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Further Expansion of Nested E-Modules to Address Anatomical Knowledge Retention in Medical Students entering the Obstetrics and Gynecology Clinical Rotation

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Goals

Our goal is to address deficits in a novel interactive e-module curriculum to improve student retention of anatomy related topics relevant to third-year OB/GYN clinical clerkship.

Background

- 143 consenting third-year medical students (IRB approved) took a **29 MCQ EXAM** assessing **pre and post-test retention on clinically relevant OB/GYN anatomy**: uterus, vasculature, peritoneum, fallopian tube, muscles and ligaments, embryology, placenta, structure ID, neuroanatomy, histology (Jurjus et al., unpublished).

- **INTEGRATED CURRICULUM**
  - interactive e-modules
  - Hands-on gross laboratory session

- **CURRICULUM EFFICACY**
  - evaluated efficacy of e-modules across anatomical topics using the data from table 1. This data illustrates that performance on **embryology and histology** questions is low.

Topics	Pretest % Correct	Posttest % Correct
Uterine	50.00%	88.33%
Vasculature	63.20%	77.33%
Peritoneum	86.00%	93.33%
Fallopian Tubes	56.00%	80.00%
Muscles and Ligaments	65.33%	75.56%
Embryology	**38.00%**	**60.00%**
Placenta	72.00%	73.33%
Structure ID	65.33%	77.22%
Neuroanatomy	68.00%	86.67%
Histology	**4.00%**	**23.33%**
Overall scores	54.50%	74.80%

Table 1: Percent correct for pre- and post-tests by anatomical category.

Methods

NEW TARGETED E-MODULES:
Expansion of e-module curriculum designed with an embryological and histological focus (Figs. 1-3).

E-Module Design:
- **Pre-test questions** assess baseline knowledge
- **Learning objectives** focus adult learners
- **Anatomy content** uses pertinent images/diagrams
- **Clinical content** incorporates medical knowledge
- **Post-test questions** assess e-module retention

Fig 1: Ultrasound in Pregnancy using Embryological Knowledge

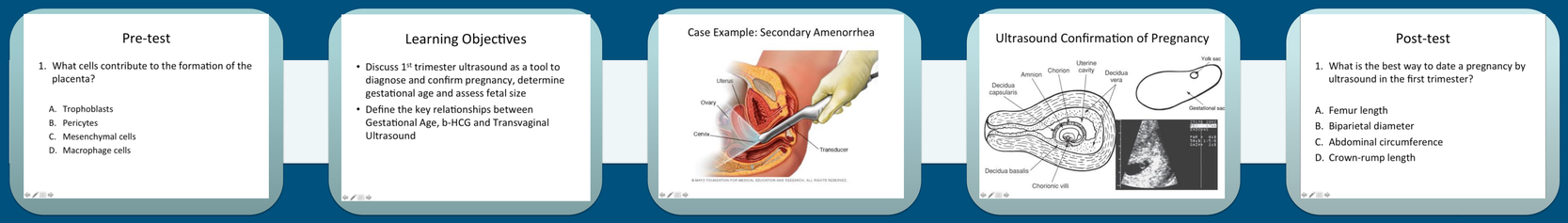


Fig 2: Pregnancy Timeline and the Embryo

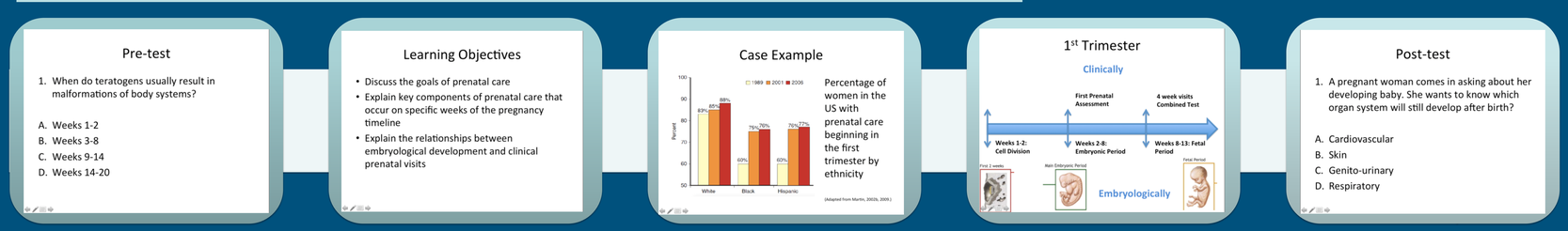
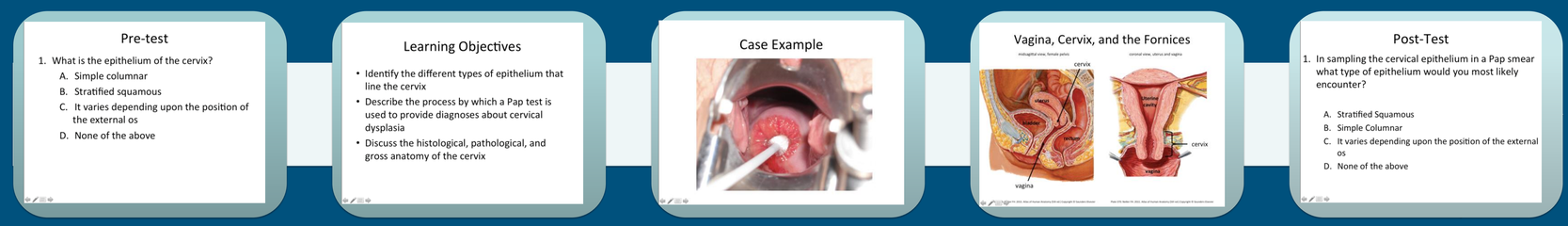


Fig 3: The Cervix in Health and Disease



Preliminary Results

New e-modules were created: 1) Ultrasound in Pregnancy using Embryological Knowledge 2) Pregnancy Timeline and the Embryo and 3) The Cervix in Health and Disease. Once finalized, these e-modules will be live on the Himmelfarb Library website.

Acknowledgements

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Conclusion

FUTURE DIRECTION: By further expanding the number of e-modules available to students, we hope to improve retention of clinically relevant anatomical knowledge in adult learners.

References

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