
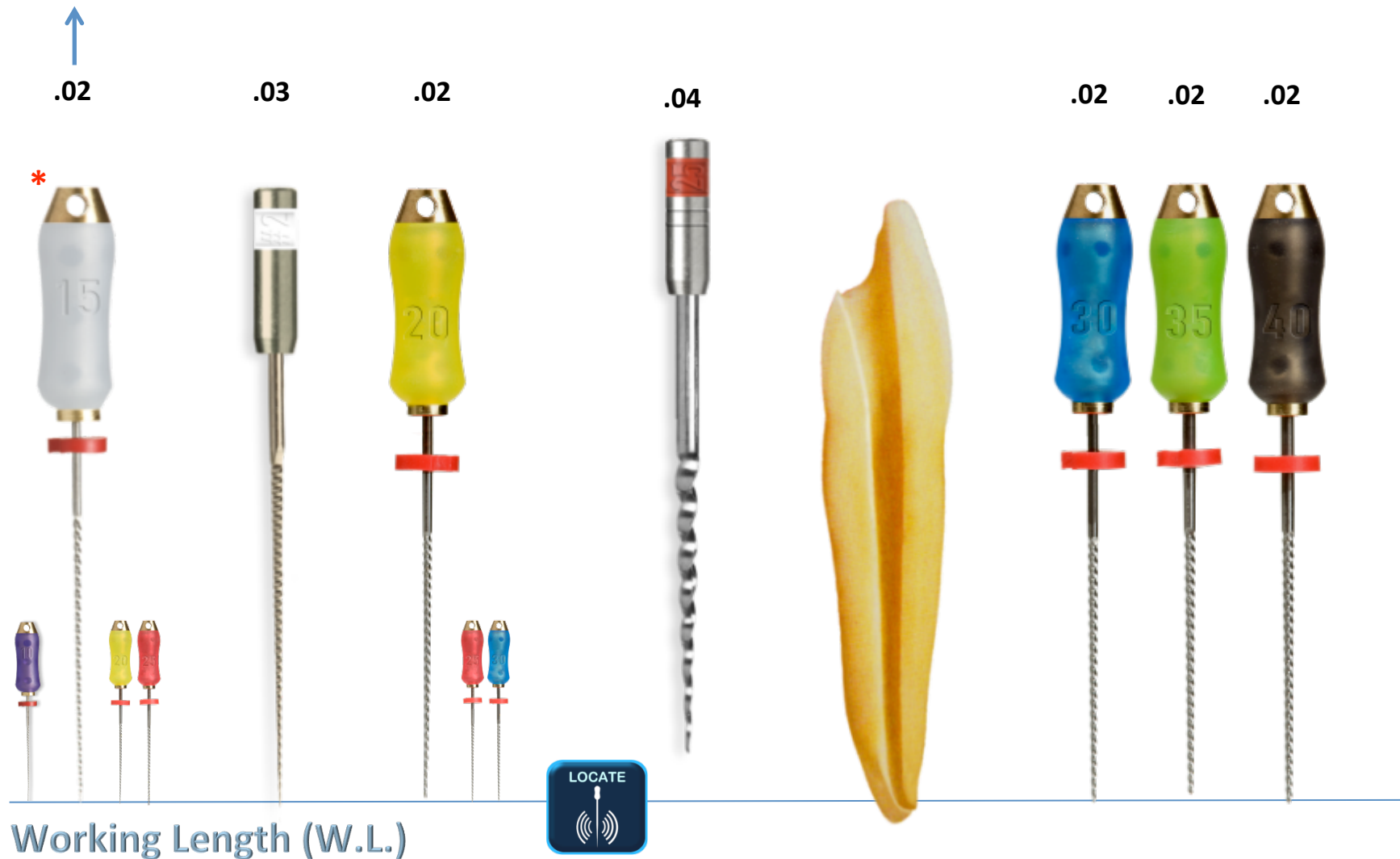


# TiLOS Rules of Engagement

- The Apical Instrument (A.I.) will vary depending on the initial dimensions of the canal in the apical third.
- Instrument 5 sizes larger than the A.I.
- Canals must be instrumented to at least a #15 hand file to establish patency prior to using engine driven files.
-  = confirm working length with the A.I. or larger file using an apex locator.
- All canals demonstrate a critical zone in at least one of the thirds, which require shaping files for safe instrumentation.
- Curved canals often require the use of NiTi instruments.

- Initial Steps
- Negotiation
- Apical Instrument Determination
- Working Length Determination

# Straight and Narrow Canals



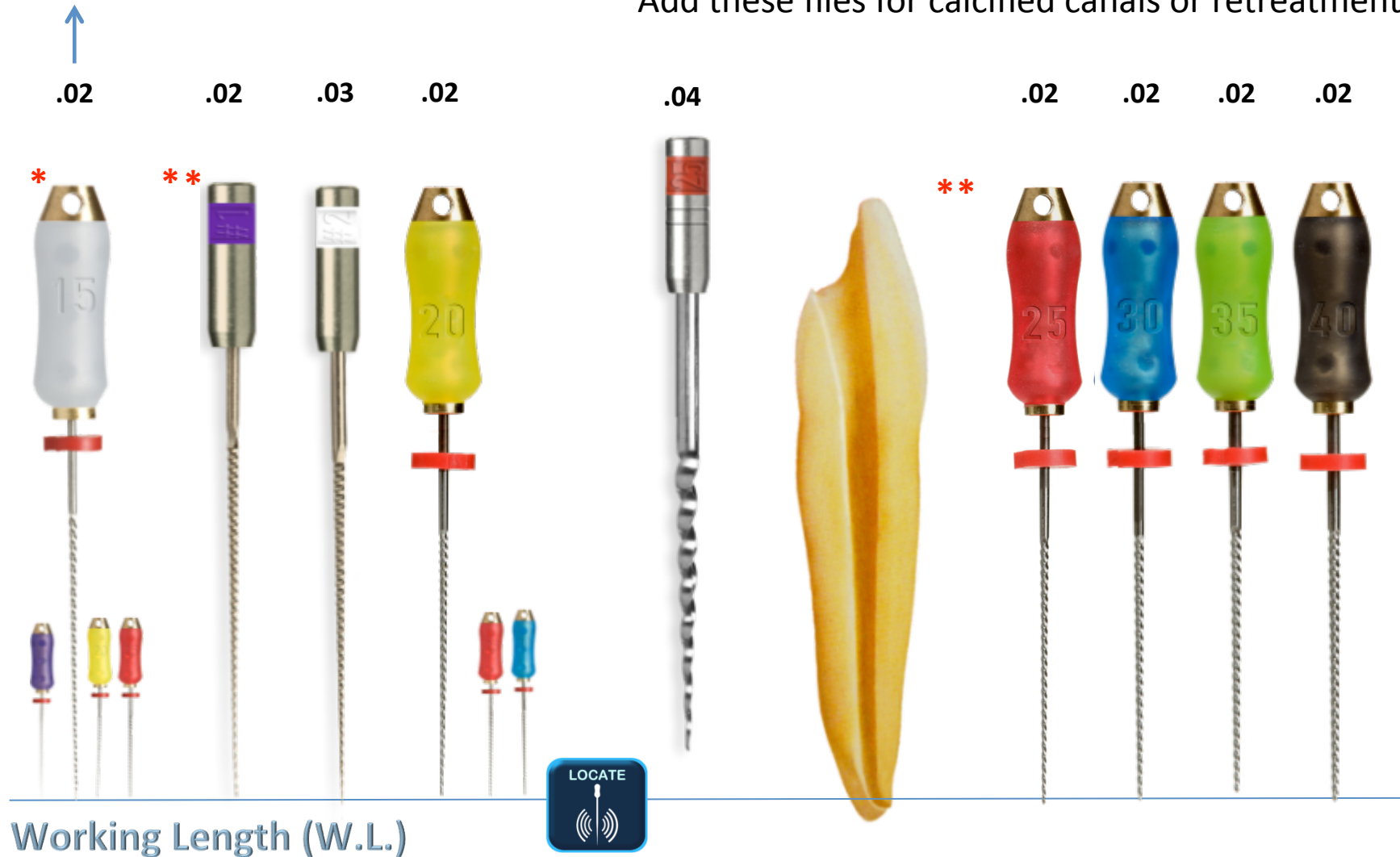
\* File size may vary depending on the initial dimensions of the canal in the apical third

- 1- Lower incisors
- 2- Upper pre-molars
- 3- Distal-buccal upper molars

- Initial Steps
- Negotiation
- Apical Instrument Determination
- Working Length Determination

# Straight and Narrow Canals

\*\* Add these files for calcified canals or retreatment

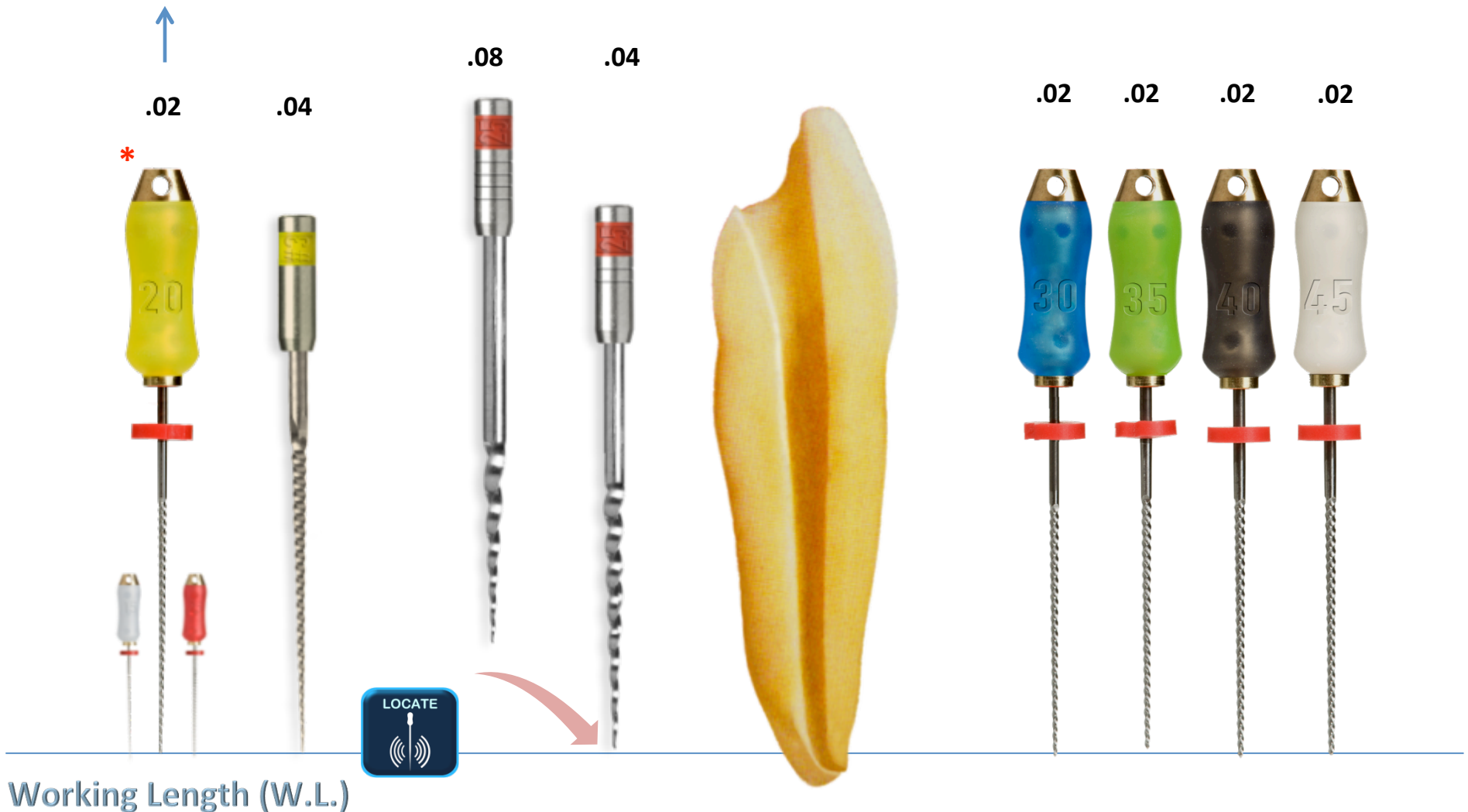


\* File size may vary depending on the initial dimensions of the canal in the apical third

- 1- Lower incisors
- 2- Upper pre-molars
- 3- Distal-buccal upper molars

- Initial Steps
- Negotiation
- Apical Instrument Determination
- Working Length Determination

# Straight and Large Canals

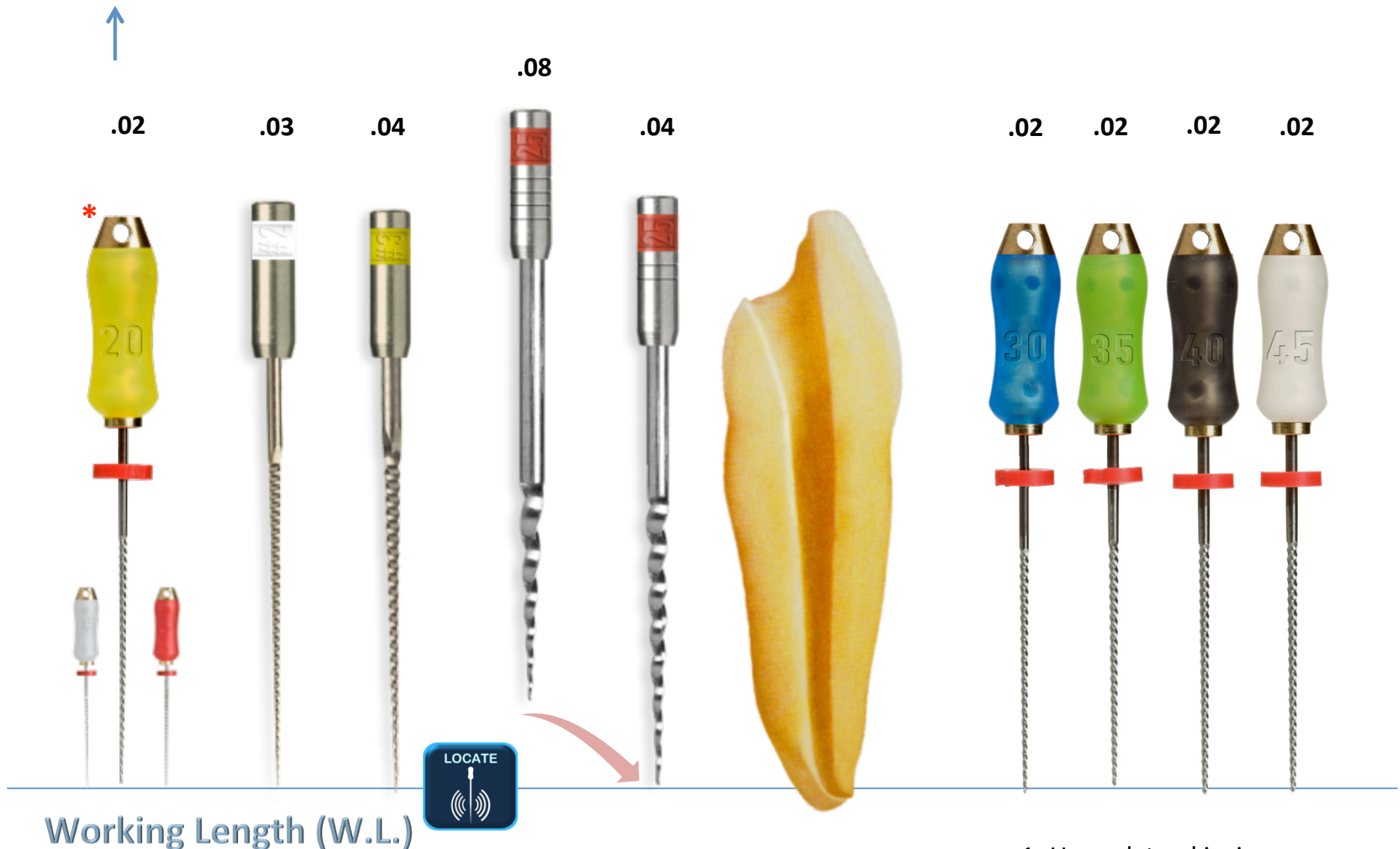


\* File size may vary depending on the initial dimensions of the canal in the apical third.

- 1- Upper Central incisor
- 2- Upper and lower canines
- 3- Lower pre-molars

- Initial Steps
- Negotiation
- Apical Instrument Determination
- Working Length Determination

# Curved and large Canals

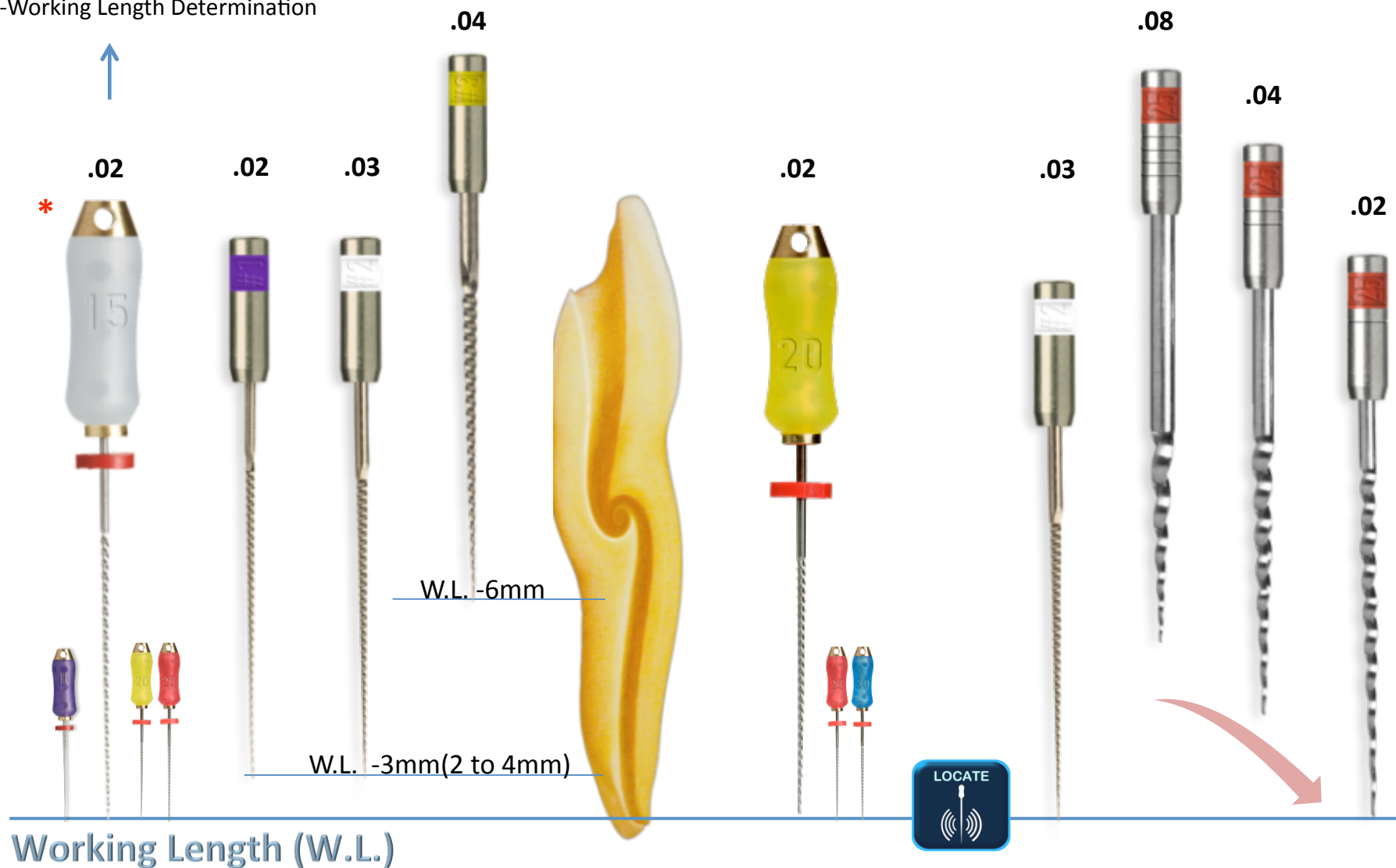


\* File size may vary depending on the initial dimensions of the canal in the apical third

- 1- Upper lateral incisor
- 2- Palatine canal of upper molars
- 3- Distal canals of lower molars

- Initial Steps
- Negotiation
- Apical Instrument Determination
- Working Length Determination

# Curved and Narrow Canals



\* File size may vary depending on the initial dimensions of the canal in the apical third

- 1- Mesial buccal and 4<sup>th</sup> canal of upper molars
- 2- Mesial canals of lower molars





- Critical Zones (v shaped areas) are best instrumented with shaping files.
- In curved and narrow canals, it is imperative to readdress these critical zones with a #2 shaping file prior to instrumenting with transitional files to the apex.

# NiTi Apical Preparation



*Recommend  
apical finishing  
to 5 sizes larger  
than the A.I.*

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Working Length (W.L.)