

A Case for Caution: Patient Use of Artificial Intelligence

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Artificial intelligence use is increasing exponentially, including by patients in medical decision-making. Because of the limitations of chatbots and the possibility of receiving erroneous or incomplete information, patient education is a necessity. Nurses can advocate for patients by emphasizing the importance of conferring with oncology professionals before making decisions based solely on self-investigation using artificial intelligence.

AT A GLANCE

- Nurses should remain current on clinical recommendations for genetic and genomic testing and their implications for diagnosis and treatment.
- Nurses can continually encourage patients to use caution with artificial intelligence and advocate for them to have an open and ongoing dialogue with their healthcare team.
- A statement in patient electronic health record portals can remind users to consult their healthcare team for interpretation of clinical information.

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artificial intelligence; cancer biomarkers; chatbot; patient education; ChatGPT

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In the past decade, there has been exponential growth in tumor (somatic) genomic testing. In 2022, the American Society of Clinical Oncology issued a provisional clinical opinion recommending that all patients with advanced or metastatic cancer undergo genomic sequencing if any alterations have regulatory approval to guide the use or exclusion of certain treatments (Chakravarty et al., 2022). The growth in testing also extends to germline testing for cancers such as pancreatic cancer, for which the National Comprehensive Cancer Network (NCCN) recommends germline and genomic tumor testing regardless of the patient's family history (Crowley et al., 2023). Tissue acquisition has changed too, with the option in many cancers of acquiring a liquid biopsy from a simple blood sample to analyze circulating tumor DNA. The ease of specimen acquisition with liquid biopsy has expanded opportunities to use these diagnostics beyond the initial diagnosis for disease surveillance (including minimal residual disease assessment) and to monitor for treatment effectiveness and resistance.

Although many alterations are not actionable, the number of targetable alterations continues to increase. Many clinical trials specify alterations in their inclusion criteria, and there has been a shift in trial designs to gene- or biomarker-directed trials (Fountzilias et al., 2022). The expanded use of genomic tumor testing has been accompanied by increasingly complex interpretations (Chakravarty et al., 2022). Alterations may or may not have clinical significance, or significance may be unknown. Molecular testing reports can be challenging for patients, and sometimes clinicians, to understand (Davies et al., 2020).

At the end of 2022, OpenAI released ChatGPT, version GPT-3.5, to the public for free. Reuters reported on February 1, 2023, that there had been 100 million users of ChatGPT in January 2023, making it the fastest-growing application in history (Hu, 2023). The public has embraced ChatGPT to complete tasks such as writing emails, crafting résumés, and explaining complex topics. Patients are also beginning to report use of artificial intelligence (AI) systems to assist them with understanding medical reports (SOPHIA, 2023). The following fictitious case study showcases an example.

Case Study

Becky is a 40-year-old, never smoker, White cisgender female who developed a painful “catch” in her right ribs. A single mother with two daughters aged 10 and 12 years, Becky has a well-paying job in sales that requires some travel, and she describes it as demanding and high pressure. Her primary care provider evaluated her and referred her to pulmonology. Imaging revealed a 4 cm tumor in the right lower lobe, with a metastatic rib lesion.