

Why Orthodontists Now Prefer **OrVance® Aligner Pontics**

For Easy Patient Use
Most Efficient for the Practice
Best in Appearance



A White Paper By:
Dr. Michael Silver | Ron Schutt
April 2024

ABSTRACT

As published by Dr. Jonathan Nicozisis, an Align Technology Faculty Member, “Managing missing U2s (upper laterals) is a challenge on many levels. Concern for cosmetics is a foremost worry, with potential breakage of a crafted pontic as a close second. When thinking about using aligners for such cases, the logistics of managing a pontic with a removable orthodontic aligner appliance can make one’s head hurt.

“Historically, approaches and techniques for clear aligner patients have involved tooth-colored paint or PVS material to be placed in each aligner. These procedures are labor-intensive for the doctor or staff, and color match is technique-sensitive because mixing stock colors to match a patient’s tooth shade can yield inconsistent results. Current paint options are often opaque and irreversible once placed. PVS material is porous and eventually stains...

“As orthodontists, we often feel responsible for providing a cosmetic, good-performing solution. We feel tremendous guilt when size, shape and color is less than ideal, and often have uncomfortable conversations with patients and parents who aren’t pleased with our attempts...”¹.

Dr. Nicozisis captures the headaches associated with traditional aligner pontic options for both the practice and patients. Condensing this down to its essence, the past aligner pontic solutions make extra work for office staff and often yield unsatisfied patients.

That changes with OrVance® Aligner Pontics. Instead of the laborious task of using opaque paint or cured-hardened PVS rubber that can fall out or interfere with gums and adjacent teeth, OrVance® Aligner Pontics are made from a permanently malleable medical-grade silicone with food-safe colorants for a real-tooth appearance, AND easily puts the pontic application process into the hands of patients.

For one-minute YouTube product demonstration video click here:

<https://youtu.be/I28hwM7LOYc?si=OICMUibT6cFWF9In>

EASE OF USE FOR PATIENT APPLICATION

To eliminate the headaches of applying pontics in the practice, OrVance® Aligner Pontics are specifically designed for the patient to apply pontics at home before wearing each tray. Simply dispensing the appropriate amount of OrVance® Aligner Pontics to the patient with a quick demonstration of how to apply in their first tray is all that is necessary.

In order to dispense pontics to patients for at-home use, instructions-for-use must of course be simple, fast, and foolproof. It is also essential that at-home use will not risk the patient experiencing the problems associated with other more complicated pontic fabrication methods.

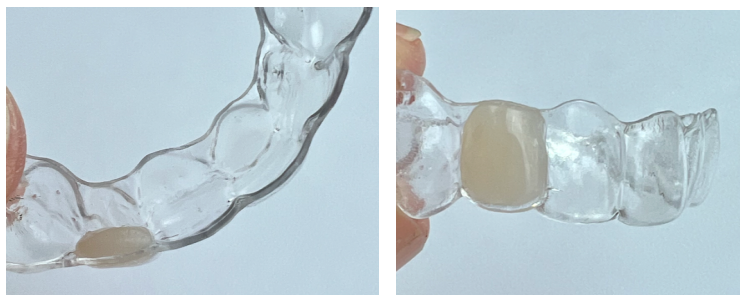
To accomplish this objective, OrVance® Aligner Pontics are made from a permanently flexible material that allows for the approximate placement and will self-mold to the gingival tissue and adjacent teeth. Whereas other fabrication options require precise placement to ensure the proper fit of the aligner, and to provide a realistic appearance relative to adjacent teeth and the gum line.

For safe, convenient, and foolproof use, each OrVance® Aligner Pontic is in peelable unit-of-use packaging.



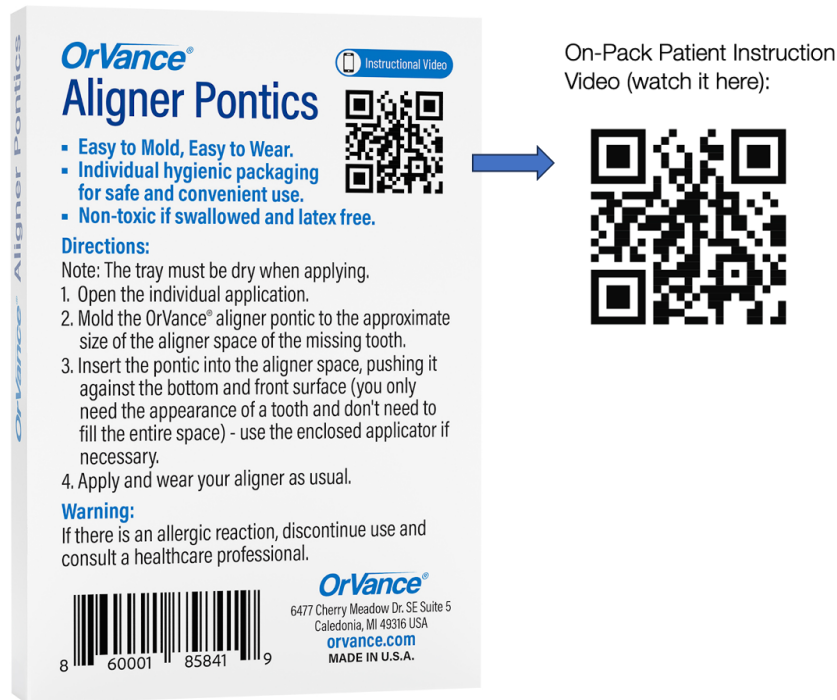
Given the invention² of this permanently flexible pontic material that sticks to dry trays, the one-size pontic is sufficient for the vast majority of cases. However, the malleability of the material also makes it easy to combine two if necessary for the less common cases of larger central incisors or cuspids.

OrVance® Aligner Pontics are simply pushed down and against the buccal side of the tray. The pictures below show an OrVance® Aligner Pontic being applied for the commonly missing maxillary lateral.



(Note: OrVance® Aligner Pontics must be applied when the tray is dry).

After dispensing OrVance® Pontics to patients with their aligner trays, they'll find that pontics can be easily applied at home in each tray within 10 seconds. To ensure easy patient application, each package includes simple directions for use and a QR code link for patients or parents that prefer YouTube video instructions (see below).



EFFICIENT AND ECONOMICAL FOR THE PRACTICE

OrVance® Aligner Pontics are clearly the most efficient and economical aligner pontic solution for the practice by eliminating the process of doing aligner pontics in the practice altogether. This process is not only time consuming for practice staff but it is also felt to be a laborious task that may compromise the proper fit of an aligner tray.

Additionally, the process of doing pontics in the practice setting requires that the original packaging of every tray from the manufacturer is opened and handled. Simply dispensing OrVance® Aligner Pontics to patients with their aligner trays also avoids the need to disrupt the original packaging from the manufacturer.

APPEARANCE

OrVance® Aligner Pontics were also developed with the goal of being superior in appearance to other pontic options. In order for the material to appear more

realistic than other pontic options, the consideration of translucence and fit, in addition to color is also critical.

Pontic paint and other fabricated pontic materials are opaque, whereas the OrVance® pontic material was formulated with the ideal level of translucence which provides a more realistic looking pontic.

The formulation of OrVance® pontics starts with a clear, permanently malleable, medical-grade silicone. This base material is over 16 times more clear than traditional dental wax³.

Starting with this base material, the ideal color and level of translucence was achieved by optimizing the formulation with food-safe colorants (titanium oxide and iron oxide) which also makes the device nontoxic and latex free.

The ideal color and translucence were achieved by working with a dental lab and several orthodontic practices. As a result, OrVance® Aligner Pontics have been formulated in one color in the most common Vita Shade range between A2 – D2, with a similar level of translucence as a real tooth.

In addition to color and translucence, a great fit is also essential for a pontic to appear as a real tooth. OrVance® Aligner Pontics are made of a permanently flexible material which enables it to self-mold to the gingival tissue and adjacent teeth, without the fear of it compromising the fit like harder fabricated pontic material.

SUMMARY

The conclusion of this paper is that OrVance® Aligner Pontics offer major advantages over other methods of applying pontics in clear aligners or retainers. Superior in appearance, easiest and fastest to use, and the first solution designed for patient use, makes it the most efficient and economical option for the practice.

The simple and foolproof application method also removes the headaches associated with other aligner pontic methods. These benefits together with a material that provides a more realistic tooth appearance also maximizes patient satisfaction.

Simply dispensing OrVance® Aligner Pontics to patients with their aligner trays also avoids the need to disrupt the original packaging from the manufacturer.

REFERENCES

1. “Managing Missing U2’s with Clear Aligners”, Dr. Jonathan Nicozisis, June 2023, <https://www.orthotown.com/magazine/article/8991/managing-missing-u2s-with-clear-aligners>
2. Patent Pending, Michael E. Silver, Ronald J. Schutt
3. Testing performed using a dual-beam Hitachi U-2910 UV-Vis spectrometer

AUTHOR BIOS

Michael E. Silver, PhD

Dr. Silver has a PhD in chemistry from Cornell University and is a professor emeritus at Hope College. Mike has over 30 years of experience in academia and working with industry to develop novel materials and intellectual property in the healthcare arena. Mike is the inventor on numerous issued patents, and the co-author of the textbook Introductory Chemistry: Atoms First (Pearson, 5th edition). He is also a co-founder of OrVance LLC and the principal inventor of OrVance® Aligner Pontics.

Ronald J. Schutt

Ron has over 30 years of experience in healthcare product development and previously served as vice president of consumer healthcare marketing at Perrigo Company (NYSE: PRGO), where he championed major healthcare initiatives and led several of the most successful product launches in the company’s history. He is also a co-founder of OrVance LLC, co-inventor of OrVance® Aligner Pontics and serves as board chair of OrVance LLC.

A special thanks to these orthodontists that assisted in the development of OrVance® Aligner Pontics and the contents of this whitepaper:

Scott Tyler, DDS, MS, Birmingham, MI
Eric Hannapel, DDS, MS, PC, Caledonia, MI
Mart McClellan, DDS, MS, Kenilworth, IL