



# Recognised for Superb Service

## The Imperial Dental Specialist Centre Edge

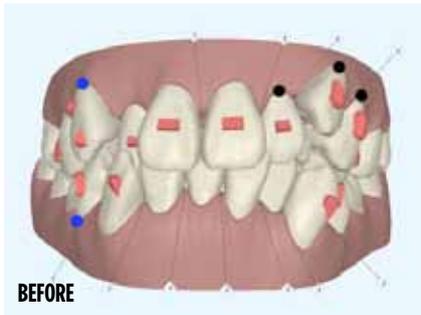
The Imperial Dental Specialist Centre (IDSC) is a fully-integrated facility which provides comprehensive solutions for all your dental, skeletal as well as soft tissue and cranial neuromuscular needs. An award-winning clinical centre that's recommended by the Malaysian Healthcare Travel Council, IDSC aims to provide the best dental outcomes based on unique needs through science and artistry. Equipped with state-of-the-art facilities and highly skilled specialists, IDSC offers unparalleled clinical expertise to create long-lasting

smiles that are both functional and beautiful. While this incomparable dental facility may provide all forms of dental practices, they particularly excel in highly-specialised services including smile designs, minimally-invasive implants, Invisalign and orthodontics. In this all-inclusive editorial piece, *Cosmetic Surgery and Beauty Magazine* seeks out four of IDSC's specialists as they explain a few of the many procedures they provide and reveal why such treatments are advantageous to any patient at any age.

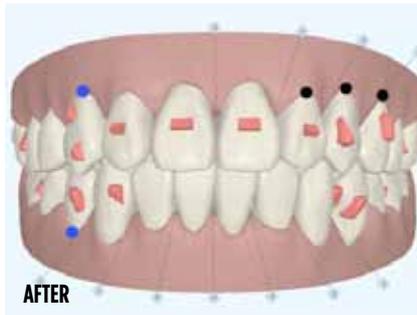




## Invisalign Provides Superior Results with Consultant Orthodontist, Dato' Dr. How Kim Chuan



BEFORE



AFTER

Digital before and after images of the patient's teeth. Digital Clincheck computer imaging allows both the doctor and patient to understand and envision upcoming results even before Invisalign treatments are carried out.

Before and after images of the patient's severely crowded teeth. Due to Invisalign's superior treatment, there was no need for dental extractions.



BEFORE



AFTER

Pictures courtesy of Dato' Dr. How Kim Chuan.



BEFORE



AFTER

Before and after images of the patient's smile line.

Many people believe Invisalign simply rectifies easy orthodontic cases where more complicated dental crowding may only be treated with conventional braces. However, and as you can see from the images attached, Invisalign has the ability to correct severe crowding with the added advantage of zero extractions of the pre-molars.

When patients undergo conventional braces to correct severe crowding, they will normally have to undergo extractions as well. Although painless, extractions do incur extra costs and may lead to some bleeding. Moreover, should patients request for zero extractions during conventional orthodontics, good results will typically be difficult to obtain. This is simply because braces only have abilities of relieving crowding once extraction spaces have been achieved. If for example, orthodontists carry on with braces without plucking out dental units, a proclination (outward flaring) of the teeth will take place.

In this case however, Invisalign was able to treat severe crowding without extractions because aligner trays cover tooth surfaces, eliminating any chances for proclination. Similarly, Invisalign also applies very low forces of 0.25mm per aligner. Such low pressures permit bones to regenerate, allowing biological growth along with natural bone formation.

When patients choose to undergo braces, conventional orthodontics will apply higher forces. This disallows bones to regenerate, leading to the aforementioned flaring of the teeth. Once patients experience proclinations, they will end up sporting teeth with poor aesthetic results. With Invisalign conversely, patients can experience optimal bone growth where the teeth are able to move more naturally. In conclusion and despite what many believe, Invisalign has the superior ability to treat severe crowding even when extractions aren't applied.



## Flapless Implant Surgery with Consultant Orthodontist, Dato' Dr. How Kim Chuan

As you can see from the images attached, this patient is partially edentulous and has been wearing dentures for many years in order to maintain function. Due to the lack of teeth and long-term denture application, this patient complained and suffered from bone resorption and gum recession. While all edentulous patients would most definitely benefit from implants, many choose to undergo other forms of dental restoration due to traditional implant surgery's invasiveness, pain and downtime. However, and as you can see from the images, this patient underwent flapless surgery where implants were immediately placed in without any need for cutting or suturing of the soft tissues. Furthermore, one can also clearly ascertain that many of the edentulous spaces have been safely restored with minimally-invasive techniques and nominal bleeding.

If you take a gander at this patient's smile line, we can evidently notice that his lower teeth were biting on the upper gums. Nonetheless, and once implants were placed in, we were able to restore the patient's dental aesthetics and function by increasing his vertical facial dimensions, allowing the lower teeth to occlude with the implant's prosthesis as opposed to the soft tissues.

The Imperial Dental Specialist Centre has been providing non-intrusive implant methods for over ten years. Through the use of minimally-invasive techniques and prosthetics, dentists have enhanced abilities of improving the teeth's size, shape and colour without bleeding, suturing or discomfort. This would not only allow patients to boast highly aesthetic smiles but also oral cavities that function perfectly well without common impedances brought upon by missing teeth, dentures or downtime.



Implant fixture inserted into bones via flapless surgery, resulting in minimal bleeding. The surgery is also painless.



Implant fixtures are ready to receive crown prosthetics after three months of osseointegration. The gingival tissues around the implants are very healthy.



During treatment.

*Pictures courtesy of Dato' Dr. How Kim Chuan.*



Before and after implant treatment. Implants have the ability to painlessly restore missing teeth with good aesthetic and functional results.



Missing teeth restored with good aesthetics and function.



The lower molars were biting on the upper gingiva. After implant restoration, the patient's bite was restored with normal occlusal height.



## The Best Age for Braces with Dental Surgeon Datin Dr. Alice Wong

The ideal age for braces varies from child to child. It can even be as young as eight-years old, depending on their physiological development and treatment needs. It's crucial dental misalignments be spotted early so that orthodontists can help you put things right and further prevent problems as children get older. Orthodontic issues become steadily worse as patients age and the older children get, the more limited opportunities for correction becomes. Likewise, as problems continually progress, the more time consuming and complex treatments will be.

### How do you know your child needs braces?

Even if your child sports beautiful baby teeth, they're still growing and could easily develop future problems. Here are a few tell-tale signs for probabilities of orthodontic treatment –

- Crowded, misplaced and protruding teeth.
- Tooth grinding and clenching.
- Thumb and finger sucking.
- Wear and tear of the dental enamel.
- Difficulty chewing and biting.
- Difficulty with speech.
- Missing teeth.
- Hereditary factors which counts for 40 percent of skeletal and dental variations resulting in malocclusion.

### What are the options?

Every child is unique and not surprisingly, the same goes for their orthodontic needs. Choosing the type of teeth straightening treatment your child needs is a decision not only made together with your specialist orthodontist but in conjunction with a thorough assessment of your child's teeth, gums and jaws. Some children relish in the fact they're sporting braces while others are embarrassed by the appearances of metal tracks on their teeth. Whichever category your child falls into, they have a wide range of orthodontics to choose from. Here are some of the commonest form of dental alignment treatments:

#### 1. Invisalign

Invisalign treatment is a virtually invisible form of dental straightening. Using advanced 3D computer-imaging technology, Invisalign shows patients complete treatment plans based on your doctor's prescription, from initial teeth positions to final desired outcomes. To achieve this, a series of clear aligners are custom-made for your teeth, moving them slowly towards final positions with each passing bi-weekly aligner. Treatment times depend on specific needs and will be decided by your doctor. Unlike fixed metal braces, Invisalign doesn't require brackets or wires that look unaesthetic and irritate soft tissues. Furthermore, brushing, flossing and



Signs your child requires orthodontic treatment.



Patient who suffers from midline shifting.



Patient who could benefit from orthodontic treatment due to severe underbite.

eating are much easier as aligners are removable.

#### 2. Fixed Metal Braces

These braces are similar to traditional metal braces, except that brackets are ceramic or porcelain. Ceramic brackets and even wires can either be clear or tooth-coloured, making them less conspicuous than their all-metal counterparts. It's worth noting that ceramic braces are more fragile and require more cleaning as staining progresses over time.

#### 3. Self-litigating Braces

Self-litigating braces are similar to traditional braces – apart from the fact that elastics aren't required. Instead, brackets are connected to the archwire by a clip or 'sliding door'. These braces are generally easier to keep clean and require fewer orthodontic visits as they needn't necessitate tightening.

#### 4. Lingual Braces

Lingual braces are more discreet than traditional braces because they're placed behind teeth. While the benefit of lingual braces is its invisibility, one drawback is difficulties related to cleanliness as they're challenging to clean. What's more, lingual braces aren't suitable to all cases and may not be offered by all orthodontists.

#### 5. Upper Removable Appliances (URA)

The obvious advantage of URA is its removability during eating and brushing. Plus, they're practically invisible and comfortable because aligners are custom-made to fit your child's teeth. Of course, in order to achieve the best results, parents have to ensure their children remain committed to wearing the URAs throughout the required amount of time each day. In some cases, URAs are worn for six to nine months before fixed appliances are fitted in.

Pictures courtesy of Datin Dr. Hui Kim Chuan.



## Better Crowns and Bridges with Dr. David Tan

Dental crowns are prescribed to reinforce damaged tooth structures while bridges replace missing teeth. Nowadays, crowns and bridges are found in two forms including porcelain fused to metal (PFM) and porcelain fused to zirconia (PFZ). PFM crowns and bridges are basically made out of a metal base to provide strength and porcelain for aesthetics. PFZ or zirconium oxide on the other hand, is made of metal oxide and is actually a form of dental ceramics.

### Why are zirconia crowns and bridges superior to PFM?

Porcelain fused to zirconia crowns and bridges are far superior to PFM based prosthetics because they not only offer superb aesthetic outcomes but are also durable, safer, metal-free and bio-compatible. In addition, they possess excellent strength, fit better than PFM based crowns and bridges, are more conservative and fabricated by computers and machines.

In my opinion, PFZ crowns are far more durable if compared to PFM-based prosthetics because they're stronger, won't fracture easily and can withstand wear and tear. PFM conversely, has the propensity to chip and break. Besides, zirconium oxide provides superb shades, blending in nicely with natural tooth colours, making them look like real, God-given teeth. Unlike PFM crowns which are fused to metal bases, zirconia offers a strong, translucent core that can be paired with suitable glazing and staining to produce highly aesthetic results. This means that patients won't only boast natural looking prosthetics but those that don't look opaque, stain soft tissues or peek through gums.

In addition, there are a number of dental patients who are allergic to the alloys utilised in fabricating PFM crowns. PFZ, however, possesses excellent biocompatibility and therefore, completely safe for clinical use within the oral cavity throughout the prosthetics' lifespan. Next, patients needn't suffer too much tooth reduction should they choose to opt for PFZ crowns and bridges. PFM prosthetics contrariwise necessitates increased tooth shaving because it needs sufficient porcelain bulk in order to mask its metal cores. Last but certainly not least, zirconium oxide based materials are fabricated using state-of-the-art CAD/CAM-assisted milling devices or 3D printing technology. This means that prosthetics won't only possess excellent fits but brag appearances and sizes that rarely result in augmentations during crown and bridge applications.

While porcelain fused to zirconia prosthetics are the obvious choice, materials are so sturdy that they may abrade opposing teeth. In order to reduce such complications, patients who suffer from dental grinding and clenching (bruxism) may be prescribed nightguards to defend against chipping, cracked teeth or pain.



*Pictures courtesy of Dr. Ho Kim Chuan.*



As you can see that porcelain fused to metal crowns tend to appear slightly grey compared to natural teeth due to gum recession. Moreover, metal margins are also visible when gums recede. These are the two main problems faced by patients who opt for porcelain fused to metal crowns. Porcelain fused to zirconia crowns however, won't affect in such problems. In short, porcelain fused to zirconia crowns are clearly the better option because they boast superior aesthetics and strength.



The porcelain fused to zirconia crowns are able to provide superior aesthetics as the shade is similar to adjacent teeth. The crowns are also able to blend well with the gums as they can provide superb fitting. Furthermore, shapes, sizes and teeth colours can be similarly restored.



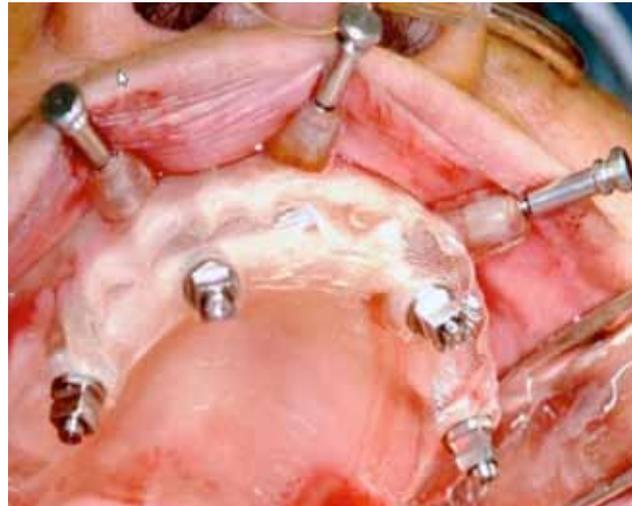
## Guided Implant Surgery with Dr. Raymond Su Wei Siong DDS (UKM), Msc Dental Implantology (UCLan, England), FICD

Flapless implant procedures are normally performed through tissues without elevating or cutting gums, which cover the alveolar bone. Through minimally-invasive flapless implant methods, osteotomies are performed with drills that directly enter both the soft and hard tissues. Once osteotomies are carried out, implants are placed through the hole and no sutures are required, leading to less pain and downtime. According to medical literature, flapless procedures have always been more advantageous due to the reduced trauma. Still, studies have also claimed that such surgeries tend to be more difficult because of the surgeon's inability to directly visualise anatomical depth or vital structures like the nerves.

While there are some dentists with years of experience who can perform minimally-invasive implants without visual, mechanical or technological aid, not all doctors may have such skills. Similarly, patient normally prefer to steer clear from surgeries that involve increased cutting, suturing, bleeding and long recovery periods. So, how can dentists safely provide flapless implant procedures without increased human error or patient-related trauma, downtime or pain? With guided implant surgery or a milled stent, of course!

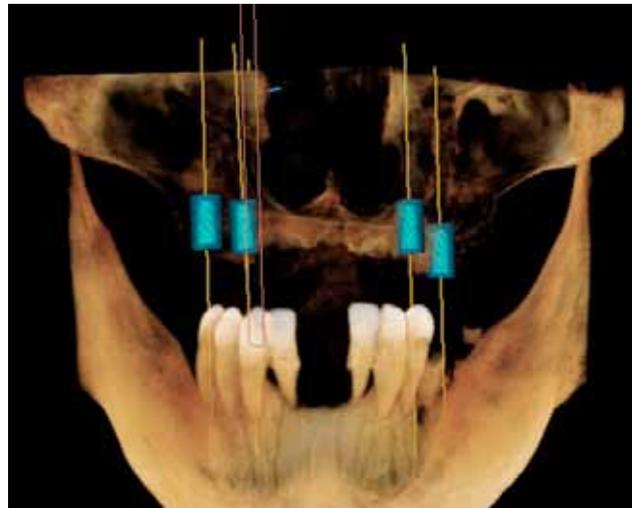
### What is a milled stent?

By amalgamating a Cone Beam CT (CBCT) scan and the patient's dental impressions, dentists can not only understand the teeth's exterior appearance but its internal structures as well. Once we have collected all the needed information, such data will be sent to the laboratory where a guided implant aid or milled stent can be fabricated based on the collected measurements of a patient's unique oral cavity including his or her hard and soft tissues and vital structures. By utilising this milled stent during surgery, dentists are not only able to place implants in precise locations and depths but also avoid damaging nerves, eliminating all forms of human error normally found during flapless osteotomies. Furthermore, because CBCT and impression data have been sent to laboratories for the milling of implant stents, practitioners are additionally able to provide temporary crowns and bridges based on the information provided. This is clearly advantageous as it eliminates requirements for prosthesis impressions after implants are placed in. Such benefits – notwithstanding minimal downtime – include reduced waiting time, improved comfortability and immediate oral function and aesthetics. Following three months of temporary crown and bridge application and usage, patients may return to have their permanent prosthetics placed in. No muss, no fuss. No pain and immediate results!

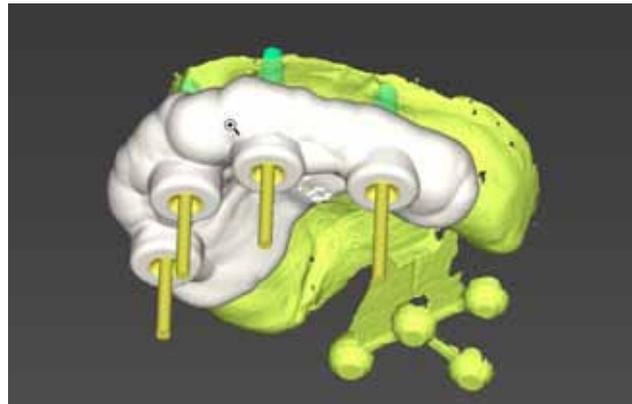


Surgical stent placed securely in the mouth to aid in correct placement of the implants.

Pictures courtesy of Dr. Raymond Su Wei Siong.



Implant treatment plans created with Cone Beam CT scan.



Surgical guide designs via CBCT scans assisting in precise implant placement, avoiding trauma to vital structures like the nerves.