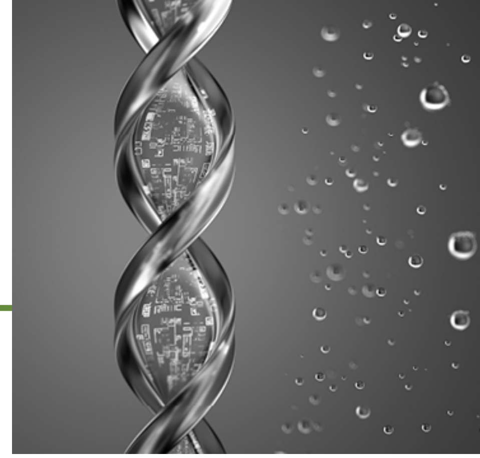
MARKET SIGHT LINES



Artificial Intelligence in Healthcare: Early Results and Future Potential

By Michael O’Keeffe, *Chief Investment Officer*

We recently discussed how artificial intelligence (AI) is impacting the labor market, may be a tailwind to deliver durable long-term returns, and is playing a key role in our long-term investment themes. And today we’re seeing real-world AI healthcare applications emerge. Clinicians are using AI tools to check drug interactions and analyze medical images, and early research shows the potential for faster diagnoses and improved precision medicine. While these uses of AI are promising, further adoption will depend on trust, regulation, and integration with existing systems. In this Sight|Lines, we discuss AI applications in healthcare.

THE TAKEAWAY: HEALTHCARE IS AN EARLY ADOPTER OF AI

AI applications are quickly transforming the healthcare industry. In summary:

- Many clinicians are adopting AI, but the pace and depth of adoption vary by task.
- AI is very effective at analyzing images – a natural application that helps clinicians improve efforts to identify abnormalities.
- When a patient needs several medications for different conditions, understanding the potential drug interactions is important – and AI is helping.
- Many doctors are wary of new tools when it comes to making decisions, and adoption will happen at a measured pace, as the applications are validated and regulations evolve.
- Potential applications in precision medicine and drug discovery are promising.
- AI has the potential to improve healthcare access in areas with limited care.
- Integrating AI into workflows and electronic health records (EHR) systems could offer measurable and clear improvements.
- More generally, the pace of AI deployment in healthcare may be slowed by regulation, governance, and an appropriate focus on privacy.

IN-DEPTH: THE HEALTHCARE SECTOR IS AN EARLY AI ADOPTER, WITH MEANINGFUL UPSIDE POTENTIAL DESPITE GUARDRAILS AND INTEGRATION CHALLENGES

AI applications are being used actively in both clinical and research settings, but regulation and privacy issues must be addressed to scale the use of current applications and new ones. Going deeper:

- Clinician adoption is underway, but depth varies by task:
  - ~76% of clinicians have used a clinically oriented AI tool at least once.
- AI is very effective at analyzing images, helping clinicians improve results:
  - ~21% of clinicians use AI to analyze medical images today.
  - ~56% expect all medical images to be AI-analyzed for abnormalities within two to three years.
  - New stroke analysis software appears two times as accurate as humans on certain brain scans.
- AI is helping doctors better understand medication interactions and safety:
  - ~30% of clinicians use AI tools to identify drug interactions.
- Doctors are wary of new tools when it comes to making decisions:
  - ~16% of clinicians are actively using AI tools for clinical decision support today.
  - Adoption will happen at a measured pace, as validation takes time and regulations evolve.
- Potential applications in precision medicine and drug discovery are promising, especially for longevity:
  - AI models may detect early signs of more than 1,000 diseases before symptoms appear.
  - AI-enabled precision medicine and accelerated drug discovery are early stage, but credible.
- AI has the potential to improve healthcare access in areas where services are hard to come by:
  - The World Economic Forum estimates ~4.5 billion people lack access to essential healthcare.
  - AI paired with clinicians may be a scalable model for these regions.
- AI integration into workflow and EHR systems will offer improvements that are measurable and clear:
  - We expect double-digit improvements in the "throughput" of clinical workflows.
  - Systems may process thousands of records per day with reduced error rates.
- Regulation, governance, and privacy considerations may lessen the pace of AI deployment in healthcare:
  - Regulators like the Food and Drug Administration treat many AI tools as software as a medical device, requiring validation, documented data, and monitoring.
  - Hospitals must guard protected health information and integrate with legacy EHRs, with clinicians favoring support tasks (e.g., drug interaction, imaging) over full clinical decisions.

CONCLUSION

We recently discussed how AI is impacting the labor market and may help deliver durable long-term returns. This is particularly true in healthcare today, as real world AI applications are emerging. Clinicians use AI tools to check drug interactions and analyze medical images. Early research shows the potential for faster diagnoses and improved precision medicine. While these uses of AI are quite promising, further adoption and scaling will depend on professionals developing more trust, navigating regulation, and integrating AI into existing systems.

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