Microcomputed tomography in Endodontics:

In recent years, the use of micro-computed tomography (micro-CT) scans in biomedical and dental research is increasing promptly. Due to a wide range of technological developments in X-ray sources and X-ray imaging arrays, the utility of micro-CT has improved in experimental, preclinical bone and dental studies. Micro-CT systems allow researchers to analyse microstructures, differences in density and morphological changes. This review highlights the recent advances in X-ray microcomputed tomography (Micro-CT) applied in Endodontics. It summarizes Micro-CT applications in analysis of root canal morphology, evaluation of root canal preparation, irrigation and intracanal medicament extrusion, restoration of root canal and retreatment. Details of studies in each of these areas are highlighted along with the advantages of Micro-CT, and finally a summary of the future applications of Micro-CT in dental research is given.