

Clinical Appearance of Socket Graft Plus™



An allograft is dead bone. However, when you place it in a patient's bone, it looks like living bone. That's because a radiograph cannot tell the difference between dead and living bone. And appearances can be deceiving.

According to the radiographic image, the grafted site looks good. However, the allograft may be completely encased in fibrous tissue or may even be infected, but it still looks good on a radiograph.

Now consider the following images, with respect to the clinical appearance of an allograft and that of a regenerative product like Socket Graft Plus™.



Allograft placed after 20 days.



2 week Post-Op with Socket Graft Plus™
Granules remain in tissue, but can be removed.

When β TCP is placed in bone, it is obviously present on the radiograph, but does not look like bone. Even though bone is growing around the graft particles, the particles are evident in the radiograph, making it appear less like bone the way an allograft would appear.

The “Turn Over”

Dentists believe allografts “turn over” into normal bone, but after the site has calcified. The allograft, per the most current research, never does “turn over”, leaving the site filled with approximately **30%** retained graft material that is never resorbed. Regardless, dentists see the radiograph and assume the site is filled with normal healthy bone. When the dentist opens a flap, he sees bone and drills into the site. Again, the assumption is that the site being drilled is solid normal bone, but that is not true.

The opened site, grafted with an allograft, contains graft particles in the gingiva and on the surface of the graft site, but they are not visible because they are bone particles that blend in with the rest of the bone. The graft particles in the gingiva and on the crest are bone, but it is non-living bone. The only evidence of the allograft particles on the crest is the bleeding, resulting from the inflammation caused by the presence of the inflammatory graft particles.

What am I seeing?

On the other hand, when a dentist opens a site grafted with β TCP, the graft particles are commonly loose in and on the surface of the crest, just like allograft particles. However, they are much more obvious to find because they are stark white. The dentist may think the graft has not performed well because of the residual particles on the crest. When the dentist drills the bone, he may see a significant number of white granules that have not “turned over” into bone and assumes the residual graft materials have not performed well. Even when there are fewer remaining β TCP particles present than allograft particles would be, the β TCP particles are simply more visible and thus, open to speculation.

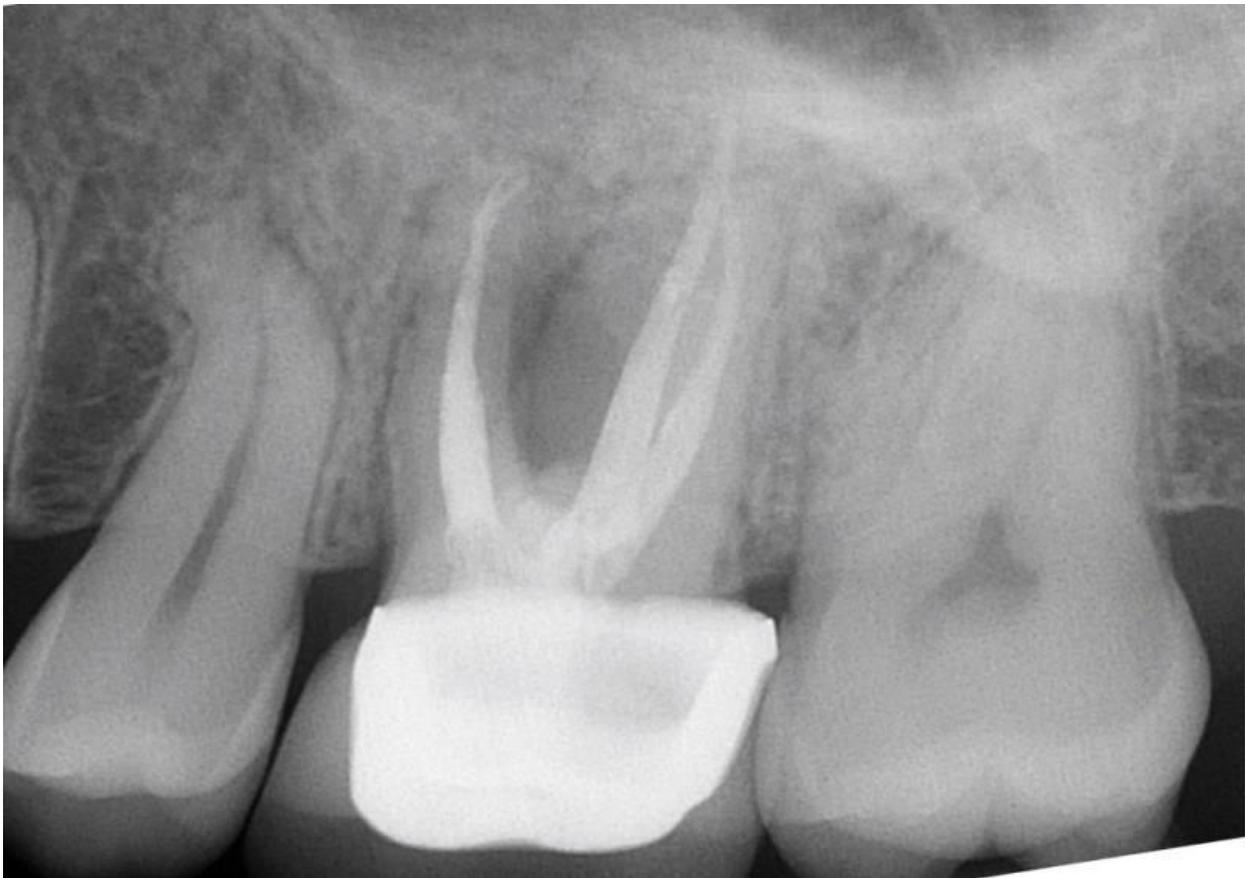
What You See vs. What You Get

Clinically and radiographically, the allograft site looks great, but it is not. The particles remain indefinitely and the bone is never normal, even after loading. On the other hand, when a site is grafted with a β TCP, it will eventually resorb.

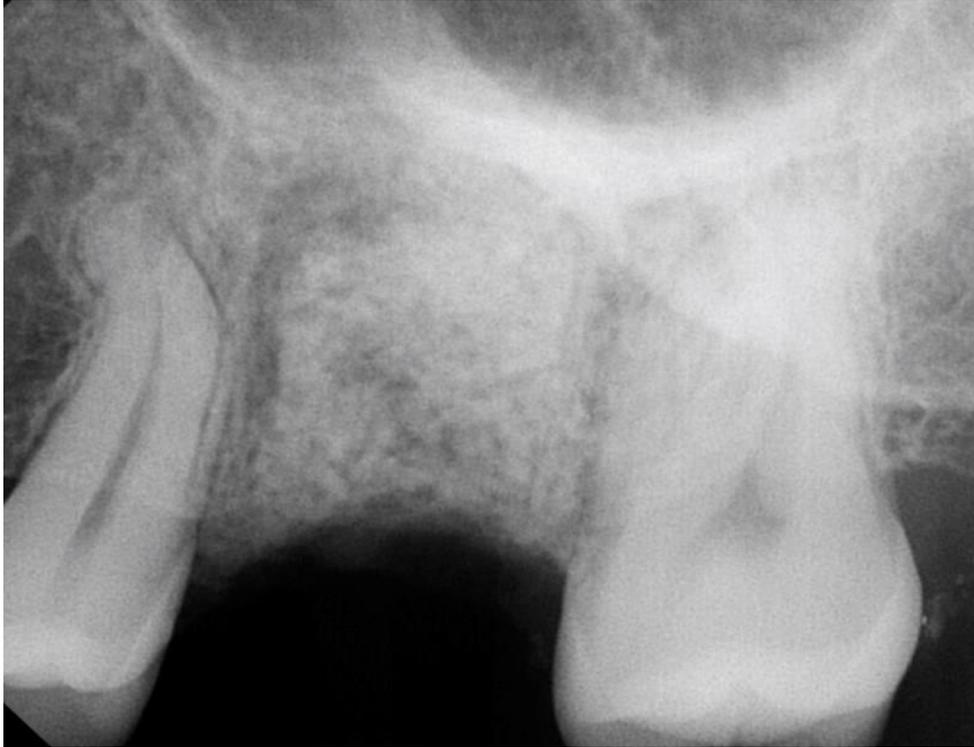
At any given time frame, some β TCP particles may remain in the site until it is loaded. the primary motivator to β TCP resorption is the remodeling process that happens after the bone is loaded with an implant. Ultimately, resorption occurs.

So while a dentist may think that because β TCP granules are visible, they must never resorb and never produce normal bone, the opposite is true. Conversely, while a dentist may assume that because a site grafted with an allograft has the appearance to be healthy bone, it is actually not case.

What you may expect to see with Socket Graft Plus™



Failing #14 with sinus involvement



Socket Graft Plus™ with membrane



2 weeks post op



Not quite a tissue



4 weeks post op