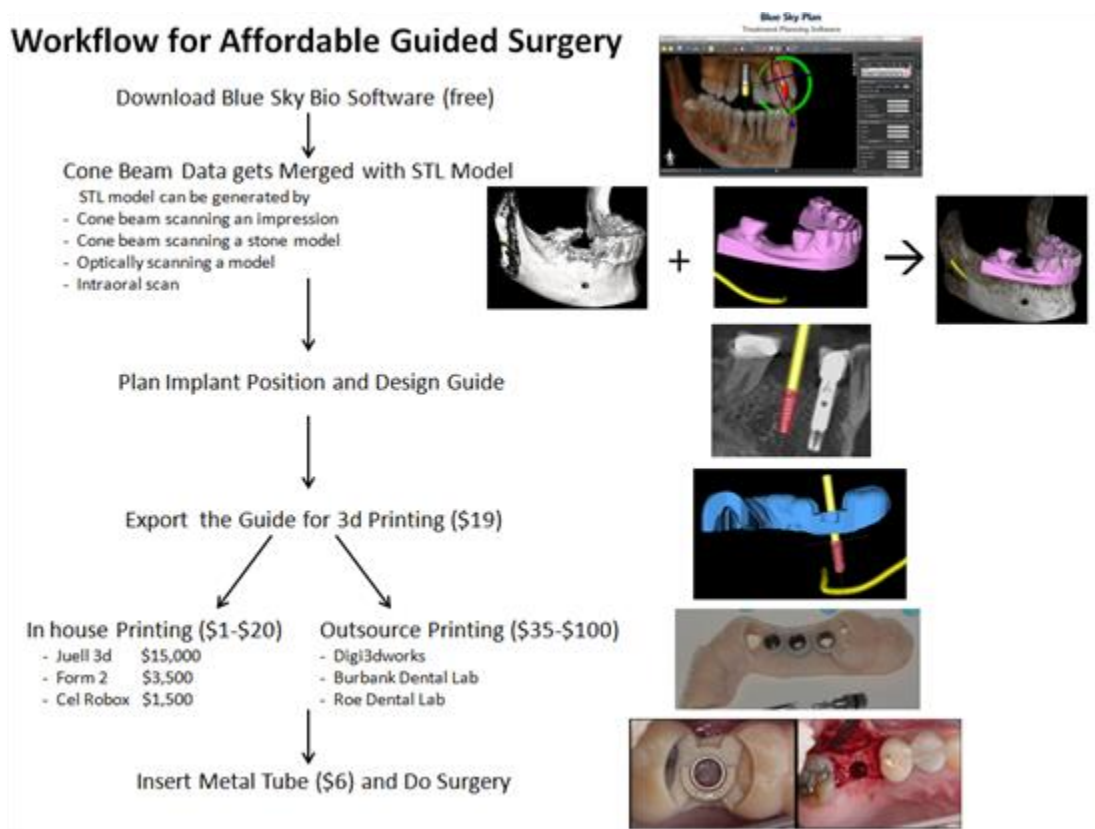


Implant Pearls

Reused with permission from Dr. Cory Glen – Implant Pearls posted on Dental Town – Posted: 8/22/2016 @ <http://www.dentaltown.com/MessageBoard/thread.aspx?s=2&f=123&t=276841&v=1>

- CBCT planning and guided surgery will save you money by decreasing the time needed for surgery, making your surgeries more precise, decreasing the need for lots of inventory, and making your restorative costs more predictable.
- CBCT planning and guided surgery will make you more money through increased case acceptance, more referrals, giving you confidence to tackle more cases, and by helping determine which cases will be complicated and/or less profitable



Which Implants to Use

Everyone's titanium integrates..... some just integrate much cheaper!

- Use a value branded implants with a good track record like Blue Sky Bio (my favorite)
- Use a conical connection with a platform switch
- Use implants with aggressive threading

Reduce Your Risks: Failures are the Kiss of Death

- Flap everything you can and bury the implants with primary closure in a 2 stage approach.
- Flap rather than punch at uncover to gain keratinized gingival by rolling it to the buccal
- Avoid immediate placement until you're very experienced. I suggest grafting all sites with Maxxues 50:50 Mineralized/Demineralized FDBA (\$51 for 0.5cc) mixed with Fusion Bone Binder (Woodland Hills Pharmacy) and covered with a collaplug in single rooted teeth or a Cytoplast TXT-200 Nonresorbable membranes (\$40) in molar sockets
- Stick with shorter implants (8 and 10mm lengths). There's almost no value in a longer implant unless primary stability is of the utmost importance (ie immediate and single staged implants which you're not going to do right!?)
- Stay 2-3 mm from anything with a name (inferior alveolar canal, mental foramen, etc)

Plan Cases Backwards from Their Restorative Endpoint

- Patients want *teeth*, not *implants* so be certain the implant is going in an ideal restorative position
- Use ideal digital or analog waxups for planning implant positions in the CT software
- For full arch edentulous cases, start with an ideal treatment denture and plan implant positions based on that by CBCT scanning them with the ideal dentures in place.

Tips to do More Implants

- Learn to do conservative crestal sinus lifts. 30% of all potential implant sites you encounter will need a sinus bump or a sinus lift
- Buy a CBCT. Having to refer out for scans creates a much bigger barrier than you realize. Most dentists find that the number of implants they do doubles once they get CBCT in office.
- Plan cases in front of the patient. The purpose is twofold: you will be able to confidently tell them whether you can do the case and what it will cost right then and there. It also creates a significant “wow factor” when your patients see you using this level of technology and planning.
- Lower your prices. Price is your gas pedal. If you want to do more, step on the gas and lower fees. A routine single tooth placed guided takes me an average of 2 hours total time and 3 appointments from start to finish. Even by charging a bundle fee of \$2500, you'll still generate over \$1,000 an hour.
- Offer in house financing: Implants are perfect for financing since they won't get the final product for several months after starting the process. Not staying current with payments? No implant crown for you!

New to Blue Sky Bio? Listen to this webinar to learn more about the company, the owners, and their products <http://www.blueskybio.academy/public/New-to-BlueSkyBio.cfm>

Recommended Product List for Guided Surgery

- Blue Sky Bio Software <https://blueskybio.com/pages/download-software>
- Dental Mark Cone Beam Radiographic Markers- 7-8 of these are be placed on the denture prior to scanning the patient <https://blueskybio.com/store/cone-beam-markers>
- Radiopaque Barium Sulfate Acrylic 12%- for making radiopaque denture scan appliances <http://www.anaxdentusa.com/acryline-x-ray-dvt-powder-12-barium-sulfate/>
- Blue Sky Bio Single Cut Drills- These are recommended when using the single drill guided surgery protocol. They are also the same drills that are in the BSB basic surgical kit so if you have a basic kit, you have a guided kit. If you are buying them

individually, there is a particular drill matched to each size and type of implant. <https://blueskybio.com/pages/bio-cut>

- Surgical Guide Tubes- These are precisely matched to each particular drill <https://blueskybio.com/store/guide-tubes>
- Guide fixation pins for use in full arch cases <https://blueskybio.com/store/guide-fixation-pins>
- Blue Sky Bio Academy for live or online training in basic and advanced guided surgery and case planning

Live courses: <http://www.blueskybio.academy/public/Hands-on-Training-Level-2.cfm>

Online membership: <https://www.blueskybio.academy/public/5.cfm>

- STL Export Licenses Can be purchased in the software by going to File -->Purchase STL Exports Roughly \$20 each.

3d Printers All 3 of these options are sufficient for surgical guide fabrication. The price increases with increased accuracy, print speed, capacity, and material options

- Robox \$ 1,500 <https://blueskybio.com/store/print-surgical-guides>
- Form 2 \$ 3,500 <http://formlabs.com/store/us/form-2/buy-printer/>
- Juell 3D \$ 15,000 <https://blueskybio.com/store/print-surgical-guides>

3d Printing Labs If you prefer to outsource the printing rather than buying your own printer, these labs do an excellent job. Many also offer implant planning services <https://blueskybio.com/pages/ordering-stents>

The labs I personally use are [Digi3dWorks](#) and [Burbank Dental Lab](#)

Total outsourcing of the Process: [CADRAY](#) offers doctor case planning and guide fabrication services. You supply them the CBCT scan and a stone model and they do the rest.

What You Need to Get Started in Implants

Most of these products are all available from Blue Sky Bio. There are other suppliers and other brands of implants that work very well and my recommendations can be

extrapolated to those other brands. However, these are what I personally use and recommend. Obviously, you should get proper training prior to jumping into implant surgery.

I recommend using an implant with a conical connection. The reasons are several fold. Conical connections provide a number of advantages including better seal performance, decreased microgap formation, better torque maintenance, and increased abutment stability (2). In addition, in vivo studies showed that conical connection implants had better alveolar bone maintenance when compared to other types of connections. (3, 4). Platform switching has also been shown to maintain crestal bone better as it moves the implant/abutment connection medially away from the bone. For these reasons, I like the BSB Biomax NP implant which has a conical connection, a platform switch, aggressive threading, and a single restorative platform which is compatible to the Nobel Active Narrow Platform. It also has an extremely wide range of implant sizes with lengths from 6 mm to 16 mm, and diameters from 3 mm to 7 mm. The list price is \$125 per implant but they're only \$89 per implant when you buy 5 at a time.



For simplicity, I'll only be showing the Biomax line but BSB offers several other implant types:

One Stage (Straumann Tissue Level compatible)

Quattro (Straumann bone level compatible)

Internal Hex (Zimmer compatible)

Trilobe (Nobel Replace compatible)


Conus (Astra Osseospeed compatible)

Max (Nobel Active compatible)

Starter Package Options

The Complete Starter Package includes a complete surgical kit, 10 implants, an X-cube motor, and a 20:1 handpiece <https://blueskybio.com/store/biomax-complete-starter-package>

Starter Package



Size	Part #	Price	Qty.
Complete Starter Package – At checkout please list your 10 implant choices in the "Additional Instructions" box.	MCSP	\$4772.00	<input type="text" value="0"/>

[add to cart](#)


10 BIO | Max Implants: Each implant is packaged with a cover screw.

The Complete X Cube Surgical Motor System includes: Control Box, motor, 20:1 handpiece, foot control pedal, internal spray nozzle (button type), tube holder, tube clamp, Y-Connector and irrigation tube. Other handpieces are available.

Surgical Kit includes: 10 osteotomy drills, 4 implant drivers, ratchet driver, 30 Ncm torque wrench, adapter for NB ratchet, 2 .048 screw drivers.

The 10 Implant Basic Starter Package includes a complete surgical kit and 10 implants <https://blueskybio.com/store/biomax-basic-starter-package>

Starter Package



Size	Part #	Price	Qty.
Basic Starter Package-At checkout please list your 10 implant choices in the "Additional Instructions" box.	MBSP	\$2932.00	<input type="text" value="0"/>

[add to cart](#)

10 BIO | Max Implants: Each implant is packaged with a cover screw.

Surgical Kit includes: 10 osteotomy drills, 4 implant drivers, ratchet driver, 30 Ncm torque wrench, adapter for NB ratchet, 2 .048 screw drivers.

30 Implant Basic Starter Package includes a complete surgical kit and 30 implants <https://blueskybio.com/store/biomax-surgical-kit-starter-package>

Starter Package




Size	Part #	Price	Qty.
Surgical Kit Package-At checkout please list your 30 implant choices in the "Additional Instructions" box.	MSKSP	\$4050.00	<input type="text" value="0"/>

[add to cart](#)

30 BIO | Max Implants: Each implant is packaged with a cover screw.

Surgical Kit includes: 10 osteotomy drills, 4 implant drivers, ratchet driver, 30 Ncm torque wrench, adapter for NB ratchet, 2 .048 screw drivers.

If you need **Surgical Instruments**, BSB has a nice kit with all the instruments you'll need for implant surgery and grafting in a cassette. <https://blueskybio.com/store/implant-surgery-kit>



Complete Implant Surgery Kit	CISK	\$766.00	<input type="text" value="0"/>
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Master Bone Expander Kit: As you begin to do tougher cases, you'll find a lot of uses for this kit. I use the rotary osteotomes a lot to expand bone in thin ridges and to condense poor quality bone also. <https://blueskybio.com/store/master-bone-expander->

kit

Master Bone Expander Kit



Size	Part #	Price	Qty.
Master Bone Expander Kit	MSBE01	\$695.00	<input type="text" value="0"/>

Master Bone Expander Kit includes the Bone Expander Kit and four Lerner Ridge Splitting Chisels.

Hammerless Crestal Sinus Lift Kit: This extremely user friendly kit can be used to safely breach the sinus floor without damaging the membrane from a crestal approach. <https://blueskybio.com/store/sinus-lift-kit>

Sinus Lift Kit



Size	Part #	Price	Qty.
Hammerless Atraumatic Crestal Sinus Lift Kit	Sinus Kit	\$1495.00	<input type="text" value="0"/>

[add to cart](#)

Piezo Surgery Unit for ridge splits, lateral wall sinus lifts, crestal lifts, atraumatic extractions, etc. <https://blueskybio.com/store/piezo-surgy-star>


Surgy Star XP Complete System



Size	Part #	Price	Qty.
Surgy Star XP Complete System	SURGYXPBSB	\$3995.00	<input type="text" value="0"/>

Implantest to evaluate implant stability and aid in determining when to safely load implants <https://blueskybio.com/store/implantest>

Implantest



Size	Part #	Price	Qty.
Implantest Complete System	Implantest	\$1790.00	<input type="text" value="0"/>
Extra Probe Tip	5953518	\$50.00	<input type="text" value="0"/>

[add to cart](#)

Controlling Inventory

It's worth mentioning that since the BioMax NP implant has a single restorative connection across all the different implant sizes, you need to stock far fewer parts. There's only 1 size analog to stock, 1 size impression transfer to stock, and all the abutments and healing abutments are interchangeable on any of the implants. You'll simply choose the width of abutment based on how wide or narrow of an emergence profile you want to create.

Implants

I keep a limited number of sizes of implants in my inventory. There is almost no stress transmitted beyond 8-10 mm deep in the bone. 8-10 mm implants offer every advantage of longer ones while carrying less surgical risk. Therefore, my primary sizes that I use 90% of the time are as follows

3.5 x 10mm

4.3 x 8mm

4.3 x 10mm

5.0 x 8mm

5.0 x 10mm

Because I don't stock an extensive amount of sizes, it allows me to purchase the above sizes 5 at a time which brings the price down to \$89 a piece.

There are certainly instances where longer, shorter, wider, narrower implants have advantages but they are a minority of cases so I purchase them one at a time on an as needed basis. Such circumstances might include short or narrow available bone or the need for high primary stability such as in an immediate implant or immediate loading.

Healing Abutments

These come in 3.5, 4.3, 4.7, and 6.0 widths and lengths of either 3 or 5 mm. Remember all of these healing abutments fit all the implants. You simply choose a size based on the emergence profile you want to develop. https://blueskybio.com/store/biomax-healing-abutments_0


Abutments

I personally like to use MPA abutments (multipurpose abutments) most of the time. These are sized to match the healing abutments and they can serve as both the impression transfer and then be prepped as the final abutment. <https://blueskybio.com/store/biomax-mpa-custom-abutments>

The other abutment option I use most is the KISS abutment. These are designed to require no prep and can be impressed with a plastic snappy impression transfer. <https://blueskybio.com/store/biomax-kiss-abutment>

Other products:

Particulate bone for socket grafts and lateral ridge augmentation <https://www.maxxeusdental.com/biologics>



Cortical Mineralized/Demineralized Blend
Cortical Mineralized/Demineralized blend combines two of our most popular products in one jar.

Size / Details	Item Code	Fee	Add to Cart
0.5 cc	DM005	\$51.00	<input type="text" value="1"/> +
1.0 cc	DM010	\$70.00	<input type="text" value="1"/> +
2.0 cc	DM020	\$107.00	<input type="text" value="1"/> +

Synthetic Beta-TCP Graft for Crestal Approach Sinus Lift- Particles should be 1mm or less in size <https://blueskybio.com/store/biotcp>

Fusion Bone Binder: Consists of medical grade calcium sulfate (plaster), gentamycin, and carboxymethylcellulose. Can be mixed with any graft material to greatly improve the handling and it will “set up” helping to keep the graft in place where you place it. <http://www.woodlandhillspharmacy.com/compounds/fusion-bone-binder.html>

Non-resorbable membranes: Cytoplast TXT-200 Membranes for socket grafting molars \$40 each <https://www.osteogenics.com/v/product-group/TXT-200-TXT-200-Singles/va/>

Non-resorbable sutures: Cytoplast PTFE Monofilament Sutures. About \$10 a piece but worth every penny- try them before you write them off <https://www.osteogenics.com/v/product-group/Non-resorbable-PTFE-Monofilament-Suture/ve/>

References:

1) <http://www.glidewell dental.com/inclusive-magazine/volume6-4/implant-dentistry-trends.aspx>

2) J Biomed Mater Res A. 2014 Feb;102(2):552-74. doi: 10.1002/jbm.a.34709. Epub 2013 May 9.

Performance of conical abutment (Morse Taper) connection implants: a systematic review.

Schmitt CM1, Nogueira-Filho G, Tenenbaum HC, Lai JY, Brito C, Döring H, Nonhoff J.

3) *Clin Implant Dent Relat Res*. 2015 Oct;17 Suppl 2:e576-85. doi: 10.1111/cid.12286. Epub 2014 Dec 23. Cone-Beam Computed Tomography Evaluation of Horizontal and Vertical Dimensional Changes in Buccal Peri-Implant Alveolar Bone and Soft Tissue: A 1-Year Prospective Clinical Study.

Kaminaka A1, Nakano T1, Ono S1, Kato T1, Yatani H1.

4) *Clin Oral Implants Res*. 2015 Jun 21. doi: 10.1111/clr.12644 Radiographic evaluation of conical tapered platform-switched implants in the posterior mandible: 1-year results of a two-center prospective study.

Moergel M1, Rocha S2, Messias A2, Nicolau P2, Guerra F2, Wagner W1.