MedCLIP View Classification on IU-CXR (Pathology-rich sanity subset)

Total samples (Frontal + Lateral): 54

Normalized accuracy: 0.5185 (28 / 54)
CLAHE accuracy: 0.5000 (27 / 54)

Misclassified (Normalized): 26
Misclassified (CLAHE):   27

How to read the confusion matrices:
- Rows = Ground Truth (GT) view, Columns = Predicted view.
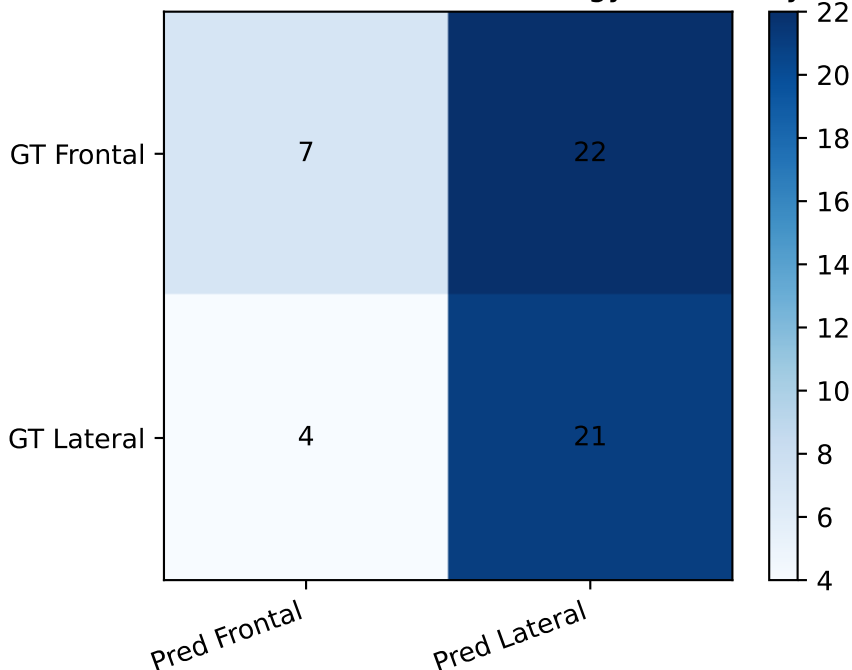- Order of classes: [Frontal, Lateral].

Timing (per-image, CPU-only):
- Normalized avg / median: 89.33 / 90.28 ms
- CLAHE avg / median: 88.13 / 89.01 ms
- Max (normalized): 97.68 ms
- Max (CLAHE):   97.21 ms

Overall interpretation:
- On this subset, normalized images perform slightly better or similar to CLAHE.
- Off-diagonal counts in the confusion matrices indicate how often views are flipped between Frontal and Lateral; l
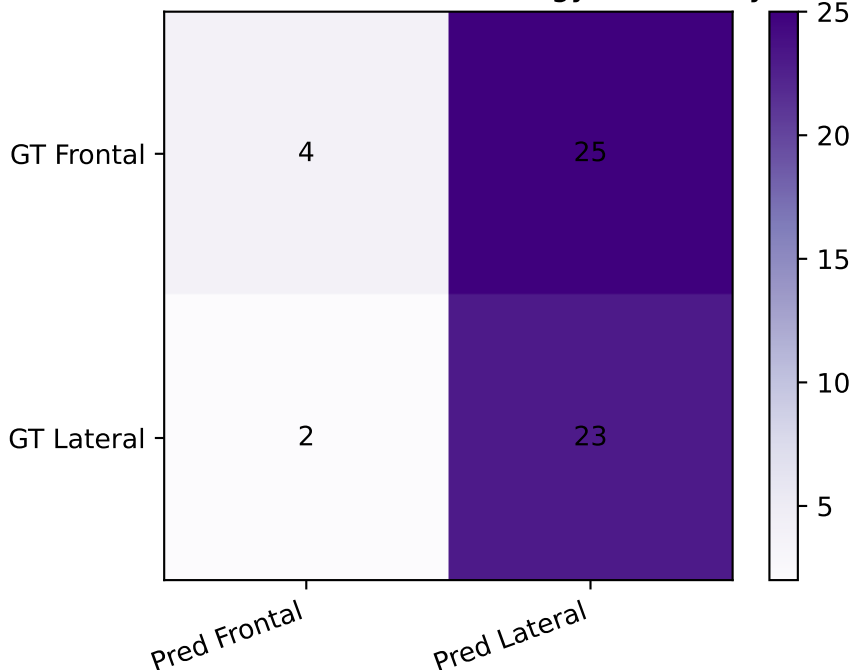
Confusion Matrix - Normalized (Pathology-rich sanity subset)

Normalized: accuracy = 51.85% on 54 images.
- GT Frontal: 7 correctly predicted as Frontal, 22 misclassified as Lateral.
- GT Lateral: 21 correctly predicted as Lateral, 4 misclassified as Frontal.
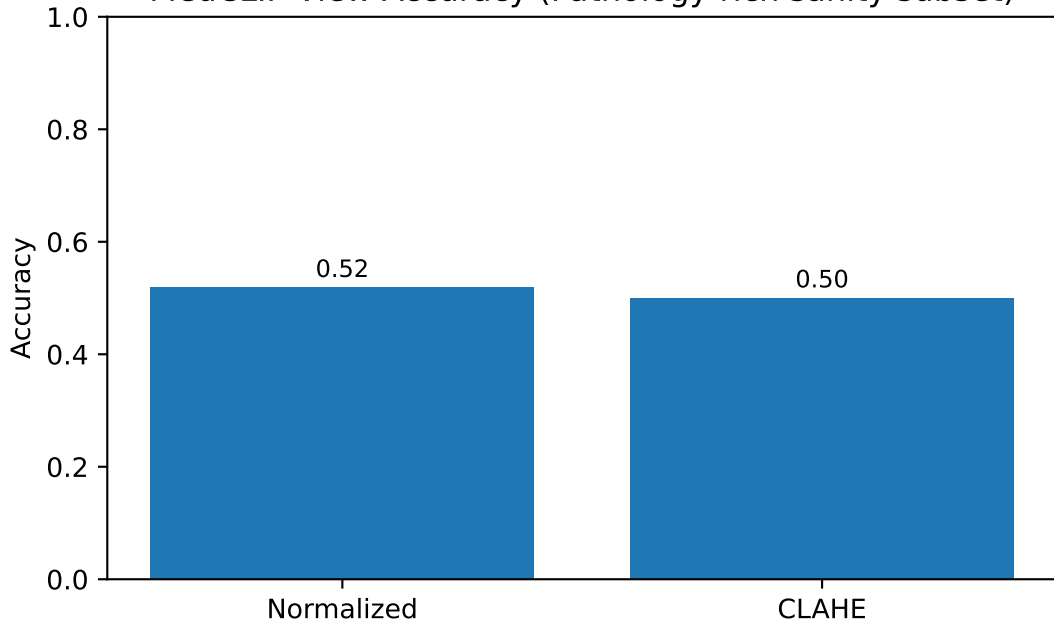- Model tends to flip Frontal views into Lateral more often than vice versa.

Confusion Matrix - CLAHE (Pathology-rich sanity subset)

CLAHE: accuracy = 50.00% on 54 images.
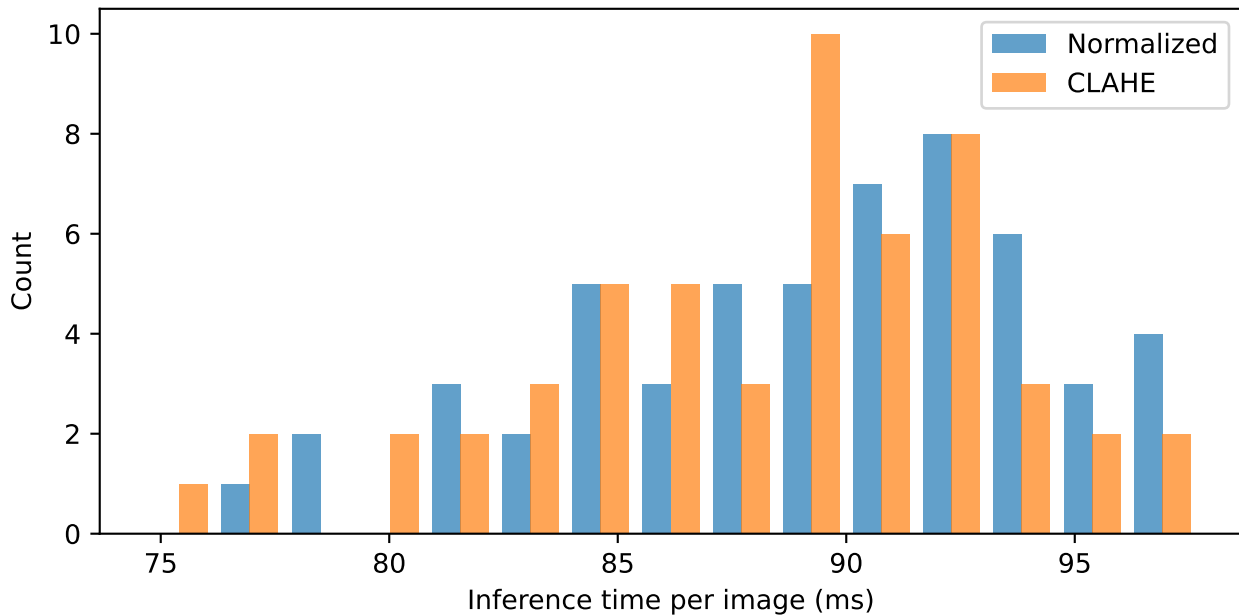- GT Frontal: 4 correctly predicted as Frontal, 25 misclassified as Lateral.
- GT Lateral: 23 correctly predicted as Lateral, 2 misclassified as Frontal.
- Model tends to flip Frontal views into Lateral more often than vice versa.

MedCLIP View Accuracy (Pathology-rich sanity subset)

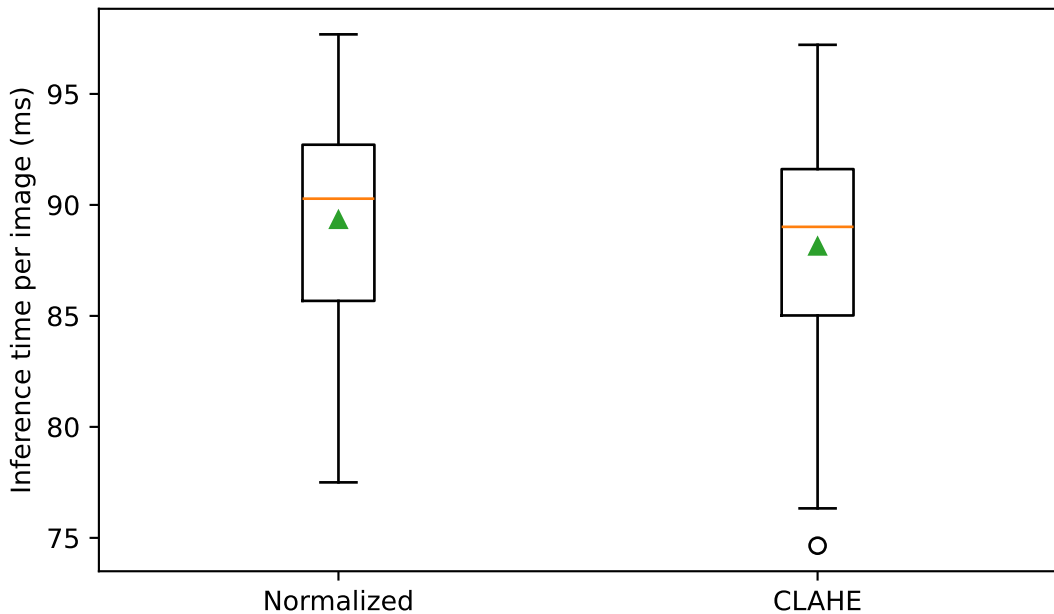Interpretation: bars compare overall view-classification accuracy for normalized vs CLAHE ima

Inference time distribution (CPU) - Pathology-rich sanity subset

Interpretation: both distributions cluster around ~90.3–89.0 ms. Overlap indicates similar latency for normali

Inference time boxplot - Pathology-rich sanity subset

Interpretation: the boxplot summarizes median, IQR, and outliers for per-image inference time

UID	Image_ID	GT_View	Normal_Pred	CLAHE_Pred	Normal_Inference_	CLAHE_Inference_	Pathology_Labels_14	is_normal_	is_tq_unsat
174	174_IM-0488-1001.dcm.png	Frontal	Frontal	Frontal	84.26	74.65	pneumothorax,support_devices	False	False
174	174_IM-0488-2001.dcm.png	Lateral	Lateral	Lateral	83.44	85.79	pneumothorax,support_devices	False	False
206	206_IM-0697-6001.dcm.png	Frontal	Lateral	Lateral	92.56	91.63	cardiomegaly,lung_lesion	False	False
289	289_IM-1292-0001-0001.dcm.png	Frontal	Lateral	Lateral	78.08	80.44	edema,consolidation,pleural_effusion,support_devices	False	False
289	289_IM-1292-0001-0002.dcm.png	Lateral	Frontal	Lateral	82.16	84.93	edema,consolidation,pleural_effusion,support_devices	False	False
295	295_IM-1348-1001.dcm.png	Frontal	Lateral	Lateral	96.06	92.88	consolidation,pneumothorax,pleural_effusion,fracture	False	False
295	295_IM-1348-2001.dcm.png	Lateral	Lateral	Lateral	92.08	83.49	consolidation,pneumothorax,pleural_effusion,fracture	False	False
332	332_IM-1588-1001.dcm.png	Frontal	Lateral	Lateral	85.38	80.32	lung_opacity,pneumonia,pleural_effusion	False	False
332	332_IM-1588-2001.dcm.png	Lateral	Lateral	Lateral	88.54	84.79	lung_opacity,pneumonia,pleural_effusion	False	False
342	342_IM-1655-0001-0001.dcm.png	Frontal	Lateral	Lateral	86.01	89.05	cardiomegaly	False	False
342	342_IM-1655-0001-0002.dcm.png	Lateral	Lateral	Lateral	88.30	88.94	cardiomegaly	False	False
403	403_IM-2052-2001.dcm.png	Frontal	Lateral	Lateral	90.27	91.89	lung_opacity,fracture	False	False
403	403_IM-2052-1001.dcm.png	Lateral	Lateral	Lateral	86.57	77.05	lung_opacity,fracture	False	False
552	552_IM-2155-1001.dcm.png	Frontal	Frontal	Lateral	90.29	92.05	consolidation,pleural_effusion	False	False
552	552_IM-2155-2001.dcm.png	Lateral	Lateral	Lateral	87.46	92.08	consolidation,pleural_effusion	False	False
558	558_IM-2158-0001-0001.dcm.png	Frontal	Frontal	Lateral	81.42	89.25	consolidation,pneumothorax	False	False
558	558_IM-2158-0001-0002.dcm.png	Lateral	Lateral	Lateral	93.31	91.56	consolidation,pneumothorax	False	False
621	621_IM-2203-1001.dcm.png	Frontal	Lateral	Lateral	93.40	87.87	pneumonia,pneumothorax	False	False

UID	Image_ID	GT_View	Normal_Pred	CLAHE_Pred	Normal_Inference_	CLAHE_Inference_	Pathology_Labels_14	is_normal_	is_tq_unsat
621	621_IM-2203-2001.dcm.png	Lateral	Lateral	Lateral	77.50	89.41	pneumonia,pneumothorax	False	False
729	729_IM-2288-1001.dcm.png	Frontal	Lateral	Lateral	87.63	86.03	lung_opacity,lung_lesion,pneumothorax,pleural_effusion	False	False
729	729_IM-2288-2001.dcm.png	Lateral	Lateral	Lateral	92.40	91.19	lung_opacity,lung_lesion,pneumothorax,pleural_effusion	False	False
1007	1007_IM-0008-1001.dcm.png	Frontal	Lateral	Lateral	87.74	84.75	lung_opacity,pleural_effusion	False	False
1007	1007_IM-0008-3001.dcm.png	Frontal	Frontal	Lateral	78.78	82.40	lung_opacity,pleural_effusion	False	False
1007	1007_IM-0008-2001.dcm.png	Lateral	Lateral	Lateral	96.66	76.33	lung_opacity,pleural_effusion	False	False
1053	1053_IM-0040-1001.dcm.png	Frontal	Lateral	Lateral	94.15	88.88	cardiomegaly,consolidation,atelectasis,pneumothorax	False	False
1053	1053_IM-0040-3003.dcm.png	Lateral	Frontal	Lateral	90.76	91.05	cardiomegaly,consolidation,atelectasis,pneumothorax	False	False
1059	1059_IM-0041-1001.dcm.png	Frontal	Lateral	Lateral	83.89	90.19	lung_opacity,pneumonia,pleural_effusion	False	False
1375	1375_IM-0241-1001.dcm.png	Frontal	Lateral	Lateral	88.04	92.92	cardiomegaly,edema,pneumonia	False	False
1375	1375_IM-0241-3001.dcm.png	Frontal	Lateral	Lateral	90.55	81.40	cardiomegaly,edema,pneumonia	False	False
1375	1375_IM-0241-4001.dcm.png	Lateral	Lateral	Lateral	83.80	86.48	cardiomegaly,edema,pneumonia	False	False
1437	1437_IM-0281-3001.dcm.png	Frontal	Lateral	Lateral	91.07	89.20	lung_opacity,pneumothorax,pleural_effusion	False	False
1437	1437_IM-0281-2001.dcm.png	Lateral	Lateral	Lateral	92.11	85.29	lung_opacity,pneumothorax,pleural_effusion	False	False
1577	1577_IM-0375-1001.dcm.png	Frontal	Lateral	Lateral	85.34	86.39	lung_opacity,pleural_effusion	False	False
1577	1577_IM-0375-2001.dcm.png	Lateral	Lateral	Lateral	97.68	88.92	lung_opacity,pleural_effusion	False	False
1581	1581_IM-0378-1001.dcm.png	Frontal	Lateral	Lateral	92.70	92.49	lung_lesion,consolidation,pneumothorax,pleural_effusion	False	False
1581	1581_IM-0378-2001.dcm.png	Lateral	Lateral	Lateral	96.23	93.09	lung_lesion,consolidation,pneumothorax,pleural_effusion	False	False

UID	Image_ID	GT_View	Normal_Pred	CLAHE_Pred	Normal_Inference_	CLAHE_Inference_	Pathology_Labels_14	is_normal_	is_tq_unsat
1678	1678_IM-0447-0001-0001.dcm.png	Frontal	Frontal	Frontal	93.77	89.37	lung_opacity,lung_lesion,consolidation,pleural_effusion,support_devices	False	False
1678	1678_IM-0447-0001-0002.dcm.png	Lateral	Frontal	Frontal	96.09	88.97	lung_opacity,lung_lesion,consolidation,pleural_effusion,support_devices	False	False
1815	1815_IM-0527-1001.dcm.png	Frontal	Lateral	Lateral	81.52	90.20	pleural_effusion	False	False
1815	1815_IM-0527-2001.dcm.png	Lateral	Lateral	Lateral	84.26	94.11	pleural_effusion	False	False
1867	1867_IM-0560-4004.dcm.png	Frontal	Lateral	Lateral	96.21	90.42	cardiomegaly,lung_opacity,edema,atelectasis,pleural_effusion,fracture	False	False
1867	1867_IM-0560-1001.dcm.png	Lateral	Lateral	Lateral	89.80	83.22	cardiomegaly,lung_opacity,edema,atelectasis,pleural_effusion,fracture	False	False
2077	2077_IM-0710-1001.dcm.png	Frontal	Lateral	Lateral	92.71	87.97	consolidation,atelectasis,pneumothorax,pleural_effusion,support_devices	False	False
2077	2077_IM-0710-2001.dcm.png	Lateral	Lateral	Lateral	91.73	89.47	consolidation,atelectasis,pneumothorax,pleural_effusion,support_devices	False	False
2095	2095_IM-0725-4001.dcm.png	Frontal	Lateral	Lateral	89.00	97.21	atelectasis,pneumothorax,pleural_effusion,fracture	False	False
2095	2095_IM-0725-2001.dcm.png	Lateral	Lateral	Lateral	85.56	84.01	atelectasis,pneumothorax,pleural_effusion,fracture	False	False
2396	2396_IM-0945-1001.dcm.png	Frontal	Lateral	Lateral	89.87	96.52	lung_opacity,consolidation,pneumothorax,pleural_effusion	False	False
2396	2396_IM-0945-2001.dcm.png	Lateral	Lateral	Lateral	92.23	90.55	lung_opacity,consolidation,pneumothorax,pleural_effusion	False	False
2752	2752_IM-1202-0001-0001.dcm.png	Frontal	Frontal	Frontal	95.76	95.65	cardiomegaly,lung_opacity,edema,atelectasis,pleural_effusion	False	False
2752	2752_IM-1202-0001-0002.dcm.png	Lateral	Frontal	Frontal	93.34	81.96	cardiomegaly,lung_opacity,edema,atelectasis,pleural_effusion	False	False
3074	3074_IM-1435-1001.dcm.png	Frontal	Lateral	Lateral	93.15	86.42	lung_opacity,pneumonia	False	False
3074	3074_IM-1435-2001.dcm.png	Lateral	Lateral	Lateral	91.20	95.43	lung_opacity,pneumonia	False	False
3636	3636_IM-1803-1001.dcm.png	Frontal	Frontal	Frontal	91.28	88.39	lung_opacity,pneumothorax,pleural_effusion	False	False
3636	3636_IM-1803-2001.dcm.png	Lateral	Lateral	Lateral	89.82	94.22	lung_opacity,pneumothorax,pleural_effusion	False	False