

## Quiz 2

A 65 year-old male patient presented for a periodic exam. The patient did not report any symptom or discomfort in his mouth.

During clinical exam, secondary caries was detected around #20 crown margin (Fig 1). A vertical bitewing was taken (Fig 2) and there was no evidence of periapical or periodontal pathologies.

The patient was informed that the amount of remaining tooth structure needed to be evaluated to determine prognosis of the tooth and the patient wanted to start the process.

After removing the crown and unhealthy tooth structure, a clinical photo was taken to evaluate the amount of remaining tooth structure. (Fig 3)

1. Discuss prognosis of #20 from a biomechanical perspective.
2. Discuss feasibility of crown lengthening with and without ortho- extrusion and whether it will improve prognosis or not.
3. What would you recommend to your patient?



Fig 1

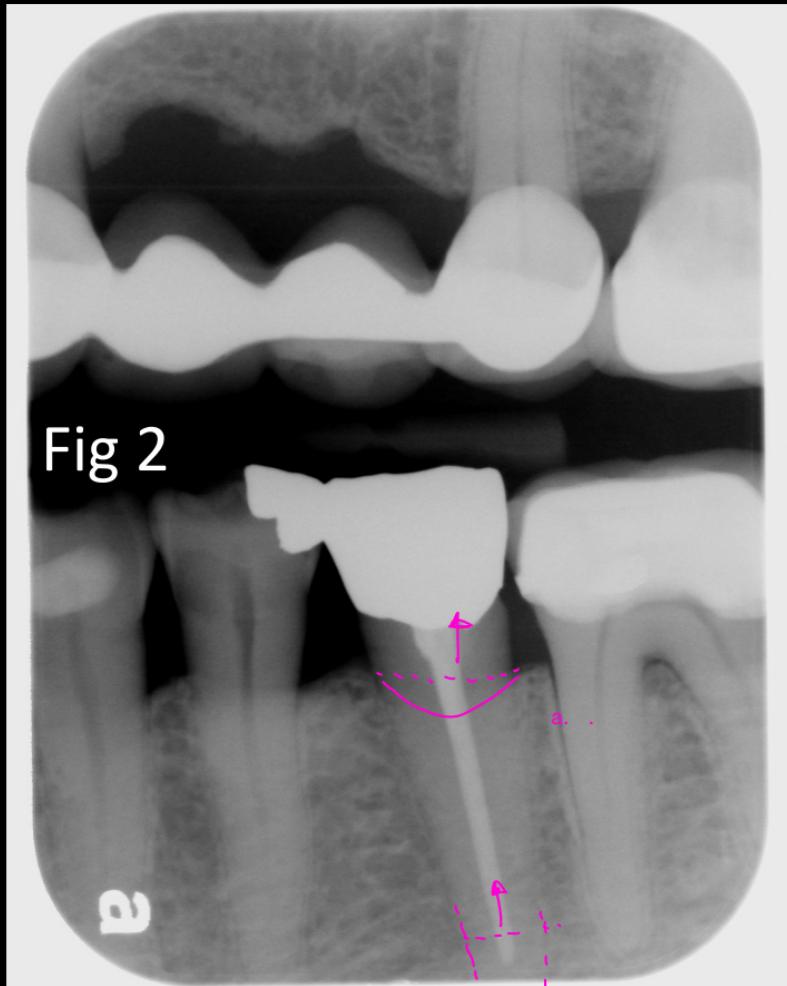
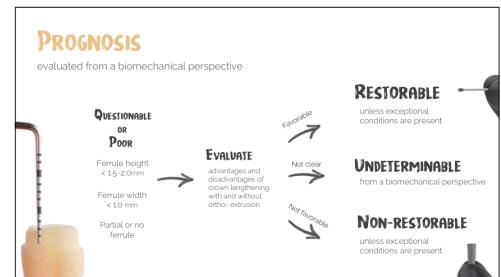
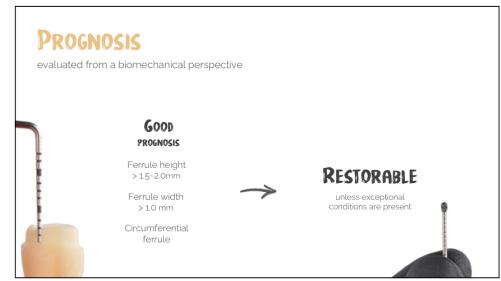


Fig 2



Fig 3

1. Prognosis #20 from biomechanical perspective
  - a. #20 has a poor prognosis because there is no ferrule - from this angle the clinical photo illustrates that remaining coronal tooth structure seems level with gingiva.
2. feasibility of cc lengthen
  - A. Cc lengthen w/o othro extrusion + prognosis
    - a. While crown lengthening could create an increase in ferrule height, ferrule width would be too thin due to the tapered root. Crown:root ratio also increases due to apical relocation of the prep finish line. Circumferential crown lengthening decreases bone level and could potentially expose the furcation on #19, thus possibly introducing periodontal risk factors. More stress would be applied to the critical areas, which is a significant biomechncial disadvantage for a tooth with a short root. Prognosis would be poor.
  - B. Cc lengthen w orthe extrusion + prognosis
    - a. Adding ortho extrusion would be beneficial in minimizing the increased crown:root ratio. Despite this benefit, the combination of both ortho extrusion and crown lengthening still would not provide adequate ferrule width because the root is tapered and there was no ferrule to begin with. Prognosis would be better than crown lengthening alone, but still poor.
3. Recommendation
  - A. Because crown lengthening and ortho extrusion are not feasible due to poor prognosis, I would place an 3-unit FDP 19-21 because the abutment teeth would have enough ferrule.



Dr An

- how much tooth structure has contact with axial wall of crown
- Inadequate ferrule so cant restore as is
- Cc length + ortho extrusion improved prognosis. Root not too short for premolar. Not too straight or tapered.
- Could use small diameter post
- Fair prognosis
- Xb another option.
- Pt chose xb and did 3 unit bb. Pt didnt want to go thru extrusion and cc lengthen surgery. This is part of full mouth rehab.
- Pfm 3 unit bb. Ovate pontic.