

# **Prospective Clinical Evaluation of Deep Learning for Ultrasonographic**

## **Screening of Abdominal Aortic Aneurysms**

I-Min Chiu Tien-Yu Chen, You-Cheng Zheng, Xin-Hong Lin, Fu-Jen Cheng, David

Ouyang\*, Chi-Yung Cheng\*

### **Supplemental information**

**Supplemental Table 1.** DL model performance in internal and external validation.

**Supplemental Figure 1.** Manual labeling of abdominal aorta, spine, and inferior vena cava.

**Supplemental Figure 2.** Real-time bounding box guidance on POCUS

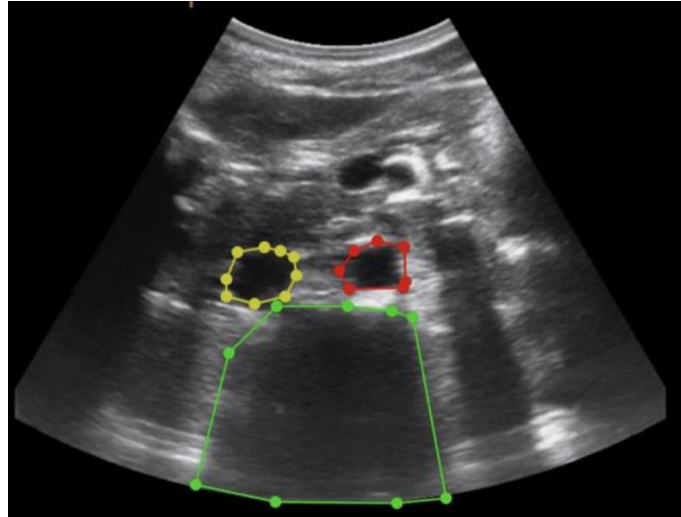
**Supplemental Video 1.** Demo of real-time bounding box guidance displayed on POCUS.

**Supplemental Table 1. DL model performance in internal and external validation.**

	Box Recall	Box Precision	Box mAP IoU $\geq 0.5$
Internal Validation	0.987	0.921	0.973
External Validation	0.943	0.627	0.843

\* mAP: mean average precision

\* IoU: intersection over union threshold



**Supplemental Figure 1. Manual labeling of abdominal aorta, spine, and inferior vena cava.** An example of manual label over abdominal aorta (red), spine (green), and inferior vena cava (yellow) during data preparation of model training.



**Supplemental Figure 2. Real-time bounding box guidance on POCUS.** User interface of deep learning guidance for image acquisition