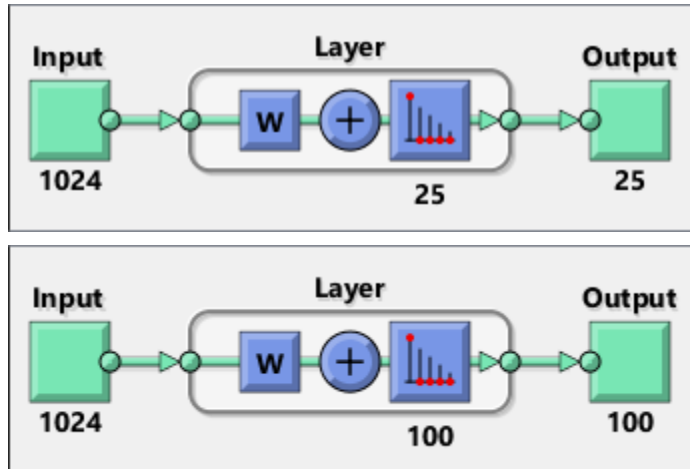
b1_network_2 = selforgmap([10,10]);

```

```

[b1_network_2, tr2] = train(b1_network_2, benign1);
view(b1_network_2)
b1_window_2 = b1_network_2(benign1);
b1_result_2 = vec2ind(b1_window_2);
B12 = reconstruct(b1_network_2, 32, b1_result_2);

```



Show Benign Image 1 10x10 Network

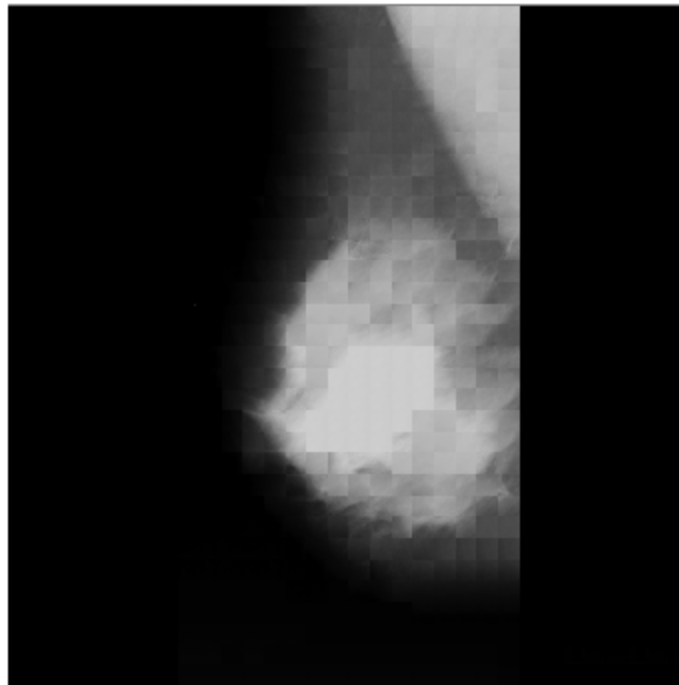
```

hFig = figure; hAxes = gca;

hImage = imshow( uint8(B12), 'Parent', hAxes );
title( hAxes, 'Benign Image 1 of 10x10 Network' );

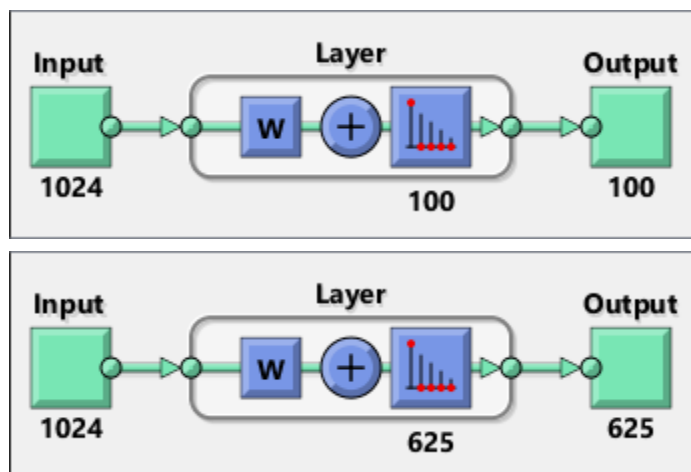
```

Benign Image 1 of 10x10 Network



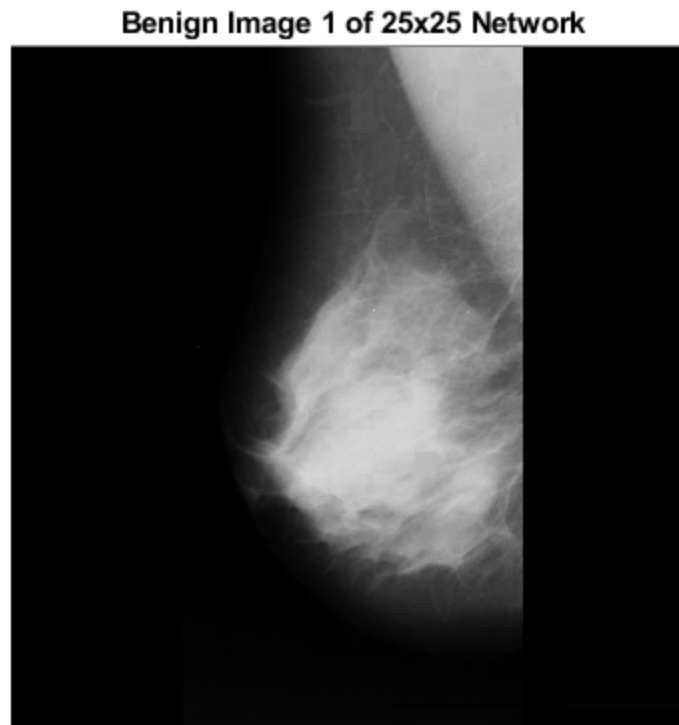
Benign Image 1 25x25 Network

```
b1_network_3 = selforgmap([25,25]);  
[b1_network_3, tr3] = train(b1_network_3, benign1);  
view(b1_network_3)  
b1_window_3 = b1_network_3(benign1);  
b1_result_3 = vec2ind(b1_window_3);  
B13 = reconstruct(b1_network_3, 32, b1_result_3);
```



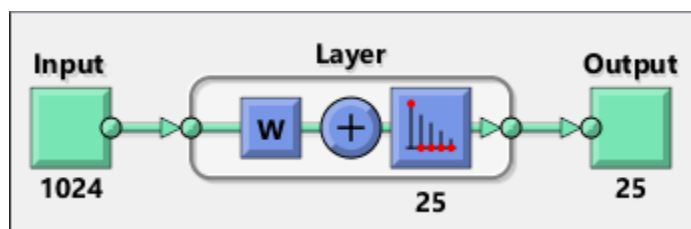
Show Benign Image 1 25x25 Network

```
hFig = figure; hAxes = gca;  
  
hImage = imshow( uint8(B13), 'Parent', hAxes );  
title( hAxes, 'Benign Image 1 of 25x25 Network' );
```



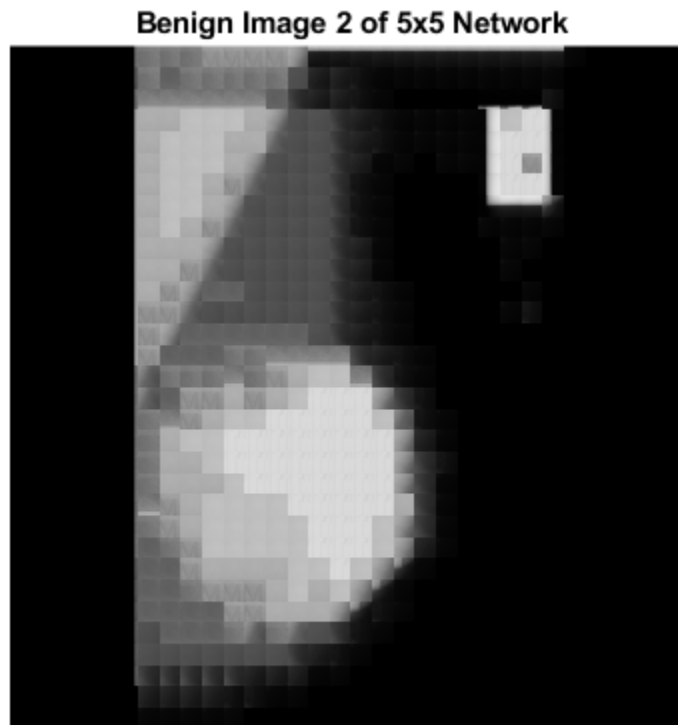
Benign image 2 5x5 Network

```
b2_network_1 = selforgmap([5,5]);  
[b2_network_1, tr1] = train(b2_network_1, benign2);  
view(b2_network_1)  
b2_window_1 = b2_network_1(benign2);  
b2_result_1 = vec2ind(b2_window_1);  
B21 = reconstruct(b2_network_1, 32, b2_result_1);
```



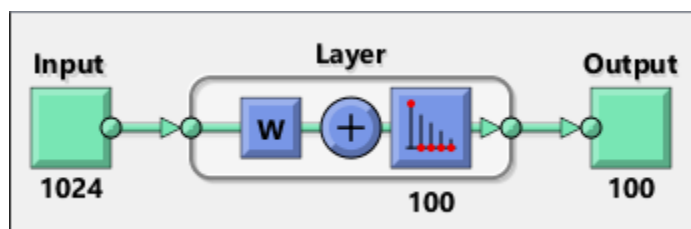
Show Benign Image 2 5x5 Network

```
hFig = figure; hAxes = gca;  
  
hImage = imshow( uint8(B21), 'Parent', hAxes );  
title( hAxes, 'Benign Image 2 of 5x5 Network' );
```



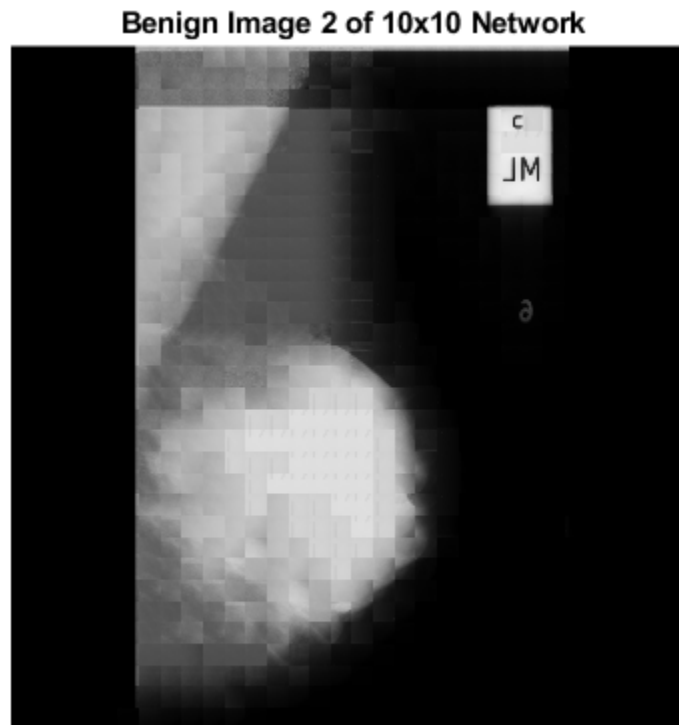
Benign Image 2 10x10 Network

```
b2_network_2 = selforgmap([10,10]);  
[b2_network_2, tr2] = train(b2_network_2, benign2);  
view(b2_network_2)  
b2_window_2 = b2_network_2(benign2);  
b2_result_2 = vec2ind(b2_window_2);  
B22 = reconstruct(b2_network_2, 32, b2_result_2);
```



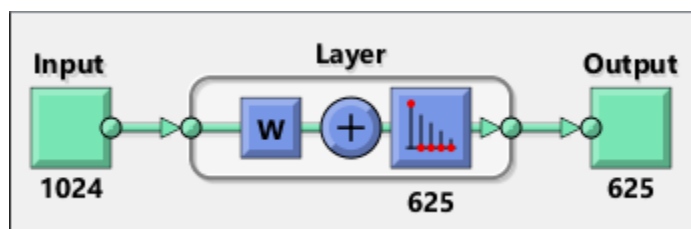
Show Benign Image 2 10x10 Network

```
hFig = figure; hAxes = gca;  
  
hImage = imshow( uint8(B22), 'Parent', hAxes );  
title( hAxes, 'Benign Image 2 of 10x10 Network' );
```



Benign Image 2 25x25 Network

```
b2_network_3 = selforgmap([25,25]);  
[b2_network_3, tr3] = train(b2_network_3, benign2);  
view(b2_network_3)  
b2_window_3 = b2_network_3(benign2);  
b2_result_3 = vec2ind(b2_window_3);  
B23 = reconstruct(b2_network_3, 32, b2_result_3);
```



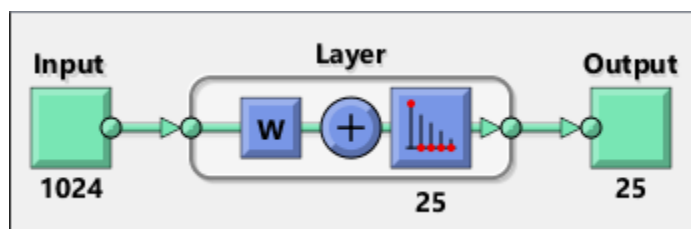
Show Benign Image 2 25x25 Network

```
hFig = figure; hAxes = gca;  
  
hImage = imshow( uint8(B23), 'Parent', hAxes );  
title( hAxes, 'Benign Image 2 of 25x25 Network' );
```



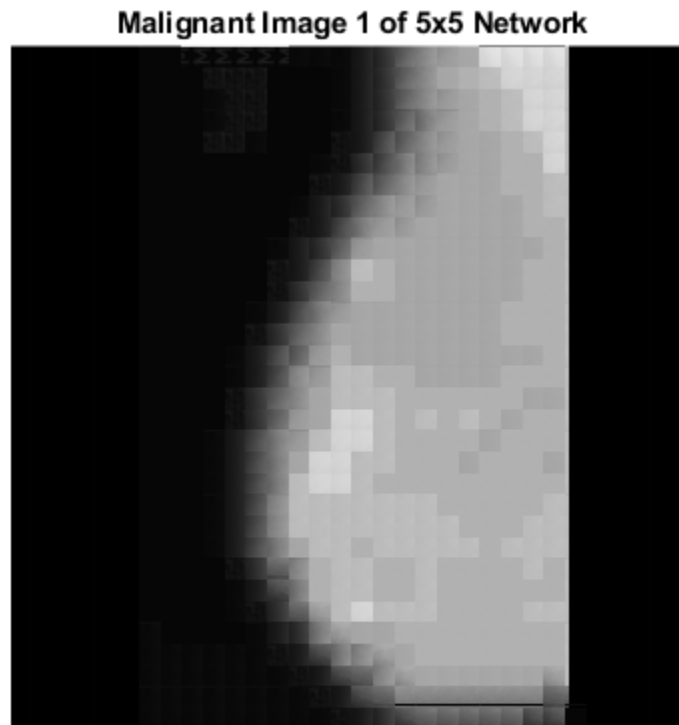
Malignant image 1 5x5 Network

```
m1_network_1 = selforgmap([5,5]);  
[m1_network_1, tr1] = train(m1_network_1, malignant1);  
view(m1_network_1)  
m1_window_1 = m1_network_1(malignant1);  
m1_result_1 = vec2ind(m1_window_1);  
M11 = reconstruct(m1_network_1, 32, m1_result_1);
```



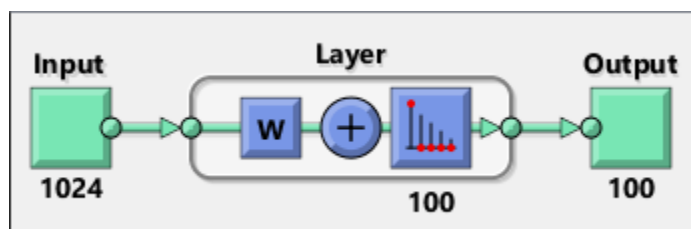
Show Malignant Image 1 5x5 Network

```
hFig = figure; hAxes = gca;  
  
hImage = imshow( uint8(M11), 'Parent', hAxes );  
title( hAxes, 'Malignant Image 1 of 5x5 Network' );
```



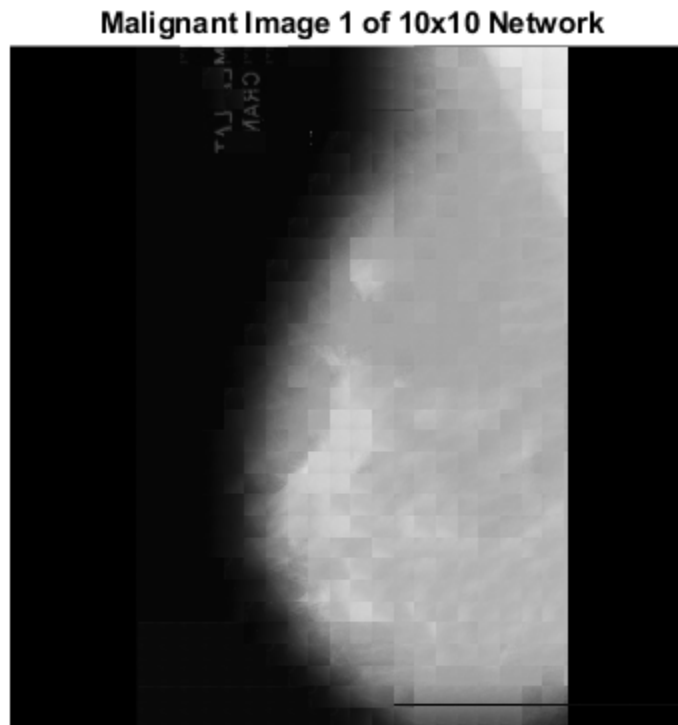
Malignant Image 1 10x10 Network

```
m1_network_2 = selforgmap([10,10]);  
[m1_network_2, tr2] = train(m1_network_2, malignant1);  
view(m1_network_2)  
m1_window_2 = m1_network_2(malignant1);  
m1_result_2 = vec2ind(m1_window_2);  
M12 = reconstruct(m1_network_2, 32, m1_result_2);
```



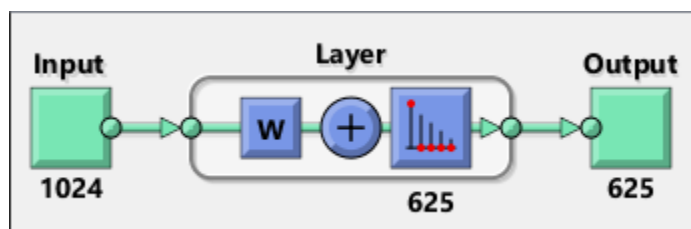
Show Malignant Image 1 10x10 Network

```
hFig = figure; hAxes = gca;  
  
hImage = imshow( uint8(M12), 'Parent', hAxes );  
title( hAxes, 'Malignant Image 1 of 10x10 Network' );
```



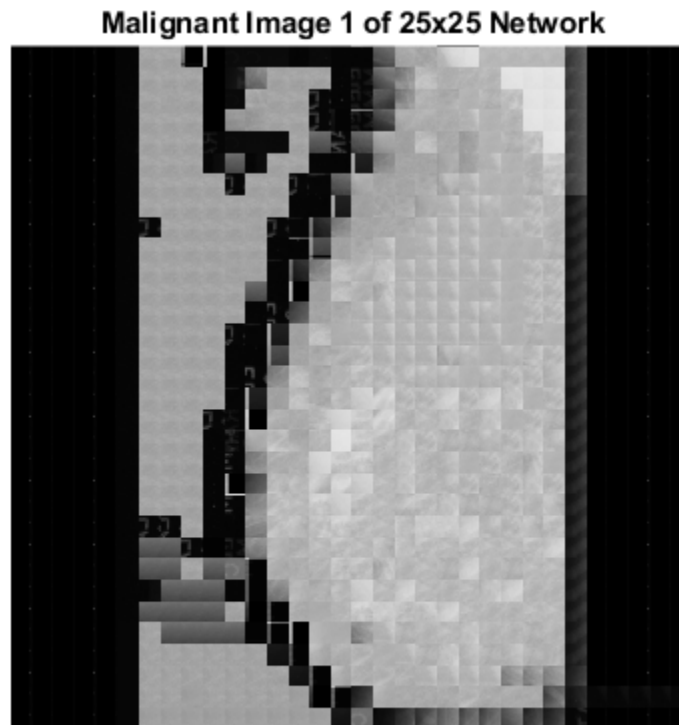
Malignant Image 1 25x25 Network

```
m1_network_3 = selforgmap([25,25]);  
[m1_network_3, tr3] = train(m1_network_3, malignant1);  
view(m1_network_3)  
m1_window_3 = b1_network_3(malignant1);  
m1_result_3 = vec2ind(m1_window_3);  
M13 = reconstruct(m1_network_3, 32, m1_result_3);
```



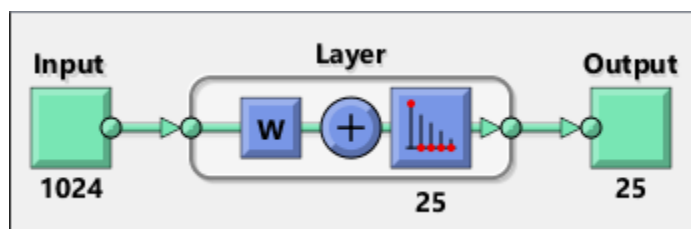
Show Malignant Image 1 25x25 Network

```
hFig = figure; hAxes = gca;  
  
hImage = imshow( uint8(M13), 'Parent', hAxes );  
title( hAxes, 'Malignant Image 1 of 25x25 Network' );
```



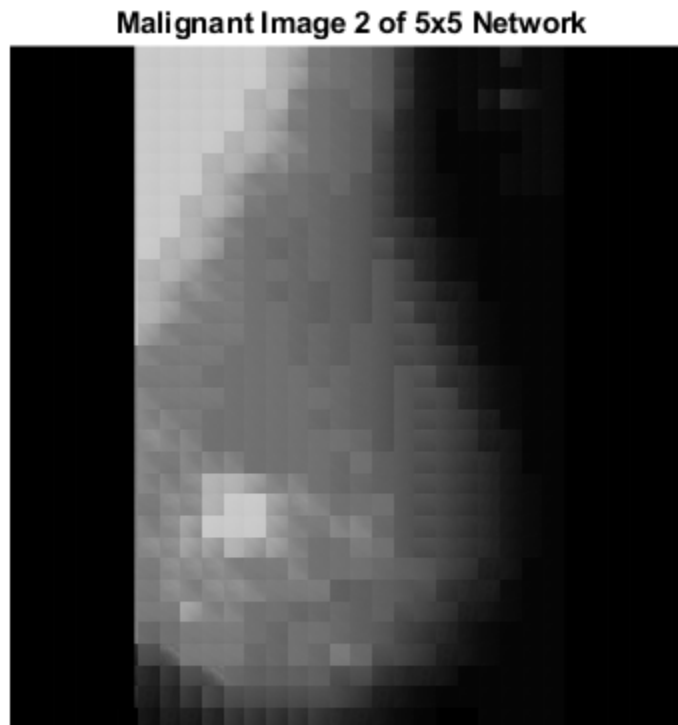
Malignant Image 2 5x5 Network

```
m2_network_1 = selforgmap([5,5]);  
[m2_network_1, tr1] = train(m2_network_1, malignant2);  
view(m2_network_1)  
m2_window_1 = m2_network_1(malignant2);  
m2_result_1 = vec2ind(m2_window_1);  
M21 = reconstruct(m2_network_1, 32, m2_result_1);
```



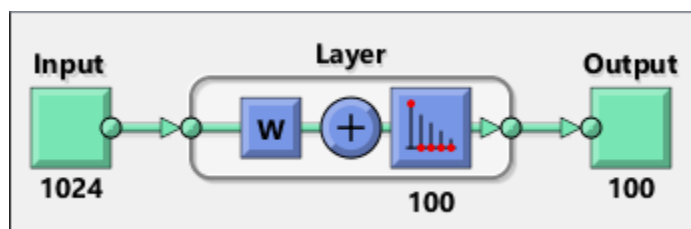
Show Malignant Image 2 5x5 Network

```
hFig = figure; hAxes = gca;  
  
hImage = imshow( uint8(M21), 'Parent', hAxes );  
title( hAxes, 'Malignant Image 2 of 5x5 Network' );
```



Malignant Image 2 10x10 Network

```
m2_network_2 = selforgmap([10,10]);  
[m2_network_2, tr2] = train(m2_network_2, malignant2);  
view(m2_network_2)  
m2_window_2 = m2_network_2(malignant2);  
m2_result_2 = vec2ind(m2_window_2);  
M22 = reconstruct(m2_network_2, 32, m2_result_2);
```



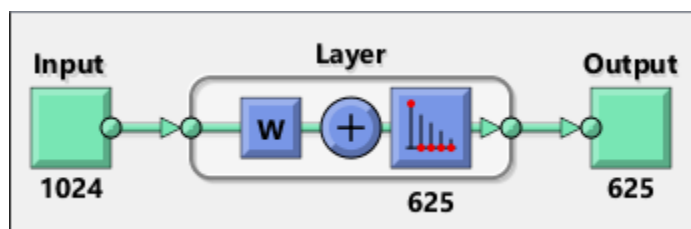
Show Malignant Image 2 10x10 Network

```
hFig = figure; hAxes = gca;  
  
hImage = imshow( uint8(M22), 'Parent', hAxes );  
title( hAxes, 'Malignant Image 2 of 10x10 Network' );
```



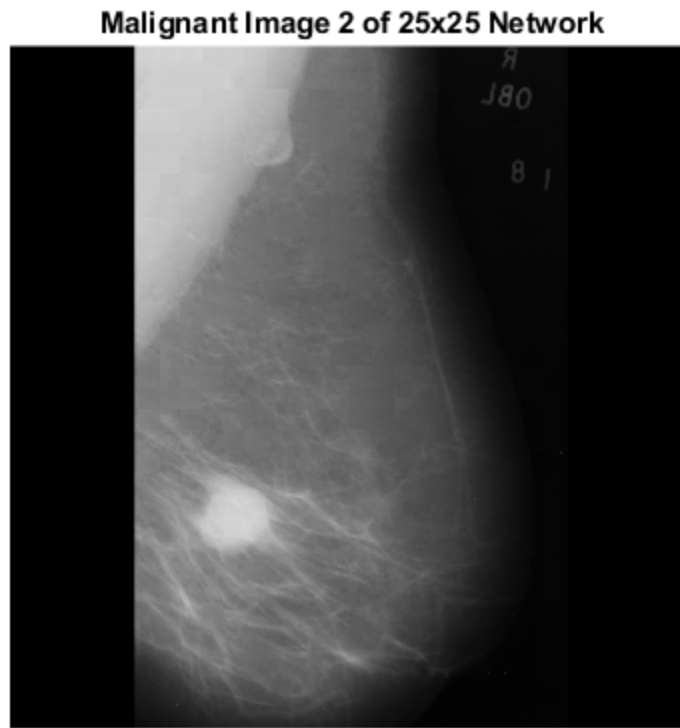
Malignant Image 2 25x25 Network

```
m2_network_3 = selforgmap([25,25]);  
[m2_network_3, tr3] = train(m2_network_3, malignant2);  
view(m2_network_3)  
m2_window_3 = m2_network_3(malignant2);  
m2_result_3 = vec2ind(m2_window_3);  
M23 = reconstruct(m2_network_3, 32, m2_result_3);
```



Show Malignant Image 2 25x25 Network

```
hFig = figure; hAxes = gca;  
  
hImage = imshow( uint8(M23), 'Parent', hAxes );  
title( hAxes, 'Malignant Image 2 of 25x25 Network' );
```



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