Supplementary

Table S1 Parameters of U-net model

Parameters	Value
Learning rate	0.0001
Minibatch size	64
Epochs	1,000
Optimizer	Adam
Loss function	Cross entropy loss

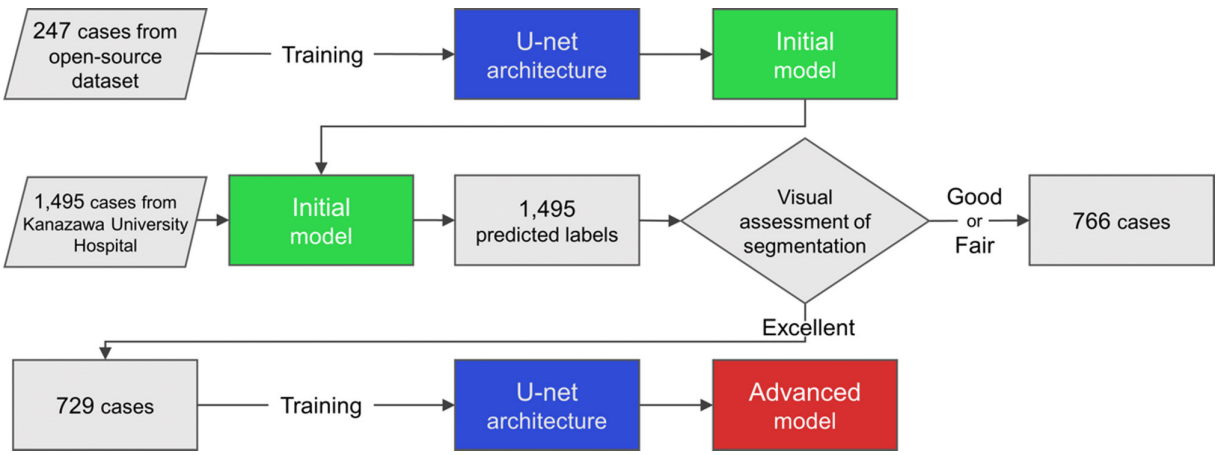

Figure S1 Flowchart of model development (initial model and advanced model).

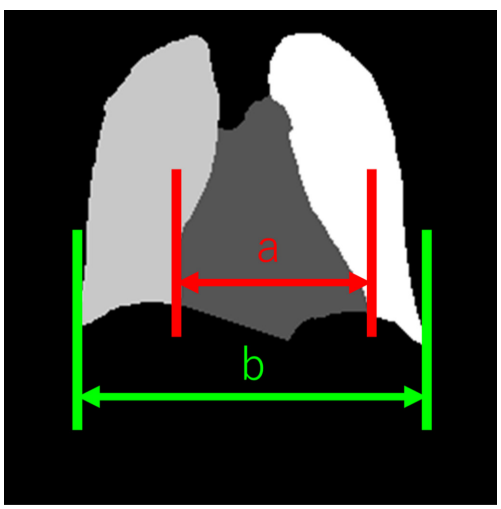

Figure S2 Output of cardiothoracic-ratio measurement. The transverse axis length of the heart was represented as "a" and that of the thorax was represented as "b".

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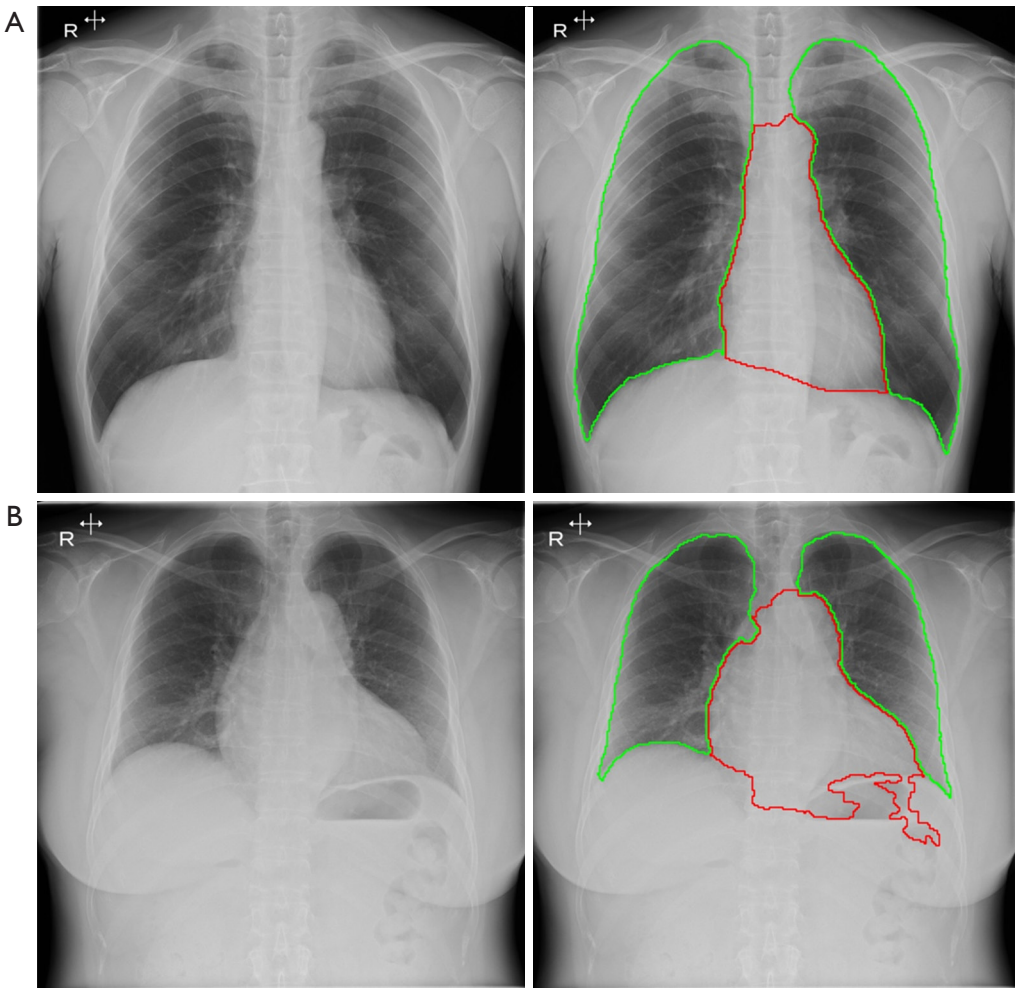

Figure S3 Examples of excellent and fair segmentation of chest radiographs performed by initial mode. (A) An excellent segmentation case. On the left is the original chest radiograph, and on the right is the image with contour information for the segmentation of lungs (green line) and heart (red line). (B) A fair segmentation case. On the left is the original chest radiograph, and on the right is the image with contour information for the segmentation of lungs (green line) and heart (red line). There are irregularities in the lower margin of the heart segment and incorrect segmentations where the gastric bubbles overlap.

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