Supplemental Table S1

Table S1 Comparison among other nephropathy and patient number

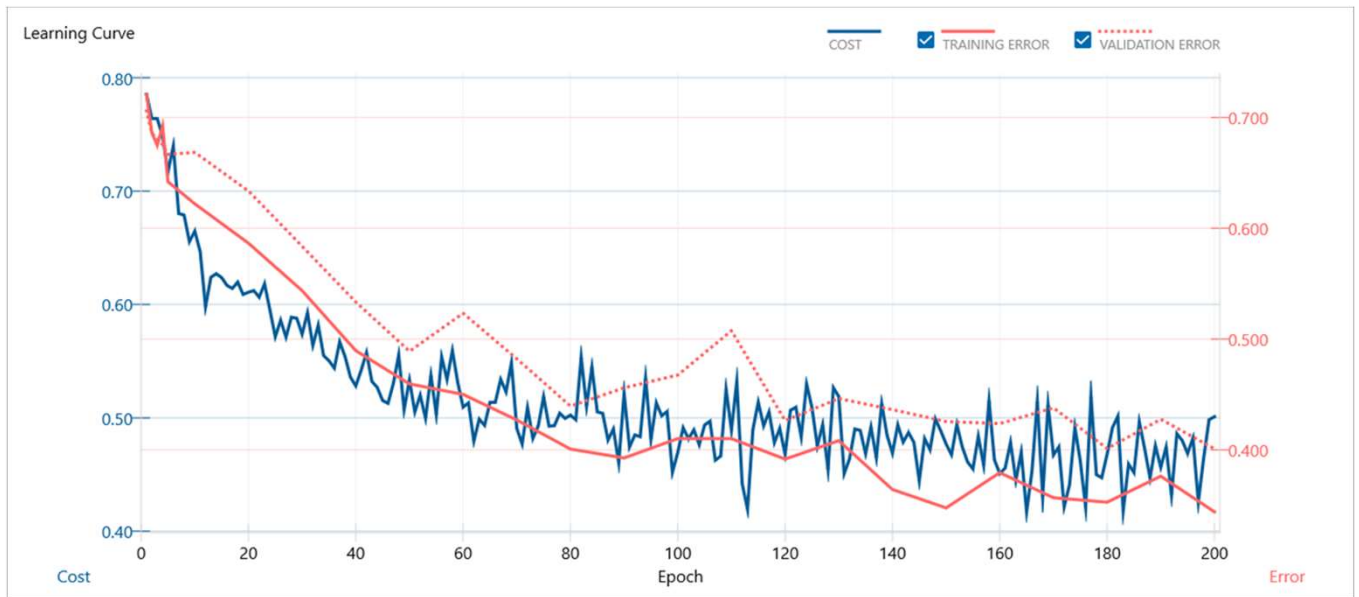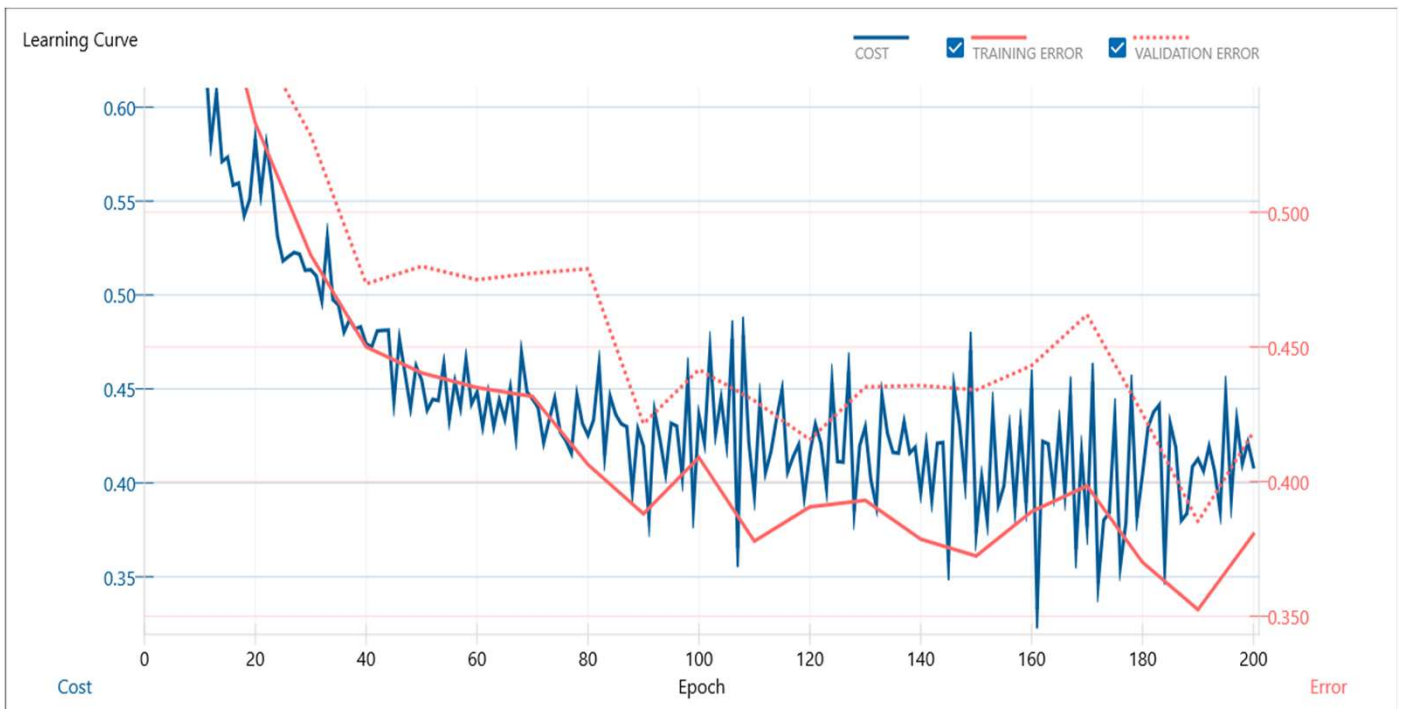| Diagnosis	Patients number
IgA nephropathy	162
Membranous nephropathy	40
ANCA related nephropathy	39
Lupus nephritis	36
Diabetic nephropathy	30
Minor change nephrotic syndrome	27
Glomerular sclerosis	24
Focal segmental glomerular sclerosis	14
Membranous proliferative glomerular nephropathy	13
Thin basement membrane disease	8
Amyloid disease	6
Obesity related nephropathy	6
Sarcoidosis	3
Light chain deposition disease	3
IgG4 related disease	2
Acute glomerular nephritis	2
Acute tubular necrosis	2
Immunotactoid nephropathy	1
C3 nephropathy	1
HIV related nephritis	1
thrombotic microangiopathy	1
scleroderma renal crisis	1
Total	422

Supplemental Figure S1

(a)

Figure S1 Representative CNN data for 4 X 4 pixels image.

(a) Schema of CNN

(b) Learning curve,

(c) Evaluation.

(b)

(c)

Accuracy	0.8235
Avg.Precision	0.8285
Avg.Recall	0.8194
Avg.F-Measures	0.8210

Supplemental Figure S2

(a)

Figure S2 Representative CNN data for 16 X 16 pixels image.
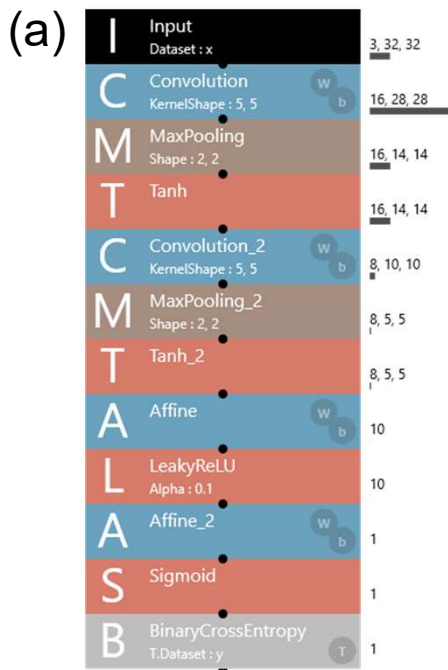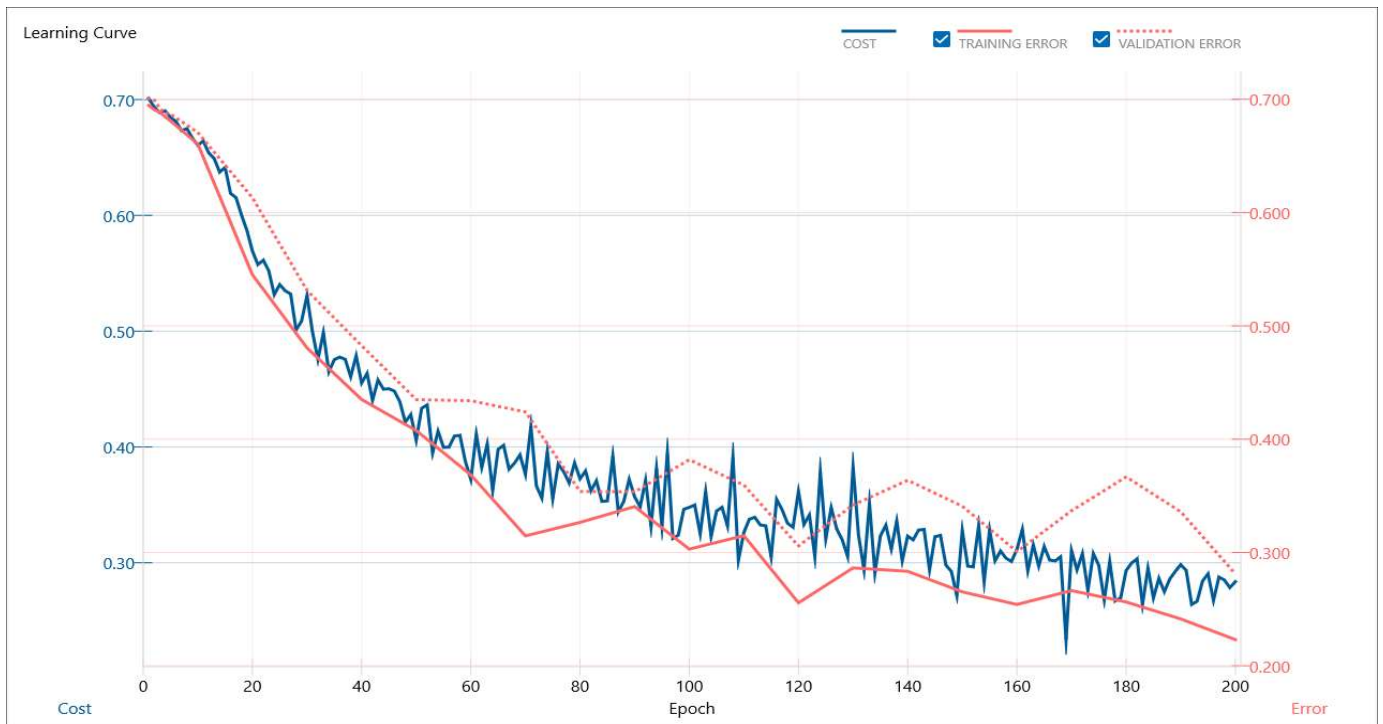
(a) Schema of CNN

(b) Learning curve

(c) Evaluation

(b)

(c)

Accuracy	0.8705
Avg.Precision	0.8912
Avg.Recall	0.8638
Avg.F-Measures	0.8669

Supplemental Figure S3

(a)

Figure S3 Representative CNN data for 32 X 32 pixels image.

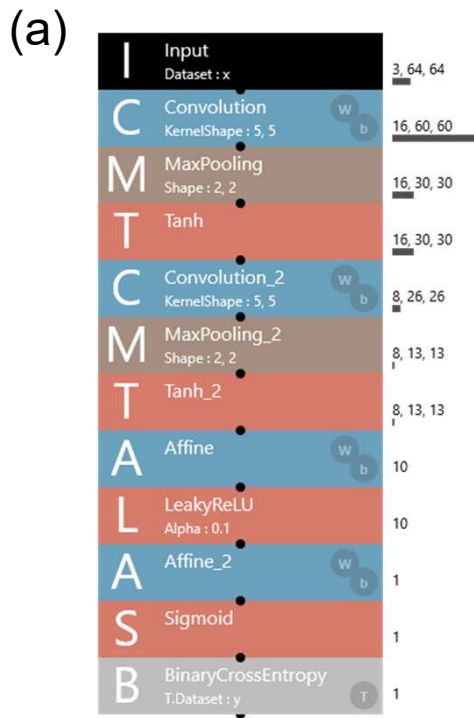(a) Schema of CNN

(b) Learning curve

(c) Evaluation

(b)

(c)

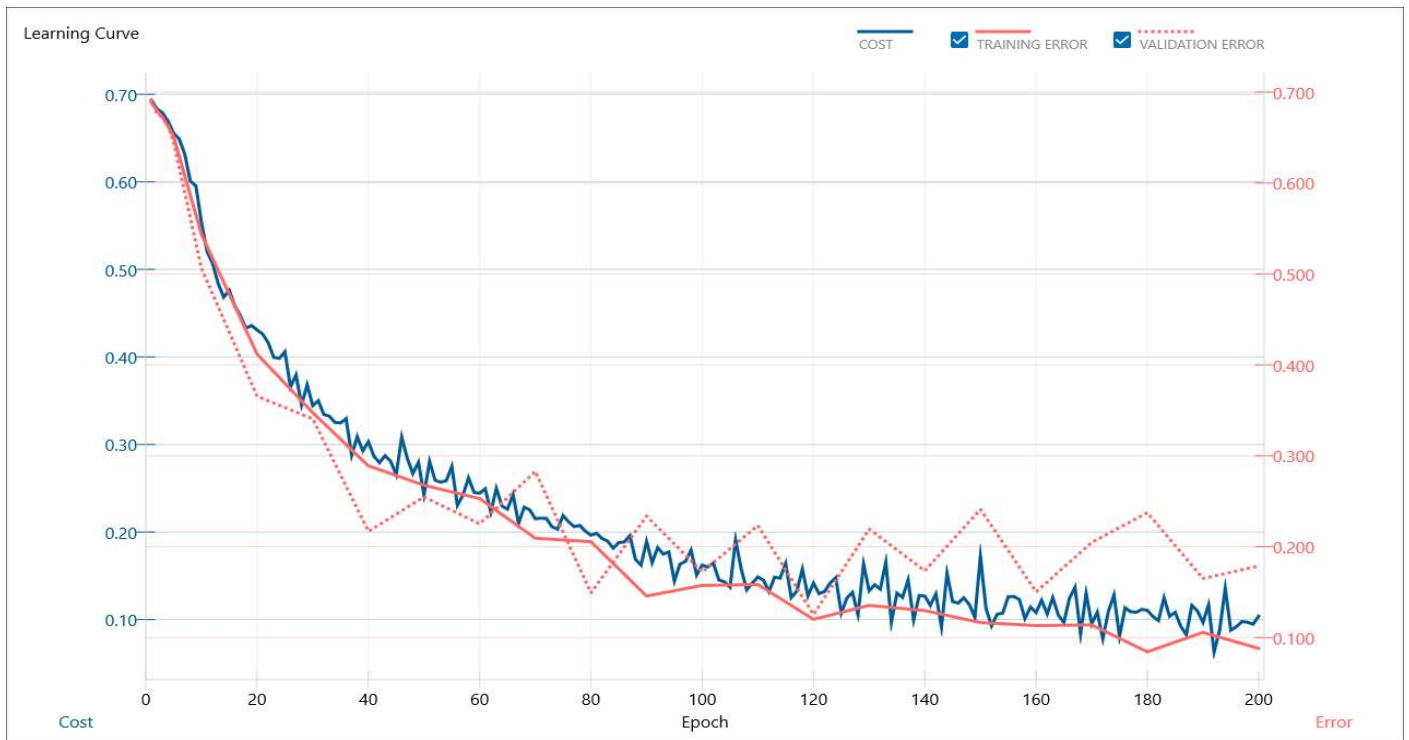| Accuracy	0.9058
Avg.Precision	0.9055
Avg.Recall	0.9055
Avg.F-Measures	0.9055

Supplemental Figure S4

(a)

Figure S4 Representative CNN data for 64 X 64 pixels images.
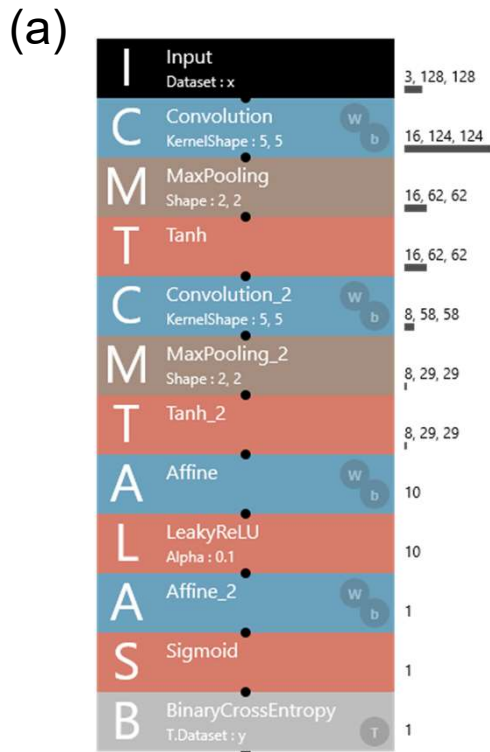
(a) Schema of CNN

(b) Learning curve

(c) Evaluation

(b)

(c)

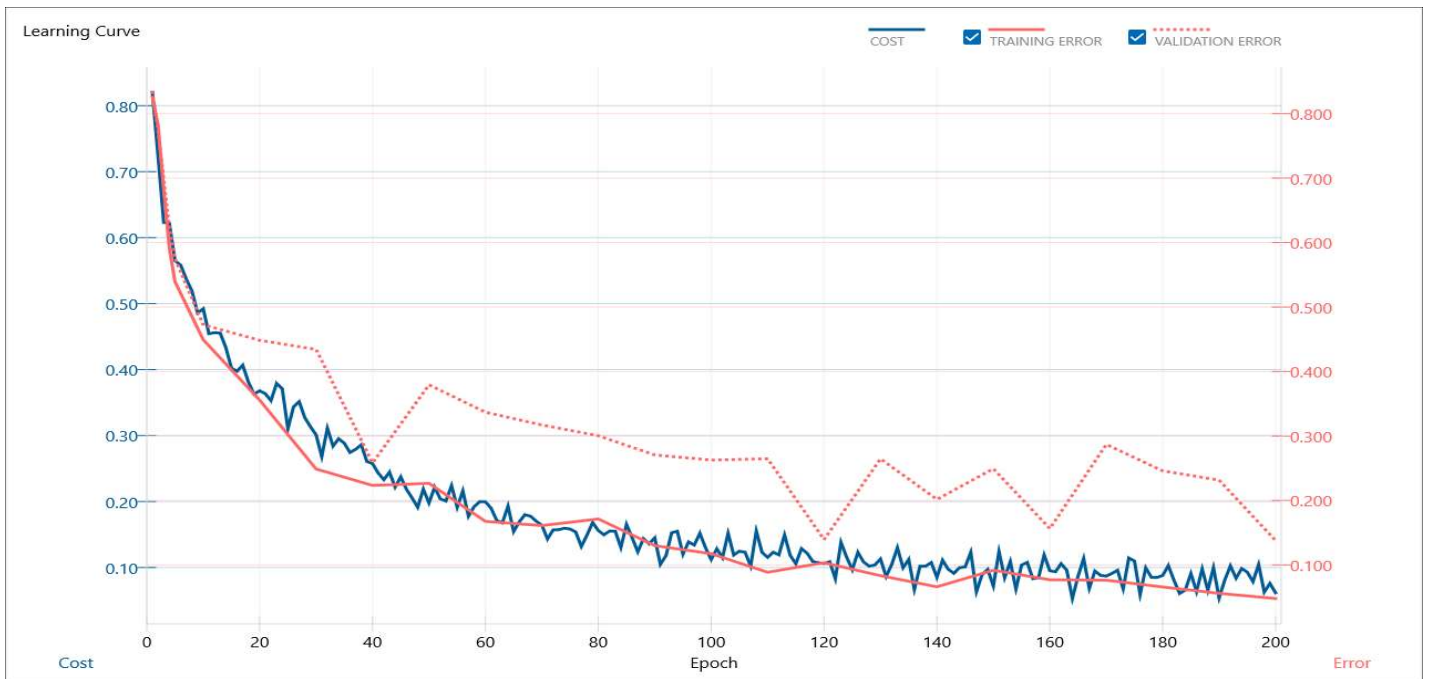| Accuracy	0.9647
Avg.Precision	0.9741
Avg.Recall	0.95
Avg.F-Measures	0.9603

Supplemental Figure S5

(a)

Figure S5 Representative CNN data for 128 X 128 pixels images.

(a) Schema of CNN
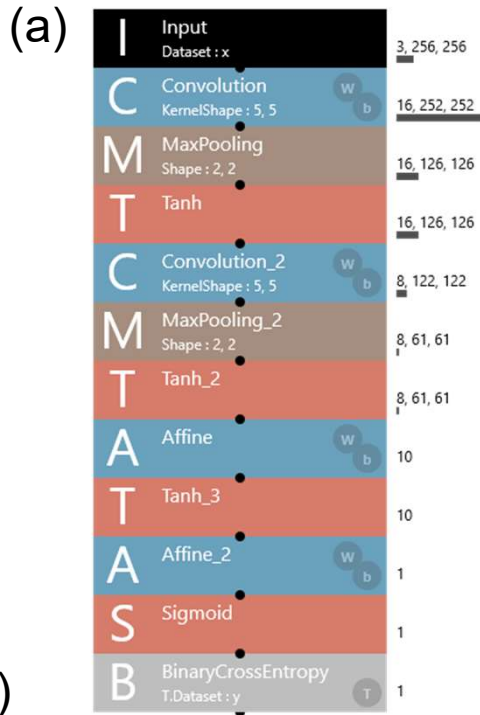
(b) Learning curve

(c) Evaluation

(b)

(c)

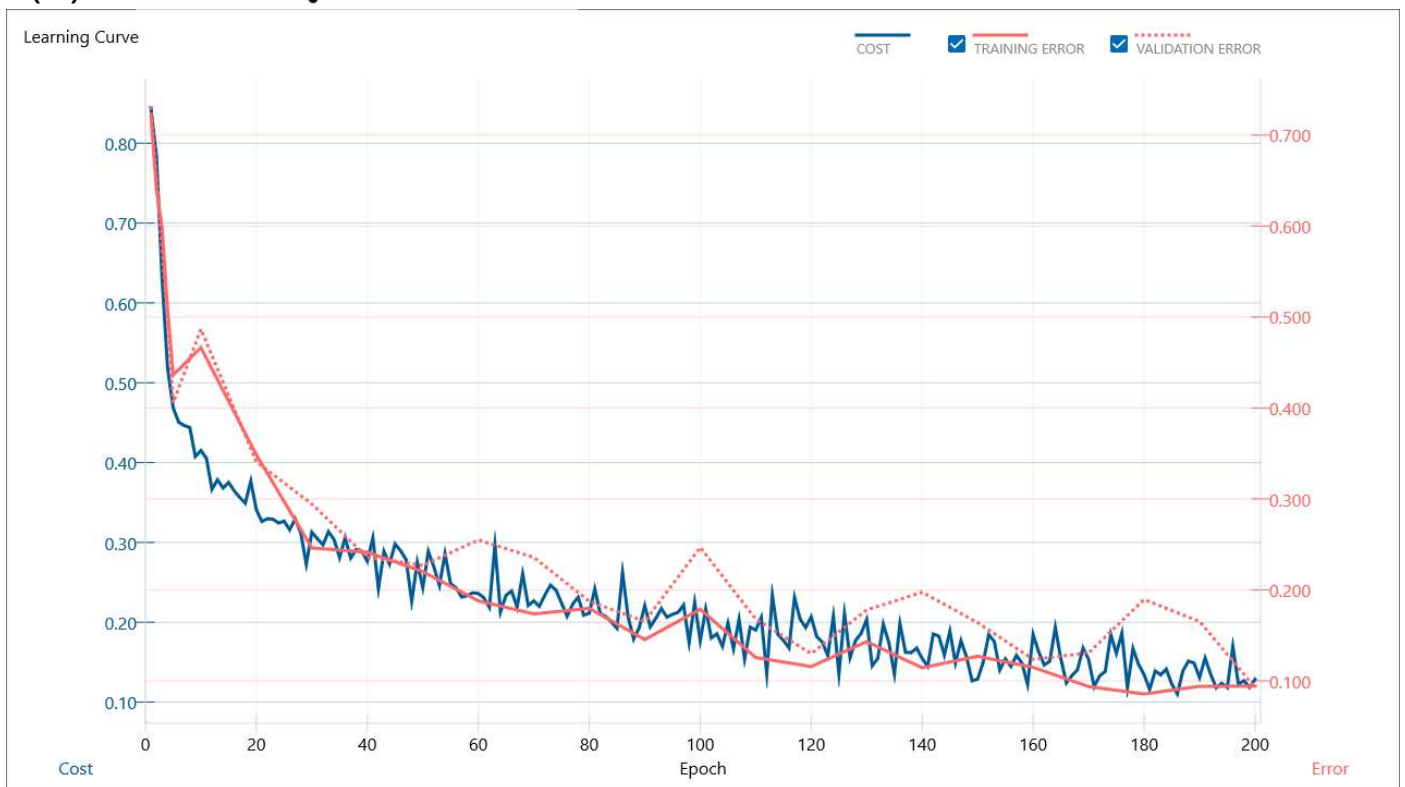| Accuracy	0.9529
Avg.Precision	0.956
Avg.Recall	0.9436
Avg.F-Measures	0.9491

Supplemental Figure S6

(a)

Figure S6 Representative CNN data for 256 X 256 pixels images.

(a) Schema of CNN
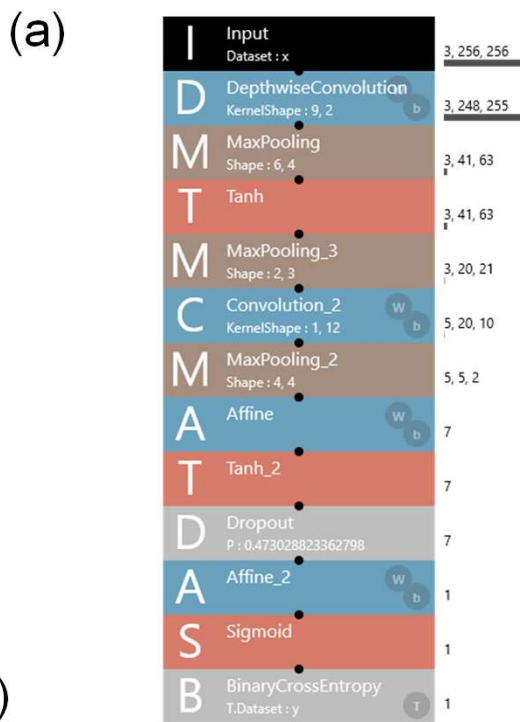
(b) Learning curve

(c) Evaluation

(b)

(c)

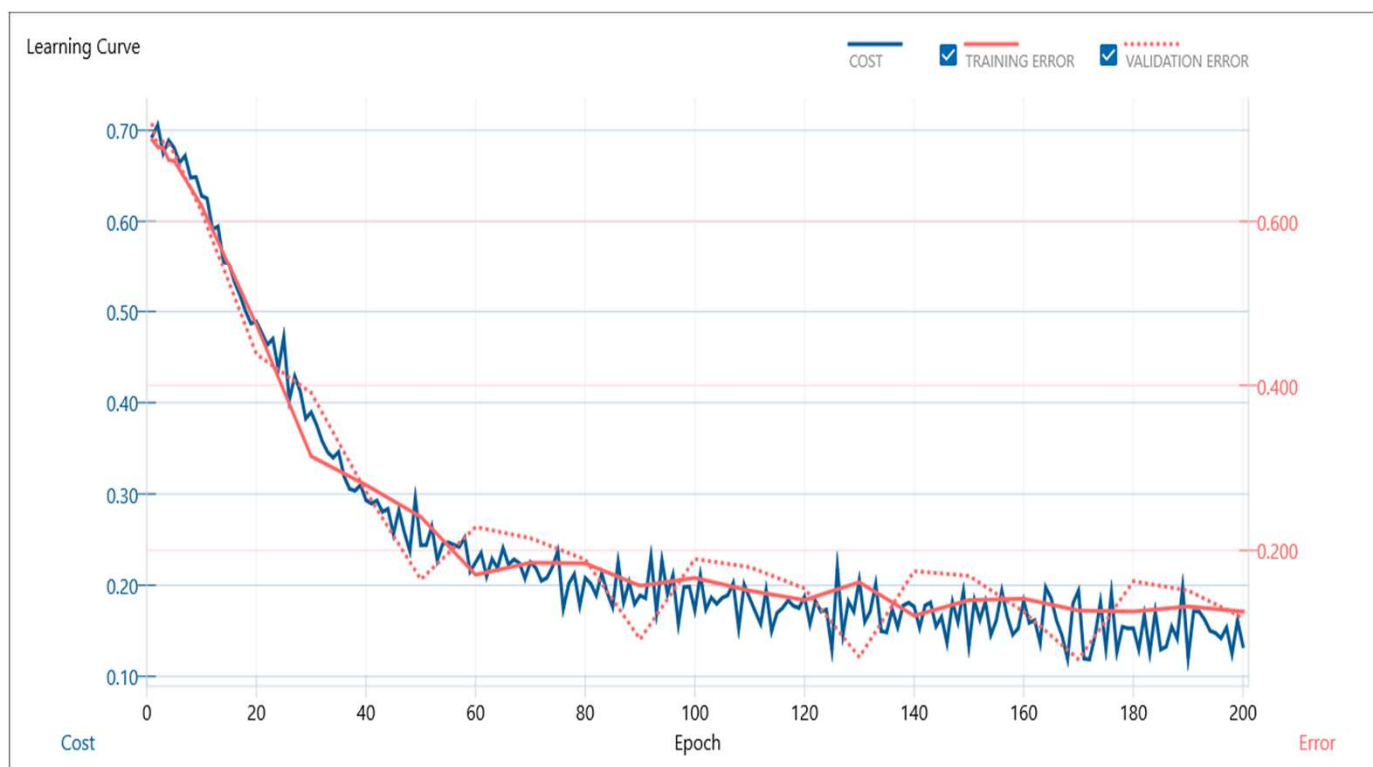| Accuracy	0.9647
Avg.Precision	0.9656
Avg.Recall	0.9607
Avg.F-Measures	0.9629

Supplemental Figure S7

(a)

Figure S7 Representative CNN data for 512 X 512 pixels images.

(a) Schema of CNN
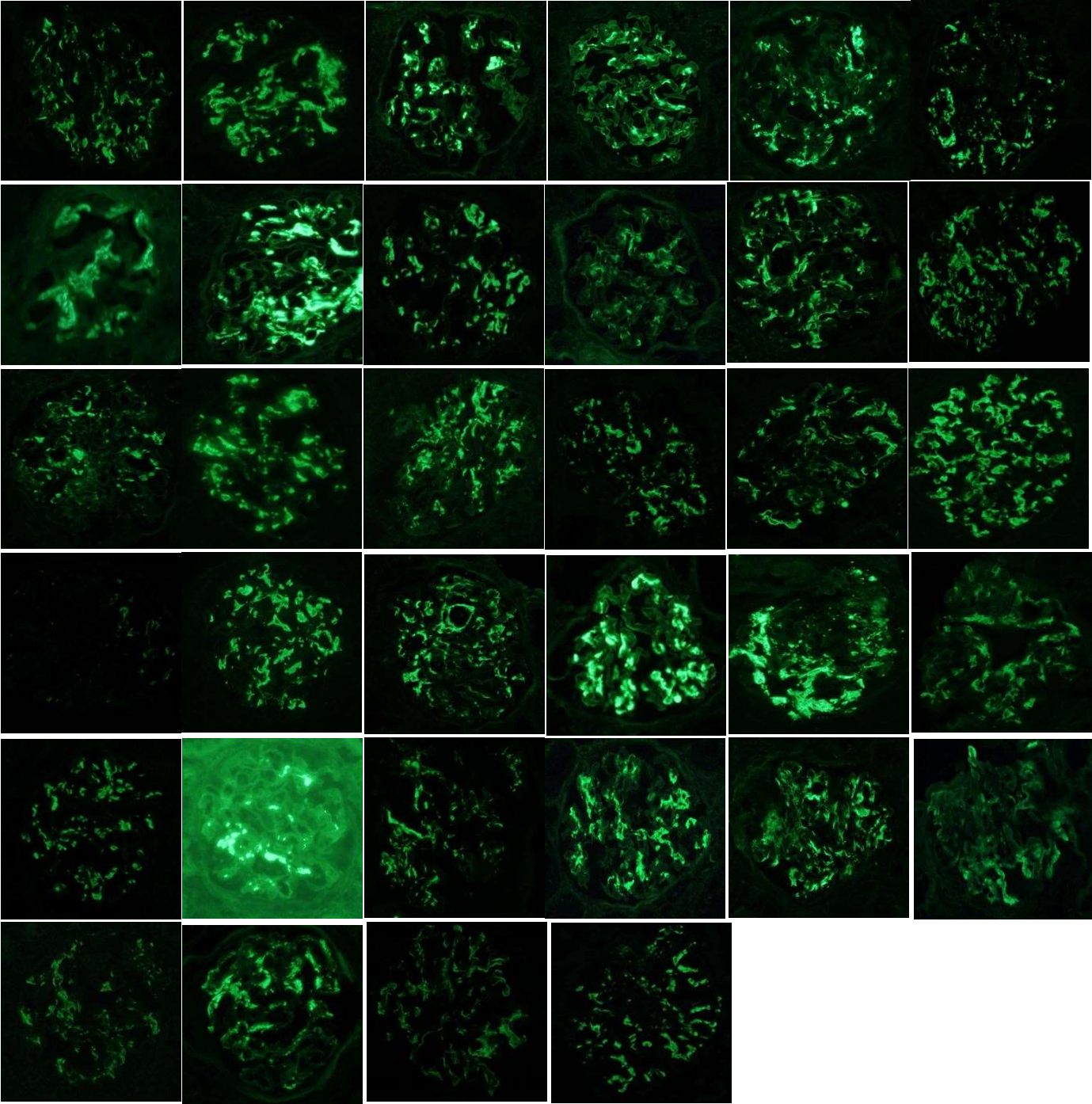
(b) Learning curve

(c) Evaluation

(b)

(c)

Accuracy	0.9529
Avg.Precision	0.9560
Avg.Recall	0.9460
Avg.F-Measures	0.9503

Supplemental Figure S8

Figure S8 Validation image data for IgA nephropathy.

Supplemental Figure S9

Figure S9 Validation image data for non-IgA nephropathy.