# INNOVATION THROUGH TECHNOLOGY & EXPERIENCE



### SEPTEMBER 2020

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## **OPEN WIDE!**

#### A LITTLE NEWS FROM DENTAL CERAMICS OF IOWA CITY

COVID DERECHO BLM #SMILESTRONG

We survived the Derecho and I'm hoping the same is true for all of you!! August was quite the month!! The week of the Derecho, our main office phone line was down, due to the loss of internet on this side of town; with that in mind, we would like to give you some of our cell phone numbers for a situation like this in the future: Nancy's Cell # (319)-631-3270 & Jason's Cell # (319)-430-1510. We feel thankful that we were able to get out pretty unscathed by the disaster and our hearts are with those still cleaning and fixing up the mess it caused.

#### Should I cement or bond?

Yes, you can bond zirconia! Due to inherent brittleness, the behavior of all ceramic crowns under functional stress is very different from metals. Excessive forces and surface adjustments may lead to fractures and cracks. Adhesive bonding with the proper

treatment of the prep and ceramic bonding surface increase fracture resistance, improve retention, and reduce micro leakage. Clinical and laboratory bonding protocols depend on the type, composition, and properties of the ceramic. Silica-based ceramics (feldspathic, leucite-reinforced, and lithium disilicate) should always be resin bonded and treated with acid-etching and silane application. High-strength, metal oxide based ceramics, such as zirconia, are considered cementable. In situations of limited retention or a veneer situation, cementation with even self-adhesive resin cements may not be sufficient. In-vitro studies and systematic reviews are in strong



agreement that a combined micromechanical and chemical pretreatment is necessary for long term durable resin bonds to zirconia; a ceramic primer that contains special adhesive monomers is also necessary. Bisco has ZPrime Plus if you are interested in bonding zirconia. ZirClean, also from Bisco, is recommended to use after trying in your zirconia crowns to clean the inside of the crown prior to cementation or bonding. Panavia V5 advertises that it bonds to zirconia without any bonding agents.

#### Outstanding Technician: Mary Stout

Most of you know Mary but, did you know that she has been a part of Dental Ceramics for over 35 years?! She is a graduate of the



Dental Laboratory Program at Kirkwood Community College in Cedar Rapids, Iowa. She did her internship with us and I was so impressed she never left!! She continues to broaden her knowledge and skills with many hands on courses, and lately Zoom courses. Her days used to be filled with waxing and finishing, now a typical day is spent in the CAD CAM room designing zirconia crowns, bridges and implant crowns! Her skills with waxing are still pretty amazing; her speed and accuracy always astounds us! We still wax our full cast crowns, pressables, veneers and pfms! Many labs have gone metal less or send their metal work to a mill. We think we are pretty special to have Mary our team!

#### Our mills have been a little busy...

Full-contour zirconia restorations are now the most prescribed ceramic material for posterior crowns! The rapid transition to zirconia monolithic restorations was fueled by the clinical success of monolithic zirconia posterior ceramic restorations, accurate milling, and rising metal costs. Zirconia continues to evolve; ranging from opaque and strong, to more translucent but weaker materials. Keep in mind when prepping for the more translucent zirconia a shoulder or chamfer prep is recommended!!

I hope this finds you all healthy and happy!! Thanks for all the work you send our way!! We really appreciate YOU!!

