

DENTSPLY

MAILLEFER



**CONTINUING EDUCATION
CLINICAL EDUCATION**

Shaping with Protaper

- Rotary and Hand use**
- Protaper Obturators**



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PROTAPER®
UNIVERSAL

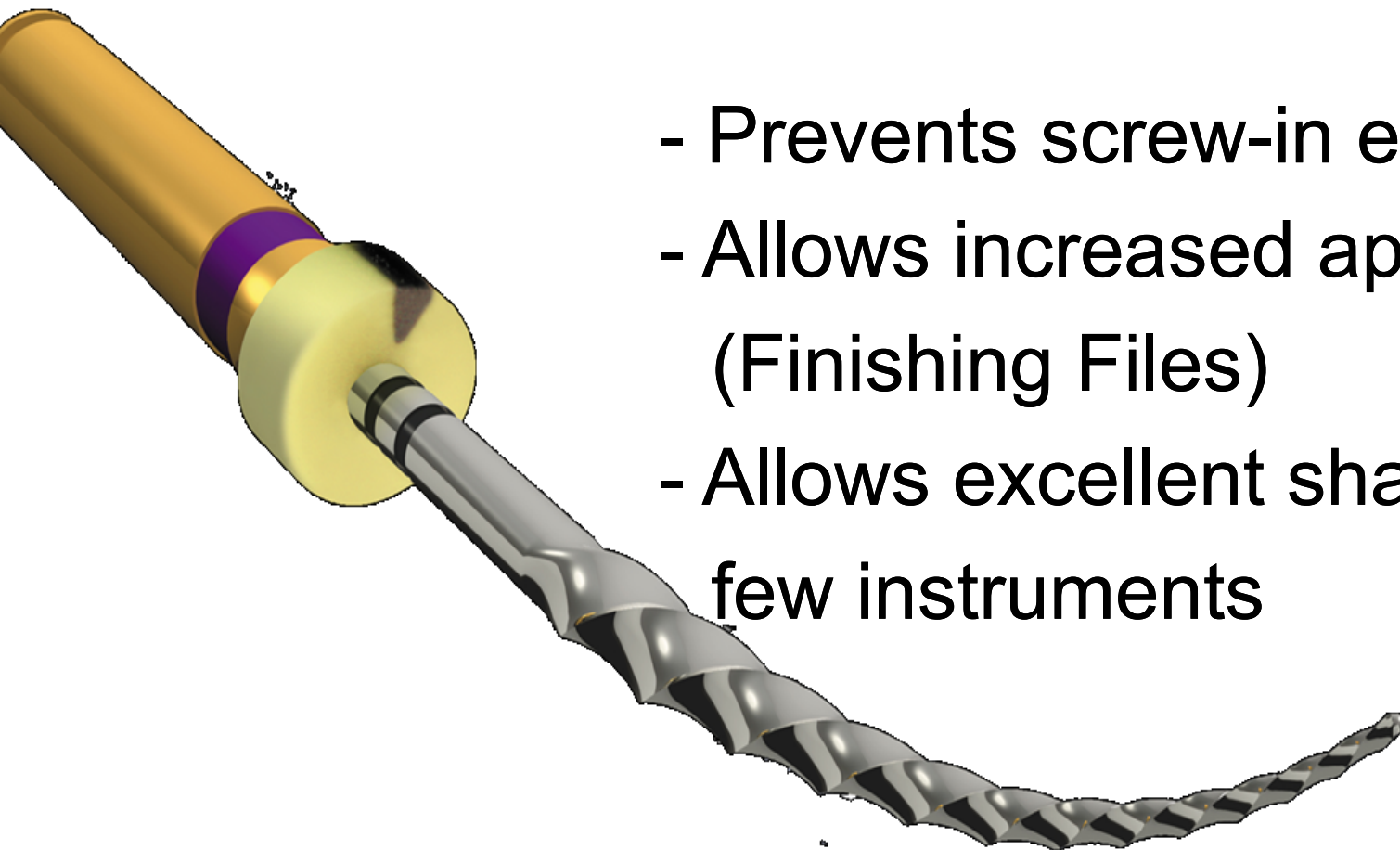


The “Eiffel –Tower” shape Instrument

VARIABLE TAPERED INSTRUMENTS

- Variable Taper:

- Prevents screw-in effect
- Allows increased apical tapers (Finishing Files)
- Allows excellent shaping with few instruments

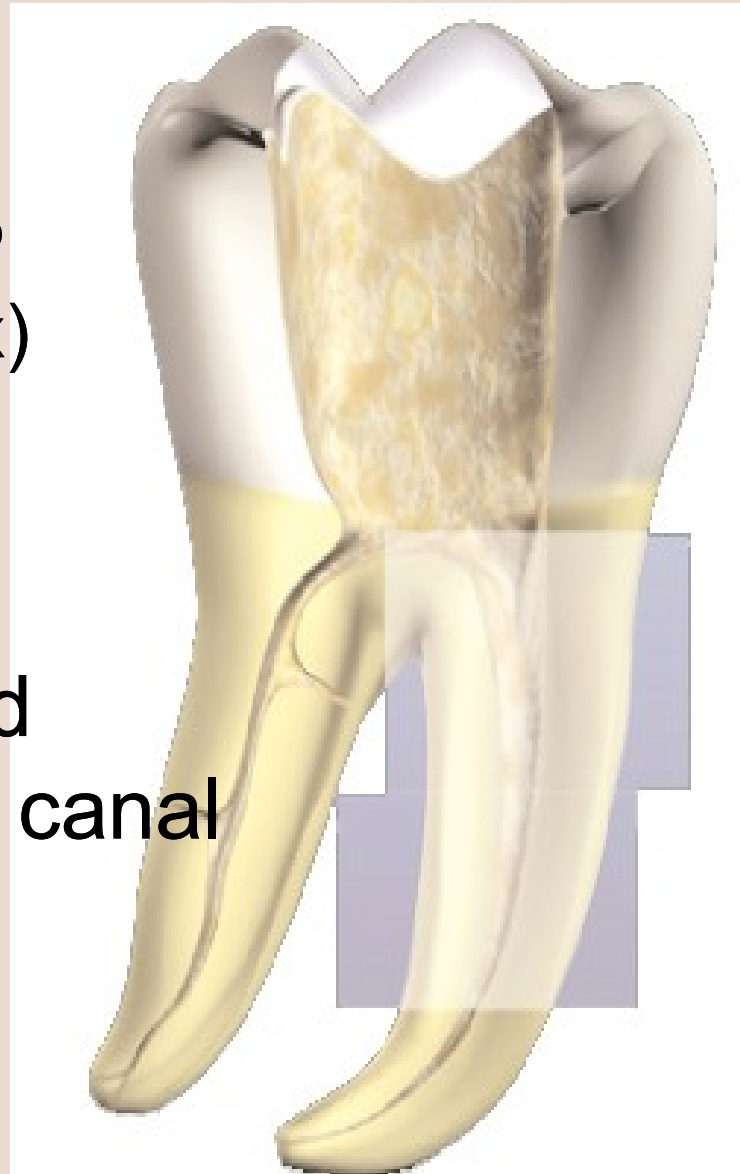


Shaping Files

(S1 & S2 – Accessory Sx)



Shape the coronal and the middle third of the canal



Shaping Files

Variable Increasing Taper (Eiffel Tower shape)

S2

S1



S2



Sx



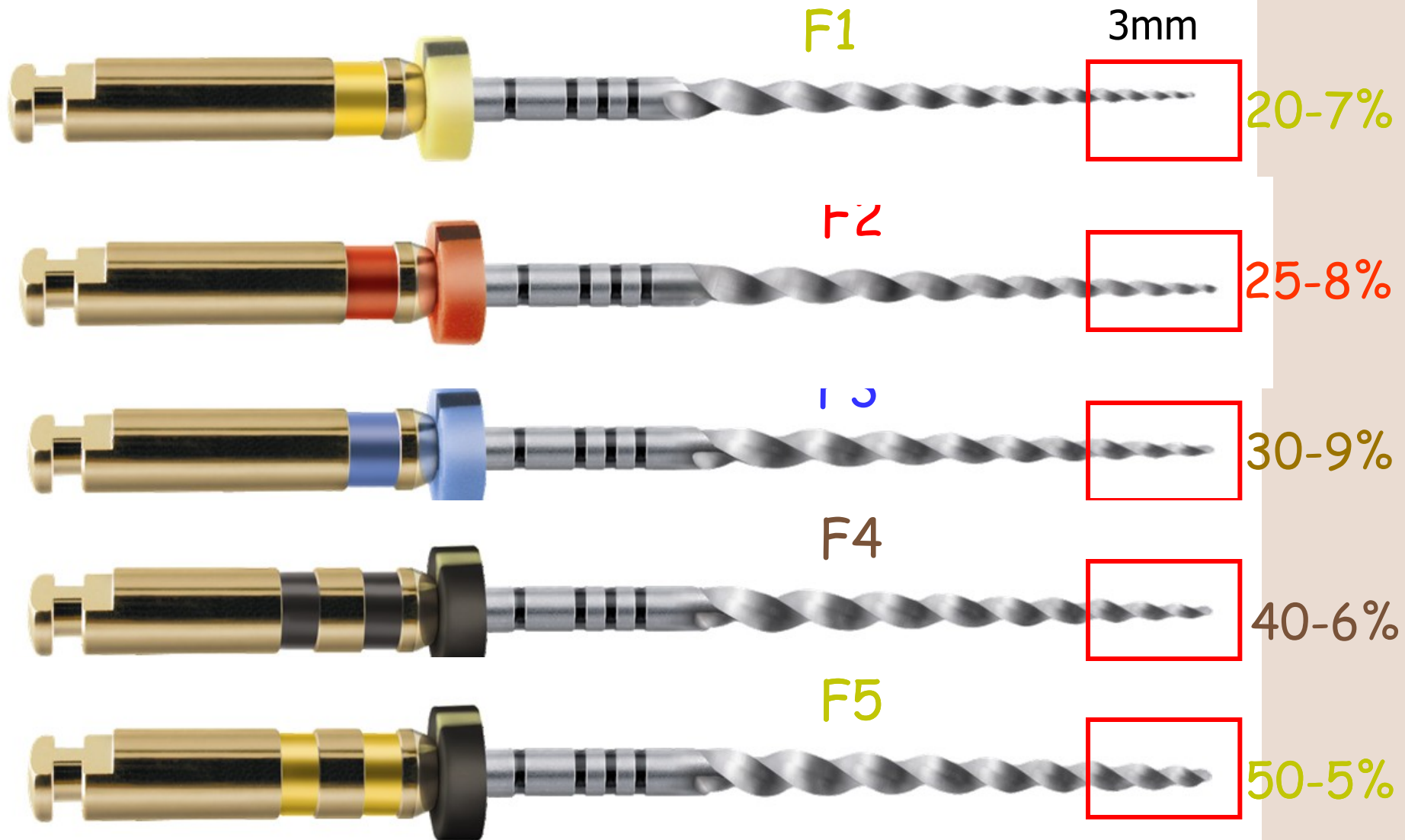


Finishing Files F1. F2. F3. F4. F5

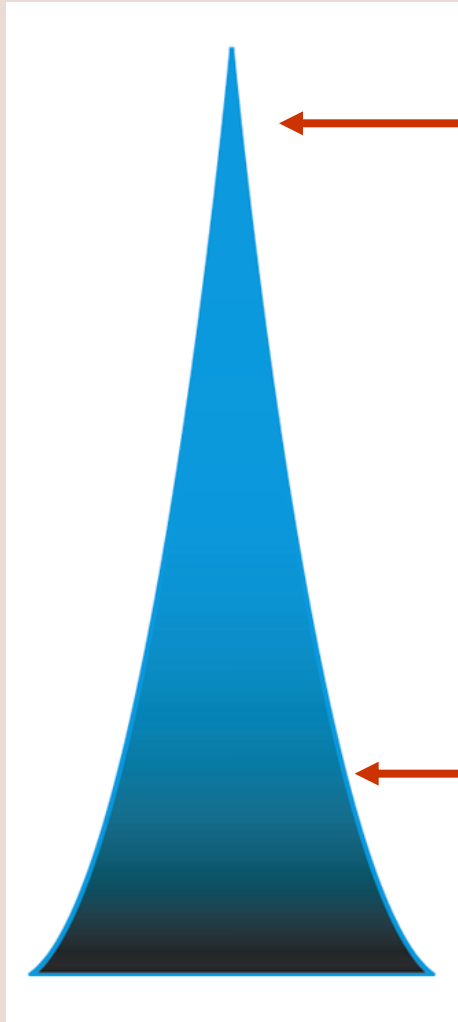


Shape the Apical part of the canal

Finishing Files (Variable Decreasing Taper)



ProTaper Universal



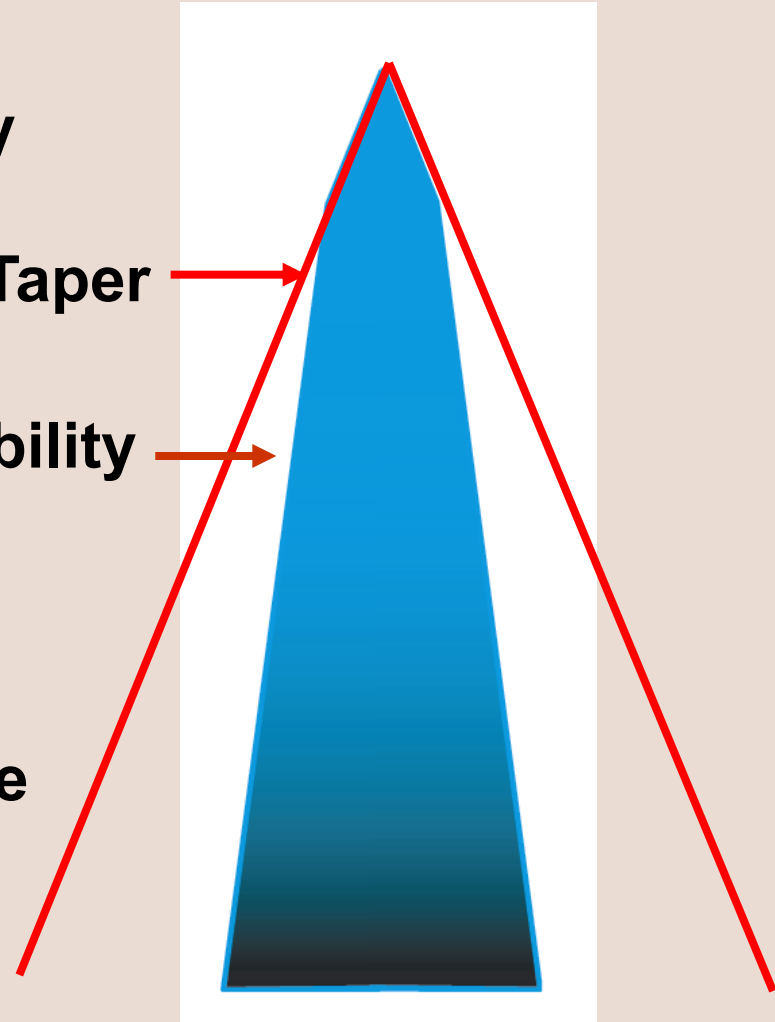
Shaping Files

Flexibility

Fixed Taper

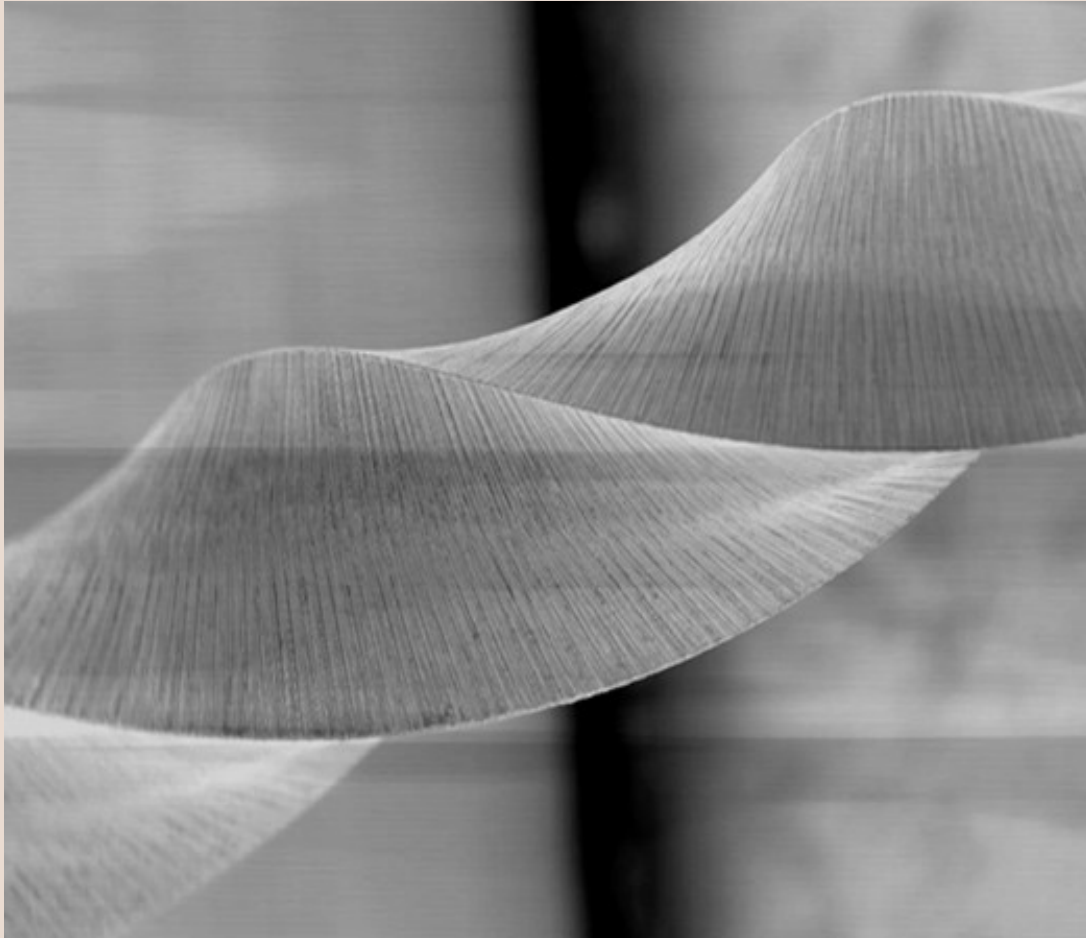
Flexibility

Resistance



Finishing Files

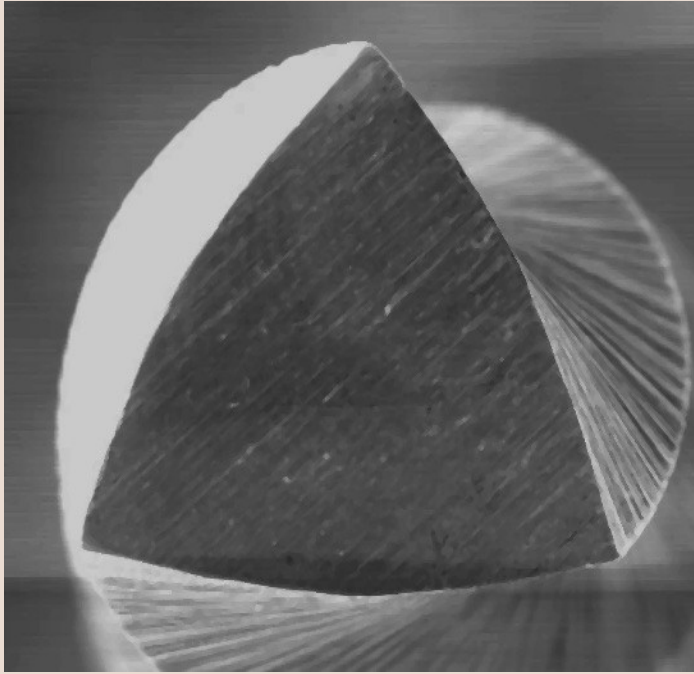
ProTaper Universal Characteristics



- **Cutting blade (no radial land) : Efficiency**

Characteristics

« Triangular » Cross-Section



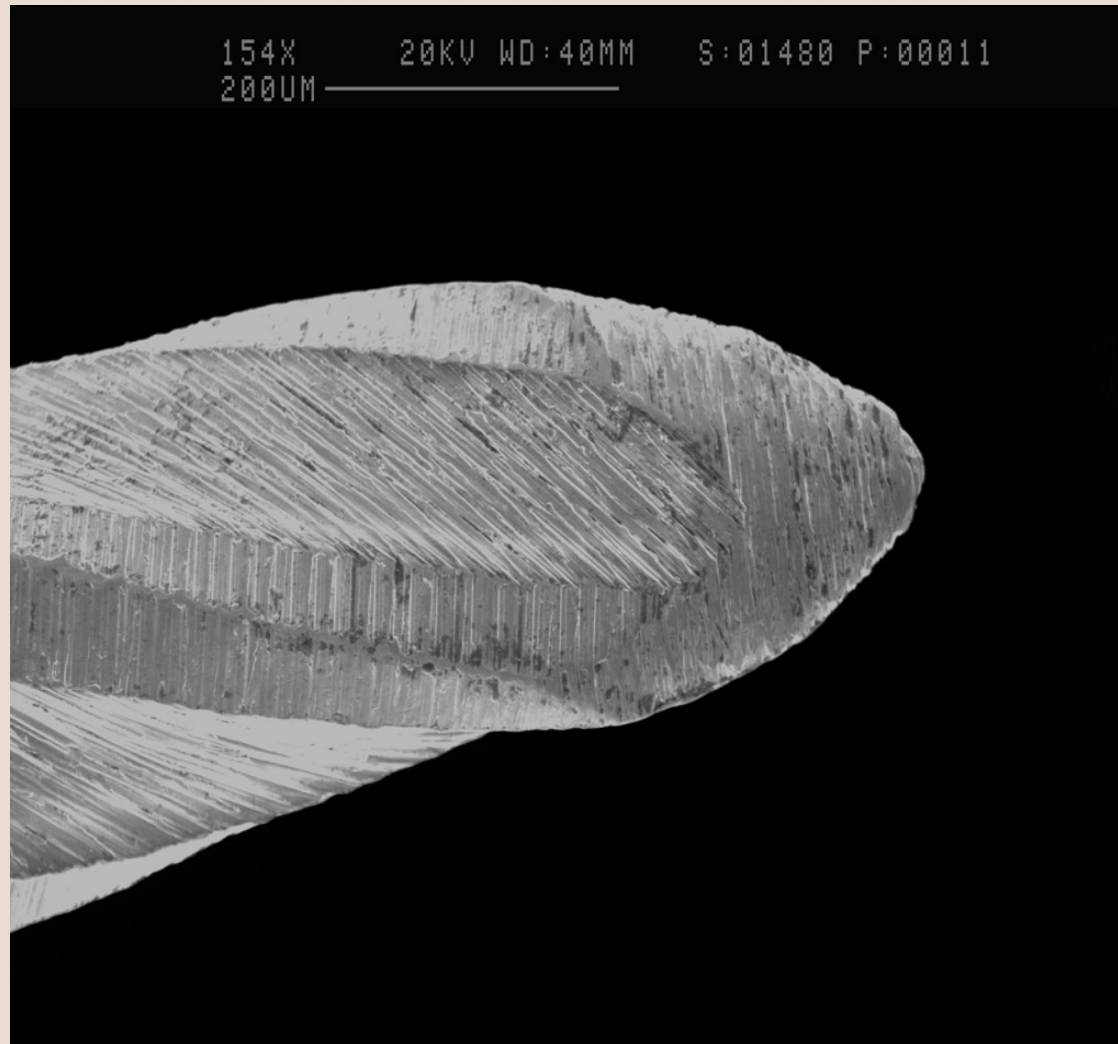
Convexe : S1, S2, SX, F1, F2



Concave : F3, F4, F5

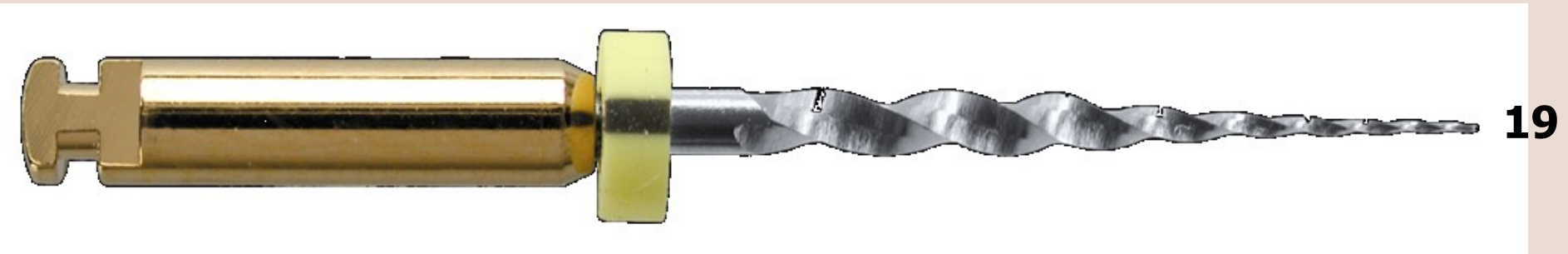
- **Triangular concave cross-section : Flexibility**
- **Triangular convexe cross-section : Resistance**

Characteristics

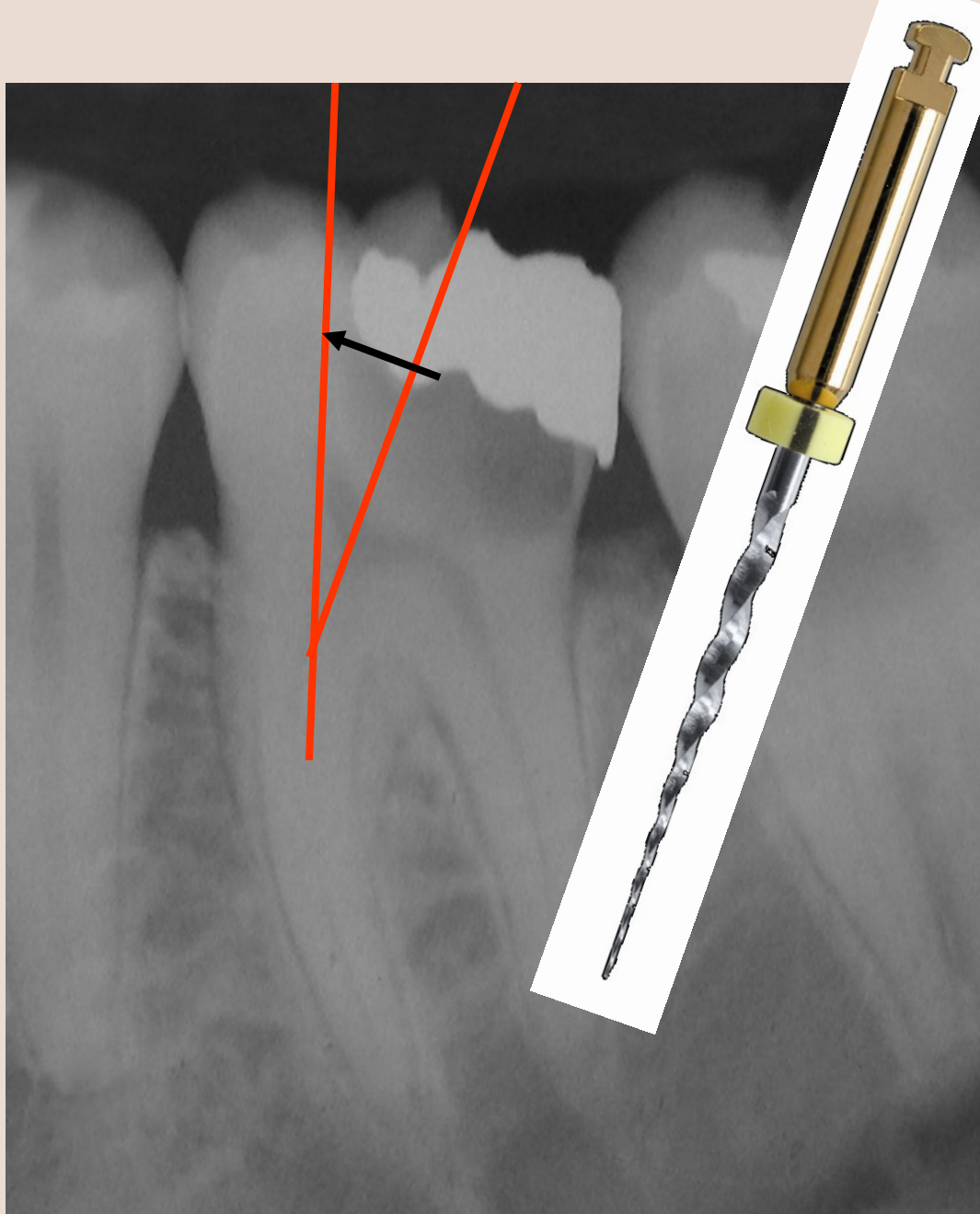


- **Safe non cutting tip : acts as a guide**

SHAPING SX (accessory)

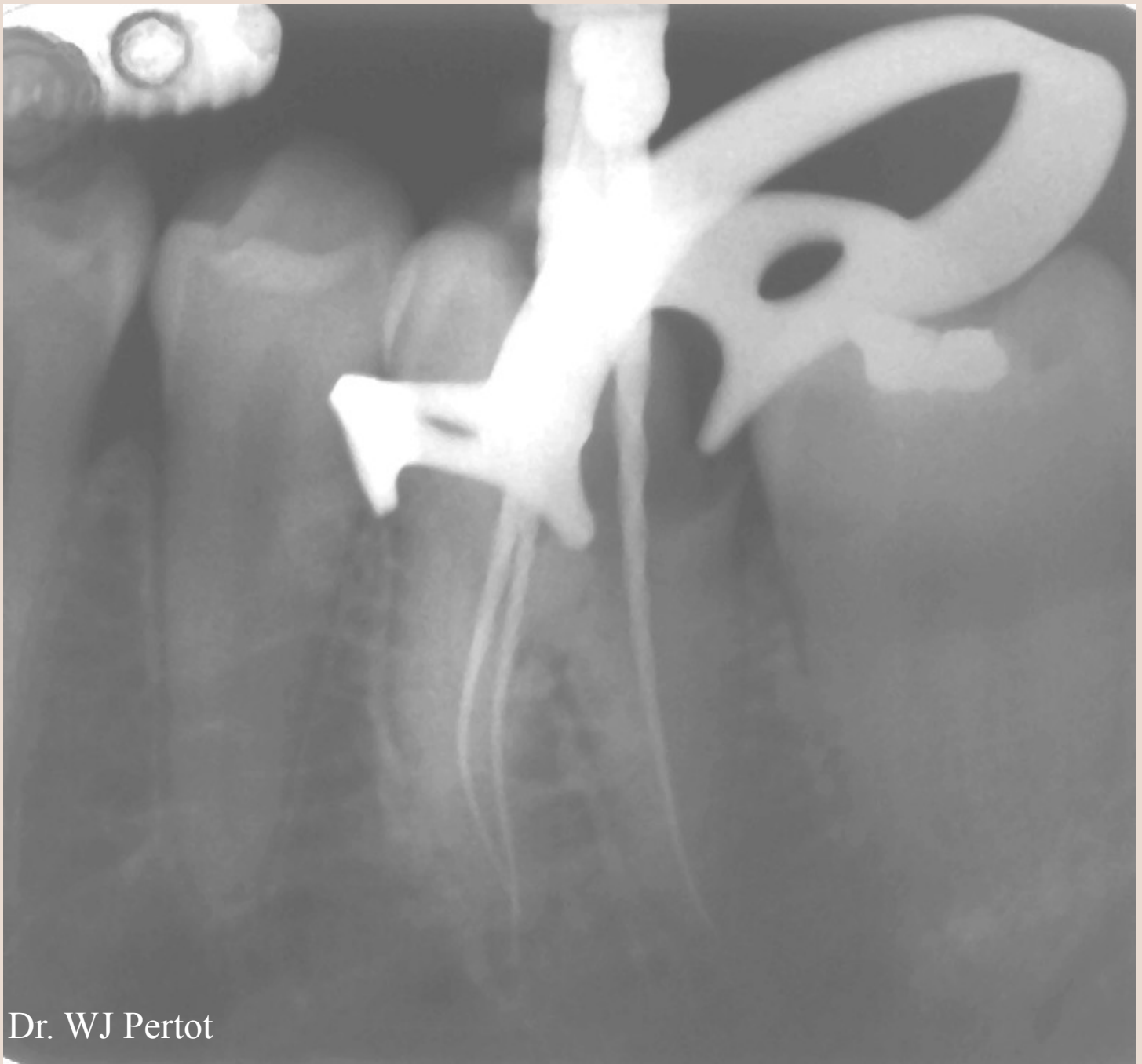


**For Relocating Canal Orifice
(only when needed)**



Sx is used with a
brushing motion

to relocate
the orifice and insure a
straight line access



Dr. WJ Pertot



Dr. WJ Pertot

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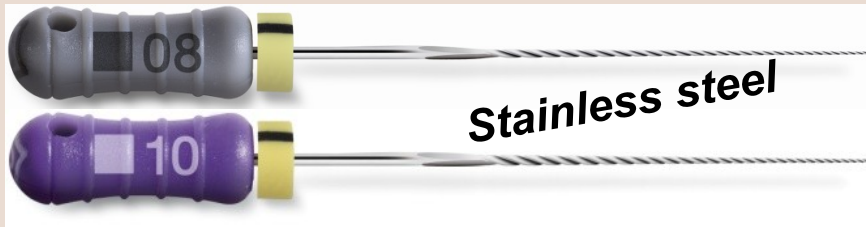


**CONTINUING EDUCATION
CLINICAL EDUCATION**



Treatment Sequence

SCOUTING THE CANAL :



K-File 008 or 010

**Then hand instruments
to the level they are accepted in the canal.**



**ProFinder Files
10,13,17**



**C+ File
08,10,15**

OR NiTi ROTARY INSTRUMENTS : Pathfiles

PathFile™

NiTi Rotary



working length



working length

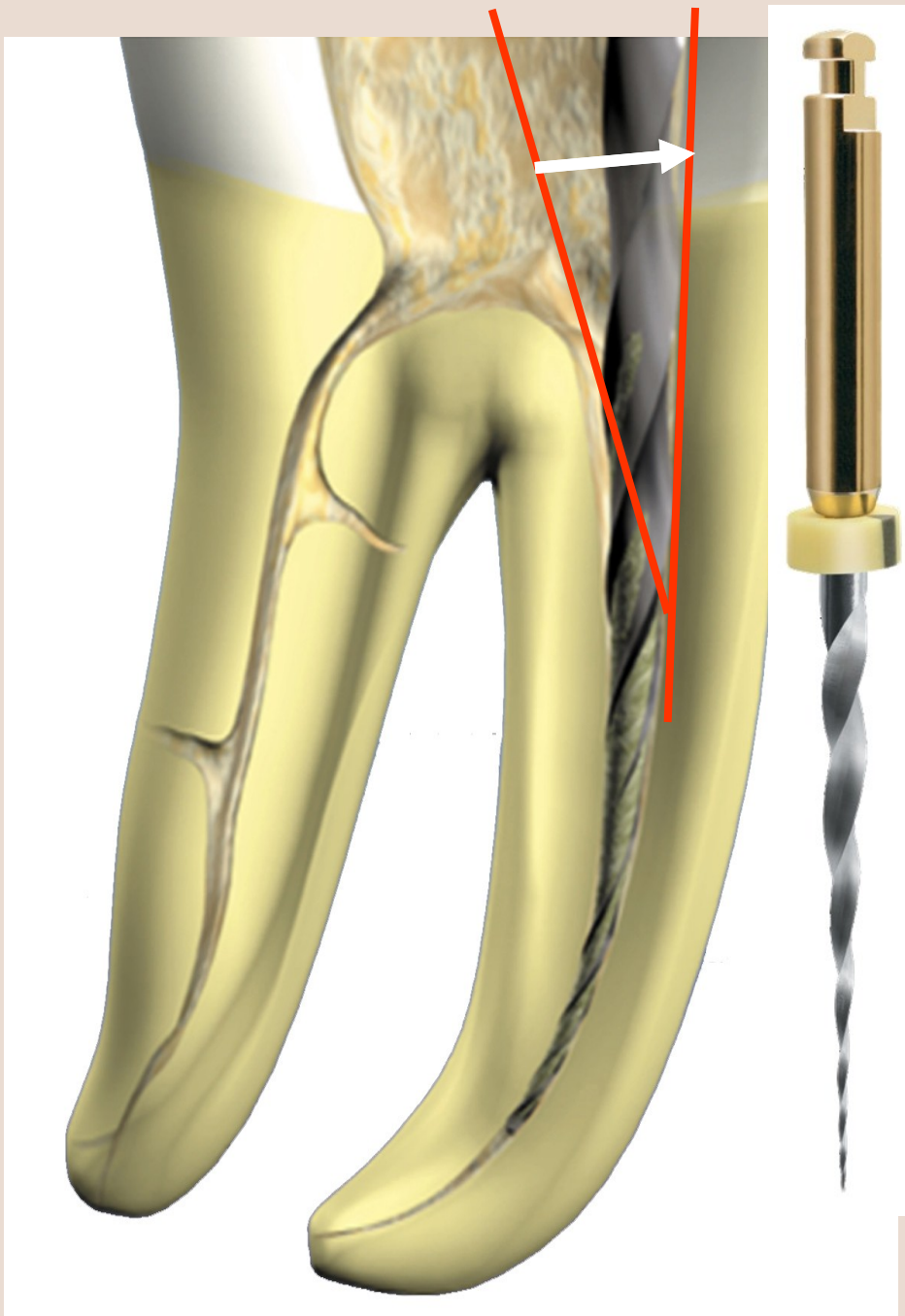


working length

Establish
WL before

The lubricating action of Glyde helps the instruments to slide in the canal





If needed, use SX with a **brushing motion** to relocate the orifice of the canal and create a straight line access

(don't use Sx deep in the canal)

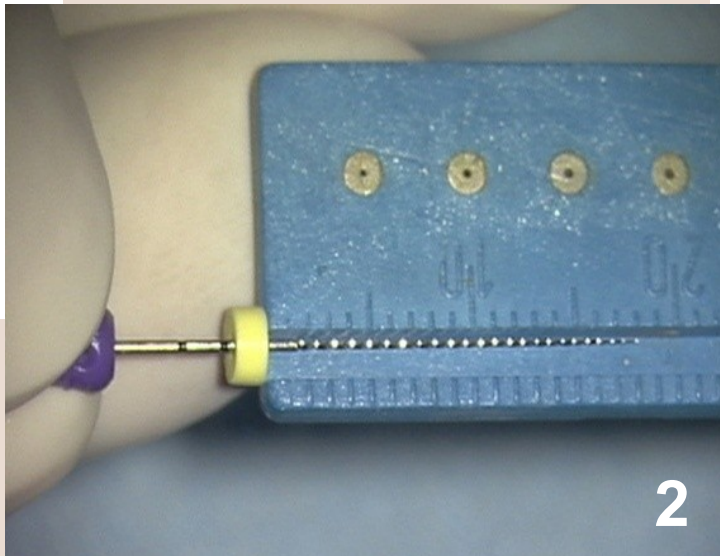
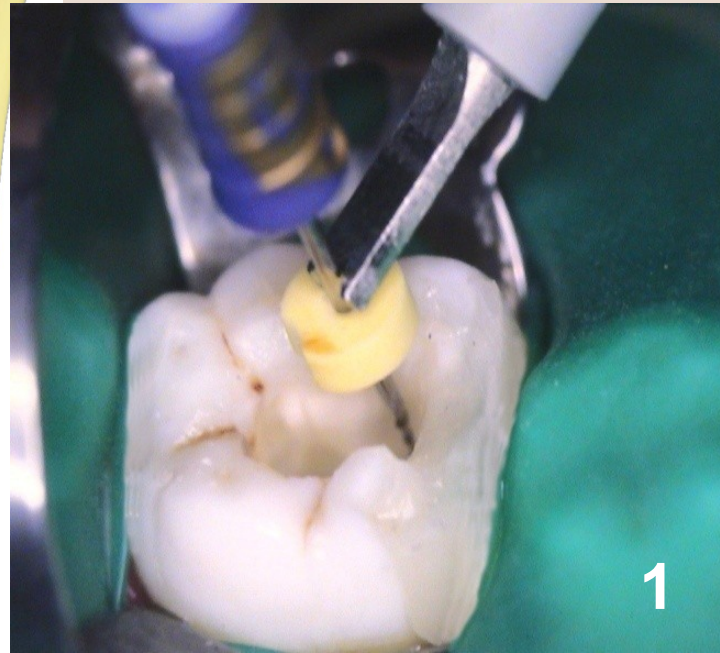
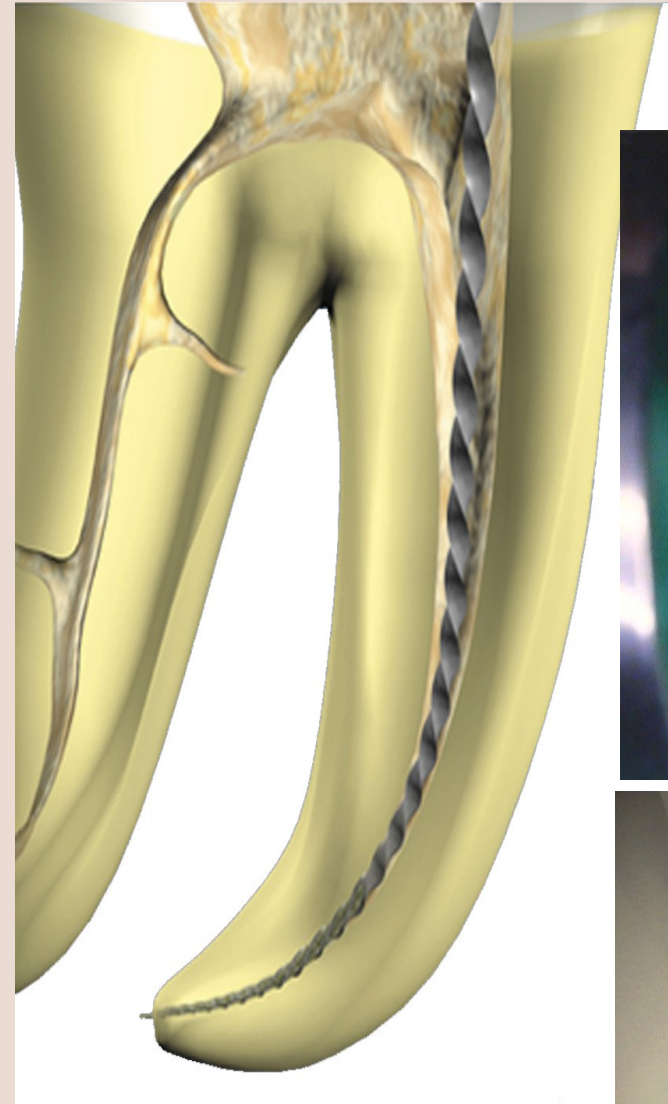


Use **S1** with a brushing motion and enlarge the canal, **no deeper** than the level of the penetration of the scouting file

(to make sure that the tip of S1 is never blocked)

Using Pathfile, go to working length that you established right before

Determine WL



Apex Locator



After going to length with a stainless steel file size 15, use :

S1 to working length

with a brushing motion.

Using Pathfile this step is skipped



When S1 reaches working length, use :

S2 to working length

with a brushing motion

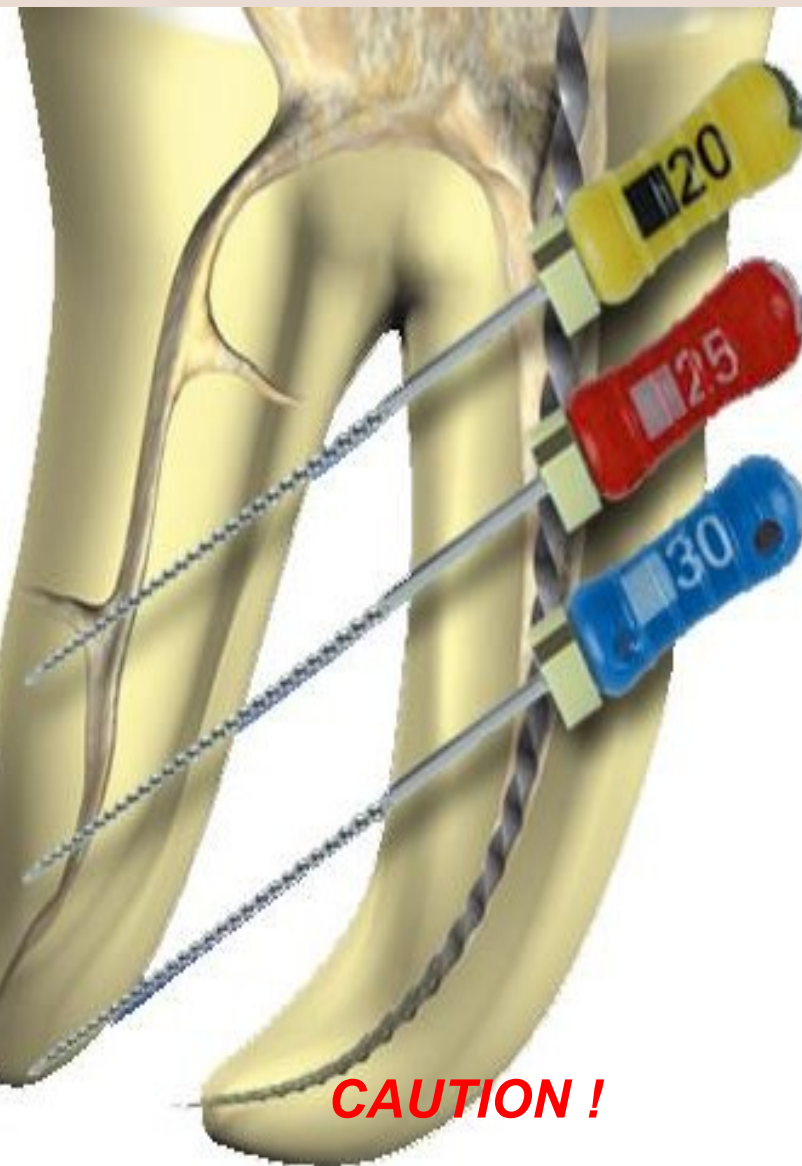


When S2 reaches
working length, use :

F1 to working length.

**CAUTION !
NEVER USE A BRUSHING
ACTION
WITH THE FINISHING FILES !!!**

**When a finishing file reaches the working length,
It is immediately withdrawn.**

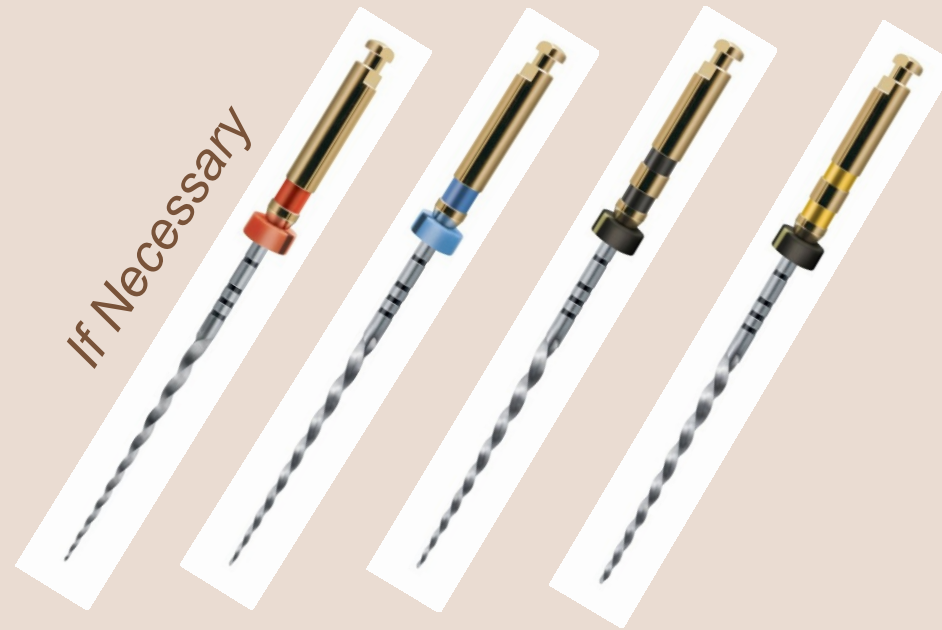


Gauge the diameter of the foramen with stainless steel files and if the foramen is larger than 20, use F2, F3, F4 or F5 to working length, according to the **real apical diameter**.

CAUTION !

NEVER USE A BRUSHING ACTION WITH THE FINISHING FILES !!!

When a finishing file reaches length, it is immediately withdrawn.





quence

VIDEO



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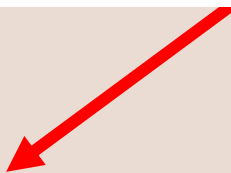
FOR HAND USE

Treatment Sequence



PROTAPER[®]

FOR HAND USE

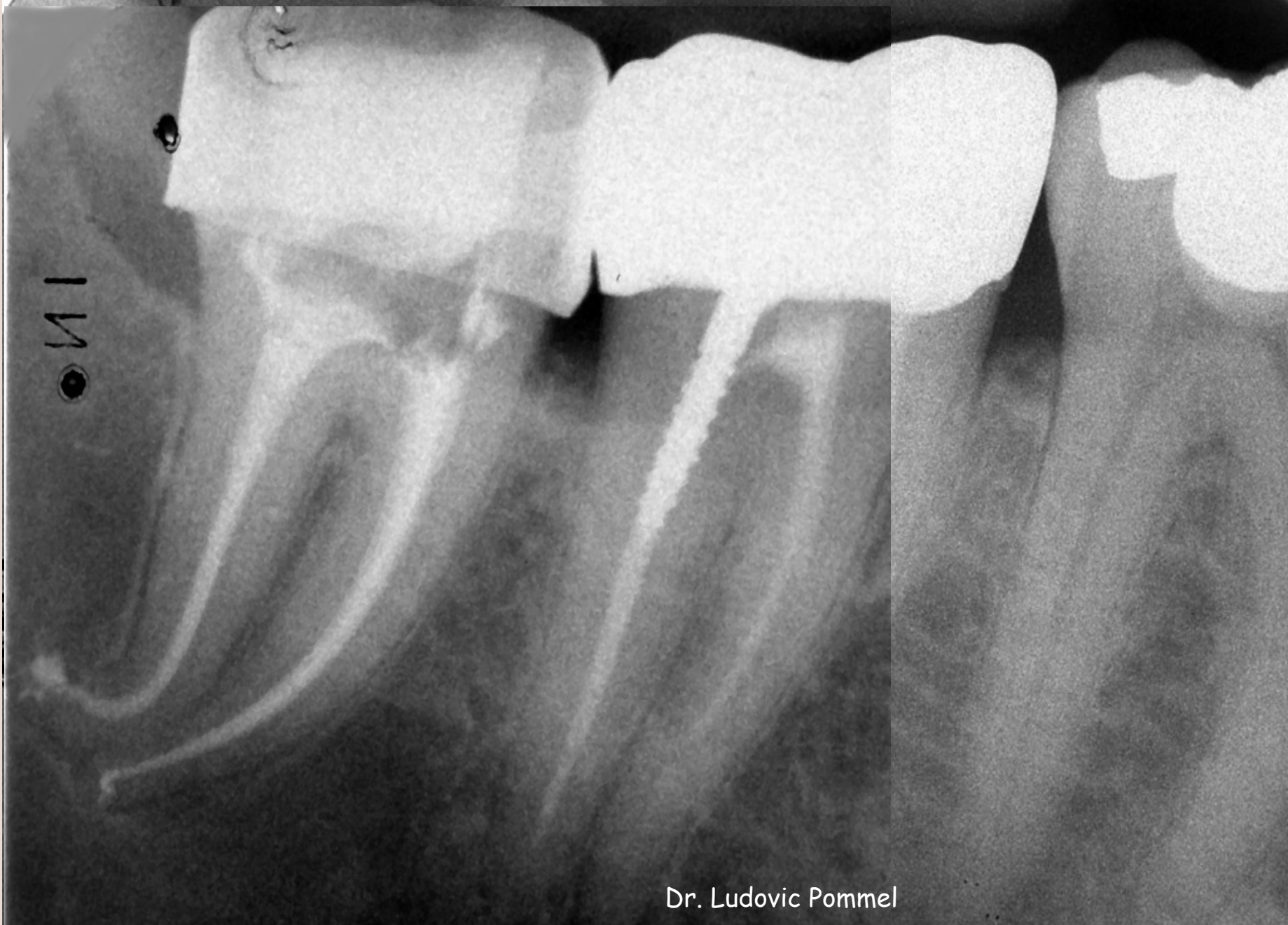


For Hand SS File Users

For NiTi Rotary Users

- Less Instruments
- No Canal Transportation
- Less Extruded Debris
- Excellent Apical Taper

- In Case of Contra Indication to Continuous Rotation.
(Example : Apical Hooks, joined canals)



Dr. Ludovic Pommel

PROTAPER[®]

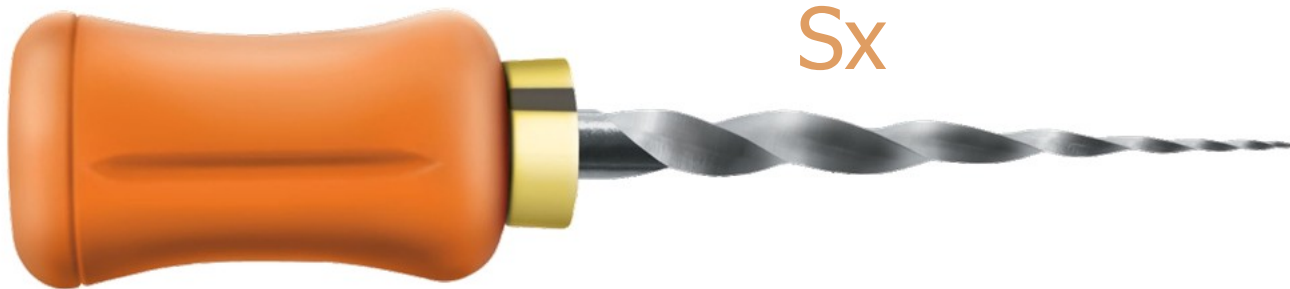
FOR HAND USE



8



20



19

3mm

F1

20-7%

F2

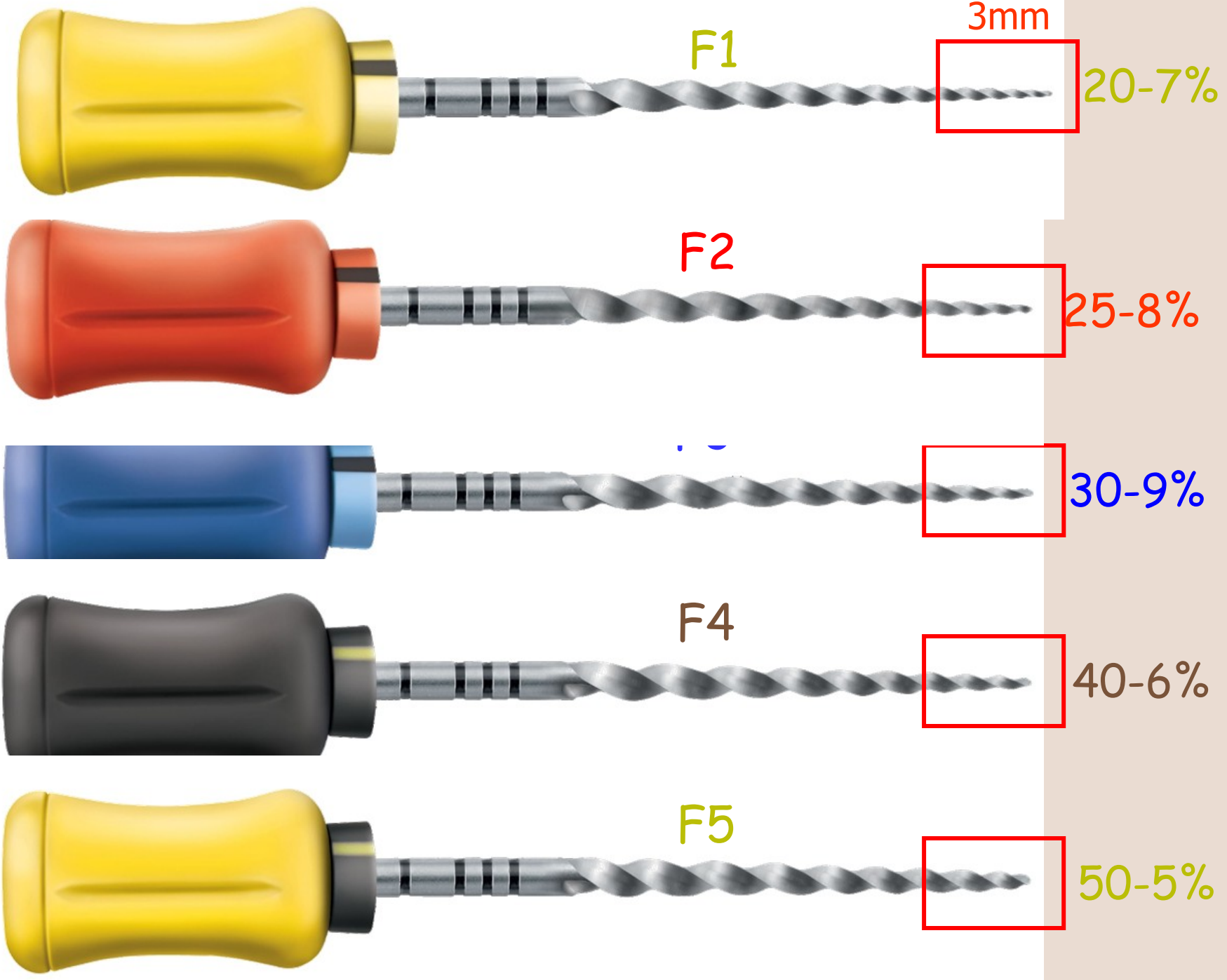
25-8%

F4

40-6%

F5

50-5%



PROTAPER[®]

FOR HAND USE

VI



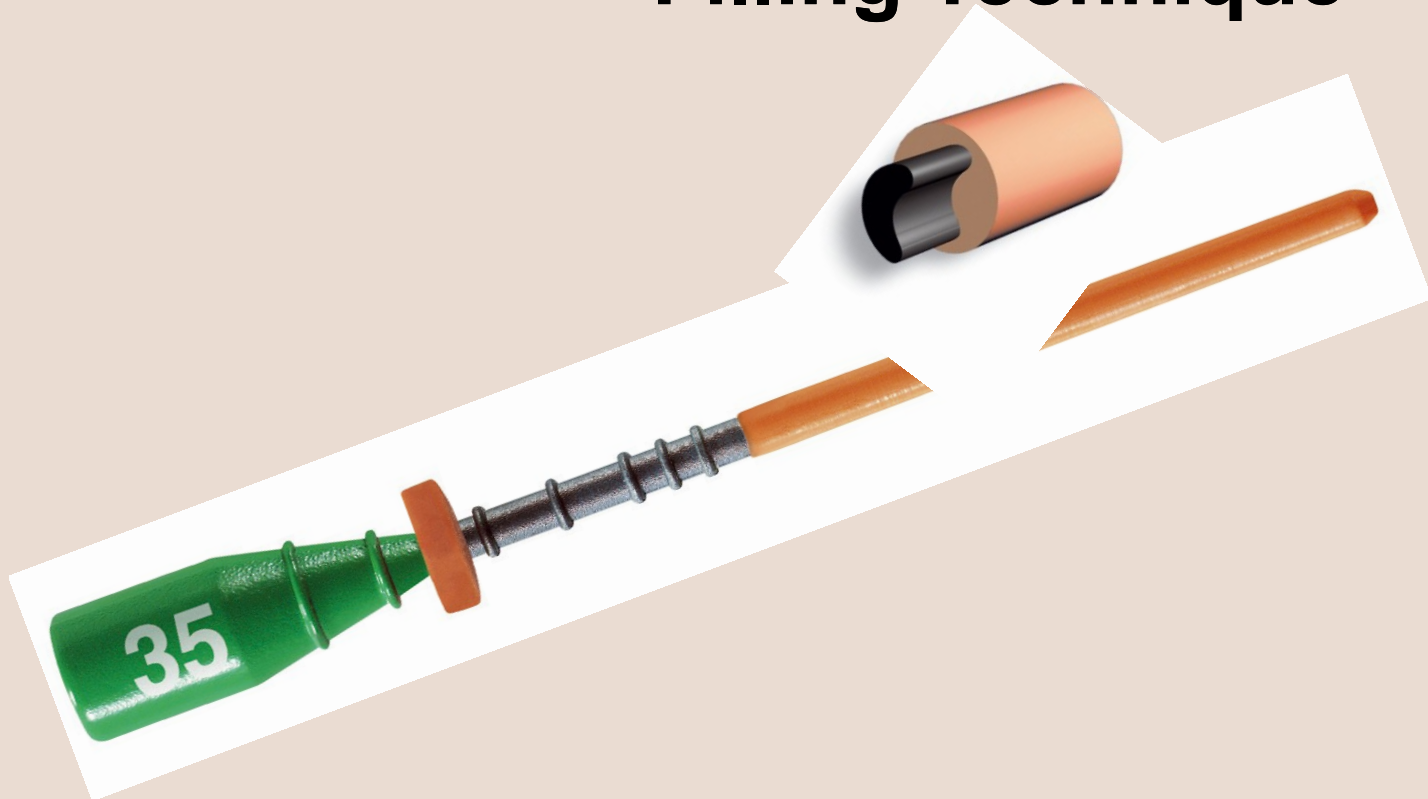
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THERMAFIL®

Core-Carrier (PP) - Gutta-Percha Filling Technique

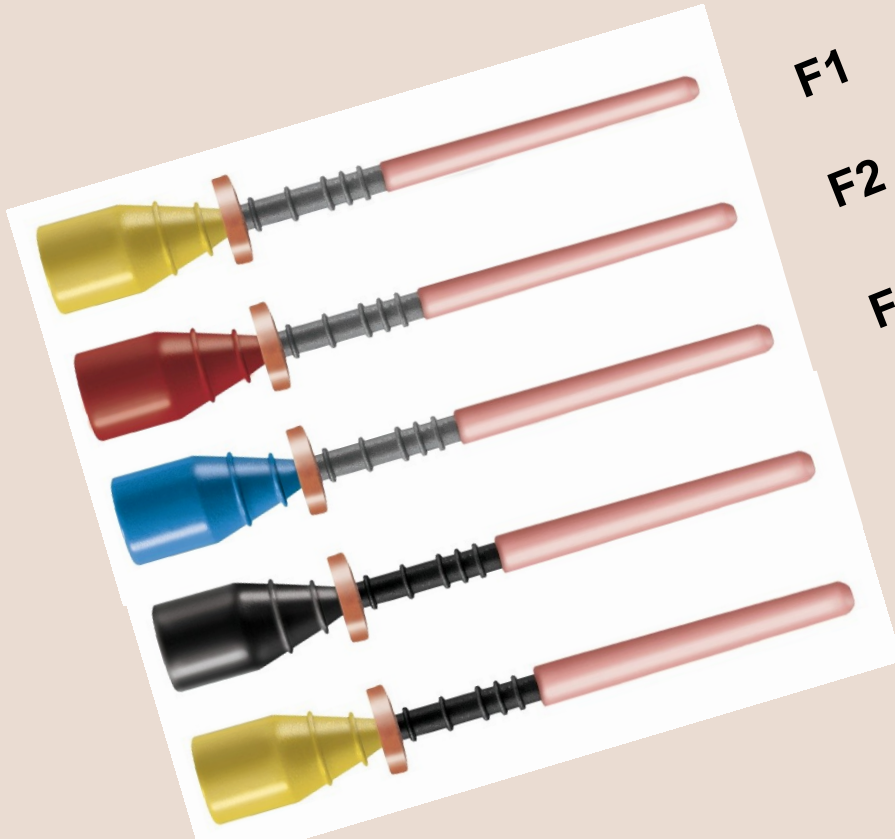


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Obturator PROTAPER

Core-Carrier Gutta-Percha Filling Technique



F1

F2

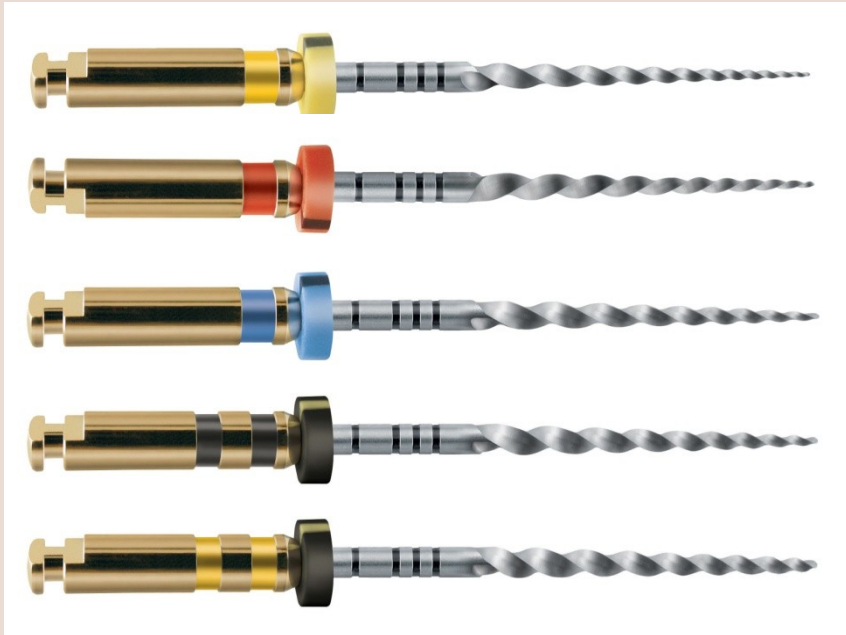
F3

F4

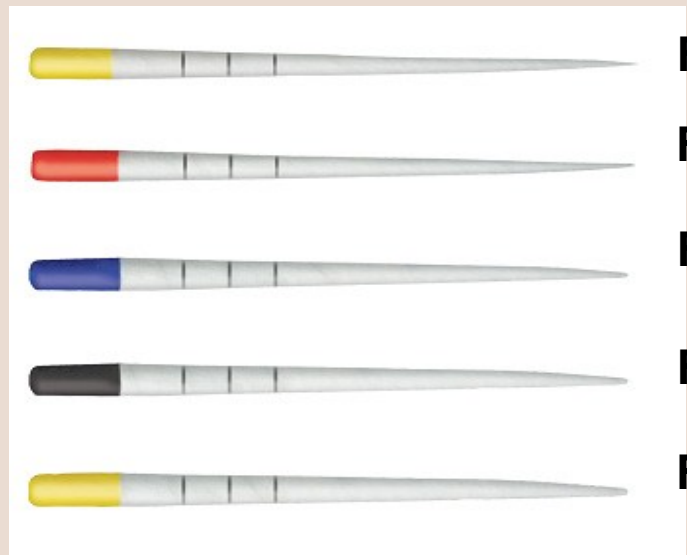
F5



Finishing Files (Apical shape)



Sterile Paper Points



Calibrated Gutta-Percha Cones

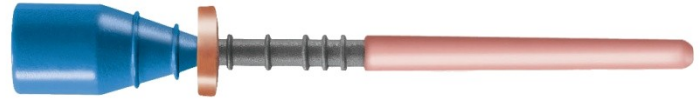
F1



F2



F3



F4



F5



Obturers - Protaper sizes

F1

F2

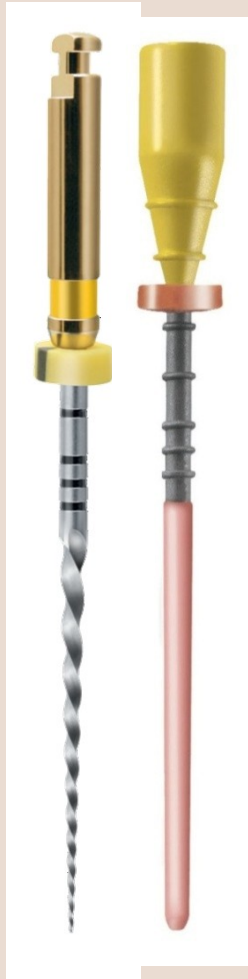
F3

F4

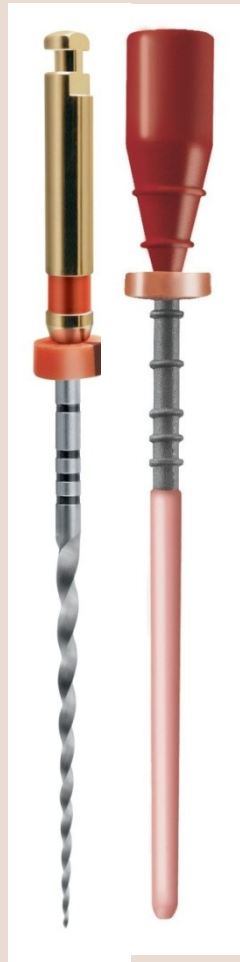
F5

Paper points - Protaper sizes

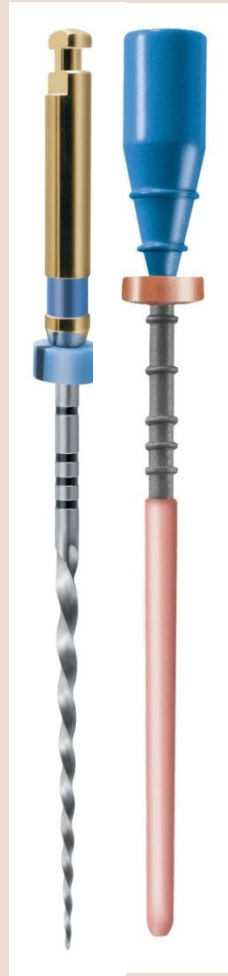
ProTaper Obturator calibrated to each Finishing File



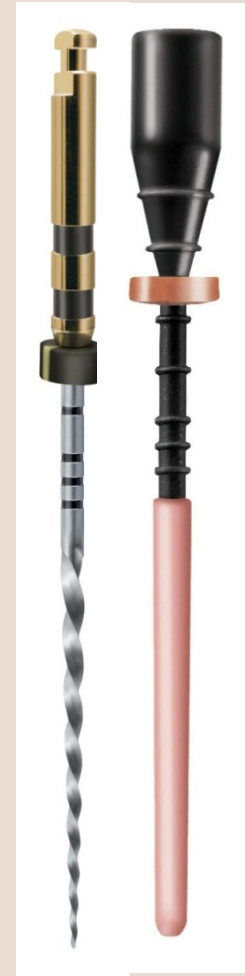
F1



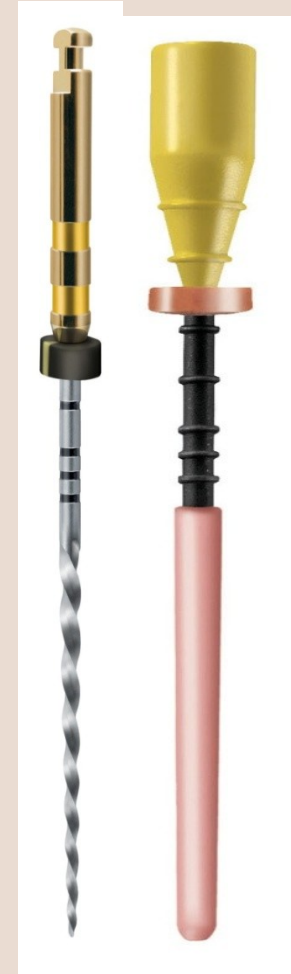
F2



F3



F4

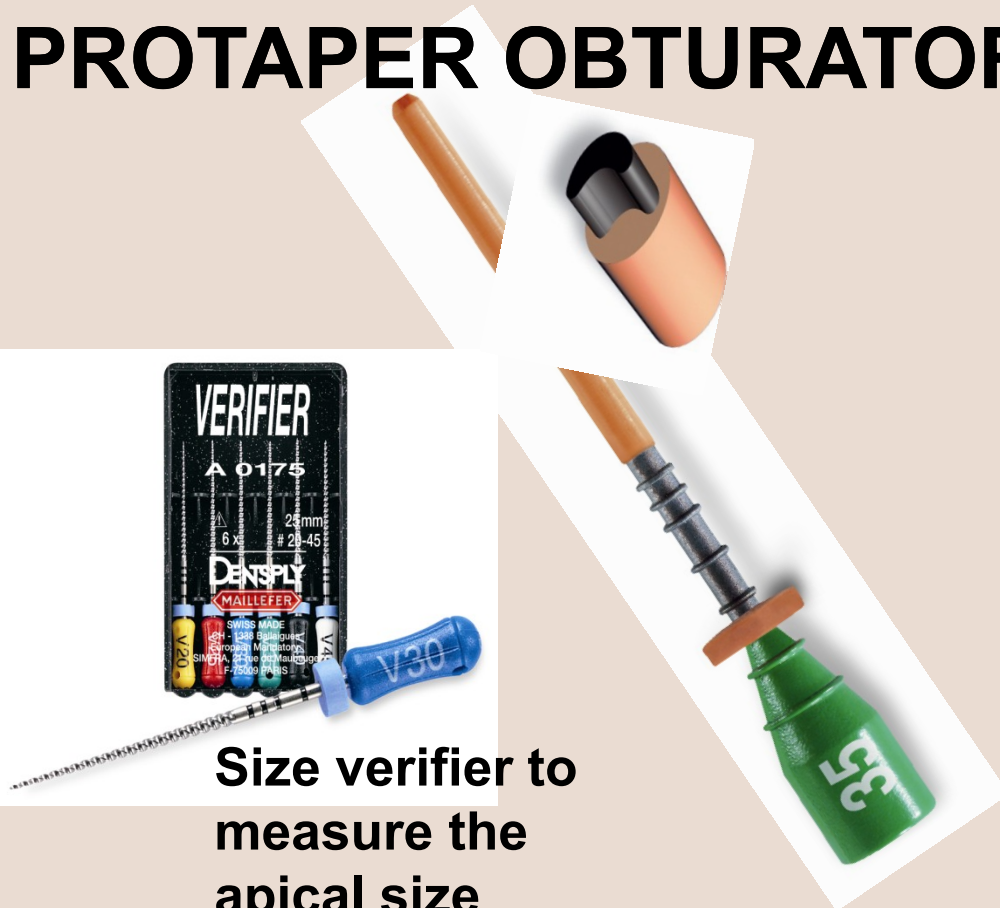


F5

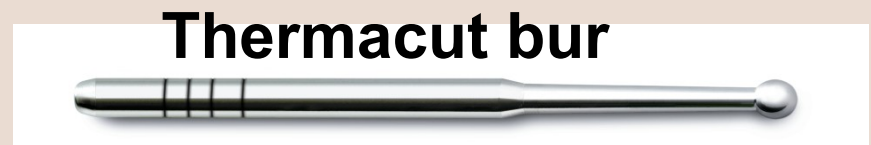
3D Filling of the Root-Canal System with THERMAFIL Or PROTAPER OBTURATOR



Thermaprep Oven



Size verifier to
measure the
apical size



Thermacut bur



Post space bur

Core-Carrier Obturator Technique

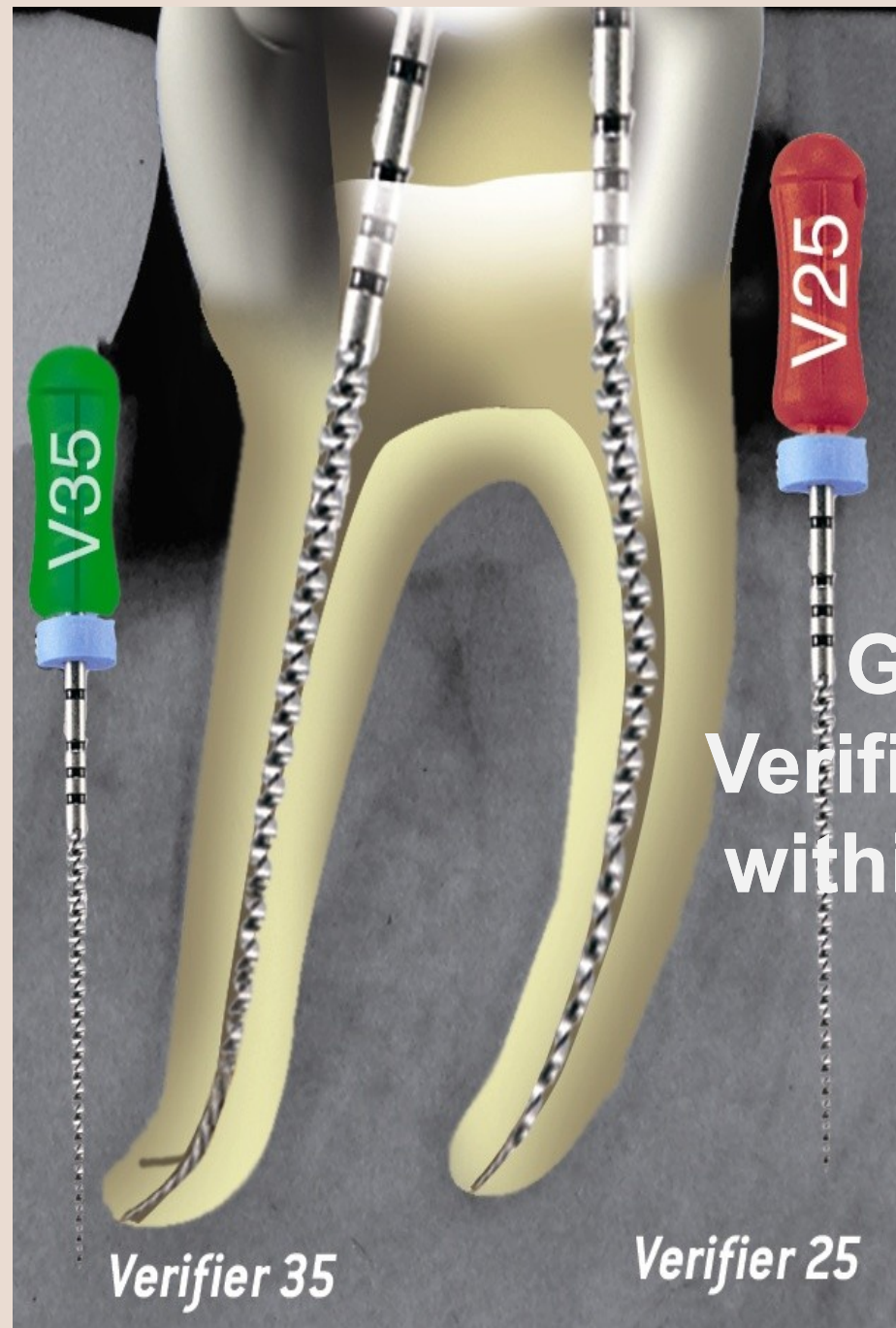


1st step :

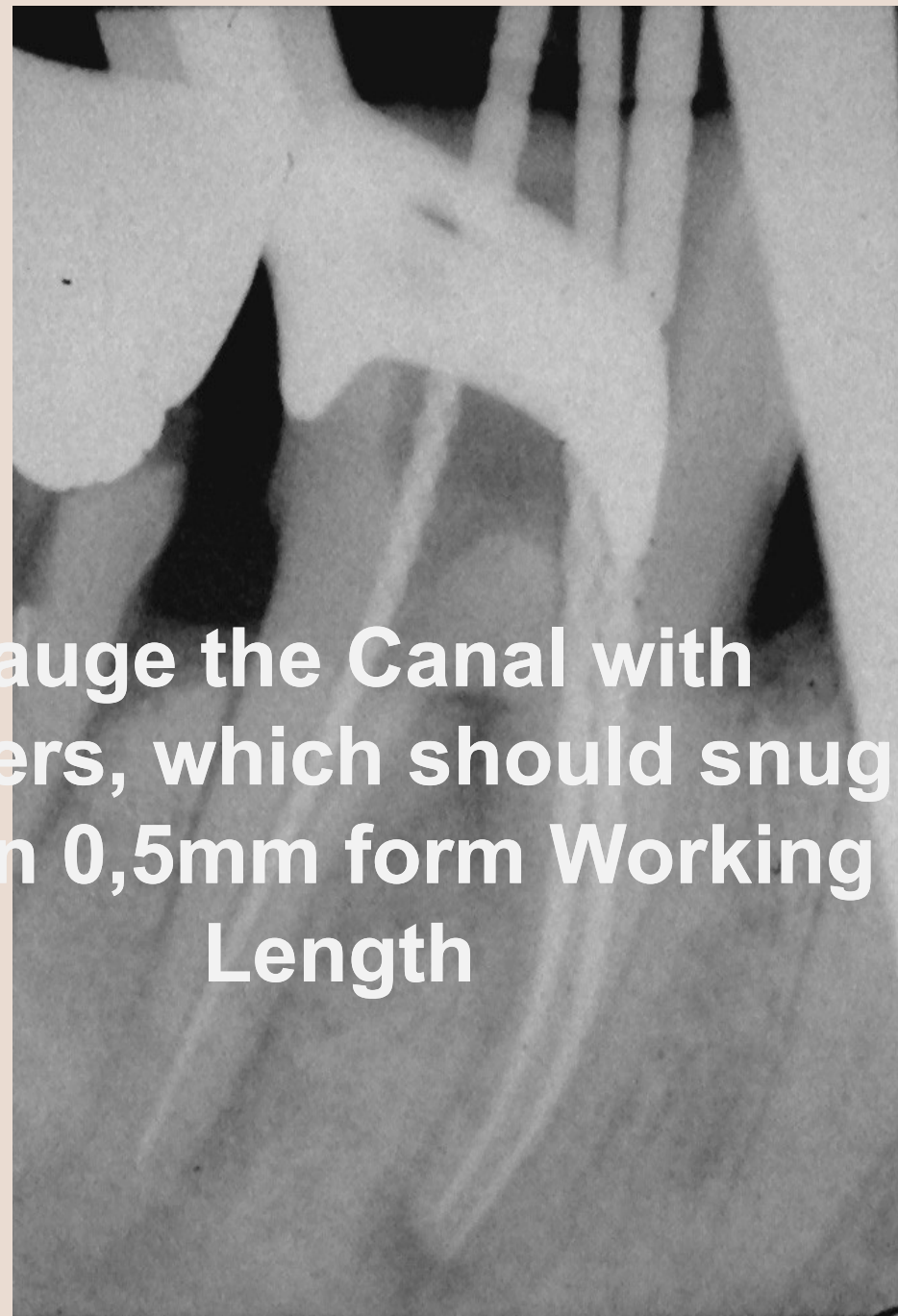
Opening

cleaning

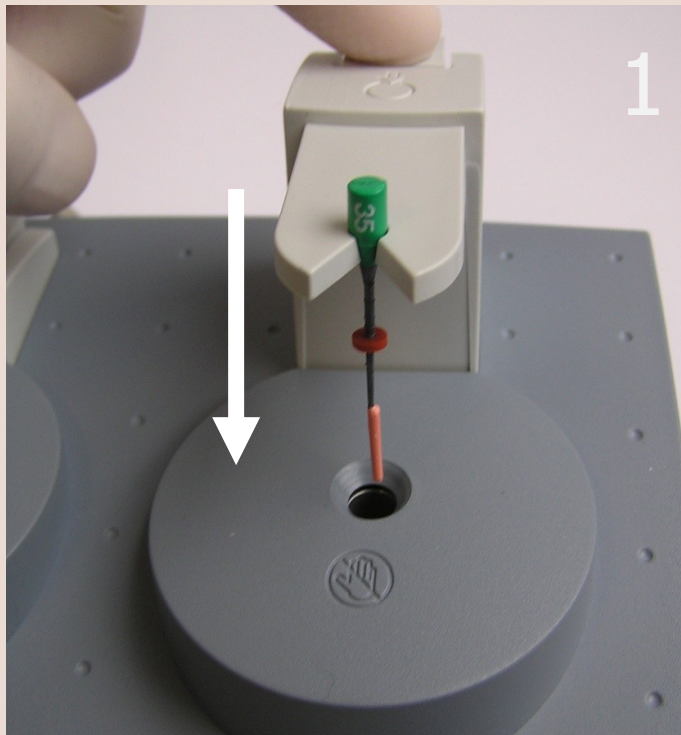
Shaping ...



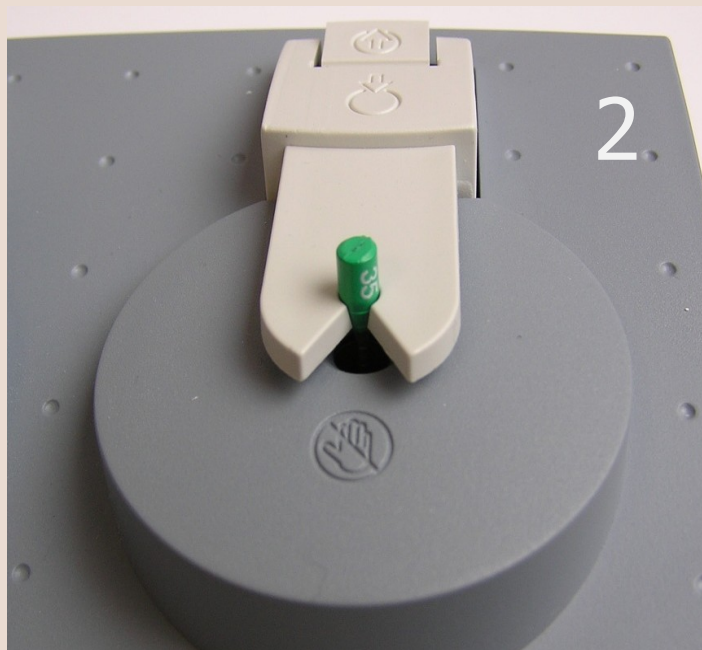
Gauge the Canal with Verifiers, which should snug within 0,5mm from Working Length



Place the Obturators

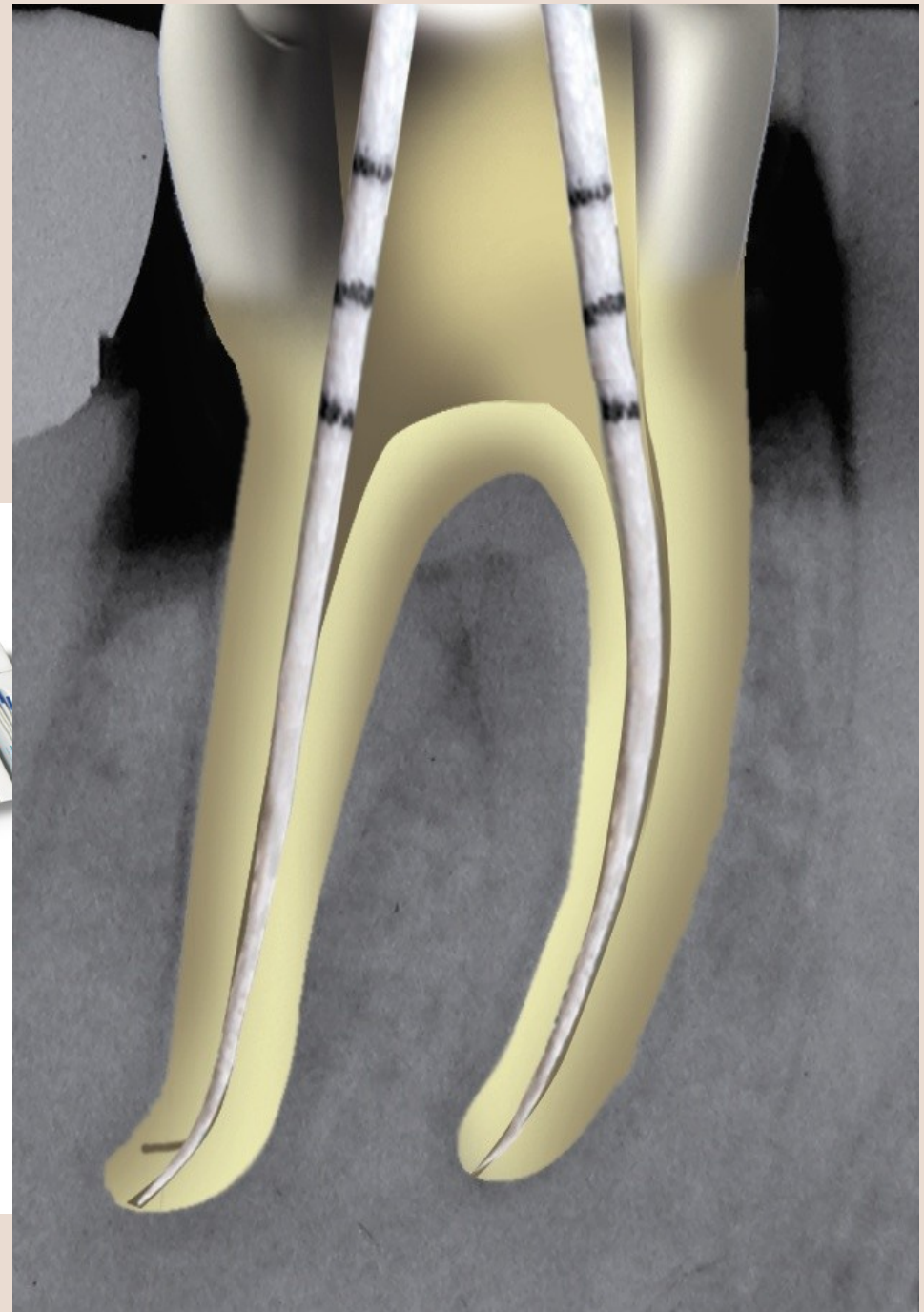


Heat The
Obturator



Select the right
size and start

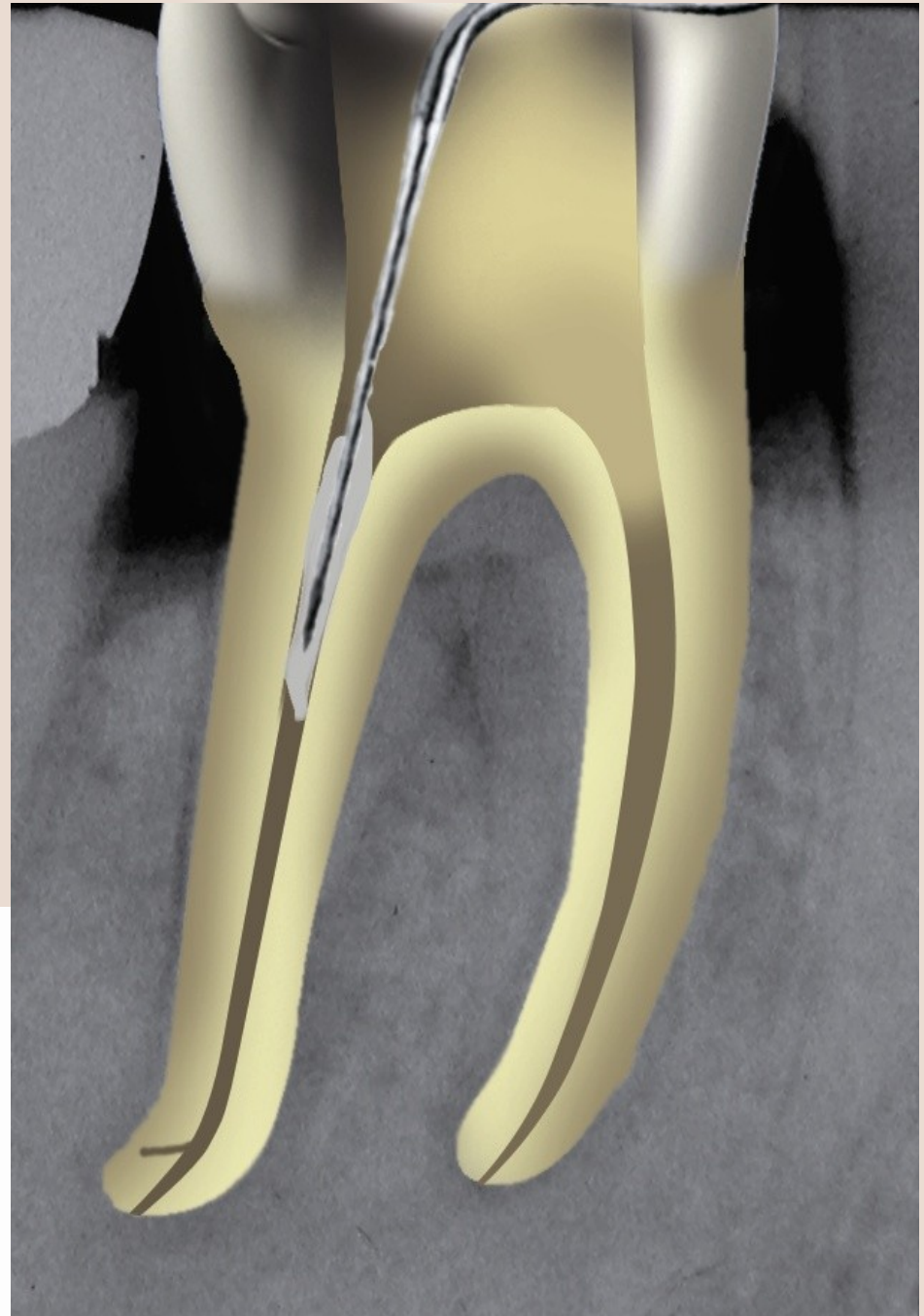
Dry the Canals with Sterile Paper Points

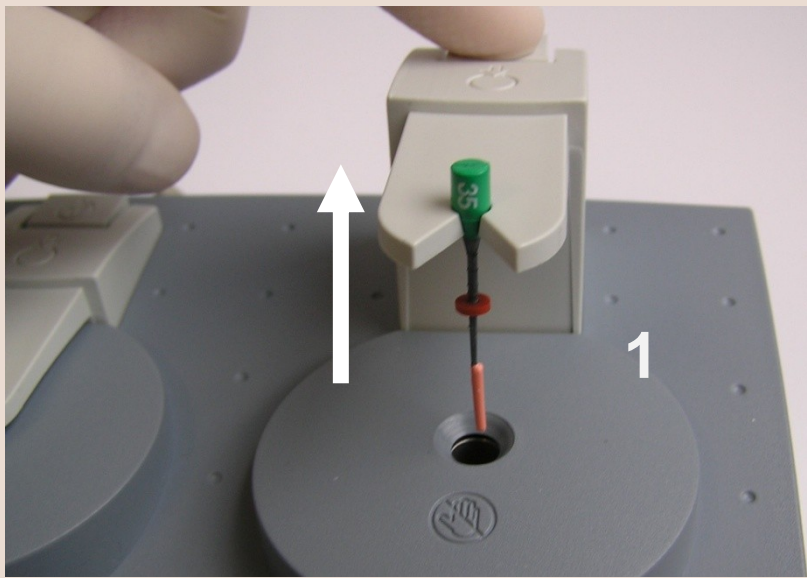


Mix the Sealer and coat the walls of the canal with a thin layer using a Probe or a paper point

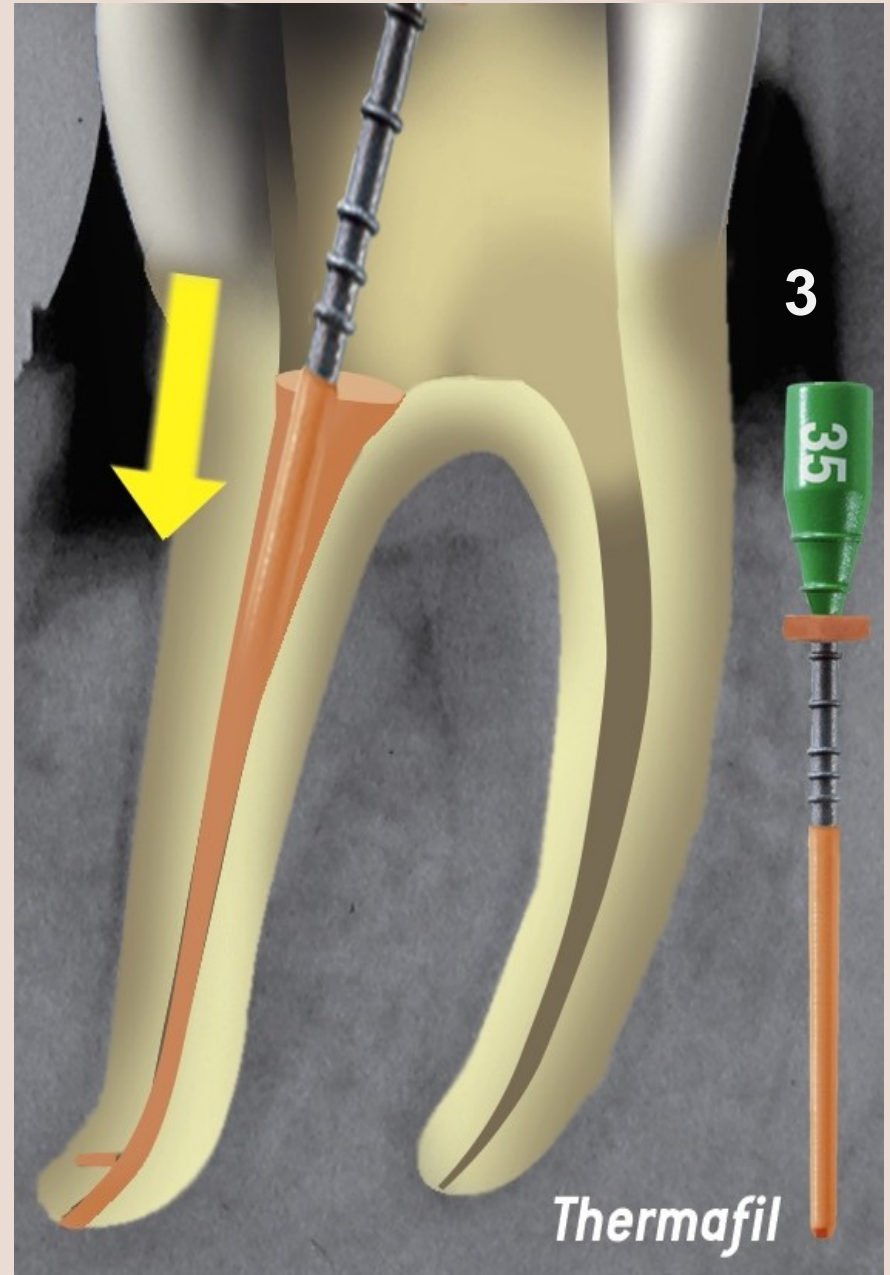
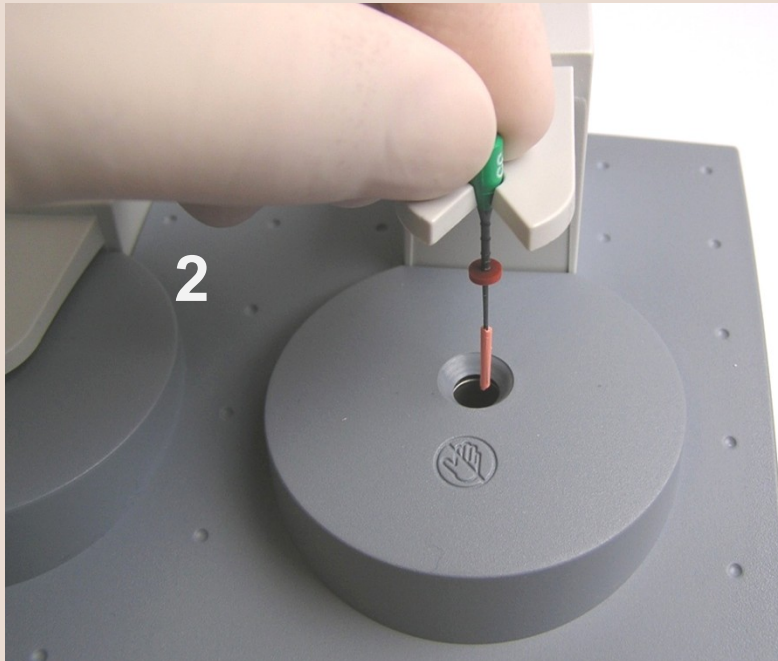


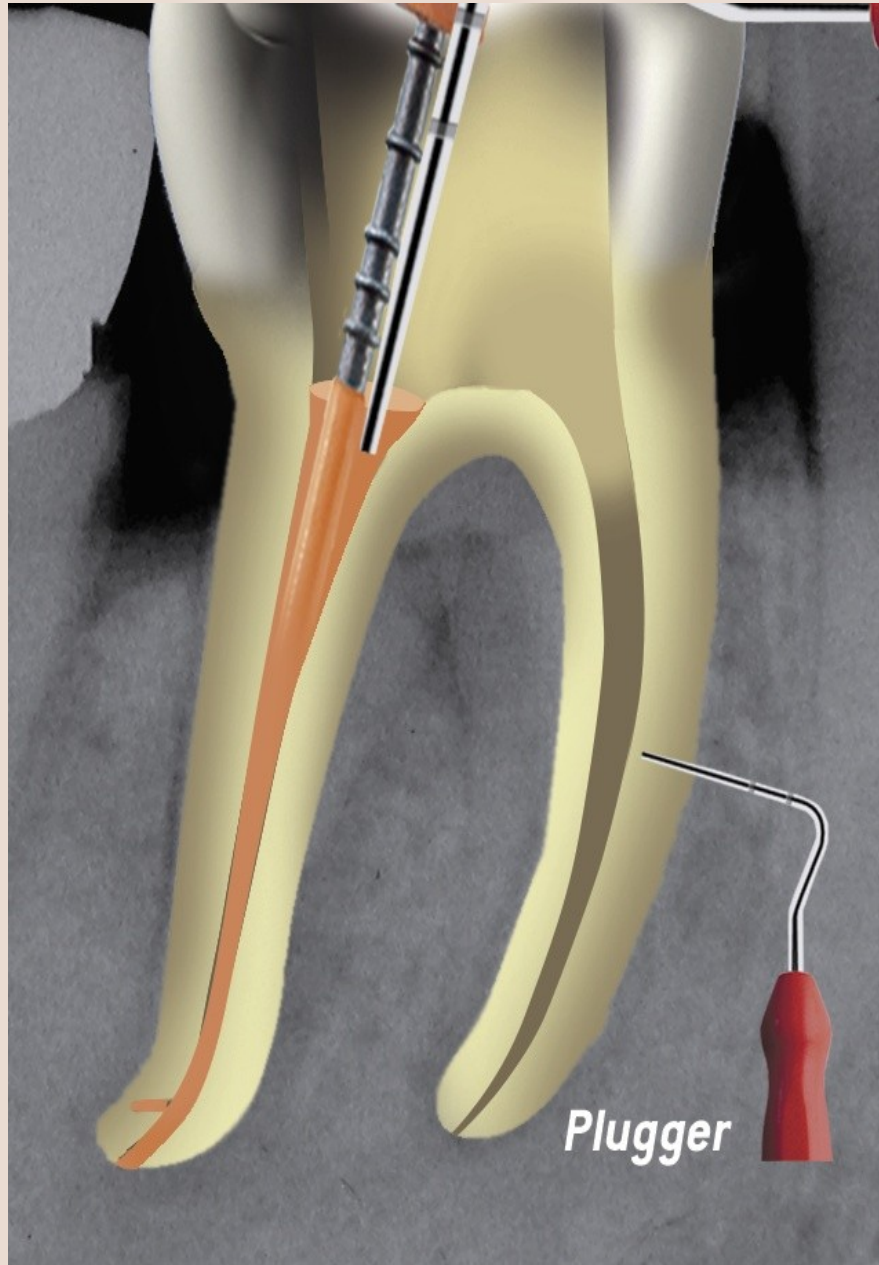
Topseal MIX



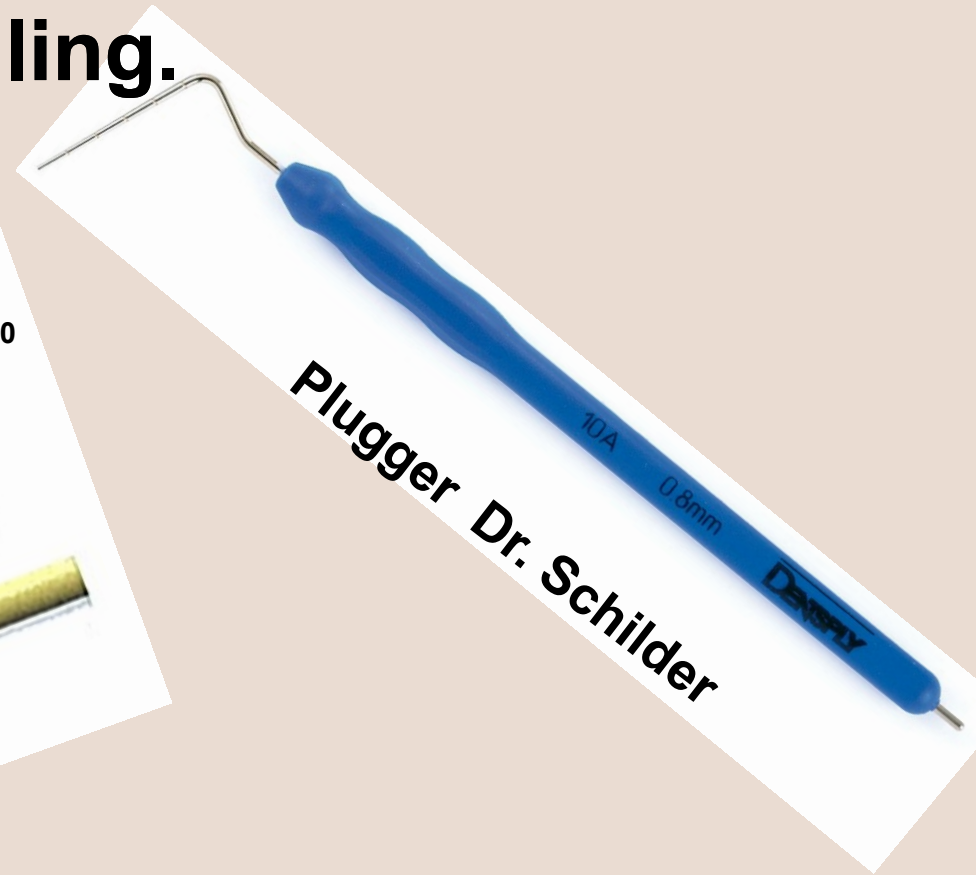
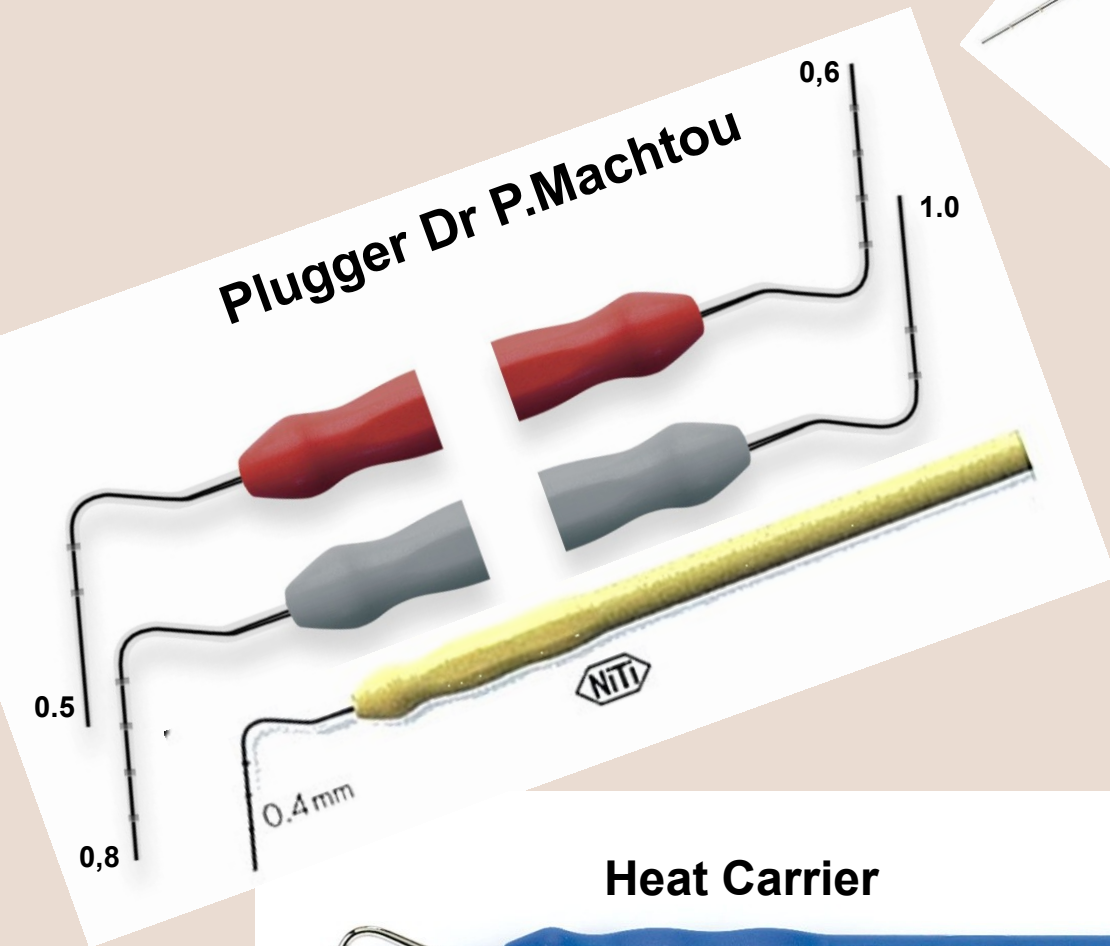


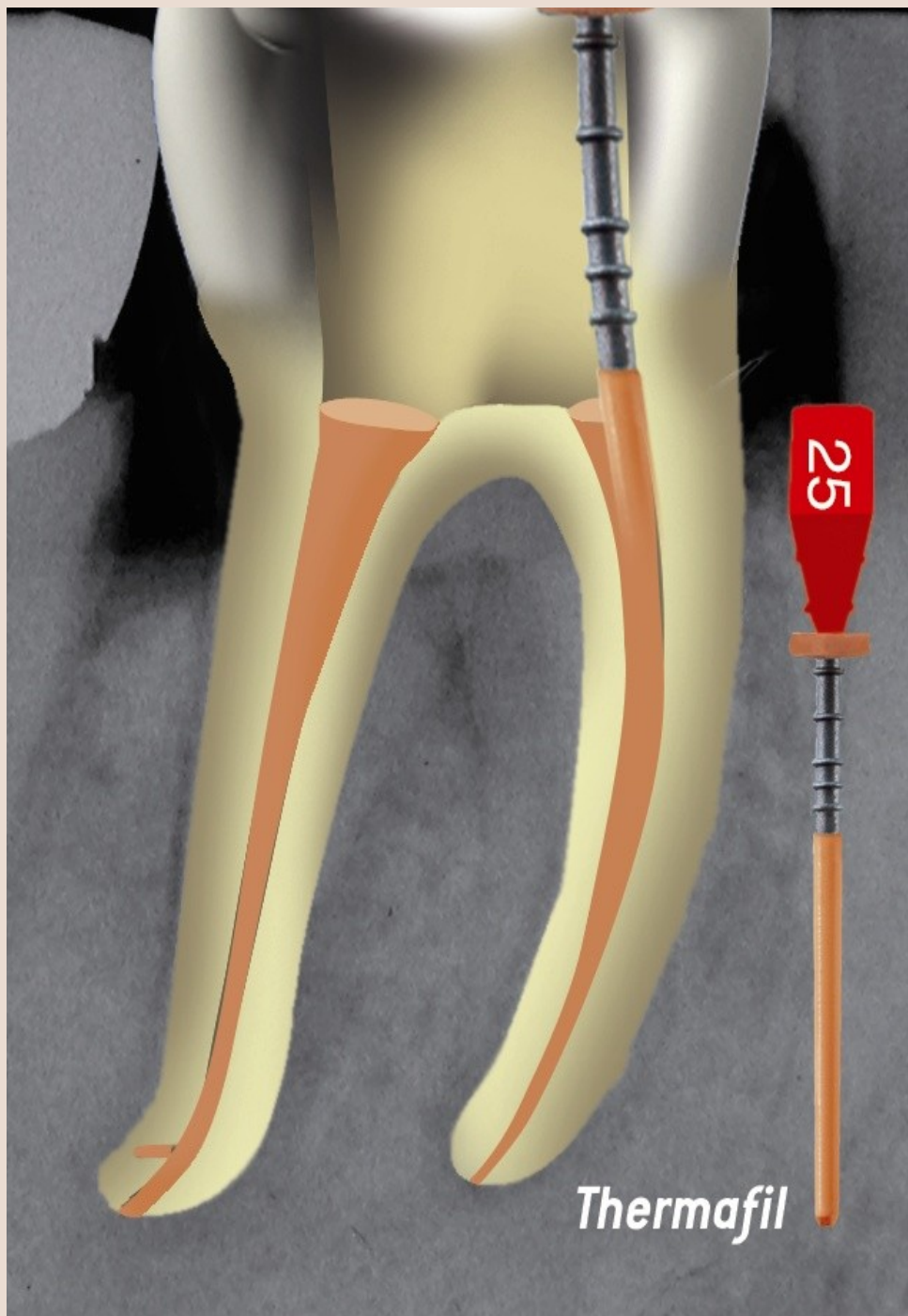
**Take it out
and insert it in the canal**





Use of a selected Plugger to ensure homogeneity of the filling.







Dr. WJ PERTOT



Dr. WJ PERTOT