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# AI in Medical Imaging

**1-2-3 YEAR HORIZON**

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## THE OPPORTUNITY

# \$20B

AI Medical Imaging market by 2033

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34.7% CAGR through 2033

**YEAR 1 HORIZON • 2025-2026**

## **Immediate Impact**

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- \$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**

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- 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**

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- \$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

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**Key Insight:**

AI reduces interpretation time by 15.7% while improving accuracy

## KEY TAKEAWAYS

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**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

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# AI in Drug Discovery

**1-2-3 YEAR HORIZON**

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## THE OPPORTUNITY

# 50%

R&D timeline reduction with AI

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\$134B market projected by 2034

**YEAR 1 HORIZON • 2025-2026**

## **Immediate Impact**

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- \$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**

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- \$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**

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- \$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

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**Key Insight:**

Traditional drug development costs \$2.6B average per drug

## KEY TAKEAWAYS

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**\$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**

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## THE OPPORTUNITY

# \$97B

AI robot-assisted surgery by 2032

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44.3% CAGR fastest-growing medical AI segment

**YEAR 1 HORIZON • 2025-2026**

## **Immediate Impact**

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- \$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**

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- \$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**

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- \$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

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**Key Insight:**

30% decrease in intraoperative complications with AI assistance

## KEY TAKEAWAYS

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**\$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**

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## THE OPPORTUNITY

# \$600M

Ambient scribe revenue in 2025

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2.4x YoY growth — fastest AI healthcare category

**YEAR 1 HORIZON • 2025-2026**

## **Immediate Impact**

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- 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**

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- 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**

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- 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

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**Key Insight:**

85% of healthcare AI spend flows to startups vs incumbents

## KEY TAKEAWAYS

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**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**

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## THE OPPORTUNITY

# \$208B

Global healthcare AI market by 2030

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524% growth from 2024 to 2030

**YEAR 1 HORIZON • 2025-2026**

## **Immediate Impact**

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- \$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**

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- \$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**

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- \$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

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**Key Insight:**

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

## KEY TAKEAWAYS

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**\$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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