

AI'S ROLE IN THE Future OF RADIOLOGY

ARTIFICIAL INTELLIGENCE (AI) and related innovations are making their impact felt across industries, perhaps most significantly in medical imaging. The field of radiology in particular is poised for AI transformation, with emerging algorithms designed to help drive faster and more-accurate diagnoses.

The following AI applications are currently being developed to revolutionize the diagnostic workflows of

TODAY'S RADIOLOGISTS:



AI-driven workflows within clinical reporting tools will **help radiologists complete tasks more efficiently and help them to make treatment recommendations.**



AI image analysis algorithms will quickly **identify stroke patient CT scans with large vessel occlusions** and alert doctors that these patients are good candidates for advanced stroke-care services.



Trained AI algorithms will flag abnormalities that are **undetectable by the human eye**, such as molecular markers within tumors.



AI platforms will consistently **monitor colonoscopy data and flag detection of polyps** that may become malignant.



Trained AI algorithms will quickly **evaluate patient response to radiation therapy** and assist physicians with adjusting future treatment strategies.



AI algorithms may help physicians **detect and prioritize incidental findings in CT and MRI scans**, such as malignant liver lesions.

In situations where imaging interpretations vary, such as mammography, AI will assist in **characterizing detailed findings.**



Deep learning AI algorithms may enable a **higher-quality approach to image reconstruction**, with improved runtime and reduced artifacts and distortions.



Deep learning AI models will **enhance radiologists' identification of pulmonary nodules and benefit nodule management** by helping to improve reading performance and workflow efficiency.



LOOKING AHEAD, physicians hope to use AI-enabled diagnostic systems to **compile and analyze all relevant medical data for a patient**, linking radiology data with other departmental medical data to support comprehensive and integrated clinical decision making.

Patient ID	AI Status	AI Findings	AI Score	Pri...	Patient Name	Moda
A7B23138EC3B83...	Red	Cerebra	Green	Green	Ci_Renkei_No0039	CT
CF7C1E495BC82A...	Red	Cerebral Infarction	Green	Green	Ci_Renkei_No0160	CT
27E8E0FC087BDD...	Red	FUJIFILM (Cerebral Inf... Version : 1.0.00) Cerebral Infarction 08/07/2019 10:36:29 AM	Green	Green	Ci_Valid_0013	MR
5FCC286E519854...	Red		Green	Green	Ci_Valid_0040	MR
B5D541974E3ED6...	Red	Cerebral Infarction	Green	Green	Ci_Valid_0050	MR

With an influx of AI use cases in radiology, the technology is poised to streamline the day-to-day workflows of radiologists, inspire a new tier of clinical confidence, and improve patient care delivery, both directly and indirectly.

