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Covid-19, Diagnosis with Computed Tomography and Artificial Intelligence, in a Few Simple Words

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Abstract : Target: The (SARS-CoV-2) is still a threat. AI software could be useful, categorizing the disease into different severities and indicate the extent of the lesions. Materials and methods: AI is a new revolutionary technique, which uses powered computerized systems, to do what a human being does more rapidly, more easily, as accurate and diagnostically safe as the original medical report and, in certain circumstances, even better, saving time and helping the health system to overcome problems, such as work overload and human fatigue. Results: It will be given an effort to describe to the inexperienced reader (see figures), as simple as possible, how an artificial intelligence system diagnoses computed tomography pictures. First, the computerized machine learns the physiologic motives of lung parenchyma by being feeded with normal structured images of the lung tissue. Having being used to recognizing normal structures, it can then easily indentify the pathologic ones, as their images do not fit to known normal picture motives. It is the same way as when someone spends his free time in reading magazines with quizzes, such as <<find the differences between these two same looking images>> and <<in what details are these same looking pictures different>>. General conclusion: The AI mimics the physiological processes of the human mind, but it does that more efficiently and rapidly and provides results in a few seconds, whereas an experienced radiologist needs many days to do that, or even worse, he is unable to accomplish such a huge task.

Keywords : covid-19, artificial intelligence, automated imaging, CT, chest imaging
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