

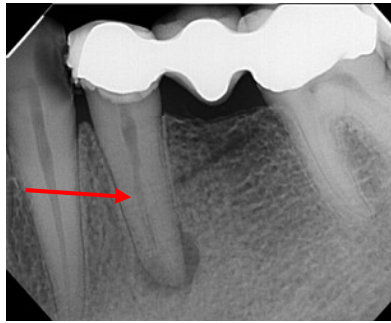
Root Tips

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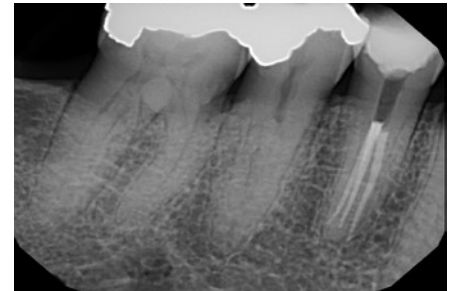
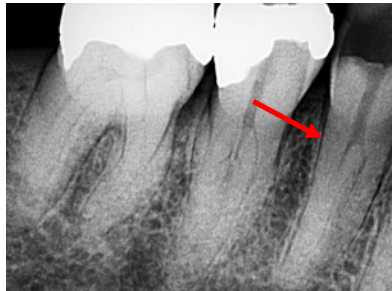
The Lower Premolar

According to Vertucci, mandibular first premolars have more than 1 canal 26% of the time.¹ This means for every 4 teeth treated, you're likely to see a premolar with more than 1 canal. In second mandibular premolars, the odds of more than 1 canal are much less likely. The odds of 3 canals is even less likely; but is more common in black patients in both first and second mandibular premolars.²

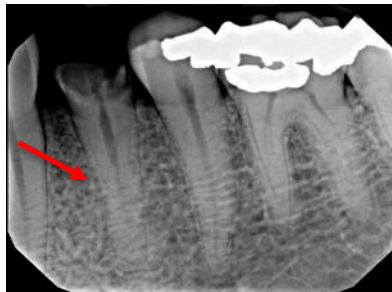
We should keep in mind that teeth are generally symmetrical so if only 1 canal is present, it should be located in the center of the tooth. Consider taking a CBCT (if you have one) when you are unsure if there is more than one canal. You will see whether it is centered in the root in all 3 planes. When one canal separates into two, the division is buccal-lingual, and the lingual canal generally splits from the main canal at a sharp angle. Consider using high magnification and light when treating these cases (or any case in general). When directing your access, keep in mind there is a lingual inclination of the crown.



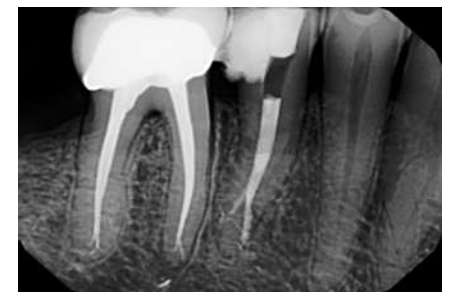
Asymmetrical canal displayed in the radiograph



Although rare, there can be 3 canals



Canal split half way down the root



If the canal disappears, it likely splits

1 Vertucci FJ: Root canal anatomy of the human permanent teeth. *Oral Surg Oral Med Oral Pathol* 58:589, 1984.

2 Trope M, Elfenbein L, Tronstad L: Mandibular premolars with more than one root canal in different race groups. *J Endod* 12(8):343, 1986.



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