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Review Article

Artificial Intelligence in Preventive Medicine and Chronic Disease Management: Key Roles and Limits

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Abstract
Artificial intelligence (AI) in modern healthcare is one of the most transformational technologies available, giving unparalleled prospects to advance preventative medicine and treat chronic diseases. AI enhances healthcare systems' ability to identify diseases earlier, predict health risks, tailor preventive interventions and improve long-term patient management by integrating machine learning, deep learning, natural language processing, computer vision and predictive analytics into clinical practice. with preventive medicine, AI helps with population health surveillance, risk stratification, precision screening, vaccination planning, lifestyle modification, and early identification of those at high risk for chronic illnesses. AI-powered clinical decision support systems, wearable health devices, remote patient monitoring, and digital therapeutics have demonstrated considerable potential in chronic disease management by improving disease control, reducing hospitalisations, enhancing medication adherence, and supporting personalised treatment strategies for conditions including diabetes mellitus, hypertension, cardiovascular disease, chronic kidney disease, chronic respiratory diseases, cancer, and mental health disorders. Despite these developments, widespread implementation is still impeded by significant challenges, including concerns about data privacy and security, algorithmic bias, a lack of transparency in complex AI models, limited interoperability with current health information systems, regulatory uncertainty, ethical concerns, and disparities in digital health infrastructure, particularly in low- and middle-income countries. Moreover, the successful integration of AI in healthcare requires professional monitoring, the preservation of patient autonomy and equal access to AI-enabled devices. This review critically examines the evolving role of artificial intelligence in preventive medicine and chronic disease management, discusses current applications and emerging innovations, assesses current limitations and ethical concerns, and discusses future directions for responsible, evidence-based, and patient-centered implementation of artificial intelligence into healthcare systems worldwide.

Keywords: *Artificial Intelligence, Preventive Medicine, Chronic Disease Management, Machine Learning, Precision Medicine, Predictive Analytics, Digital Health, Clinical Decision Support Systems, Remote Patient Monitoring, Healthcare Innovation.*

INTRODUCTION
In healthcare, artificial intelligence (AI) has emerged as one of the most disruptive developments, transforming the landscape of illness prevention, diagnosis, treatment, and long-term patient management. Artificial Intelligence (AI) is the capacity of computer systems to execute tasks that often necessitate human intelligence, including learning, reasoning, pattern recognition, decision-making, and language processing. The rapid acceptance of AI in healthcare is enabling more effective, personalised, and data-driven healthcare due to the widespread use of electronic health records (EHRs), wearable devices, genomics, mobile health apps, and big data analysis [1].

The global burden of communicable and non-communicable diseases (NCDs) continues to confront health systems. NCDs like cardiovascular diseases, diabetes, chronic respiratory diseases and malignancies account for around 74% of fatalities globally[2]. Many chronic diseases have a slow onset, therefore early recognition of risk factors and early intervention are critical in lowering morbidity, mortality and health care costs. Unlike traditional healthcare which is mostly reactive to the appearance of disease after the symptom has shown, AI allows for a proactive approach with forecasting disease risk, promoting preventive and enabling personalised interventions[3]. Here describes the idea of AI in the health care setting, how it is used for preventative medicine and the treatment of chronic disease, and the technology that drive these achievements.

Concept of AI in Health Care

The use of AI in healthcare is the use of computational algorithms that learn from health data in an effort to support physicians in making accurate, efficient and personalised decisions. Compared to the traditional software which is coded with predefined instructions, AI is different. AI continuously learns and self-improves with the help of machine learning and deep learning algorithms [4]. The key technologies that support AI applications are several. Machine learning finds predicts patterns in historic data and deep learning use artificial neural networks to assess complicated information such as medical pictures, electrocardiograms, pathology slides and genomic data. Natural language processing (NLP) allows computers to understand and analyse clinical documents, scholarly literature and patient interactions. Computer vision enables automatic interpretation of radiological images, retinal photos, skin lesions and histopathology slides with good diagnostic accuracy [5] Healthcare produces vast amounts of structured and unstructured data from EHRs, laboratory results, imaging tests, wearable sensors, genome sequencing, and mobile applications. AI synthesises disparate datasets to provide clinically relevant insights, enabling precision medicine and personalised treatment. Most importantly, AI will not replace but augment healthcare workers. Clinical judgements involve ethical judgement, empathy, communication and patient preferences and societal situations. This makes AI work best as a decision-support tool in a collaborative human-AI healthcare system. Preventive medicine is the practice of promoting health and preventing disease before symptoms appear through health promotion, screening, immunisation, behavioural modification and early intervention. The use of AI has contributed to major improvements in preventive medicine, including improved risk prediction, illness monitoring, personalised prevention, and early diagnosis[6].

Primary prevention is the reduction of disease incidence by control of risk factors prior to disease occurrence. By examining demographic variables, lifestyle choices, genetic vulnerability, environmental exposures and medical history, AI develops personalised preventative measures. Wearable devices equipped with AI provide continuous tracking of physiological data such as heart rate, blood pressure, blood glucose, oxygen saturation, sleep quality, and physical activity. These systems detect abnormal trends and encourage healthy behaviours such as exercise, smoking cessation, proper nutrition, stress reduction and medication adherence. Artificial intelligence can also help public health by looking at environmental, demographic, travel and epidemiological data to predict disease outbreaks and identify vulnerable populations. AI has been used for surveillance, outbreak prediction, vaccine monitoring and healthcare resource allocation during the COVID-19 pandemic. Secondary prevention includes early detection of disease and treatment at an early disease stage. AI has enhanced the accuracy of screening and reduced false-positive and false-negative outcomes. Algorithms using deep learning evaluate mammograms to detect early breast cancer, retinal images to detect diabetic retinopathy, chest CT scans to identify pulmonary nodules, and brain imaging to diagnose intracranial haemorrhage. AI-based risk prediction models can also identify those most likely to benefit from tailored screening, based on clinical, genetic and lifestyle characteristics, thus enhancing screening efficiency and avoiding wasteful investigations. Tertiary prevention tries to reduce complications of patients already having a disease. AI enables constant monitoring, anticipates illness progression, detects patients at the risk of hospitalisation and directs personalised rehabilitation[7]. For example, AI processes continuous glucose monitoring data to anticipate hypoglycaemia in diabetes and wearable cardiac monitors detect arrhythmias and early heart failure deterioration. Early notifications enable for earlier intervention; minimising emergency admissions and increasing patient outcomes.

AI has fast tracked precision preventive medicine using genetic, proteomic, metabolomic, laboratory, imaging and behavioural data to tailor preventive strategies. Polygenic risk scores indicate people at higher hereditary risk of diseases such as coronary artery disease, breast cancer, Alzheimer's disease and type 2 diabetes. This means early identification of high-risk individuals for screening, intensive lifestyle advice and preventative therapies. Artificial intelligence also assists preventative nursing practices by helping community health nurses identify vulnerable populations, monitor maternity and child health, improve immunisation coverage, diagnose malnutrition, and increase chronic disease prevention programs. Mobile AI applications help in risk assessment, early referral and efficient allocation of health care resources. The role of AI has grown in managing chronic diseases like as diabetes, hypertension, cardiovascular disorders, chronic renal disease, asthma, chronic obstructive pulmonary disease, and cancer. These conditions need regular monitoring, medication compliance, life style modifications and periodic clinical follow up[8]. Machine learning algorithms use laboratory findings, imaging, medical history, medication use and behavioural aspects for predicting disease development. Predictive models can identify high risk patients for problems or hospitalisation, so that early intervention can be made. One of the greatest breakthroughs of AI is remote patient monitoring. Wearable sensors and Internet of Things (IoT) devices monitor continually physiological data such as blood glucose, blood pressure, heart rhythm, oxygen saturation, and respiratory function. AI examines this data in real time and warns healthcare providers when deterioration is identified. And AI aids precision medicine by merging genome data with clinical information to suggest customised treatments. In oncology, AI is helping find specific treatments based on tumour genetics, and in diabetes, it is improving insulin dosing based on continuous glucose monitoring data. AI-powered mobile apps can also enable better medication adherence, including reminders, education, behavioural coaching and virtual health help. Clinical decision support systems empower healthcare workers by recommending evidence-based treatments, aberrant test results, and potential drug interactions [9]. There are certain technologies that drive AI use cases in healthcare. Machine learning uses previous clinical data to predict illness risk and treatment outcomes. Deep learning enables expert-level interpretation of complex medical pictures, electrocardiograms, and pathology slides. Natural language processing turns unstructured clinical notes into relevant information and fuels chatbots and automated documentation. Computer vision is used to assess radiological and pathological pictures for illness detection [10]. Also, robots helps with operations, rehabilitation and hospital logistics. Internet of things and wearable technologies allow continuous remote monitoring of patients. Finally, big data analysis and cloud computing manage large healthcare databases, enabling precision medicine, disease surveillance, and population health management [11].

AI in Chronic Disease Management Artificial Intelligence Technologies Used

Chronic diseases are the primary causes of morbidity, death and health care cost in the globe. Common chronic diseases include diabetes, hypertension, cardiovascular disorders, chronic kidney disease, chronic obstructive pulmonary disease (COPD), asthma, cancer and arthritis. Non-communicable diseases (NCDs) are responsible for almost 41 million deaths per year. The rising incidence of these diseases with ageing populations and the lack of healthcare personnel has resulted in the use of artificial intelligence (AI) to enhance the prevention, monitoring and treatment of chronic diseases[12]. Unlike acute illnesses, chronic diseases require ongoing surveillance, long-term treatment, lifestyle adjustment and interdisciplinary care. Conventional management includes periodic hospital visits that may miss early clinical worsening. The shortcoming of this approach is overcome by AI through ongoing surveillance, predictive analytics, personalised treatment, and timely interventions that enhance patient outcomes and reduce healthcare costs[13]. One of the biggest benefits of AI is predicting the evolution of disease and problems before they are clinically evident. Machine learning algorithms assess demographic variables, laboratory findings, medical histories, genetic information, medication use and lifestyle behaviours to predict future illness risk. For example, standard artificial intelligence can identify those at high risk of developing type 2 diabetes using body mass index, blood glucose, lipid profiles, blood pressure and family history. Clinical and imaging data are used to predicted the risk of cardiovascular events such as myocardial infarction and stroke, utilising equivalent prediction models [14]. AI is able to identify patients with established chronic conditions, forecast disease progression and identify those at risk of hospitalisation so physicians can intervene early. Another prominent use of AI is in remote patient monitoring. Recent advances in wearable gadgets, smart watches, implanted sensors and Internet of Things (IoT) technologies enable continuous measurement of physiological data outside the healthcare facilities. Artificial intelligence-driven continuous glucose monitoring systems can forecast hypo- and hyperglycaemia episodes and suggest insulin modifications, which can be useful for patients with diabetes. Wearable cardiac monitors also continually monitor heart rhythm, blood pressure, oxygen saturation and physical activity, allowing early diagnosis of arrhythmias and progression of heart failure. Artificial intelligence technologies for monitoring respiratory function and detecting early illness exacerbations also help patients with asthma and COPD by minimising emergency admissions[15].

It has also spurred precision medicine, which customises healthcare interventions based on unique patient traits. Unlike traditional treatment guidelines, which tend to be applicable to populations, AI incorporates genome sequencing, proteomics, metabolomics, pharmacogenomics, imaging findings, electronic health records and behavioural data to generate individualised therapy regimens. Oncology uses AI to examine cancer genetics and pinpoint specific treatments, while in diabetes, it suggests personalised insulin regimes by looking at glucose monitoring, diet and exercise habits. Precision medicine enhances treatment efficacy and decreases side effects of drugs and avoidable health costs[16]. Adherence to medication is still a major difficulty in the management of chronic diseases. AI-enabled mobile apps and virtual health assistants that offer prescription reminders, refill notifications, education and behavioural coaching help to increase adherence. Conversational AI helps patients get personalised recommendations on drug use, lifestyle improvements and symptom management. AI also provides self-management by assessing patient-generated data from wearable devices and home monitoring systems, giving personalised feedback to encourage healthy diet, physical exercise, blood pressure control, and blood glucose monitoring[17]. Lastly, clinical decision support system (CDSS) is another key AI application. These systems can process vast volumes of clinical information and offer evidence-based recommendations that help health care workers diagnose, plan therapy, interpret laboratory tests, and manage medications. AI-powered CDSS can identify abnormal laboratory values, probable drug interactions, predict disease prognosis, and suggest guideline-based treatments. However, AI is a support tool, not a replacement for physicians whose professional judgement remains central to patient-centred decision-making.

AI is also helping with community health management by finding patterns of disease in populations, as well as individual care. Healthcare organisations employ AI to identify patients by disease severity and risk of hospitalisation. This allows specific treatments for those at highest risk and better use of healthcare resources. Population-level AI also helps policymakers to predict healthcare demands and develop evidence-based public health policies. The speedy progress of AI in healthcare is being driven by a host of complimentary technologies. Machine learning (ML) is the backbone of most AI applications, finding patterns in previous health data to predict disease risk, treatment outcomes, hospital readmissions and population health trends[18].

Deep learning (DL) is a specific field of machine learning that uses artificial neural networks to evaluate very complicated data, particularly medical imaging. Deep learning has attained expert level performance for reading mammograms, CT scans, MRI pictures, retinal photos, dermatology lesions and histopathology slides, which has improved the accuracy and decreased the interpretation time. Natural language processing (NLP) allows artificial intelligence systems to interpret and evaluate unstructured clinical information, including physician notes, nursing documentation, pathology reports, discharge summaries and scientific literature. NLP can benefit automatic recordkeeping, medical coding, extracting clinical information, patient engagement, and AI-powered chatbots. Recent developments in big language models have also boosted clinical recording, medical education and patient counselling. Computer vision can be used by AI to interpret medical photos and videos for disease diagnosis. It is frequently used in radiology, ophthalmology, dermatology, pathology, gastroenterology and surgery to help detect tumours, test for diabetic retinopathy, detect fractures and digital pathology.

Robotics and intelligent automation assist surgical procedures, rehabilitation, medicine dispensing, hospital logistics and infection control. Robotic surgery blends AI with computer vision to boost precision and minimise tissue stress. Rehabilitation robots help recovery from stroke and neurological illnesses. Lastly, IoT, wearable technology, analytics for big data, and cloud computing allow for ongoing tracking of patients and analysis of health data on a wide scale. AI monitors heart rate, blood pressure, glucose levels, oxygen saturation, sleep quality and medication adherence in real time using data from wearable devices. Cloud computing offers the infrastructure to store and analyse enormous healthcare datasets to assist precision medicine, illness surveillance, healthcare planning and medical research. In general, AI is changing chronic disease management through predictive, personalised and proactive treatment. AI, including machine learning, deep learning, natural language processing, robots, computer vision, and wearables, enables early disease identification, personalised care, ongoing surveillance, and better clinical decisions. As we advance, there are hurdles such as ethics, privacy, infrastructure, and algorithmic bias, but the responsible use of AI in healthcare has the potential to achieve better patient outcomes, improved healthcare efficiency, and better treatment of chronic diseases globally[19].

Challenges and future prospects

Artificial intelligence (AI) has the potential to be transformative, but there are multiple technical, ethical, legal and organisational barriers preventing its broad use in preventative medicine and chronic illness management. AI has shown tremendous potential in illness prediction, medical imaging, clinical decision assistance and remote patient monitoring. However, successful deployment requires responsible governance, public confidence, solid infrastructure and equitable access. It has been stressed that in promoting safe, transparent and ethical healthcare, AI should augment, not replace, human judgement [20]. Data privacy and security is one of the biggest challenges. Artificial intelligence systems need enormous quantities of high-quality health data, including electronic health records, laboratory data, genomic data, medical imaging, and data from wearable devices. When storing and distributing such sensitive information there are concerns around patient confidentiality, informed consent and cybersecurity. Cyberattacks, data breaches, and ransomware continue to be a serious threat to healthcare organisations, highlighting the importance of robust security protocols, encryption, anonymisation, and compliance with data protection rules to protect patient confidence. Another crucial issue is algorithmic bias, which occurs when artificial intelligence systems are trained on datasets that do not appropriately represent various populations. Biased algorithms can result in false projections for minority ethnic groups, genders or populations in low- and middle-income countries (LMICs), which can further entrench existing inequities in healthcare. Hence, there is a requirement to create inclusive datasets, validate algorithms in varied populations, and incorporate fairness assessments to promote equitable healthcare delivery." The lack of transparency and explainability is also a barrier to AI adoption. Many deep learning models are 'black boxes' that give very accurate predictions without explaining how conclusions are reached. This creates a degree of ambiguity for clinicians, who are nonetheless accountable for patient care and legal liability. Explainable AI (XAI) strives to improve transparency by offering accessible explanations for the suggestions produced by AI, which can increase confidence among clinicians and acceptability among patients. Another obstacle is regulatory and legal issues. Artificial intelligence (AI) technologies are developing at a faster pace than healthcare laws can keep up with, leaving uncertainties about clinical validation, approval, liability and post-market monitoring. Clear rules and regulations are needed for the safe use of AI, quality assurance and accountability, while still permitting continual progress of artificial intelligence systems [21]. Successful application of AI also includes integration into the clinical workflow. Many health care organisations still employ fragmented electronic health record systems that inhibit interoperability and data interchange. Healthcare personnel may potentially oppose using AI if they have inadequate training, disturbance to productivity or concerns about lost professional autonomy. Successful adoption thus involves staff education, ease of use, interdisciplinary collaboration, and incorporation into ordinary clinical practice. The key is that AI should be a clinical decision support tool, not an autonomous decision maker. In the developing countries, the restrictions of finance and infrastructure continue to be especially relevant. To deploy AI, you need to invest in digital infrastructure, cloud computing, reliable internet access, software, cybersecurity and workforce training. Many basic care facilities and rural hospitals do not have these resources. Thus, government investment, international collaboration, open-source technologies and scalable digital health programmes are key to scaling fair AI usage. The rise of generative AI has led to new ethical challenges, including misinformation, faked outputs, accountability, and appropriate therapeutic use. AI-generated recommendations should always be checked by qualified healthcare professionals and ethical concepts such as autonomy, beneficence, non-maleficence, justice, confidentiality and informed consent must remain key to AI-assisted healthcare[22]. Despite these hurdles, the future of AI is very bright. Emerging technologies such as multi-modal AI, federated learning, digital twins, genomics, precision medicine, robots and huge language models, to name a few, are poised to alter the delivery of healthcare. Artificial intelligence systems of the future will incorporate electronic health records, medical imaging, genomic data, information from wearable sensors, and social determinants of health to deliver completely personalised treatment. Wearable gadgets and the Internet of Things (IoT) will enable constant remote monitoring, which will lead to earlier detection of disease and fewer hospitalisations. AI is also predicted to speed up drug discovery, biomarker identification, vaccine development, and precision public health. AI will enhance telehealth, patient education, chronic illness monitoring and clinical decision support for nursing practice, freeing nurses to spend more time on compassionate patient-centred care.

CONCLUSION

Artificial intelligence has emerged as one of the biggest advancements in modern healthcare, changing preventative medicine and chronic illness management. AI through machine learning, deep learning, natural language processing, computer vision, robotics, wearable technologies, and big data analysis enables earlier detection of disease, personalised risk prediction, continuous patient monitoring, precision medicine, and evidence-based clinical decision support. In preventive medicine, AI is used for health promotion, focused screening and early intervention by identifying patients with an elevated risk of developing disease before it occurs. AI enhances long-term outcomes in chronic disease management by ongoing surveillance, personalised treatment planning, medication adherence assistance and early diagnosis of disease progression. Nonetheless, major obstacles including data privacy, algorithmic bias, explainability, regulatory supervision, ethical governance, infrastructural limits, and healthcare disparities need to be overcome before standard artificial intelligence can be fully integrated into normal clinical practice. These difficulties need collaboration between health care providers, researchers, policy makers, engineers, and regulators. Ultimately, AI should be considered as a tool to supplement healthcare personnel, not supplant them. Human empathy, ethical thinking, communication and clinical judgement are still essential. When developed responsibly and deployed ethically, artificial intelligence can help create a more predictive, preventive, personalised and patient-centred healthcare system that improves health outcomes while encouraging equity and sustainability.

REFERENCES

1. Al-Kuwaiti, Ahmed, Nazer, Khalid, Al-Reedy, Abeer, Al-Shehri, Saud, Al-Muhanna, Abdulrahman, Subbarayalu, Arun, & Aljerian, Noura. (2023). A review of the role of artificial intelligence in healthcare. *Journal of Personalized Medicine, 13*(6), 951.
2. Zhong, Yifan, Yuan, Ming, Zhang, Yuchen, & others. (2022). Deep learning for prediction of N2 metastasis and survival for clinical stage I non–small cell lung cancer. *Radiology, 302*(1), 200–211.
3. Yamada, Masahiro, Saito, Yutaka, Imaoka, Hiroki, Saiko, Masashi, Yamada, Shinya, Kondo, Ryohei, Saito, Daisuke, Saito, Satoshi, & others. (2019). Development of a real-time endoscopic image diagnosis support system using deep learning technology in colonoscopy. *Scientific Reports, 9*(1), 14465.
4. Moafa, K. M. Y., Hassan, H. M., El-Sayed, A. A., & Abdelrahman, M. A. (2024). Artificial intelligence for improved health management: Applications, uses, opportunities, and challenges—A systematic review. *Egyptian Journal of Chemistry, 67*(13), 865–880.
5. Karalis, Vangelis D. (2024). The integration of artificial intelligence into clinical practice. *Applied Biosciences, 3*(1), 14–44.
6. Salinari, A., De Lorenzo, A., & Gratteri, S. (2023). The application of digital technologies and artificial intelligence in healthcare: An overview on nutrition assessment. *Diseases, 11*(3), 97.
7. Taye, Meseret Mengistu. (2023). Understanding of machine learning with deep learning: Architectures, workflow, applications and future directions. *Computers, 12*(5), 91.
8. Fahim, Y. A., Hasani, I. W., Kabba, S., & Ragab, W. M. (2025). Artificial intelligence in healthcare and medicine: Clinical applications, therapeutic advances, and future perspectives. *European Journal of Medical Research, 30*(1), 848

9. Srinivasan, S. M., & Sharma, Vikas. (2025). Applications of AI in cardiovascular disease detection—A review of the specific ways in which AI is being used to detect and diagnose cardiovascular diseases. *AI Disease Detection, 1*, 123–146.
10. Paul, D., Sanap, G., Shenoy, S., Kalyane, D., Kalia, K., & Tekade, R. K. (2021). Artificial intelligence in drug discovery and development. *Drug Discovery Today, 26*(1), 80–93.
11. Yan, Wei, Zhang, Liang, & others. (2022). Applicability analysis of immunotherapy for lung cancer patients based on deep learning. *Methods, 205*, 149–156.
12. Allam, Zaheer. (2020). The rise of machine intelligence in the COVID-19 pandemic and its impact on health policy. In *Surveying the COVID-19 pandemic and its implications* (p. 89).
13. Qiu, H., Tang, X., Ma, J., Shrestha, D. L., & Jin, Y. (2022). Applications of artificial intelligence in screening, diagnosis, treatment, and prognosis of colorectal cancer. *Current Oncology, 29*(3), 1773–1795.
14. Li, X., Zhang, Y., Wang, H., Liu, J., & Chen, L. (2024). Role of artificial intelligence in medical image analysis: A review of current trends and future directions. *Journal of Medical and Biological Engineering, 44*(2), 231–243.
15. Hu, Yu, Ding, Yansong, & others. (2021). Artificial intelligence security: Threats and countermeasures. *ACM Computing Surveys, 55*(1), 1–36.
16. Rajkomar, A., Dean, J., & Kohane, I. (2019). Machine learning in medicine. *New England Journal of Medicine*, 380, 1347–1358.
17. Band, Shahab S., Ardabili, Sina F., Mosavi, Amir, & others. (2023). Application of explainable artificial intelligence in medical health: A systematic review of interpretability methods. *Informatics in Medicine Unlocked, 40*, 101286.
18. Gao, Xiang, Li, Yifan, Zhang, Wei, & others. (2024). Artificial intelligence applications in smart healthcare: A survey. *Future Internet, 16*(9), 308.
19. Kumar, P., Singh, R., Sharma, V., & Gupta, A. (2025). Advanced artificial intelligence technologies transforming contemporary pharmaceutical research. *Bioengineering, 12*(4), 363.
20. Parekh, A.-D. E., Shah, N., Mehta, R., & Patel, K. (2023). Artificial intelligence (AI) in personalized medicine: AI-generated personalized therapy regimens based on genetic and medical history. *Annals of Medicine and Surgery, 85*(11), 5831–5833.
21. Sarella, P. N. K., & Mangam, V. T. (2024). AI-driven natural language processing in healthcare: Transforming patient-provider communication. *Indian Journal of Pharmacy Practice, 17*(1).
22. Rao, D. P., Kumar, R., & Singh, A. (2024). Evaluation of an offline artificial intelligence system for referable glaucoma screening using a smartphone-based fundus camera: A prospective study. *Eye, 38*(6), 1104–1111.

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