INTRODUCTION

- As artificial intelligence (AI) becomes increasingly integral in healthcare, it is crucial to investigate its capabilities and compare it with the expertise of human physicians. This project focuses on ChatGPT, a language model trained by OpenAI, and its ability to provide advice on bariatric surgery recommendations compared to human physicians.

AIM

- This study aimed to compare the recommendations provided by physicians and ChatGPT for five clinical vignettes related to bariatric surgery. The primary objective was to evaluate the validity, quality, and utility of the advice given by the AI model.

METHODS

- Five clinical vignettes representing varied scenarios in bariatric surgery were presented to a group of board-certified bariatric surgeons and ChatGPT. The surgeons and ChatGPT provided their surgical recommendations for the patients in each vignette.

RESULTS

VIGNETTE	PHYSICIAN RESPONSE	CHATGPT RESPONSE	ASMBS GUIDELINE
35 y/o female, no prev. surgical hx, BMI 30. Has tried dietary interventions and multiple medications with no sustained weight loss.	No Surgery	No Surgery	No Surgery
35 y/o male, complaints of fatigue and failed weight loss attempts. Has no past medical or surgical hx. BMI 45. Has tried dietary interventions and multiple medications with no sustained weight loss.	Sleeve Gastrectomy or Roux-en-Y Gastric Bypass	Sleeve Gastrectomy or Roux-en-Y Gastric Bypass	Sleeve Gastrectomy or Roux-en-Y Gastric Bypass
35 y/o female, BMI 37. Past medical hx includes obstructive sleep apnea. Has tried dietary interventions and multiple medications with no sustained weight loss.	Sleeve Gastrectomy or Roux-en-Y Gastric Bypass	Sleeve Gastrectomy or Roux-en-Y Gastric Bypass	Sleeve Gastrectomy or Roux-en-Y Gastric Bypass
35 y/o male presents with complaints of 6 months of epigastric pain. Pain is worse after meals. Past surgical history includes sleeve gastrectomy 5 years ago. BMI of 35.	Roux-en-Y Gastric Bypass	No Surgery	Roux-en-Y Gastric Bypass
35 y/o female presents with 6 month history of burning epigastric pain. Pain is worse after meals. Past	Roux-en-Y Gastric Bypass	Sleeve Gastrectomy	Roux-en-Y Gastric Bypass

DISCUSSION

- Overall, 60% of ChatGPT's responses fell within the ASMBS guidelines, while 100% of the physicians' recommendations fell within these guidelines.
- While ChatGPT is a promising tool for generating bariatric surgery recommendations; it cannot replace physicians' holistic and patient-specific understanding. Further improvements in AI training of complex patient scenarios will help augment their role in healthcare.
- NEXT STEPS: We aim to create additional vignettes and compare responses based on the ASMBS criteria.
- While ChatGPT is a promising tool for generating bariatric surgery recommendations, it currently cannot replace physicians' holistic and patient-specific understanding. Our study indicates that further improvements in AI training involving complex patient scenarios will help augment their role in healthcare.
- However, physicians remain indispensable in providing comprehensive and contextually grounded medical advice. Future research should focus on improving the ability of AI models to consider patient-specific factors and ethical implications in their recommendations. This will facilitate the development of AI models that can provide more nuanced and individualized recommendations, ultimately enhancing patient care and outcomes.