# NLP Presentation Script

## Background

Chest X-ray definition & why they help

One of most common imaging procedures in medicine

CXR is obtained by a certified technologist

Images sent for interpretation by a radiologist.

Nowadays, radiologists read from large queue’s which are prioritized by indication – some examples; however, often unexpected findings come up in low priority cases.

To minimize the time it takes for emergent findings to be communicated, it would be great to have a tool that could triage the abnormal cases to the head of the queue to be read first by a radiologist.

The mix of normal to abnormal cases obviously varies; however, some studies have estimated that over 60% of CXR’s are interpreted as normal. If the abnormal studies could be prioritized over the normal studies, this could reduce the time for communication of potentially urgent or emergent findings in half.

Multiple efforts to use AI and computer vision to help triage CXR’s are underway; however, these efforts are limited by the availability of large sets of labelled data (on the order of 10’s of thousands). There are however an abundance of CXR images with accompanying radiology reports. If there were a way to generate weak labels in an automated fashion from CXR reports; this would have a large impact on efforts to develop computer vision systems to triage CXR for radiologic interpretation. Such systems could be trained by large datasets as well as tailored to a particular hospital’s case spectrum and equipment; thereby increasing their value in a local setting.

## References

<https://www.rsna.org/news/2019/january/ai-for-chest-x-rays> (Annarumma M, Automated Triaging of Adult Chest Radiographs with Deep Artificial Neural Networks, Radiology 2019)