The Future of Health Care & Oncology Through the Lens of AI

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Disclosures and Potential Conflicts of Interest

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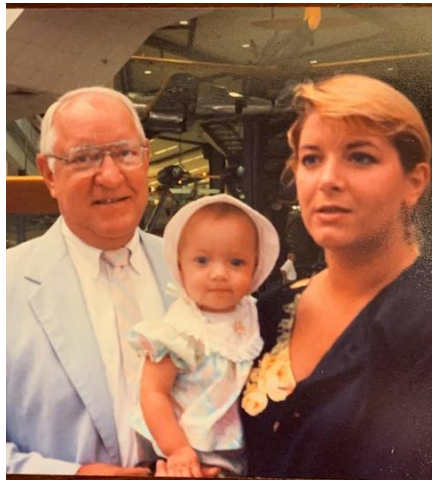
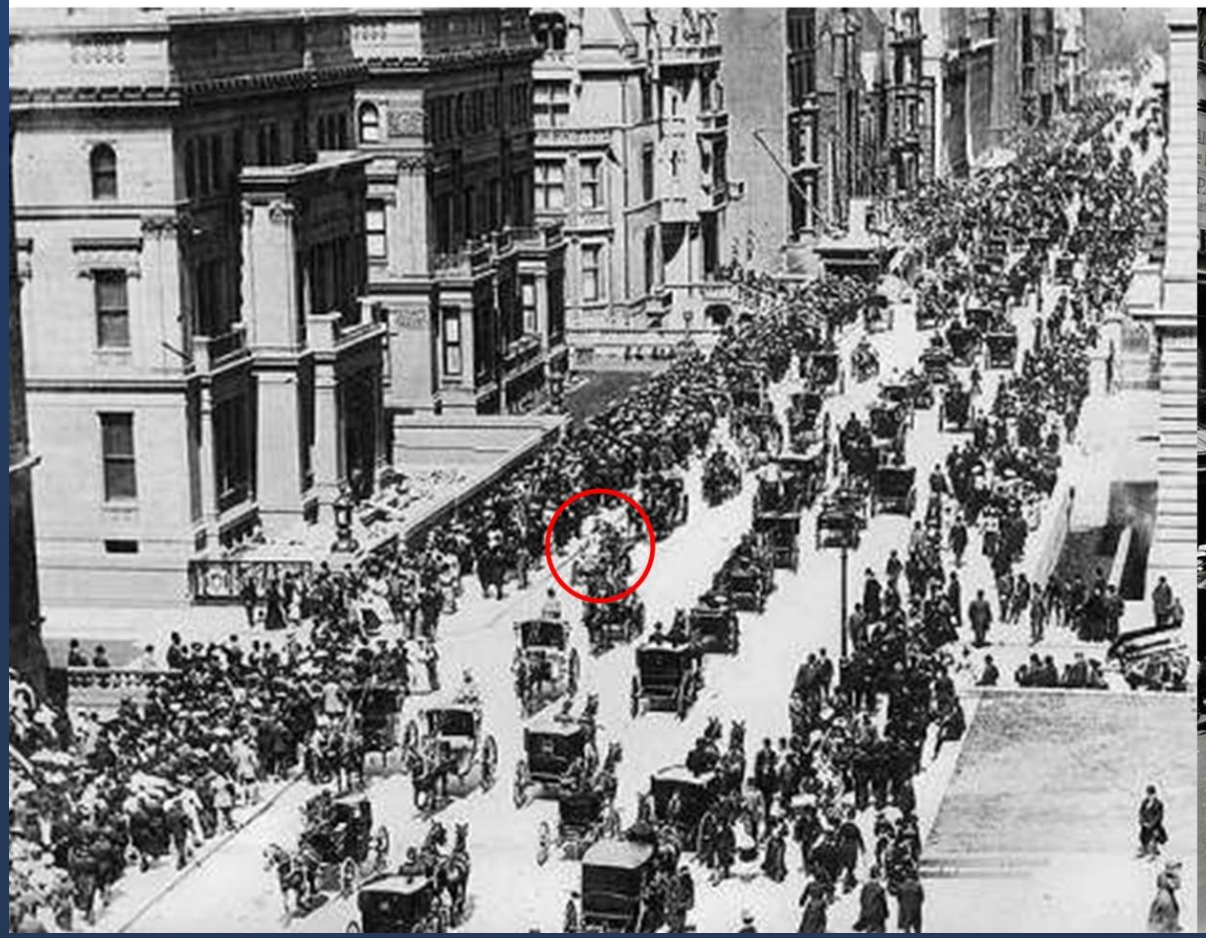


Easter Parades in New York City

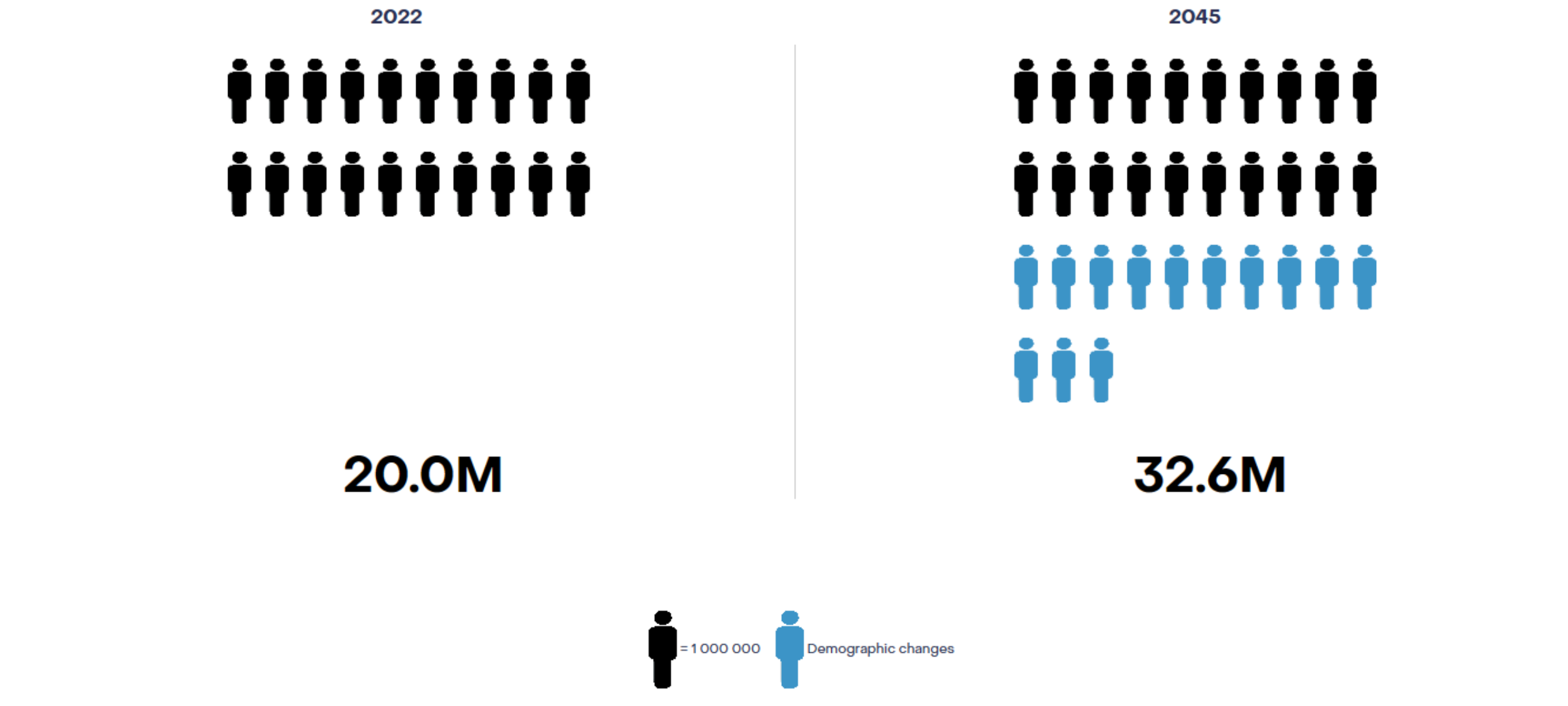
Year 1900: One Motor Vehicle



Year 1913: One Horse & Carriage

Estimated number of new cases from 2022 to 2045, Both sexes, age [0-85+]
All cancers
World

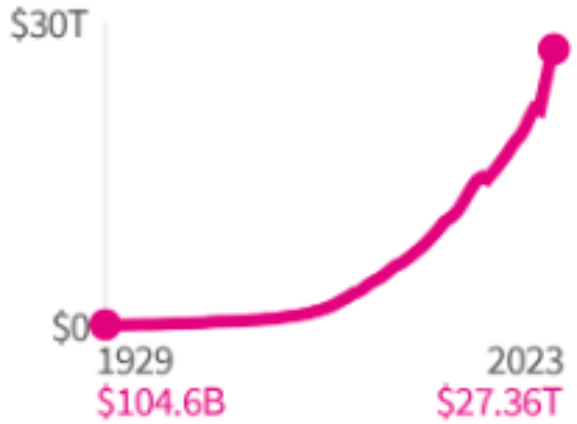
GLOBAL CANCER OBSERVATORY



Cancer Tomorrow | **IARC** – https://gco.iarc.who.int
Data version: Globocan 2022 (version 1.1) – 08.02.2024

International Agency for Research on Cancer
World Health Organization

USA GDP issues

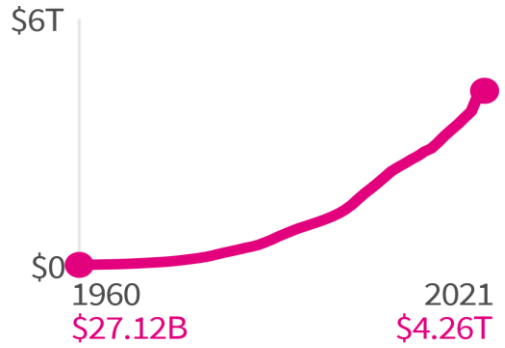


Gross domestic product

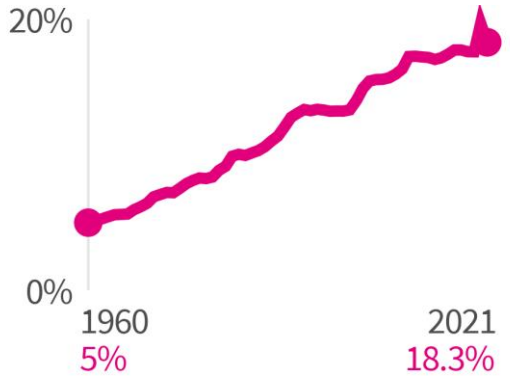
$27.36 trillion

2023

National spending on healthcare goods and services

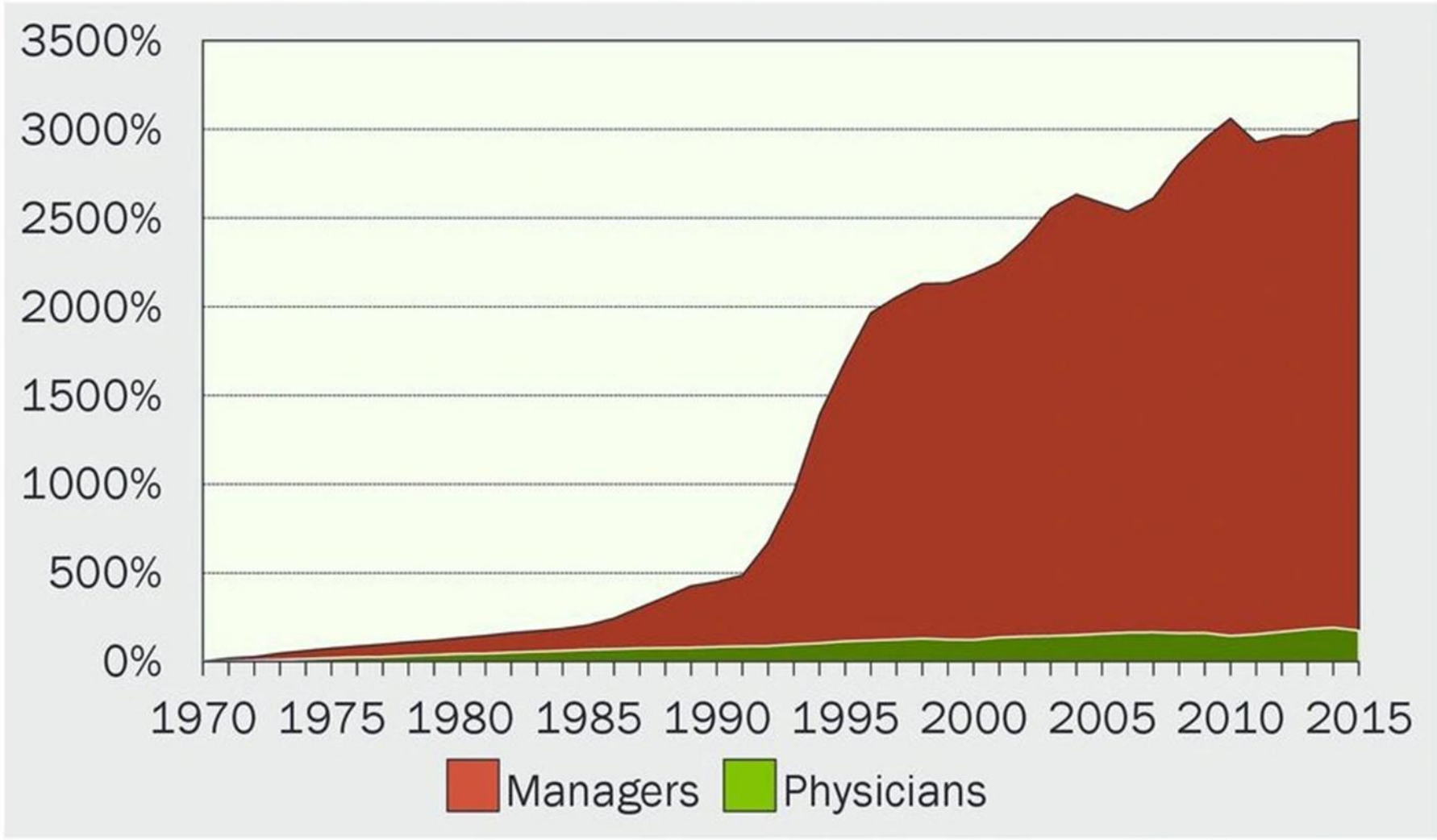


Healthcare expenditures as a percent of GDP



Source: Health – USAFacts

Growth of Physicians and Administrators in U.S.



Bureau of Labor Statistics; NCHS; Himmelstein/Woolhandler analysis of CPS
Managers shown as moving average of current year and two previous years

THE MEDICAL LITERATURE TSUNAMI

Pubmed

Daily: ~4,000 Weekly: ~28,000 Monthly: ~120,000

Annually: ~1.44 million articles

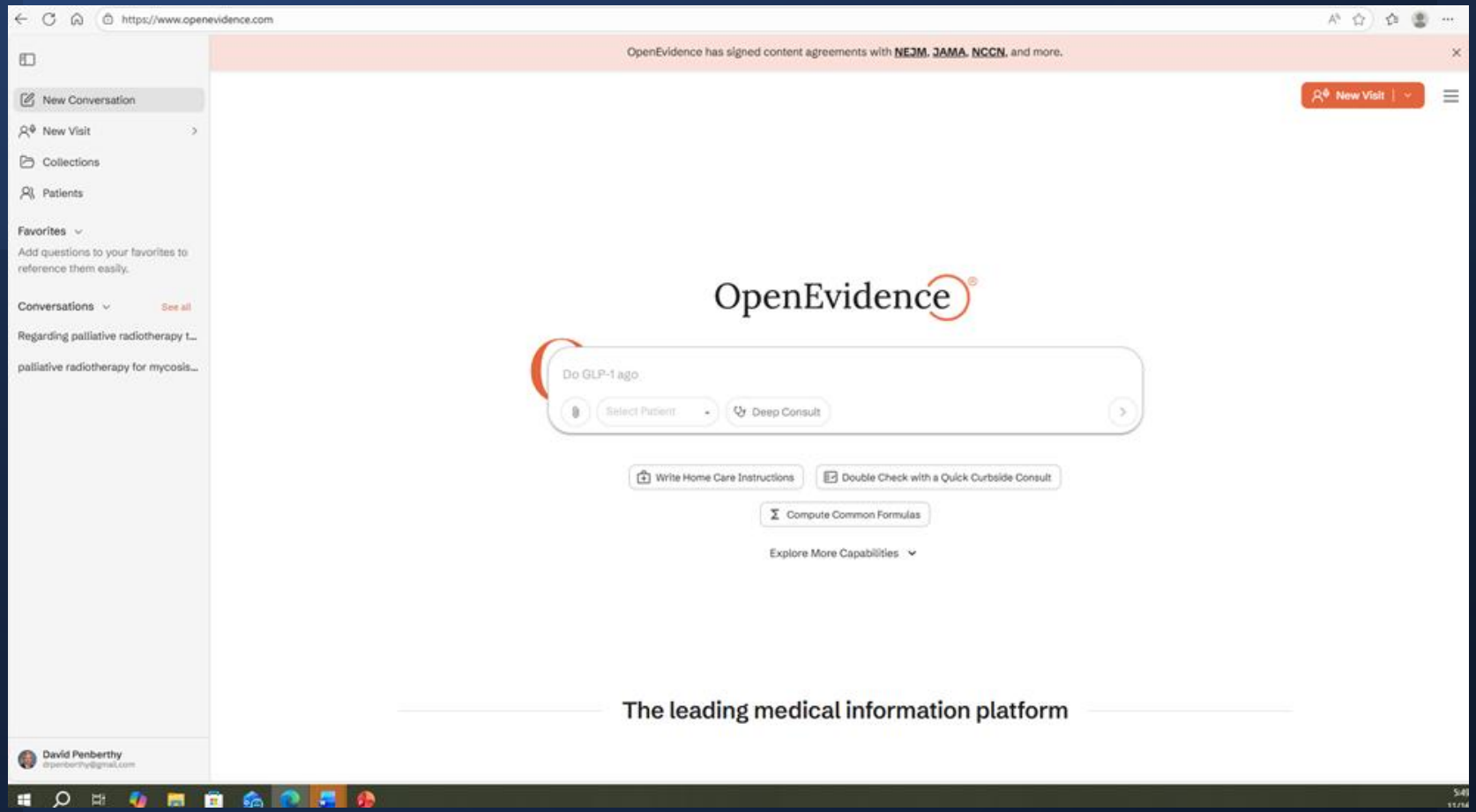
10% oncology related

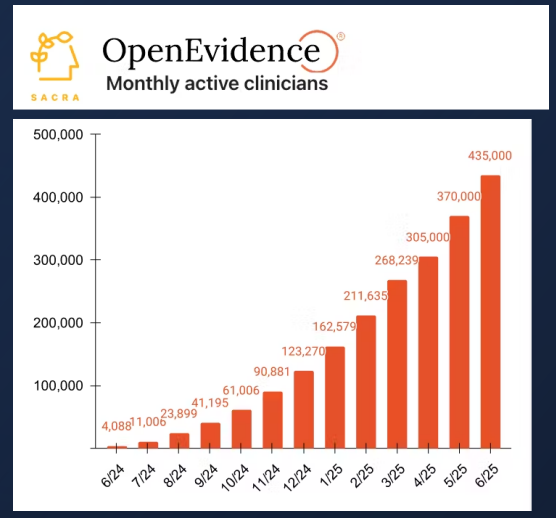
Daily - ~400 Weekly - ~2800 Monthly – ~12,000

Annually- ~144,000

These figures only represent a fraction of the medical information being generated, as they do not account for other sources like clinical trials, patents, guidelines, conference proceedings, and more. Additionally, the growth of data in fields like genomics and digital health is further accelerating the expansion of medical information.

How do you handle the tsunami?





Yours truly with Zach Ziegler, PhD
CTO and Co-founder of OpenEvidence

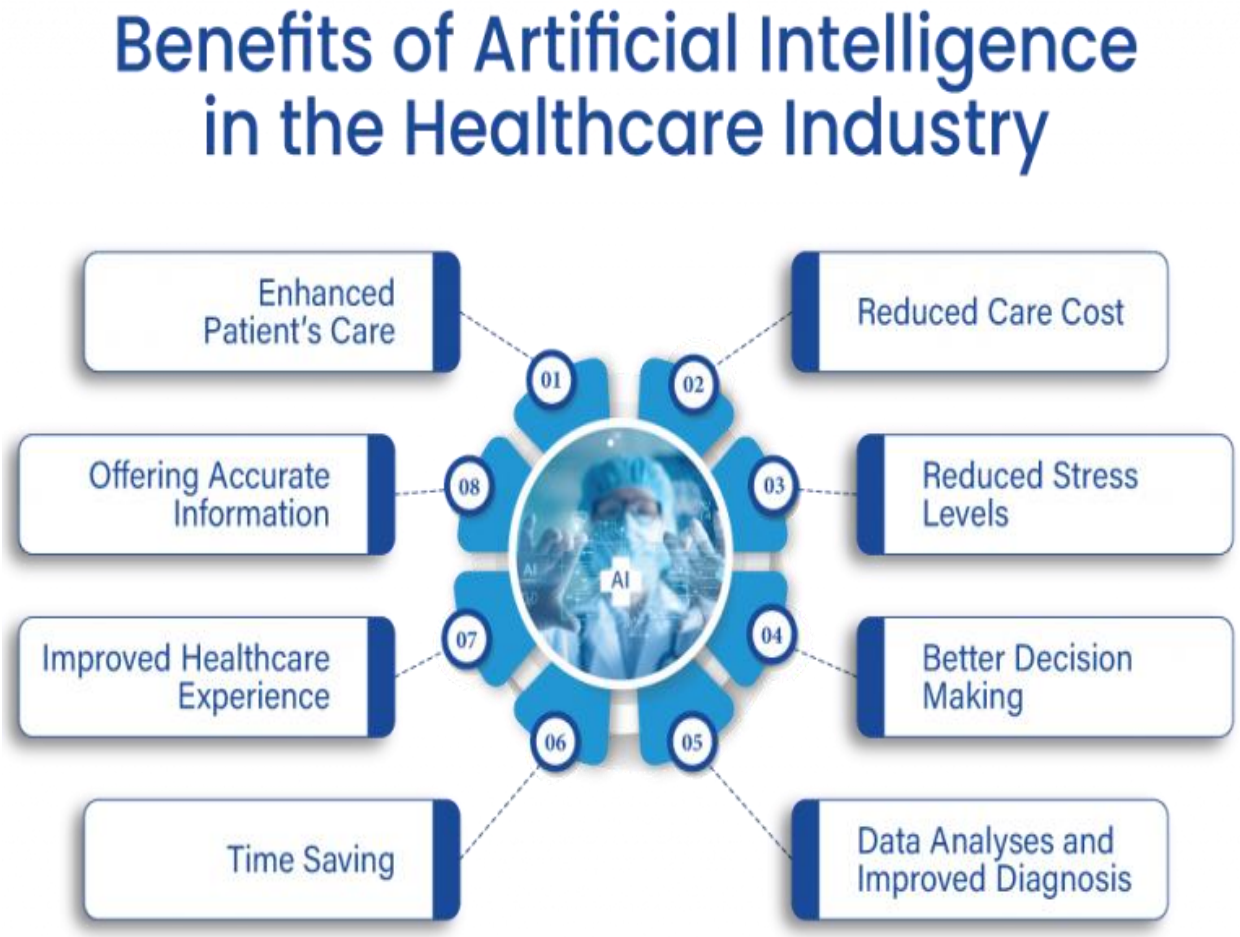
Bottom Line Up Front

Can AI really help physicians do their work better? And help improve patient care?

Short answer: **Yes, *in some areas*, when it's designed and used well. But it's far from magic, and it can also make things worse if we're careless.**

AI in Healthcare – Where We Are Now

- AI tools emerging for documentation, decision support, imaging, and operations
- Hype cycles: promises of efficiency, precision, and reduced burnout
- Patchwork implementation across service lines and institutions
- Regulatory and reimbursement frameworks still evolving



Risks

- Studies show that when clinicians trust biased or incorrect AI output, their diagnostic accuracy can actually ***drop***.
- Adding "explanations" to flawed AI recommendations sometimes makes clinicians ***more likely*** to accept the wrong answer.
- There's emerging concern that routine dependence on AI for certain tasks could **blunt clinicians' own diagnostic skills over time,** especially for more junior clinicians.
- AI models trained on skewed datasets can encode and **amplify existing inequities**—e.g., misclassification in underrepresented groups, or poor performance outside the training population.
- Many physicians worry about deskilling the **"human"** part of medicine; less eye contact if you're checking AI suggestions, more pressure to "follow the algorithm," and medico-legal confusion if your judgment diverges from the tool.

Jabbour, S., Fouhey, D. F., Shepard, S., Valley, T. S., Kazerooni, E. A., Banovic, N., Wiens, J., & Sjoding, M. W. (2023). Measuring the impact of AI in the diagnosis of hospitalized patients: A randomized clinical vignette survey study. *JAMA, 330*(23), 2275–2284.

2026 Community Oncology Conference
Innovation in Practice

AI is already reducing certain forms of burnout and improving diagnostic accuracy.

AI's greatest promise lies in augmenting, not replacing, human clinicians.

Success depends on transparency and careful oversight.

The best healthcare future combines AI's pattern-recognition power with the irreplaceable compassion of human physicians.

- American Medical Association. (2024). *Principles for augmented intelligence (AI) development, deployment, and use*. American Medical Association.
- Hadhazy, A. (2024, October 28). Can AI improve medical diagnostic accuracy? *Stanford Institute for Human-Centered Artificial Intelligence*.
- Goyal, R. (2024, December 12). How AI is optimizing patient care in general practice. *AI Business*.

The Best is Yet to Come!