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ORAL ABSTRACT

WAGO
Western Association of Gynecologic Oncology

Is AI Your Next Genetic Counselor for Patients with Gynecologic Malignancy?

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Objectives
With increasing access and proliferation of different types of AI platforms, patients can access more summarized health information than ever before. Our study explores the use of AI chatbots to improve patient understanding of genetic testing.

Methods
Thirty-nine frequently asked questions (FAQs) on genetic testing over basic science, BRCA, and Lynch syndrome mutations were queried using five AI chatbots (ChatGPT 3.5, Google Gemini, Reddit, Bootcamp, and DeepSeek). Each question was queried independently in each platform to minimize bias from previous questions. Answers were individually assessed in a blind, randomized survey by two gynecologic oncologists and genetic counselors on a 4-point scale (1: accurate and comprehensive, 2: accurate but inadequate, 3: accurate and inaccurate/outdated, 4: completely inaccurate). A Flesch-Kincaid readability score and word count for each answer was obtained through Microsoft Office Software.

Results
No AI platform outperforms regarding information accuracy or readability. On average, ChatGPT 3.5, Google Gemini, Reddit, Bootcamp, and DeepSeek received scores of 1.5, 1.6, 2.4, 1.6, and 1.4, respectively. Overall, 51% of Reddit answers received a score of 3. The majority of answers from ChatGPT 3.5 (65%) and DeepSeek (71%) received a rating of 1. Bootcamp (52%) received a score of 2. See Table 1. The average readability score for all platforms was higher than the average American reading level (ChatGPT 3.5: 13.5, Google Gemini: 13.3, Reddit: 12.1, Bootcamp: 14.6, DeepSeek: 14.2). Qualitative review revealed some answers lack focus and include tangential, irrelevant information (e.g. genetic testing laws of a specific Middle Eastern country) which may confuse patients or cause undue concern. Conversely, AI platforms largely scored well regarding basic science information, such as defining "genes."

Conclusions
Although AI chatbots can potentially be a great resource for patients desiring information over genetic testing, personalized genetic counseling and education by the healthcare team remains crucial. AI tended to provide more focused and applicable foundational genetics information but lacked the ability to provide individual assistance for patients. Patients may also lack the medical background to parse the extraneous information given.

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