

# Deep learning applications in lung cancer imaging

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## **Deep Learning Applications in Lung Cancer Imaging**

Ahmed Hosny

1. “A computer would deserve to be called intelligent if it could deceive a human into believing that it was human.” — Alan Turing
2. “Machine intelligence is the last invention that humanity will ever need to make.” — Nick Bostrom
3. “The greatest opportunity offered by AI is not reducing errors or workloads, or even curing cancer: it is the opportunity to restore the precious and time-honored connection and trust —the human touch—between patients and doctors.” — Eric Topol
4. “With recent advances in the field of AI, there is now a computational basis to integrate and synthesize this growing body of multi-dimensional data, deduce patterns, and predict outcomes to improve shared patient and clinician decision-making.” — This thesis
5. “Data is a fundamental ingredient in building AI models, and there are direct correlations between data quality and model robustness, fairness, and utility.” — This thesis
6. “Deep learning algorithms that learn from experience offer access to unprecedented states of intelligence that, in some cases, match human intelligence.” — This thesis
7. “We believe that deep learning can emerge as an independent methodology that need not rely on handcrafted radiomics to move forward.” — This thesis
8. “AI methods excel at automatically recognizing complex patterns in imaging data and providing quantitative, rather than qualitative, assessments of radiographic characteristics.” — This thesis
9. “AI could play an important role in addressing global healthcare inequities at the individual patient, health system, and population levels.” — This thesis
10. “Torture the data, and it will confess to anything.” — Ronald Coase
11. “In a world deluged by irrelevant information, clarity is power.” — Yuval Noah Harari