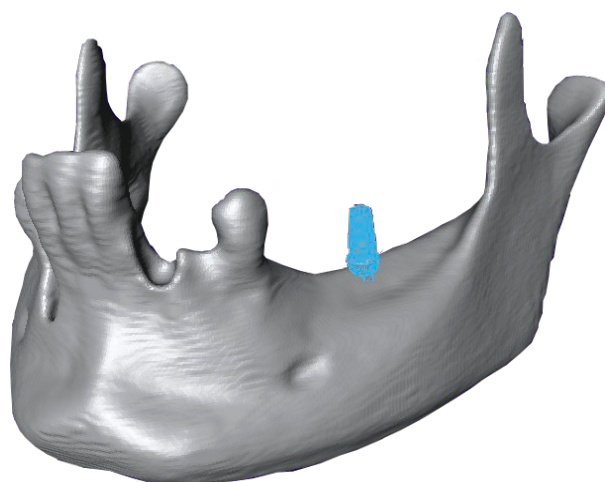


DOES SMART GUIDE WORK WITH DIGITAL IMPRESSIONS? CAN THE SAME ACCURACY BE ACHIEVED AS WITH A CONVENTIONAL IMPRESSION?

The easiest way to find out about this with a statistically meaningful number of implants was to take a dozen of artificial mandibles and implant them with SMART Guide. Guides for one group were produced based on conventional silicone impression, while the guides for the other group were produced on the basis of a digital impression (TRIOS® 3Shape). The measured values were the same as in our clinical accuracy study (above). Actual implant positions were determined digitally, with the help of abutments. Altogether 108 implants were placed.



The table below shows our findings.

The numbers are pretty much in accordance with the literature, both for the digital and the conventional group, that is, both inputs allow the production of guides of a generally accepted level of accuracy. What came somewhat as a surprise – especially that it is a debated issue in the literature- that guides manufactured from a digital input yielded significantly better angle deviation.

INPUT		Angle deviation (degrees)	Coronal deviation (mm)	Volume overlap (%)	Apical deviation (mm)
CONVENTIONAL N=60	mean	4.81	1.17	61.48	1.71
	SD	3.19	0.60	18.60	0.91
DIGITAL N=48	mean	3.31	1.33	65.01	1.65
	SD	1.92	0.60	11.33	0.59