Histomorphometric Analysis of Maxillary Sinus Augmentation Using an Alloplast Bone Substitute* 

Roni Kolerman, DMD; Gal Goshen, DMD, MSc, MBA; Nissan Joseph, DMD; Avital Kozlovsky, DMD; Saphal Shetty, DMD and Haim Tal, DMD, PhD
Purpose
To evaluate the regenerative potential of a fully synthesized homogenous hydroxyapatite: β-tricalcium phosphate 60:40 alloplast material in sinus lift procedures.

Materials and methods
Hydroxyapatite:-tricalcium phosphate was used for sinus floor augmentation. After 9 months, 12 biopsies were taken from 12 patients. Routine histologic processing was performed and specimens were analyzed using a light microscope and a digital camera.

Results
Histologic evaluation showed 26.4% newly formed bone, 27.3% residual graft material, and 46.3% bone marrow. The osteoconductive index was 33.5%.

Conclusion
Within the limits of the present study, it is suggested that 4Bone SBS is a biocompatible and osteoconductive graft permitting new bone formation similar to DBBM and allograft materials when used for sinus augmentation procedures.