ChatGPT is all the rage in the artificial intelligence space right now—for better and possibly also for worse. Developed by OpenAI and launched in November 2022, ChatGPT is a large-scale language model that can draft text, poetry, short stories, and computer code on demand. It boasted an estimated 100 million monthly active users in January, just 2 months after its launch. This technology is so hot that every major tech company is actively developing their own alternative.

ChatGPT uses Natural Language Processing and gathers data from textbooks, websites, and articles to create unique content. It is free, but there is also a pilot subscription plan with more bells and whistles.

I am interested in artificial intelligence (AI) especially as it pertains to dermatology, so I thought I would give ChatGPT a spin to see what all the buzz was about...

EXPERIMENT NO. 1

I entered, “Write a patient note for someone with atopic dermatitis who has failed topical medications, has an IGA score of 3, and would like to start dupixent with discussion of risks and benefits and also justification for starting bio-logic therapy with dupixent” into the instruction prompt. Within seconds, the app fed this response back to me:

Patient Note: Today I discussed with the patient the risks and benefits of starting biologic therapy with Dupixent for their atopic dermatitis. The patient has failed topical medications and has an IGA score of 3. The risks of starting Dupixent include injection site reactions, cold sores, and potential allergic reactions. The benefits of Dupixent include improved skin condition, reduced itching, and improved quality of life.

The verdict: Not bad but not great. Not as robust of a discussion as I was expecting from what I had seen with other examples. Surely this is easier than typing these notes, but this clearly does not replace the robust discussion most physicians have with patients and document, so there is clearly room for improvement before being incorporated into an electronic health record.

EXPERIMENT NO. 2

There is a lot of concern that the app may usher in a new era of plagiarism and cheating in academics, and it may not be as easy to detect as old-school methods of plagiarism. A recent study found that 50 essays generated by ChatGPT produced sophisticated texts that were able to evade the traditional plagiarism check software. The study has not yet been peer-reviewed. It is published on the preprint site arXiv.org.

To see how sophisticated the text could be, I typed “Please provide a personal statement for a student applying for a dermatology residency” into the prompt. Not 2 seconds later, the app spit this back out:

As a medical student, I have always been passionate about dermatology and the unique challenges it presents. I am excited to pursue a dermatology residency to further my knowledge and skills in this field. I have a strong academic background in dermatology, having completed a number of courses in the subject. I have also had the opportunity to participate in several clinical rotations in dermatology, which have given me a better understanding of the field and the challenges it presents. I am confident that I...

The verdict: Obviously it is unfinished and maybe that is because I was using the free version of ChatGPT. It’s not a bad first draft although it is very superficial and clearly lacks the sort of details that would make an application unique and jump out at a reviewer.

EXPERIMENT NO. 3

I asked it this: “A 25-year-old man presents to your office with ovoid scaly lesions on his flank which has been itching”
So what do these experiments tell us about ChatGPT? That it’s impressive and may help current and future dermatologists complete certain tasks.”

The verdict: Clearly the top of the differential diagnosis and although the stem is fairly basic and would be akin to a USMLE Step 1 question, ChatGPT got it instantly and without multiple-choice options.

So what do these experiments tell us about ChatGPT? That it’s impressive and may help current and future dermatologists complete certain tasks. That said, there is a long way to go until its regular incorporation into clinical practice and even medical education. Most of all, the onus is on us to help ensure responsible and accurate use. Other questions regarding oversight or governing of the technology also loom on the horizon.

AI is here to stay, and these large-scale language models are the ones to watch—especially by professors and instructors in medical education programs, and down the road, physicians in all types of practices—just like how EMR once revolutionized and then became commonplace in medicine.

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