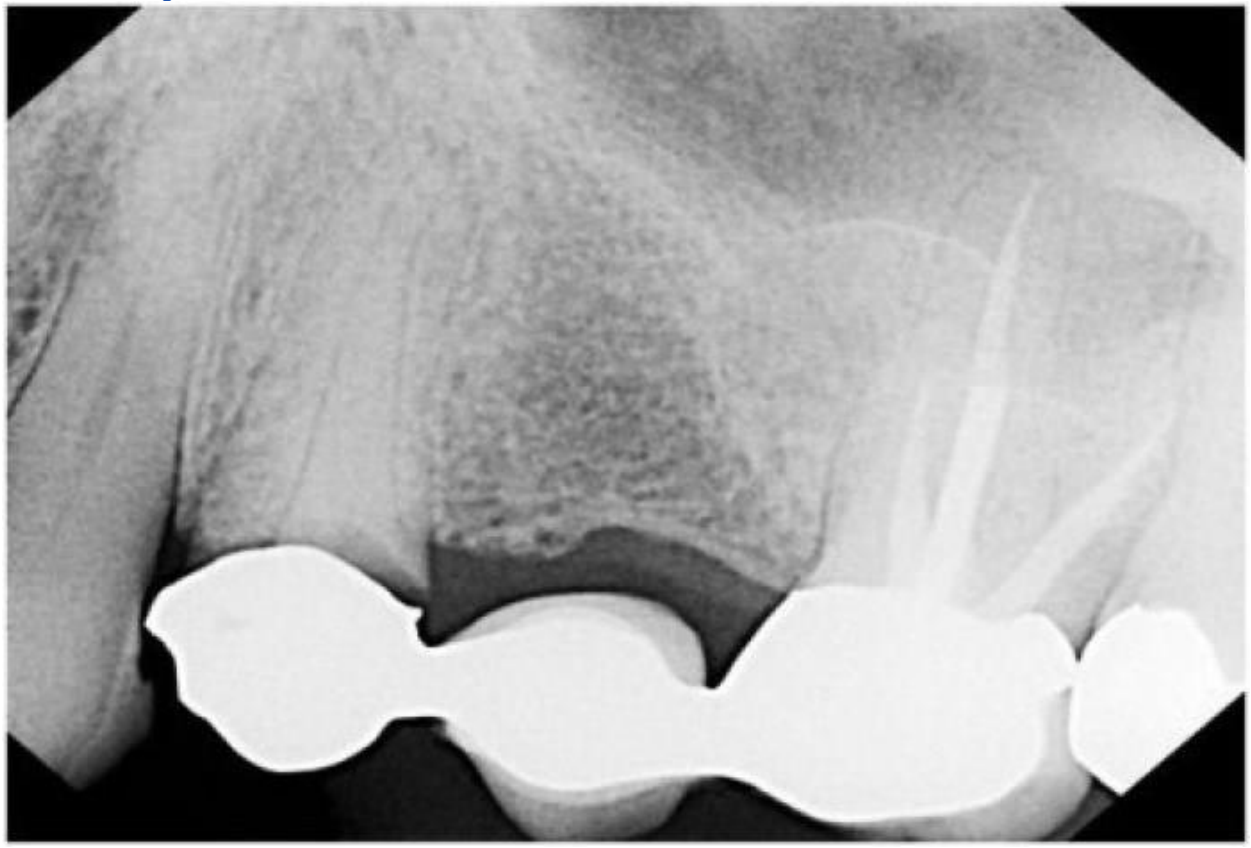
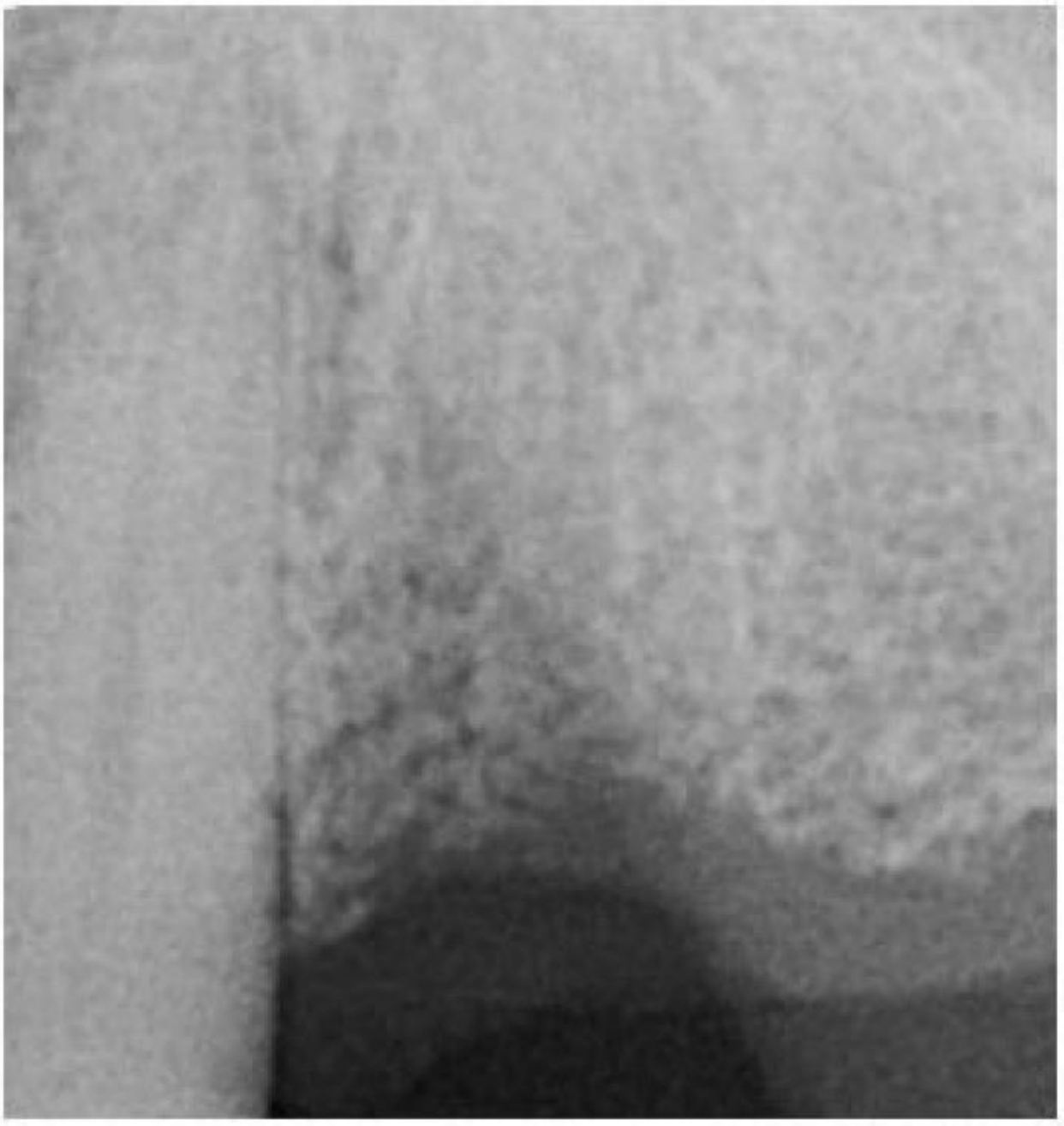
Socket Graft™ Cases with Histology

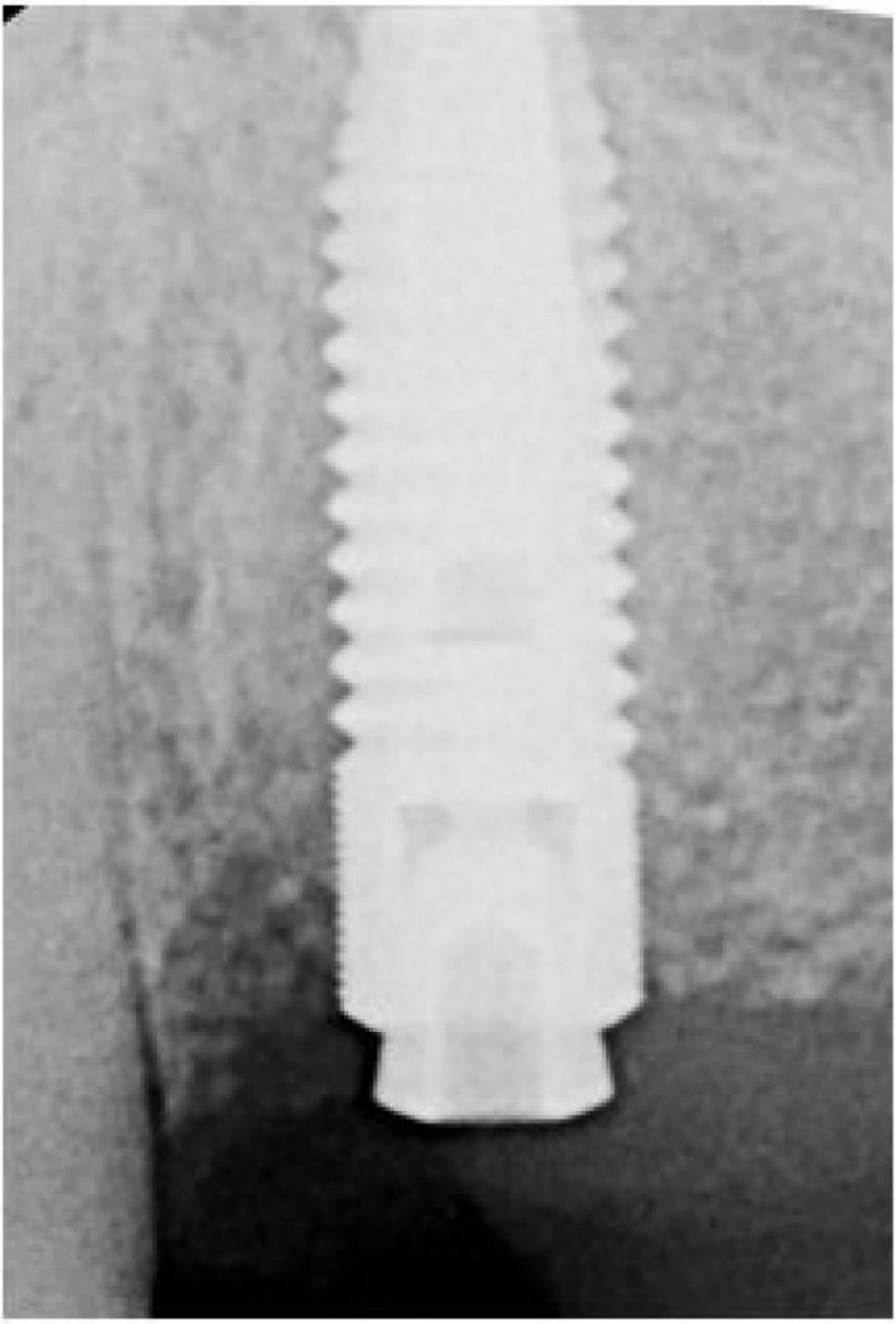
6-Week Implant Case



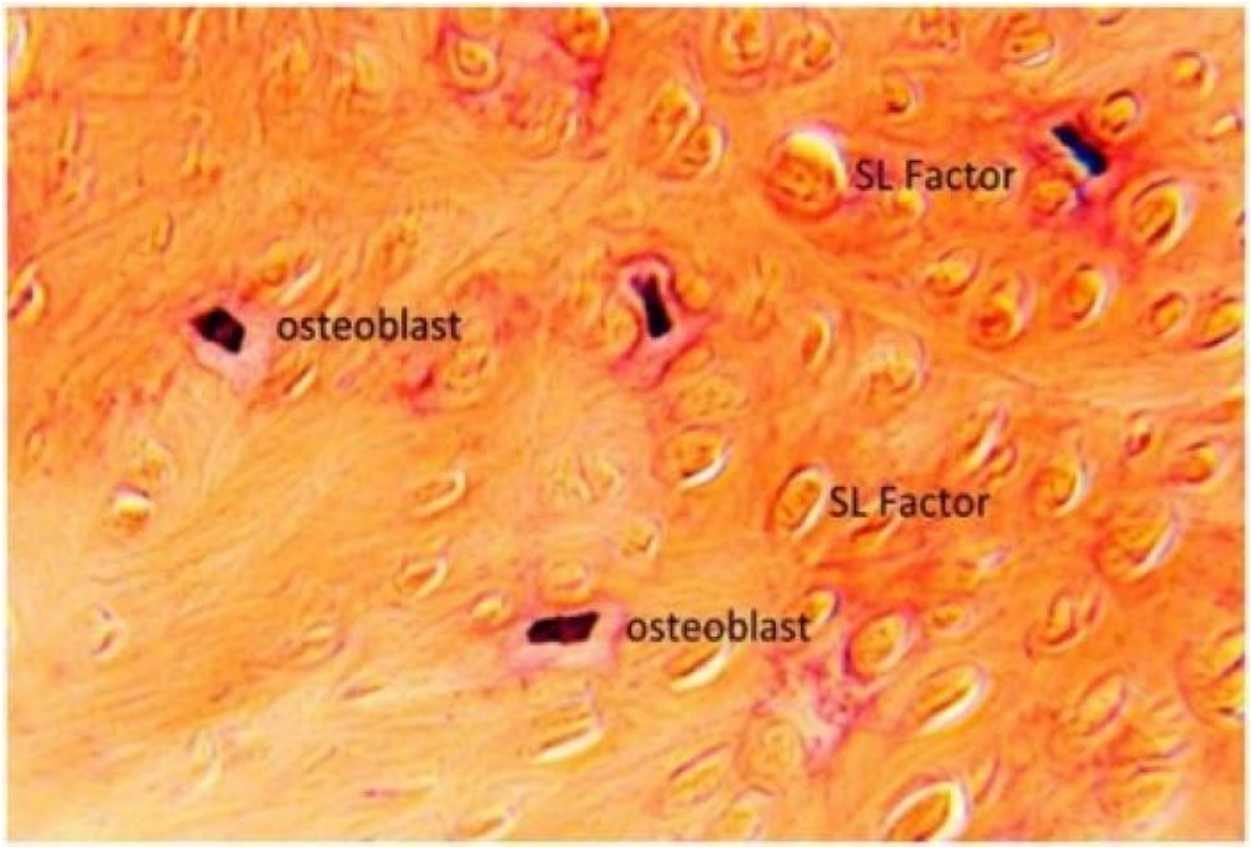
#12 was determined to be unrestorable. The socket was grafted with **Socket Graft™**.



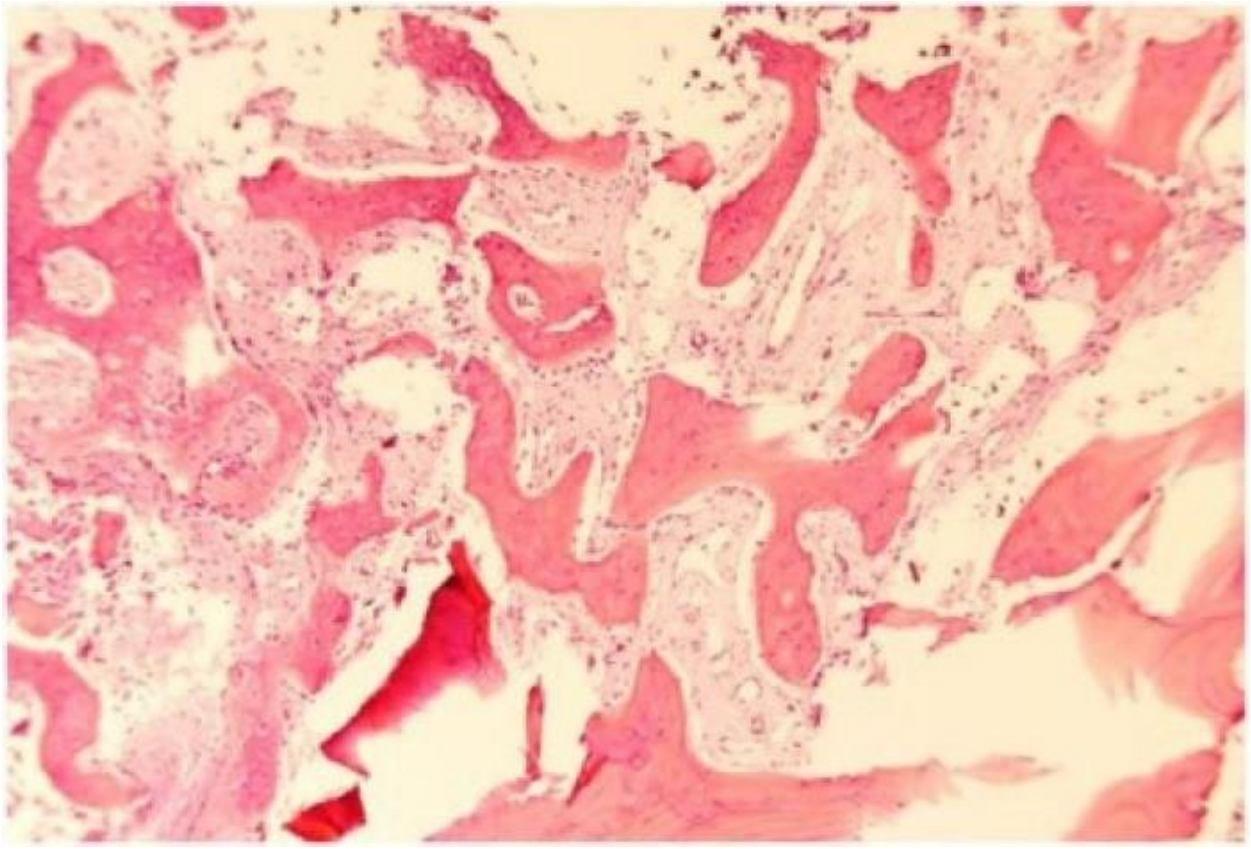
This radiograph shows the extraction site of #12 six weeks after grafting.



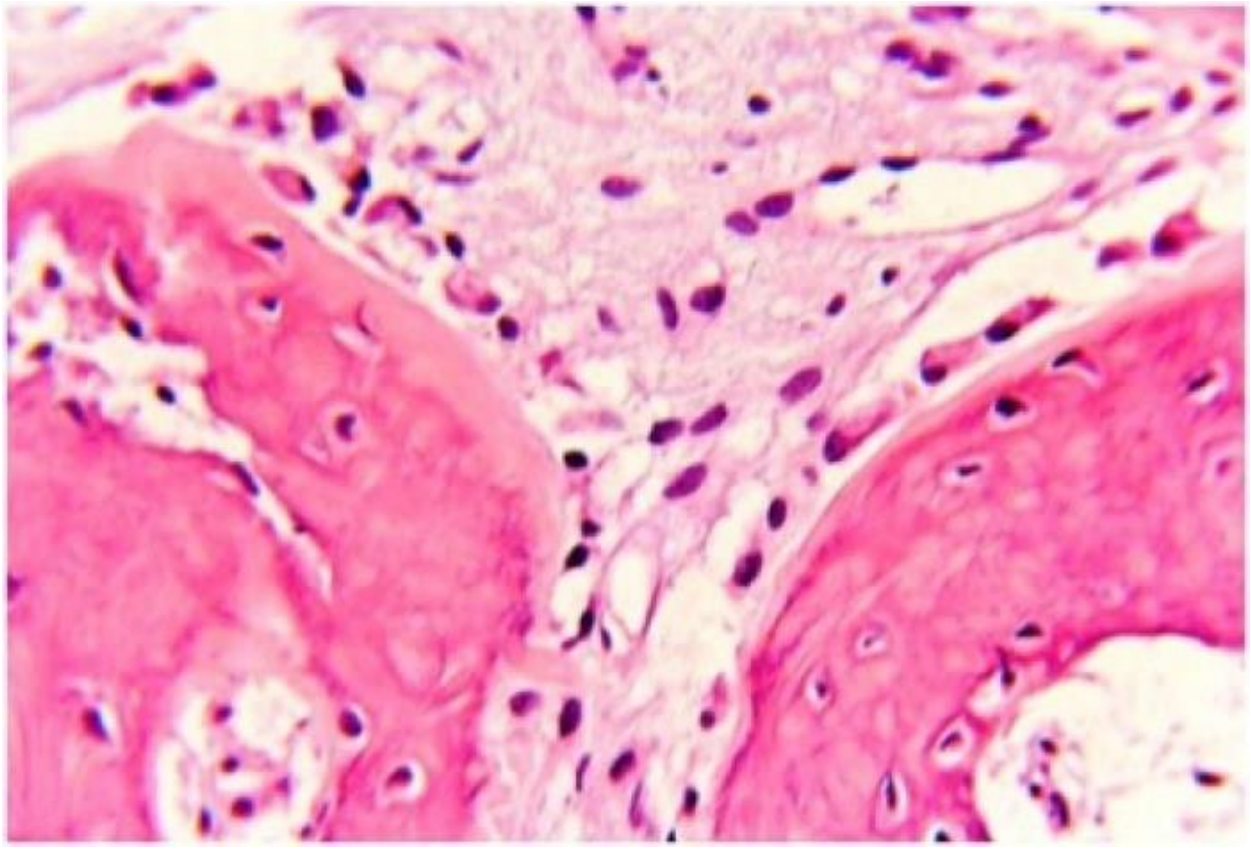
Implant placement was performed at 6 weeks after extraction and grafting. At the time of implant placement, a core sample was taken with the results as follows:



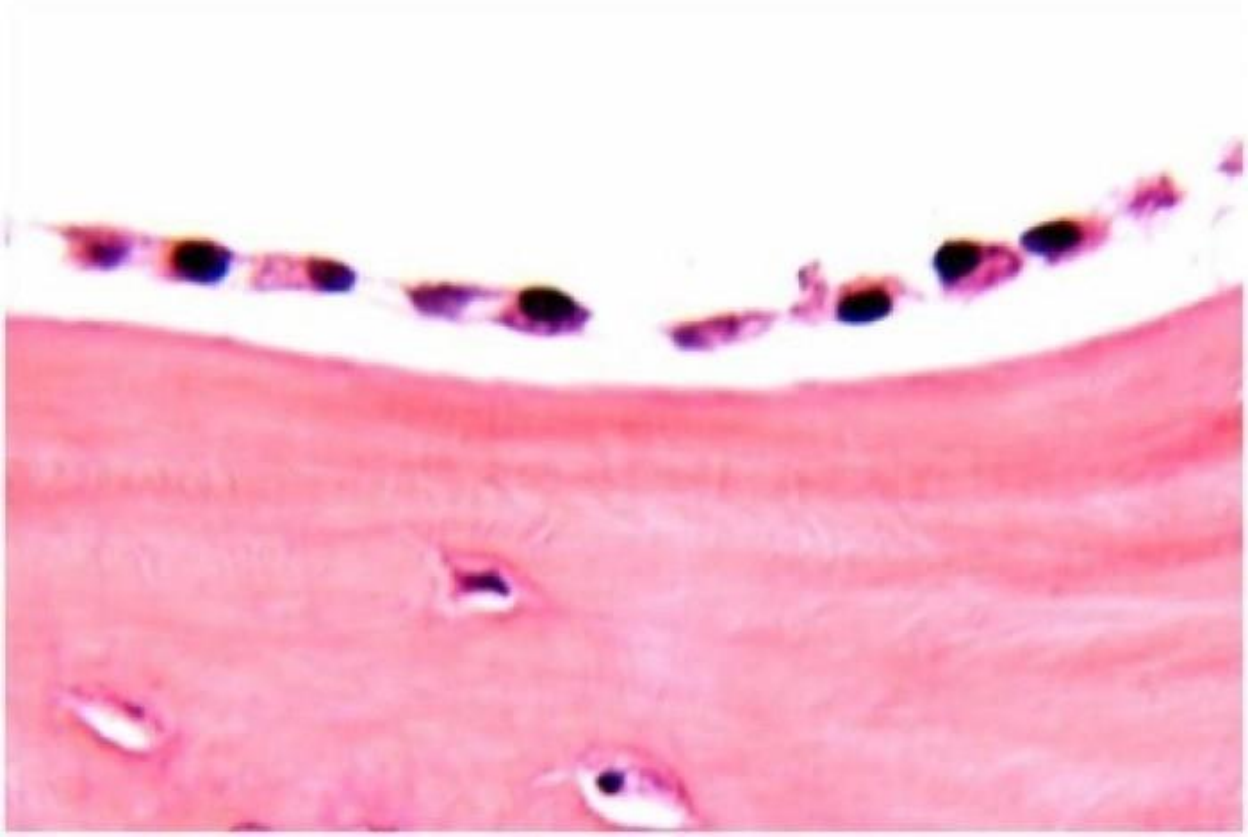
This high power photomicrograph of Socket Graft™ shows **osteoblasts** migrating throughout Socket Graft™. The vacuoles in the graft material contain SL Factor that is absorbed by the osteoblasts. The osteoblast in the upper right corner is fused with the vacuoles and is actively absorbing SL Factor. Socket Graft™ is like no other bone graft material. The entire healing process is skipped and osteoblasts begin to migrate into Socket Graft™ as soon as it is placed. Since Socket Graft™ functions as a stimulating growth medium, the graft material is populated with osteogenic cells before blood vessels arrive.



This low power photomicrograph is from the above socket grafted with Socket Graft™ after 6 weeks. Significant bone formation has occurred and very little graft material remains.



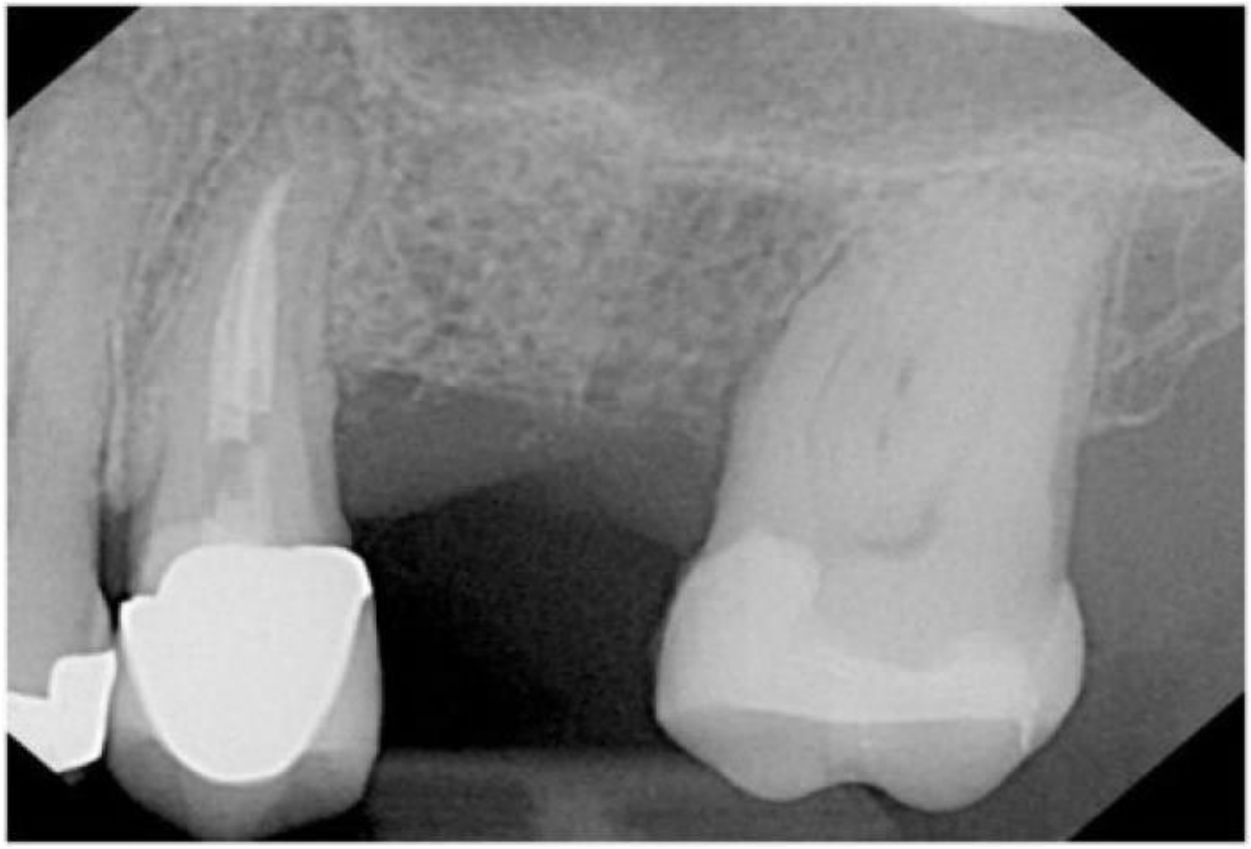
This high power photomicrograph is from the previous core sample taken after 6 weeks. The mineralized bone is covered with osteoid, which is lined by osteoblasts. Osteomacs are found in the canopy of cells over the osteoblasts.



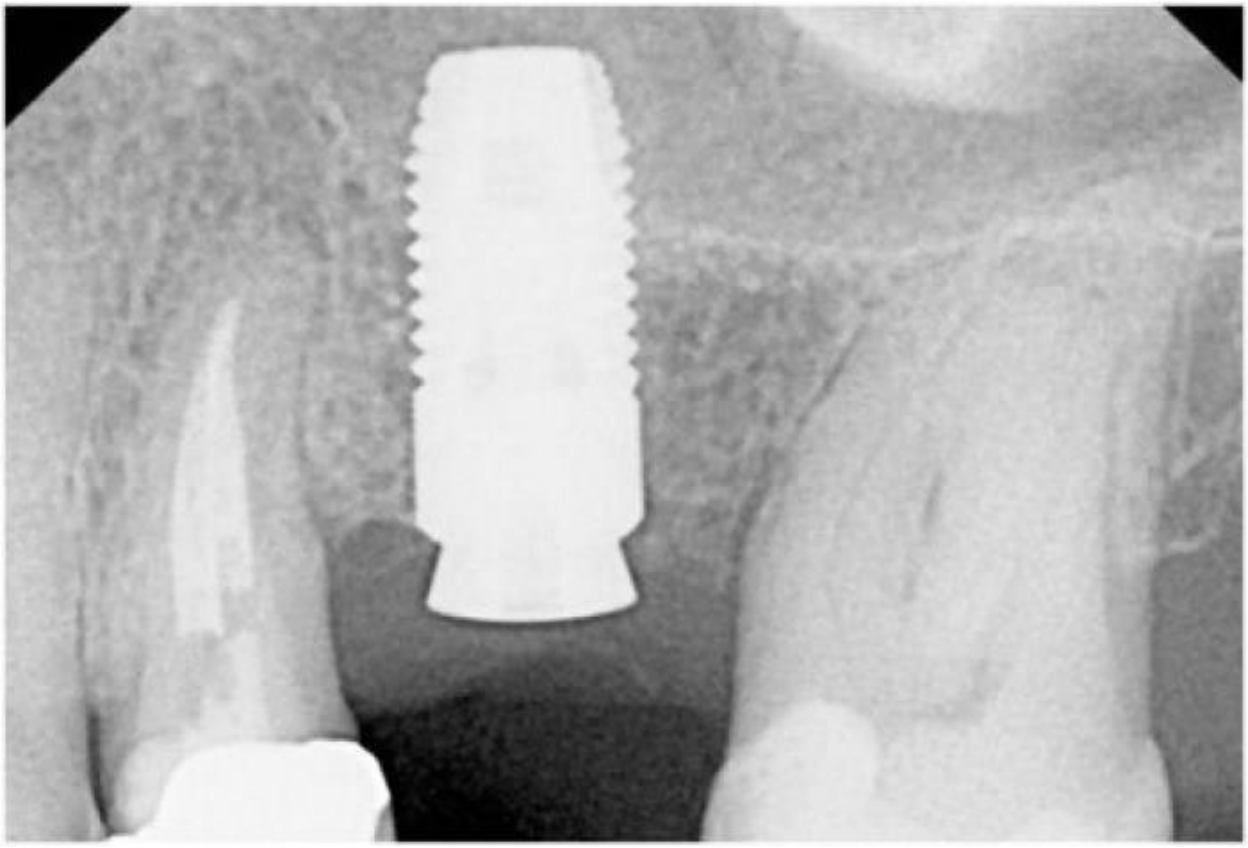
This high power photomicrograph shows osteoblasts that have been isolated and floated over the mineralized surface. The osteoblasts are cuboidal in shape and are densely packed, indicating the stimulation of osteogenesis. Osteoblasts are responsible for bone formation and implant integration. The more osteoblasts are present and stimulated directly affects your implant integration rate. Socket Graft™ has the highest implant integration and long term success rates of any bone graft material.

8-Week Implant Case

#14 presented with caries and a buccal fistula. The gutta percha was placed in the fistula to confirm the source of the infection was the apex of the distal buccal root of #14. Significant periodontal bone loss was found mesial and distal to #14.
#14 was extracted and grafted with Socket Graft™.



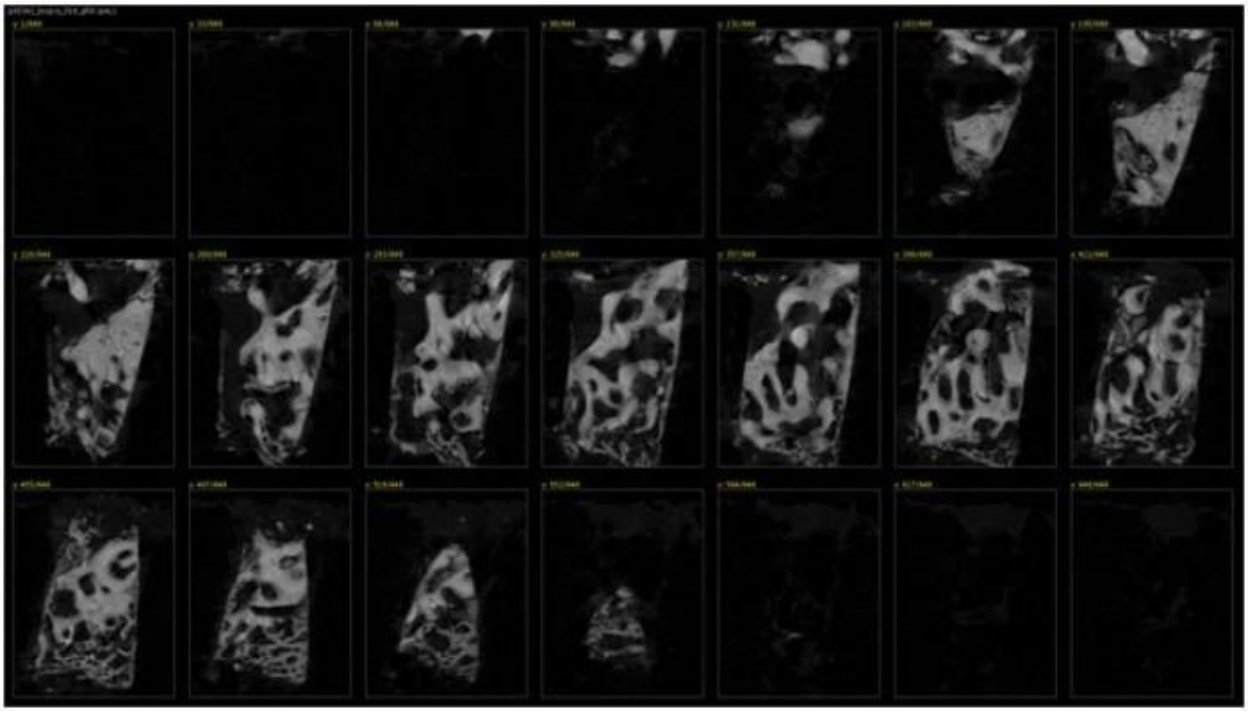
8 weeks after extraction and grafting with Socket Graft™.
Note that Socket Graft™ will regenerate bone to the alveolar crest of the extraction site. If more bone is needed, ridge augmentation is indicated.



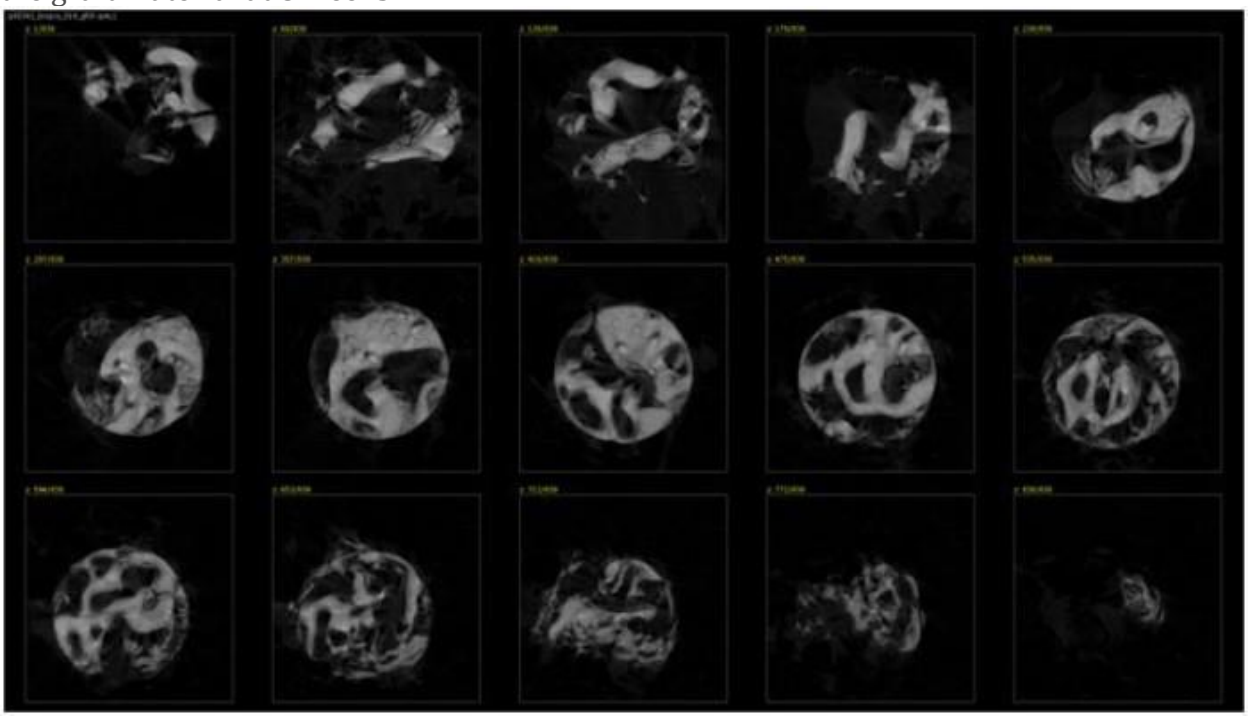
8 weeks after extraction and grafting a core sample was take at the time of implant placement.

The sinus membrane was exposed through the implant osteotomy and raised hydraulically. The socket was also filled with graft material. As the implant was placed, the graft material raised the sinus membrane. For hydraulic lift of the sinus membrane, we advise the use of **Sinus Graft™** as outlined for the **Steiner Sinus Lift™**.

The core sample was evaluated with a micro CT scan to determine the morphology and physical characteristics of the bone generated 8 weeks after grafting with Socket Graft™.



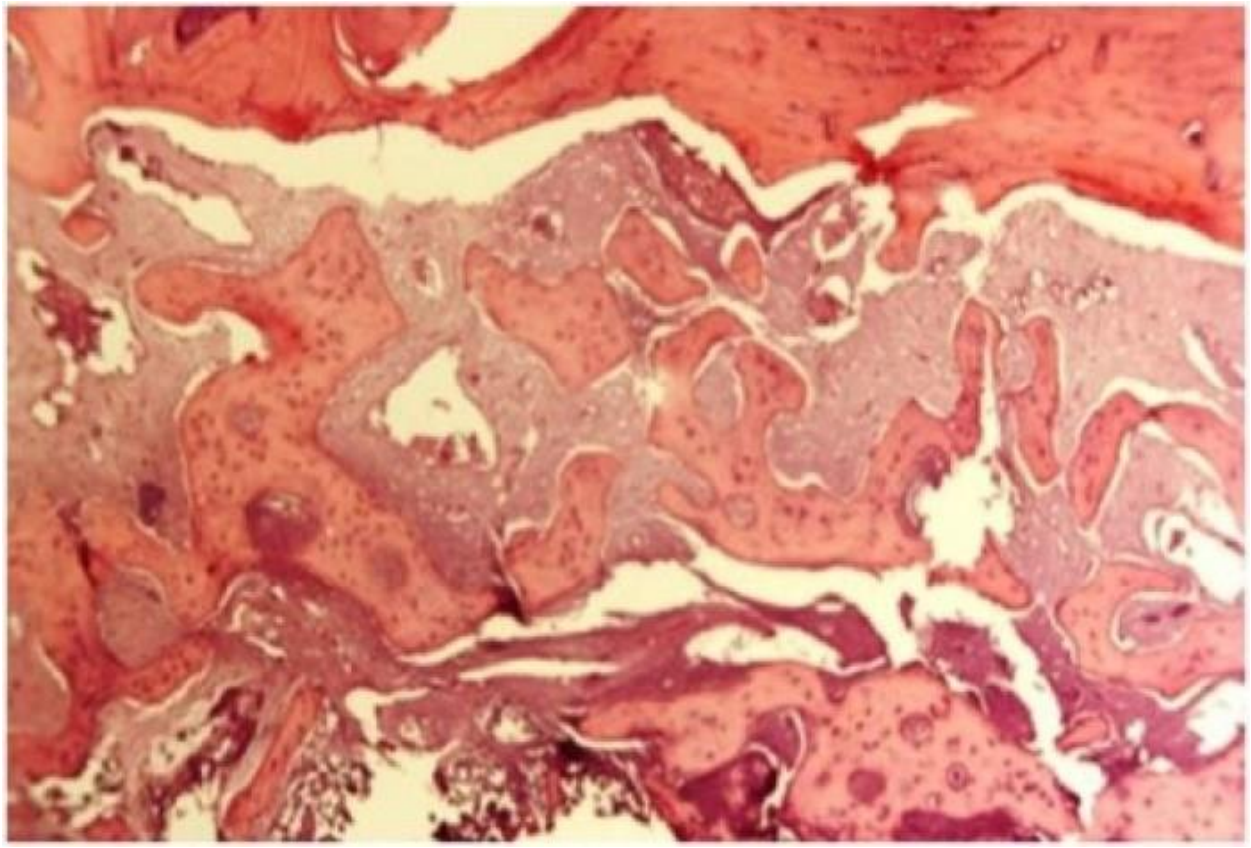
The micro CT scan reveals excellent trabecular morphology with complete resorption of the graft material at 8 weeks.



Horizontal radiographic cuts through the core sample shows actively growing bone nodules and excellent trabecular morphology at 8 weeks.

Sample	Group	AMD	AMD.SD	TMD	TMD.SD	TV	BV	MV	BS	BV/TV	MV/TV	BS/TV	BS/BV	SMI
NA	NA	[mg HA/cm3]	[mg HA/cm3]	[mg HA/cm3]	[mg HA/cm3]	[mm³]	[mm³]	[mm³]	[mm²]	[%]	[%]	[1/mm]	[1/mm]	[1]
p00842_biopsy_014	Biopsy	432.86	384.71	809.57	152.20	3.73	1.81	1.92	29.10	48.44	51.56	7.80	16.11	-0.02

An analysis of the data derived from the micro ct scan shows an SMI of -0.02 which reflects a near ideal bone trabecular morphology. A BV/TV of 48 % indicates that 48% of the core sample was mineralized bone. This figure is higher than normal mineralized trabecular bone. TMD refers to the density of the mineralized tissue. The TMD of this sample is 809 which is well above normal trabecular bone. After 8 weeks, this site grafted with Socket Graft™ has produced superior bone than is found in normal trabecular bone.



This low power photomicrograph is from a socket after 8 weeks. The top of the core sample is the original socket wall which has retained its vitality. The amount of mineralized tissue at 8 weeks has already passed the normal amount of mineralized tissue found in trabecular bone.