

SEE: Scan, Explain, Empower. Translating gynecologic ultrasound reports into lay, patient-friendly reports using large language models

AK Mardon,¹ A Deslandes,² SM Freger,^{2,3} K McGowan,⁴ Anna Fragkoudi,² J Avery,² J Chalmers,¹ ML Hull,² H-T Chen,⁵ M Leonardi^{2,3}

1- IIMPACT in Health, Adelaide University, Australia; 2- Robinson Research Institute, Adelaide University, Australia; 3- Department of Obstetrics and Gynecology, McMaster University, Canada; 4- Specialized Ultrasound in Gynecology & Obstetrics (SUGO), Canada; 5- School of Computer Science and Information Technology, Adelaide University, Australia



BACKGROUND

People with endometriosis have expressed their desire for clear patient-facing explanations of their gynecologic ultrasound reports. This is becoming increasingly relevant as patients have complete access to their medical records globally and they are turning to large language models (LLMs) to understand what medical terms mean. For imaging experts, translating a diagnostic report into lay language would be obstructively time-consuming and subject to human error.

The objective of this proof-of-concept study was to develop and evaluate the performance of an LLM system ('SEE') for generating patient-facing reports of gynecological ultrasound reports.

METHODS

- SEE generated outputs for 5 mock gynecologic ultrasound reports from GPT-5.4 (OpenAI), Gemini-3.1 Pro (Google), and Claude 4.6 (Anthropic).
- Four criteria evaluated by expert gynecologist and sonologist blinded to LLM: coherence, factual consistency, comprehensiveness, and medical safety.
- Each criterion was rated using a 5-point Likert scale (higher scores = better performance).
- Scores were summed across four domains to generate a total score for each LLM.
- Mean ratings were calculated for each evaluation domain across the five reports for each LLM.

RESULTS

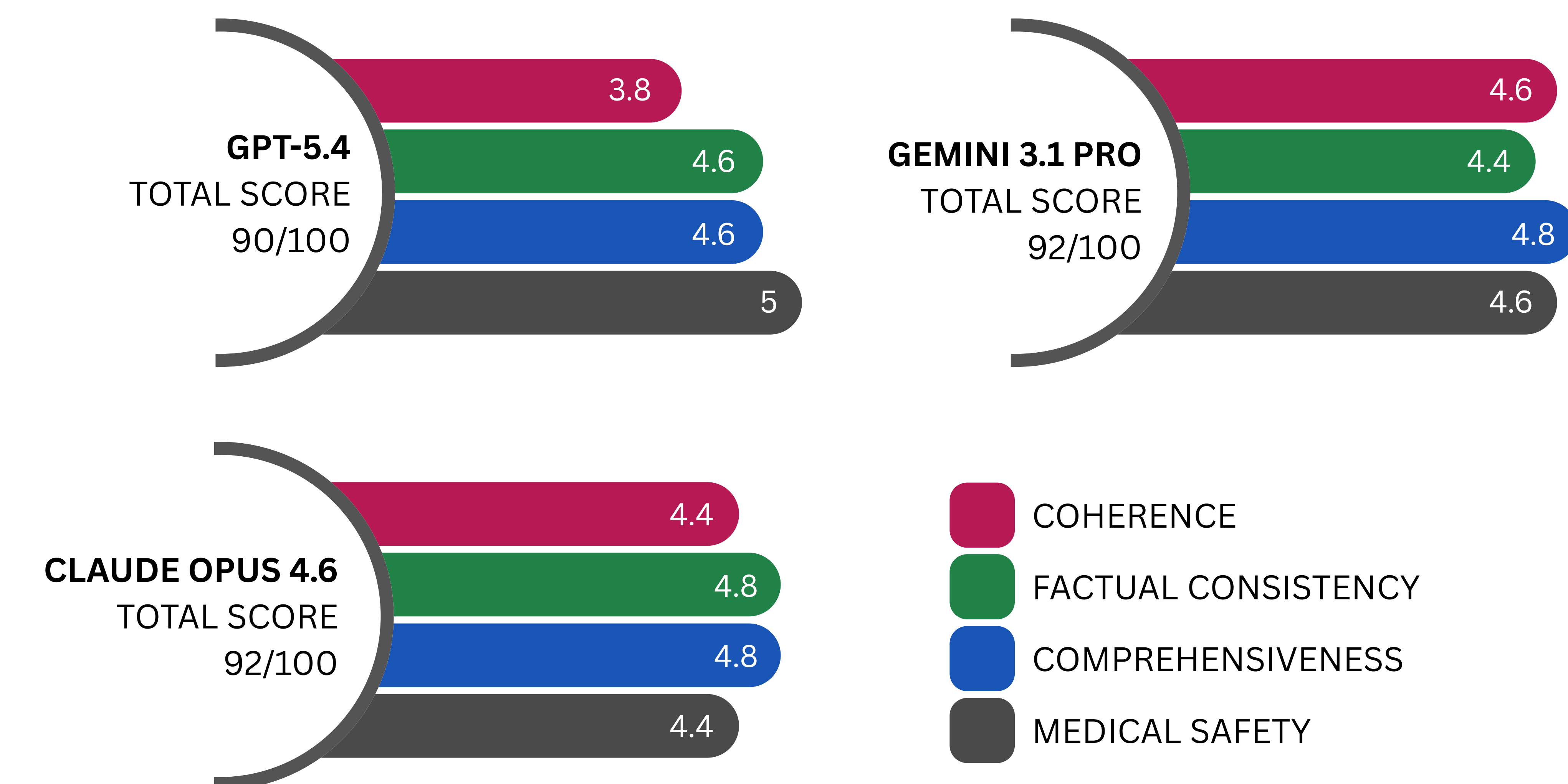


FIG 1. Mean Likert scores for evaluated domains across SEE LLMs

CONCLUSION

SEE has potential to be a **novel system for generating patient-friendly gynaecological ultrasound reports**. Further refinement of SEE with patient and clinician input will be necessary prior to piloting in a clinical trial.