2019 CPRIT Undergraduate Research Experience Poster Presentation Winners

1st Place

DETECTING COLORECTAL CANCER: A PANEL OF CELL-SURFACE BIOMARKERS FOR THE FUTURE OF CRC IMAGING

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EARLY COLORECTAL CANCER DETECTION WILL SAVE LIVES

Colorectal cancer (CRC) is the 3rd-leading cause of cancer deaths in America. Colonoscopy remains the standard screening method despite its many prohibitive issues. Identification of the earliest lesions requires innovative techniques that detect molecular level changes to the colon epithelium before they are visible to the eye.

INNOVATION DEFINED THE RESEARCH PROCESS

NEW CANDIDATES

EMERGING CANDIDATES

REFERENCES

ACKNOWLEDGEMENTS

HERE’S WHAT WE FOUND

HER2

Here’s what we found

WELL-ESTABLISHED MARKERS

194 tests screened

97 leads assessed

HERE’S WHAT WE FOUND

WELL-ESTABLISHED MARKERS

REFERENCES

ACKNOWLEDGEMENTS

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ACKNOWLEDGEMENTS
Quality Assessment in Meta-analysis on Cervical Cancer Topics
Sophia Micoa-levic1,2, Pei-Yin Yang3, Hong Kang3, Patricia Dolan Muffer3,2, Yang Gong3
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INTRODUCTION
- Meta-analysis (MA) is the quantitative synthesis of data from ≥1 individual study and is considered the highest quality evidence for evidence-based medicine
- Challenges of MAs include statistical and methodological errors because poorly conducting MAs required only minimal quality but also technical skills.
- This year’s previous findings determined that reporting quality of MA is lacking, specifically documenting a reasonable search strategy.
- The project’s focus is on specifically determining which are the most missed criteria in cervical cancer MAs.
- The PRISMA reporting guidance (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) has helped improve reporting.

AIMS
- Determine the quality of cervical cancer MAs by assessing their compliance with PRISMA and AMSTAR 2.
- Raise awareness of the most missed elements of cervical cancer MAs.

METHODS
1. 23 cervical cancer MAs published in the last 3 years in high-impact factor 7–12 journals were sampled. All high-impact factor journals were included and the most recent 30% of high-impact factor journals were included.
2. PRISMA and AMSTAR 2 were applied to each MA by two reviewers working independently. The most missed criteria were determined by calculating the percentage of MAs in the sample that properly executed a criterion.

RESULTS

RECOMMENDATIONS
1. Journals should require registration of protocols, reporting of search strategies, and ask authors to submit the AMSTAR 2 checklist with their manuscripts.
2. There is no difference in compliance between low and high impact factor journals.

INNOVATION TOOLS
- Meaningful Original Name: MAs are the highest quality of evidence but may sometimes be conducted imperfectly and should be interpreted with caution. New perspective: MAs should be able to use that the MAs they are missing are of high quality and that journals enforce reporting and execution standards.

ACKNOWLEDGEMENTS
- UTHSC innovation for cancer research: Innovative research Summer Undergraduate Research Fellowship Cancer Prevention and Research Institute of Texas (CPRIT) grant # P303150136

REFERENCES
Development of a Vaccine Education Program for Middle School Youth

Julia P. Ceco, PhD, MPH1,2, SAC, Fund for the Improvement of Science Education, Inc., 1A. The University of Texas School of Public Health, Houston, TX

Introduction

**Objective:**
- To increase the knowledge of middle school students about the importance of vaccine education and the role of vaccines in preventing disease.

**Methods:**
1. Created a curriculum that includes information on vaccine-preventable diseases, vaccine safety, and the importance of vaccination.
2. Developed a set of materials to be used in the classroom, including a presentation, handouts, and a video.
3. Conducted a series of workshops to train teachers on the use of the curriculum.

**Results:**
- The curriculum was implemented in 10 different middle schools.
- Students who received the curriculum showed a significant increase in knowledge about vaccines and their importance.

Acknowledgements

[1] Fund for the Improvement of Science Education, Inc., Houston, TX

References