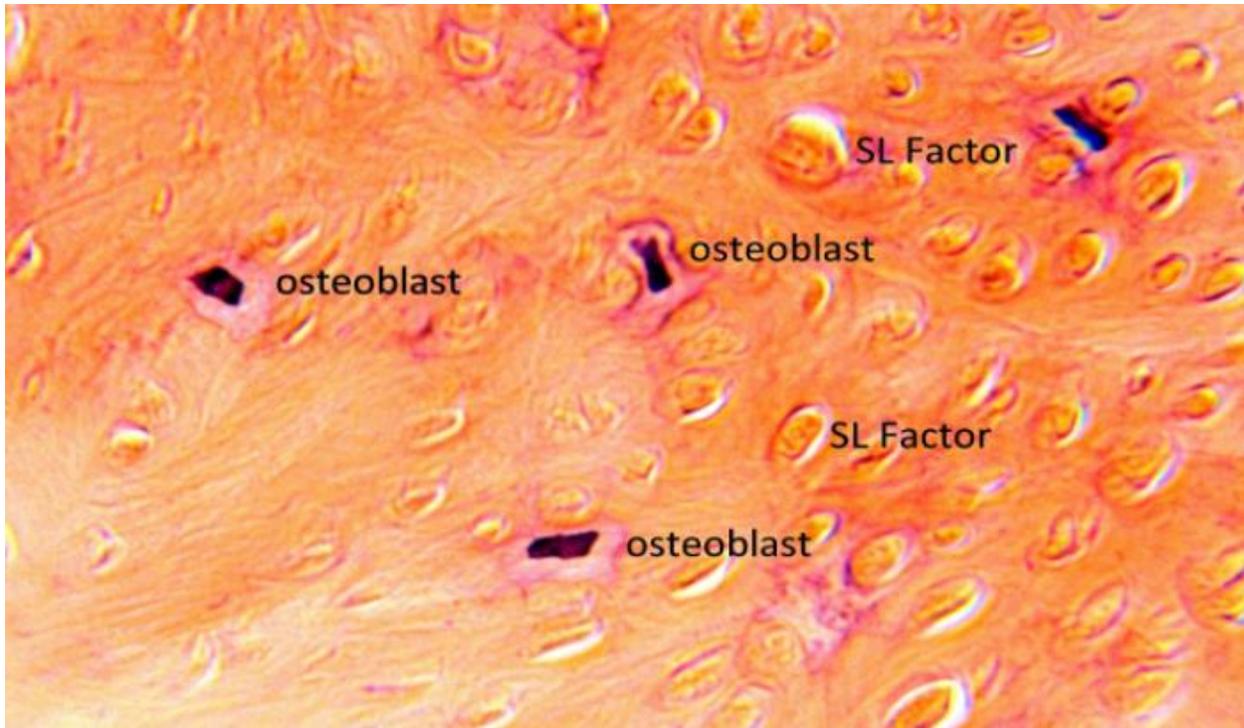
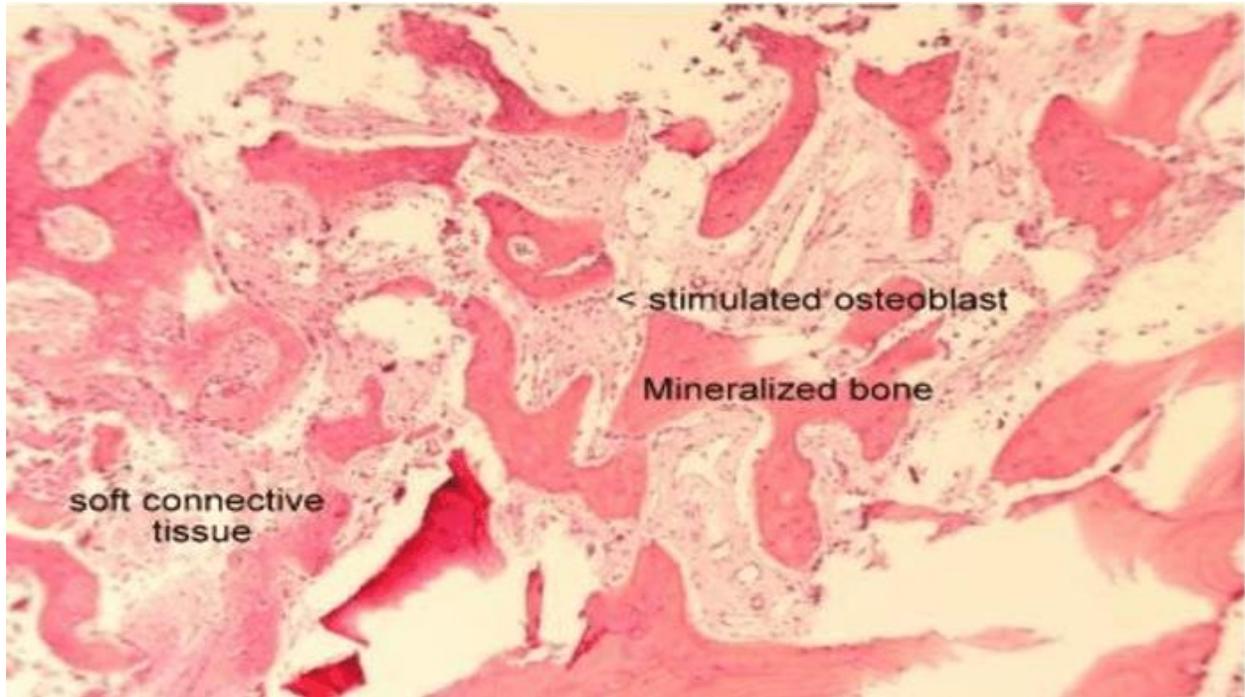


Socket Graft™ Histology



SL Factor Absorption

This human histology illustrates what occurs when our graft material is placed in bone. The material becomes hydrated by extracellular fluid and operates as a growth medium. Our patented compound, SL Factor, exists in vacuoles within the material, scattered around the matrix. Multiple osteoblasts migrate from the surrounding bone into the graft material. In the upper right corner, an osteoblast is seen being fused to two of the vacuoles and absorbing SL Factor. As they migrate throughout the material, the osteoblasts organize it into functional, mineralized bone.



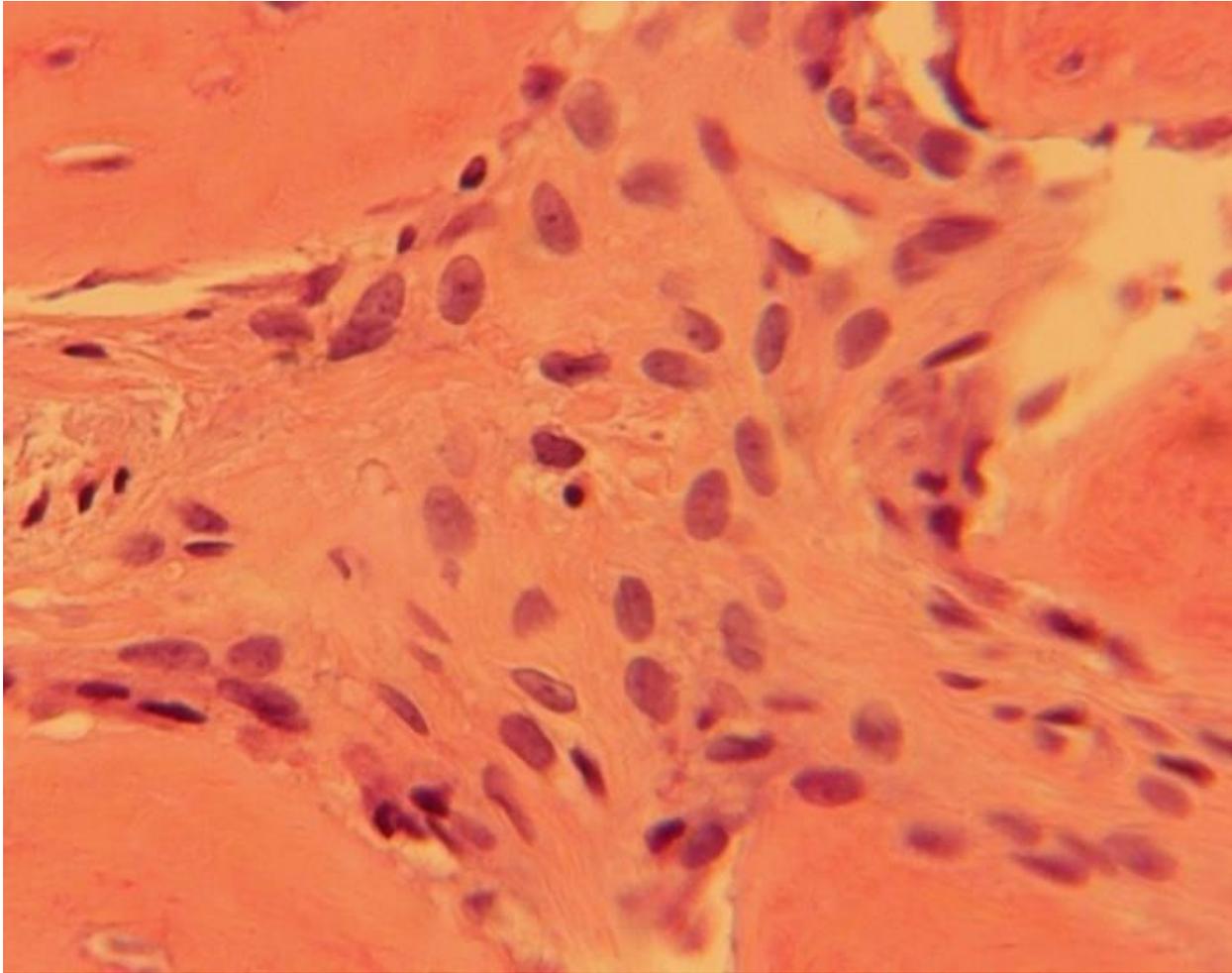
6 Weeks After Grafting

This is histology of a site 6 weeks after being grafted with Socket Graft™. The light pink material is newly formed mineralized tissue. The osteoblasts are stimulated and can be seen lining up on the mineralized tissue, beginning to secrete osteoid on the surface. The key takeaway is that there is no inflammation present. In normal bone formation, there is no inflammatory reaction.



6 Weeks High Power

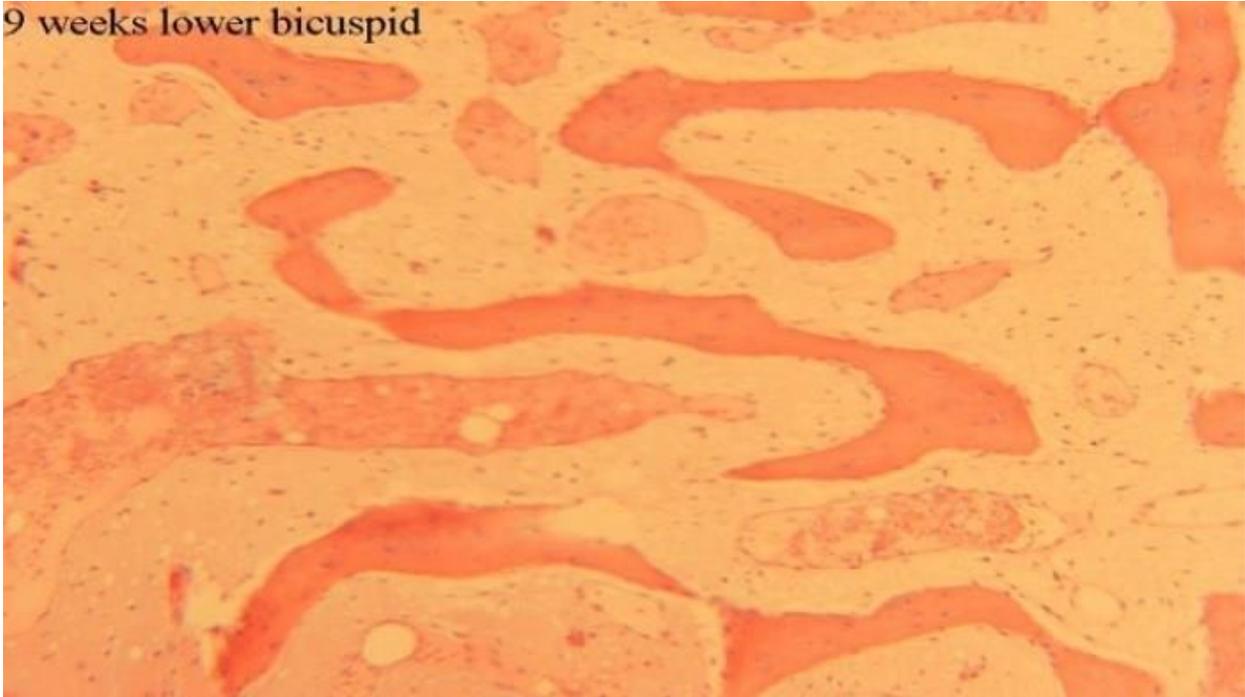
This is a high power of previous image. Production of mineralized bone is identified by the darker pink material. A thick layer of osteoid is present, which has been secreted by the osteoblasts. The soft tissue that surrounds the mineralized tissue is devoid of any inflammatory infiltrate. What you see are very highly stimulated osteoblasts producing mineralized tissue. The graft material has been rapidly resorbed at 6 weeks.



Stimulation and Proliferation of Osteoblasts

This is a histologic section of a site grafted with Socket Graft™. Osteoblasts typically only form on the surface of areas that are mineralizing. However, this image shows an extraordinarily high concentration of osteoblast cells in the middle of soft tissue, illustrating a high level of osteoinduction and osteoblast proliferation.

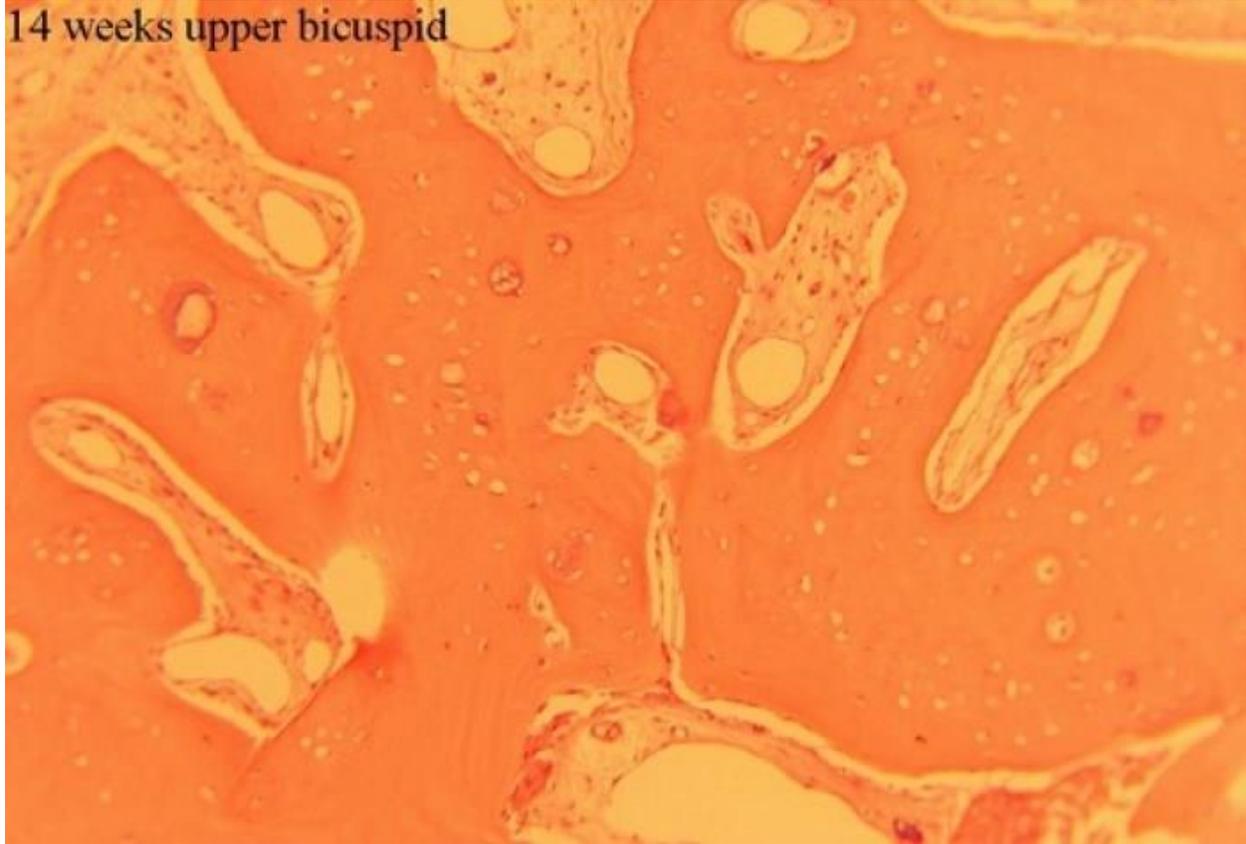
9 weeks lower bicuspid



9 Weeks, No Inflammatory Response

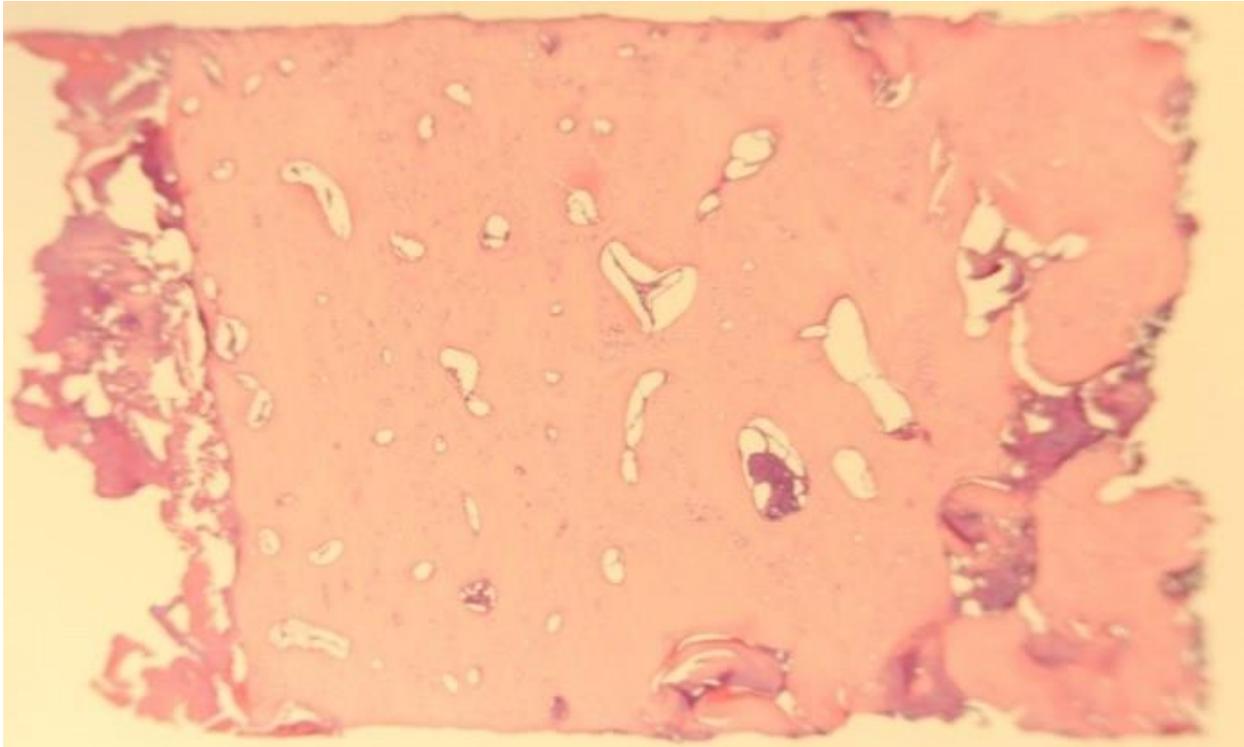
This image is at 9 weeks after grafting a lower bicuspid with no inflammation present. This image illustrates newly formed trabeculae (cancellous bone) with a vascular supply. This 9-week graft site is extensively vascularized with a large portion of this histologic section made up of vascular tissue. There is nearly as much vascular tissue as mineralization. This is because the regenerative process requires a highly functioning vascular supply. The process involves stimulating the vascular supply to supply the nutrients in the area and remove bi-products to facilitate rapid regeneration.

14 weeks upper bicuspid



14 Weeks, Upper Bicuspid

This is histology of an upper bicuspid site grafted with Socket Graft™. There is no inflammation present and although most of the section has become mineralized tissue, there is a tremendous amount of vascular supply present. The vacant areas are large blood vessels. There is ongoing active mineralization and bone formation occurring. Normal bone has between 35-45% mineralized bone in it. Cancellous bone usually has around 50%, in the most ideal situation. Here, however, we see **75%** mineralized tissue, which is bone formation beyond what is found in normal healing.



6 Months

This core sample is an example of what is seen 6 months after grafting with SG. There is 90% highly mineralized tissue with a vascular supply. At about 6 months when the entire site has mineralized, the osteoblast cells begin to migrate out of the site and into the surrounding tissue to improve mineralization in those areas.

However, this tissue does not stay like this. While the tissue is normal, the percentage of mineralized tissue is extremely high. When the implant is finally placed, the tissue will remodel and realign itself according to the load. It will go from this tissue to an organized cancellous bone with organized trabeculae.