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J-BHI Special Issue on "Artificial Intelligence-Driven Biomedical Imaging Systems for Precision Diagnostic Applications"

Artificial intelligence (AI) is a revolutionary technology that enables computational approaches to examine complex information. Diagnostic biomedical imaging is the most potential clinical implementation of AI, and increasing effort has been paid to develop and perfect its services to identify better and measure a range of clinical problems. AI-assisted diagnostic research has seen incredible precision, tolerance, and selectivity to identify minor radiological defects, potentially improving global health. Medical experts and clinicians can utilize AI to help them diagnose a wide range of illnesses using biomedical imaging. The biomedical sectors identified the possible uncertainties of this innovation at the start of the revolution. Biomedical imaging observations are among the most comprehensive and sophisticated data regarding individual patients. The need for AI in biomedical imaging is now being studied in depth. AI has shown excellent reliability and selectivity in discovering imaging disorders; It can enhance surface diagnosis and screening. It can also use AI to detect enlargement of particular muscle tissues, including the left ventricular membrane, and track changes in blood volume and flow through the cardiac and linked vessels.

Despite the great possibilities of AI-enabled biomedical imaging technology in responding to globalized medical emergencies, there are still many difficulties to overcome. Moreover, when selectivity improves, a significant disadvantage arises, the identification of small differences of unclear real value. According to a mammography study, artificial neural networks would be no more reliable than physicians in cancer detection. But it had significantly greater accuracy for abnormal results, particularly for small defects. Using AI to its full potential would include detecting MRI techniques relating to particular health outcomes, including acute abnormalities, cardiovascular instabilities, and occurrence lethality, instead of a broad, non-specific diagnostic of myocardial inflammation. This Work encourages researchers to use AI for developing unique futuristic biomedical imaging application services that are consistent, accessible, economical, and independent. This Special Issue intends to highlight recent developments in AI-enabled biomedical imaging technologies for combating disease transmission using potential methodologies, such as novel structures, development, optimization, and effectiveness predictions in the future. We're looking for articles that show the functionality, accuracy, and efficiency standards that AI-assisted biomedical imaging can achieve for individual patients in healthcare systems.

- Recent advancements to facilitate medical imaging methods
- Performance analysis of biomedical imaging for the real-time applications
- Role of artificial neural networks in cancer detection
- Need for effective technology-enabled biomedical imaging tools
- Innovations in biomedical imaging systems
- Role of AI-enabled biomedical imaging in cancer screening
- Methodologies for implementations in AI-assisted medical devices
- Potential benefits and barriers of biomedical imaging applications
- Limitation of AI-assisted diagnostic imaging in medical care
- Future of AI-assisted Biomedical imaging devices in healthcare sectors
- Applications of AI techniques in diagnostic medical imaging systems
- Trends in Biomedical imaging system
- Impact of biomedical imaging in medical sectors

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