

# Practice nurse-led use of portable echo to detect early forms of heart failure in primary care: insights from a prospective multicenter surveillance study



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## BACKGROUND

The initial detection of heart failure (HF) typically occurs when a person is acutely hospitalized. Ideally, GPs/primary care teams have the capacity to proactively detect and manage HF much earlier.

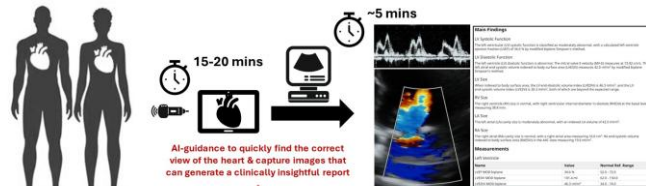
## STUDY AIMS

To determine if Practice Nurses (PNs) can learn to reliably apply AI-mediated portable cardiac ultrasound (AI-PoCUS) to acquire detailed cardiac images to detect HF in primary care patients aged  $\geq 60$  years with major antecedent for the syndrome.

## METHODS

PANACEA-HF is a prospective, pragmatic, multicenter HF surveillance study & nested RCT.

A diverse team of PNs were initially trained to apply AI-PoCUS over 6m to acquire detailed cardiac images.



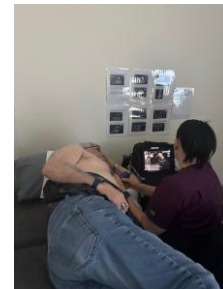
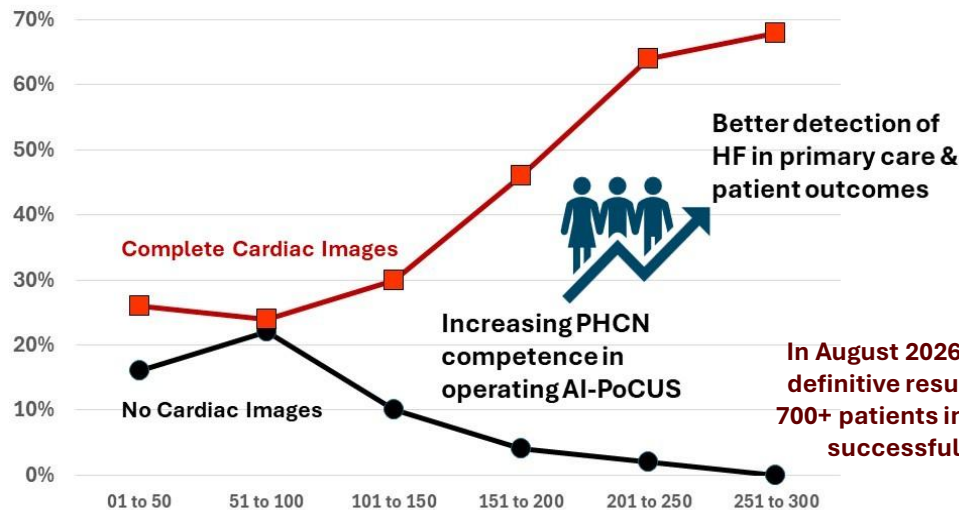
## RESULTS

**Practice Nurses:** 4 of 8 initially trained in AI-PoCUS took responsibility for HF screening.

**Study Cohort:** 150 men & 150 women - 70.7 $\pm$ 9.2 & 71.7 $\pm$ 10.7 years/BMI of 31.0 $\pm$ 6.4 & 31.1 $\pm$ 6.2 kg/m<sup>2</sup>.

**Imaging Success:** Not affected by age (aOR 0.99, 95% CI 0.96–1.02 per year;  $p=0.322$ ), sex (aOR 1.03, 95% CI 0.61–1.76 men versus women;  $p=0.910$ ) or BMI (aOR 0.98, 95% CI 0.91–1.06 per unit;  $p=0.595$ ).

**Full AI-PoCUS report:** 2.43-fold (95% CI 1.03–5.72;  $p=0.042$ ), 5.25-fold (95% CI 2.17–12.70;  $p<0.001$ ) and 6.30-fold (95% CI 2.58–15.40;  $p<0.001$ ) **more likely** in cases 151–200, 201–250 and 251–300.



## CONCLUSIONS

In August 2026 we will report on the definitive results of HF screening of 700+ patients in primary care by PNs successfully applying AI-PoCUS

Fig. A clear 'threshold' of PN competency in applying the AI-PoCUS

