

Differences between Chrome GuidedSmile, Home/office made plastic surgical guides and free handed All-On-4 surgery.

	<b>Chrome guided Smile</b>	<b>Plastic Generic home/office printed guides</b>	<b>Free Handed Surgery</b>
<b>Accuracy</b>	Highly accurate, precise placement	Varies, generally less accurate than Chrome	Least accurate, depends on the surgeon's skill
<b>Customization</b>	Custom-made for each patient	Custom-made but less precise	No customization
<b>Planning and Visualization</b>	Advanced digital planning and 3D visualization.	Basic planning and limited visualization	Limited planning, reliant on surgeon's experience
<b>Multi Doctor planning</b>	Chrome guides are always planned by two doctors	Mostly lab plans the procedure	Only the surgical doctor alone usually performs the planning which is least accurate
<b>Technology Requirements</b>	Requires advanced computer programs run on high end systems. All Chrome surgical guides are produced by Roe dental laboratory	A free software available on the internet can be used and a cheap 3D printer can be used to make these guides in office.	None. A surgeon can start cutting, dissecting and start placing implants just by eyeballing it; success depends on experience of the surgeon.
<b>Material Quality</b>	All FDA approved Chrome Guided Smiles are made with a biocompatible titanium and Chrome alloy.	Made with cheap printable plastic materials which contains nanoplastics, which can be dangerous to health	No special materials needed to do free handed surgery.
<b>Workflow requirements</b>	Very high. Requires a very efficient team and multiple steps to get it right.	Lower than chrome.	Low, straightforward but very skill and technique intensive.
<b>Surgical Time</b>	Reduced due to precise guidance. Most surgeries are finished within 2 hours per arch	Varies, can be longer than Chrome – 4-5 hour per arch	Potentially longest due to manual adjustments; can be 5-8 hours per arch; dependent on skills and experience of the surgeon.
<b>Complication Rates</b>	Very low due to precise nature of the Chrome GuidedSmile	High due to breakable bulky nature of plastic guides and non see-through material where doctor is not able to visualize implants.	Very high due to imprecise nature of the process and exploratory nature of the surgery, however, depends on the skills of the surgeon.
<b>Recovery time</b>	Very low. Trauma is minimal and a surgeon does not have to dissect out nerves or enter sinus.	Long; most of the plastic guides can not be placed very precisely and visual is obstructed by the plastic, therefore, there is more trauma.	Longest – the free handed surgeries are often associated with more trauma to the tissue, more swelling and post operative infections.
<b>Patient Comfort</b>	Higher, due to shorter surgery time and precision	Varies, generally lower than Chrome	Potentially least comfortable and depends on surgeon's experience and diligence.
<b>Post-Op Results</b>	Consistent and predictable outcomes. Prosthesis are pre printed and pre aligned with implants for greatest accuracy	Less predictable, varies with guide quality. Usually traditional dentures are relined to convert at time of surgery, Varies.	Most variable, depends on surgeon's expertise

<b>Patient Satisfaction</b>	Very high. Patients are able to see their temporary teeth, exact planning prior to the surgery.	Varies, but is lower than Chrome GuidedSurgery	Lowest; most of the time, surgeon is giving the patient full dentures to go home with due to low torque on implants achieved during surgery.
<b>Implant Placement</b>	Most precise and exact due to FDA approved non movable surgical guides. Almost no chance of any nerves to be damaged.	Varies and many deviations from the plans exist. Due to bendable and non accurate nature of the guides, the nerves are still in danger.	Dr. has very little control over the exact angles and where the implants end up. There are many chances nerves can get damaged. This surgery depends on surgeons skills.
<b>Duration Operation Adjustments</b>	Almost no adjustments are needed – everything in the guide is preplanned- from bone reduction to temporization.	Most soft tissue and hard tissue guides require adjustments. The plan does not always end up and align with the results.	Most amount of adjustments – chance of performing a perfectly planned free handed surgery is minimal.
<b>Surgical Efficiency</b>	Most arches take less than 2 hours to finish surgery. The efficiency is very high and all steps are pre planned	Most arches take 4-5 hours to finish surgery. Efficiency varies and the guides are bulky.	Least efficient. Surgeon basically has to dissect all nerves and enter sinus in order to do surgery without complications.
<b>Margin of Error</b>	Very low. Chrome guides are made of metal and non bendable, non movable	Margin of error is high. Breakage of plastic guides are common and error margin increases	Highest. Most free hands surgeries have complications, however depends upon skills of the surgeon
<b>Cost</b>	Higher, due to advanced technology and customization	Lower, varies with material and complexity	Lowest, but may lead to higher long-term costs due to inaccuracy inherently built into the system.
<b>Learning Curve</b>	Moderate, requires training in digital technology	Lower than Chrome, but still requires training	High, requires significant experience and skill level.
<b>Technology Integration</b>	High, involves digital workflow and 3D printing	Moderate, some digital aspects	Low, minimal technology use
<b>Bone Reduction</b>	Accurate, pre-planned and guided	Varies, but it is definitely less precise – all plastic stackable guides are not see through and bone reduction is not fully accurate because plastic guides move.	Manual. Least precise. Basically surgeon has to eyeball the bone and it most of the time bone ends up uneven. Success is dependent on skills of the surgeon.
<b>Tissue Management</b>	Improved, with less tissue trauma, less bleeding and much better healing afterward.	Varies, generally more trauma than Chroe	Can be high, depending on surgeon's technique