

Figure S1. Binary classification - Testing set confusion matrices for all 5 folds.

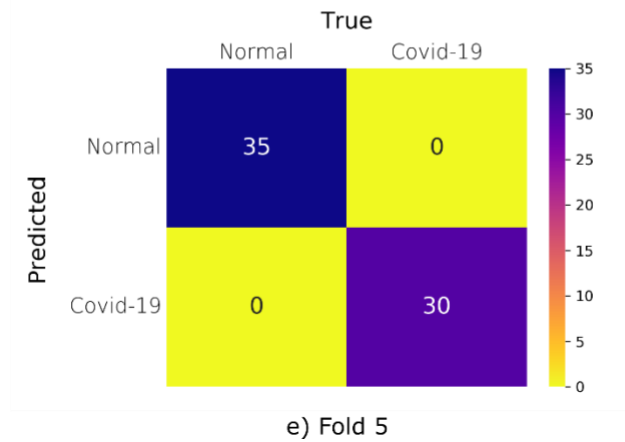
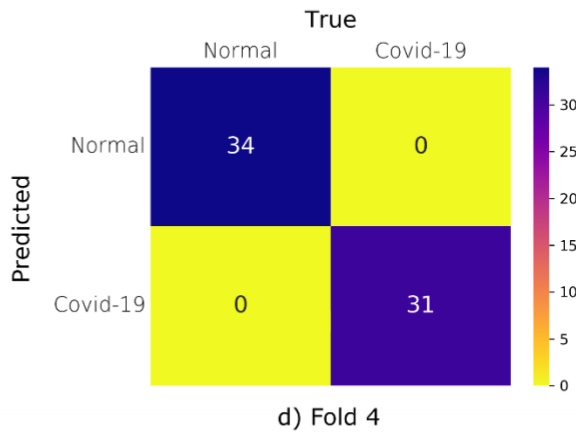
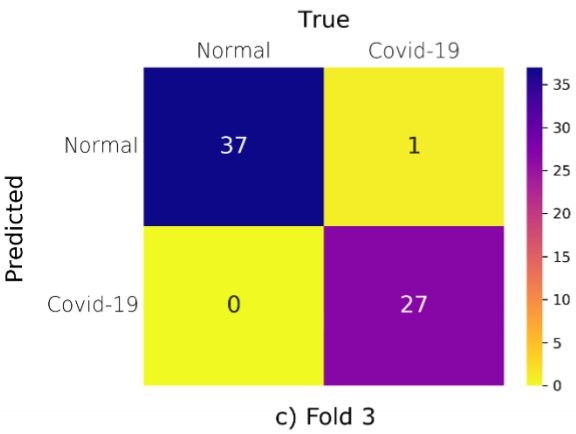
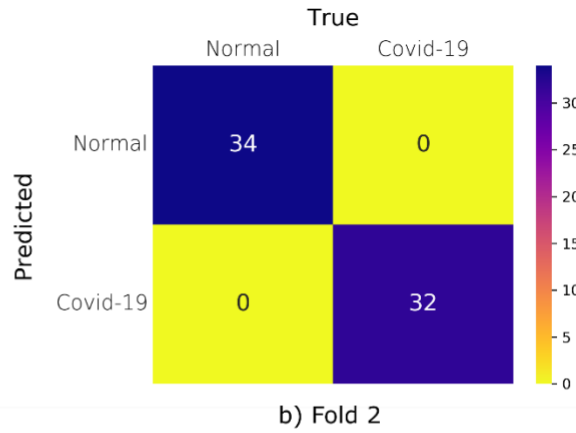
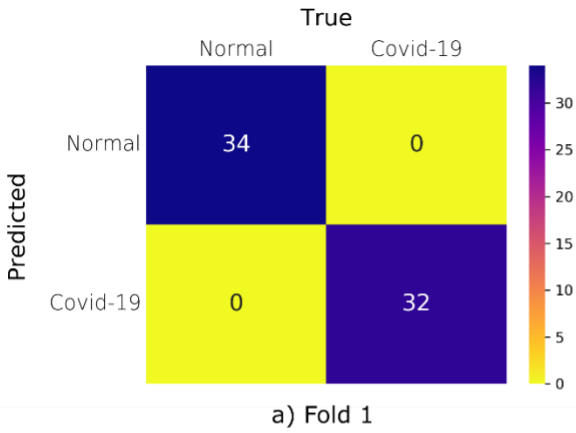


Figure S2. Ternary classification - Testing set confusion matrices for all 5 folds.

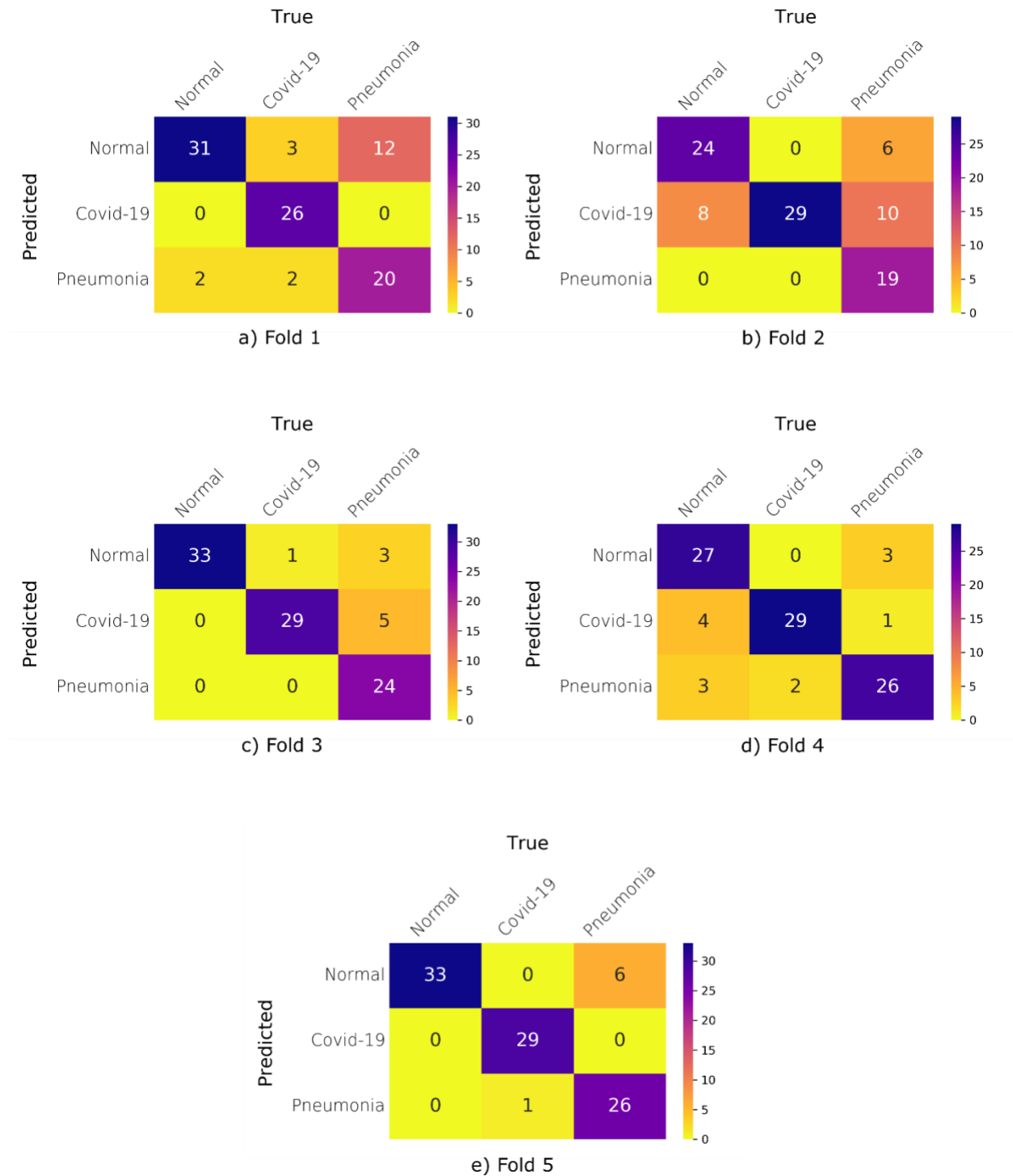


Figure S3. Quaternary classification - Testing set confusion matrices for all 5 folds.

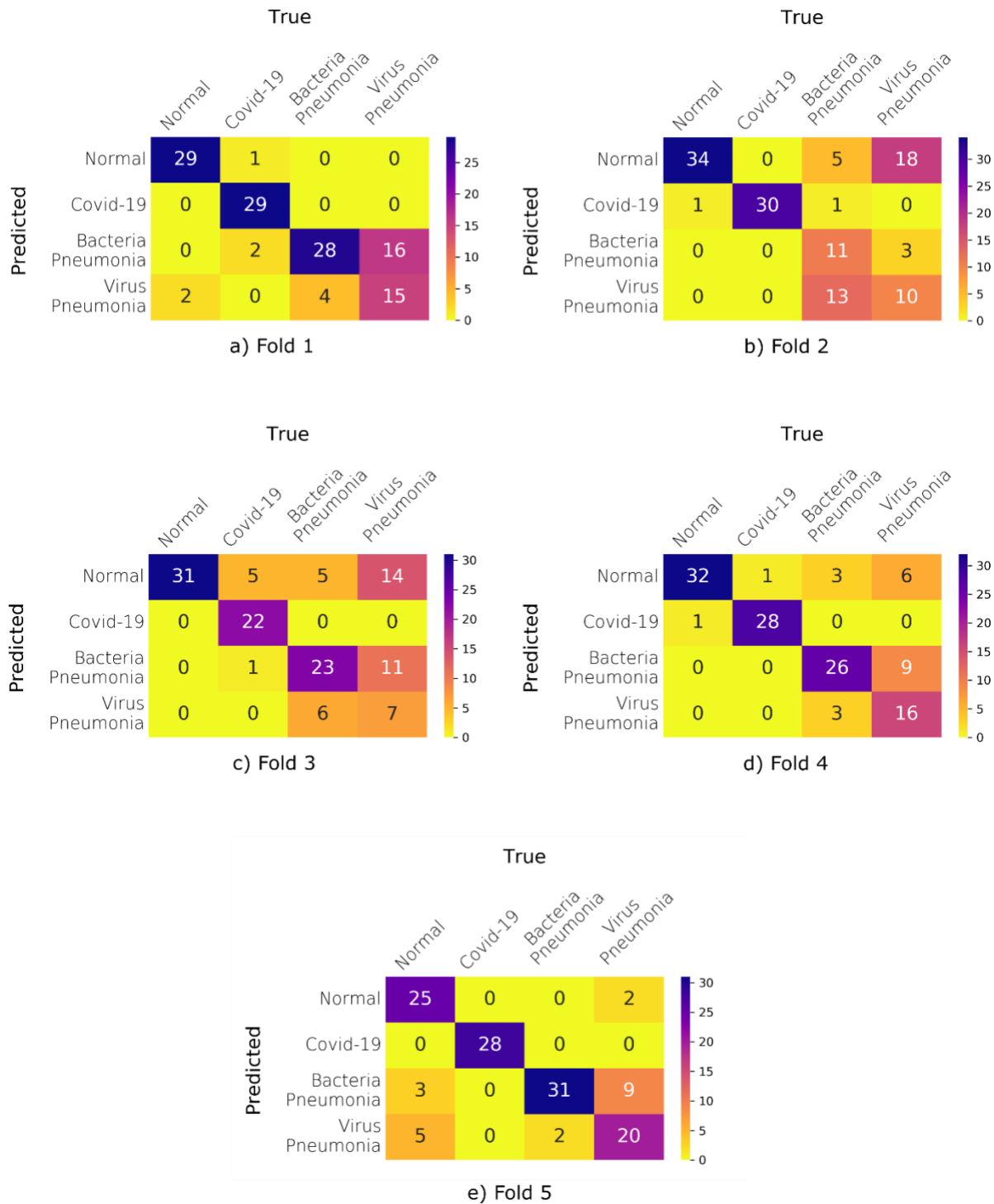


Table SI. Ternary classification - Normal class performance on the testing sets across all folds.

	Mean	Median	STD	Min	Max
SPC	0.89	0.91	0.08	0.76	0.9581
SEN	0.90	0.94	0.12	0.75	1
PRE	0.82	0.85	0.09	0.67	0.9
ACC	0.89	0.89	0.06	0.98	0.96

Table SII. Ternary classification - COVID-19 class performance on the testing sets across all folds.

	Mean	Median	STD	Min	Max
SPC	0.92	0.92	0.11	0.73	1
SEN	0.94	0.97	0.06	0.84	1
PRE	0.86	0.85	0.16	0.62	1
ACC	0.92	0.94	0.07	0.81	0.99

Table SIII. Ternary classification - Pneumonia class performance on the testing sets across all folds.

	Mean	Median	STD	Min	Max
SPC	0.97	0.98	0.04	0.92	1
SEN	0.72	0.75	0.13	0.54	0.87
PRE	0.93	0.96	0.08	0.83	1
ACC	0.88	0.91	0.05	0.83	0.93

Table SIV. Quaternary classification - Normal class performance on the testing sets across all folds.

	Mean	Median	STD	Min	Max
SPC	0.87	0.89	0.12	0.74	0.99
SEN	0.93	0.97	0.10	0.76	1
PRE	0.76	0.76	0.18	0.56	0.97
ACC	0.89	0.91	0.07	0.81	0.98

Table SV. Quaternary classification - COVID-19 class performance on the testing sets across all folds.

	Mean	Median	STD	Min	Max
SPC	0.99	1	0.01	0.98	1
SEN	0.93	0.97	0.09	0.79	1
PRE	0.98	1	0.03	0.94	1
ACC	0.98	0.98	0.02	0.95	1

Table SVI. Quaternary classification - Bacteria Pneumonia class performance on the testing sets across all folds.

	Mean	Median	STD	Min	Max
SPC	0.88	0.87	0.06	0.81	0.97
SEN	0.73	0.81	0.23	0.37	0.94
PRE	0.70	0.72	0.07	0.61	0.79
ACC	0.85	0.83	0.03	0.82	0.89

Table SVII. Quaternary classification - Virus Pneumonia class performance on the testing sets across all folds.

	Mean	Median	STD	Min	Max
SPC	0.93	0.94	0.04	0.86	0.97
SEN	0.44	0.48	0.17	0.22	0.65
PRE	0.65	0.71	0.16	0.43	0.84
ACC	0.80	0.83	0.06	0.73	0.86