

Supplemental Table 1: Publications of GTR in dogs, including case reports, case series, and a prospective study. Clinical success was documented in all instances, providing proof-of-concept.

Publication	Tooth/Teeth	Pre-operative degree of periodontal disease	Bone graft material	Barrier membrane	Post-operative awake recheck at 10-14 days	Post-operative anesthetized recheck at 6-8 months
Smith, 1995 Case report (10 year-old German Shepherd dog)	-Chronic periodontal defect secondary to a string foreign body in the interproximal space of left mandibular fourth premolar and first molar involving soft tissue and bone	-4mm gingival recession with a 6mm periodontal pocket for 10mm of total attachment loss -Radiographs revealed periodontal bone loss	Autogenous corticocancellous bone harvested from the left ventral mandible	None	-No post-operative complications reported by the veterinarian owner, but not rechecked by the clinician	-4mm gingival pocket -Partial restoration of periodontal bone with a persistent 4-5mm bone defect resulting in approximately 60% diminution in the size of the original boney defect
Beckman, 2004 Case report (7 year-old female spayed American Eskimo dog)	-Right mandibular first molar	-6mm periodontal pocket on the distal aspect -Vertical 2-walled osseous defect on the distal aspect of the distal root with a 2-mm decrease in alveolar crestal bone height	Consil	None	-Complete healing of the surgical site	-3mm periodontal pocket on the distal aspect -Bone deposition on the distal aspect with a 1mm infrabony defect measured radiographically -Restoration of the periodontal space
Rice, Snyder, and Soukup, 2012 Case report (11 year-old male castrated Cairn Terrier)	-Left mandibular first molar (mesial aspect of the mesial root)	-12mm periodontal pocket along mesial root -Approximately 50% vertical bone loss associated with only the mesial root -2-walled infrabony defect of the mesial root	Autogenous cortical bone harvested from the vestibular cortical plate ventral to the alveolar bone of right mandibular first molar	Doxirobe	-Recommend to be performed by referring veterinarian due to travel distance - no further remarks	-2mm gingival recession with 2mm attached gingiva, for 2mm total attachment loss -Radiographically appropriate alveolar crestal bone height with osteointegration of graft -Radiographically apparent PDL space traceable along the entire length of the mesial root surface
Stepanuik & Gingerich, 2015	-Right maxillary fourth premolar (x1)	-The mean periodontal probing depth was 7.2- mm (range 5 to 12-	Periomix	Ossiflex	-No membrane exposure, evidence of surgical site infection,	-All periodontal probing depths decreased to < 3-mm, with a mean

Prospective study (11 teeth in 8 client owned dogs)	-Left maxillary fourth premolar (x2) -Right maxillary canine (x5) -Left maxillary canine (x3)	mm, median 6-mm) -Intrabony pockets present in all cases			hemorrhage, or swelling, and the periodontal flaps were healed	depth gain of 5.4mm -Intrabony bony pocket depth decreased in all cases -Intraoral radiographic improvement of alveolar bone height was subjectively noted in all cases
Alterman & Huff III, 2016 Case series (4 teeth in 3 client owned dogs)	-Right maxillary canine (x1) -Left maxillary canine (x2) -Left mandibular first molar (x1)	-Stage 2-4 periodontal disease	Periomix	Doxirobe	-Complete healing of all GTR sites	-Attachment gain and new bone growth of all GTR sites
Bebel & Rochette, 2019 Case report (10 year-old female spayed miniature dachshund)	-Left mandibular canine (lingual aspect)	-12mm lingual periodontal pocket -3-walled bony pocket on the lingual aspect -Stage 3 periodontal disease	Periomix	Ossiflex	-Surgical site healing	-Periodontal probe measurement 3mm lingually -Radiographic resolution of the infrabony pocket