

```

1 !git clone https://github.com/fxlmer/AJPom\_cancer

Cloning into 'AJPom_cancer'...
remote: Enumerating objects: 81, done.
remote: Counting objects: 100% (81/81), done.
remote: Compressing objects: 100% (70/70), done.
remote: Total 98 (delta 40), reused 34 (delta 11), pack-reused 17
Unpacking objects: 100% (98/98), done.
Checking out files: 100% (16/16), done.

1 !git clone https://github.com/EvilPickle-PCSHSPT/AJPom\_cancer\_data

Cloning into 'AJPom_cancer_data'...
remote: Enumerating objects: 1203, done.
remote: Total 1203 (delta 0), reused 0 (delta 0), pack-reused 1203
Receiving objects: 100% (1203/1203), 1.45 GiB | 31.18 MiB/s, done.
Resolving deltas: 100% (47/47), done.
Checking out files: 100% (810/810), done.

```

## ▼ Import

```

1 import tensorflow as tf
2 from google.colab import files
3 from AJPom_cancer_utils import *

1 tf.compat.v1.disable_eager_execution()

1 test_model = tf.keras.models.load_model('/content/AJPom_cancer/AJPom_canc
1 # test_model.summary()

```

## ▼ Grad-CAM

```
1 last_conv2d = 'conv5_block16_2_conv'
```

## ▼ Cancer

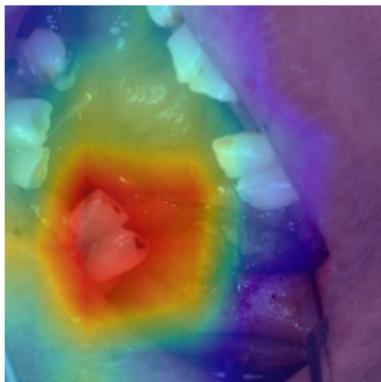
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
/usr/local/lib/python3.7/dist-packages/tensorflow/python/keras/engine/training.py:100: UserWarning: `Model.state_updates` will be removed in a future version. 'Model prediction:
```

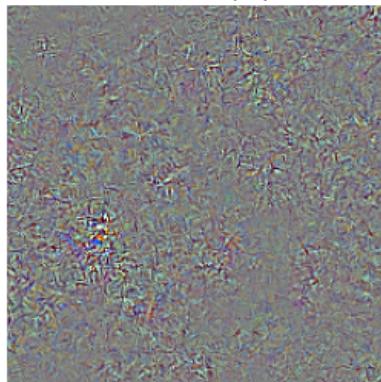
normal (1) with probability 0.974  
cancer (0) with probability 0.026

## Explanation for 'normal'

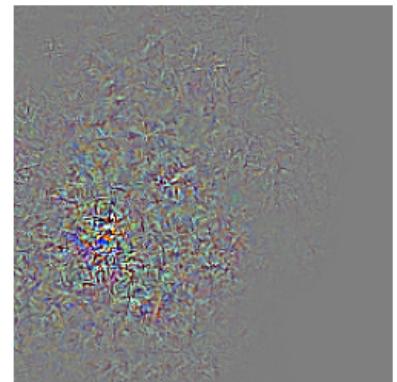
## GradCAM



## Guided Backprop



## Guided GradCAM



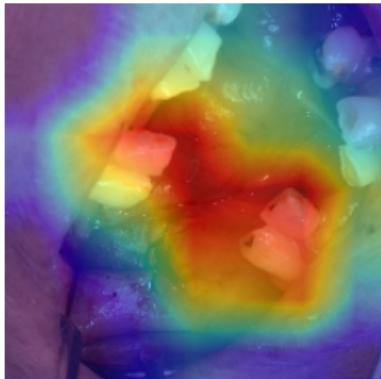
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

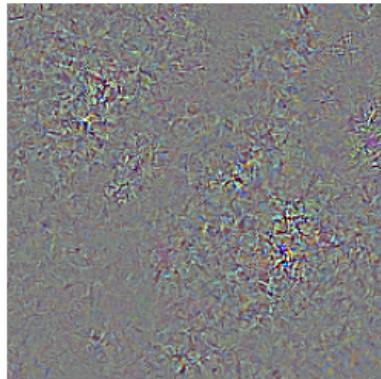
normal (1) with probability 0.939  
 cancer (0) with probability 0.061

## Explanation for 'normal'

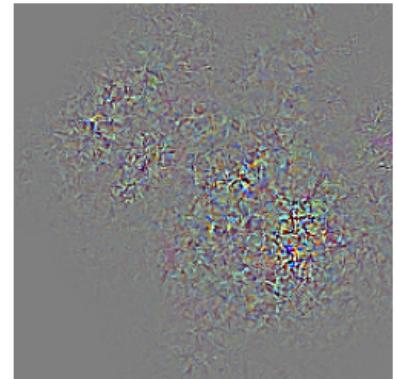
## GradCAM



## Guided Backprop



## Guided GradCAM

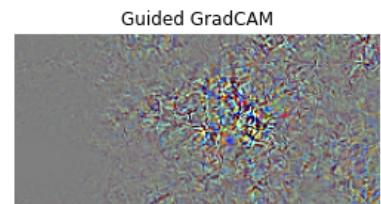
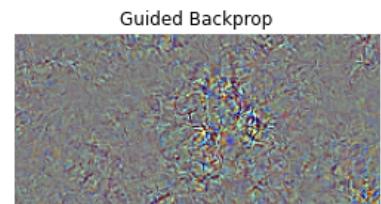
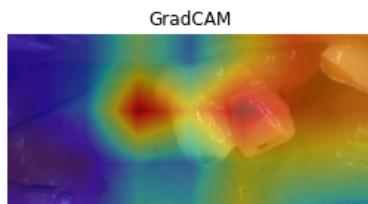


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.841
cancer	(0)	with probability 0.159

Explanation for 'normal'

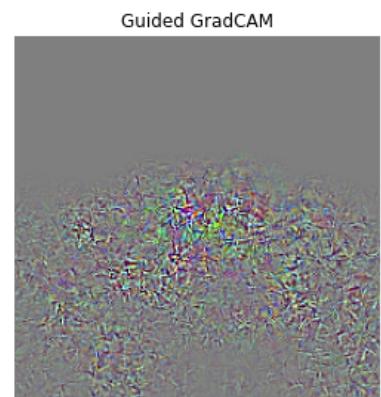
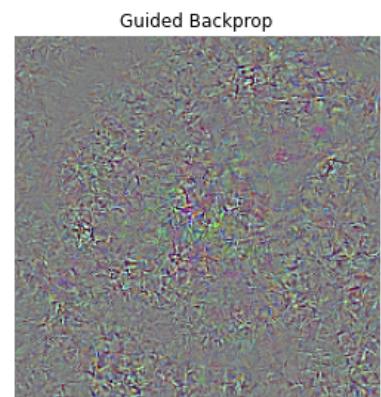
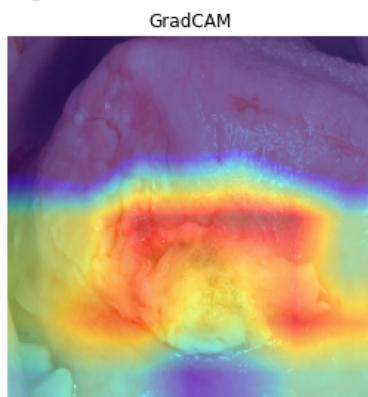


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.999
normal	(1)	with probability 0.001

Explanation for 'cancer'

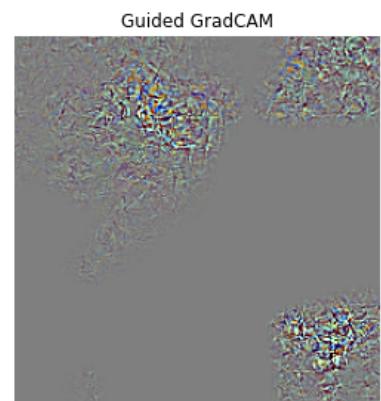
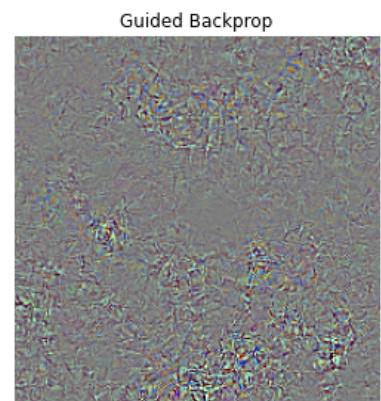
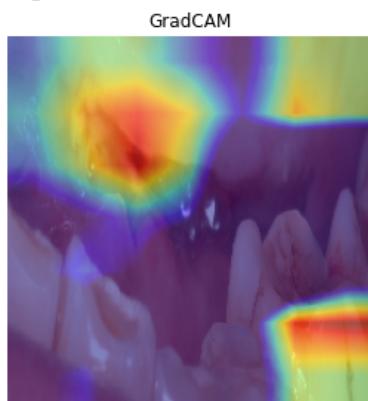


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.989
normal	(1)	with probability 0.011

Explanation for 'cancer'

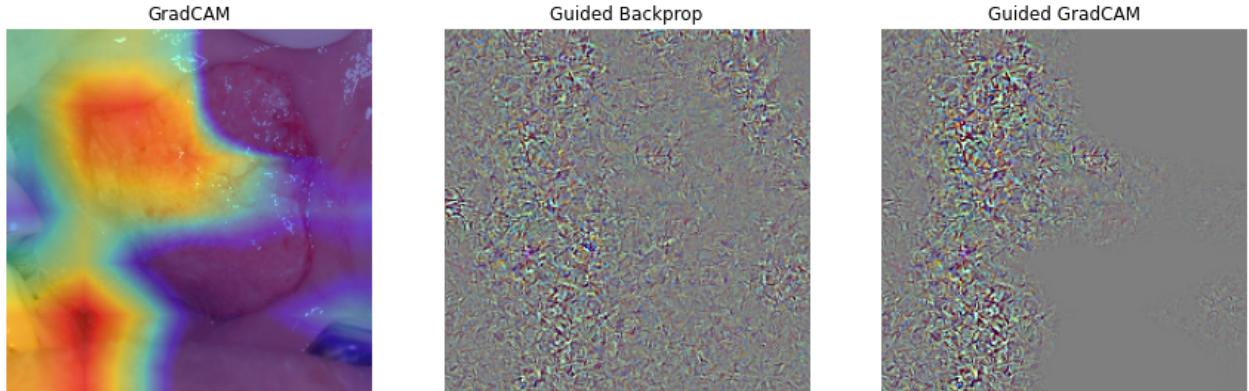


```

1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te

Model prediction:
    cancer      (0)      with probability 0.985
    normal      (1)      with probability 0.015
Explanation for 'cancer'

```

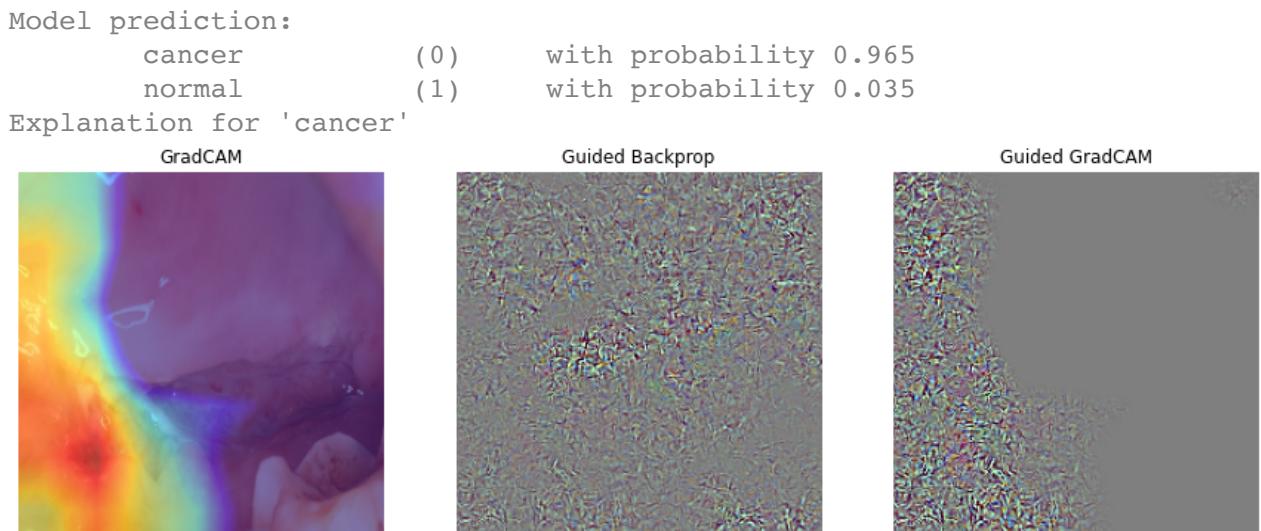


```

1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te

Model prediction:
    cancer      (0)      with probability 0.965
    normal      (1)      with probability 0.035
Explanation for 'cancer'

```



```

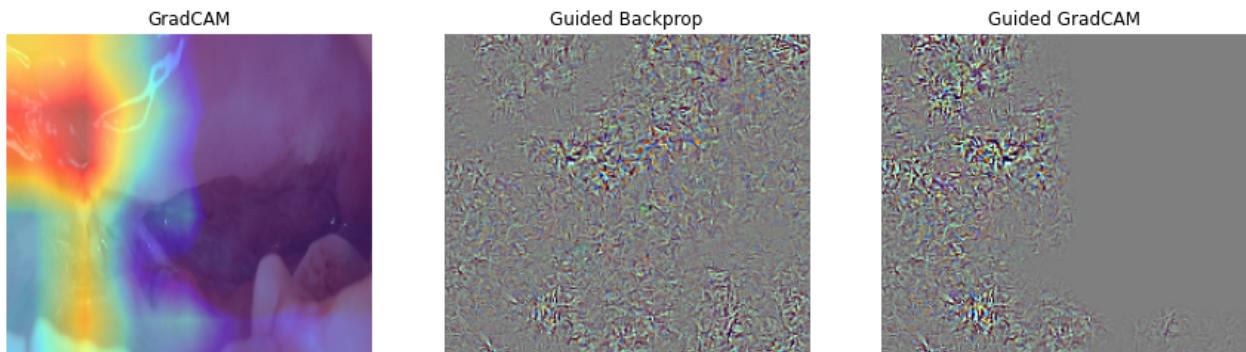
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te

```

Model prediction:

cancer	(0)	with probability 0.990
normal	(1)	with probability 0.010

Explanation for 'cancer'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.501
normal	(1)	with probability 0.499

Explanation for 'cancer'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

cancer	(0)	with probability 0.973
normal	(1)	with probability 0.027

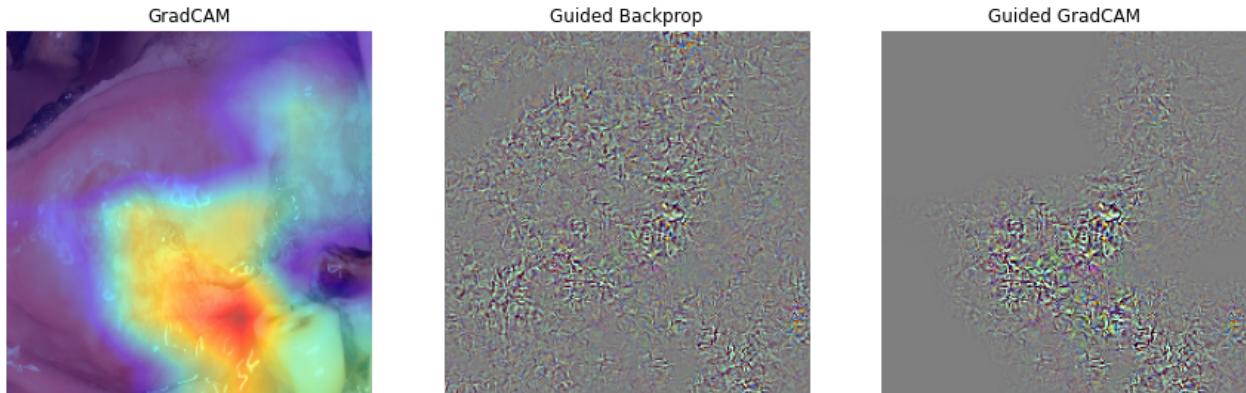
```
Explanation for 'cancer'
```

```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

cancer	(0)	with probability 0.996
normal	(1)	with probability 0.004

```
Explanation for 'cancer'
```

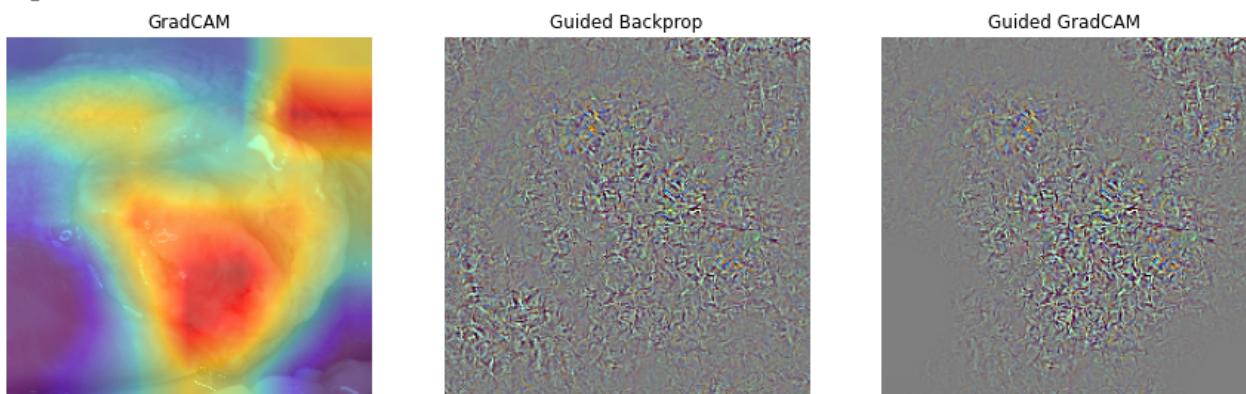


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

cancer	(0)	with probability 1.000
normal	(1)	with probability 0.000

```
Explanation for 'cancer'
```

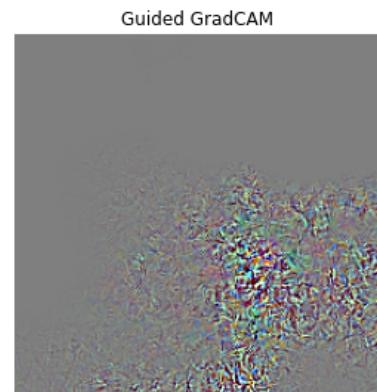
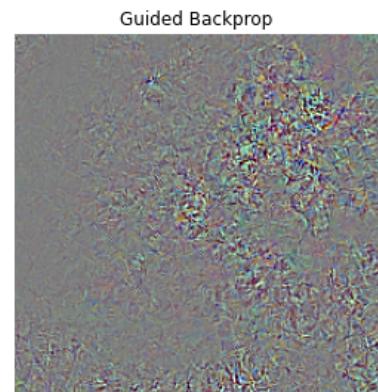
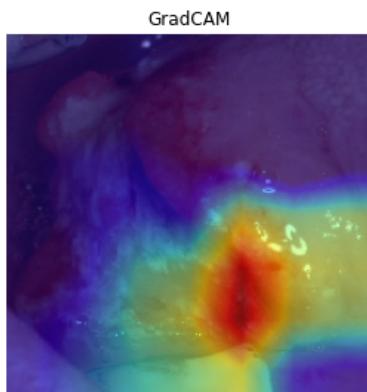


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.505
cancer	(0)	with probability 0.495

Explanation for 'normal'

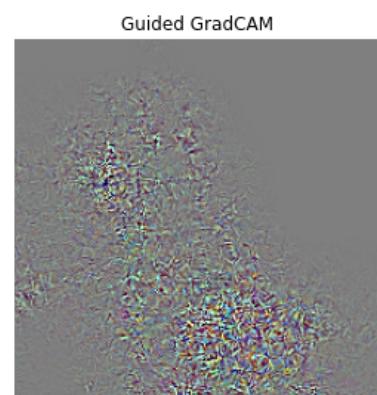
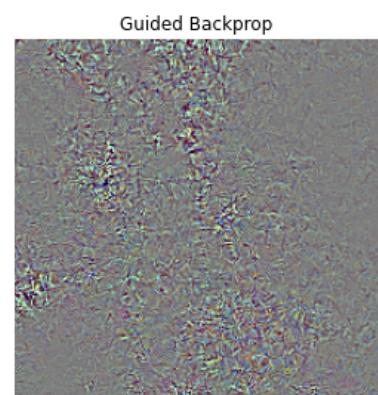
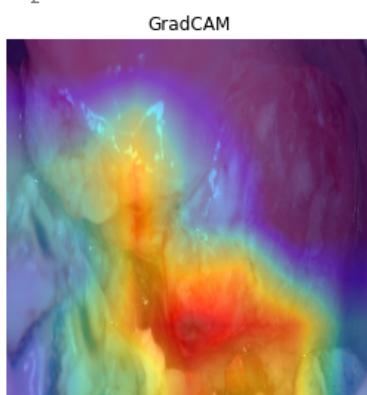


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.996
normal	(1)	with probability 0.004

Explanation for 'cancer'

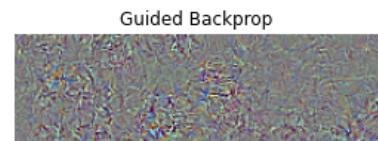
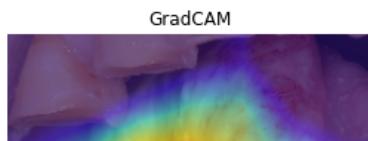


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.963
normal	(1)	with probability 0.037

Explanation for 'cancer'

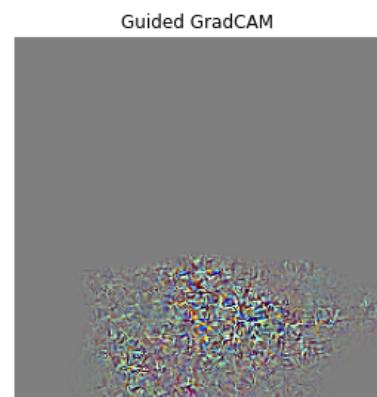
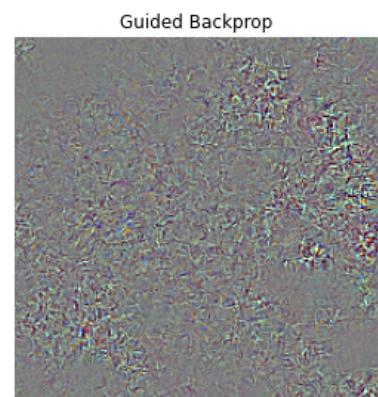
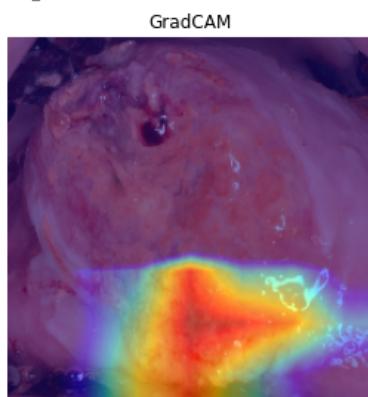


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.990
normal	(1)	with probability 0.010

Explanation for 'cancer'

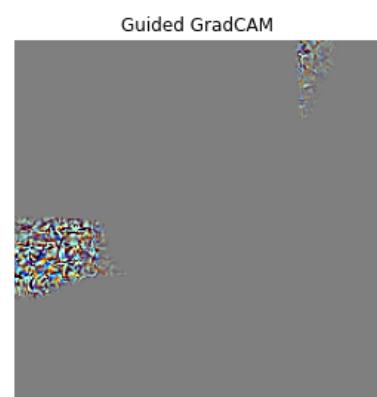
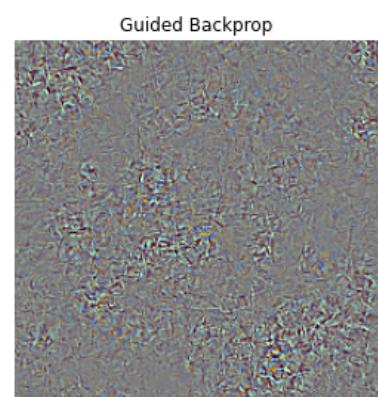
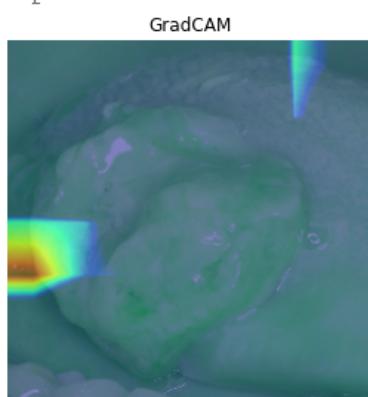


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.530
normal	(1)	with probability 0.470

Explanation for 'cancer'



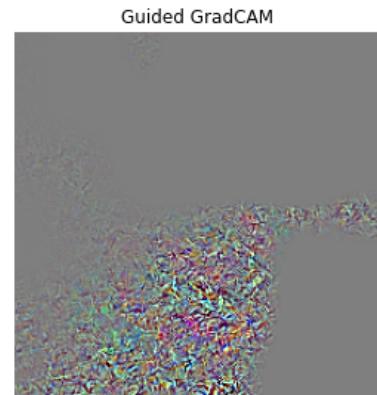
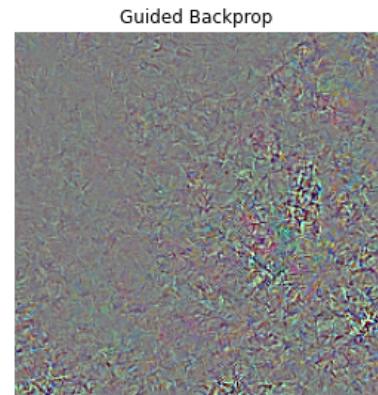
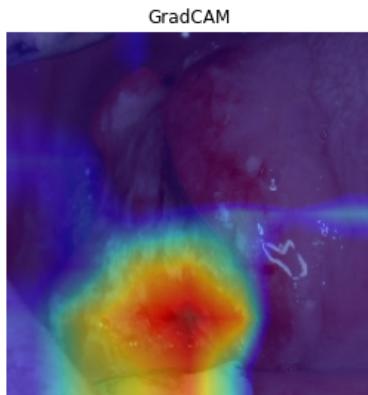
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
```

```
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.573
cancer	(0)	with probability 0.427

Explanation for 'normal'

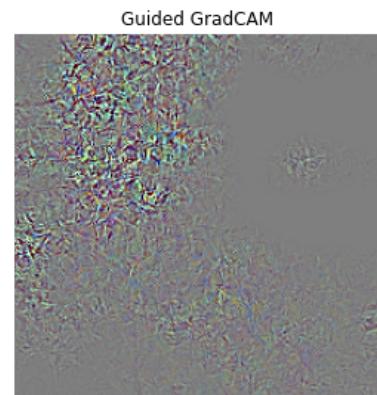
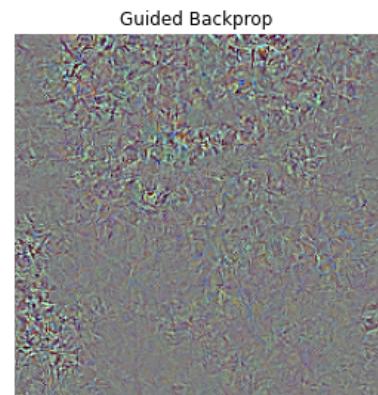
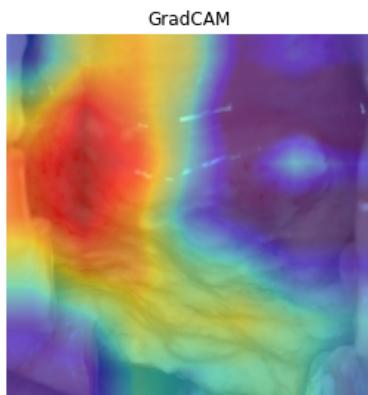


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.998
normal	(1)	with probability 0.002

Explanation for 'cancer'

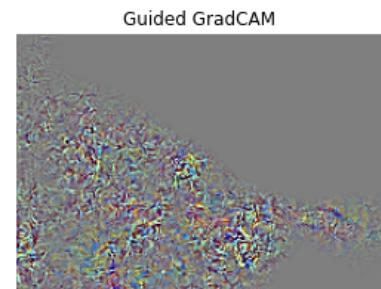
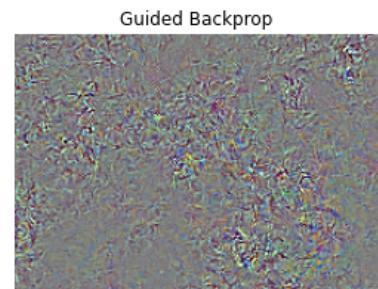
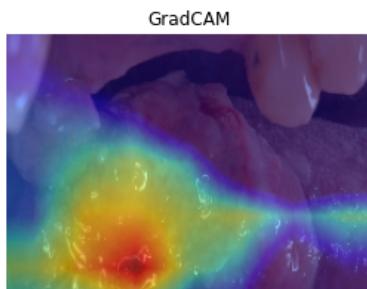


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.982
normal	(1)	with probability 0.018

Explanation for 'cancer'

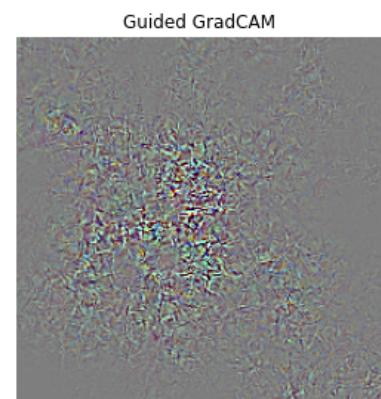
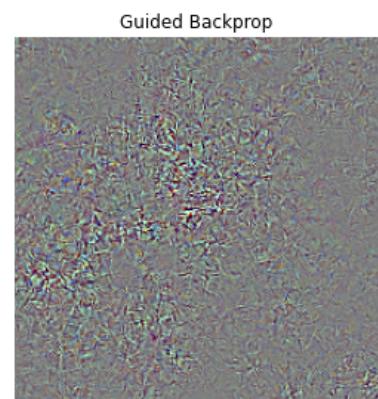
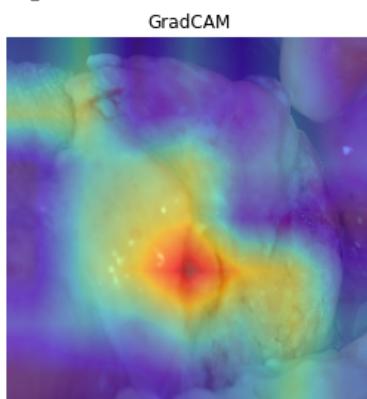


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.990
normal	(1)	with probability 0.010

Explanation for 'cancer'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

```
    normal      (1)    with probability 0.637
```

```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

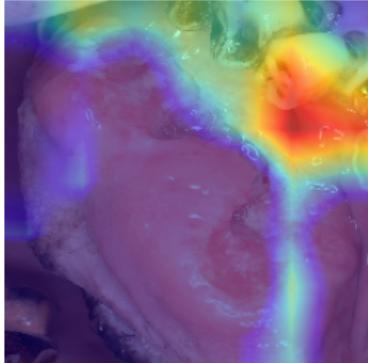
```
Model prediction:
```

```
    cancer      (0)    with probability 0.923
```

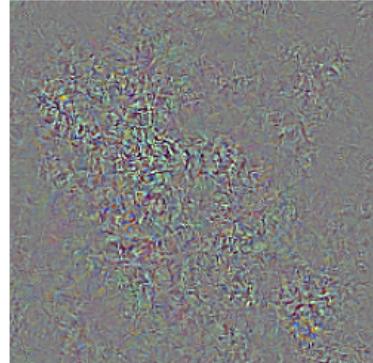
```
    normal      (1)    with probability 0.077
```

```
Explanation for 'cancer'
```

GradCAM



Guided Backprop



Guided GradCAM



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

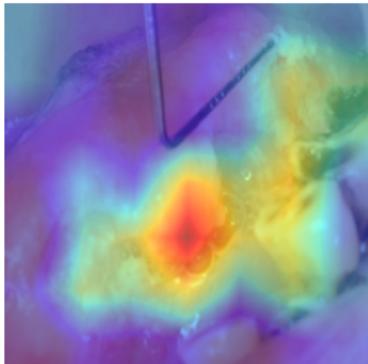
```
Model prediction:
```

```
    cancer      (0)    with probability 0.999
```

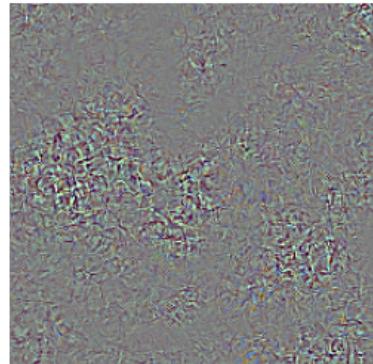
```
    normal      (1)    with probability 0.001
```

```
Explanation for 'cancer'
```

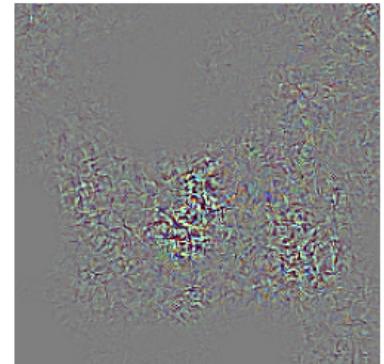
GradCAM



Guided Backprop



Guided GradCAM

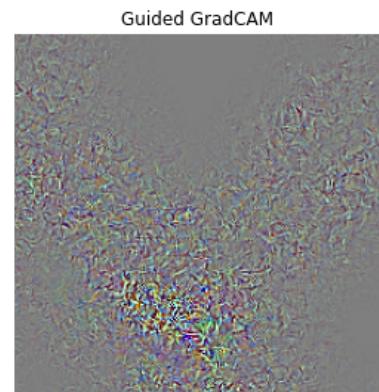
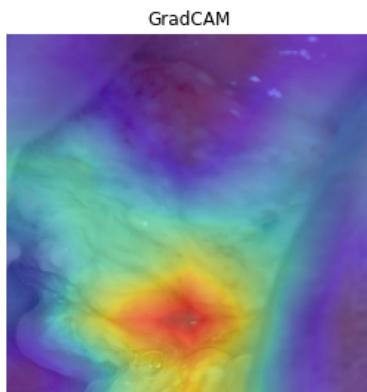


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_A_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 1.000
normal	(1)	with probability 0.000

Explanation for 'cancer'

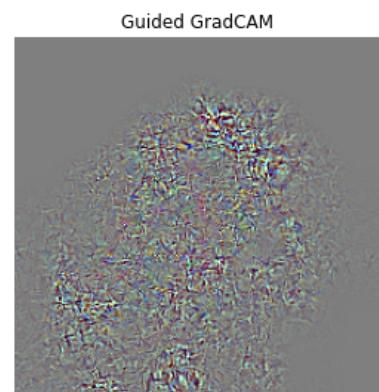
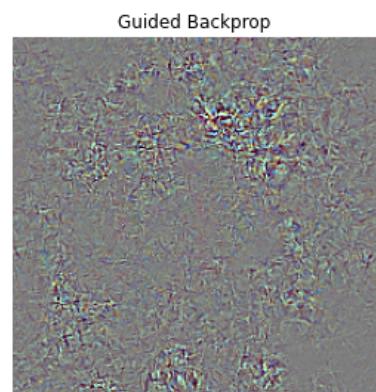
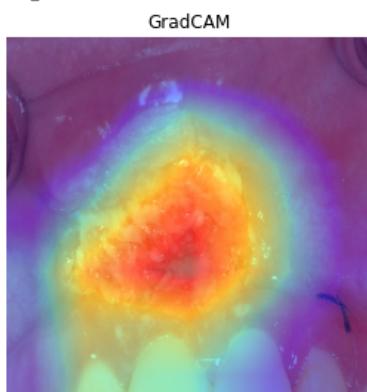


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.998
normal	(1)	with probability 0.002

Explanation for 'cancer'

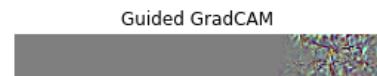
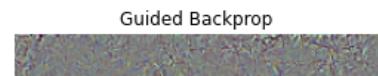
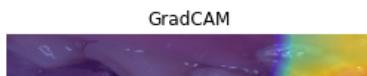


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.854
normal	(1)	with probability 0.146

Explanation for 'cancer'

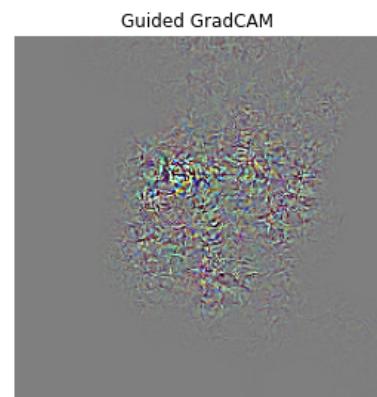
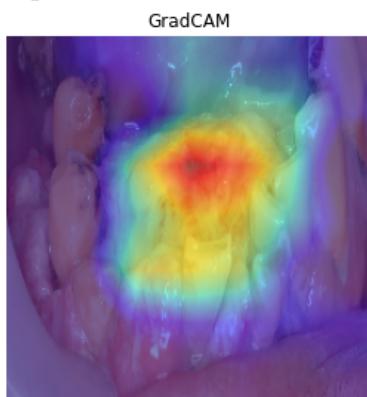


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.983
normal	(1)	with probability 0.017

Explanation for 'cancer'

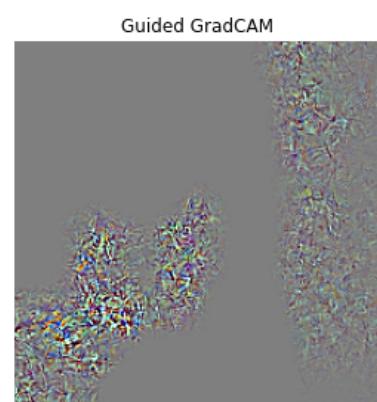
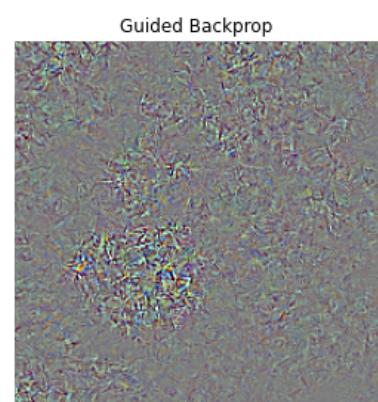
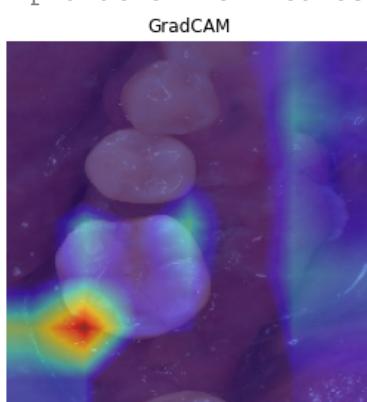


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.878
normal	(1)	with probability 0.122

Explanation for 'cancer'

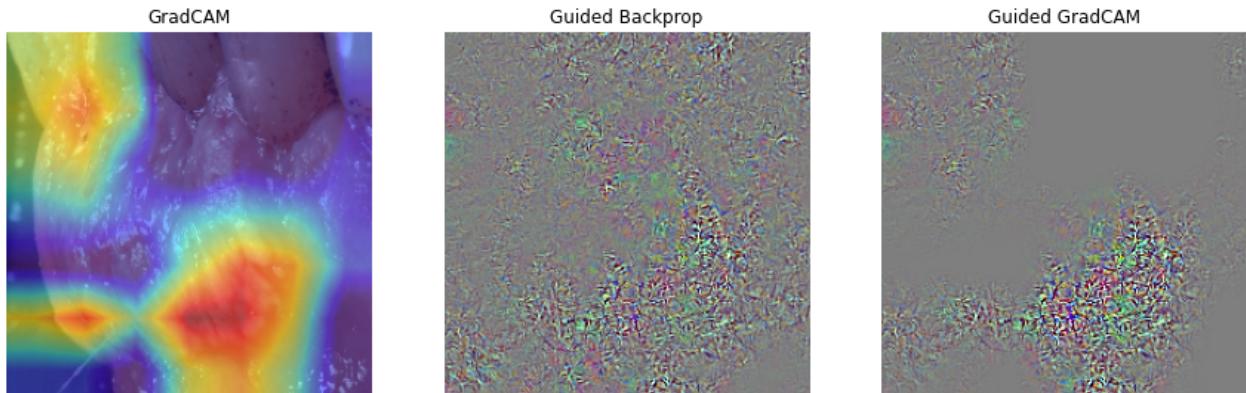


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.949
normal	(1)	with probability 0.051

Explanation for 'cancer'

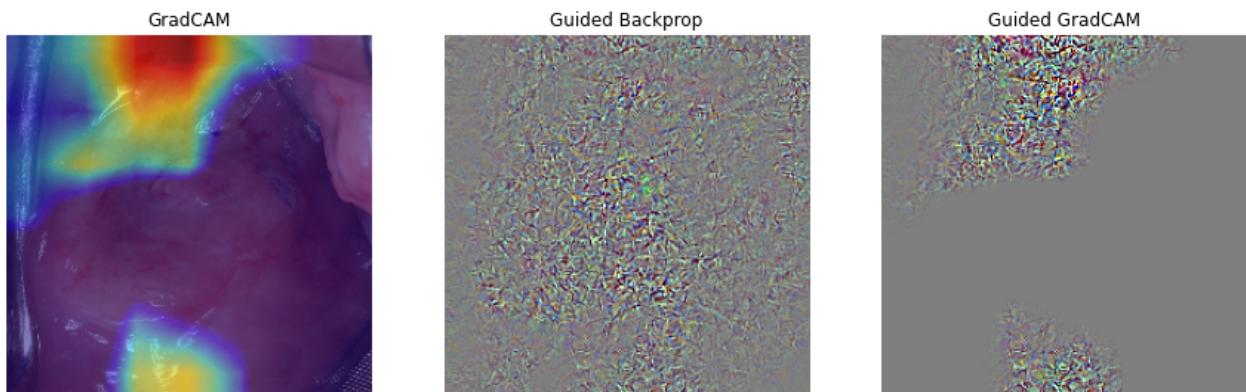


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.623
normal	(1)	with probability 0.377

Explanation for 'cancer'

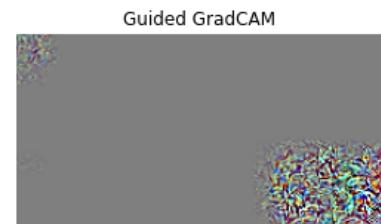
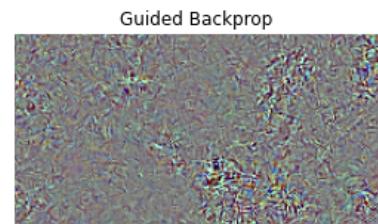
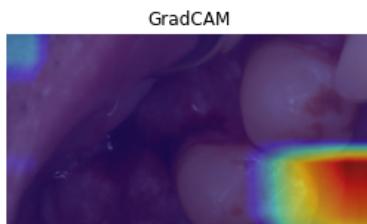


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.911
normal	(1)	with probability 0.089

Explanation for 'cancer'



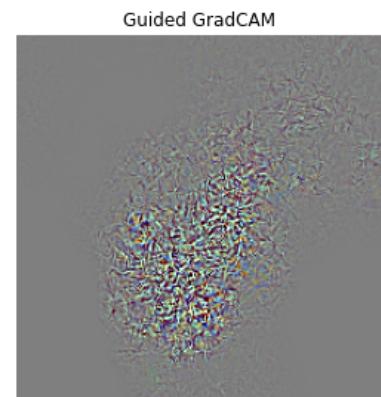
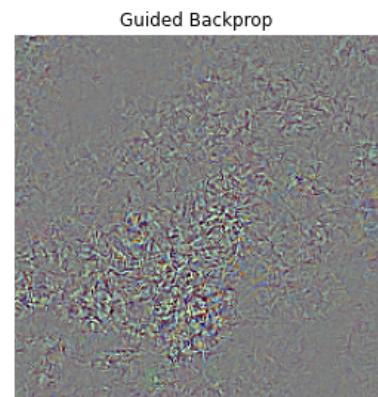
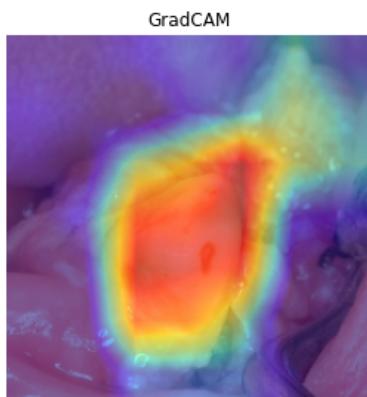
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
/usr/local/lib/python3.7/dist-packages/tensorflow/python/keras/engine/training
  warnings.warn(`Model.state_updates` will be removed in a future version. '
```

Model prediction:

cancer	(0)	with probability 0.998
normal	(1)	with probability 0.002

Explanation for 'cancer'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

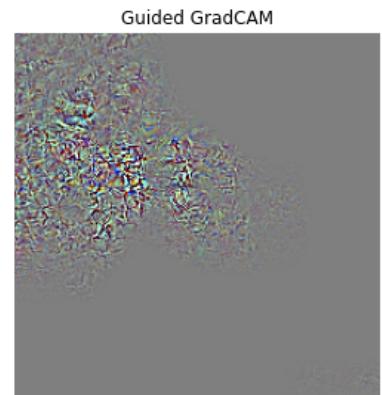
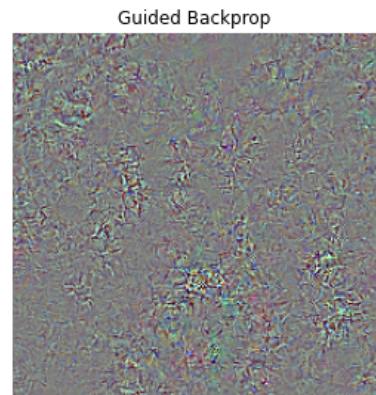
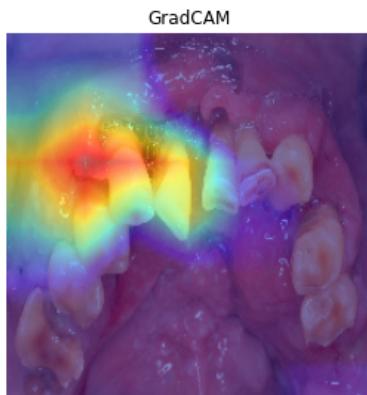
cancer	(0)	with probability 0.968
normal	(1)	with probability 0.032

```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

normal	(1)	with probability 0.690
cancer	(0)	with probability 0.310

```
Explanation for 'normal'
```

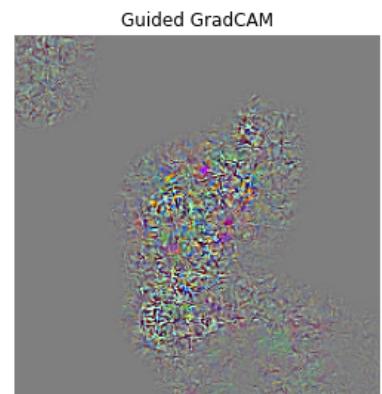
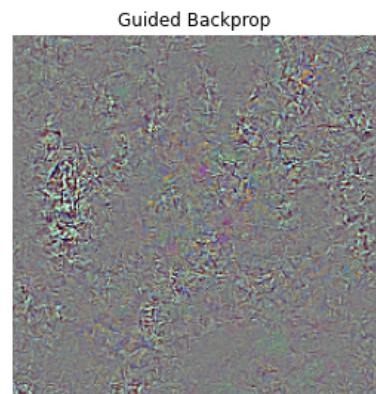
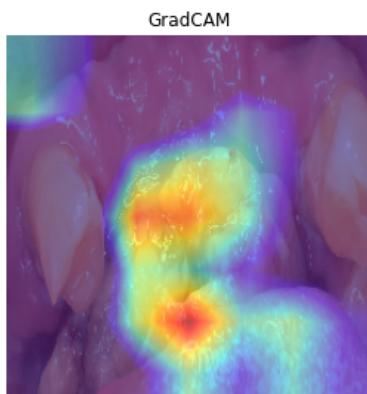


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

cancer	(0)	with probability 0.951
normal	(1)	with probability 0.049

```
Explanation for 'cancer'
```

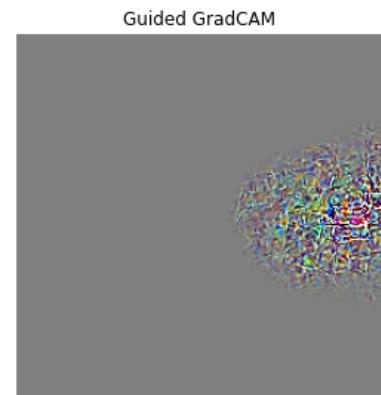
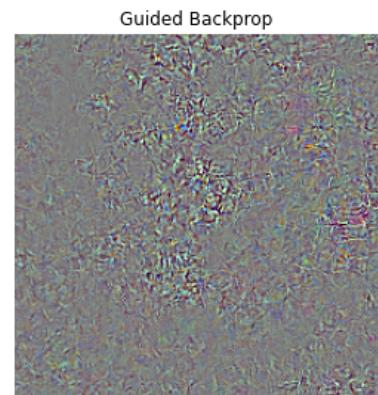
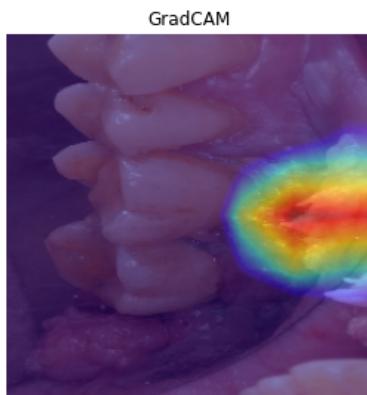


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.936
normal	(1)	with probability 0.064

Explanation for 'cancer'

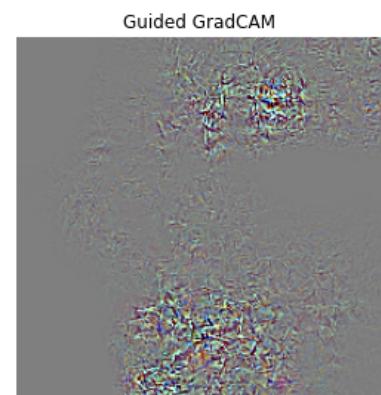
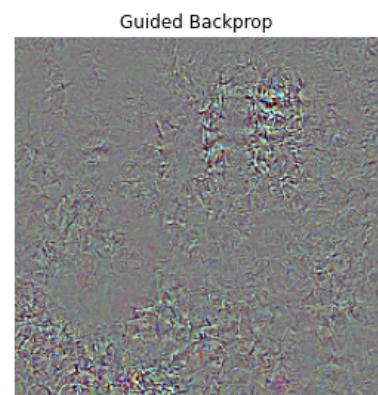
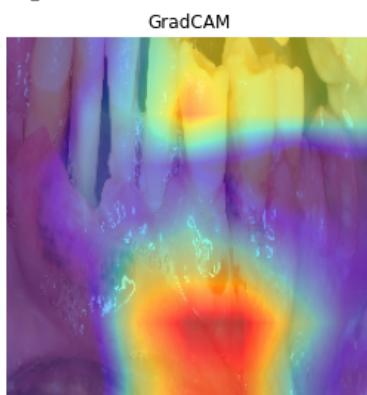


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.580
cancer	(0)	with probability 0.420

Explanation for 'normal'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.659
cancer	(0)	with probability 0.341

Explanation for 'normal'

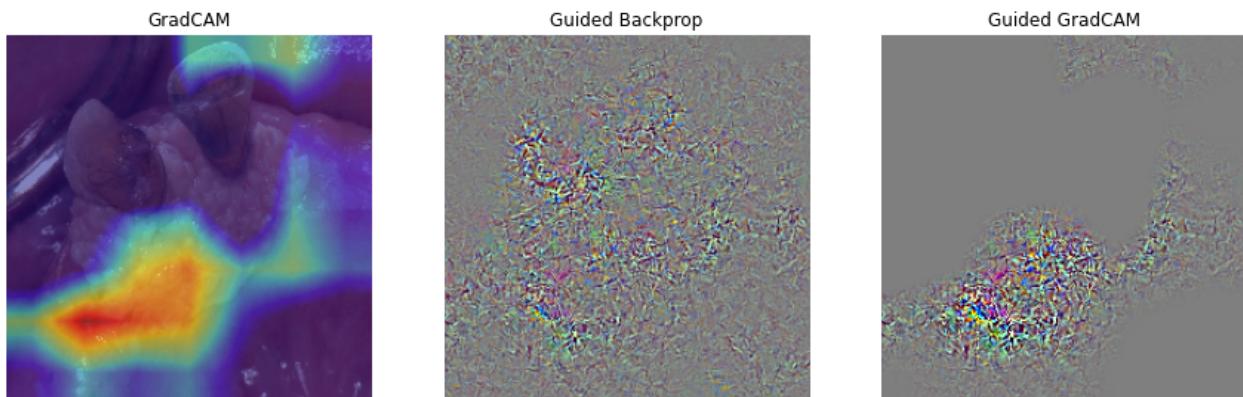


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.972
normal	(1)	with probability 0.028

Explanation for 'cancer'

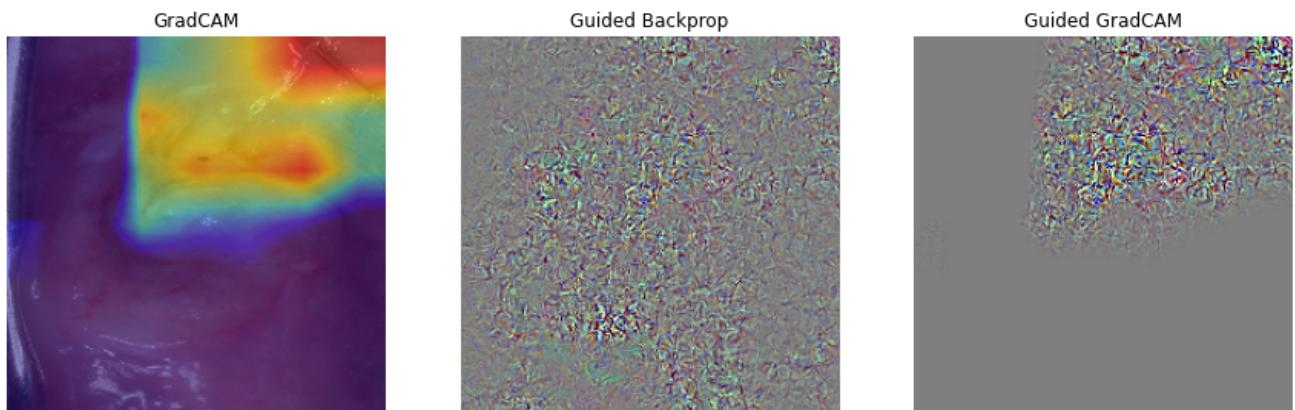


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.904
normal	(1)	with probability 0.096

Explanation for 'cancer'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.939
normal	(1)	with probability 0.061

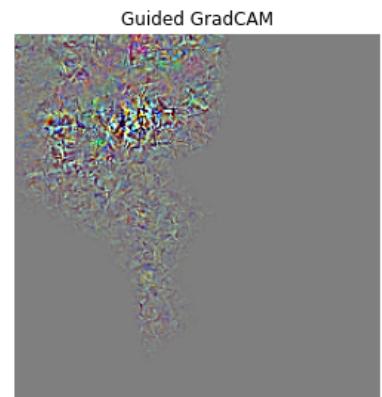
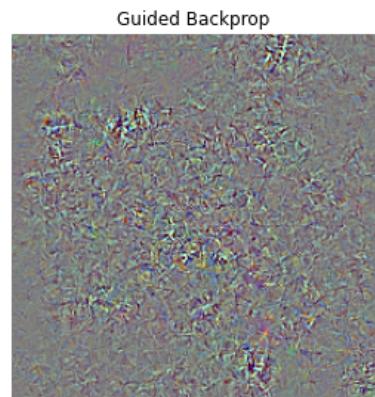
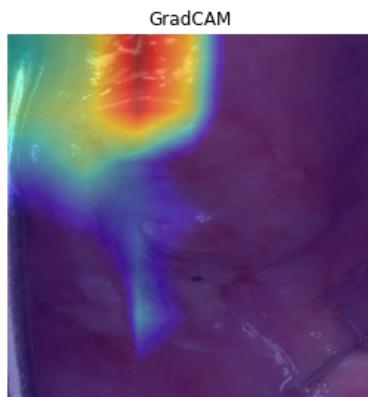
Explanation for 'cancer'

```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.912
normal	(1)	with probability 0.088

Explanation for 'cancer'

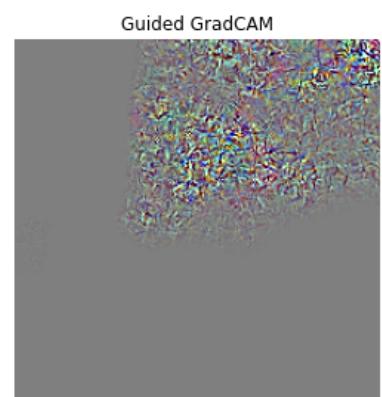
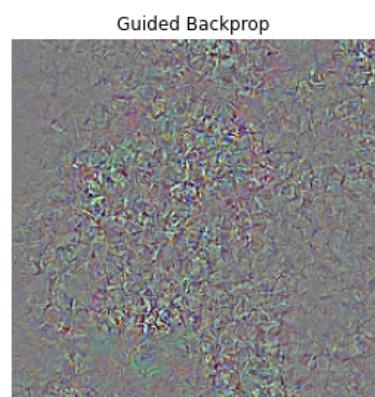
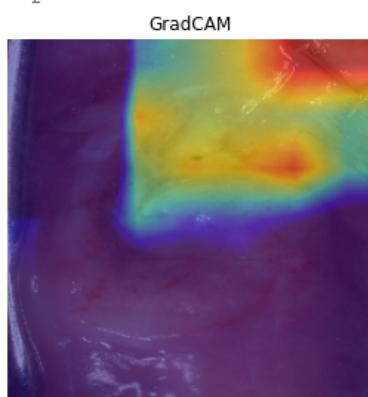


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.904
normal	(1)	with probability 0.096

Explanation for 'cancer'

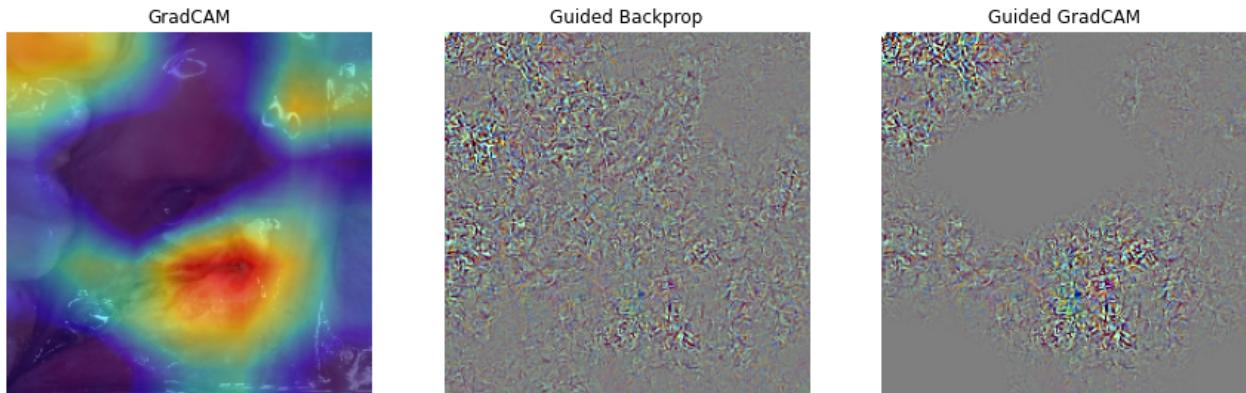


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.908
normal	(1)	with probability 0.092

Explanation for 'cancer'

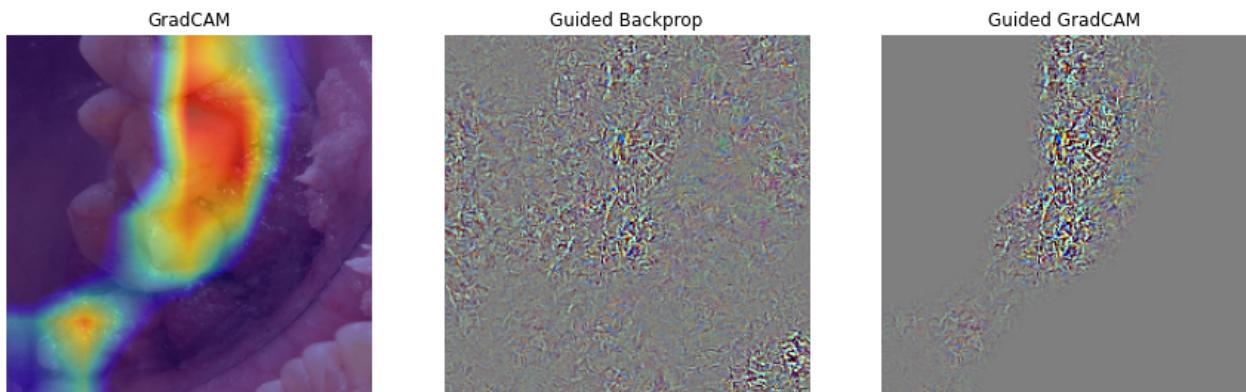


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.991
normal	(1)	with probability 0.009

Explanation for 'cancer'

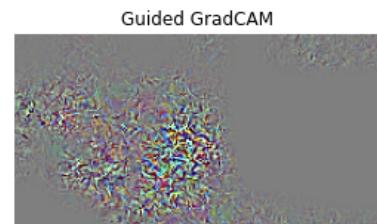
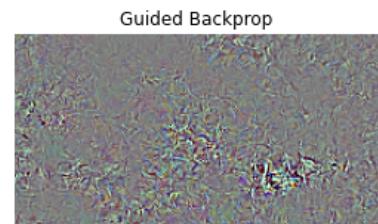
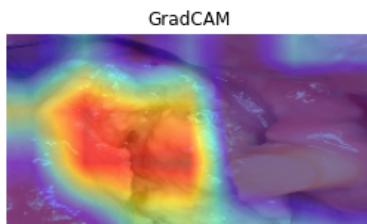


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.990
normal	(1)	with probability 0.010

Explanation for 'cancer'

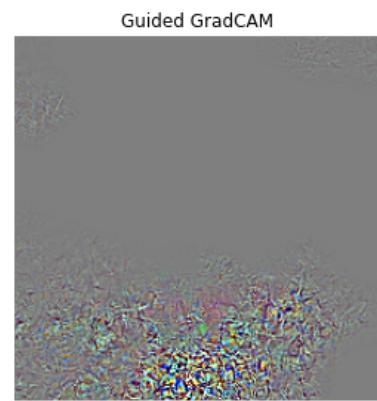
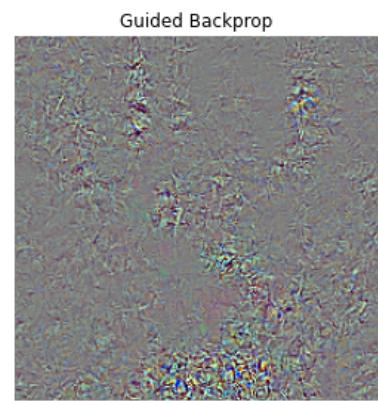
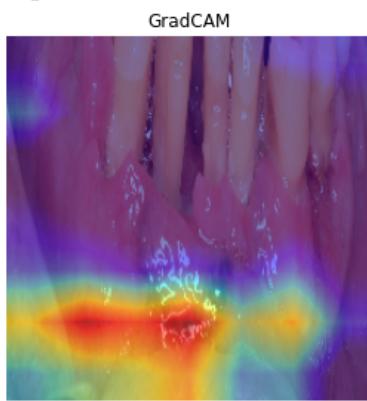


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.760
normal	(1)	with probability 0.240

Explanation for 'cancer'

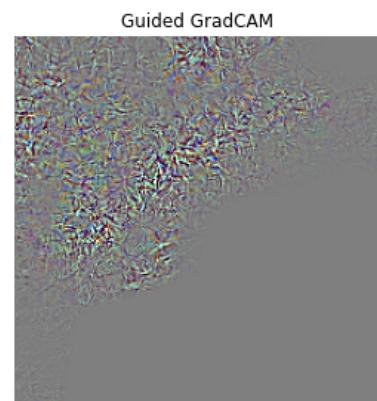
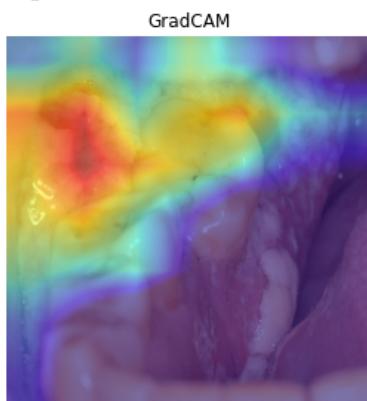


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.998
normal	(1)	with probability 0.002

Explanation for 'cancer'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.642
cancer	(0)	with probability 0.358

Explanation for 'normal'

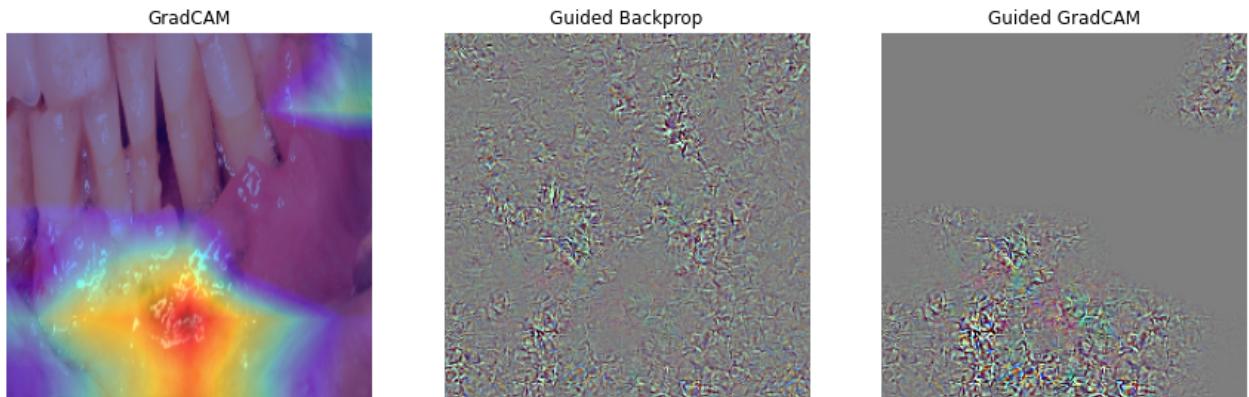


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.763
normal	(1)	with probability 0.237

Explanation for 'cancer'

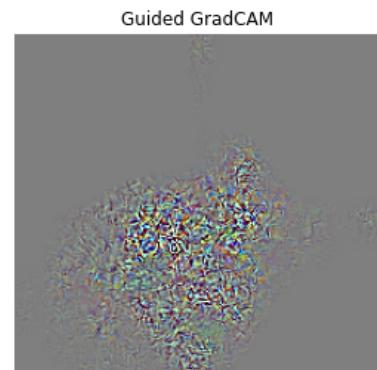
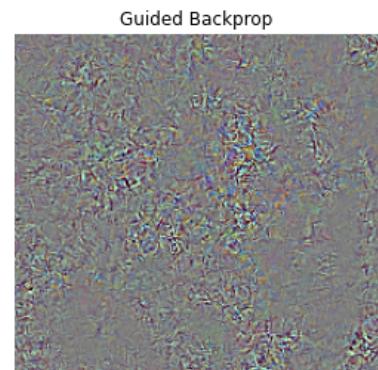
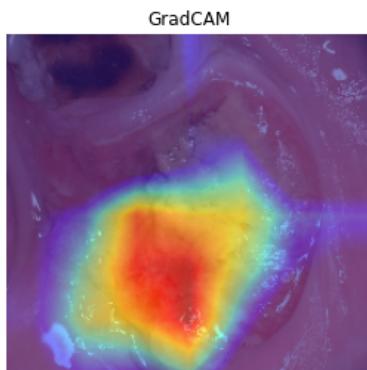


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.994
normal	(1)	with probability 0.006

Explanation for 'cancer'

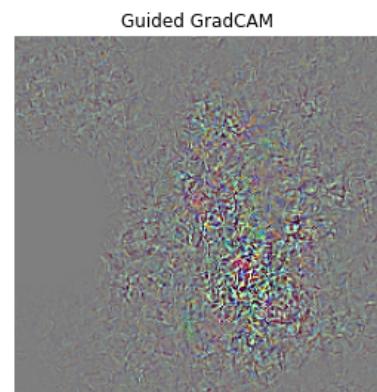
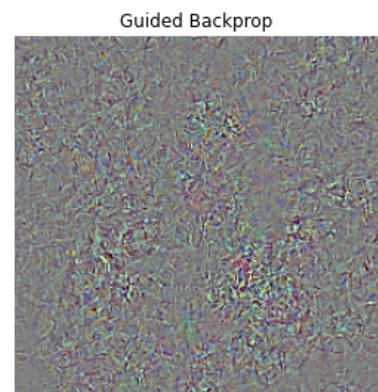
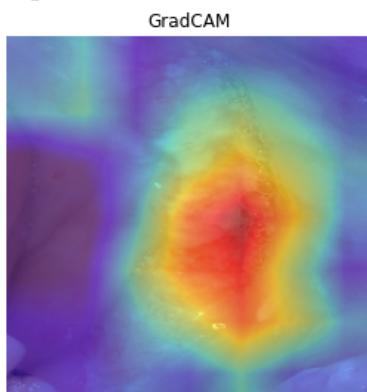


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.993
normal	(1)	with probability 0.007

Explanation for 'cancer'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

cancer	(0)	with probability 0.992
normal	(1)	with probability 0.008

```
Explanation for 'cancer'
```

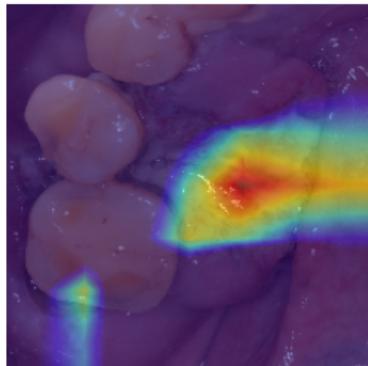
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

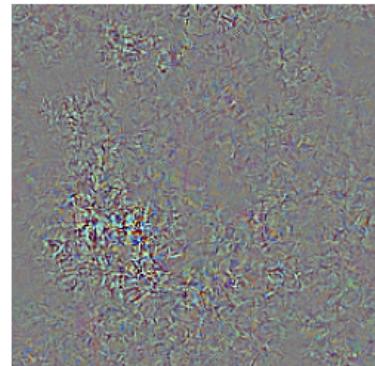
cancer	(0)	with probability 0.993
normal	(1)	with probability 0.007

```
Explanation for 'cancer'
```

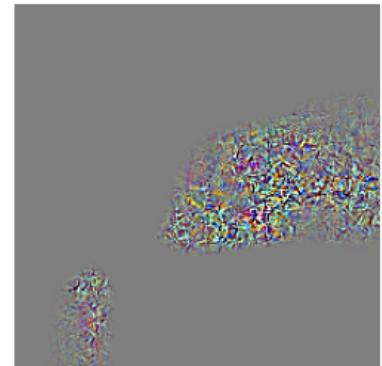
GradCAM



Guided Backprop



Guided GradCAM



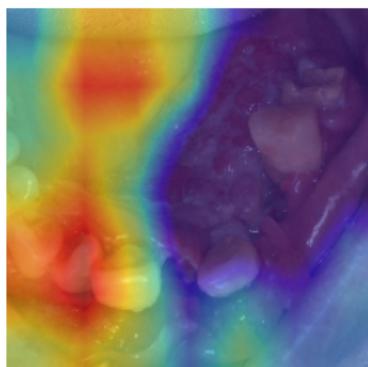
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

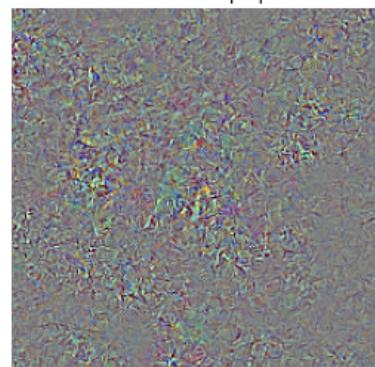
normal	(1)	with probability 0.738
cancer	(0)	with probability 0.262

```
Explanation for 'normal'
```

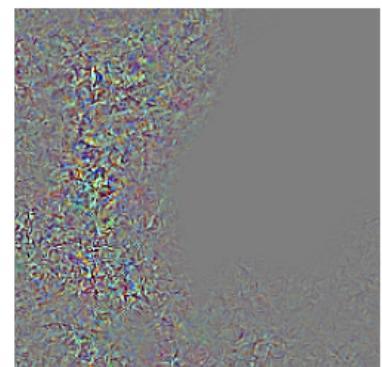
GradCAM



Guided Backprop



Guided GradCAM

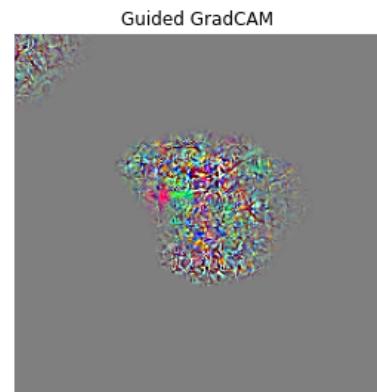
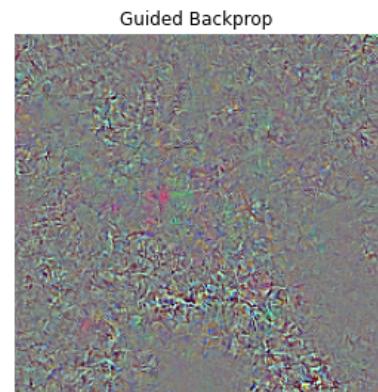
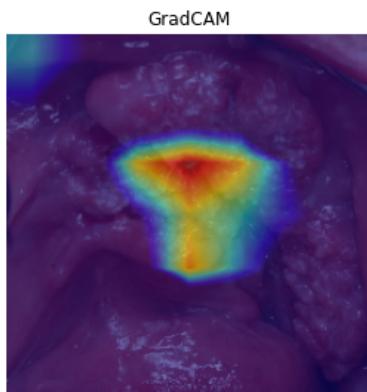


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.794
normal	(1)	with probability 0.206

Explanation for 'cancer'

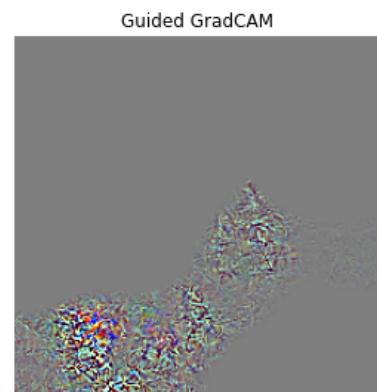
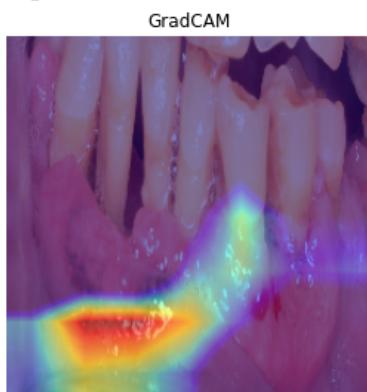


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.820
normal	(1)	with probability 0.180

Explanation for 'cancer'

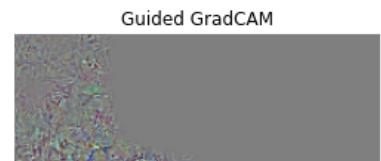
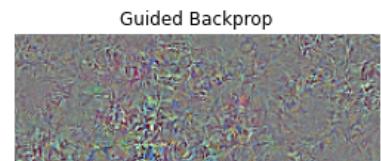
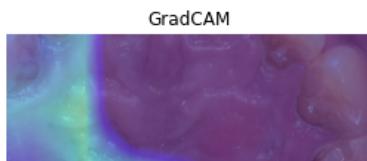


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.872
normal	(1)	with probability 0.128

Explanation for 'cancer'

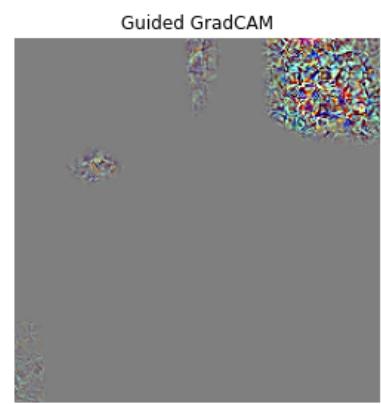
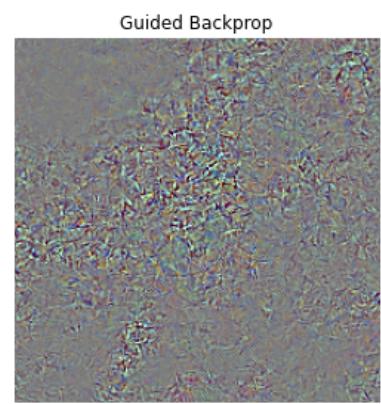
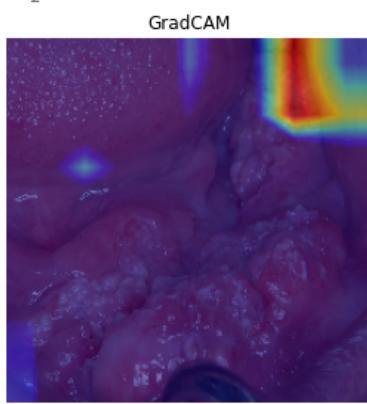


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.612
normal	(1)	with probability 0.388

Explanation for 'cancer'

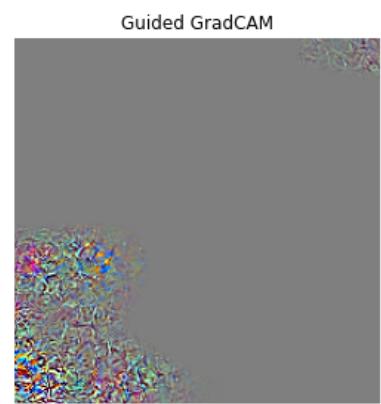
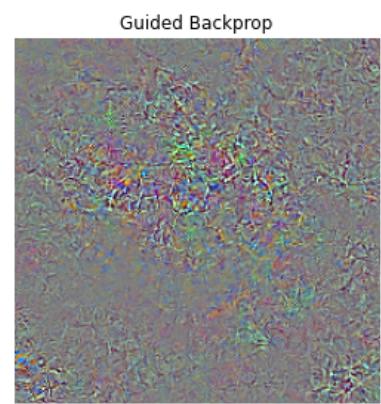
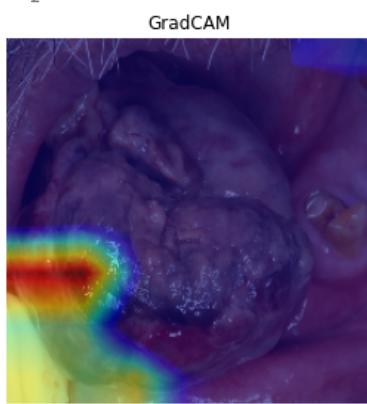


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.564
normal	(1)	with probability 0.436

Explanation for 'cancer'

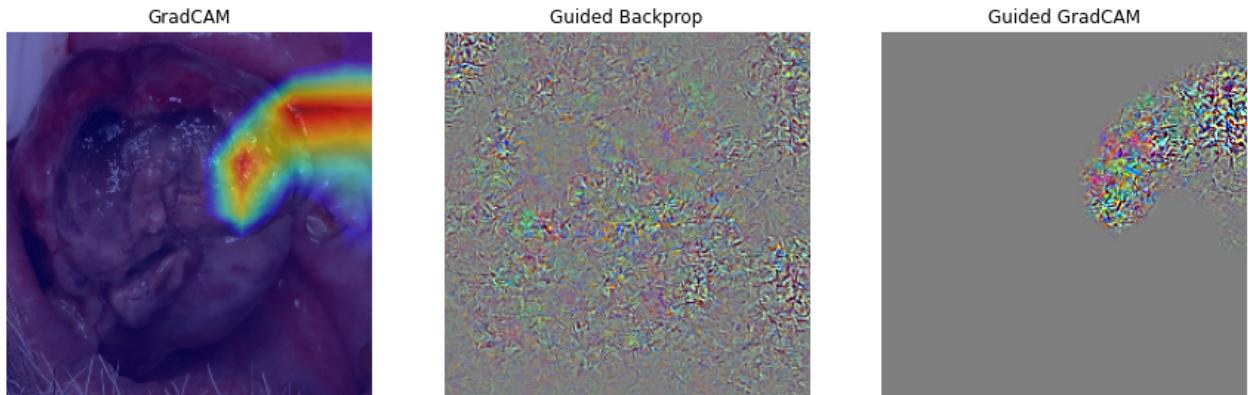


```
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, tε
```

Model prediction:

cancer	(0)	with probability 0.668
normal	(1)	with probability 0.332

Explanation for 'cancer'

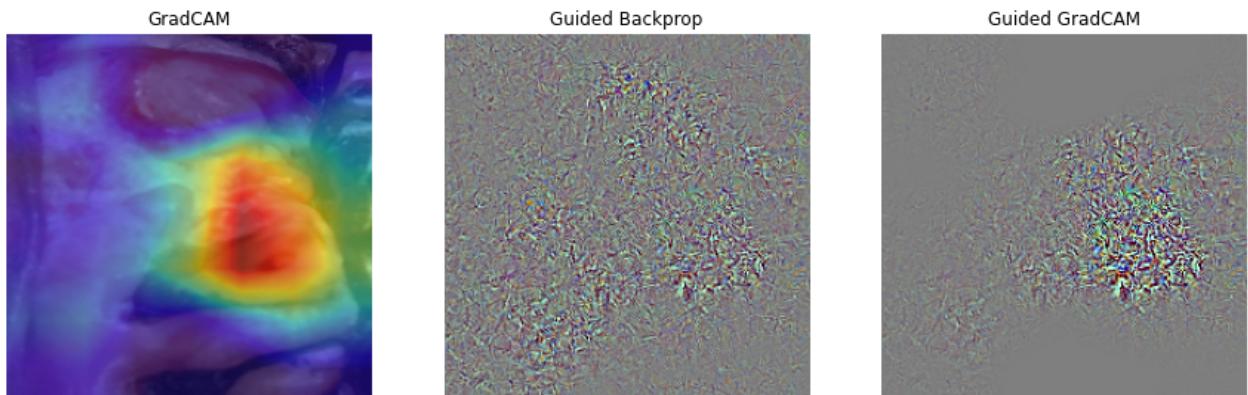


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, tε
```

Model prediction:

cancer	(0)	with probability 0.994
normal	(1)	with probability 0.006

Explanation for 'cancer'

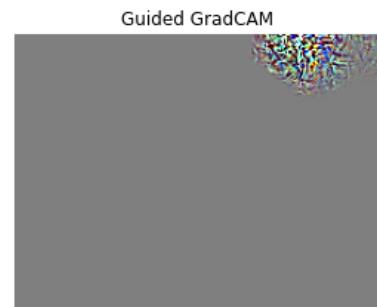
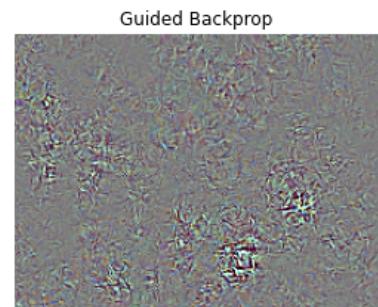


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, tε
```

Model prediction:

cancer	(0)	with probability 0.740
normal	(1)	with probability 0.260

Explanation for 'cancer'



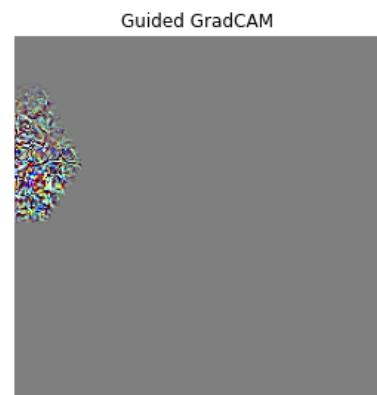
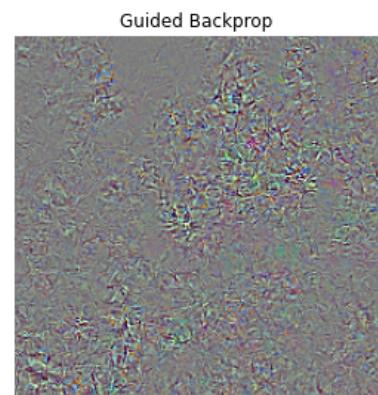
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
/usr/local/lib/python3.7/dist-packages/tensorflow/python/keras/engine/training
  warnings.warn(`Model.state_updates` will be removed in a future version. `

Model prediction:
```

cancer	(0)	with probability 0.936
normal	(1)	with probability 0.064

Explanation for 'cancer'

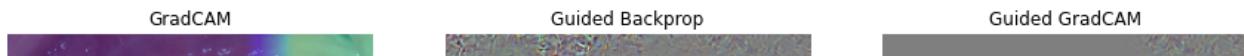


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.684
normal	(1)	with probability 0.316

Explanation for 'cancer'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.940
normal	(1)	with probability 0.060

Explanation for 'cancer'

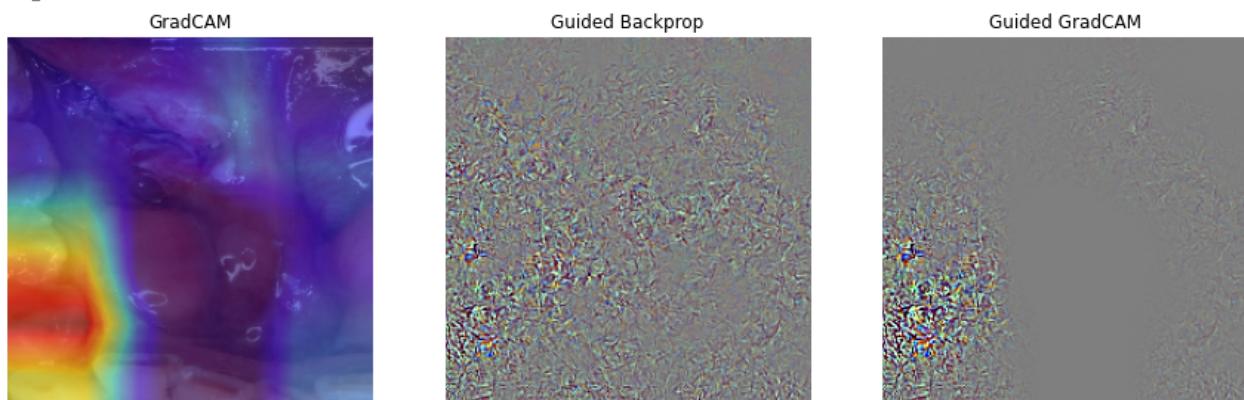


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.922
normal	(1)	with probability 0.078

Explanation for 'cancer'

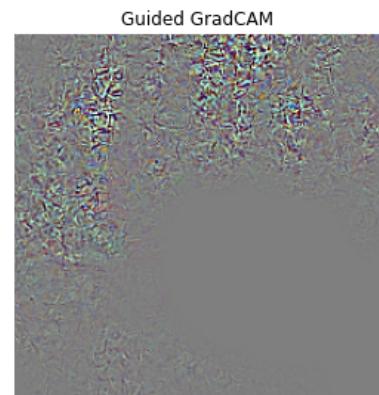
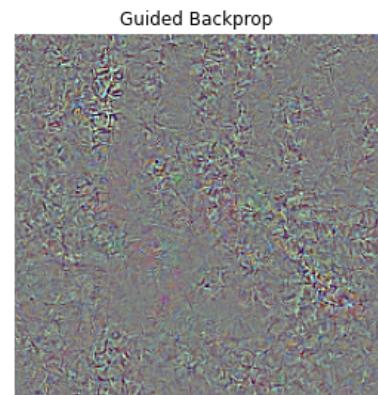
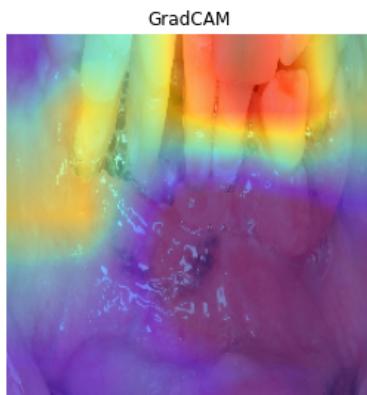


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.719
cancer	(0)	with probability 0.281

Explanation for 'normal'

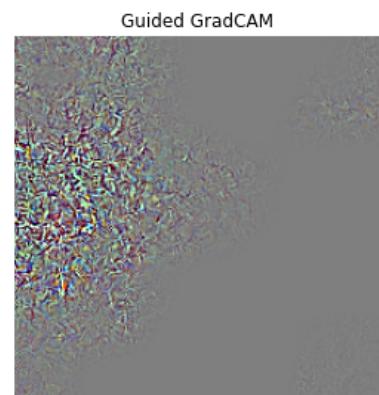
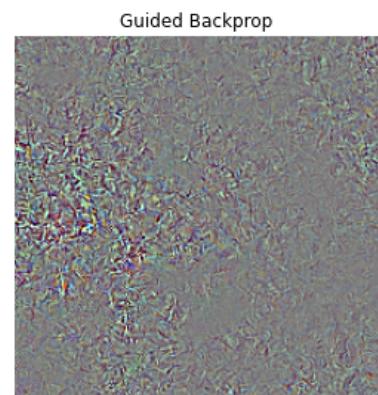
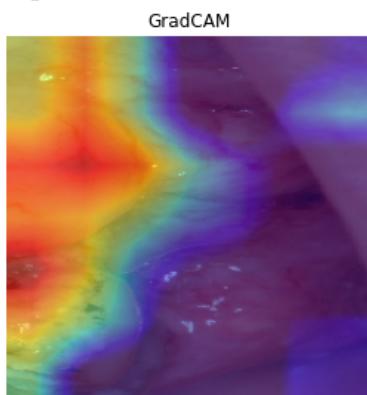


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.999
normal	(1)	with probability 0.001

Explanation for 'cancer'

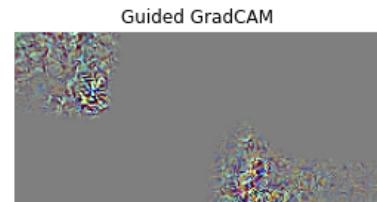
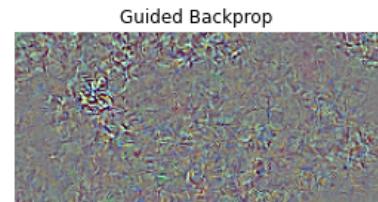
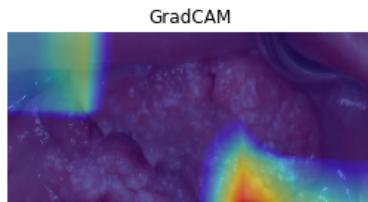


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.733
normal	(1)	with probability 0.267

Explanation for 'cancer'

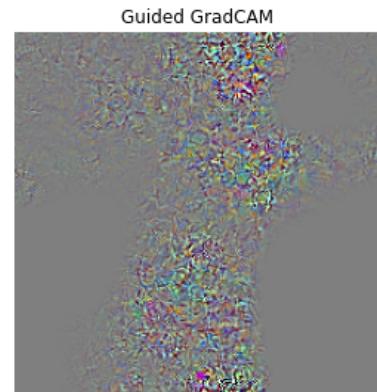
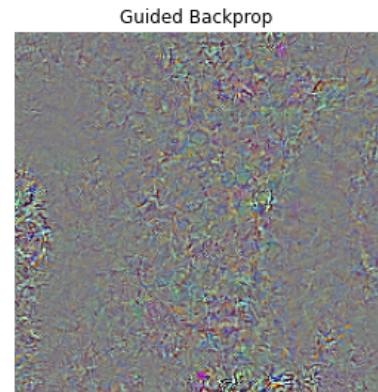
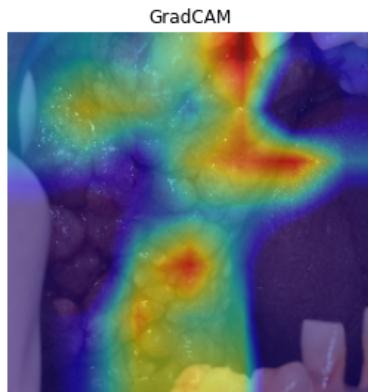


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.827
normal	(1)	with probability 0.173

Explanation for 'cancer'

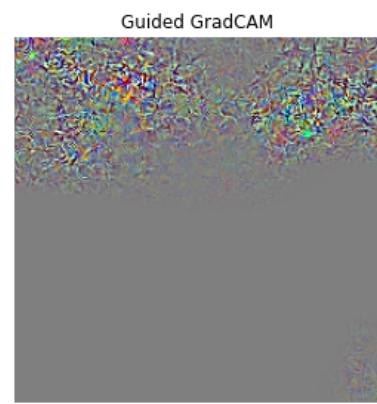
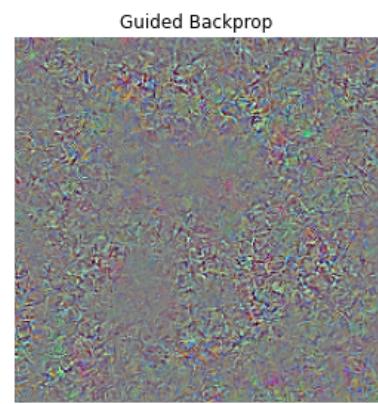
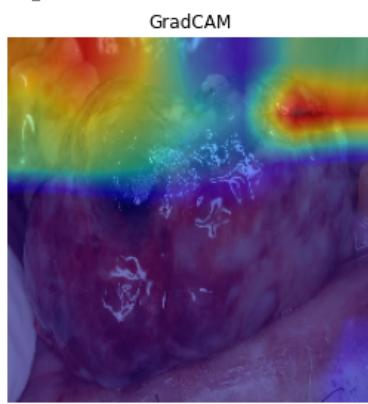


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.689
normal	(1)	with probability 0.311

Explanation for 'cancer'



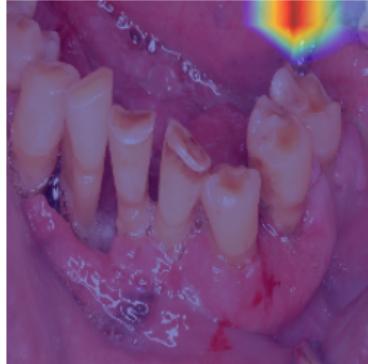
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

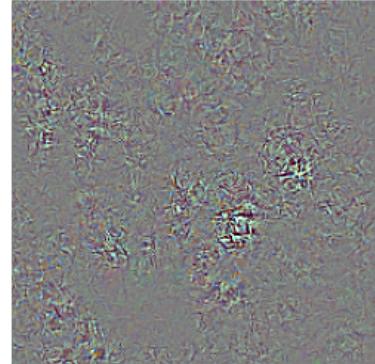
cancer	(0)	with probability 0.740
normal	(1)	with probability 0.260

Explanation for 'cancer'

GradCAM



Guided Backprop



Guided GradCAM



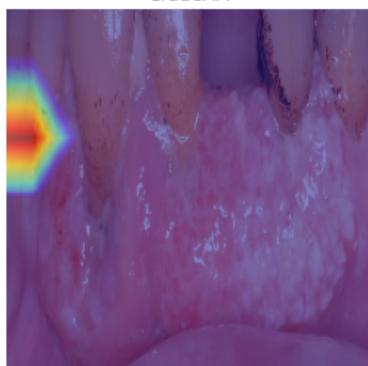
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

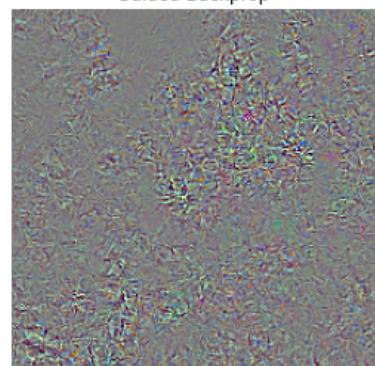
cancer	(0)	with probability 0.936
normal	(1)	with probability 0.064

Explanation for 'cancer'

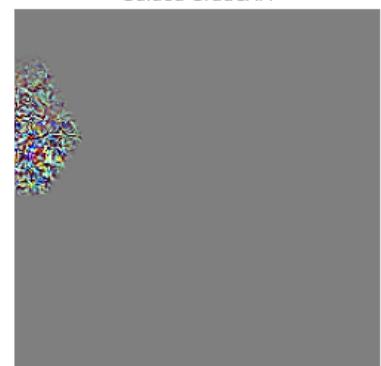
GradCAM



Guided Backprop



Guided GradCAM

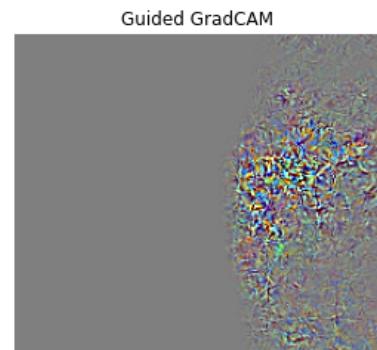
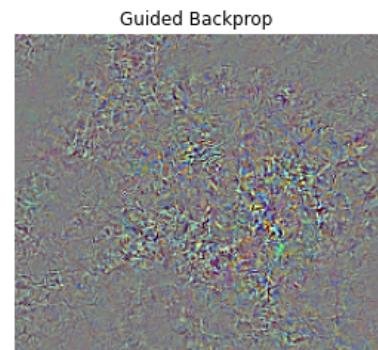
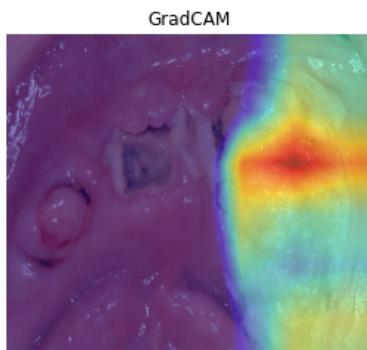


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.684
normal	(1)	with probability 0.316

Explanation for 'cancer'

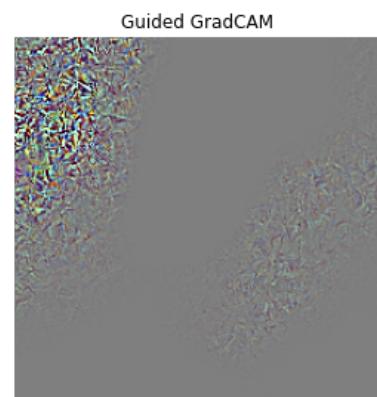
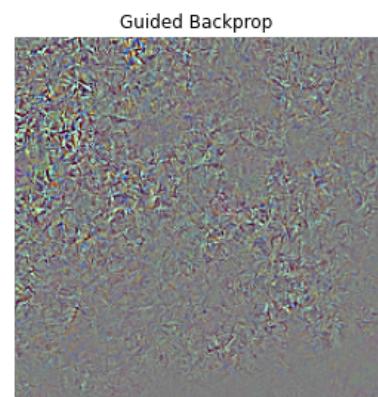
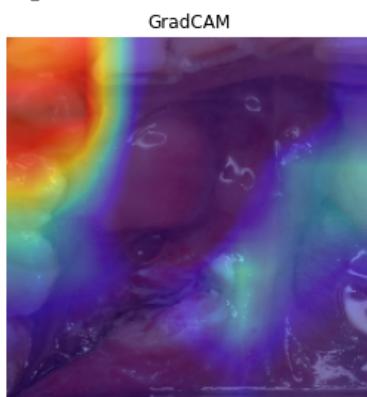


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.940
normal	(1)	with probability 0.060

Explanation for 'cancer'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.922
normal	(1)	with probability 0.078

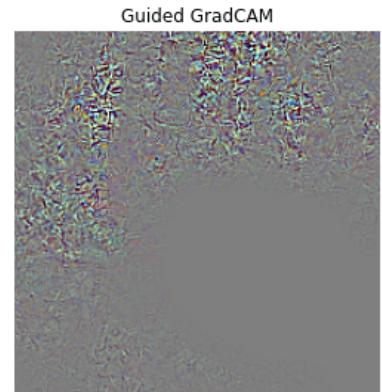
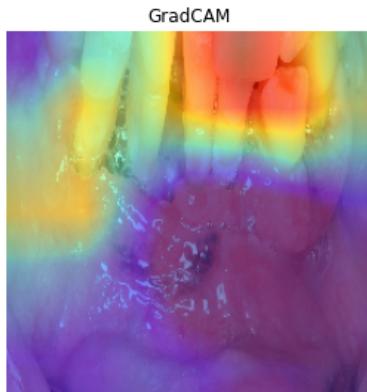
Explanation for 'cancer'

```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.719
cancer	(0)	with probability 0.281

Explanation for 'normal'

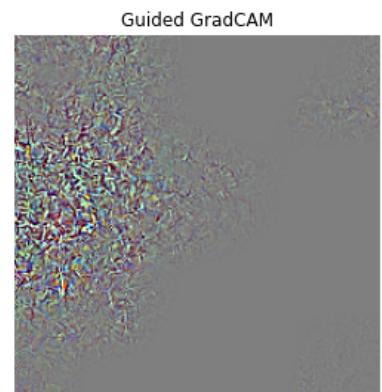
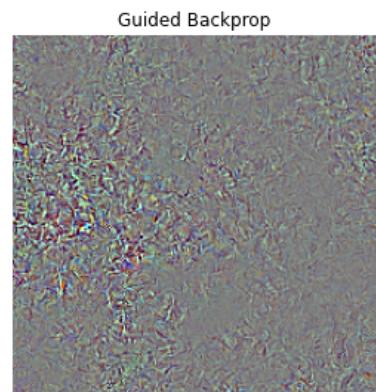
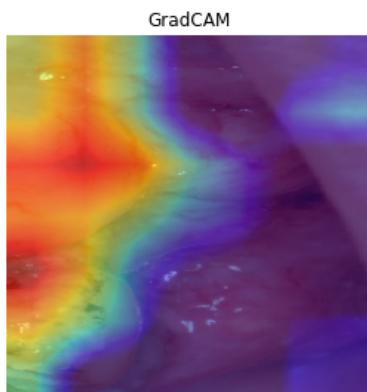


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.999
normal	(1)	with probability 0.001

Explanation for 'cancer'

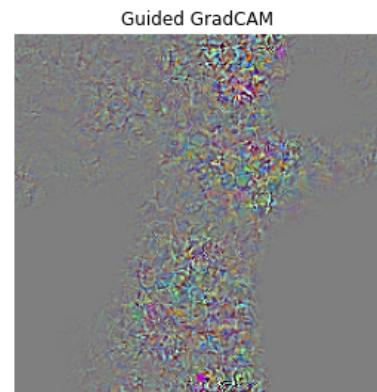
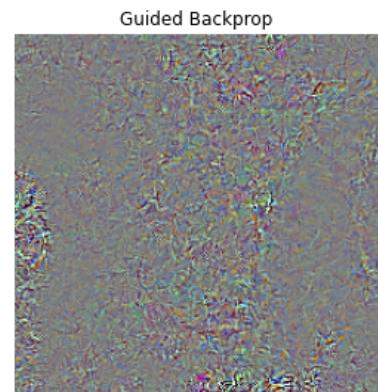
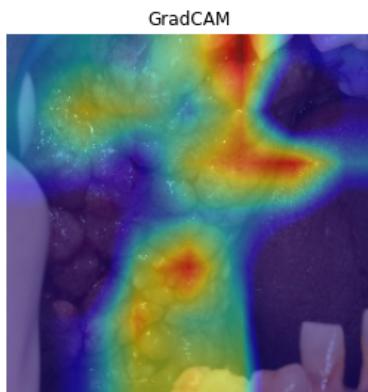


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.827
normal	(1)	with probability 0.173

Explanation for 'cancer'

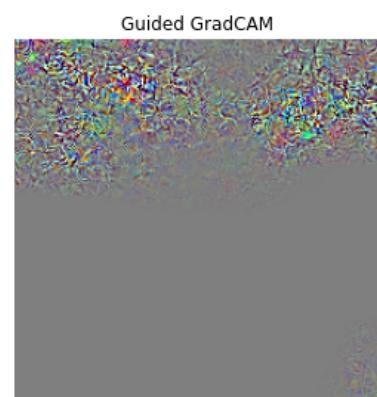
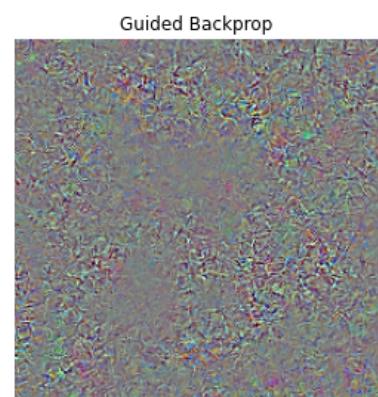
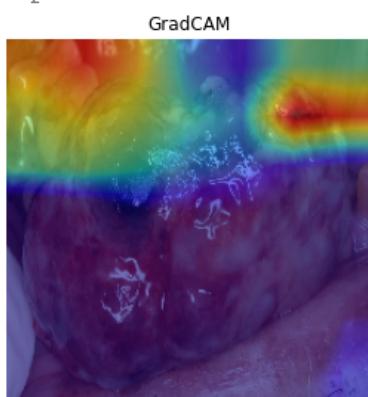


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.689
normal	(1)	with probability 0.311

Explanation for 'cancer'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.941
normal	(1)	with probability 0.059

Explanation for 'cancer'

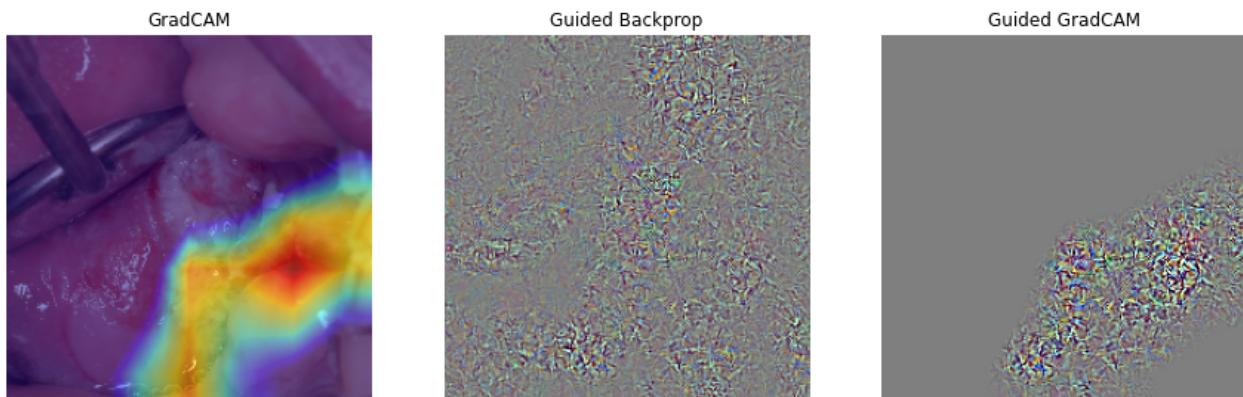


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.902
normal	(1)	with probability 0.098

Explanation for 'cancer'

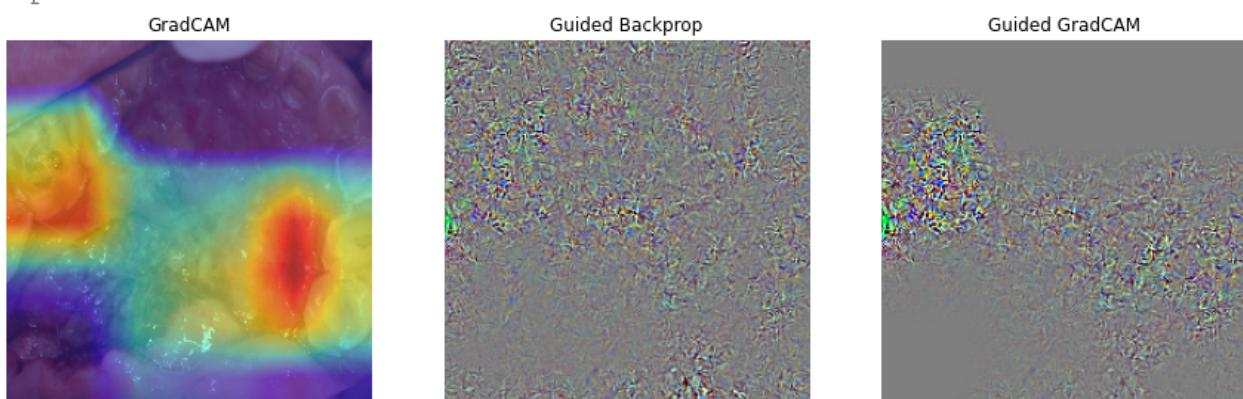


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.981
normal	(1)	with probability 0.019

Explanation for 'cancer'



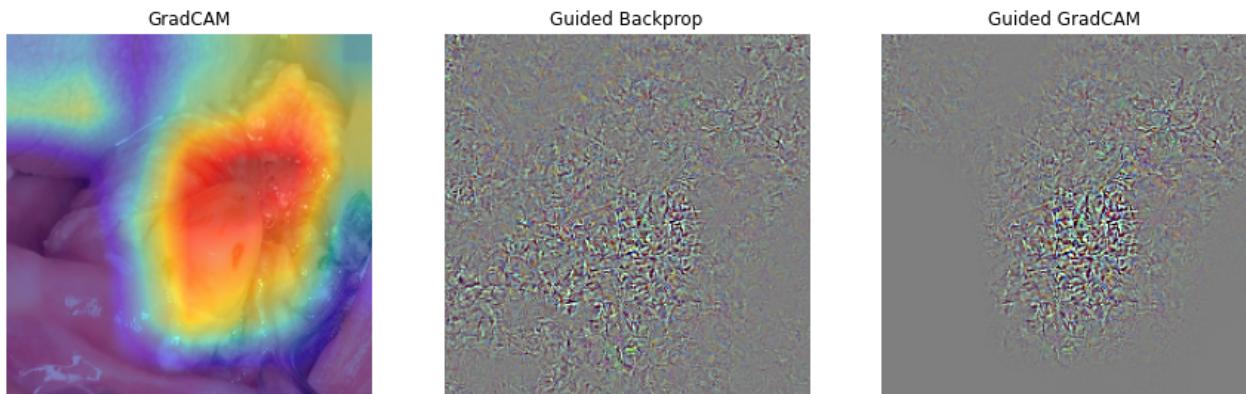
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
```

```
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.999
normal	(1)	with probability 0.001

Explanation for 'cancer'

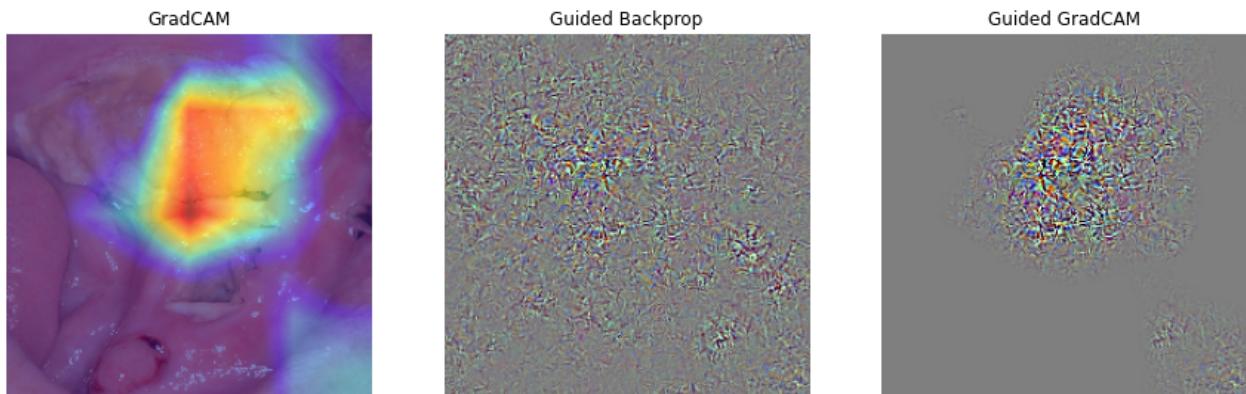


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.993
normal	(1)	with probability 0.007

Explanation for 'cancer'

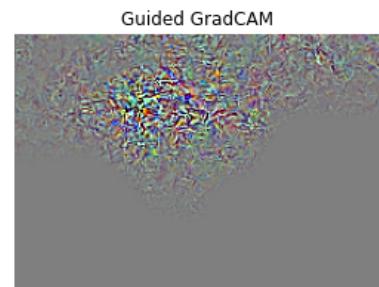
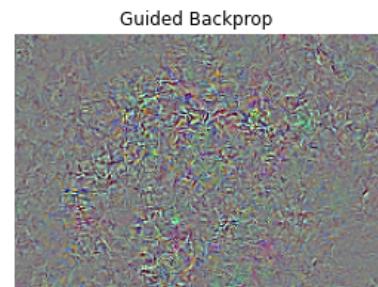
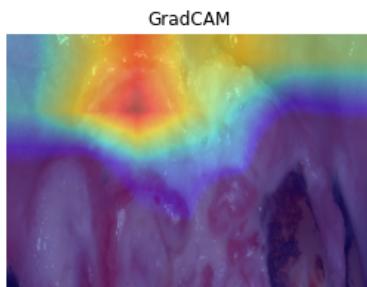


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/cancer/Cancer_edit_B_
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

cancer	(0)	with probability 0.606
normal	(1)	with probability 0.394

Explanation for 'cancer'



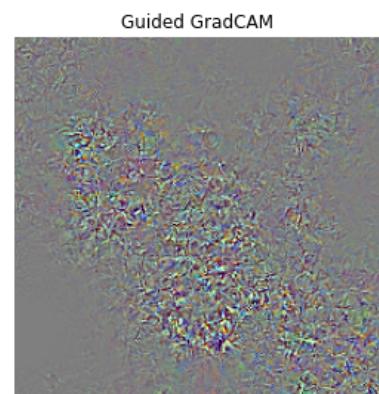
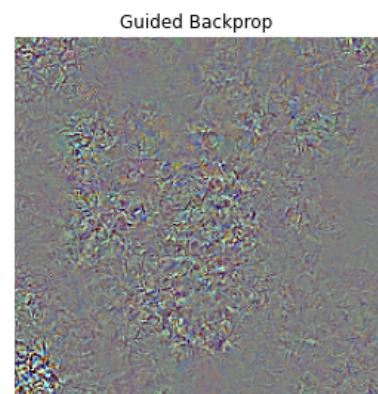
## ▼ Normal

```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-11.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

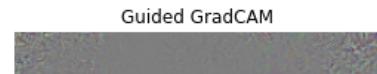


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-11_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

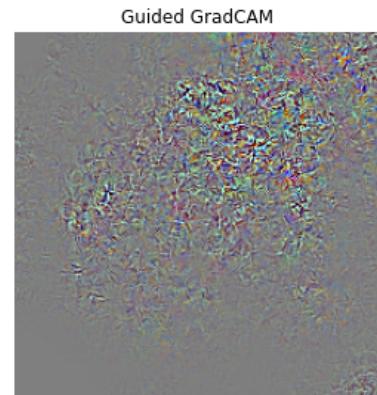
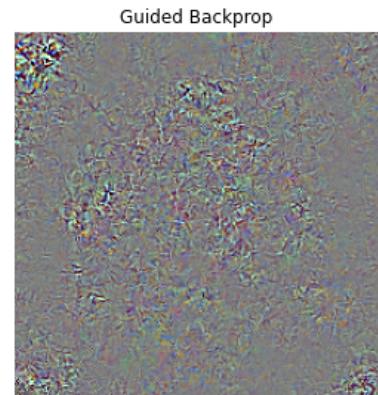
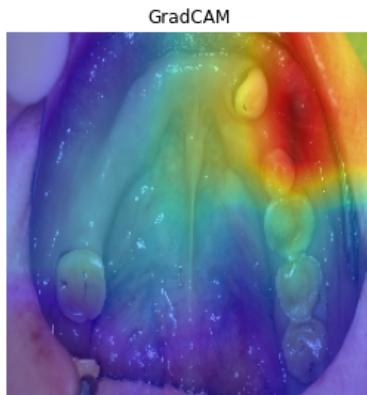


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-11_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

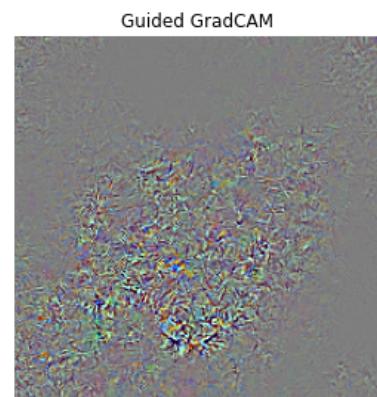
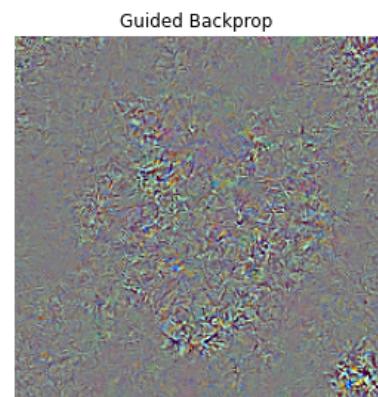
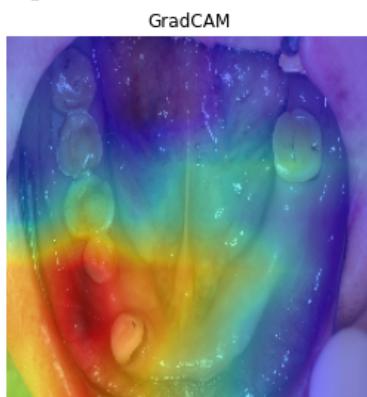


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-11_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

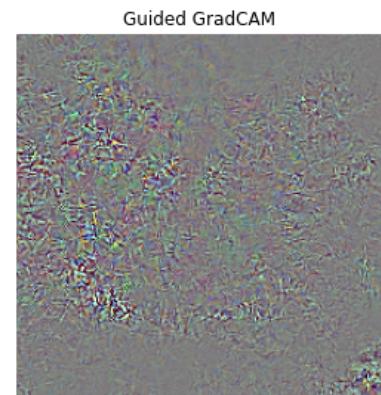
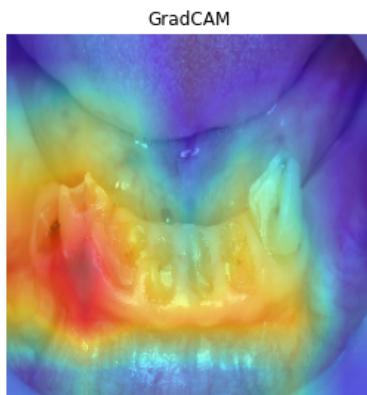


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-25.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.995
cancer	(0)	with probability 0.005

Explanation for 'normal'

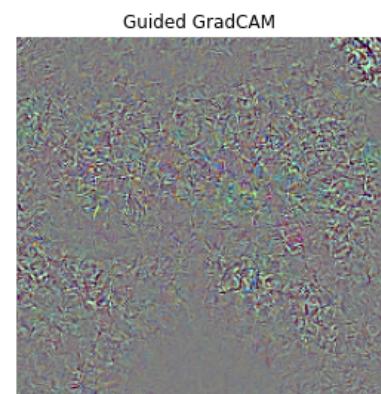
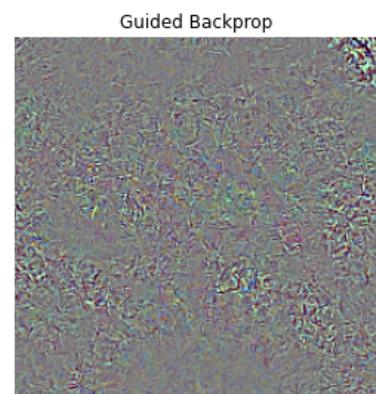
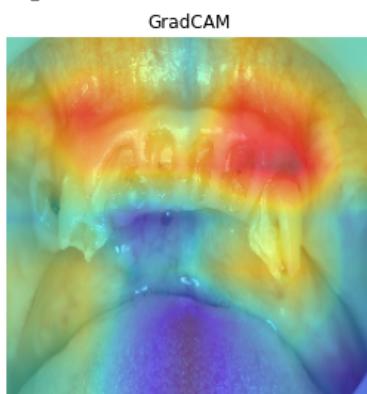


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-25_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

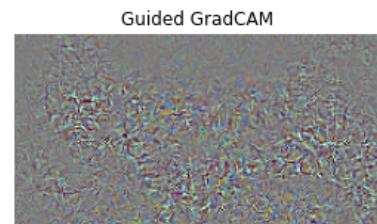
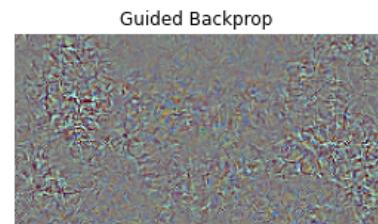
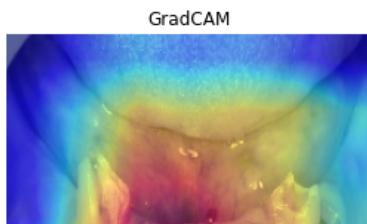


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-25_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

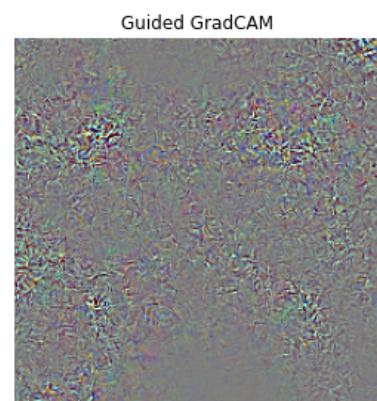
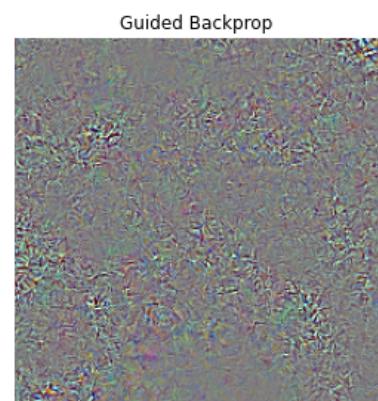
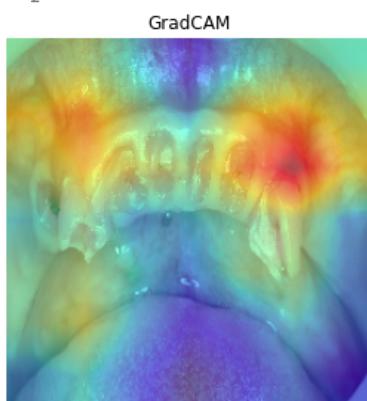


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-25_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

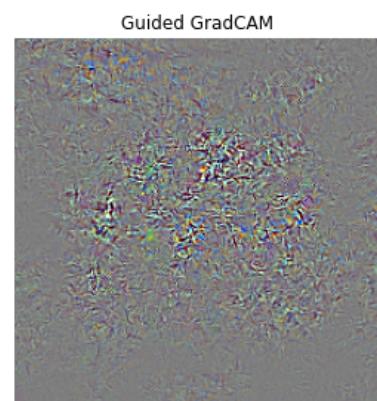
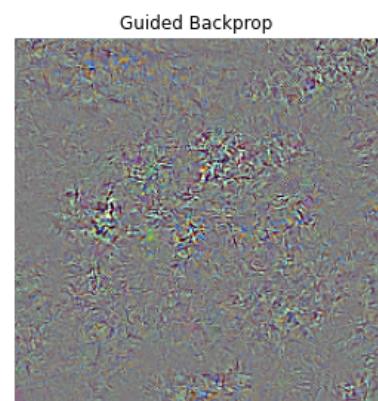
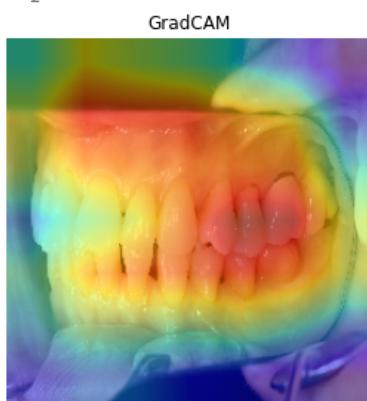


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-3.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

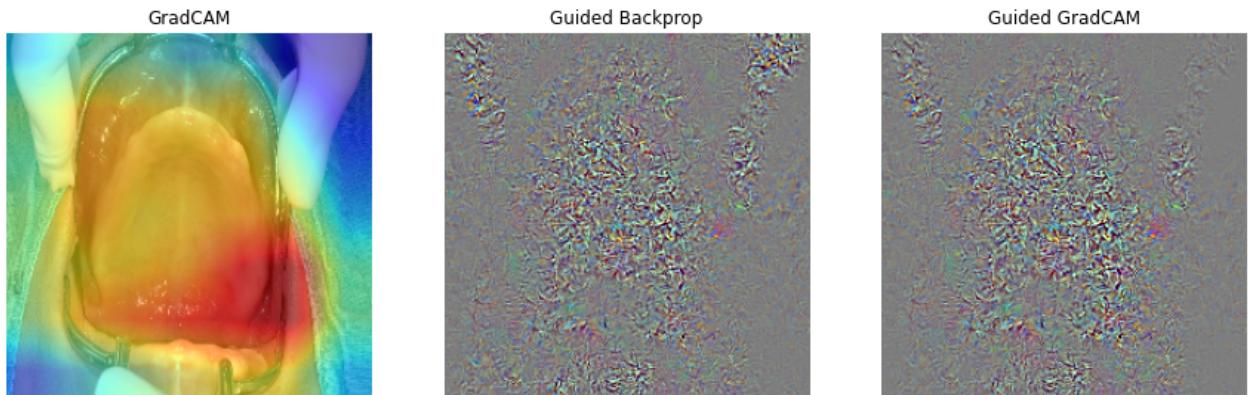


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-35.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

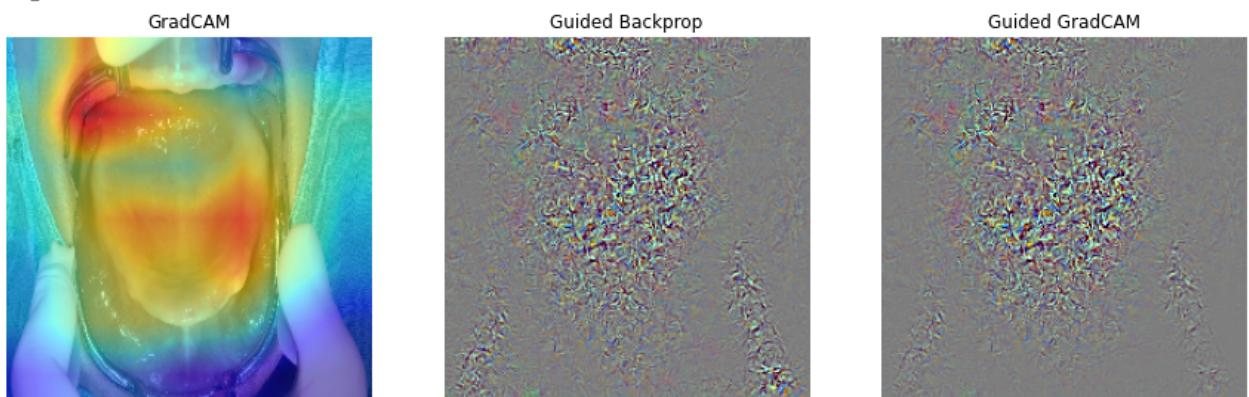


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-35_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

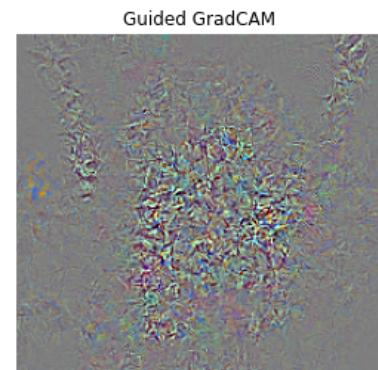
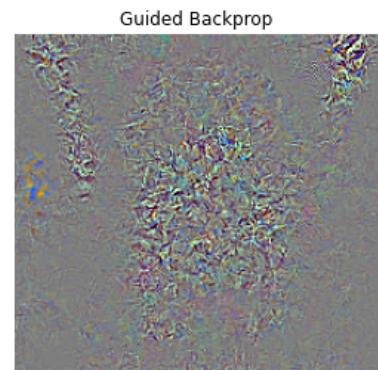
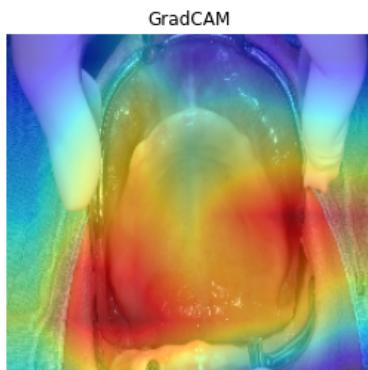


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-35_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

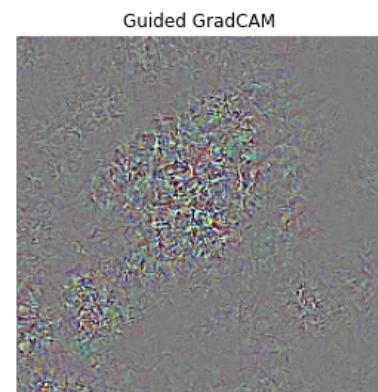
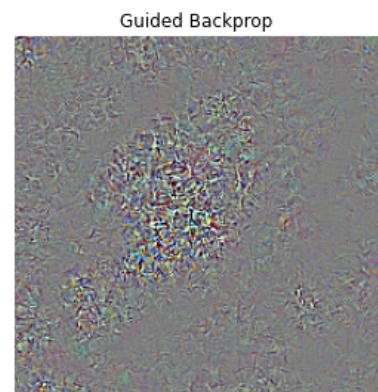
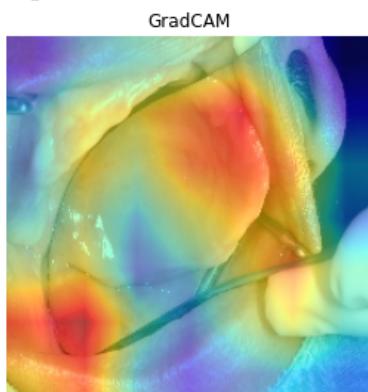


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-38.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-38_augm
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

```
Explanation for 'normal'
```

GradCAM

Guided Backprop

Guided GradCAM

```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-38_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

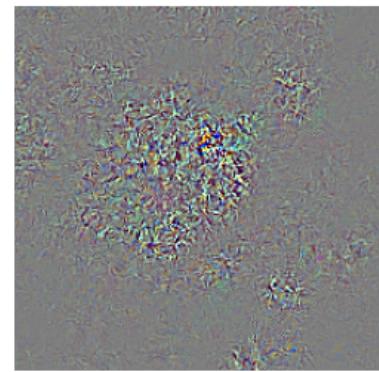
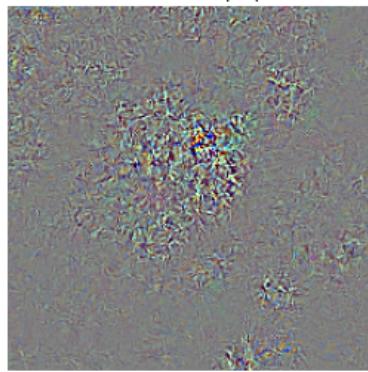
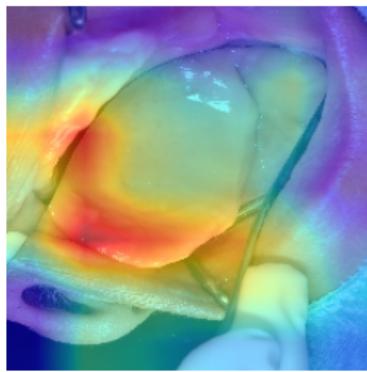
normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

```
Explanation for 'normal'
```

GradCAM

Guided Backprop

Guided GradCAM



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-38_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

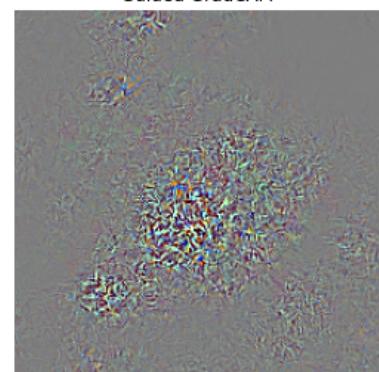
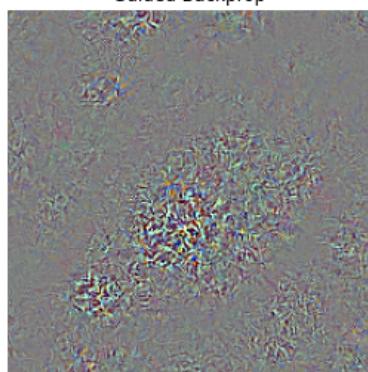
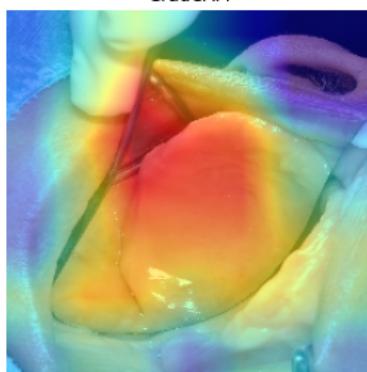
normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

```
Explanation for 'normal'
```

GradCAM

Guided Backprop

Guided GradCAM

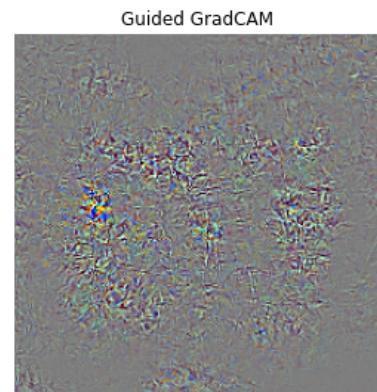
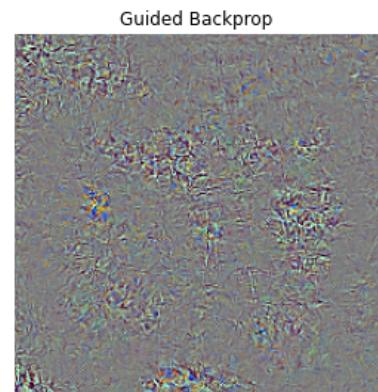
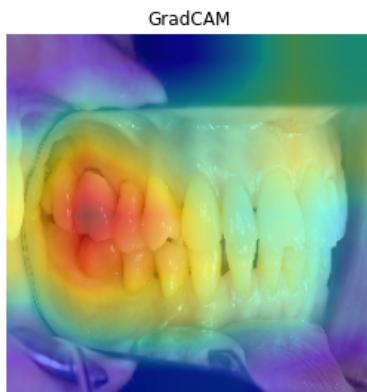


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-3_augme
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

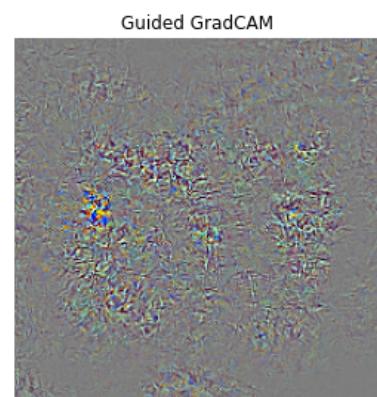
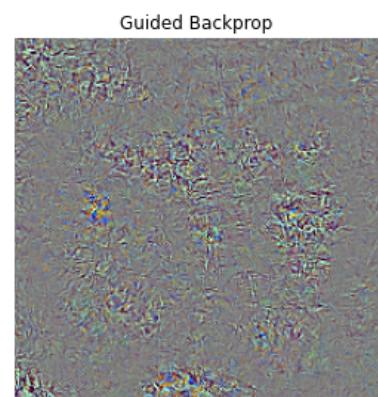
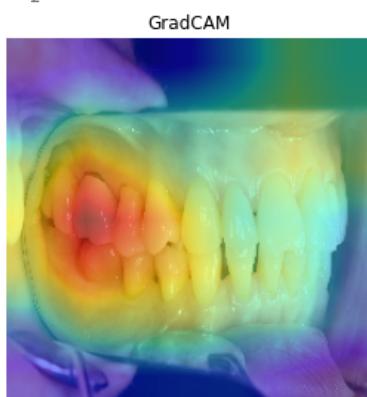


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-3_augme
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

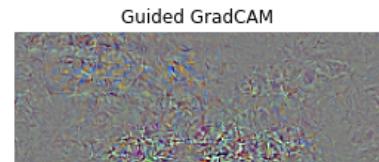
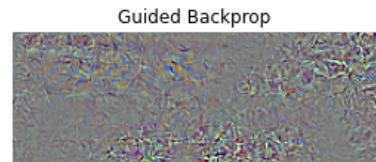


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-3_augme
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

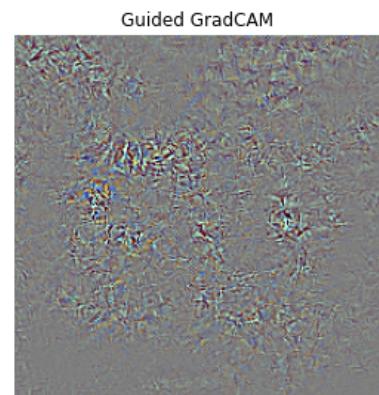
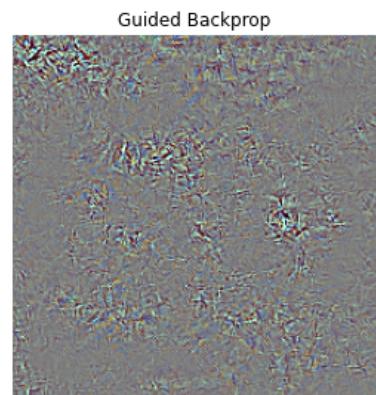
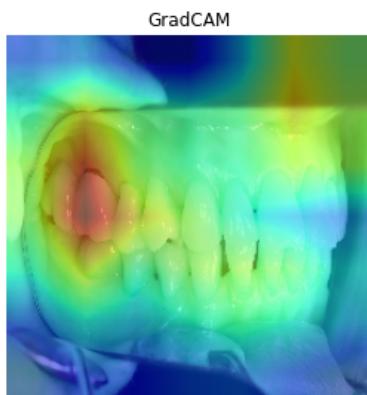


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-3_augme
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

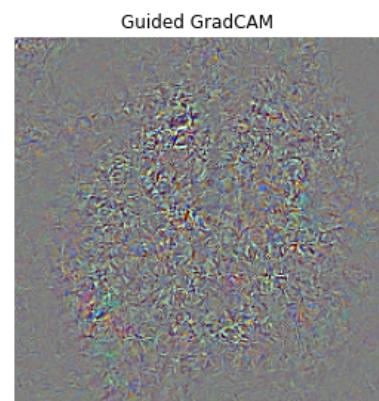
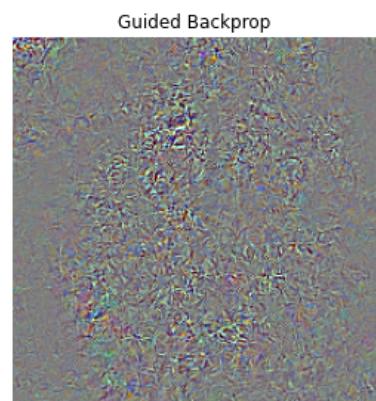
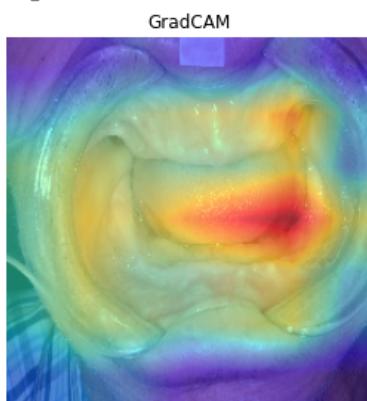


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-40.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

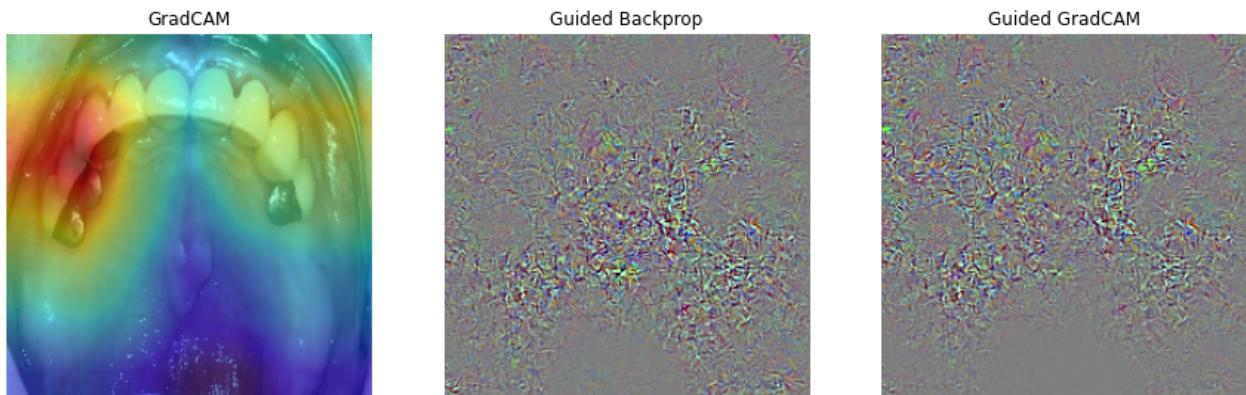


```
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

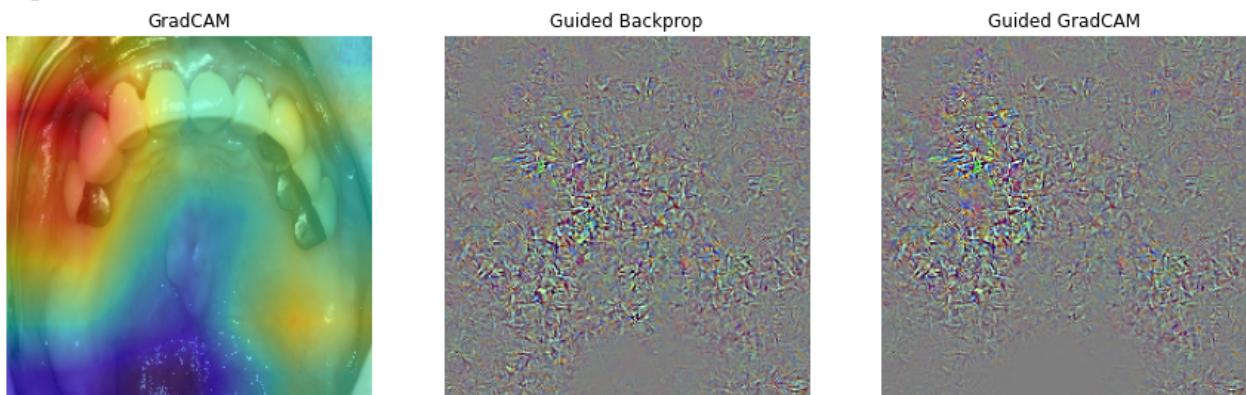


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-43_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

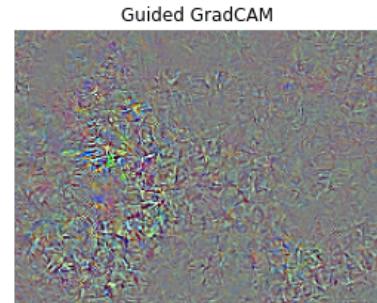
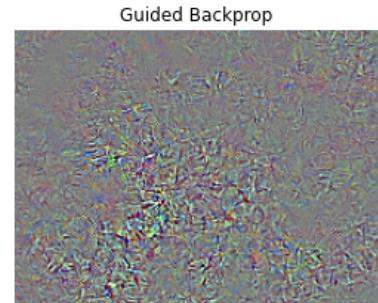


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-43_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

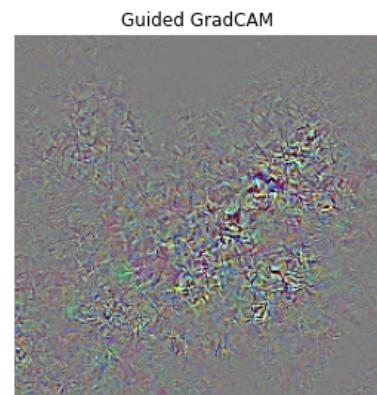
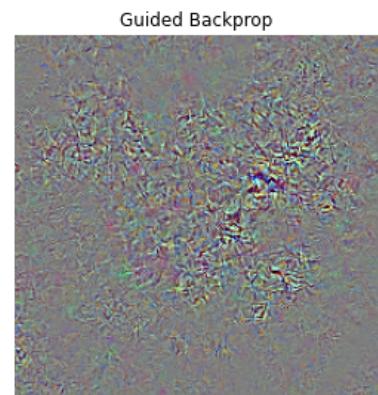
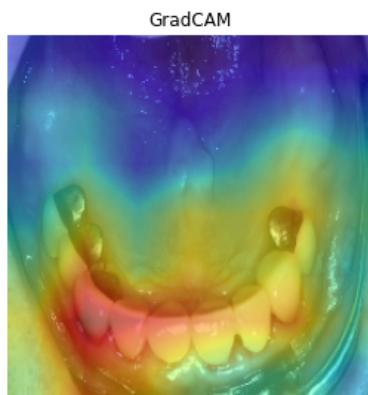


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-43_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-43_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

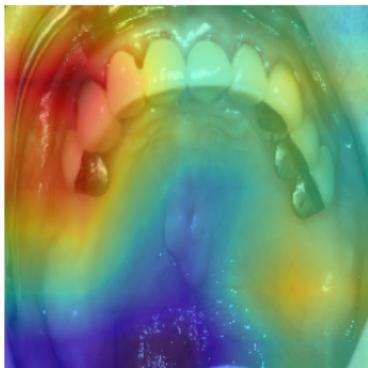
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-43_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

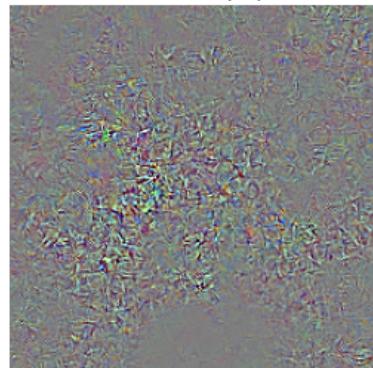
normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

```
Explanation for 'normal'
```

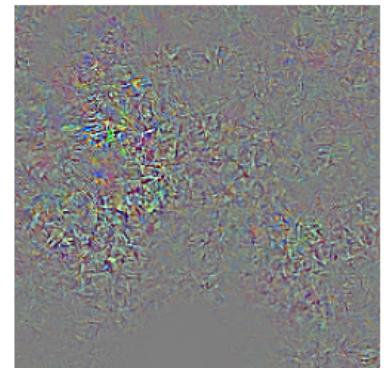
GradCAM



Guided Backprop



Guided GradCAM



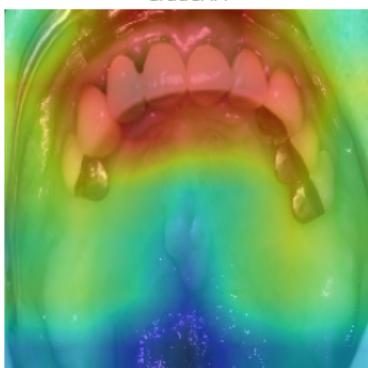
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-43_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

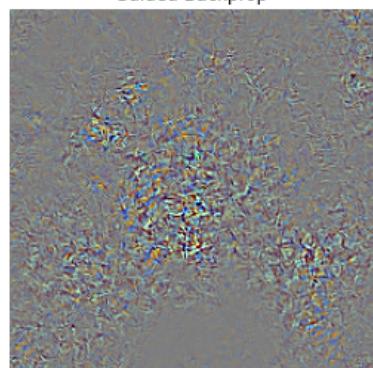
normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

```
Explanation for 'normal'
```

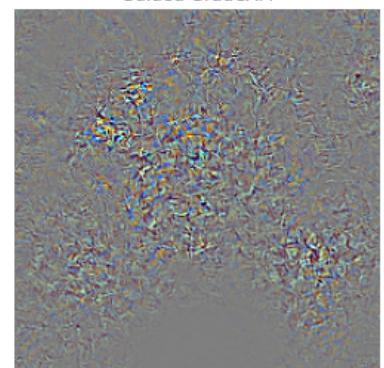
GradCAM



Guided Backprop



Guided GradCAM

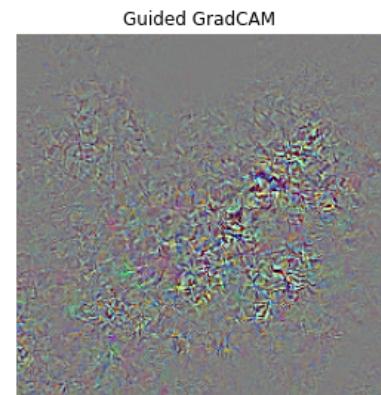
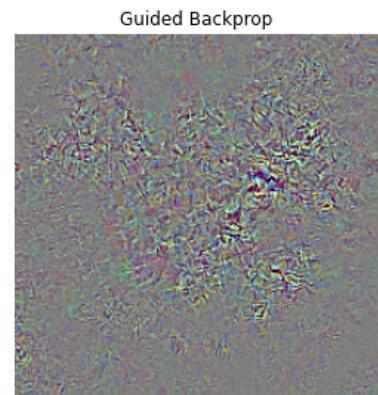
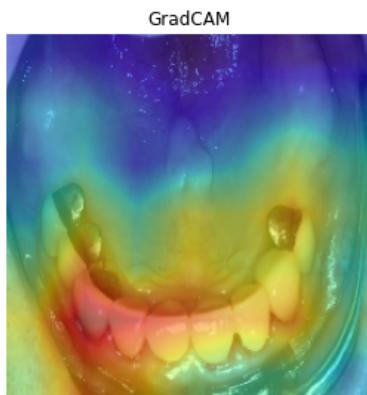


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-43_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

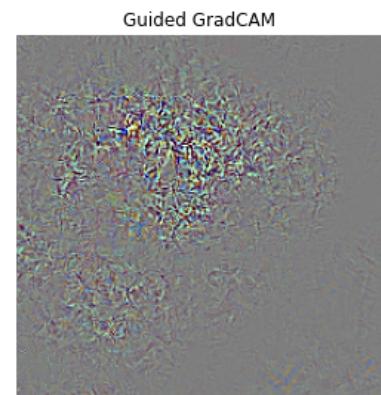
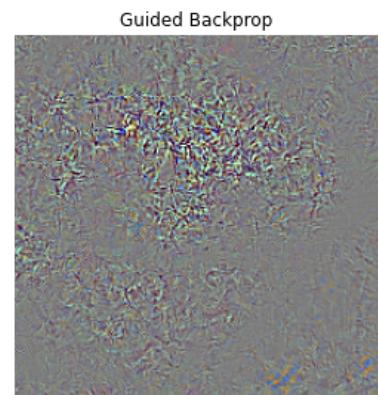
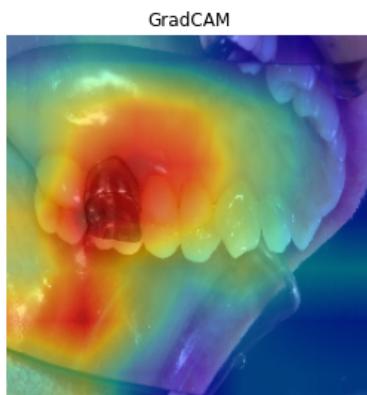


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-47.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-47_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

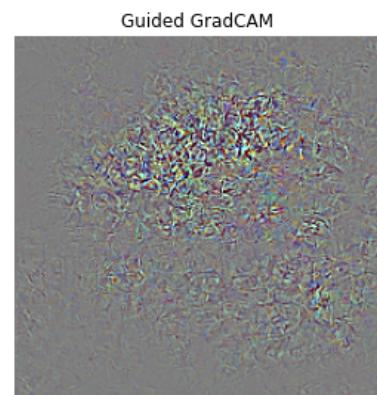
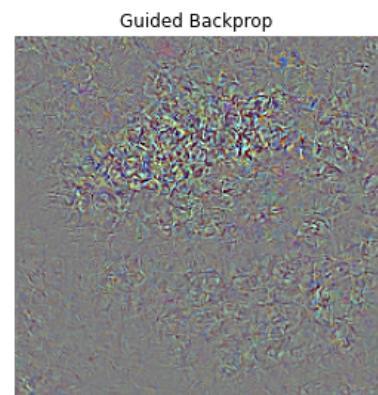
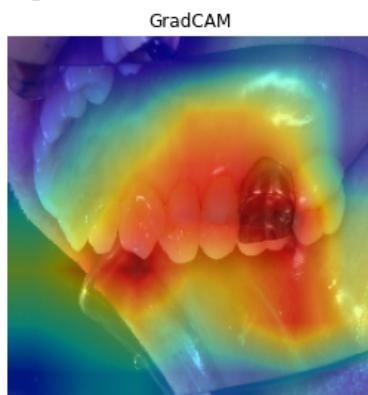


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-47_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

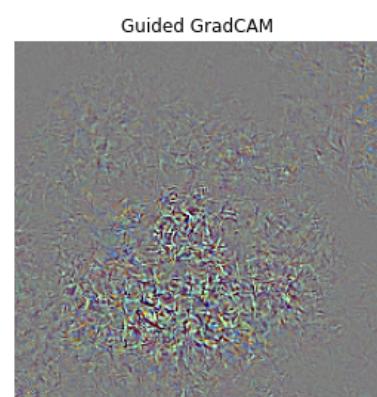
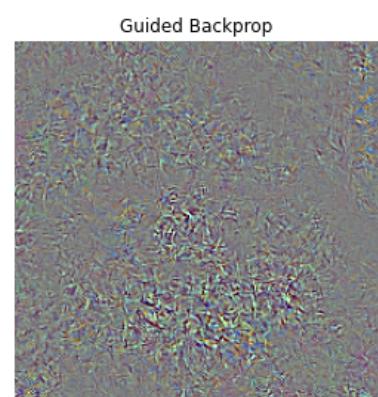
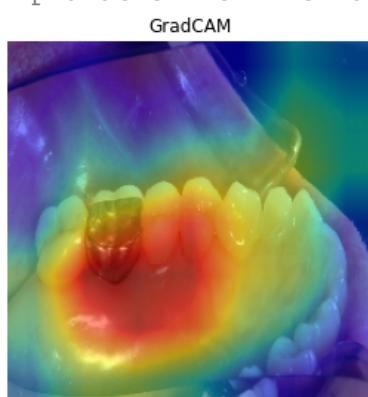


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-47_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

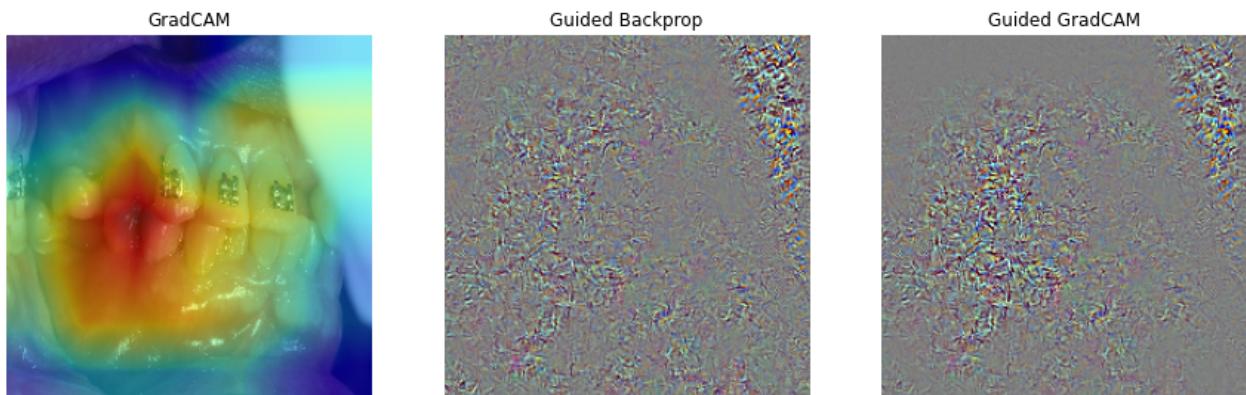


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-5.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

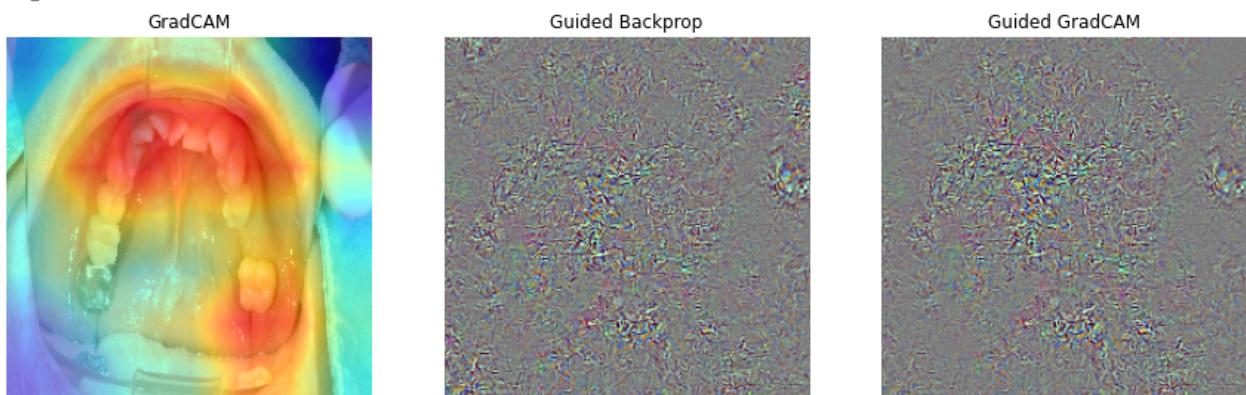


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-50.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

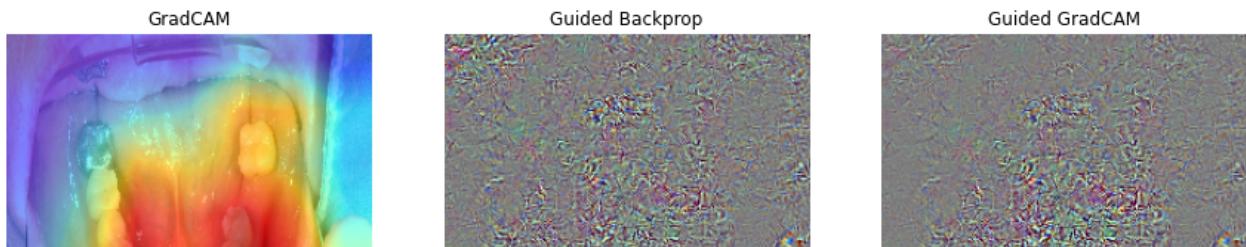


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-50_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

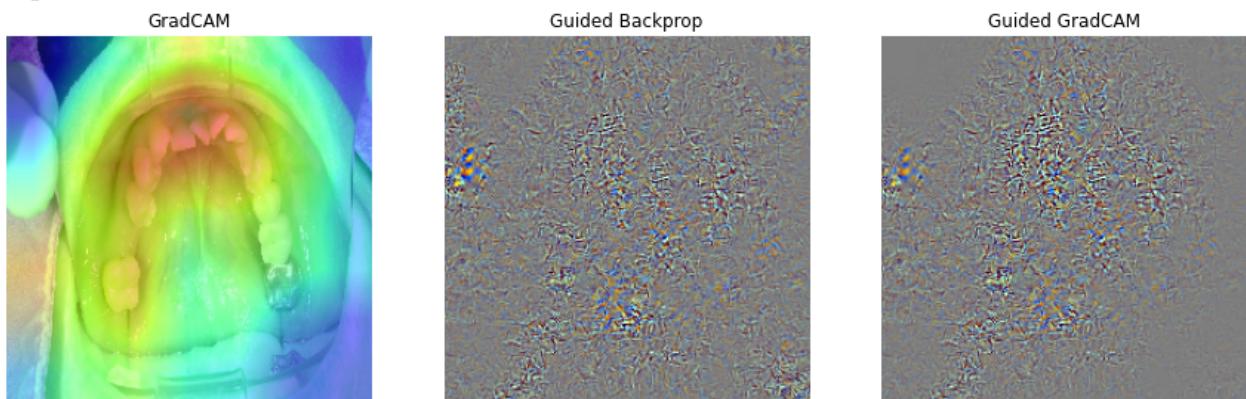


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-50_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-50_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

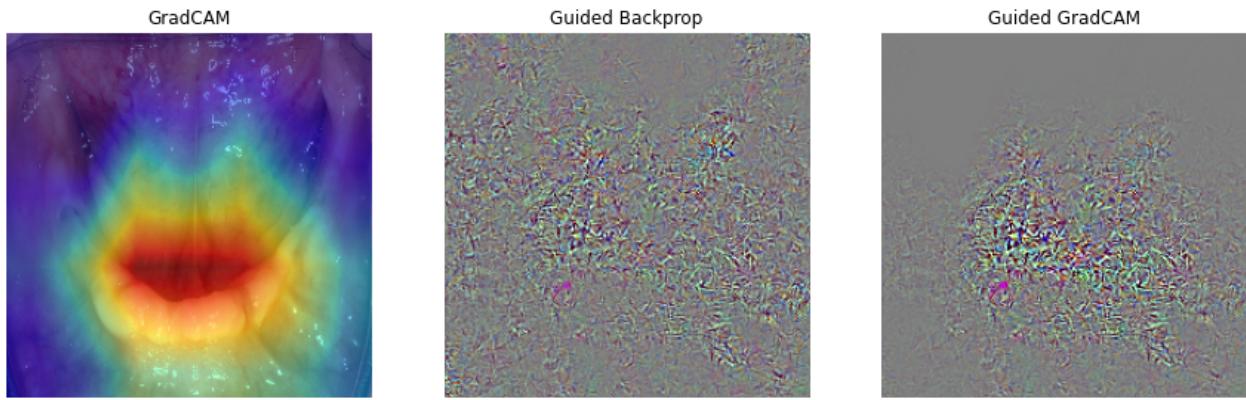
Model prediction:

```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-56.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.970
cancer	(0)	with probability 0.030

Explanation for 'normal'

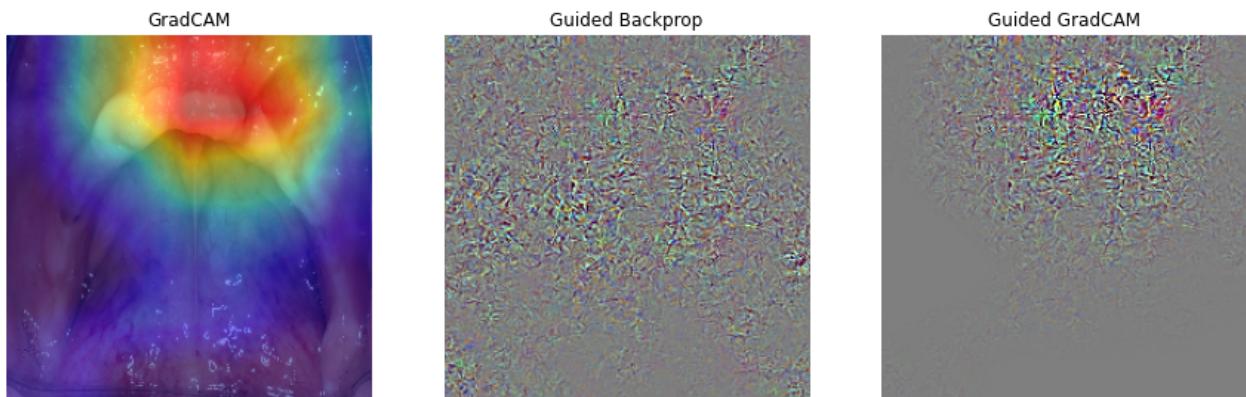


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-56_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.979
cancer	(0)	with probability 0.021

Explanation for 'normal'

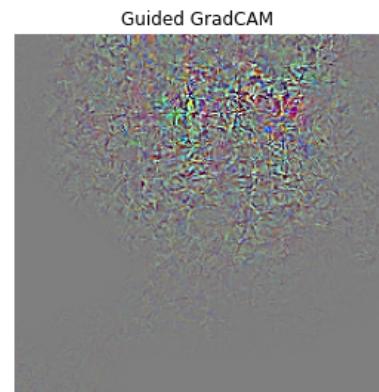
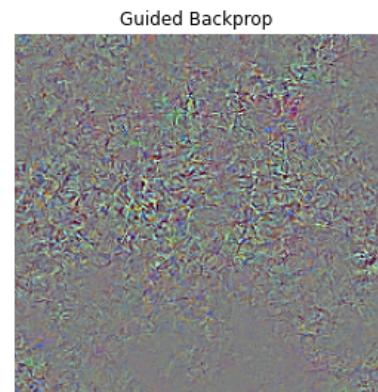
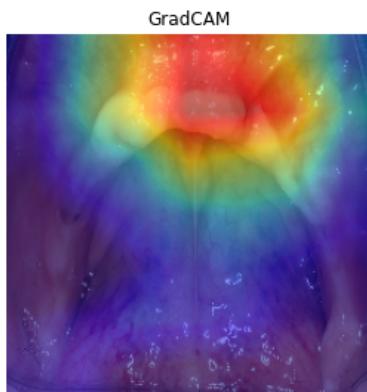


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-56_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.979
cancer	(0)	with probability 0.021

Explanation for 'normal'

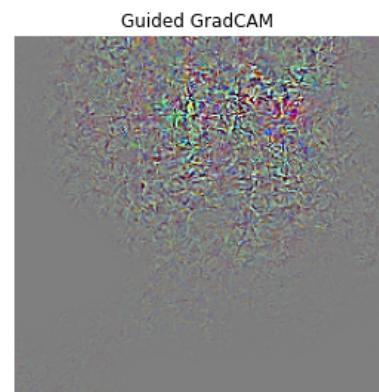
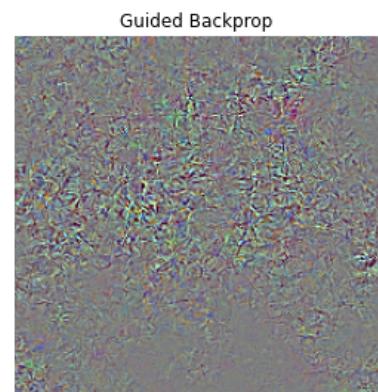
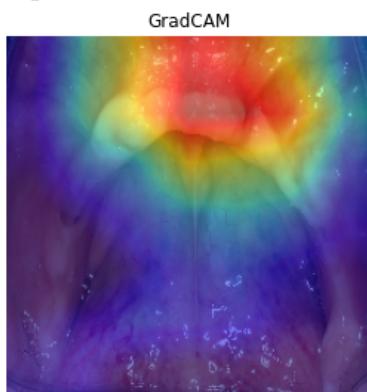


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-56_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.979
cancer	(0)	with probability 0.021

Explanation for 'normal'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-56_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.979
cancer	(0)	with probability 0.021

Explanation for 'normal'

GradCAM

Guided Backprop

Guided GradCAM

```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-58.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

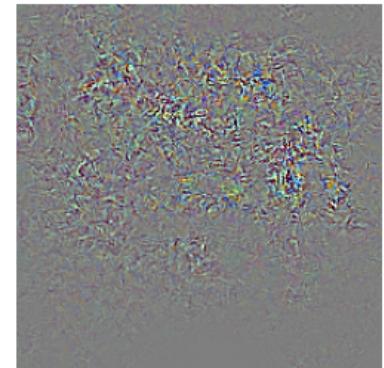
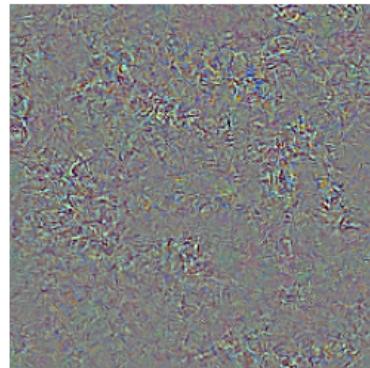
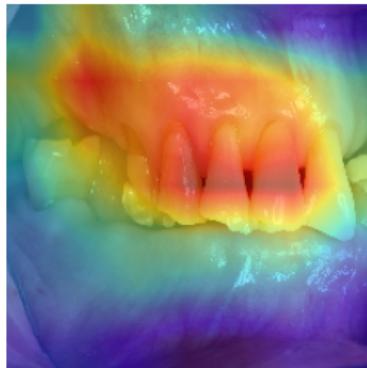
normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

GradCAM

Guided Backprop

Guided GradCAM



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-58_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

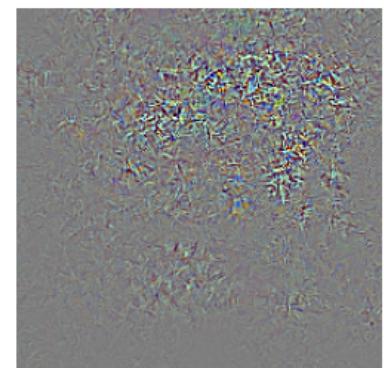
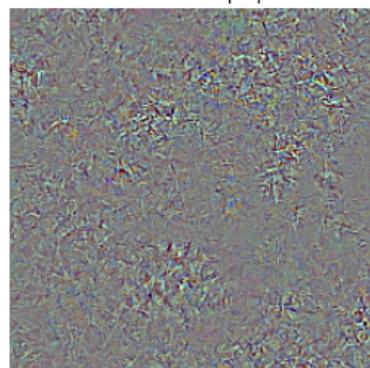
normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

GradCAM

Guided Backprop

Guided GradCAM

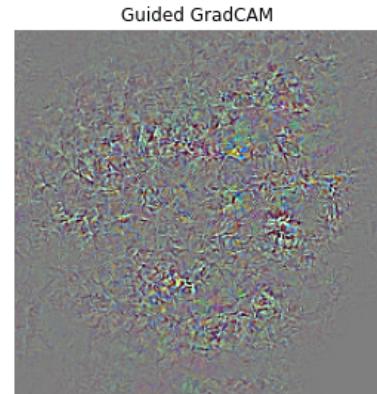
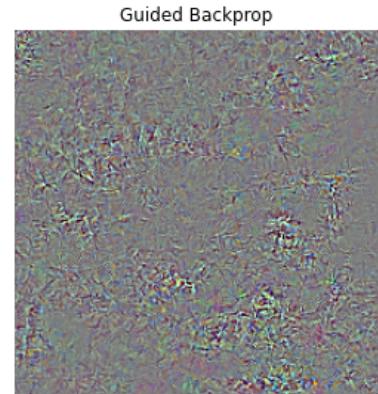
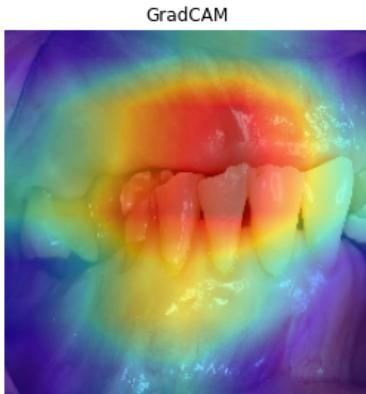


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-58_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
/usr/local/lib/python3.7/dist-packages/tensorflow/python/keras/engine/training.py:100: UserWarning: `Model.state_updates` will be removed in a future version. 'Model prediction:
```

normal	(1) with probability 1.000
cancer	(0) with probability 0.000

Explanation for 'normal'

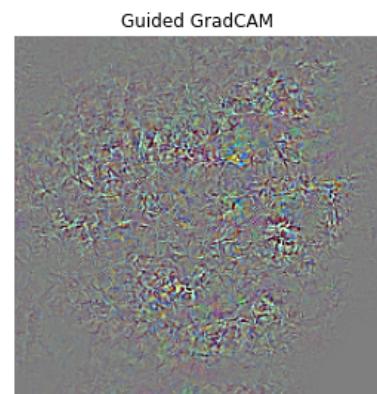
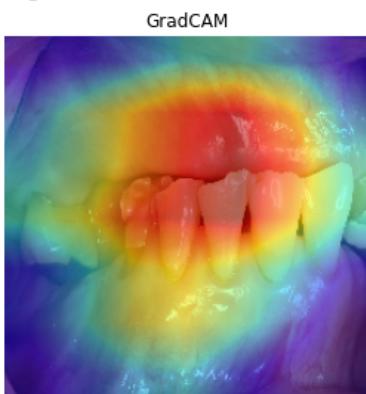


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-58_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1) with probability 1.000
cancer	(0) with probability 0.000

Explanation for 'normal'

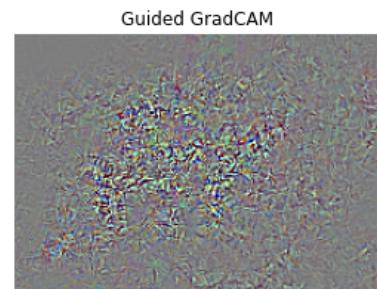
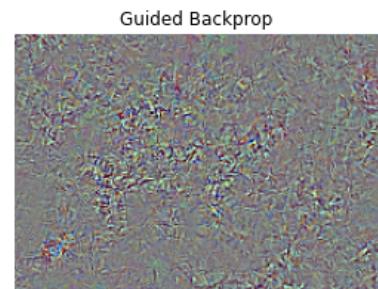
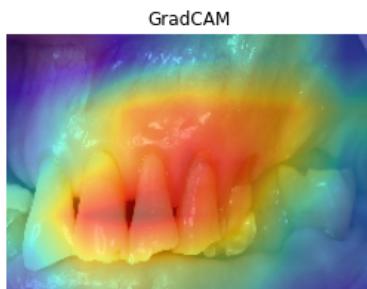


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-58_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.998
cancer	(0)	with probability 0.002

Explanation for 'normal'

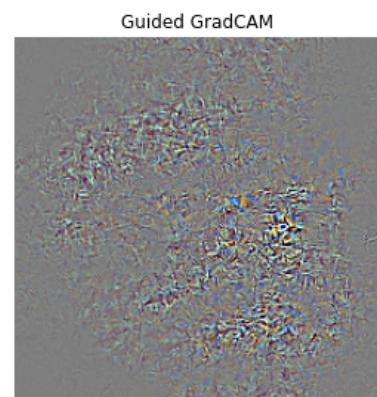
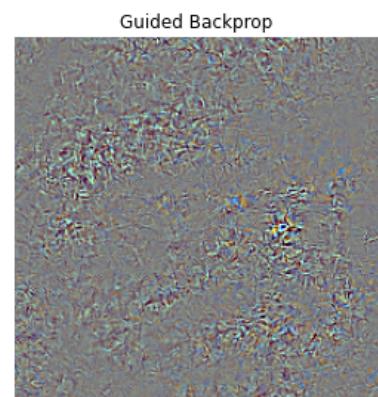


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-58_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-5_augme
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

```
Model prediction:
```

```
    normal      (1)    with probability 0.996
```

```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-5_augme
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

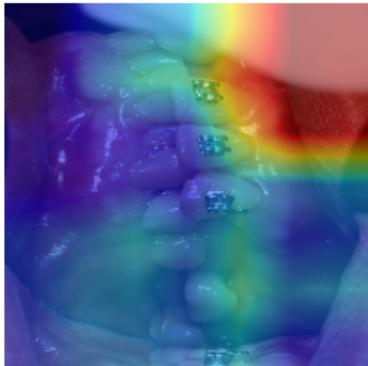
```
Model prediction:
```

```
    normal      (1)    with probability 0.993
```

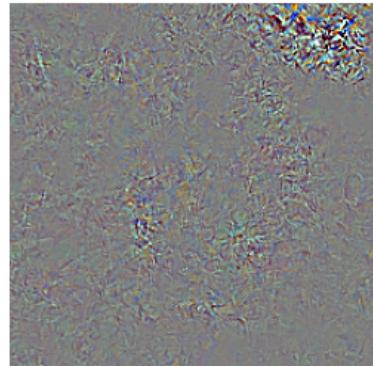
```
    cancer     (0)    with probability 0.007
```

```
Explanation for 'normal'
```

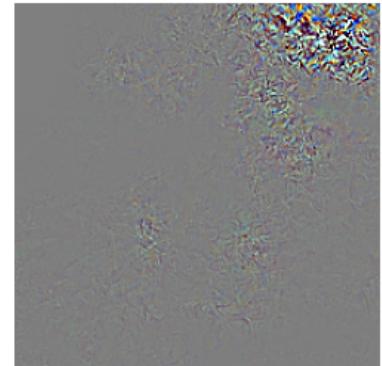
GradCAM



Guided Backprop



Guided GradCAM



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-5_augme
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

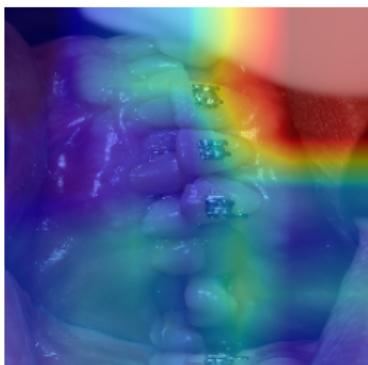
```
Model prediction:
```

```
    normal      (1)    with probability 0.993
```

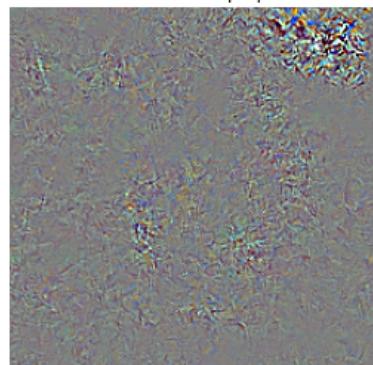
```
    cancer     (0)    with probability 0.007
```

```
Explanation for 'normal'
```

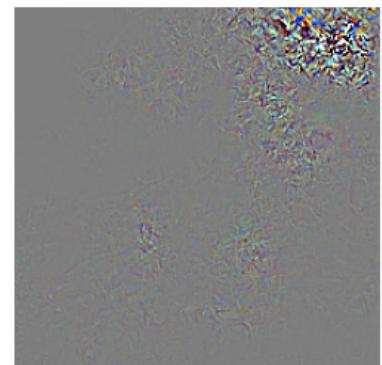
GradCAM



Guided Backprop



Guided GradCAM

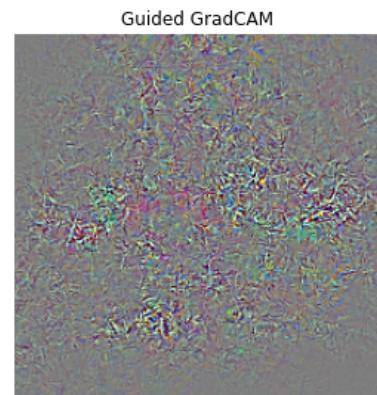
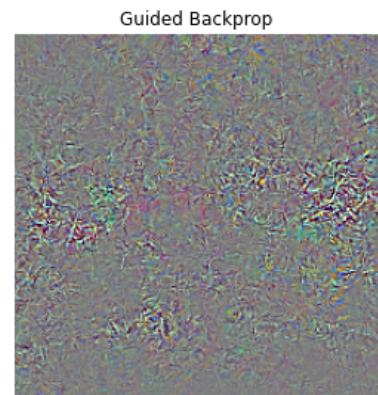


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-60.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

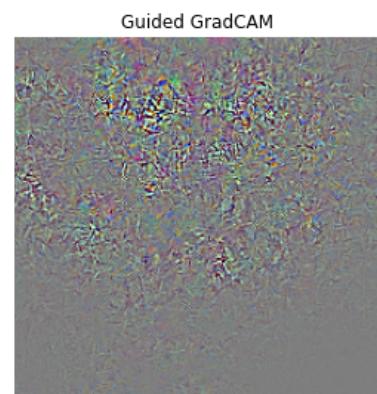
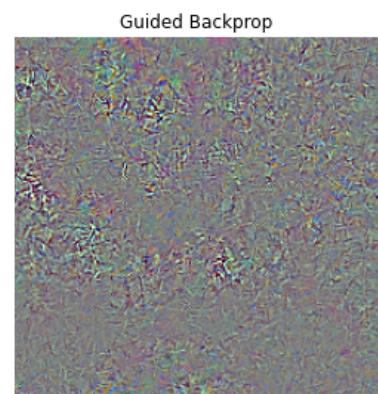


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-60_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

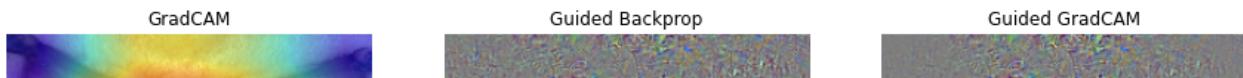


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-60_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

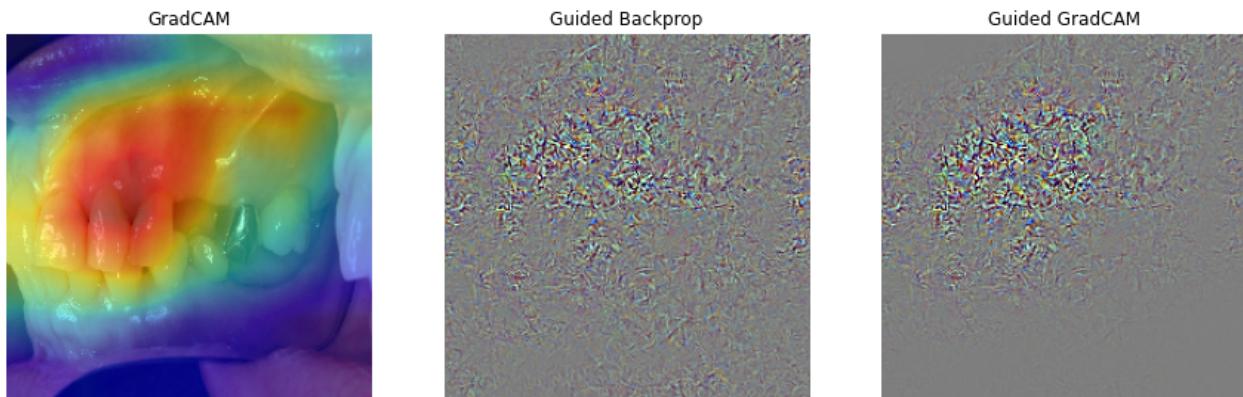


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-61.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

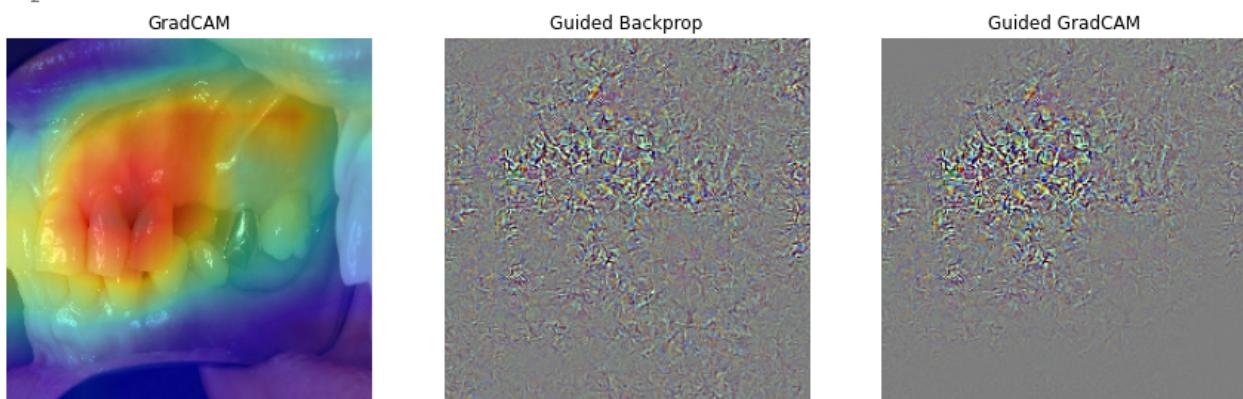


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-61_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

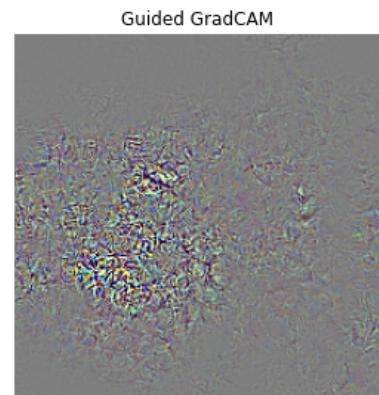
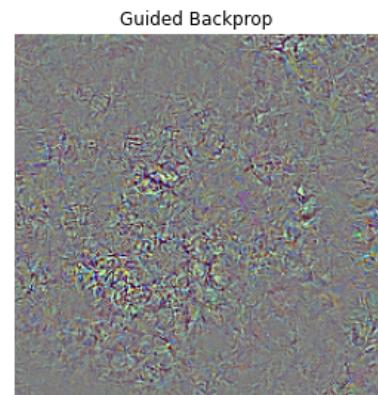
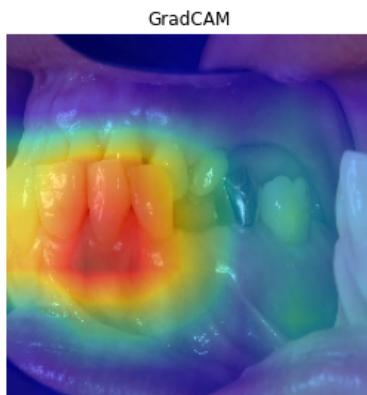


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-61_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

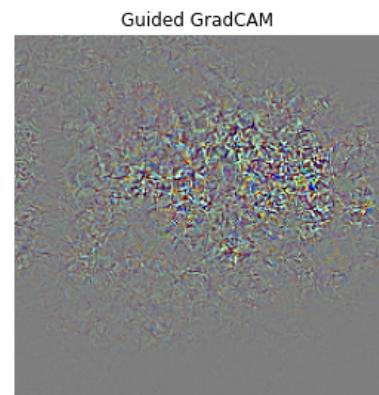
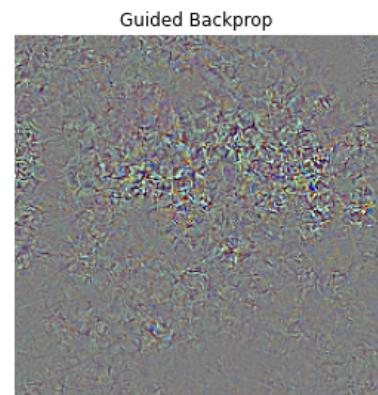
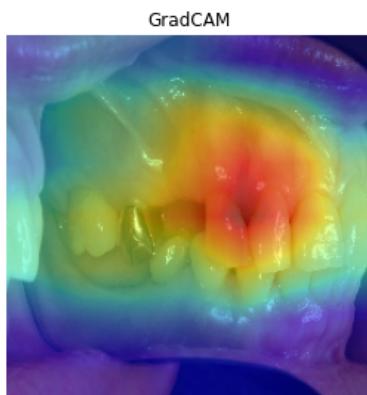


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-61_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

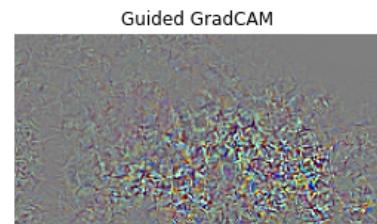
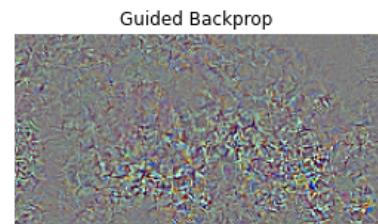


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-61_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

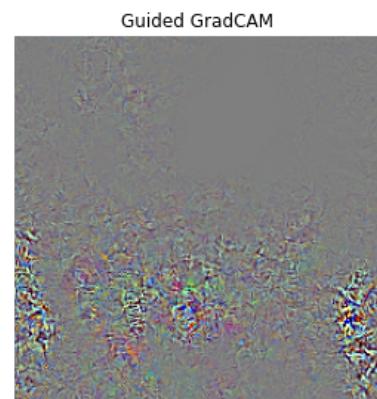
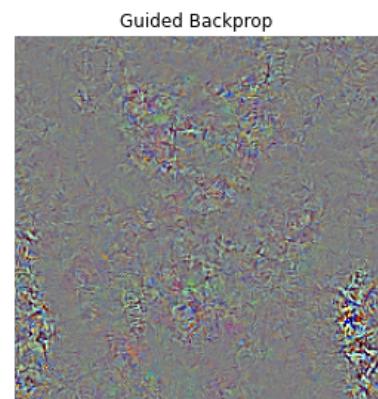
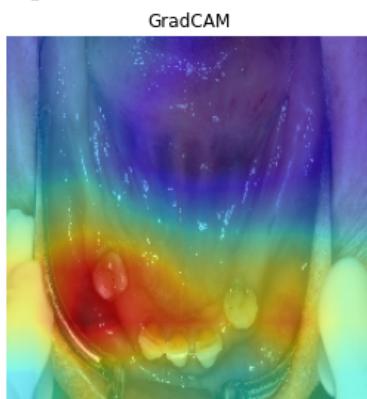


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-69.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

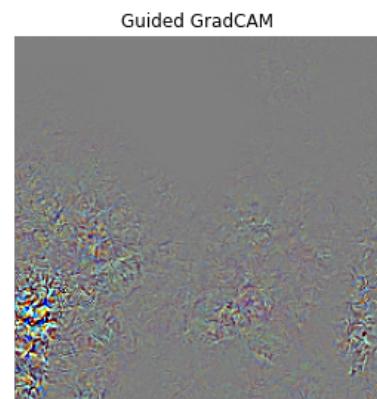
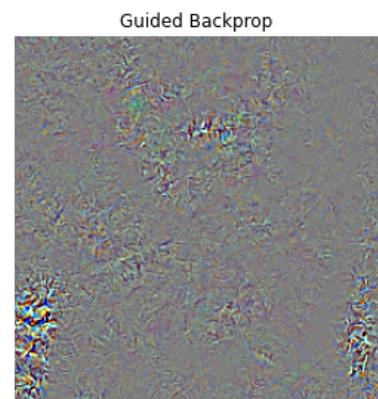
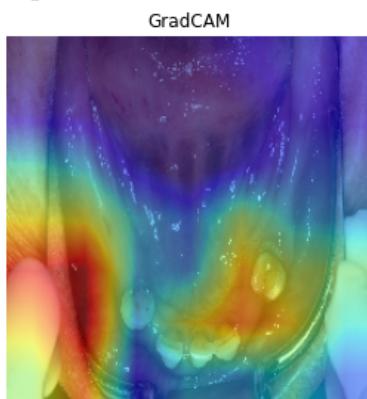


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-69_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

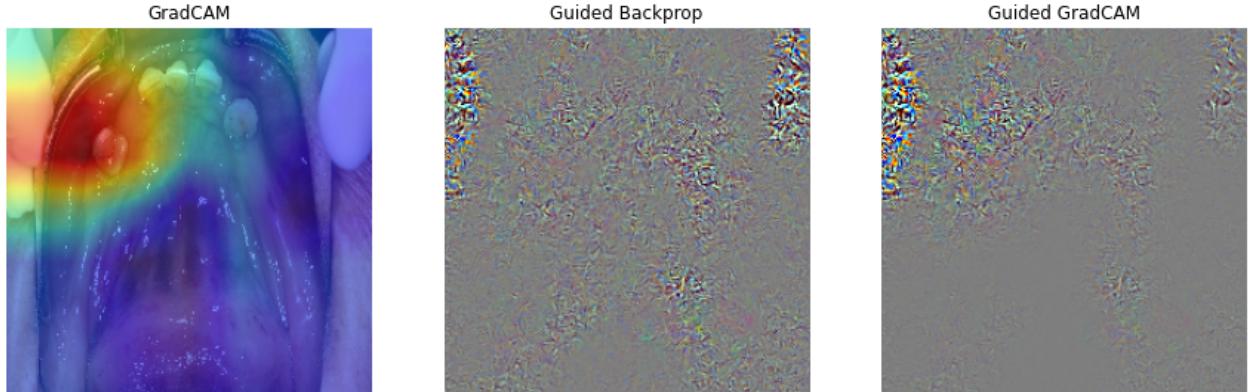


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-69_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

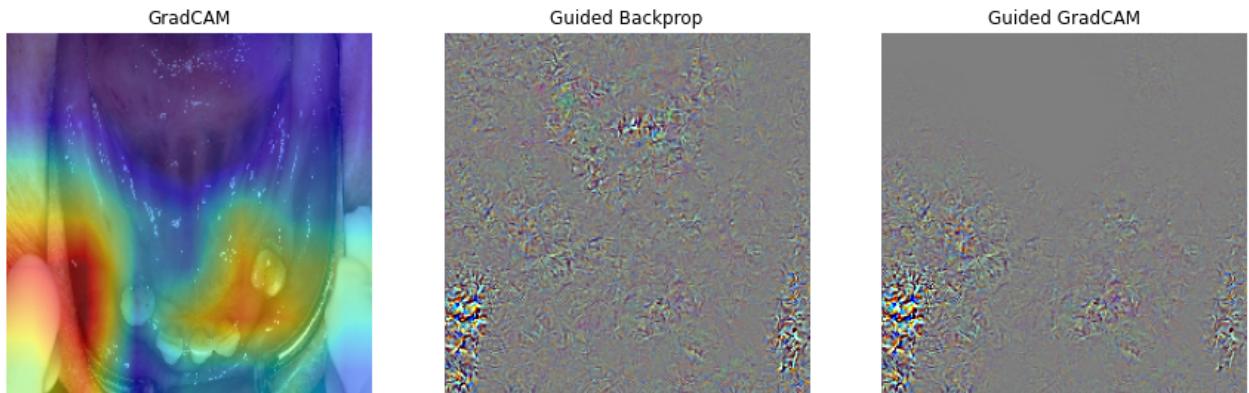


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-69_augn'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

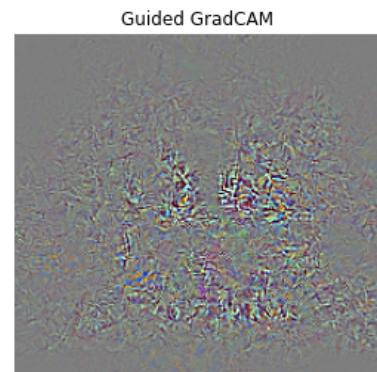
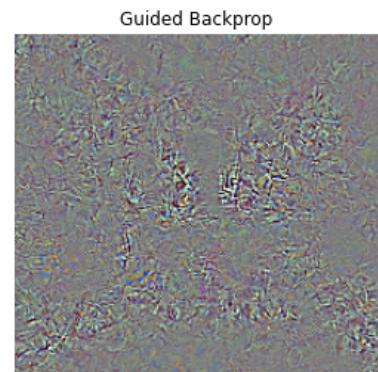
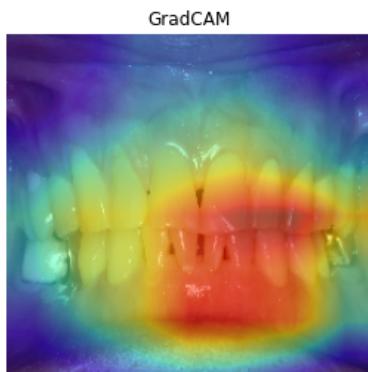


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-77.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

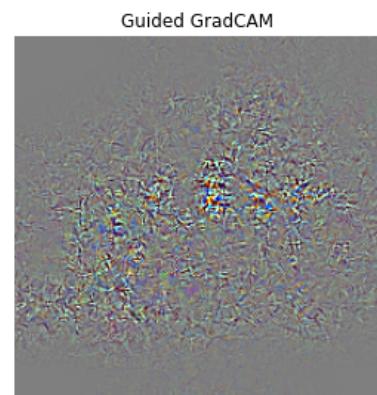
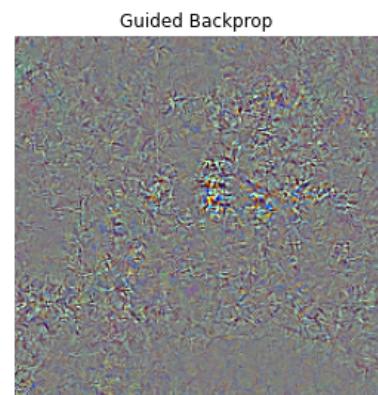
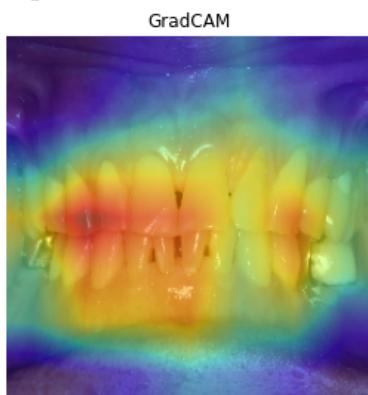


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-77_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-77_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.989
cancer	(0)	with probability 0.011

Explanation for 'normal'

GradCAM Guided Backprop Guided GradCAM

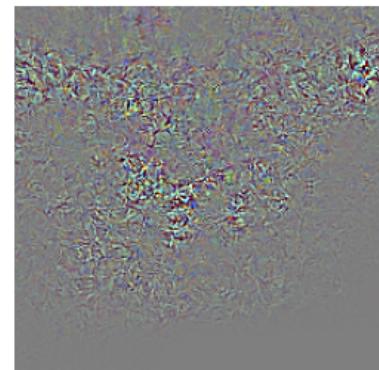
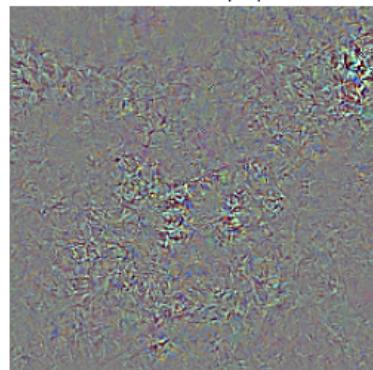
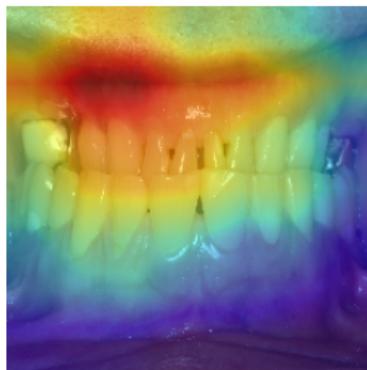
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-77_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

GradCAM Guided Backprop Guided GradCAM



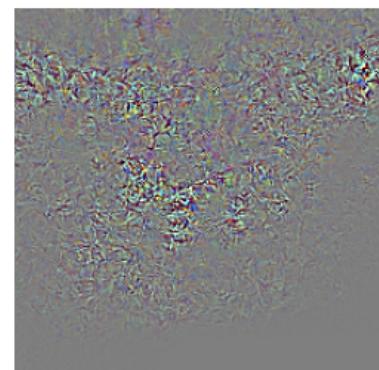
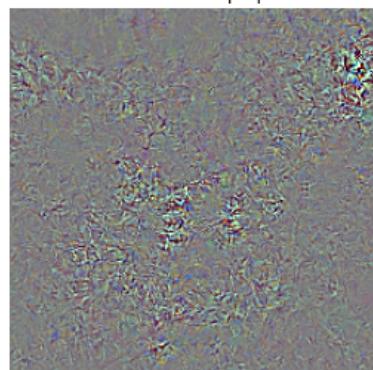
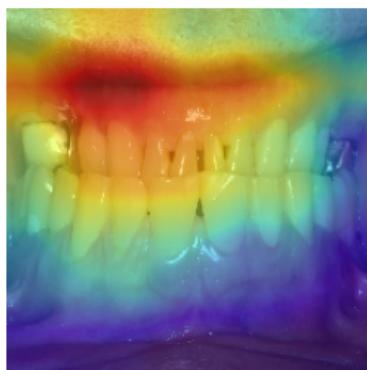
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-77_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

GradCAM Guided Backprop Guided GradCAM

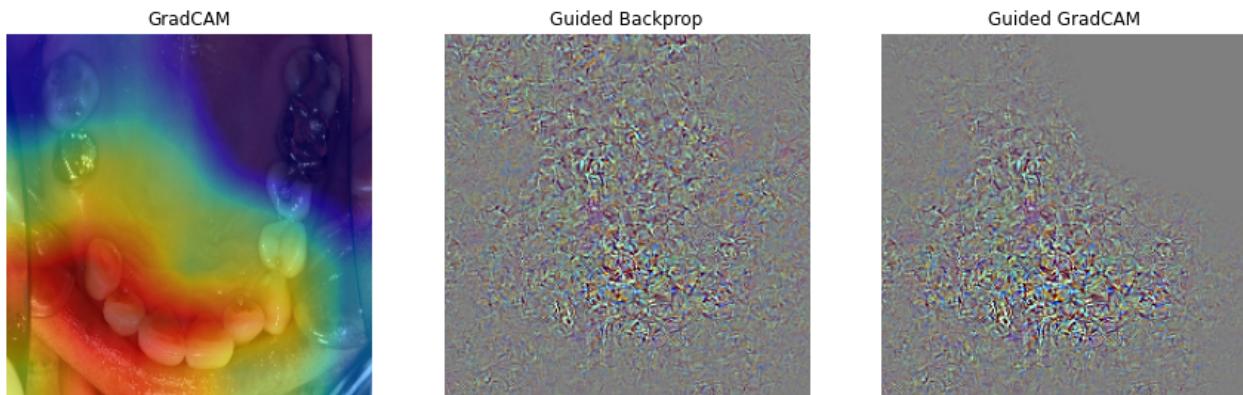


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-8.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.989
cancer	(0)	with probability 0.011

Explanation for 'normal'

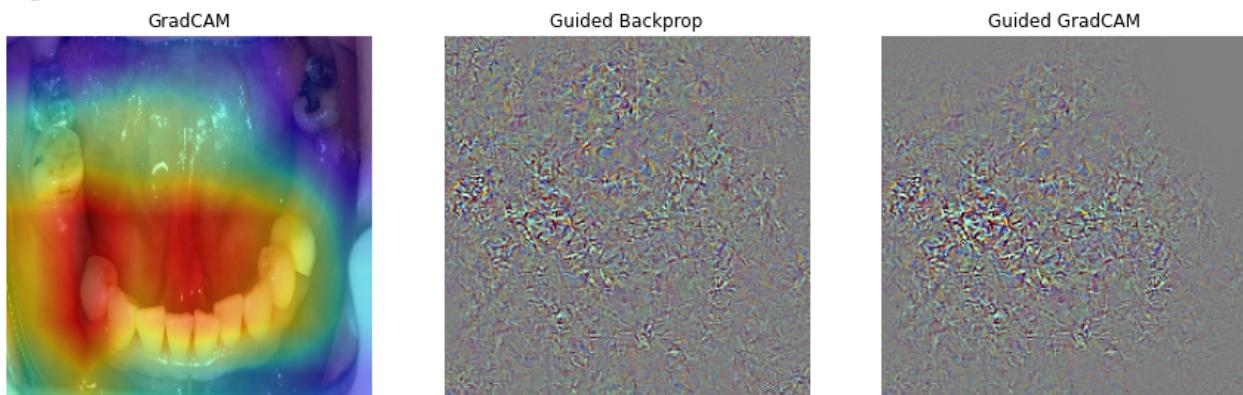


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-81.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.998
cancer	(0)	with probability 0.002

Explanation for 'normal'

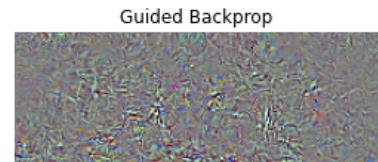


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-81_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

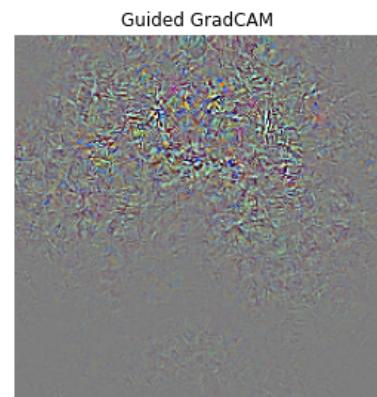
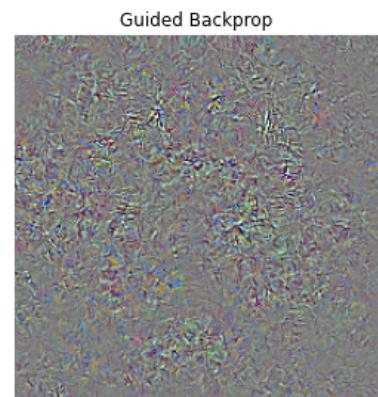
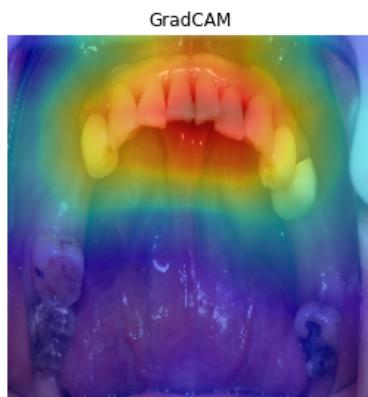


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-81_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

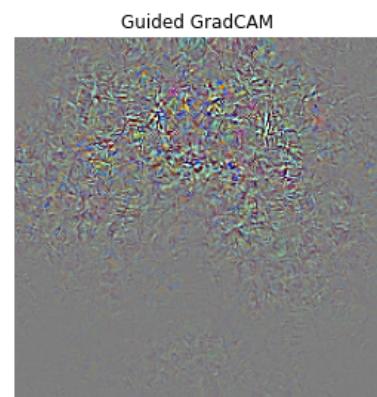
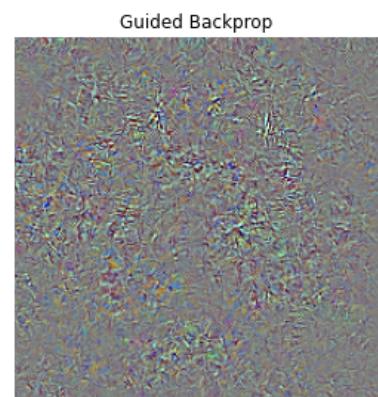
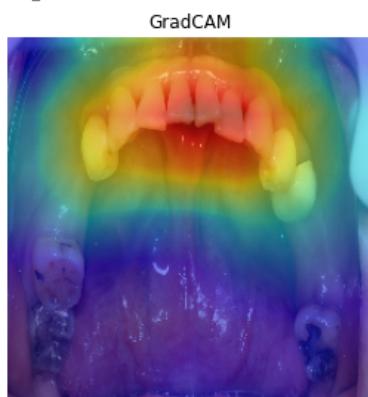


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-81_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

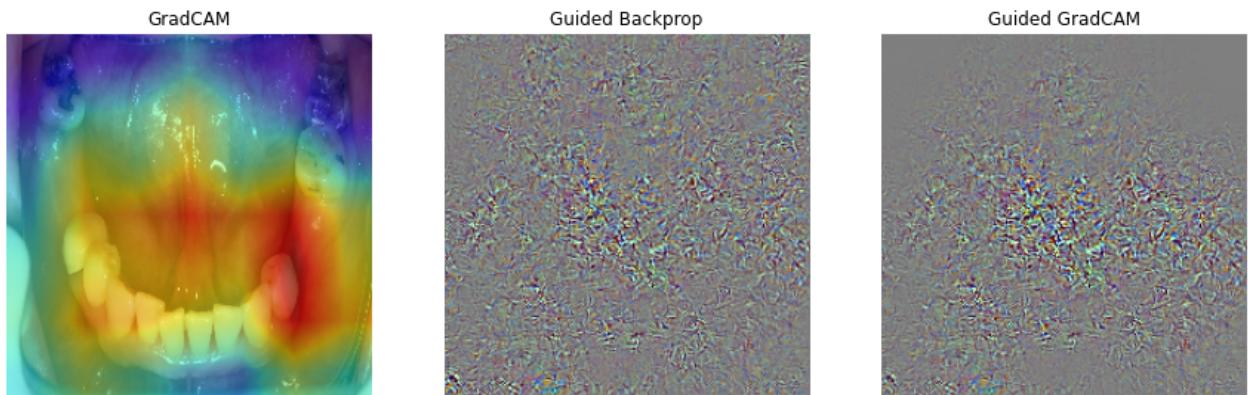


```
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, tε
```

Model prediction:

normal	(1)	with probability 0.999
cancer	(0)	with probability 0.001

Explanation for 'normal'

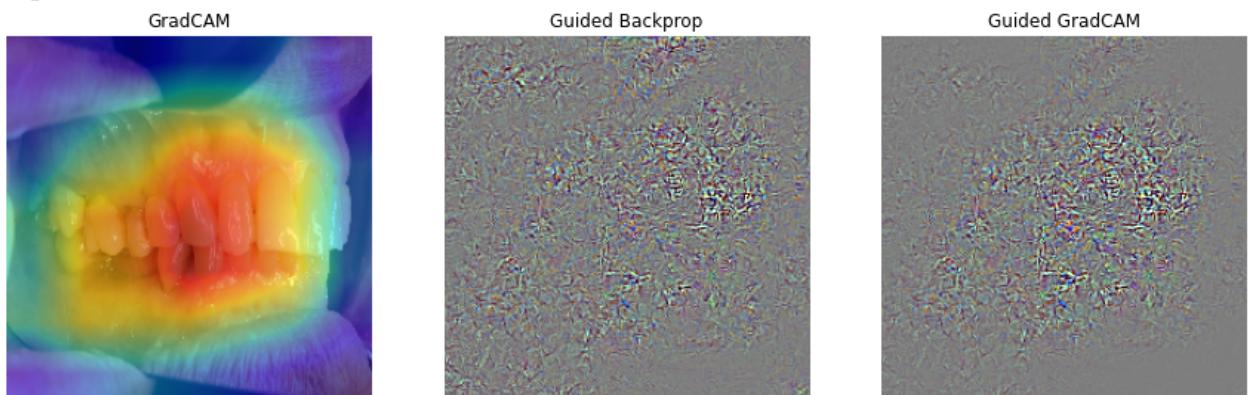


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-85.jpg'
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, tε
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

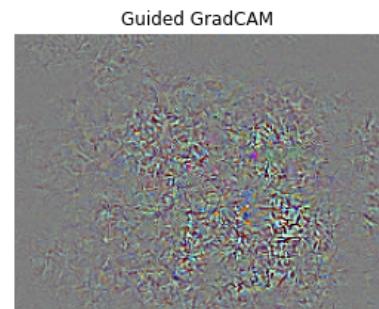
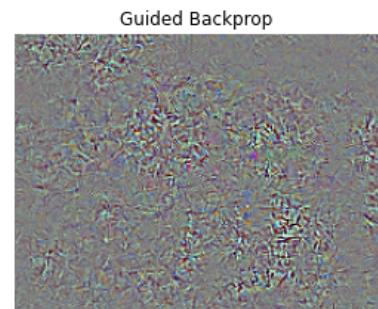
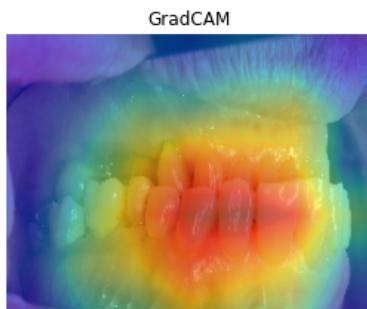


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-85_augn
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, tε
```

Model prediction:

normal	(1)	with probability 1.000
cancer	(0)	with probability 0.000

Explanation for 'normal'

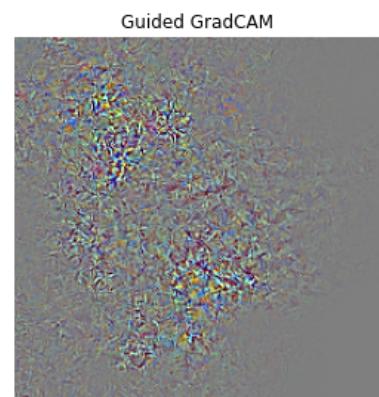
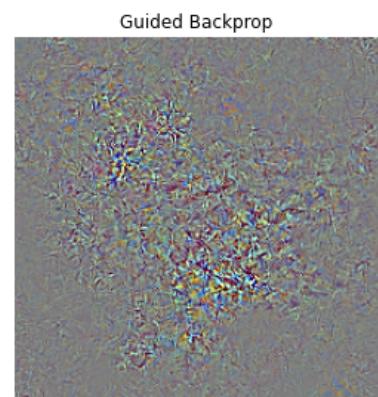
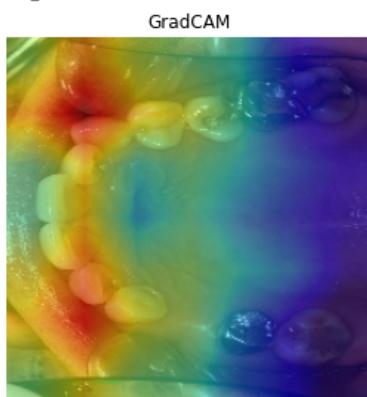


```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-8_augme
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal	(1)	with probability 0.989
cancer	(0)	with probability 0.011

Explanation for 'normal'



```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-8_augme
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

normal (1) with probability 0.998  
cancer (0) with probability 0.002

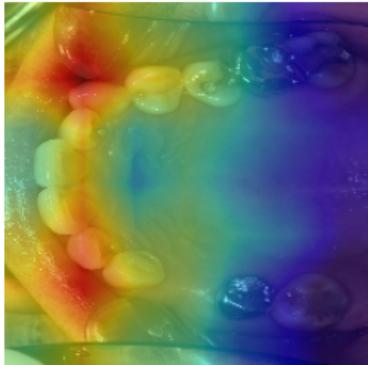
```
1 test_img = '/content/AJPom_cancer_data/dataset/test/normal/normal-8_augme
2 gradcam, gb, guided_gradcam = compute_saliency(test_model, test_model, te
```

Model prediction:

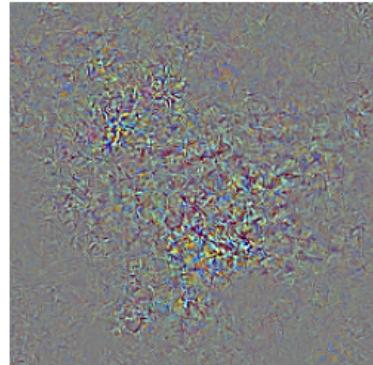
normal (1) with probability 0.989  
cancer (0) with probability 0.011

Explanation for 'normal'

GradCAM



Guided Backprop



Guided GradCAM

