

GUIDED ENDODONTICS- Precision, predictability and progress

Guided endodontics is a novel procedure applied in multiple treatments which uses 3D imaging and computer assisted technology to enhance the accuracy of procedure and reduce treatment time. It was introduced by Zehnder et al in 2016. It is of two types DYNAMIC ENDODONTICS and STATIC ENDODONTICS.

STATIC WORKFLOW

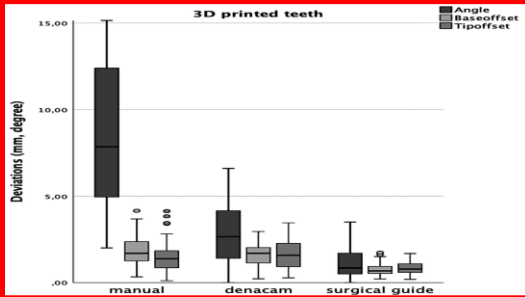
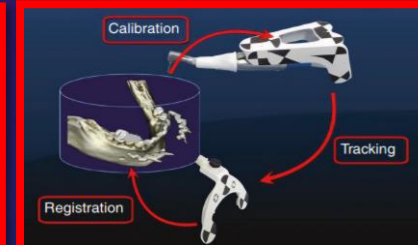
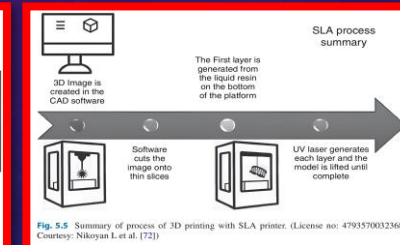
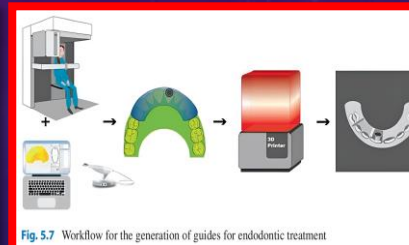
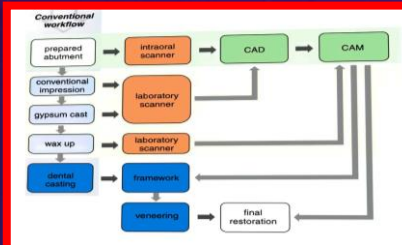
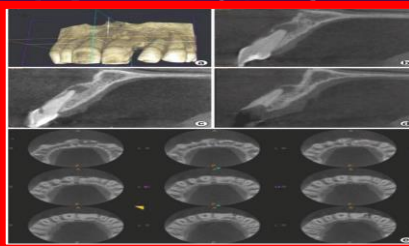
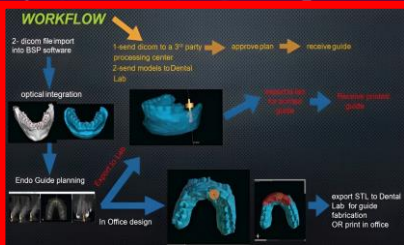
CBCT

CAD CAM

ENDO GUIDE

3D PRINTING

DYNAMIC WORKFLOW



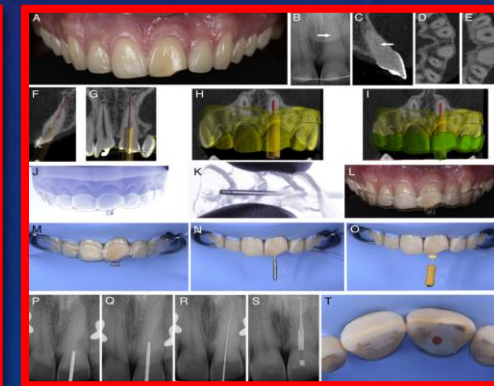
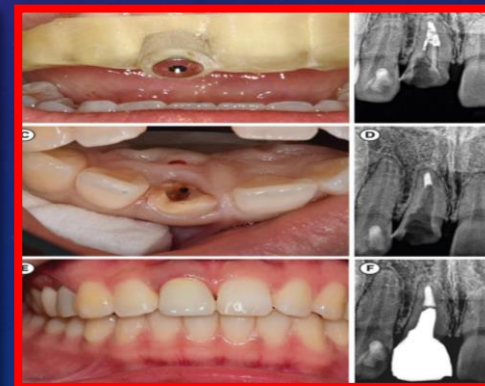
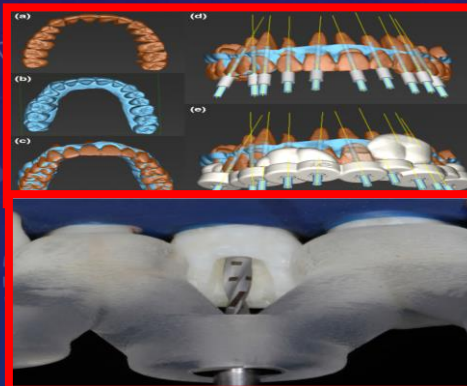
APPLICATIONS

ACCESS CAVITIES

APICOECTOMY

REMOVAL OF FIBER POST

PULP CANAL OBLITERATION



PROS & CONS

GUIDE SYSTEM	ADVANTAGES	DISADVANTAGES
Static Navigation	1. With surgical template it avoids the need for drilling guidance during treatment 2. Minimal armamentarium and cost effective compared to dynamic navigation	1. The accuracy is highly dependent on the design and fabrication process of the Templates 2. Guide has to be removed in between to confirm correct path as it restricts the visual Access.
Dynamic navigation	1. It enables a direct view of the operatory field and allows clinicians to readjust the direction of the endodontic access cavity bur in real time 2. Especially useful in case of limited mouth opening or Posterior region treatments since a template is not necessary 3. Enhanced success in terms of Angular deflection and linear deviation in all directions.	1. Proper operator training prior to treatment are required 2. High initial equipment investment.

CONCLUSION- Guided endodontics represents a paradigm shift in modern endodontics. By combining cutting edge imaging, digital planning, and precise guides, it offers unparalleled accuracy and improved outcome, especially in complex and high risk cases. As technology continue to evolve , guided endodontics will likely become gold standard for endodontic treatments ,offering safer, faster and more predictable care