

AI in Medical Imaging

1-2-3 YEAR HORIZON

THE OPPORTUNITY

\$20B

AI Medical Imaging market by 2033

34.7% CAGR through 2033

YEAR 1 HORIZON • 2025-2026

Immediate Impact

- \$1.65B → \$2.5B market growth in medical imaging AI
- 950+ FDA-cleared AI medical devices now in market
- CT leads with 28% market share; oncology dominates applications

YEAR 2 HORIZON • 2026-2027

Scaling Adoption

- Multimodal AI analyzing text, images, genomics simultaneously
- Cloud-based imaging solutions projected 36.2% CAGR
- Radiology AI reaches \$989M with 35% of medical device market

YEAR 3 HORIZON • 2027-2028

Market Maturity

- \$6.5B+ AI medical imaging market achieved
- Foundation models with LLMs standard in diagnostic consoles
- Asia-Pacific leads growth at 33%+ regional CAGR



We look forward to taking advantage of physical AI for autonomous imaging systems to address challenges of growing workloads and staffing shortages.

— Roland Rott, President & CEO of Imaging, GE HealthCare

Key Insight:

AI reduces interpretation time by 15.7% while improving accuracy

KEY TAKEAWAYS

19,500

US radiologist shortfall
by 2034

72%

of radiologists believe AI
improves accuracy

100+

new FDA AI device
approvals yearly

Medical Imaging AI is transforming diagnostics

Follow for more AI healthcare insights

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AI in Drug Discovery

1-2-3 YEAR HORIZON

THE OPPORTUNITY

50%

R&D timeline reduction with AI

\$134B market projected by 2034

YEAR 1 HORIZON • 2025-2026

Immediate Impact

- \$4.6B AI drug discovery market in 2025
- 80-90% success rate for AI-discovered molecules in Phase I
- 27 partnerships between pharma giants and AI firms (up from 4 in 2015)

YEAR 2 HORIZON • 2026-2027

Scaling Adoption

- \$8.5B AI clinical trials market projected
- Generative AI designing novel compounds in real-time
- Synthetic data accelerates trials while protecting privacy

YEAR 3 HORIZON • 2027-2028

Market Maturity

- \$60B pharma investment in AI projected by 2030
- 30%+ of new drugs discovered using AI by 2028
- AI-native pipelines standard at major pharma companies



AI-discovered molecules have an 80-90% success rate in Phase I, substantially higher than previous average outcomes.

— Science Direct Research, 2025

Key Insight:

Traditional drug development costs \$2.6B average per drug

KEY TAKEAWAYS

\$2.6B

average cost per new
drug to market

<10%

traditional Phase I to
market success

30%

CAGR in AI drug
discovery market

AI is revolutionizing drug discovery

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AI Surgical Robotics

1-2-3 YEAR HORIZON

THE OPPORTUNITY

\$97B

AI robot-assisted surgery by 2032

44.3% CAGR fastest-growing medical AI segment

YEAR 1 HORIZON • 2025-2026

Immediate Impact

- \$11.26B robotic surgery market in 2025
- da Vinci 5 launches with force-feedback capabilities
- 25% reduction in operative time vs manual surgery

YEAR 2 HORIZON • 2026-2027

Scaling Adoption

- \$40B robot-assisted surgery market projected
- Semi-autonomous capabilities for suturing and bone prep
- Neurosurgery AI at 17.5% CAGR for sub-millimeter precision

YEAR 3 HORIZON • 2027-2028

Market Maturity

- \$21B+ market with 13.5% sustained CAGR
- AI vision models for real-time surgical guidance
- ASC adoption at 16% CAGR for outpatient robotics



A surgical robot trained on real procedure videos performed a critical phase of gallbladder removal autonomously, adapting to unexpected situations.

— Johns Hopkins University Research, July 2025

Key Insight:

30% decrease in intraoperative complications with AI assistance

KEY TAKEAWAYS

\$2,400

savings per robotic knee
surgery

20%+

shorter hospital stays

53%

EU healthcare orgs
planning robotics

AI robotics: precision meets autonomy

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AI Clinical Documentation

1-2-3 YEAR HORIZON

THE OPPORTUNITY

\$600M

Ambient scribe revenue in 2025

2.4x YoY growth — fastest AI healthcare category

YEAR 1 HORIZON • 2025-2026

Immediate Impact

- 60%+ providers projected to use AI scribes by end of 2025
- Kaiser Permanente deploys largest AI rollout: 40 hospitals, 600+ offices
- 50%+ reduction in documentation time projected

YEAR 2 HORIZON • 2026-2027

Scaling Adoption

- Beyond scribing: AI coding, billing, prior auth automation
- EHR integration wars: Epic, Oracle, athenahealth launch AI
- 60+ ambient vendors competing for market share

YEAR 3 HORIZON • 2027-2028

Market Maturity

- AI platforms replace point solutions for end-to-end admin
- \$1.17B healthcare chatbot market by 2032
- Revenue integrity AI prevents billing leakage



Physicians spend one hour on documentation for every five hours of patient care. Ambient scribes are healthcare AI's first breakout category.

— Menlo Ventures, State of AI in Healthcare 2025

Key Insight:

85% of healthcare AI spend flows to startups vs incumbents

KEY TAKEAWAYS

30%

reduction in after-hours
'pajama time'

98%

accuracy for general
medical terms

15,791

hours saved at TPMG in
one year

AI scribes: ending physician burnout

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Healthcare AI Market

1-2-3 YEAR HORIZON

THE OPPORTUNITY

\$208B

Global healthcare AI market by 2030

524% growth from 2024 to 2030

YEAR 1 HORIZON • 2025-2026

Immediate Impact

- \$28B → \$37B healthcare AI market growth
- \$1.4B healthcare AI spending (3x 2024 levels)
- 83% believe AI will revolutionize healthcare in 3-5 years

YEAR 2 HORIZON • 2026-2027

Scaling Adoption

- \$45B+ global healthcare AI market
- GenAI growth: 146% between 2025-2028
- Enhanced regulation and ethical AI governance frameworks

YEAR 3 HORIZON • 2027-2028

Market Maturity

- \$102B US healthcare AI market alone
- 90% hospitals using AI for diagnosis and monitoring
- Asia-Pacific fastest growth at 42.5% CAGR



86% of all respondents said AI is critical to their future.
83% believe AI will revolutionize healthcare in the next
three to five years.

— NVIDIA State of AI in Healthcare 2025

Key Insight:

AI projected to save \$13B in healthcare costs by 2025

KEY TAKEAWAYS

\$260B

potential annual
productivity gains

36%

average CAGR across
healthcare AI

\$1B+

Mayo Clinic AI
investment

Healthcare AI: \$208B opportunity by 2030

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