



**INDEX**

**INTRODUCTION**

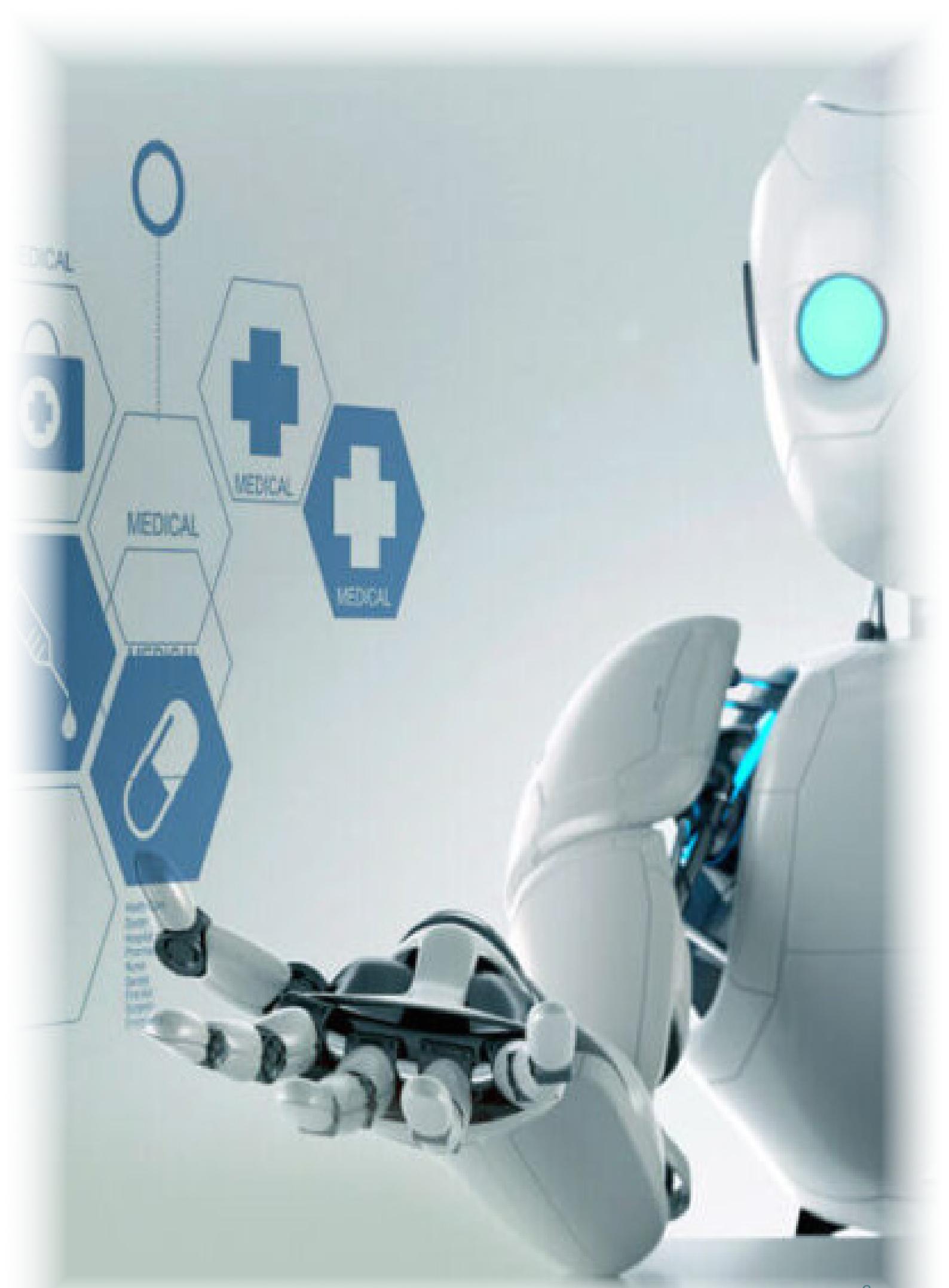
**AI IN MEDICAL DIAGNOSIS**

**AI IN MEDICAL IMAGING**

**AI ROBOTIC SURGERY**

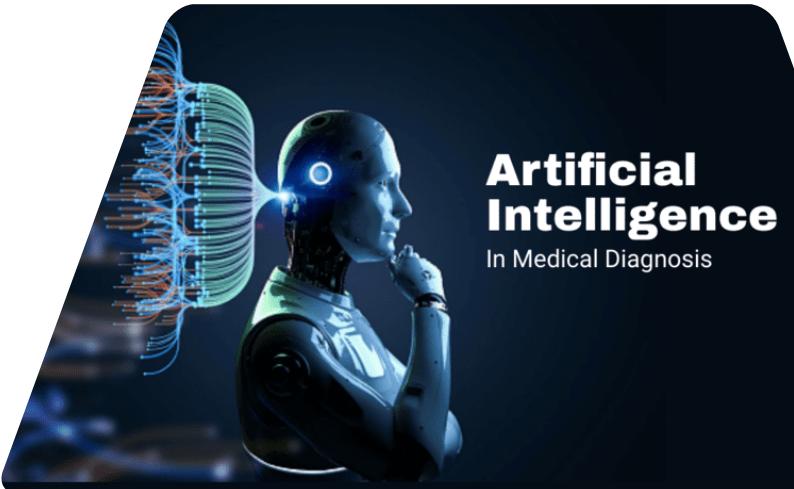
**AI IN SKIN DISEASE**

**AI IN PATHOLOGY AND LAB**



## What is artificial intelligence in medicine?

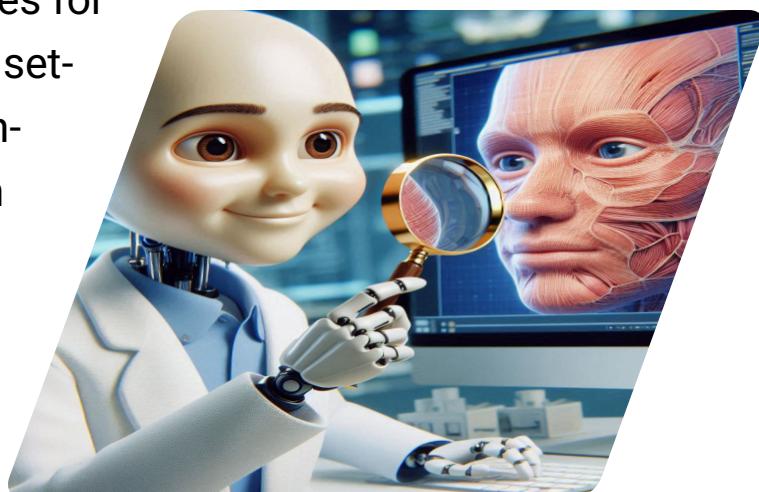
Artificial intelligence in medicine is the use of machine learning models to help process medical data and give medical professionals important insights, improving health outcomes and patient experiences.



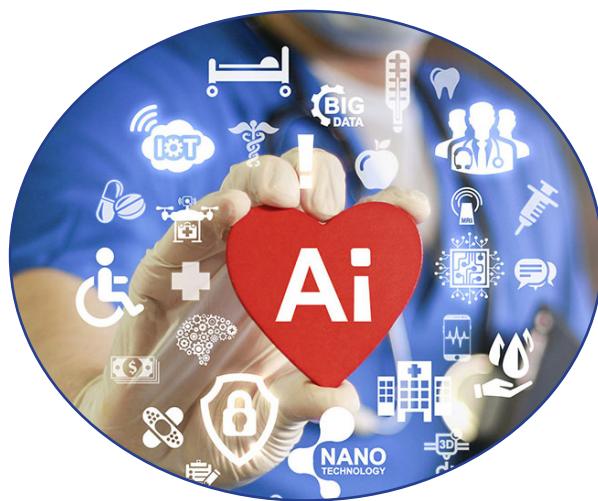
**Artificial Intelligence**  
In Medical Diagnosis

## How is artificial intelligence used in medicine?

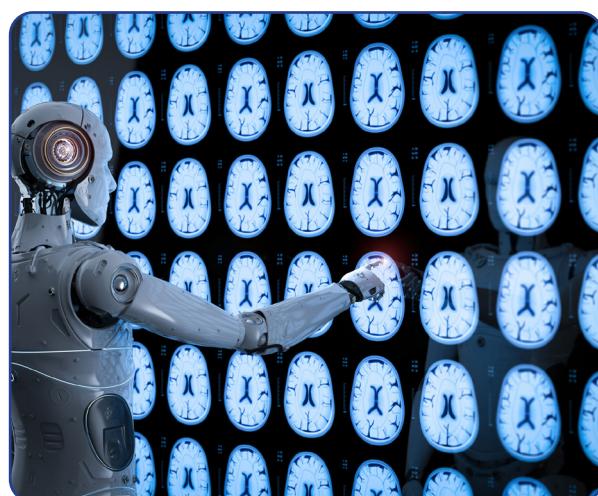
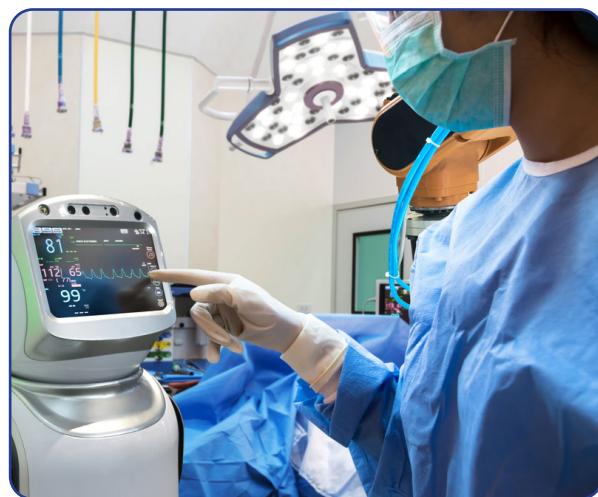
Currently, the most common roles for AI in medical settings are clinical decision support and imaging analysis.



Clinical decision support tools help providers make decisions about treatments, medications, mental health and other patient needs by providing them with quick access to information or research that's relevant to their patient.



In medical imaging, AI tools are being used to analyze CT scans, x-rays, MRIs and other images for lesions or other findings that a human radiologist might miss.



# ARTIFICIAL INTELLIGENCE IN MEDICAL DIAGNOSIS





Unlike humans, AI never needs to sleep. Machine learning models could be used to observe the vital signs of patients receiving critical care and alert clinicians if certain risk factors increase.

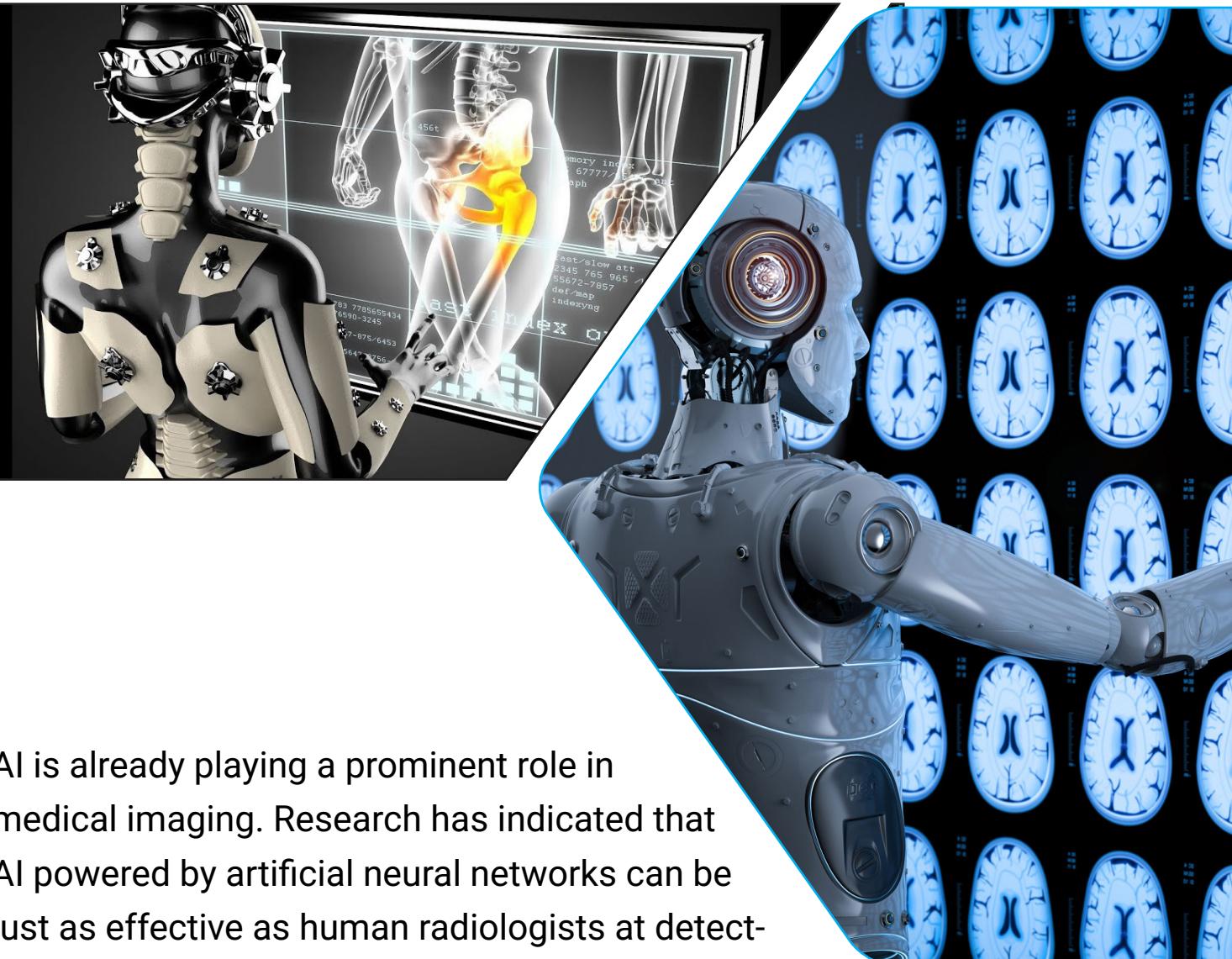


While medical devices like heart monitors can track vital signs, AI can collect the data from those devices and look for more complex conditions, such as sepsis.



One IBM client has developed a predictive AI model for premature babies that is 75% accurate in detecting severe sepsis patients receiving critical care and alert clinicians if certain risk factors increase.

# ARTIFICIAL INTELLIGENCE IN MEDICAL IMAGING



AI is already playing a prominent role in medical imaging. Research has indicated that AI powered by artificial neural networks can be just as effective as human radiologists at detecting signs of breast cancer as well as other conditions. In addition to helping clinicians spot early signs of disease,



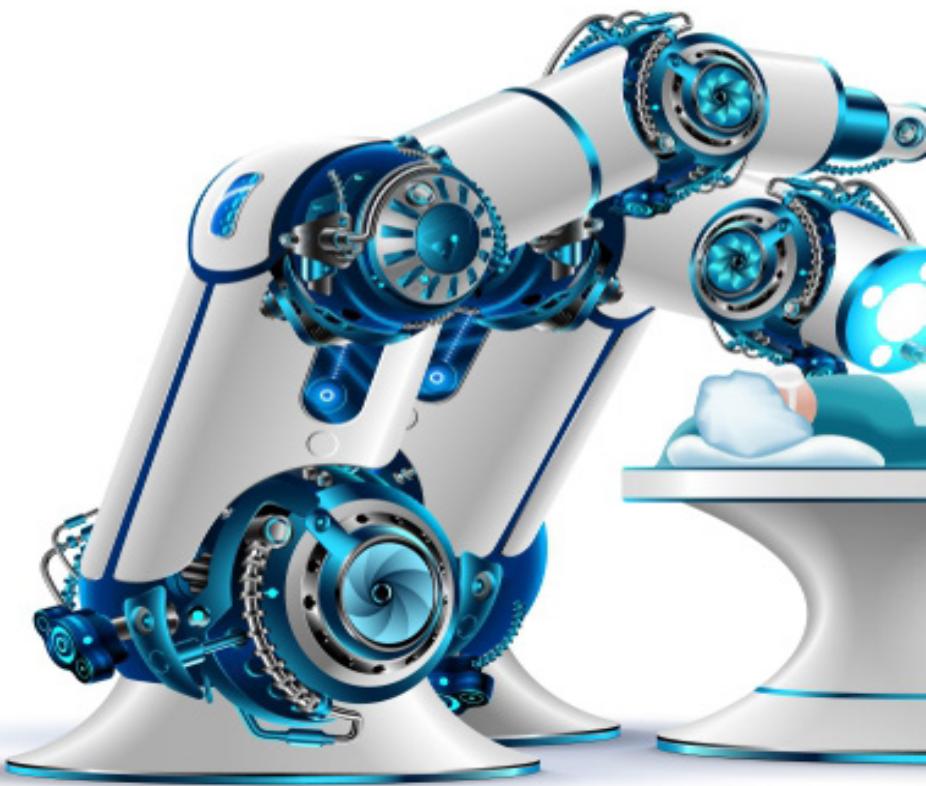
AI can also help make the staggering number of medical images that clinicians have to keep track of more manageable by detecting vital pieces of a patient's history and presenting the relevant images to them.



# ARTIFICIAL INTELLIGENCE

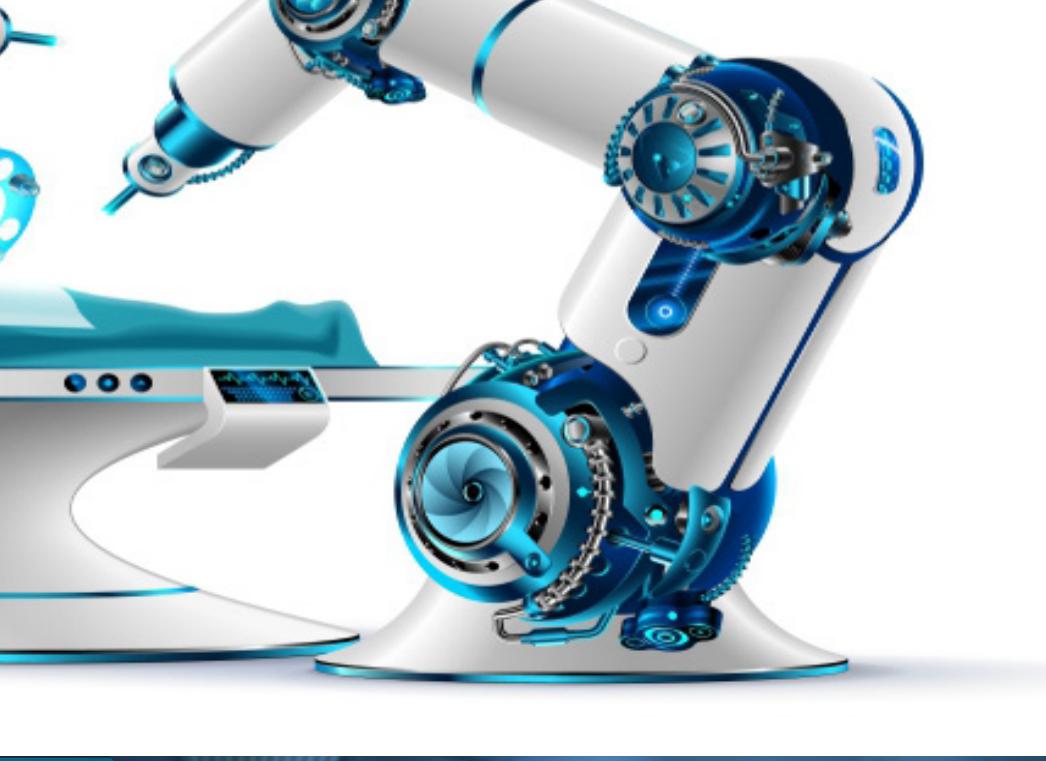


Robotics powered by AI assist in precision surgeries, reducing errors and improving outcomes



## ROBOTIC SURGERY

# ARTIFICIAL INTELLIGENCE



A robotic surgical system in an operating room, with a surgeon controlling it through a screen.

# ROBOTIC SURGERY



# ARTIFICIAL INTELLIGENCE IN SKIN DISEASE



AI apps analyze skin lesions to detect melanoma and other skin conditions.

# ARTIFICIAL INTELLIGENCE IN PATHOLOGY AND LAB



AI scans microscopic slides to detect cancer cells, infections, or abnormal blood samples.

