Silicon Valley Endodontics & Microsurgery

Jason C. Kung, DDS, MS — Specialist Endodontist

(669) 234-2354 · 1565 Hollenbeck Avenue, Suite 106, Sunnyvale, CA 94087 · svendodontics.com

Root Resection / Hemisection — Chairside Decision Checklist

When root resection should be on the table before extraction. Tick each box — the more that hold, the stronger the save-vs-replace case. Evidence-based; see references below.

- ☐ **1. Periodontal indication, not non-periodontal.**
  Resections for isolated furcation / single-root bone loss survive longer than those for caries, VRF, or single-root endo failure (Park 2009).
- ☐ **2. Bone support on the retained root(s) > ~50%.**
  The only statistically significant site factor in Park 2009. Generalized loss on the roots you'd keep = borderline at best.
- ☐ **3. Not an isolated mandibular terminal abutment under a long bridge.**
  Dominant 10-yr failure mode is root fracture + cement washout on a resected distal abutment of a 3+ unit bridge (Langer 1981). Plan a single crown instead.
- ☐ **4. Parafunction absent or actively managed.**
  Bruxism / heavy load is a leading cause of resected-root fracture. Only realistic with an occlusal appliance the patient will wear — document it.
- ☐ **5. Favor maxillary (two large roots) over mandibular (one small root).**
  Upper resection of a single buccal root with palatal retained tolerates load well; a slender lower hemisected root carrying full load fails earlier (Klavan 1975, Bühler 1988).
- ☐ **6. Single-root endo-perio on a maxillary molar can be saved with resection + GTR.**
  Treat the retained roots first, then resect the affected root with guided tissue regeneration of the defect (Oh 2012). Best case: localized breakdown, otherwise healthy support.
- ☐ **7. Set the survival expectation honestly: ~62–97% at 10–15 yrs.**
  Driven almost entirely by case selection (Langer 1981 ~62%; Bühler 1988 ~68%; Fugazzotto 2001 ~96%, implant-comparable). A well-selected candidate lasts; a poorly selected one does not.

How to refer for evaluation

For a candidate resection or hemisection case, the most useful packet to send is:

- Periapical of the tooth in question, plus a recent bitewing if available.
- CBCT (limited FOV) if you have one — the single most useful piece of information for resection planning. If not, we capture one on the Veraview X800 in Endo Mode (80 µm voxel, 40 × 40 mm) at the consult.
- Recent perio chart — or just pocket depths on the tooth, with mobility class and bleeding-on-probing notes.
- A line on occlusion: bruxism history, existing appliance, planned restorative end-state (single crown vs. bridge abutment).

Refer or discuss a borderline case

Online referral form: svendodontics.com/referral · Same-day phone discussion: (669) 234-2354

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References: Park 2009; Langer 1981; Klavan 1975; Bühler 1988; Oh 2012; Fugazzotto 2001. Full citations at svendodontics.com/for-referring-dentists. Decision aid only — clinical judgment governs.