**Abstract**

This research project explains the fundamentals of artificial intelligence (AI) and the ways that AI can be useful in computed tomography (CT). The current state of AI application in CT is still new yet has been advancing with its significant impact on diagnosis, image analyses and patient care. These impacts deal with the challenges that have traditionally been associated with CT scans through a series of techniques and algorithms. In CT, computed tomography angiography (CTA) is a common procedure which is used to diagnose cardiovascular disease (CVD), the leading cause of death worldwide. AI can assist with such a procedure by assessing the degree of stenosis, coronary calcification, and plaque morphology which may prompt a cardiovascular episode. AI systems are capable of rapidly and accurately analyzing CT and CTA scans, assisting radiologists in detecting anomalies and enhancing diagnostic accuracy. Moreover, the AI automation of routine tasks such as organ segmentation and image reconstruction has improved workflow, reduced radiologist fatigue and improved turnaround report times. The process of machine learning (ML) and deep learning (DL) along with their contribution to the healthcare diagnostic process is also discussed. AI in the assistance of chest diagnostics as well as oncological applications are other aspects pertaining to the future of AI in the radiologic setting.While this technology is impressive, there are limitations and misconceptions surrounding the implementation of AI in such a healthcare dynamic.

*Keyword*s: artificial intelligence, computed tomography, cardiovascular disease, computed tomography angiography