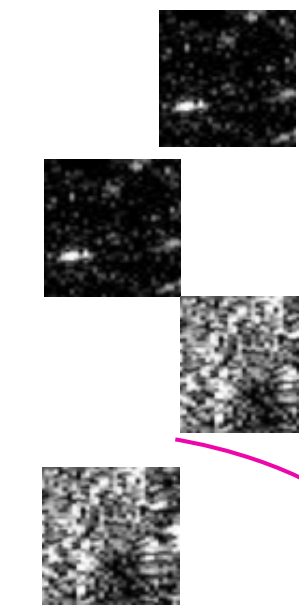
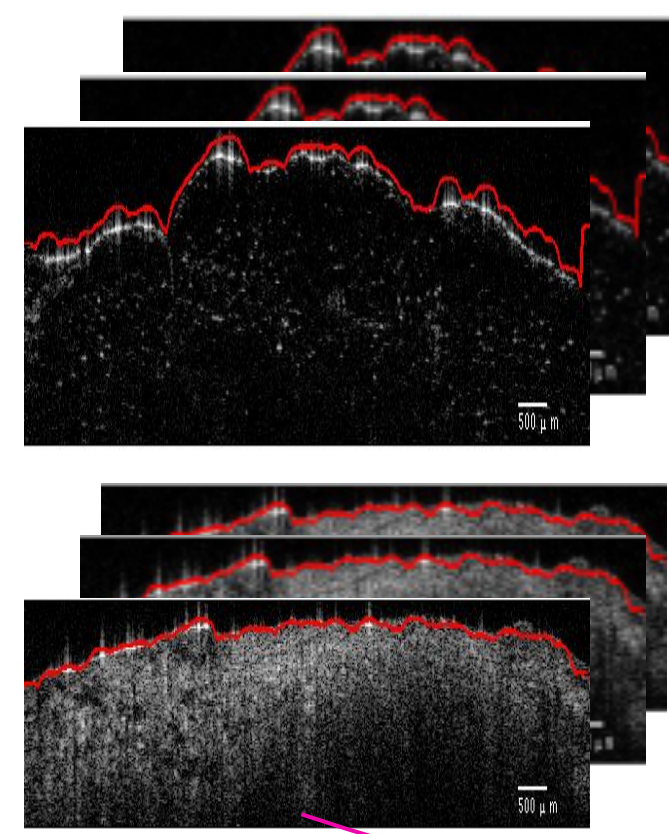
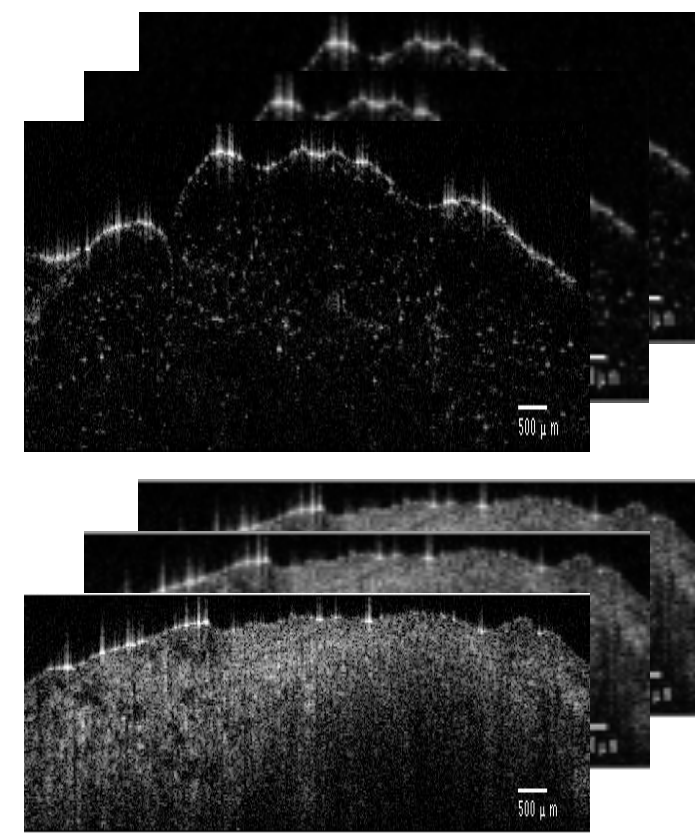


Training

Normal

Separated by  
pathologists

Cancer



4a

ConvNet

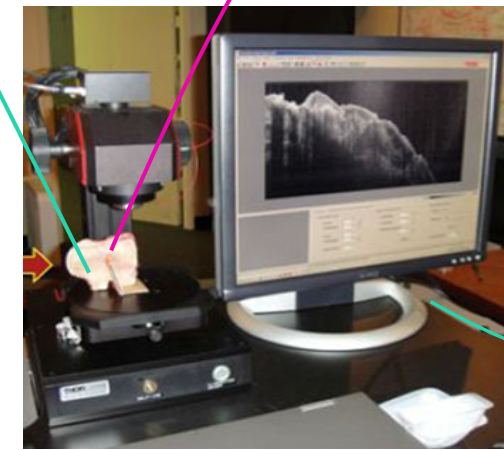
5

1

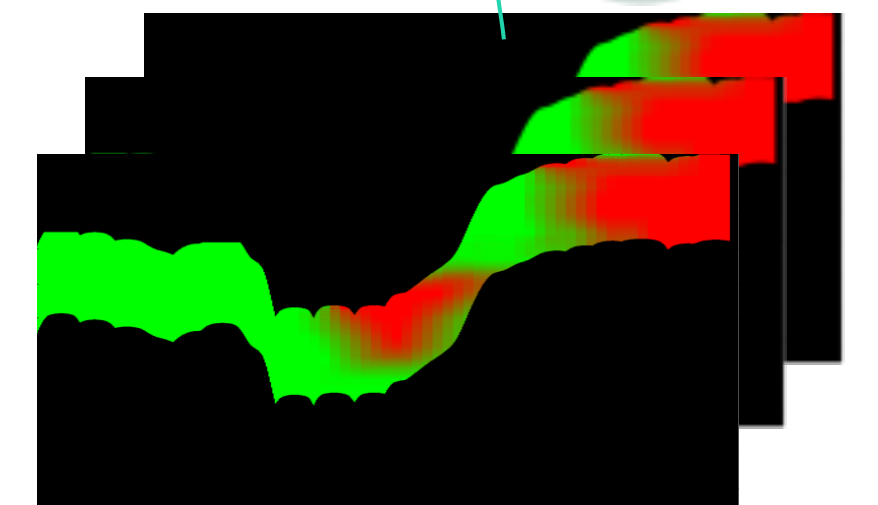
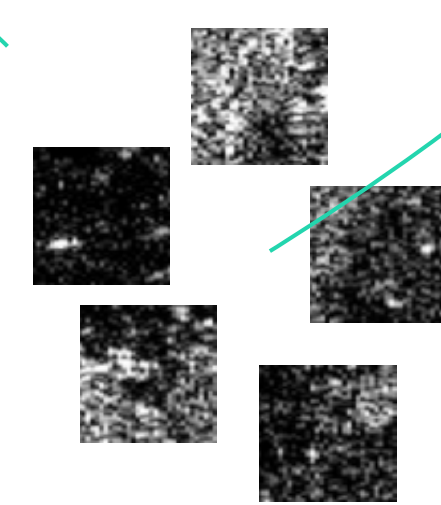
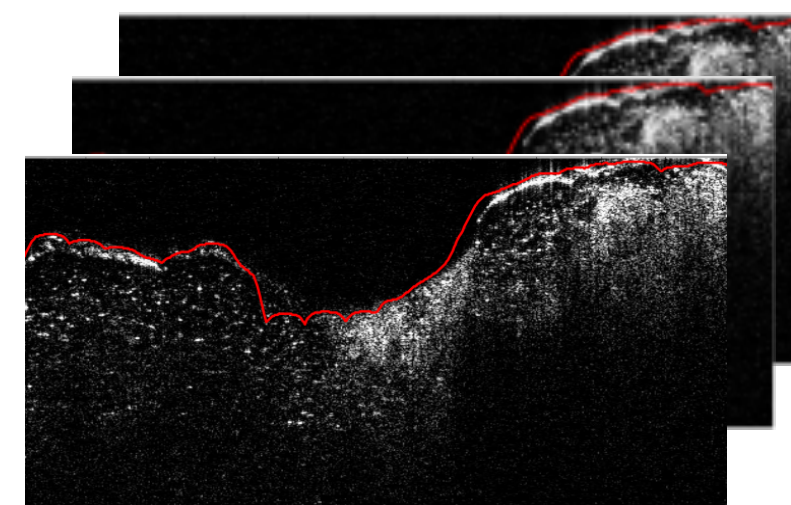
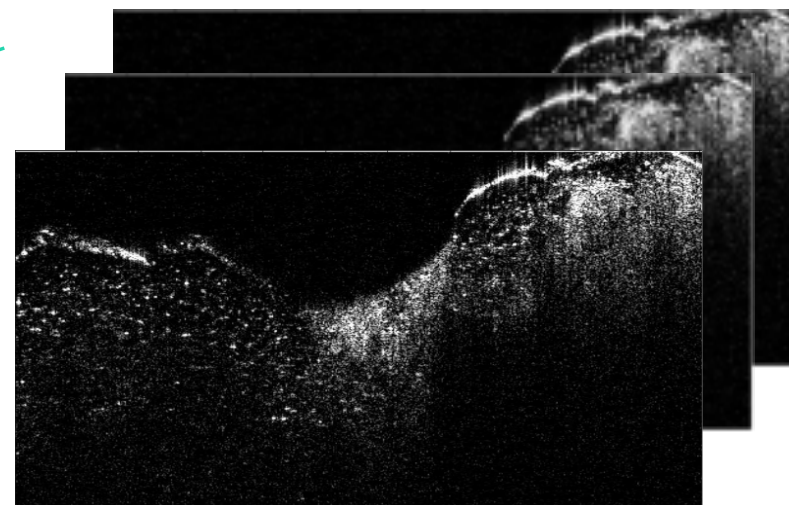
2

3

4b



During surgery



**1. Image  
acquisition**

Imaging technique:  
OCT

**2. Surface  
detection**

Smoothed Sobel edge  
detector

**3. Extract  
patches**

Training: non-  
overlapping

During surgery:  
overlapping

**4. Feed to the  
network**

4a. Train the network:  
Forward + Backward  
with function norm  
regularization

4b. Evaluate class  
probability for each  
patch

**5. Average  
results**

Over overlapping  
patches: Red = most  
probably cancer, green =  
most probably norm.