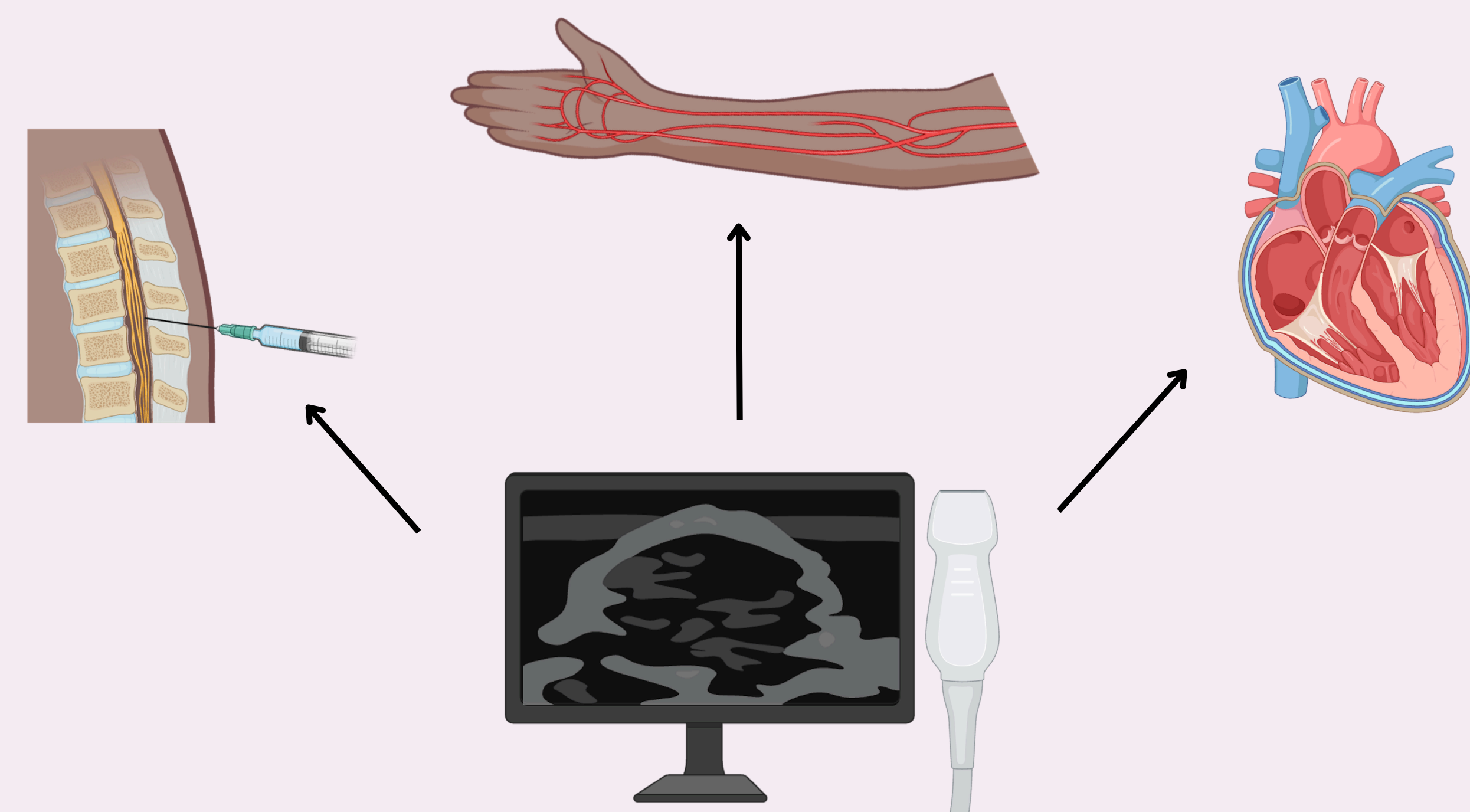


# Training Phantoms for Neonatal Point-of-Care Ultrasound

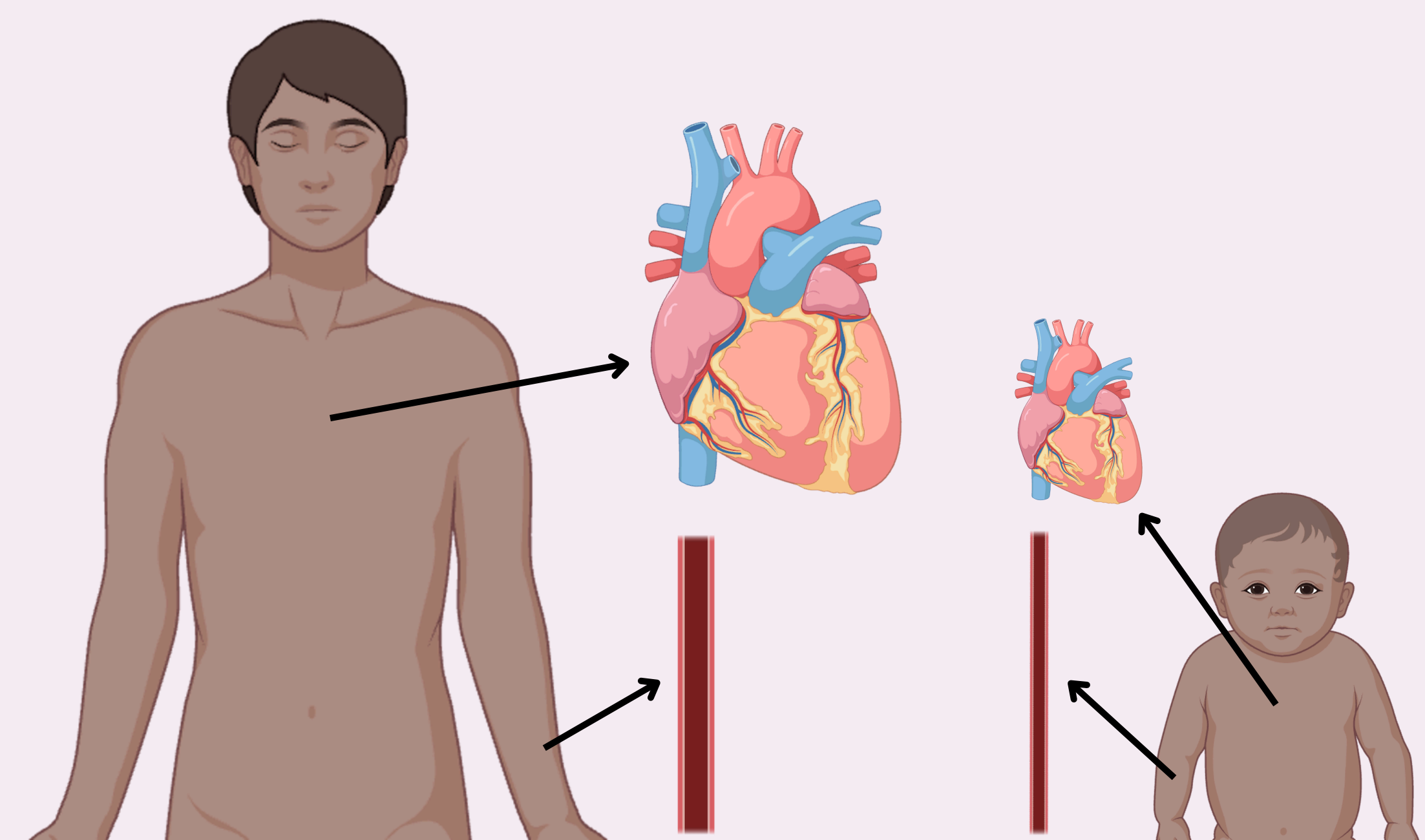
*Team: Allison Booher, Grace Guan, Sebastian Tabares Erices, Alexa VelezFonseca*  
*Faculty Mentors: Dr. Nusaybah Abu-Mulaweh, Alissa Burkholder Murphy || Project Partner: Dr. May W Chen*

## Point-of-Care Ultrasound

POCUS is a method of **bedside ultrasonography** that allows neonatologists to **quickly and accurately assess life-threatening conditions in premature babies and newborns.**



Most training phantoms for POCUS are adult-sized, and **neonate-sized ones are often extremely expensive.**



POCUS clinicians need **accessible, durable, and realistic neonatal phantoms** to master translational procedures.

## Project Workflow



## Training Phantoms

	Forearm	Cardiac	Spine
Real			
Phantoms			

## Meet The Team

<b>Allison</b> Biomedical Engineering '26	<b>Grace</b> Applied Mathematics '27	<b>Sebastian</b> Mechanical Engineering '27	<b>Alexa</b> Chemical Engineering '26

## Production Output

**5** forearm  
**4** cardiac  
**12** spine  
 phantoms provided to neonatologists

## Impact and Future Work

We shared our phantoms with Dr. Chen and trainees to evaluate and practice needle insertion and vein localization. Our models resemble human anatomy better than commercial alternatives and we plan to refine this work further to provide neonatologists with more accessible, realistic training phantoms.



## Acknowledgements

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