

Supplementary TABLE S4. Comparison of Regenerative Outcome of Stem Cell Therapy for Sinus Floor Augmentation

Regenerative Modality	Study Design	Study Endpoint(s)	Outcome assessment (analysis method)	n patients	Authors
rhBMP-2 vs. autogenous	RCT	6 months	Bone mineral density (mg/cm ³) higher in autogenous group: 280 vs. 200 (CT scans)	160	Triplett, Boyne et. al. '09
rhBMP-2 + xenograft vs. xenograft alone	RCT	6-9 months	New bone formation (% new bone) higher in xenograft alone group: 25 vs. 16 (histology)	21	Kao, Fiorellini et. al. '12
rhBMP-2 (4.2 mg) + allograft vs. rhBMP-2 (8.4 mg) + allograft vs. allograft alone	RCT	6-9 months	Higher bone density (HU) in allograft alone group than both rhBMP-2 groups: 449 vs. 410 (8.4 BMP-2) vs. 315 (4.2 BMP-2) (CT scans)	36	Froum, Tarnow et. al. '14
MSCs + β TCP	Case series	3 months	41 % new bone formation (histology)	6	Shayesteh, Ahmadbeigi et. al '08
BMAC + xenograft (test) vs. autogenous bone + xenograft (control)	RCT	3-4 months	No difference in new bone formation (% new bone) between groups: 14% vs. 12% (histology)	24	Sauerbier, Koch et. al. '11
Cellular allograft vs. allograft	RCT	3-4 months	Higher vital bone content (% new bone) in cellular allograft group: 33 vs. 18 (histology)	22	Gonshor, Prasad et. al. '11
MSC + β TCP vs. β TCP	RCT	4 months	Higher bone volume fraction (BVF) in MSC + β TCP group: 0.49 vs. 0.43 (μ CT)	30	Present study

rhBMP- recombinant human bone morphogenetic protein

MSCs- mesenchymal stem cells

β TCP- beta tricalcium phosphate

RCT- randomized controlled clinical trial

CT- computed tomography