Artificial Intelligence and its future potential in lung cancer screening

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Artificial intelligence (AI) simulates intelligent behavior as well as critical thinking comparable to a human being and can be used to analyze and interpret complex medical data. The application of AI in imaging diagnostics reduces the burden of radiologists and increases the sensitivity of lung cancer screening so that the morbidity and mortality associated with lung cancer can be decreased. In this article, we have tried to evaluate the role of artificial intelligence in lung cancer screening, as well as the future potential and efficiency of AI in the classification of nodules.

The relevant studies between 2010 -2020 were selected from the PubMed database after excluding animal studies and were analyzed for the contribution of AI. Techniques such as deep learning and machine learning allow automatic characterization and classification of nodules with high precision and promise an advanced lung cancer screening method in the future. Even though several combination models with high performance have been proposed, an effectively validated model for routine use still needs to be improvised.

Combining the performance of artificial intelligence with a radiologist's expertise offers a successful outcome with higher accuracy. Thus, we can conclude that higher sensitivity, specificity, and accuracy of lung cancer screening and classification of nodules is possible through the integration of artificial intelligence and radiology. The validation of models and further research is to be carried out to determine the feasibility of this integration.

Biography:

Dr. Christopher Joy Mathew graduated from Jubilee Mission Medical College and research Institute, Kerala, India. He is currently a foundation year 2 doctor at Conquest hospital, East Sussex NHS Trust, Hastings, U.K. He has 5 publications to his name in reputed journals. He was also the founding member of Medgram consultants LLp. An educational organization that helps international medical students and doctors prepare for their medical exams.