


  
**TeethXpress<sup>®</sup>**
  
 Immediate results that leave a lasting impression!
   
 Fred Frisse IV, CDT and James Woodyard, DMD, MS

A reliable, predictable and efficient work flow that minimizes chair time and maximizes profitability.

place the implants      place the multi-units      place the titanium copings

create provisional denture      immediate load



BIOHORIZONS





**multi-unit abutments**  
 Intelligent component design for restorative flexibility and abutment slide.

**Faster osseointegration<sup>®</sup> and bone maintenance for short Laser-Lok Complete implants**

**Laser-Lok technology** creates a connective tissue seal and maintains crestal bone.

**Optimized buttress threads** engineered for superior stability essential for immediate load.

BIOHORIZONS


  
**You need Models to show patients**



- <http://www.dentalmodelsplus.com/>
- immediate hybrid bridge \$165

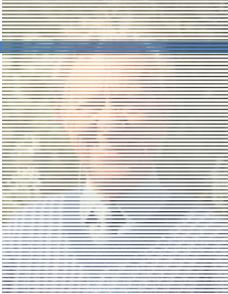

  
**Implant model package**



- 4 models \$1199
- [www.salvin.com](http://www.salvin.com)
- C&B implant+2 locator + Implant bar+ Fixed hybrid


  
**Is this New?**

- Mr. Gosta Larson was first patient ever to receive a dental implant in 1965.
- He passed away in 2013 with a healthy hybrid bridge done from Dr. Branemark.



### Does this work?

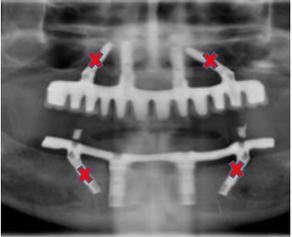
- A longitudinal study of the survival of All-on-4 implants in the mandible with up to 10 years of follow-up Malo et al. JADA 2011;142(3):310-320.
- Prospective non randomized longitudinal study
- 245 patients
- 980 immediate-function implants (four per patient)

### Results/Success rates

- A total of 21 implants in 13 patients were lost, with a higher incidence of failures in the first six months of function.
- Implant losses occurred in: **primarily smokers and diabetics**
- **98.1 percent** cumulative success rates at **5 years**
- **94.8 percent** cumulative success rates at up to **10 years**
- implant-related analyses showed **older machined titanium surface implants showed a higher failure** versus roughed surface

### Why 4 implants can be a problem

- In 4 implants is one fails then the whole restoration can fail
- Especially the posterior ones



### 5-6 implants is a BETTER PRODUCT!

- By using 5-6 implants it is unlikely that if one single implants failed it would cause failure of the restoration



Success rates courtesy of M Nader Sharifi, DDS, MS

### Maxillo-Mandibular Variations

**Single Mandibular Implant** Krennmair G: JOMI 2001; 16;98.



Single Symphysis Implant  
Opposing Mx Dentures  
Bicortically Stabilized  
More Than 80 years old  
9 Patients  
**Subsequently Repeated**

Success rates courtesy of M Nader Sharifi, DDS, MS

### Maxillo-Mandibular Variations

**Lower Overdentures** Naert et al. JOMI 2004; 19;5, 695.



10 Yr Randomized Clinical Trial  
36 Pts. with Two Implants  
Bars, Balls, Magnets  
No Implant Failures  
**Lower Overdentures Viable**

Success rates courtesy of M Nader Sharifi, DDS, MS

### Maxillo-Mandibular Variations

**Pushing the Envelope** Dudley J. JPD 2014; 112:104

Case Study (lowest level)  
 2 Patients  
 2 Implants  
 Unsplinted

**"Outside the evidence-based clinical scope where little or no rigorous scientific evidence exists"**



Success rates courtesy of M Nader Sharifi, DDS, MS

### Implant Retained Overdenture

**Mandibular Bone Quality** Jemt T, et al.: JOMI 1996 11:3; 291.

Multi-Center International  
 5 Year Prospective  
 9 Centers  
 133 Patients

**Mn Implant Success: 97%; Mn Prosthesis Success: 100%**  
**Mx Implant Success: 78%; Mx Prosthesis Success: 73%**



Success rates courtesy of M Nader Sharifi, DDS, MS

### Maxillo-Mandibular Variations

**Pick an Arch** Raghoobar, et al.: EJOI 2014

Compared Uppers to Lower  
 Splinted to Unsplinted  
 Four or Less  
 Six or More

**Splinted Implant Success: 98%**  
**Four Unsplinted Implant Success: 88%**



Success rates courtesy of M Nader Sharifi, DDS, MS

### Maxillo-Mandibular Variations

**Splinted Implant Success Rates** Sanna, et al.: 2009 Clinic Oral Imp Res.

10 Year Prospective  
 44 Patients  
 Mx Splinted Bars  
 2, 4 or 6 Implants

**4 or 6 Splinted: 99.3%**  
**2 Splinted Implants: 85.7%**



What type of patient can do Teeth Xpress?

- Enough Bone to place implants
- Capable of creating vertical clearance
- Non-smoker with controlled diabetes of <7A1c
- No **Severe** TMD or bruxism; everyone grinds a little
- Capable of affording treatment
- Must be able to hide transition line under lip

Vertical Dimension of Occlusion(VDO) for restoration/smile line

- Does bite need to be opened or closed?
- 13-15 mm of space needed for Fixed Restoration



## Why do we need so much space



Multiunit abutment 1-3mm  
Titanium frame ~5mm  
Teeth/acrylic 7-9mm

Identify Smile Line and Transition Line of Prosthesis

is apical to the smile line (in red) with an esthetic outcome.

Transition line (in green) is coronal to the smile line (in red) with an unesthetic outcome.

## Appt #1 Initial exam w/ Dr. Woodyard

- Comprehensive exam
- FMX if needed to rule out saving any of the teeth
- CBCT required
- Required photos taken by Dr. Woodyard and/or Gen Dent.
  - ▣ Full face smiling
  - ▣ Full face repose
  - ▣ Side profile
  - ▣ With and without denture
  - ▣ Denture out of mouth: Occlusal view and Intaglio view
  - ▣ Intra-oral Alveolar Ridge without denture
  - ▣ Lips retracted, teeth apart- with and without denture
  - ▣ Lips retracted, teeth together- front, right, and left sides



## Appt #2 Treatment Conference

- Usually with our Dr. W's office
- A detailed description of surgical procedure and times is presented
- Cost for surgery and a estimate of cost of restorative fee is presented (\$10-12,000). (I need to know how much you would charge)
- Patient will sign waiver for insurance and financial agreement for surgery portion and cost of conversion

## #Appt 3 Impressions, occlusal record and financial discussion at General Dentist



- We will provide waiver for insurance
- Have patient pay full amount or arrange payments for full amount so that they are not tempted to leave in provisional
- Impressions and occlusal record must be suitable to fabricate a denture

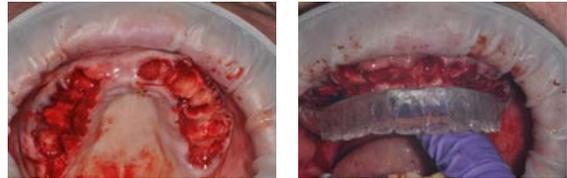
## Lab fabrication of denture and guides

- Frisse Dental Lab will fabricate surgical guide and temporary denture including but not limited to:
  - ▣ Custom trays
  - ▣ Base plate and bite rims
  - ▣ Denture teeth and try-in. Bite registration for surgical delivery, too.

### Why we will not convert existing denture

- Will not have correct vertical
- Not strong enough
  - ▣ Perma fiber
- Denture cannot be removed for 2 months for risk of micromovement of implants
  - ▣ If it breaks then a regular denture may have to be worn until it heals

### Appt #4 Surgery – 7-10am



### Appt #4 Conversion 10-12 pm



### Appt #4 12-2:30pm patient rests



### Appt #4 Deliver fixed bridge 2:30pm



### Post-op instructions

- **DO NOT** chew on, touch, brush, or look at the tissue where you had surgery. The more it is left alone the better!
- **DO NOT** rinse vigorously or drink through a straw for the first 24 hrs.
- **DO NOT** Smoke or use smokeless tobacco
- **DO NOT** stop taking any of your prescribed post-surgical medication unless you consult with our office first.
- **AVOID** vigorous physical activity for the next 2 days as it can cause bleeding
- **DO NOT** use any home remedies or deviate from you post-op care instructions unless you consult with our office
- **SOFT FOOD FOR 6 WEEKS.** If you cannot squish the food in between your fingers then you cannot eat it.
- **TAKE YOUR OPPOSING DENTURE OUT AT NIGHT OR IF YOU HAVE OPPOSING TEETH WEAR YOUR NIGHTGUARD EVERY NIGHT**
- **DO NOT TAKE ANY** aspirin, ibuprofen, or naproxen unless specifically directed to for the first 24 hrs. This will increase bleeding, swelling and chance of infection.
- **RINSE WITH THE PRESCRIBED CHLORHEXIDINE** starting 24 hours after the procedure for the next 2 weeks.

### Appt #5-7

- #5 1-2 week post-op check
- #6 4 weeks – give patient hydrofloss™ irrigator
- #7 4 months take radiographs and verify integration. We will send impression copings to laboratory. You then must decide what impression technique you will use and contact Frisse Dental lab.

### Restorative Appt #1 LONG/technique

Lab will send you a sectioned verification jig with impression copings

Remove temp bridge and clean abutment

### Something you need!

EasyReach Right Angle Prosthetic Wrench \$469 from [www.salvin.com](http://www.salvin.com)

Easy Access In Difficult To Reach Areas

Finger Tip Rotation Easily Tightens Or Loosens Prosthetic Screws

Fits "Latch Type" Driver Tips

### Or this

Salvin AccessTorq Right Angle Variable Torque Driver \$850 from [www.salvin.com](http://www.salvin.com)

Rotation Easily Tightens Or Loosens Screws

Seven Torque Settings: 10, 15, 20, 25, 30, 32 & 35 Ncm

### Best tray to use Cbite trays

- <http://www.cbitedds.com/> for information on how to use
- [www.practicon.com](http://www.practicon.com) \$29.99 for one box of 12 trays
- There are 4 sizes

### Restorative Appt #1 LONG/technique

DO NOT remove multi unit abutment!!

Assemble impression copings one by one in mouth as it is on the model and lute jig together with TRIAD.

### Restorative Appt #1 LONG/technique

Wipe impression material from tops of screws BEFORE it sets

After material sets remove ENTIRE bridge

### Restorative Appt #1 LONG/technique

Replace bridge and torque abutment screws to 15Ncm

Fill access holes with blue moose if not visible

### Restorative Appt #2 LONG/technique

Remove temp Bridge and place screw retained Occlusion Rim

Establish vertical and bite registration. Remove replace temp bridge

### Restorative Appt #3 LONG/technique

Remove Temp bridge and wax try in w/ denture teeth

Check for esthetics and make any adjustments in tooth position before final – communicate to lab and replace temp bridge

### Fast/Easy technique

How to skip the verification jig and wax bite rim try in.

### Restorative Appt #1 Fast/Easy technique

Check and adjust occlusion if needed

Take new occlusal record

Thank you Dr. Andrew Shephard!

### Restorative Appt #1 Fast/Easy technique

Access screw holes and remove Teflon	Check space under bridge - >3mm
	

### Restorative Appt #1 Fast/Easy technique

Clean tissue and abutments with water spray and gauze	
	

### Restorative Appt #1 Fast/Easy technique

Remove screws and put on wax	Clean bridge in ultrasonic and duplicate to give lab tooth angle
	

### Restorative Appt #1 Fast/Easy technique

Adjust tissue side of bridge to make room for impression material. DO NOT DAMAGE METAL ABUTMENTS	Need at least 3mm space or more
	

### Restorative Appt #1 Fast/Easy technique

Apply tray adhesive to intaglio surface/tissue side of bridge	
	

### Restorative Appt #1 Fast/Easy technique

Use Long Multi unit coping screws provided by our office	Clean abutments and replace bridge using long screws finger tight
	

### Restorative Appt #1 Fast/Easy technique

**Radiograph to verify seating**



**Try in tray and mark sites for screw holes**



### Restorative Appt #1 Fast/Easy technique

**Pop out screw holes**



**Make sure screws do not bind or touch tray**



### Restorative Appt #1 Fast/Easy technique

**Inject light body PVS from facial until it flows to the lingual**



**Inject medium or heavy body impression material in vestibule and distal to bridge**



### Restorative Appt #1 Fast/Easy technique

**Fill tray with a medium or heavy body PVS**



**Align tray with screws and insert**



### Restorative Appt #1 Fast/Easy technique

**Wipe impression material from tops of screws BEFORE it sets**



**After material sets unscrew screws and remove ENTIRE bridge**



### Restorative Appt #1 Fast/Easy technique



### Restorative Appt #1 Fast/Easy technique

Place metal cover caps provided by our office finger tight over the multi unit abutments

Laboratory will use bridge as verification jig to mount case, establish bite and to get vertical dimension

### Restorative Appt #2 Fast/Easy technique Next day

Replace bridge and torque abutment screws to 15Ncm

Fill access holes with blue moose if not visible

### Restorative Appt #3 Fast/Easy technique

Remove Temp bridge and wax try in w/ denture teeth

Check for esthetics and make any adjustments in tooth position before final - communicate to lab and replace temp bridge

### Types of bars for Hybrid Bridges

### Restorative Appt #4 Fast/Easy technique

Remove Temp bridge and try in milled Titanium bar with wax and denture teeth. Check for passive fit with one screw test

Check for esthetics and make any adjustments before final - communicate to lab and replace temp bridge

### Restorative Appt #5 Fast/Easy technique

Remove temp bridge and clean abutments and final bridge with CHX

Place final bridge, torque screws to 15Ncm, verify seating with x-ray, place PTFE tape /composite in access holes, and adjust occlusion

### Restorative Appt #5 Fast/Easy technique

Bridges in place- Impress for biteguard



Smile with bridges



### Restorative Appt #6 Fast/Easy technique

#### Deliver biteguard

Before



After



### Final Hygiene Appt with Dr. Woodyard included

1 hr. proph/exam with oral hygiene instruction



Check bone levels around implants



### Long term Maintenance?

- **Periapical Radiographs** (pan will not show detail) in general office yearly
- **Hygiene recall** based on patients ability to clean and past periodontal history. Minimum every 6 months. If periodontitis was involved with tooth loss then every 3 months. *IF no periodontitis present on remaining teeth will alternate at your request.*
- **Only Remove Bridge** when you see visible inflammation, poor home care with high plaque score, and/or bone loss on implants
  - **D6080 IMPLANT MAINTENANCE PROCEDURES** most people charge \$300-500 depending on amount of time and replacement parts involved

### Fees, production, etc..

What does this cost and what does the General Dentist charge?

### 4 Locator overdenture; GP Production

4 locator overdenture appointments

Patient fee range \$5500-\$8500

- 8-12 Appointments
  - Initial impressions -30 min
  - Adjustment of provisional dentures/soft liners 1-3 appts -15-30 min
  - Impressions for custom trays -30 min
  - Impressions for master cast/locator placement 30 min-1 hr.
  - Wax rims 30 min-1 hr.
  - Wax teeth try in 30 min-1 hr.
  - Final denture and adjustment -30 min-1 hr.
  - Denture adjustments 1-3 appts -15 min

Average chair time	5.5 hrs
Lab+abutments	\$2250
Net Production	\$3250-\$6250
Net Hourly Production	<b>\$590-\$1136</b>

## Hybrid Bridge; GP Production

**Hybrid bridge appointments**

- 6 Appointments
  - Initial impressions -30 min
  - Removal of provisional bridge and final impressions -1-1.5 hrs
  - If bridge sent to lab- replacing bridge -30 min
  - Wax teeth try in 30 min-1 hr.
  - Wax teeth try in with bar 30 min-1 hr.
  - Final bridge and adjustment 1 hr.
  - Nightguard delivery-15 min

**Patient fee range \$10,000-\$12,000**

Average chair time	4.25 hrs
Lab+abutments	\$4500
Net Production	\$5500-\$7500
Net Hourly Production	<b>\$1294-\$1765</b>

## Cost and what is provided per arch

**Dr. Woodyard \$14,300 + Extractions**

- Initial exam and CBCT
- IV or oral sedation
- Alveoplasty and flap surgery
- surgical placement of 4 to 6 implants (no fee difference per implant)
- placement of multi-unit abutment
- \$500 laboratory fee to convert denture into hybrid bridge
- all post-op radiographs and up to 4 post-op visits
- Impression copings and 2 sets of analogs/replicas
- 1 hydrofloss oral irrigator
- 1 prophyl visit with oral hygiene instruction after final bridge complete

**Frissie Lab all inclusive \$4500**

- Initial denture, surgical guide, and bite registration for surgery
- Verification jig for final impression
- Fixed Wax rim with at least 2 temp copings
- Wax teeth try in
- Milled titanium framework for final restoration
- Final tooth placement on milled bar
- Final hybrid bridge restoration
- Occlusal bruxism appliance/biteguard

### Cost benefits for Package pricing: Patient with 14 teeth/arch

Per arch	Surgery	Rest Dentist fee	Patient cost
4 implants and Locator™ overdenture	\$21,600 <i>CBCT, exam, 2 IV sedations, 12 extractions, 4 ridge preservation, implant guide, PRF, 2 vertical sinus lifts and 4 implants – 2 Surgeries</i>	\$5500-8500 <i>tissue conditioner, 4 Locator abutments, final locator denture (\$2250 lab fee)</i>	\$27,100-\$30,100
TeethXpress™ hybrid bridge	\$17,800 <i>CBCT, exam, IV sedation, 4-6 implants, 4 surgical/10 simple extractions and 4-6 Multiunit abutments, bridge conversion, hydrofloss, 1 hygiene prophyl w/ OH</i>	\$10-12,000 <i>Initial impressions, wax rim try in, teeth try in, bar try in, Final bridge and bite-guard (\$4500 lab fee)</i>	\$27,800-\$29,800

### Cost benefits for Package pricing: Edentulous patient

Per arch	Surgery	Rest Dentist fee	Patient cost
4 implants and Locator™ overdenture	\$12,000 <i>CBCT, exam, IV sedation, 2 vertical sinus lifts, PRF, Surgical guide and 4 implants</i>	\$5500-8500 <i>tissue conditioner, 4 Locator abutments, final locator denture (\$2250 lab fee)</i>	\$17,500-\$20,500
TeethXpress™ hybrid bridge	\$14,300 <i>CBCT, exam, IV sedation, 4-6 implants, 4-6 Multiunit abutments, bridge conversion, hydrofloss, 1 hygiene prophyl w/ OH</i>	\$10-12,000 <i>Initial impressions, wax rim try in, teeth try in, bar try in, Final bridge and bite-guard (\$4500 lab fee)</i>	\$24,300-\$26,300



- ## Reasons not to Offer this..
- New Technology...1965
  - All day surgery...7-10 am surgery
  - Patient Pain...Does not move=little pain
  - Technically not able...
  - Patient Cost...

## In summary: Pros and Cons

	4 Locator overdenture	Bar retained overdenture	Hybrid Bridge
Frequency/Cost of ongoing maintenance	High/High	Low/Low	<b>Lowest/Low</b>
Must wear a denture 4-8 months during healing	Yes	Yes	<b>No</b>
Can be left in at Night	No	<b>Yes</b>	<b>Yes</b>
Can have a Buccal flange to hide transition line	Yes	<b>Yes</b>	No
Tissue born prosthesis w/ micro-movement	Yes	<b>No</b>	<b>No</b>
Will need frequent denture relines	Yes	<b>No</b>	<b>No</b>
Long term success Upper/Lower	75%/98%	<b>98%/98%</b>	<b>99%/99%</b>
Number of surgeries needed per arch	Multiple	<b>Usually One</b>	<b>Usually One</b>