Devan once quoted “Our goal should be perpetual preservation of what remains rather than meticulous restoration of what is missing” which is achieved by the shift of endodontics from extension for prevention to the minimal invasion with the systematic respect of original tissue.[1] The long-term retention of endodontically treated tooth is correlated with the remaining amount of tooth tissue and the quality of the restoration after root canal filling. In recent years, there has been rapid progress and development in the basic research of endodontic biology, instrument and applied materials, making treatment procedures safer, more accurate, and more efficient. Thus, minimally invasive endodontics (MIE) has received increasing attention at present.[2] This approach requires in-depth knowledge of Root Canal Anatomy, Diagnosis and Decision Making, Preservation of Structural Integrity of Tooth, Alternate Access Designs like Ninja access cavity, Truss access cavity, Incisal access cavity design etc. Newer developed technologies like Image Guided Endodontic Access, Dynamically Guided Endodontic Access, Micro-guided Endodontic Access enhance the success rate of endodontic treatment. Modern Bur Designs like Endoguide burs, Cleaning and Shaping, 3D Irrigation and Disinfection, Root Strengthening and Magnification aids like Loupes and Surgical Operative Microscope also help to achieve our goal of preservation.

Fig. 9 (A–F) CBCT 3-dimensional reconstructions and segmentations of lower molars prepared with different access cavity designs in (A–C) the sagittal view and (D–F) the axial view at the occlusal surface. (A and D) A traditional access cavity (purple), (B and E) conservative access cavity (green), and (C and F) ultraconservative “ninja” access cavity (red) are segmented on CBCT reconstructions.

Fig. 14: Dynamically Guided Endodontic Access

REFERENCES