Supplementary Material

CNN Model Architecture

Table S1. KidneyResNet model architecture.

Layer Name	Output Size	Comment
Convolution 2D-Input Layer	64 × 25 × 25	[Convolutional layer 1] Kernel size 3, stride 2, variable dropout-rate, activation ReLu
Residual block 1	64 × 25 × 25	[Convolutional layer 2] Kernel size 3, stride 1, variable dropout-rate, activation ReLu
	64 × 25 × 25	[Convolutional layer 3] Kernel size 3, stride 1, variable dropout-rate, activation ReLu
Pooling layer 1	64 × 25 × 25	2 × 2 Max pooling
Residual block 2	128 × 25 × 25	[Convolutional layer 4] Kernel size 3, stride 1, variable dropout-rate, activation ReLu
	128 × 25 × 25	[Convolutional layer 5] Kernel size 3, stride 1
	128 × 25 × 25	[Convolutional layer 6] Identity convolution: kernel size 1, stride 1, variable dropout-rate, activation ReLu
Pooling layer 2	128 × 25 × 25	2 × 2 Max pooling
Residual block 3	256 × 25 × 25	[Convolutional layer 7] Kernel size 3, stride 1, variable dropout-rate, activation ReLu
	256 × 25 × 25	[Convolutional layer 8] Kernel size 3, stride 1
	256 × 25 × 25	[Convolutional layer 9] Identity convolution: kernel size 1, stride 1, variable dropout-rate, activation ReLu
Pooling layer 3	256 × 25 × 25	2 × 2 Max pooling
Residual block 4	512 × 25 × 25	[Convolutional layer 10] Kernel size 3, stride 1, variable dropout-rate, activation ReLu
	512 × 25 × 25	[Convolutional layer 11] Kernel size 3, stride 1
	512 × 25 × 25	[Convolutional layer 12] Identity convolution: kernel size 1, stride 1, variable dropout-rate, activation ReLu
Pooling layer 4	512 × 25 × 25	1 × 1 Average pooling
Flatten	320,000 × 1	
Fully connected layer	3	Activation Softmax