

Week 1: Applications of Computer Vision to Medical Diagnosis

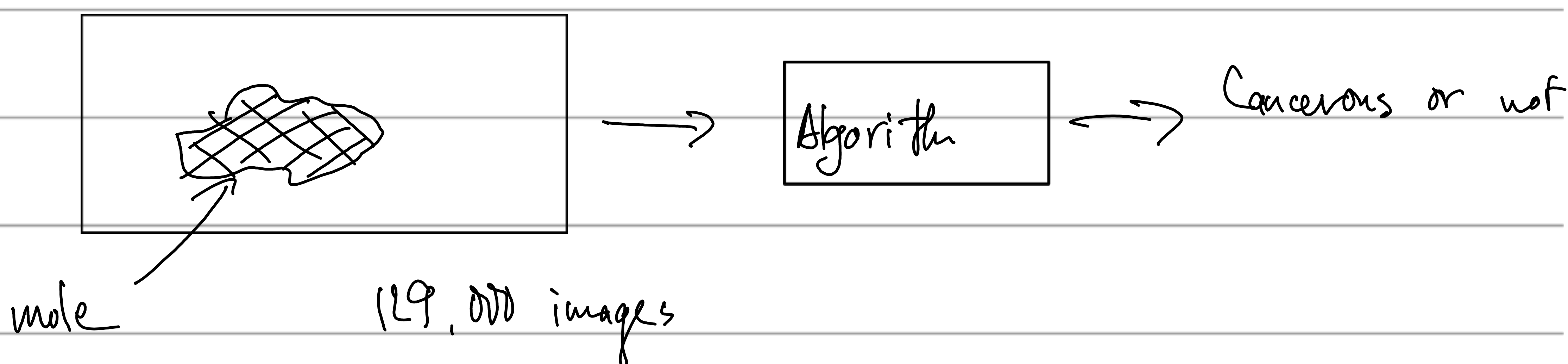
Task Chest X-ray classification.

three examples

training procedure

testing procedure

First example: Dermatology (dealing with skin)



Second example: Ophthalmology

• 128,000 images

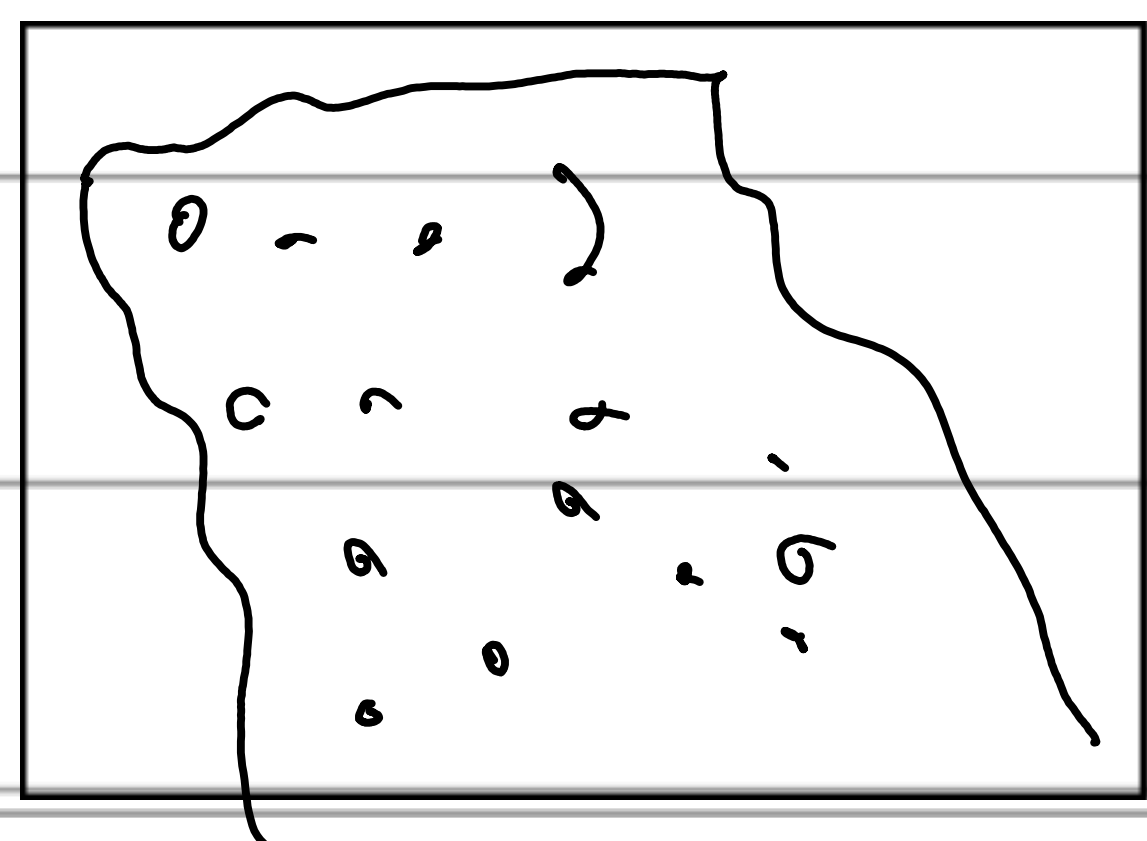
• 306 → DR (Diabetes Retinopathy)

• Results comparable with ophthalmologists

• The majority vote of multiple ophthalmologists was used

Third example: Histopathology

(Whole slide image)



→ Cancer Spread to Lymph Nodes?

• In 2012, using 20 WSI → comparable pathologist

500,000+ patches