IMPLANTS
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# Achieving Soft Tissue Development in the Anterior

By Kevin Kwiecien (/spear-review/author/kevin-kwiecien/) on February 24, 2017 | (/bookmarks/bookmark/39038)

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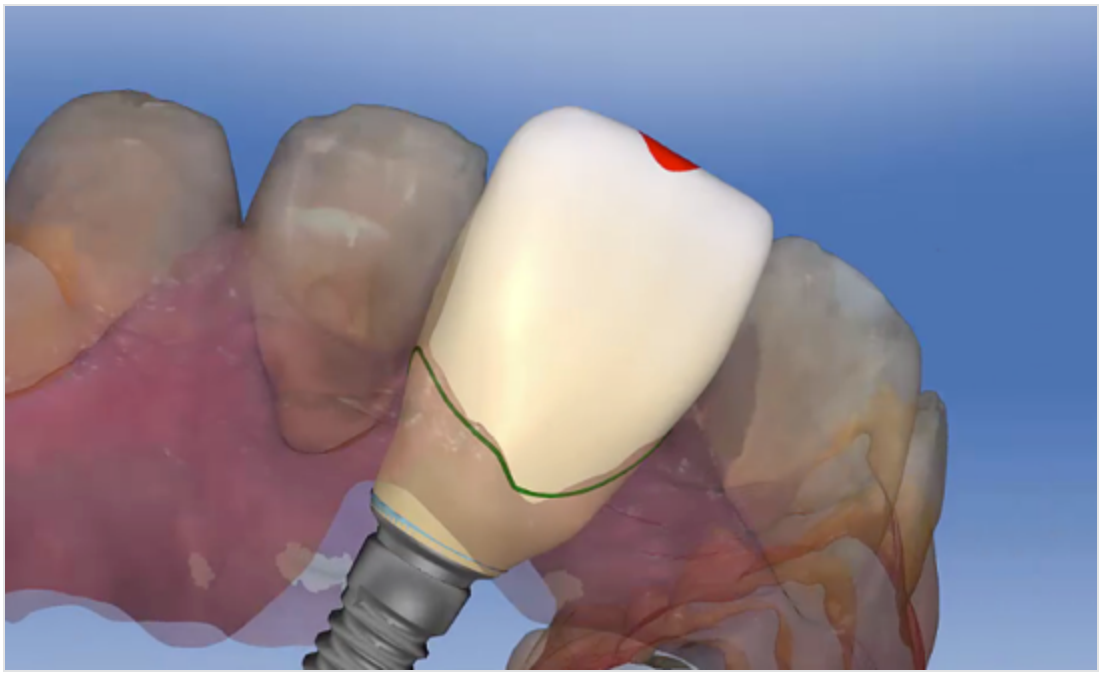
Digital dentistry, I think I'm falling for you, but I don't think I'm going to be the only one. And I guess I'm going to have to be OK with that because you are worth sharing.

In a previous article, *Implant Tissue Development in the Posterior with Digital Dentistry (https://www.speareducation.com/spear-review/2017/02/implant-tissue-development-in-the-posterior-why-not-in-the-digital-world)*, I did my best to convince you that tissue development around an implant (https://www.speareducation.com/spear-review/category/implants) in the posterior might actually be easy and predictable and, by default, just part of your normal work flow.

But what about the anterior region, like a single central, in a patient who has been missing the tooth for over 35 years and has been wearing a "flipper" for all 35 years?



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As always, I hope you trust the process of Facially Generated Treatment Planning (EFSB: Esthetics, Function, Structure, Biology), in visualizing the end before beginning, whether it be a custom healing abutment followed by a provisional crown (Figures 1-2) or immediately loading the implant.

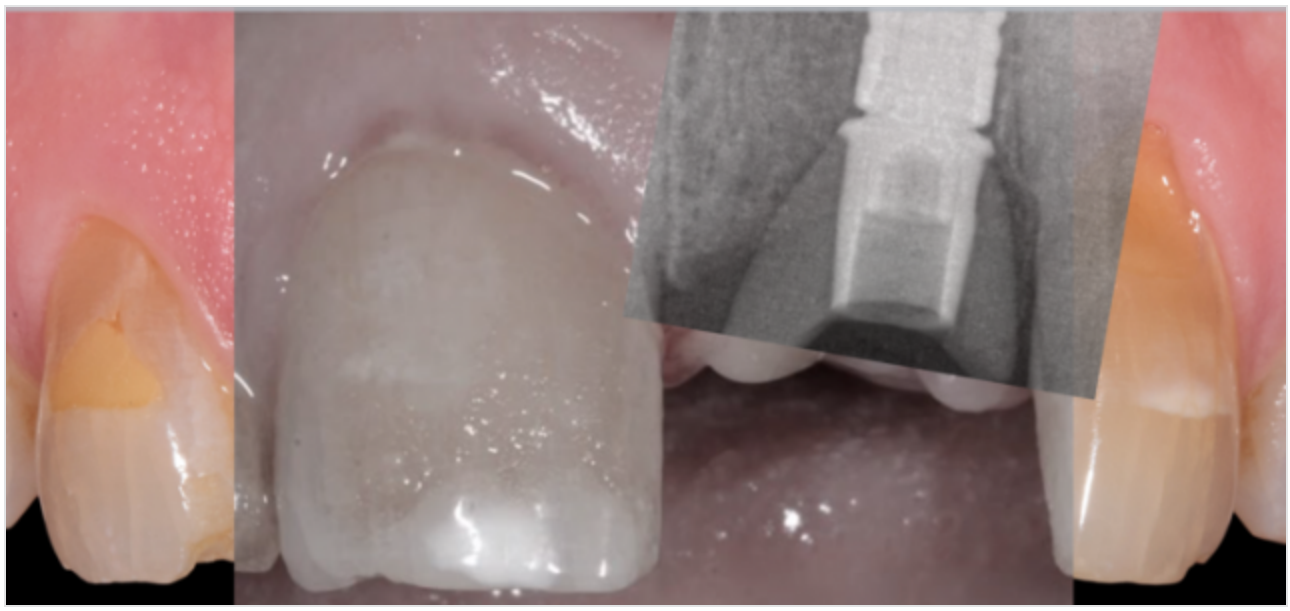

Figure 1


Figure 2

This process, as taught at the Spear Education workshops, is the core of our educational philosophy.

Once you have a vision of what you want the end result to look like (Esthetics), how you want it to work (Function), what material makes most sense (Structure) and confirm that you have the foundation to support it (Biology), historically, the technique and protocol to develop the tissue has been achievable and somewhat predictable yet difficult.

Today, with my newfound friend CAD/CAM digital dentistry, the work flow inherently lends itself to predictable results, even in the anterior region when using and trusting the EFSB treatment planning process, combining comprehensive dentistry in the digital world. After the implant is placed, and ideally at the time of placement, a scanpost with a scanbody can be placed on the implant and scanned, capturing the location of the implant for all future treatment of that implant (Figure 3).

Figure 3

Whether the tissue is in decent position or not, it can always be digitally “cut out” while maintaining the position of the implant in the arch captured in the original scan (Figure 4).

However if the position of the soft tissue is acceptable, a restoration can be digitally designed for the previously determined esthetics and to support the tissue (Figure 5). The design for the optimal crown can be altered to only mill the gingival 1/3, thereby easily fabricating a custom tissue healing abutment at the time of surgery (Figures 6-7). How cool is that? Compared to how you fabricate healing abutments in the analog world, this is far easier.

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Figure 5

Figure 6

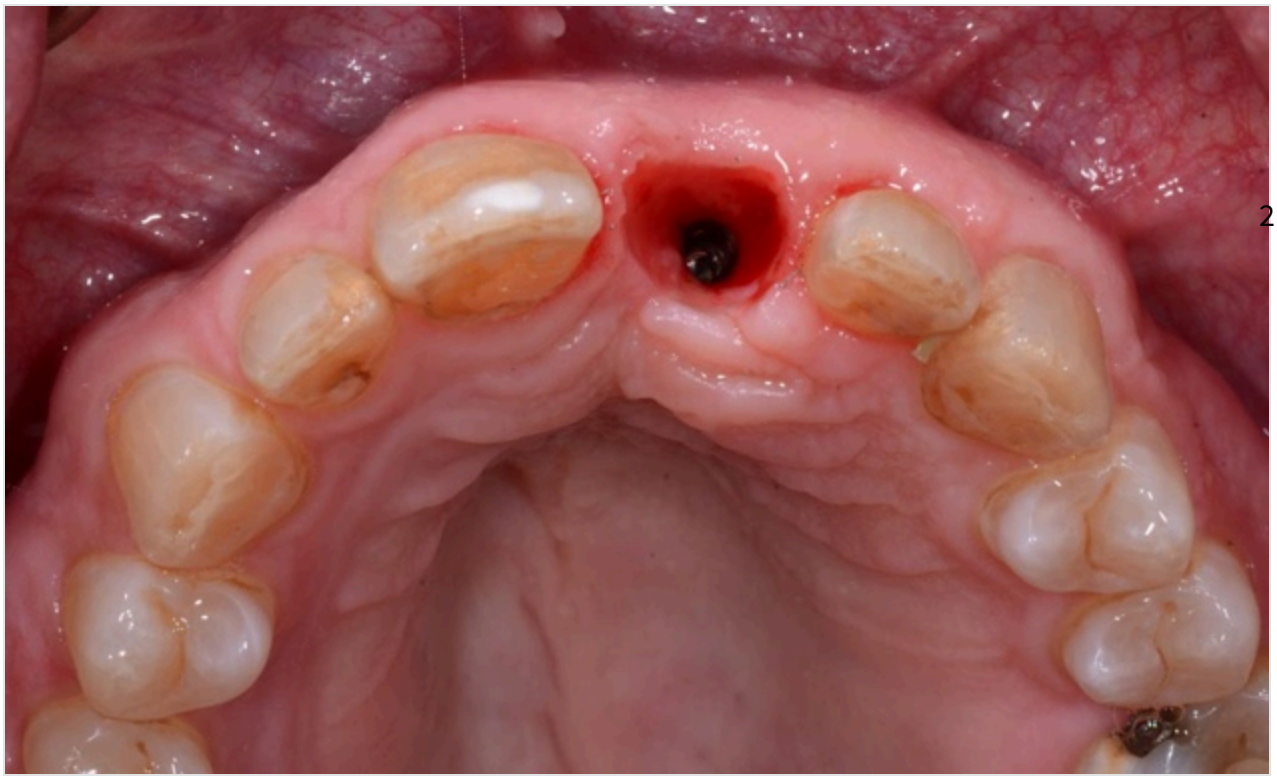


Figure 8

Figure 9

The previous designed crown, which was used to fabricate the custom healing abutment, can then be modified to create a screw retained acrylic (PMMA) provisional restoration to support and further develop the existing tissue (Figures 10-13).

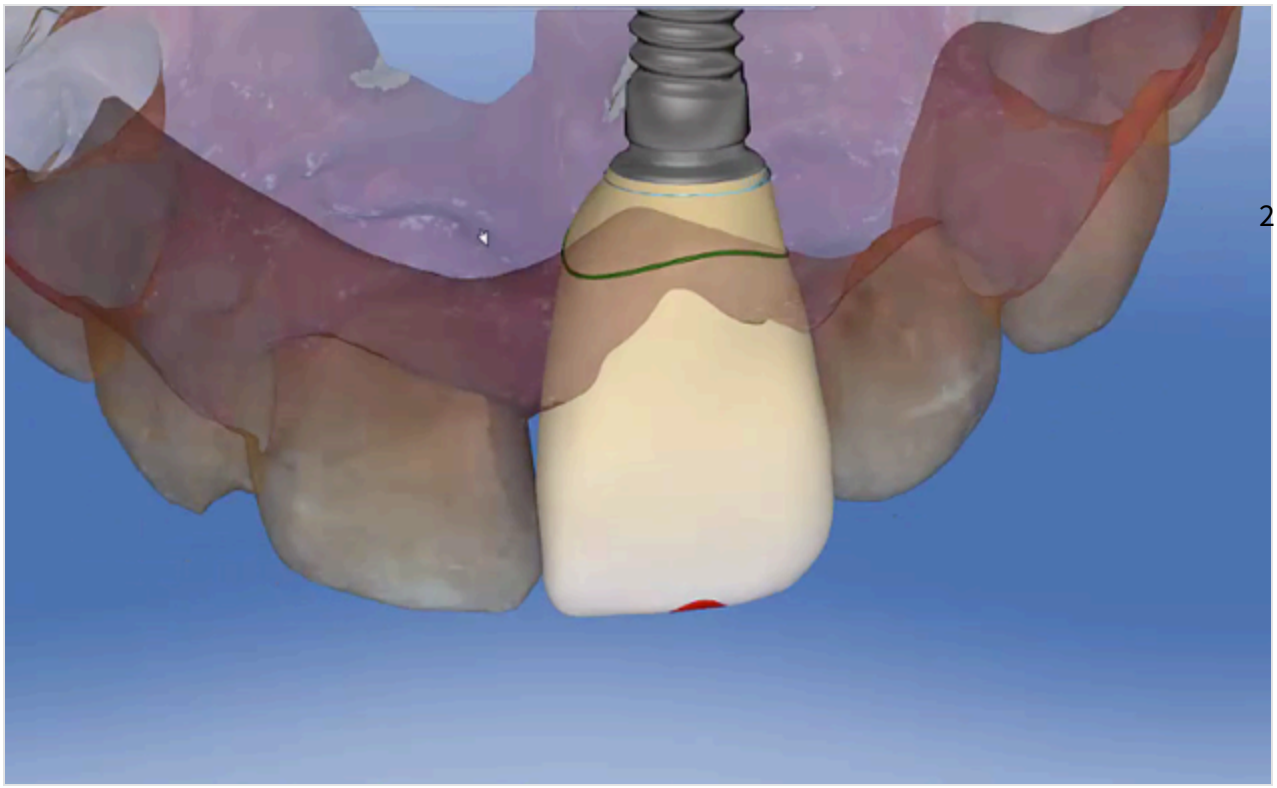

Figure 10

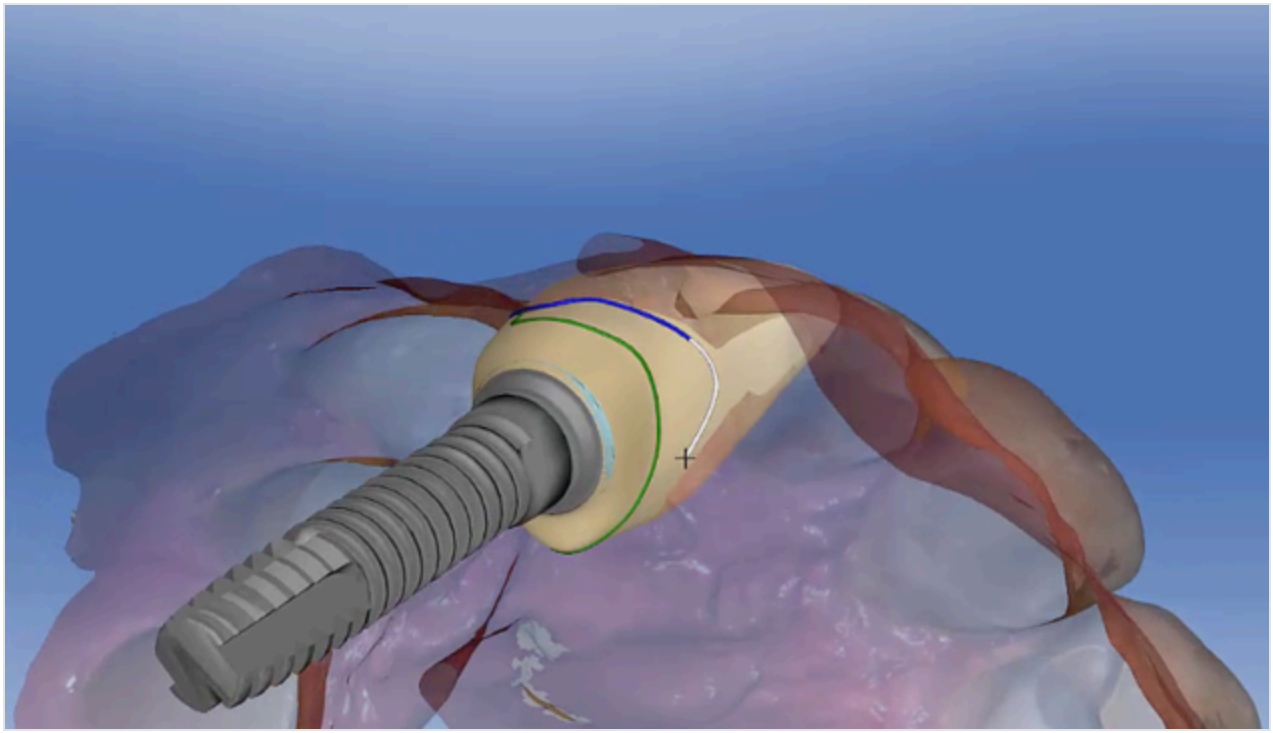

Figure 11

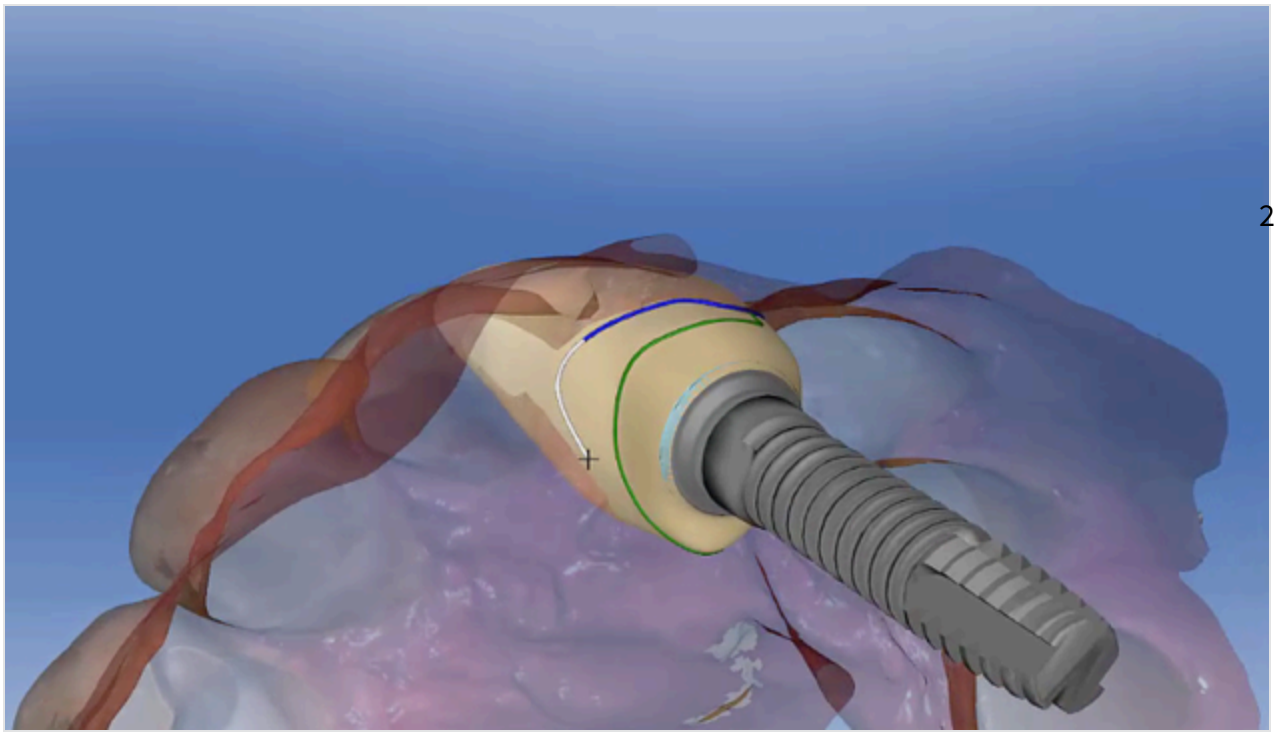

Figure 12

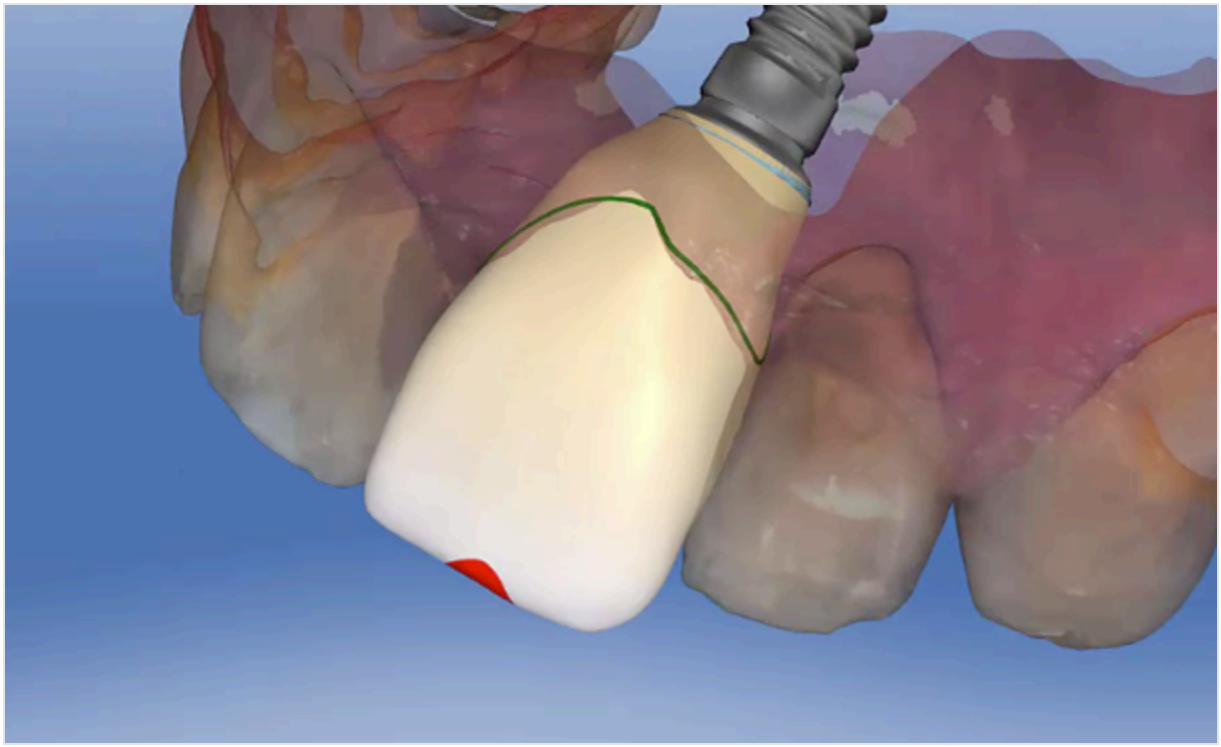

Figure 13

Digitally visualizing the contours of the crown, verifying the pressure to support the tissue, while at the same time visualizing the accuracy of the crown-implant relationship, brings confidence to proceed and decreases anxiety for me that it's almost like starting over in dentistry. This time, though, it makes sense (Figures 14-15).

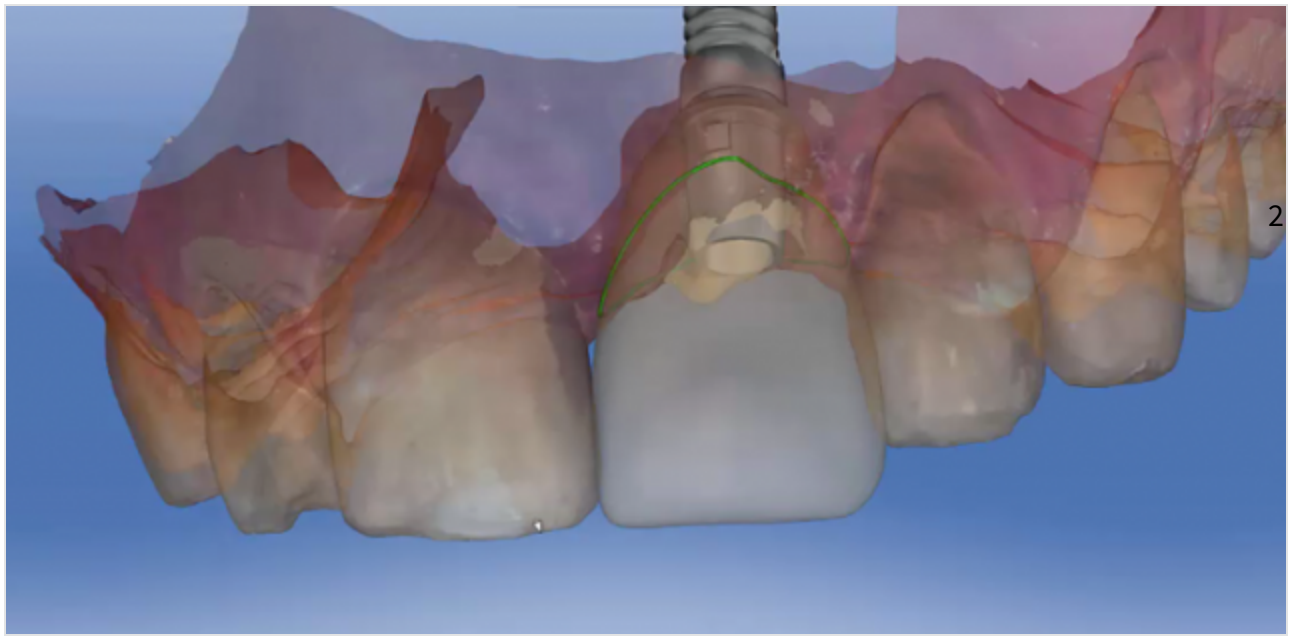


Figure 14

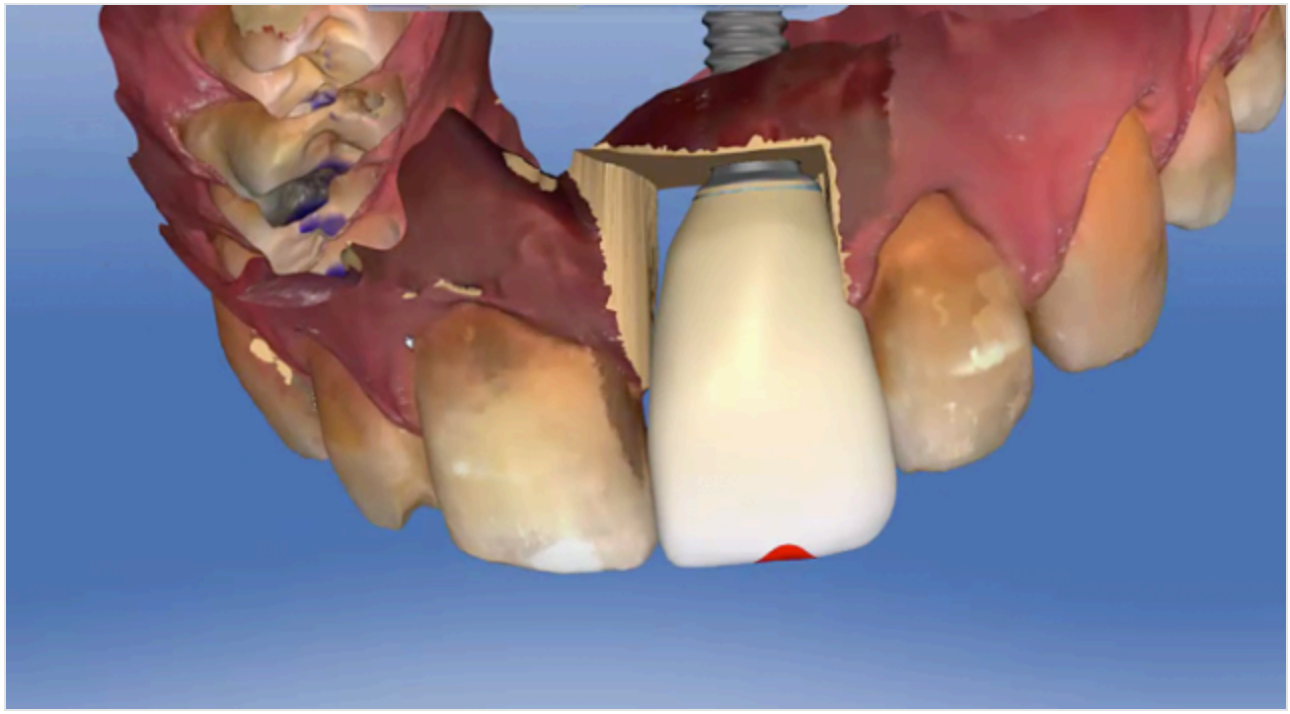

Figure 15

The material selection in the CAD/CAM world has also made the process more fun and predictable. Several blocks have holes to provide the option for a screw-retained provisional crown. The milled crown is then, obviously, a replica of the well-thought out, intentionally planned restoration on the computer screen (Figures 16-17).

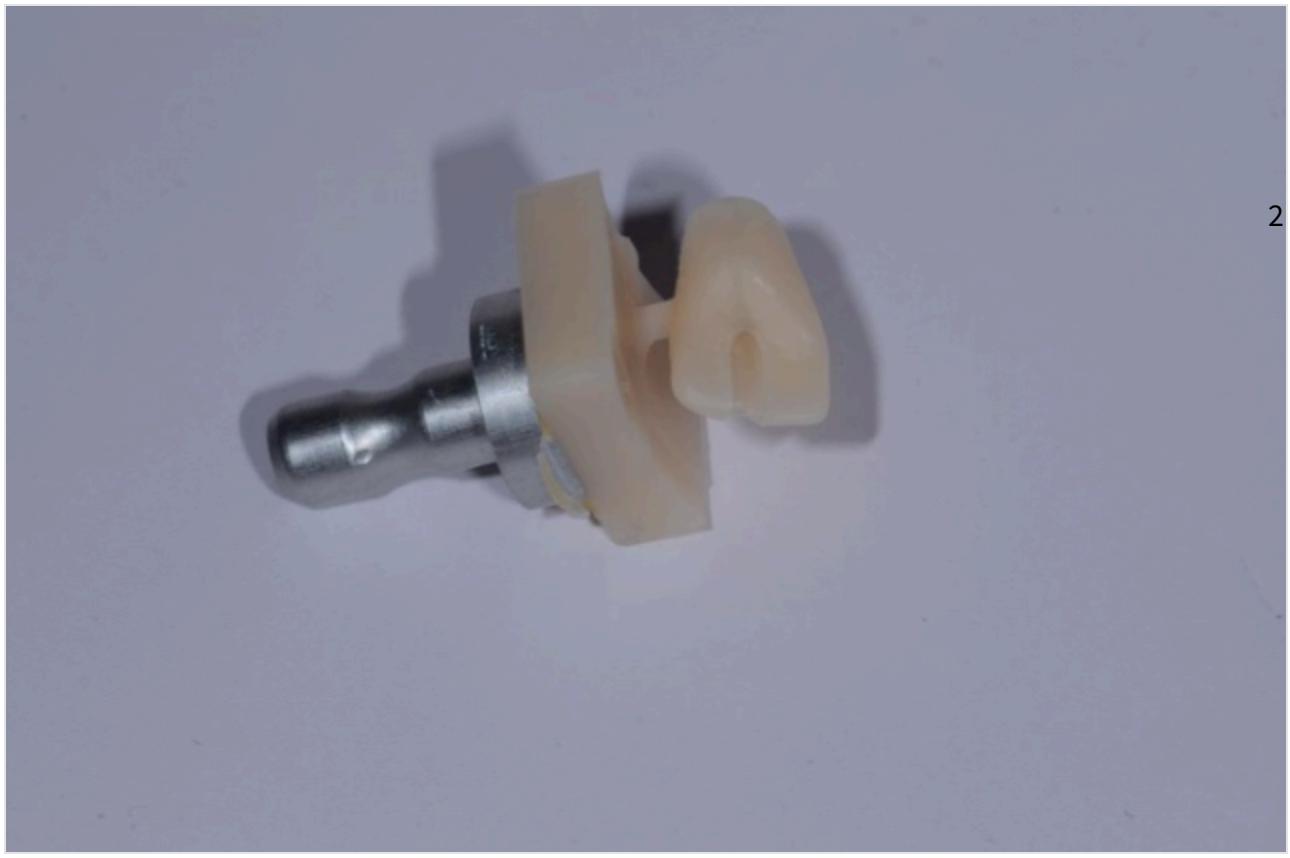


Figure 16

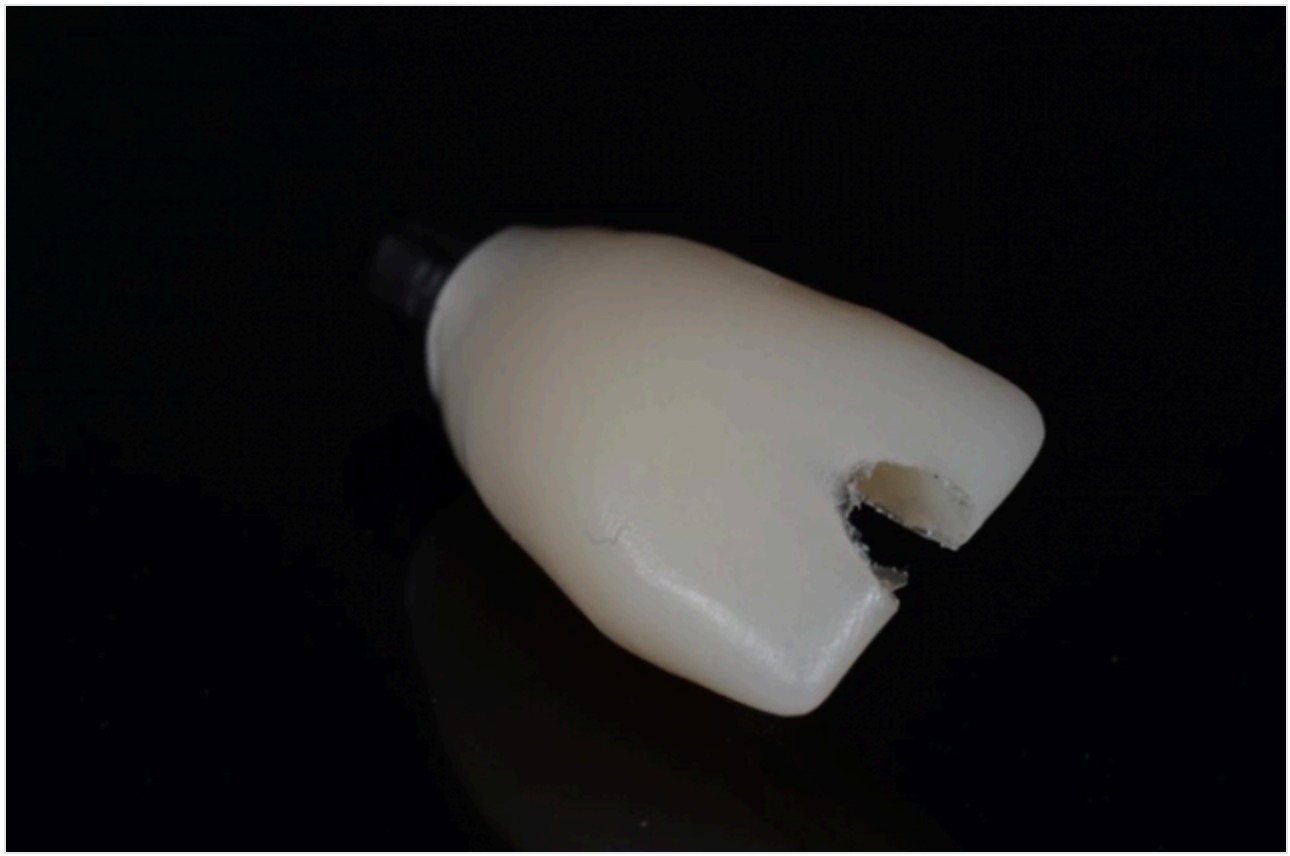

Figure 17

After reviewing the crown for fit, primary anatomy can be confirmed and adjusted and soft tissue support can be evaluated. The process is now back to the traditional analog world, allowing the tissue to adapt while creating an esthetically acceptable restoration for the interim (Figures 18-20).

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Figure 18

Figure 19

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Figure 20

After several weeks with the provisional crown, the tissue was not what I had hoped. But again, the digital world makes it easier to provide more optimal results (Figures 21-23).

Figure 21

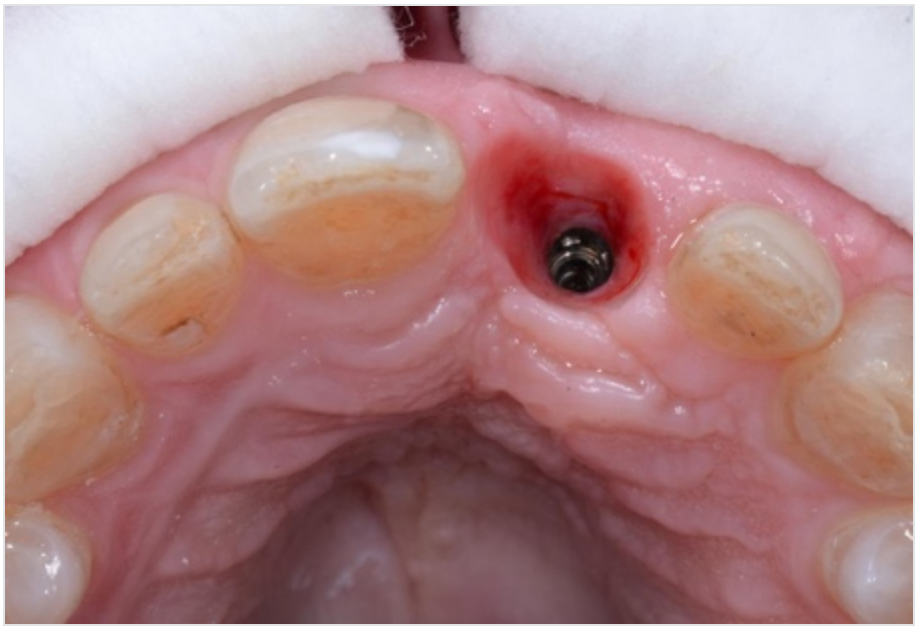

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Figure 22

Figure 23

The same digital file was opened again, the old soft tissue digitally “cut out” and the more adapted tissue scanned and “stitched in.” The restoration proposal can be easily altered to push the tissue slightly more apically. This is not difficult or stressful yet predictable. As you can tell, I am falling even more for my new friend, CAD/CAM digital dentistry.

After you verify the fit of the new restoration (of course it fits, it’s just fun to try it with such predictability every time), it is evident that even more bulk is needed. So many options are available in the digital world; however, when using an Enamic block with an implant hole (a composite-infiltrated ceramic), traditional composite can be easily added to the identified area, resulting in an optimal result to predictably begin the process of definitive restorations based on the original treatment plan. You see, we’re always visualizing the ideal end before beginning (Figures 24-26).

2

Figure 24

Figure 25

2

Figure 26

When it is time to take final impressions for the restorations, the same file is opened with the implant position captured from the day of surgery. This step never needs to be repeated, so what is the only thing that needs to be captured? Yes, just the pristine soft tissue that was so easily developed (Figures 27-28).


Figure 27


2

Figure 28

How long does it take? Seconds. How much does the tissue distort during the new scan/impression? None, because the scan of the soft tissue takes literally seconds. How cool is that? So cool.

Comprehensive dentistry in the digital world or the digital world in comprehensive dentistry? Either way, the future is here, and it continues to make dentistry even better and more predictable with a single central incisor after 35 years without one. Good times.

*(Click this link for more dentistry articles by Dr. Kevin Kwiecien (https://www.speareducation.com/spear-review/author/kevin-kwiecien/).)*

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