PIPER

Program for Interprofessional Practice, Education and Research

Education Program In Anatomy

Dissecting Minds:

AI-OSPE for Anatomy Assessment in Interprofessional Human Dissection

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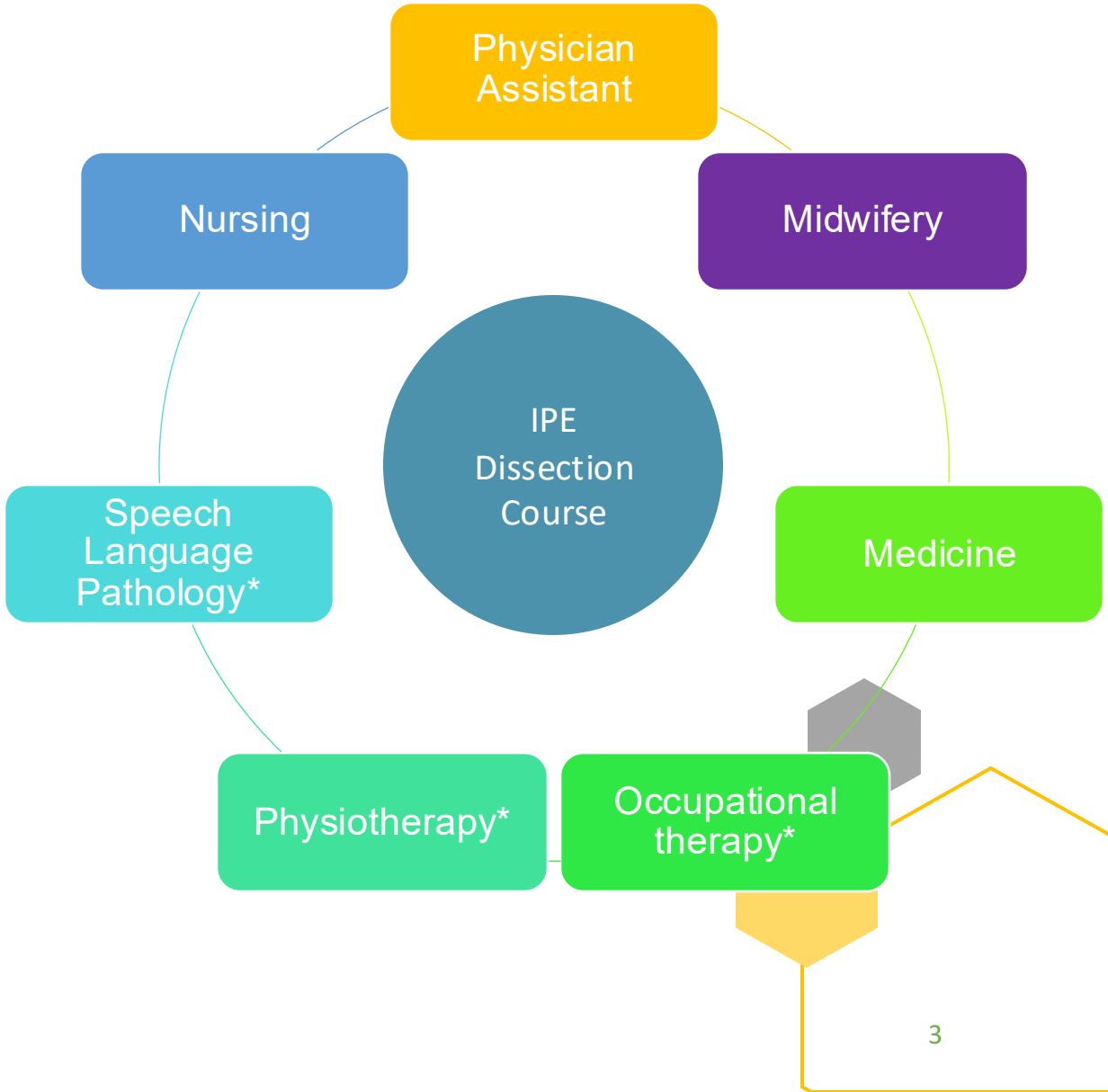
Background

- Interprofessional collaboration (IPC) is key to delivering safe, patient centered care
- Early interprofessional education (IPE) helps pre-licensure students build essential IPC skills for future practice
- Students' IPE readiness and perceptions influence the success of IPE

Zechariah et al, *Healthcare,* 2019

Background

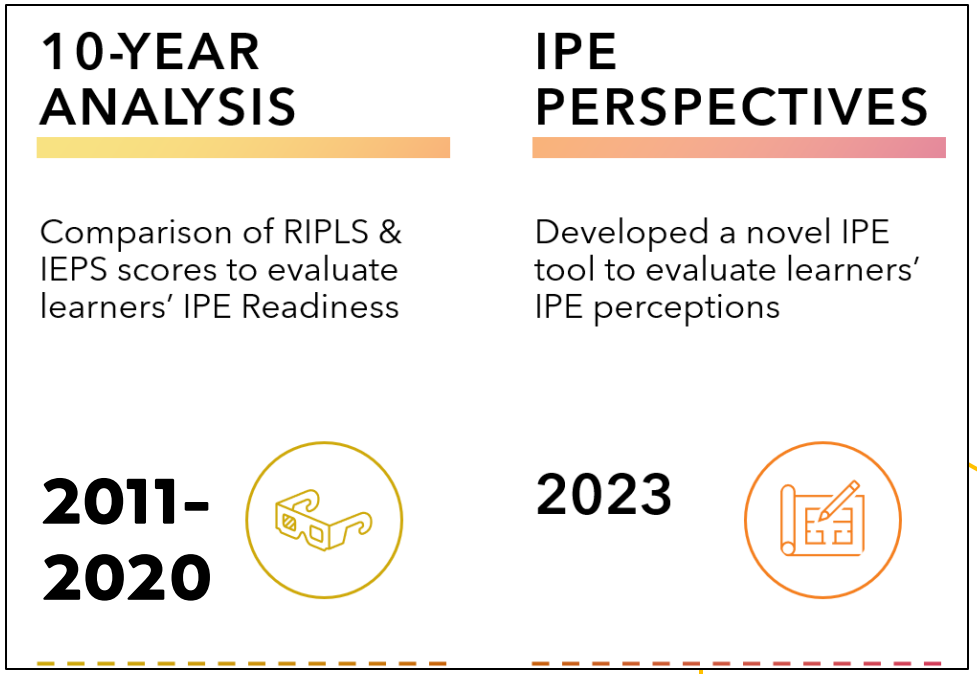
- 8-Week anatomy dissection elective
- ***Elective objectives***:
  - To explore scope of practices
  - To discuss clinical case studies
  - To perform human dissections with their peers
- Annual offering in early winter
- Limited seats for each profession
- Approximately 25-35 students



Background

- Dissection elective is offered as an elective IPE event

- Various program evaluations to assess its impact on Interprofessional learning
- Readiness and Perceptions for Interprofessional Education & Collaboration
  - Readiness for Interprofessional Learning Scale (RIPLS) 19-item self-assessment
  - Interdisciplinary Perception Scale (IEPS) 12 item self-assessment



Fernandes et al, *ASE,* 2015; Quach et al, *J of Interprofessional care,* 2024

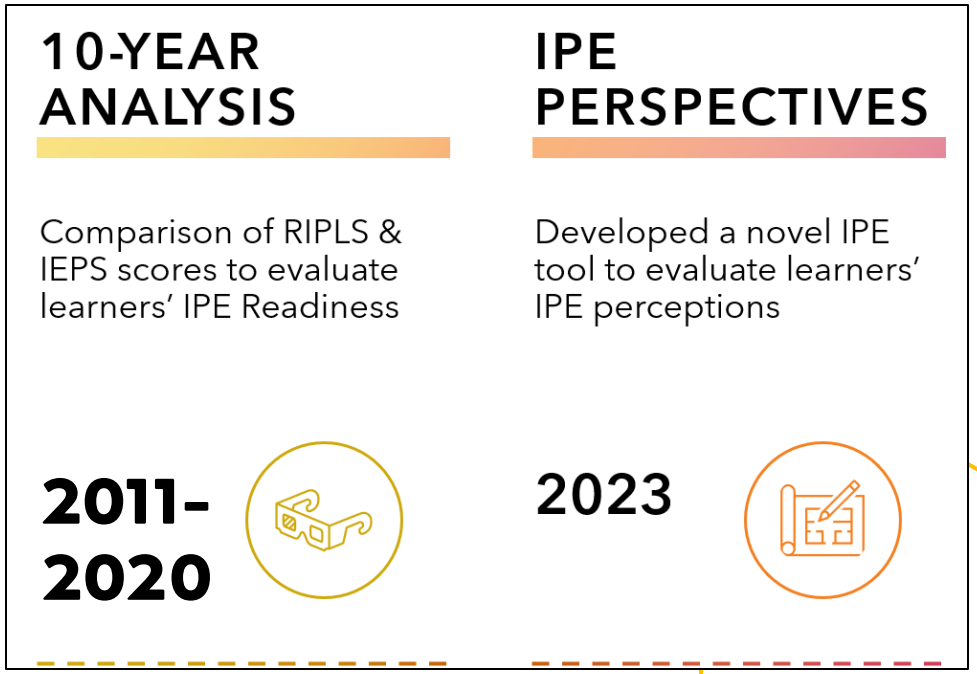
Background

1 10-year analysis of learners' IPE readiness

- Pre/ post dissection evaluation
- Increased RIPLS and IEPS scores

2 Exploration of IPE Perspectives

- Two types of learners
- Distinct learning priorities



Quach et al, *J of Interprofessional care,* 2024

Background

10-YEAR ANALYSIS

Comparison of RIPLS & IEPS scores to evaluate learners' IPE Readiness

2011-2020

IPE PERSPECTIVES

Developed a novel IPE tool to evaluate learners' IPE perceptions

2023

ANATOMY LEARNING

AI-OSPE to evaluate changes in anatomy knowledge

2024

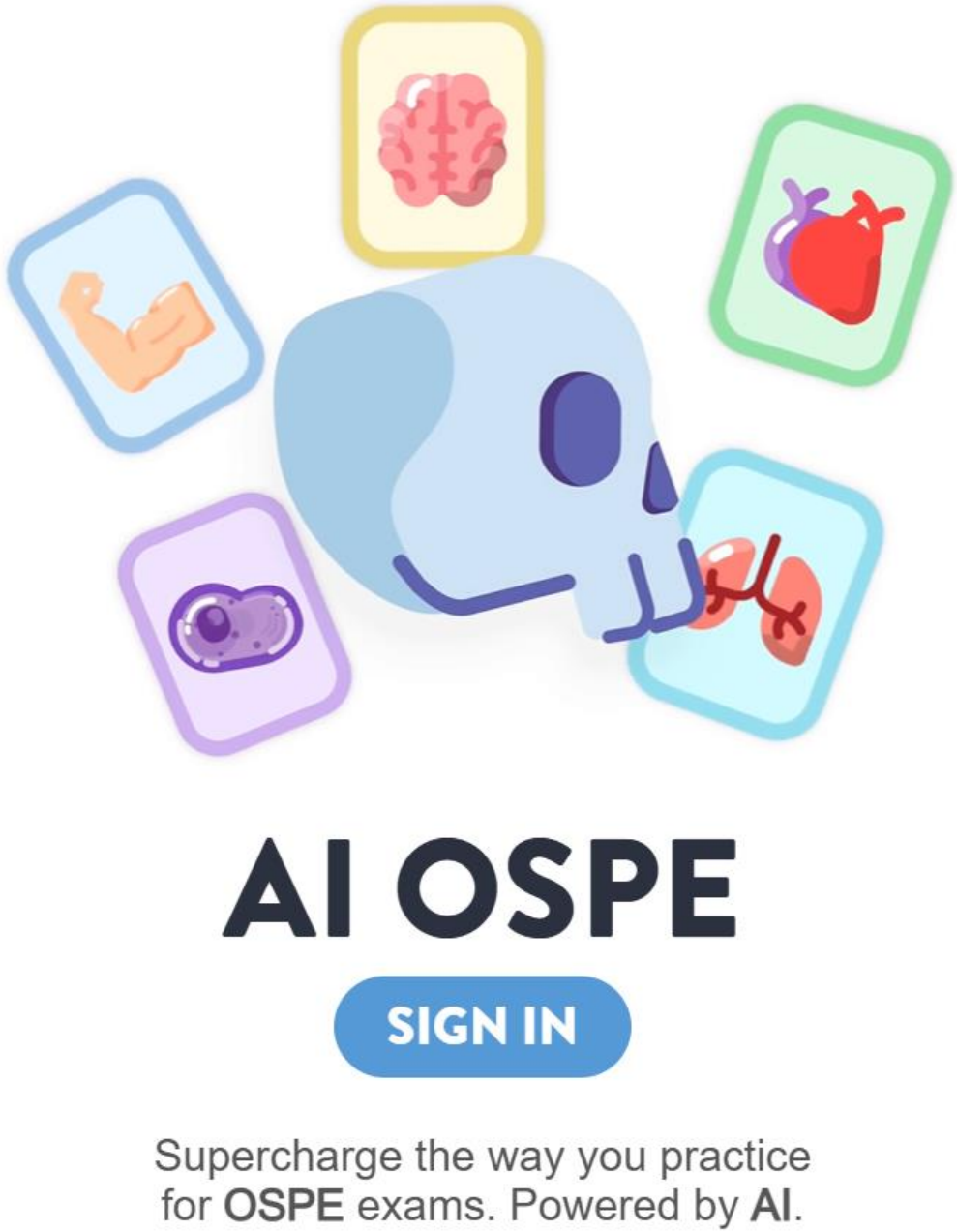
But did their anatomy knowledge improve?

To evaluate learners' change in anatomical knowledge before and after the human dissection elective using the AI-OSPE.

Quach et al, *J of Interprofessional care,* 2024

What is AI-OSPE?

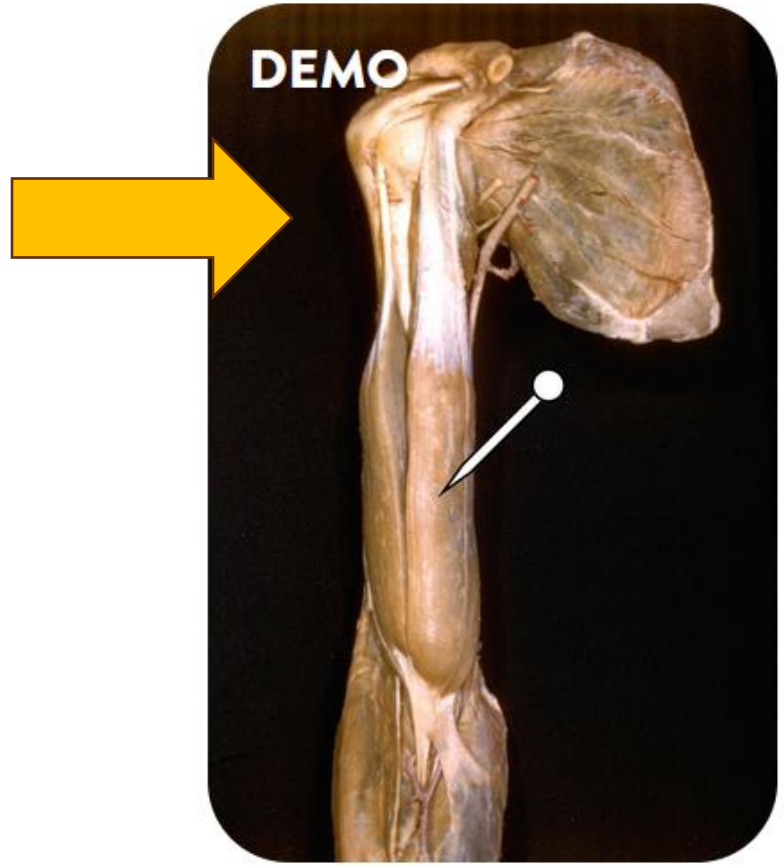
- Artificial intelligence – Objective Structured Practical Exam
- Developed by faculty, staff and students in the Education Program in Anatomy
- Flash cards of human donors to help students learn anatomy and physiology

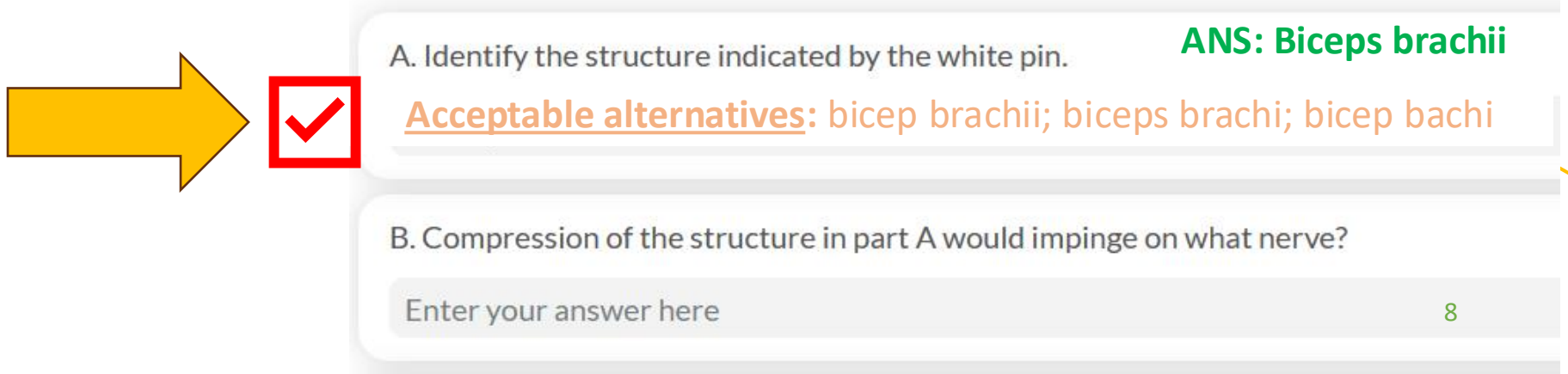


Coelho et al, *FASEB Journal,* 2022

What is AI-OSPE?

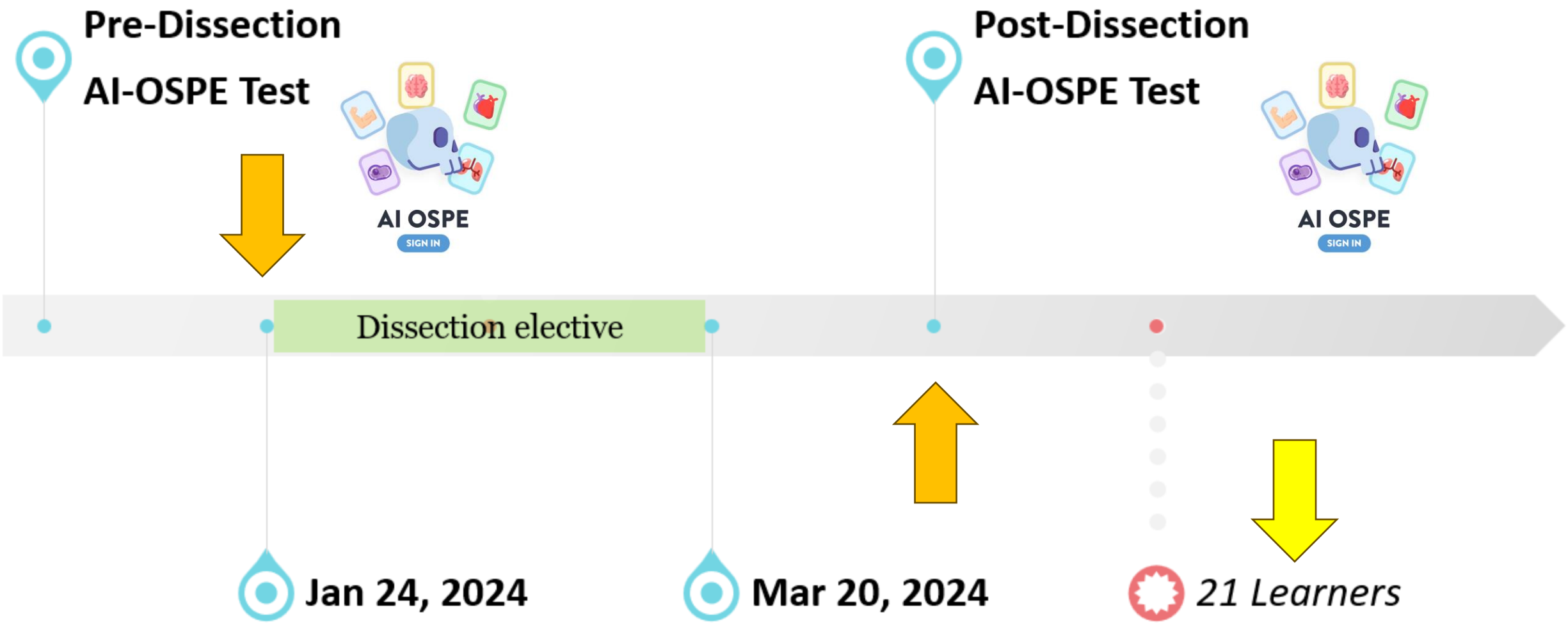
- 10 donor images across 10 anatomical topics for 30 questions
  - 3 questions each
  - /30 points





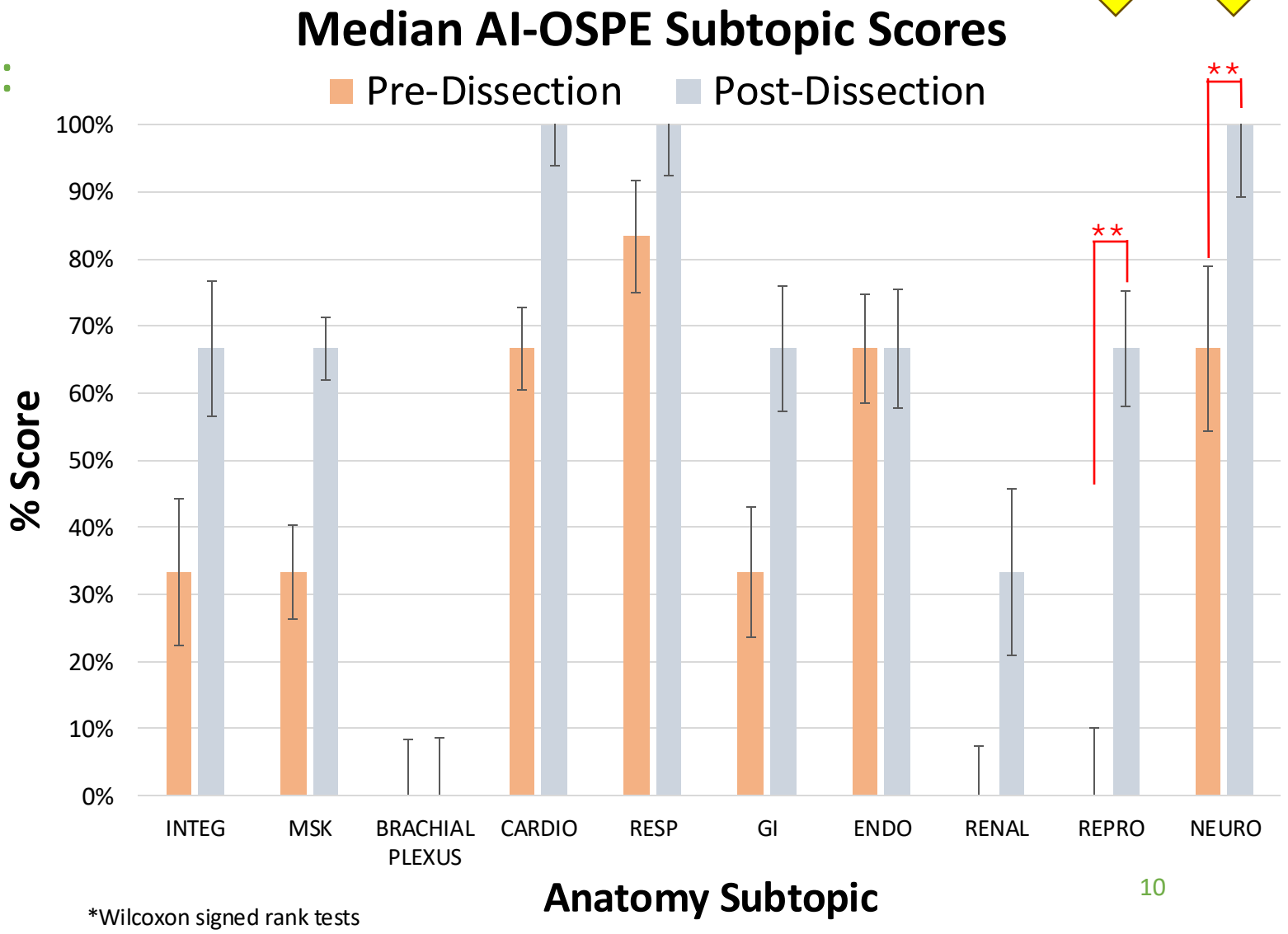
Coelho et al, *FASEB Journal,* 2022

Methods


Pre-Dissection
AI-OSPE Test
AI OSPE
SIGN IN
Post-Dissection
AI-OSPE Test
AI OSPE
SIGN IN
Dissection elective
Jan 24, 2024
Mar 20, 2024
21 Learners

Results: Score changes

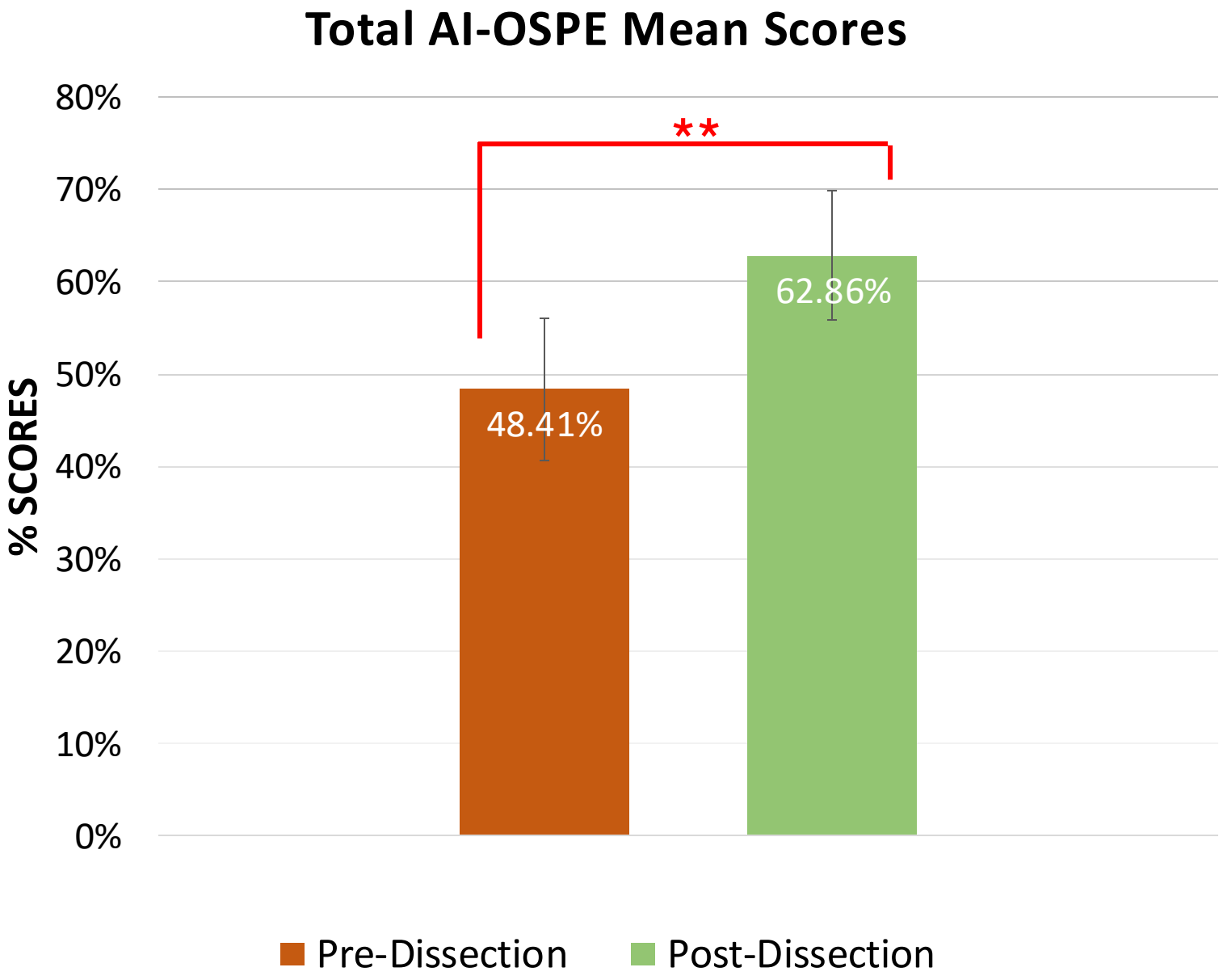
- Improved AI-OSPE scores:
  - Neurology
  - Reproductive
  - p<0.01**



*Wilcoxon signed rank tests

Results

- **Median% (Q1, Q3)**
  - Pre: 43% (33%, 60%)
  - Post: 63% (50%, 73%)
- **Mean% (STD)**
  - Pre: 48% (15%)
  - Post: 63% (14%)
- Improved total AI-OSPE scores (**p=0.003)



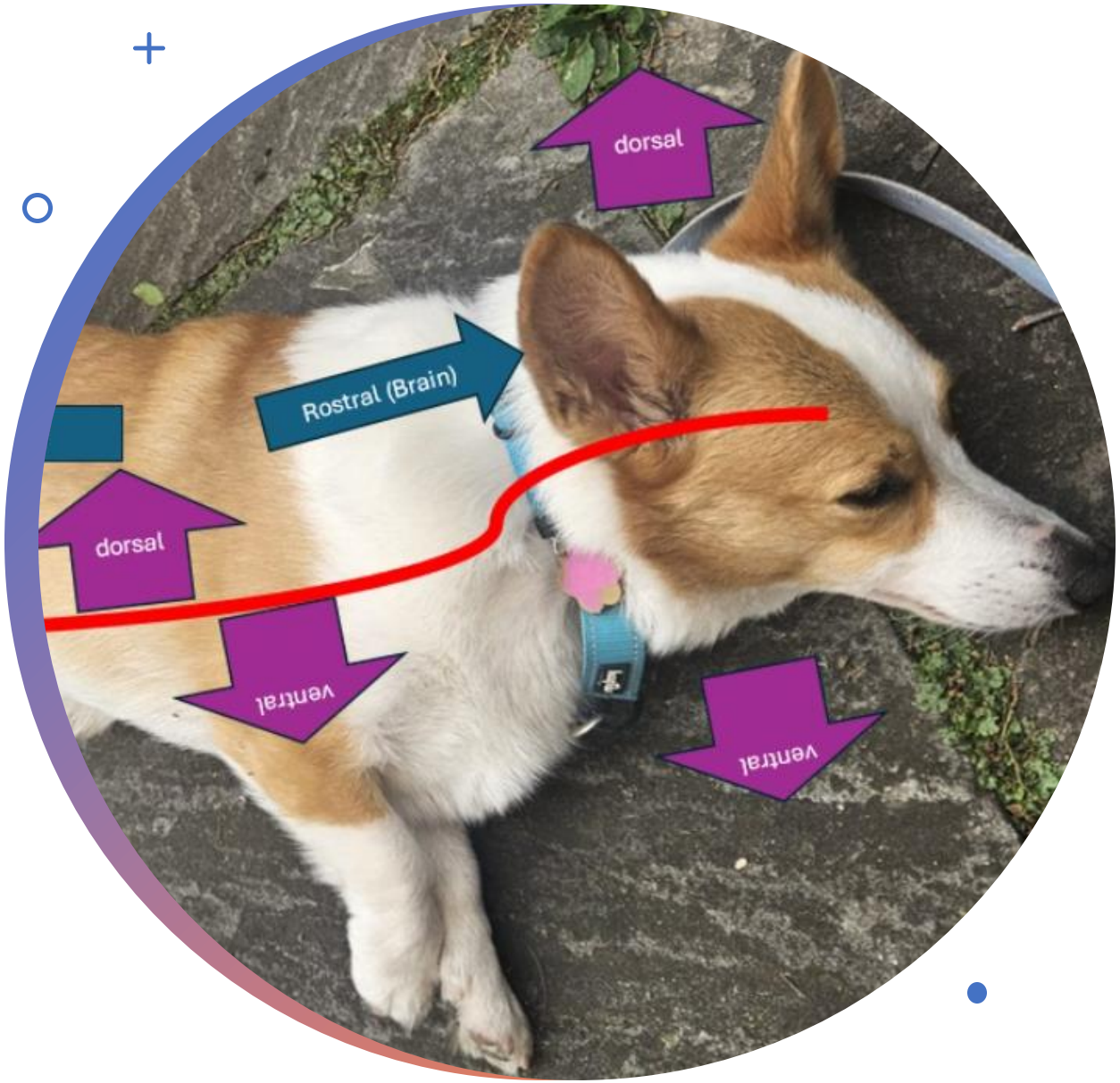
Paired t-test; Wilcoxon signed rank test

Discussion

- Past studies showed improvement of IPE readiness
- Current study showed improvement in gross anatomy knowledge
  - Specific anatomical topics (Reproductive, neurology)

- **AI-OSPE:**
  - Serves as a useful tool for quick assessments
  - Potential study tool to support anatomy learning
- AI can provide advanced learning experiences
- Consider integrating its use in future renditions to minimize burden

Abdellatif et al, *Int J Environ Res Public Health,* 2022; Lazarus et al, *Anat Sci Educ,* 1011; Narayanan et al, *Cureus,* 2023; Quach et al, *J of Interprofessional care,* 2024



Thank you

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Appendix

- Will include some info on the IPE dissection’s objectives, outline etc.