

2018 RSNA Pneumonia Detection Challenge
Dataset Description

Imaging Modality	X-ray Preferred name: digital radiography RadLex ID: RID10351
Number of Images	30,000 frontal view chest radiographs from the 112,000-image public National Institutes of Health (NIH) CXR8 dataset <ul style="list-style-type: none"> ● 16,248 posteroanterior views ● 13,752 anteroposterior views ● Test: 4,527
Imaging file and structure set format	Portable Network Graphics images were converted into Digital Imaging and Communications in Medicine format, and patient sex, patient age, and projection (anteroposterior or posteroanterior) were added to the Digital Imaging and Communications in Medicine tags
Annotation Pattern	<ul style="list-style-type: none"> ● Whole study label ● Whole image (2D) label ● 2D ROI(s)
Annotation methodology and structure	Method of annotation <ul style="list-style-type: none"> ● Manual Annotation output <ul style="list-style-type: none"> ● Bounding boxes Annotation software <ul style="list-style-type: none"> ● md.ai Storage, Portability, Interoperability <ul style="list-style-type: none"> ● RSNA Website ZIP file
Common data elements	PDE339-Pneumonia Detection Element Details for Pneumonia Detection Name: Pneumonia Detection Definition: Detection of pneumonia Question: Pneumonia Detection ValuesValue References Enumerated (exactly 1 value): <ul style="list-style-type: none"> ● 0 Unknown ● 1 Pneumonia present ● 2 Pneumonia absent
Data use agreement/licensing	<ul style="list-style-type: none"> ● Open licensing ● Non-commercial purpose ● References to dataset ● Terms
Imaging file and structure set format	DICOM - metadata/tags (based on individual task)

Image Characteristics	Resolution <ul style="list-style-type: none"> ● Original ● Downsampled Pre-processing <ul style="list-style-type: none"> ● Standard normalization ● Histogram normalization ● Other Burned-in PHI <ul style="list-style-type: none"> ● No ● Removed
Labeler demographics	<ul style="list-style-type: none"> ● 18 radiologists from 16 different institutions, including 12 chest radiologists from the STR Specialty ● Mean of 10.6 years of experience (age range, 3-35 years) ● Scope of annotation (e.g., multi-institutional)
Reference	Shih G, et al. Augmenting the National Institutes of Health Chest Radiograph Dataset with Expert Annotations of Possible Pneumonia https://pubs.rsna.org/doi/10.1148/ryai.2019180041