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# CS 3600 Intraoral Scanner Outperforms Other Scanners, Traditional Impression, in Finish Line Accuracy

**[ATLANTA]**—Since its launch in 2016, the accuracy of Carestream Dental's CS 3600 intraoral scanner has been [consistently confirmed](#) by international third-party scientific research. Now, the scanner has once again been recognized for its outstanding performance in finish line accuracy.

[“Finish Line Distinctness and Accuracy in 7 Intraoral Scanners versus Conventional Impression: An In-vitro Descriptive Comparison,”](#)\* published in BMC Oral Health, aims to highlight differences, if any, in finish line distinctness and finish line accuracy among seven intraoral scanners and one traditional impression.

The study defines finish line distinctness as “the degree of visual clarity and identifiability in the reproduction of the finish line compared to a reference scan,” and finish line accuracy (FLA) as “the ability of a measurement to match the actual value of a reference scan in the immediate proximity to the finish line.” In this case, a model with a screw retained crown and a preparation for a cemented crown was scanned with a highly accurate industrial scanner to act as the reference scan.

One traditional impression was taken of the base model while each of the seven scanners captured 10 digital impressions each on the model; the tenth scan from each scanner was used to evaluate finish line distinctness and accuracy.

Based on “color deviation evaluation and distribution of deviations in histogram,” the CS 3600 shared the top rank among the scanners for highest finish line accuracy, with a deviation below  $\pm 25 \mu\text{m}$ . The study also stated the CS 3600 showed a clear and distinct color rendering, which the researchers purposed may “assist in identifying the finish line compared to the monochromatic .STL files.”

Also, while the CS 3600 consistently ranked higher in both finish line accuracy and distinctness than the traditional impression, that was not true for all scanners tested.

“In modern dentistry, we assume that digital will naturally give us better results than analog,” Ed Shellard, D.M.D., chief dental officer, Carestream Dental said. “However, this study shows that not all scanners are created equal when it comes to providing better results than traditional impressions.”

Ultimately, the study states that there are “sizeable variations between intraoral scanners with both higher and lower finish line distinctness and finish line accuracy than impressions” and encourages clinicians to “critically evaluate [a] digital impression, being aware of technical limitations and system specific variations among intraoral scanners.”

To learn more about the CS 3600 intraoral scanner, or any other of Carestream Dental's innovative solutions, please contact 800.944.6365 or visit [carestreamdental.com](http://carestreamdental.com).

\*Nedelcu R, Nystrom I, Olsson P, Thor A. Feb. 26, 2018. Finish Line Distinctness and Accuracy in 7 Intraoral Scanners versus Conventional Impression: An In-vitro Descriptive Comparison. BMC Oral Health.18(27): DOI 10.1186/s12903-018-0489-3

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