



Kenji Suzuki Lab

Computational Intelligence That Can Learn Images Super-efficiently and Its Applications to Diagnostic Aid

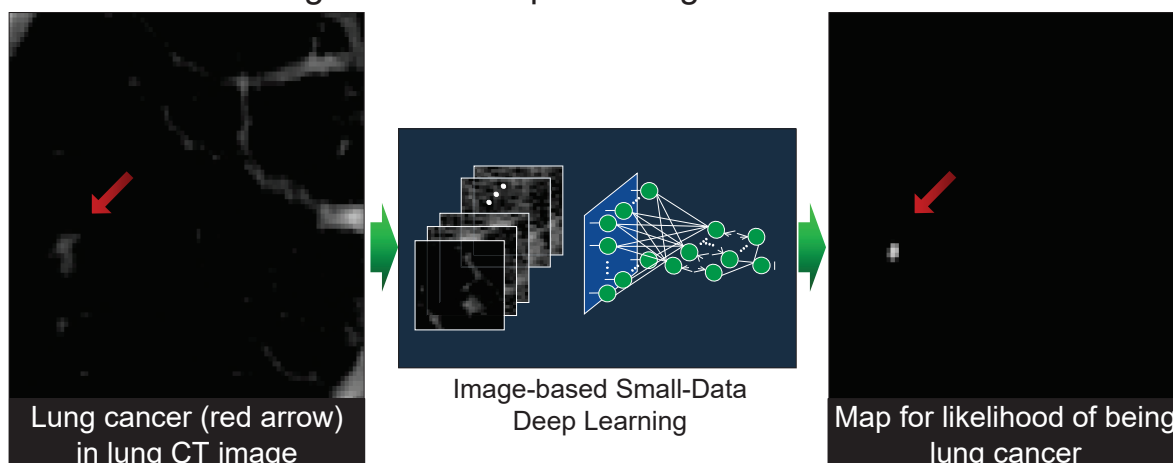
BioMedical Artificial Intelligence Research Unit (BMAI) &
Applied Artificial Intelligence Research Center, FIRST

<http://bmai.iir.titech.ac.jp>

- Small-Data Deep Learning: Development of deep learning models that do not require “big data”, but can be trained with a small number of cases (“small data”)
- AI Doctor: Development of intelligent computer-aided systems that assist physicians in early detection, accurate diagnosis, effective treatment, and better prognosis of diseases
- Virtual AI Imaging: Development of deep learning technologies that learn to virtually acquire the physical phenomena and functions in imaging

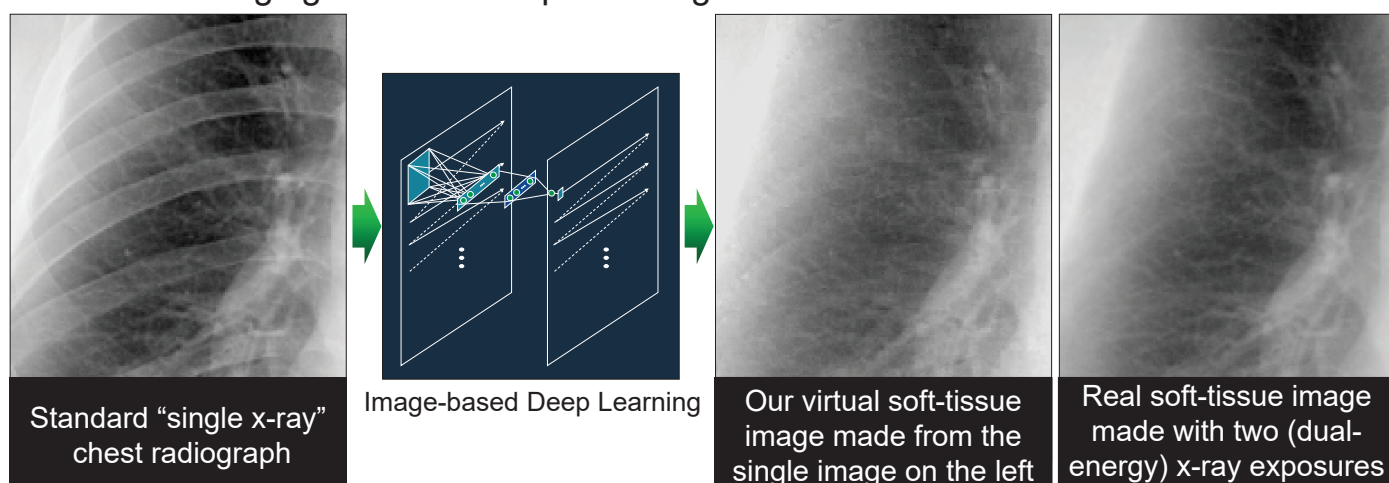
We develop computational intelligence that learns, from image examples, physicians' skills and knowledge in interpreting images to help make smart decisions in biomedicine

AI Doctor with Our Image-based Deep Learning



Our original image-based small-data deep learning learned to estimate a map for the likelihood of being lung cancer in computed tomography (CT)

Virtual AI Imaging with Our Deep Learning



Virtual AI imaging with our original image-based deep learning learned to remove bone components in a chest radiograph