

Generative models improve radiomics

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Propositions

Generative Models Improving Radiomics Reproducibility and Performance in Low Dose

CTs

- 1. Radiomics is the bridge between medical imaging and personalized medicine. (Lambin P et al.)
- 2. Low dose CTs should be more popular for screening and monitoring of populations at risk due to the long term risk posed by low levels of ionizing radiation exposure. (Musolino S et al.)
- 3. Developing a radiomics prediction model for early lung cancer classification in low-dose CT can reduce the mortality of lung cancer. (Wookjin C et al.)
- 4. Deep generative models outperform traditional methods in low dose CTs denoising. (Chen H et al.)
- Not all shortcuts in encoder-decoder networks are necessary for low dose CTs denoising. (This thesis)
- 6. Generative models can improve radiomics reproducibility and performance in low dose CTs. (This thesis)
- Denoising seems to be a useful pre-processing step to consider for low dose CT radiomics. (This thesis)
- 8. Low dose CT radiomics can be applied into a new scenario: early diagnosis of lung cancer at a patient level. (This thesis)

- 9. Improving low dose CT radiomics performance may reduce ionizing radiation exposure for patients. (This thesis)
- Some people call this artificial intelligence, but the reality is this technology will enhance us and our equipment. So instead of artificial intelligence, I think we'll augment our intelligence. (Ginni Rometty)