

**MORITA**

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# Article showing advantages of MORITA CBCT

EVALUATION OF 10 CONE BEAM COMPUTED TOMOGRAPHIC DEVICES FOR ENDODONTIC

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# Method

The phantom which some teeth can be replaceable was prepared and the evaluation points (A, B, C) were set by using industrial CT.

Take the images with various CBCT in 2 conditions, 1st place normal tooth, 2nd tooth with endodontic treatment.

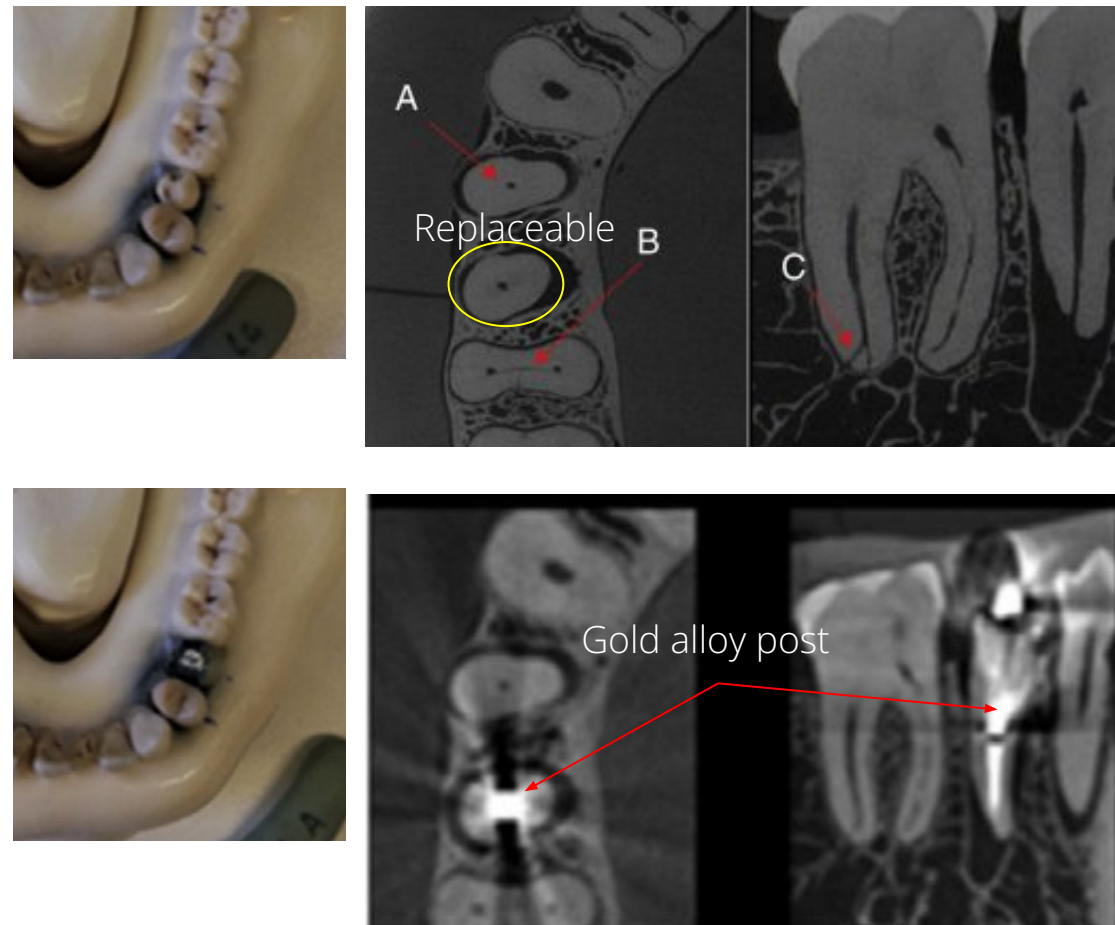
Diagnostic specialists evaluate those points with and without Metal conditions.

After statistical analysis, grouping various CBCT machines into 3 group.

1. Top group
2. Middle group
3. Bottom group

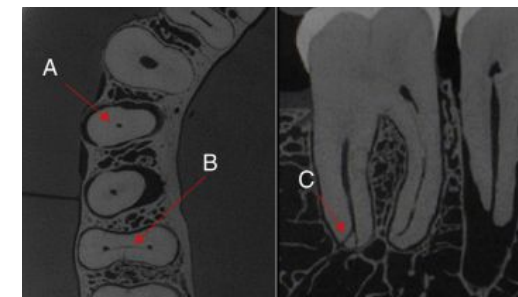
In the same group, there is no statistically significant difference.

[https://www.jendodon.com/article/S0099-2399\(21\)00150-3/abstract](https://www.jendodon.com/article/S0099-2399(21)00150-3/abstract)



# Accuitomo and X800 shows advantage in image quality

Accuitomo is top and X800 is top under 100k EUR products



**TABLE 2 - A Comparison of Mean Scores (Range) among All Cone-beam Computed Tomographic (CBCT) Devices for Evaluating Narrow Canals, Delta Ramifications, and Isthmus in 2 Different Conditions (Metal Free and with Metal)**

Narrow canal middle <b>A</b>		Narrow canal apical <b>A</b>		Delta <b>C</b>		Isthmus <b>B</b>					
Metal free		With metal		Metal free		With metal					
CBCT device	Mean score (range)	CBCT device	Mean score (range)	CBCT device	Mean score (range)	CBCT device	Mean score (range)				
C <sup>*</sup>	1.1 (1-1) <sup>*</sup>	I <sup>*</sup>	1.7 (1-2) <sup>*</sup>	B <sup>*</sup>	1.0 (1-1) <sup>*</sup>	A <sup>*</sup>	1.1 (1-1) <sup>*</sup>	A <sup>*</sup>	2.7 (1-6) <sup>†</sup>	G <sup>*</sup>	1.3 (1-2) <sup>*</sup>
A <sup>*</sup>	2.3 (2-3) <sup>*</sup>	A <sup>*</sup>	2.0 (1-4) <sup>†</sup>	A <sup>†</sup>	2.7 (2-4) <sup>†</sup>	B <sup>*</sup>	2.7 (2-4) <sup>*</sup>	D <sup>*</sup>	2.3 (2-3) <sup>*</sup>	C <sup>*</sup>	2.7 (1-5) <sup>*</sup>
B <sup>*</sup>	2.7 (3-7) <sup>*</sup>	D <sup>*</sup>	3.0 (2-4) <sup>*</sup>	C <sup>†</sup>	3.0 (2-4) <sup>†</sup>	D <sup>*</sup>	3.0 (3-3) <sup>*</sup>	E <sup>*</sup>	3.7 (3-4) <sup>*</sup>	G <sup>*</sup>	3.0 (2-4) <sup>*</sup>
D <sup>†</sup>	4.0 (4-4) <sup>†</sup>	C <sup>*</sup>	3.3 (3-4) <sup>*</sup>	D <sup>†</sup>	4.0 (3-5) <sup>†</sup>	G <sup>*</sup>	3.3 (2-4) <sup>*</sup>	C <sup>†</sup>	4.3 (3-5) <sup>†</sup>	B <sup>*</sup>	4.0 (2-6) <sup>*</sup>
I <sup>†</sup>	5.3 (6-6) <sup>†</sup>	G <sup>†</sup>	5.0 (5-5) <sup>†</sup>	G <sup>†</sup>	4.3 (3-5) <sup>†</sup>	F <sup>†</sup>	5.7 (5-7) <sup>†</sup>	E <sup>†</sup>	5.0 (3-6) <sup>†</sup>	B <sup>†</sup>	5.0 (2-8) <sup>†</sup>
G <sup>†</sup>	6.3 (6-7) <sup>†</sup>	H <sup>†</sup>	6.3 (6-7) <sup>†</sup>	I <sup>†</sup>	6.0 (6-6) <sup>†</sup>	E <sup>†</sup>	6.3 (5-8) <sup>†</sup>	I <sup>†</sup>	5.3 (4-7) <sup>†</sup>	I <sup>†</sup>	6.3 (6-7) <sup>†</sup>
H <sup>†</sup>	7.7 (5-10) <sup>†</sup>	E <sup>†</sup>	6.7 (6-7) <sup>†</sup>	H <sup>†</sup>	7.3 (7-8) <sup>†</sup>	H <sup>†</sup>	6.7 (6-7) <sup>†</sup>	D <sup>†</sup>	5.7 (3-7) <sup>†</sup>	G <sup>†</sup>	6.7 (6-7) <sup>†</sup>
E <sup>†</sup>	8.0 (7-9) <sup>†</sup>	B <sup>†</sup>	8.7 (8-9) <sup>†</sup>	E <sup>†</sup>	7.7 (7-8) <sup>†</sup>	C <sup>†</sup>	8.3 (6-10) <sup>†</sup>	J <sup>†</sup>	8.3 (8-9) <sup>†</sup>	F <sup>†</sup>	7.0 (4-9) <sup>†</sup>
F <sup>†</sup>	8.0 (7-9) <sup>†</sup>	J <sup>†</sup>	8.7 (8-10) <sup>†</sup>	F <sup>†</sup>	9.0 (9-9) <sup>†</sup>	J <sup>†</sup>	8.7 (8-9) <sup>†</sup>	H <sup>†</sup>	8.7 (8-9) <sup>†</sup>	H <sup>†</sup>	9.0 (8-10) <sup>†</sup>
J <sup>†</sup>	9.7 (9-10) <sup>†</sup>	F <sup>†</sup>	9.7 (9-10) <sup>†</sup>	J <sup>†</sup>	10.0 (10-10) <sup>†</sup>	I <sup>†</sup>	9.3 (9-10) <sup>†</sup>	F <sup>†</sup>	10.0 (10-10) <sup>†</sup>	J <sup>†</sup>	9.7 (9-10) <sup>†</sup>

The CBCT codes are defined in Table 1.

<sup>\*</sup>Did not differ from the best.

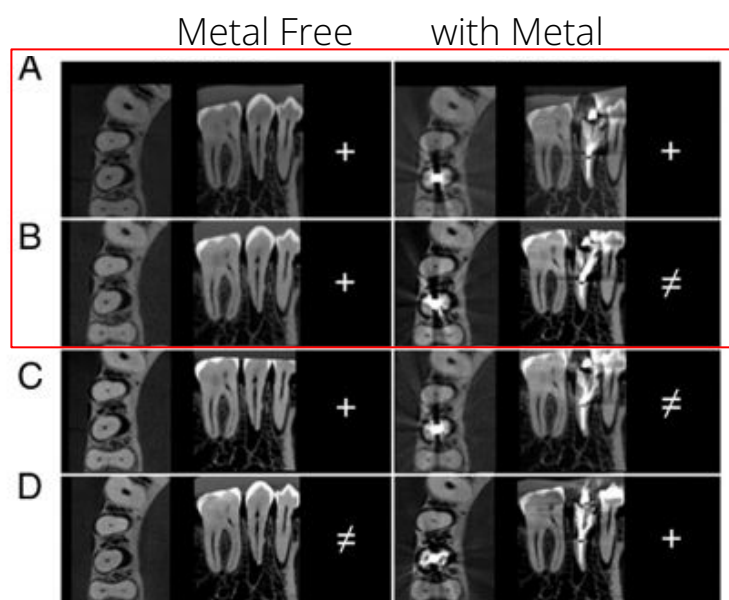
<sup>†</sup>Differed from the best and the worst.

<sup>‡</sup>Did not differ from the worst (lower score).

A: Accuitomo, B: X800, C: 3Shape X1, D: NEWTOM VGi Evo, E: Kavo OP3D pro, F: Kavo OP3D, G: Carestream CS9300, H: Planmeca Promax 3D Max, I: Sirona Orthophos SL 3D, J: Spectral Dental UEG

# Accuitomo and X800 shows advantage in image quality

Well known other competitor shows less than average > Better to reconsider if the user consider to use in Endo



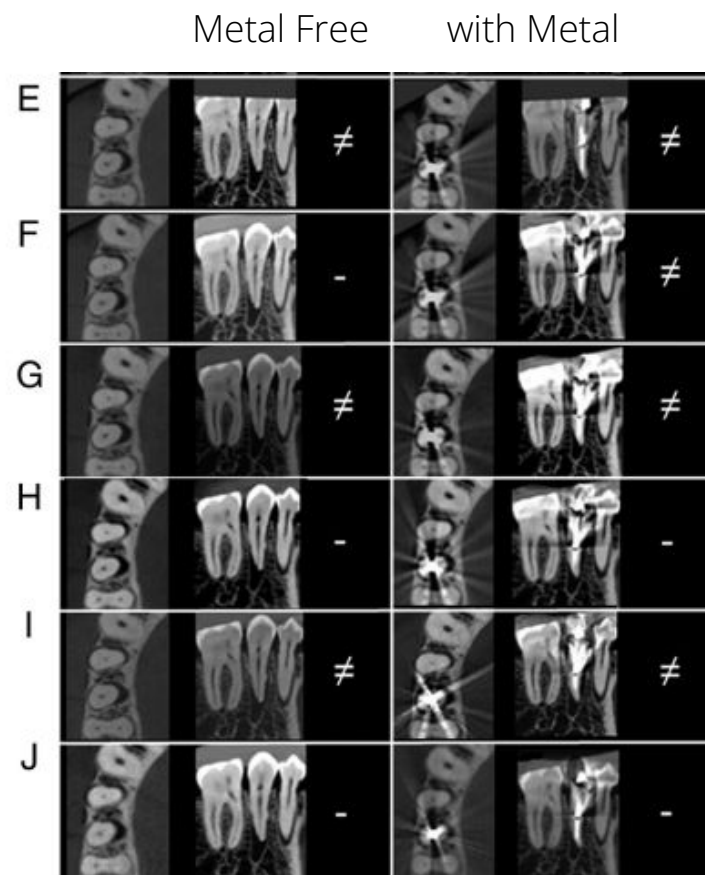
A: Accuitomo,

B: X800,

C: 3Shape X1,

D: NEWTOM VGi Evo,

+:Top group  
≠:Middle group  
-:Bottom group



E: Kavo OP3D pro,

F: Kavo OP3D,

G: Carestream CS9300,

H: Planmeca Promax 3D Max,

I: Sirona Orthophos SL 3D,

J: Spectral Dental UEG

## How to use this article

The best situation is when the users are considering X800 or other popular devices like Sirona, Planmeca, Carestream, Kavo.

Counter talk example

Top group

NEWTOM VGi Evo: Price is comparable with Accuitomo > Then why not Accuitomo which has better image quality

3Shape X1: 3D image is not bad but pan image is terrible. They also ask for annual fee and total cost becomes to upper class, more than 10k EUR.

Lower group

Kavo OP3D pro: Image quality is average. If the user expect from the name KAVO or Pro, he/she will be regret.

Kavo OP3D: Cheap and lowest image quality.

Planmeca Promax Max: FOV is big as Accuitomo/Newtom class but image quality is not in the same class. Radiology or hospital user can't use this as they need to provide all clinical application including endo. Our impression on promax series is similar to this test.

Sirona Orthophos SL: It is one of the luguary model comparable to X800. However the image quality is average. If the user expected from Sirona name, he/she will be regret.

Carestream 9600: It is the flagship product from carestream for radiology segment, but image quality is average...

Thank you!

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