

# Maxillofacial Deformity Correction & Reconstruction

A hub of accurate and safe maxillofacial deformity correction and reconstruction

By applying cutting-edge 3D technology,  
SMC performs a precise and specialized procedure  
to achieve the best results.



## Maxillofacial Deformity Treatment

### What is a maxillofacial deformity?

Maxillofacial deformities are irregularities associated with skull and facial skeletal misalignments caused by congenital or acquired conditions.

\* Types of Maxillofacial Deformities



Prognathism



Retrognathism



Openbite



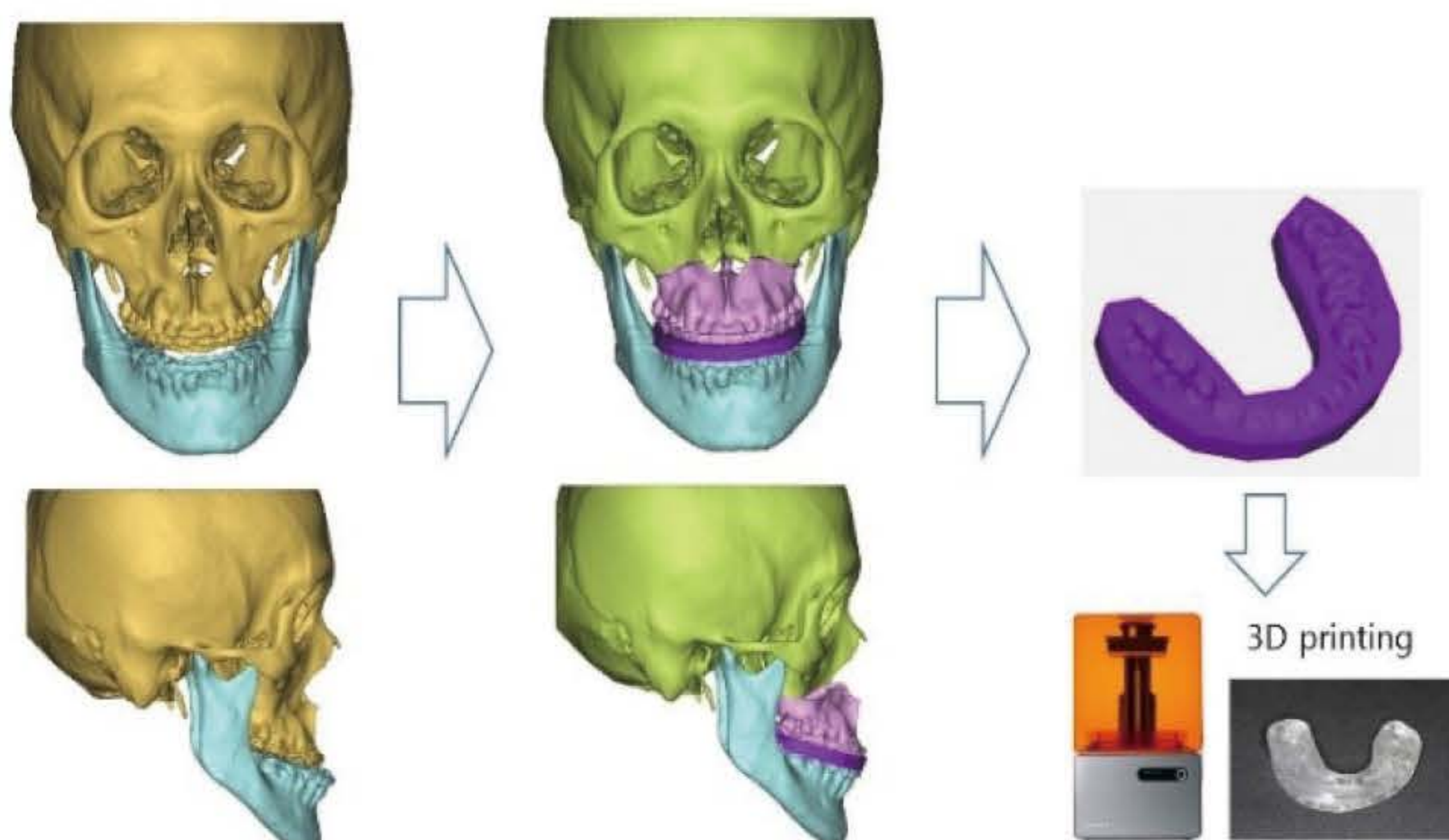
Facial Asymmetry

### How to treat a maxillofacial deformity?

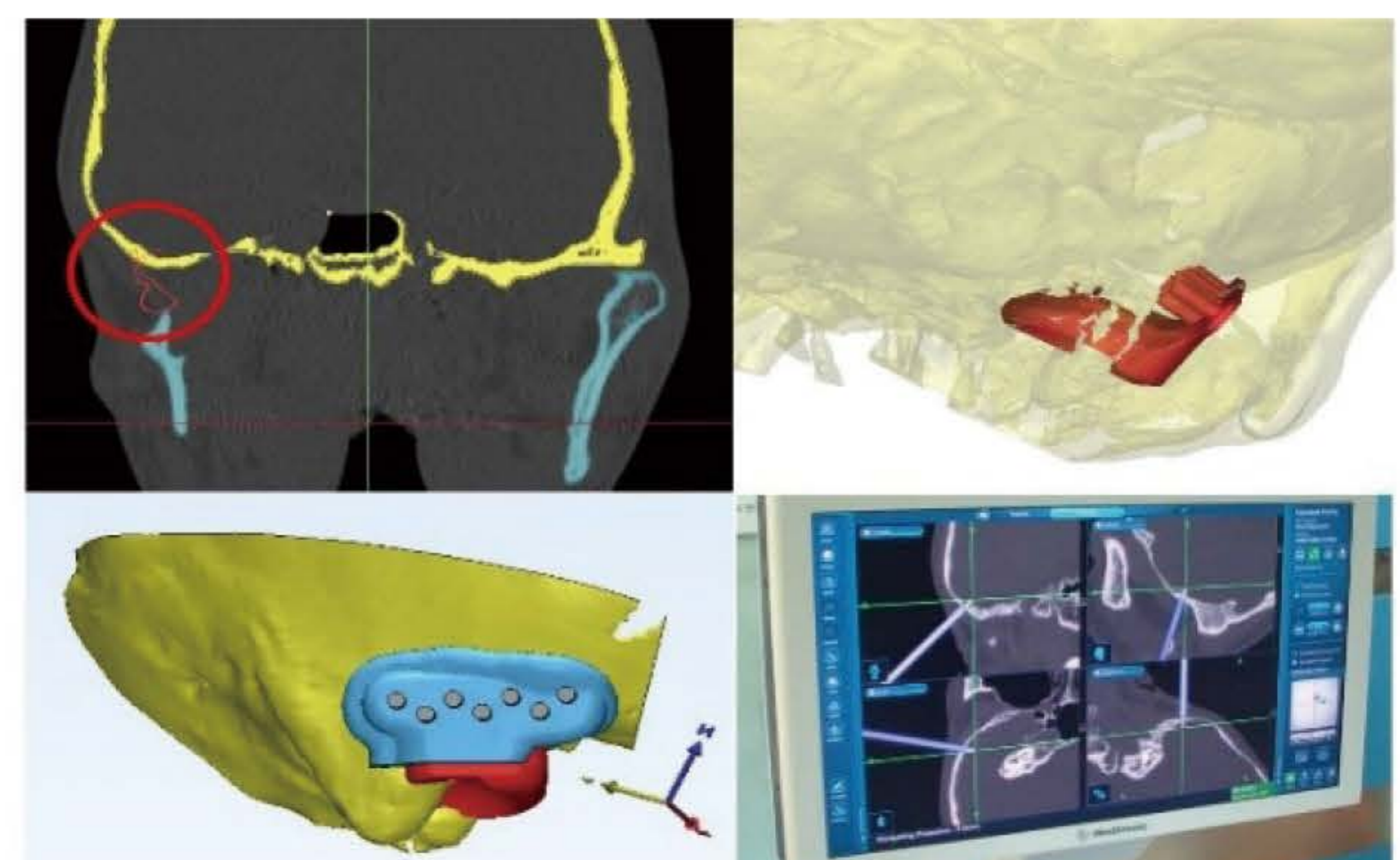
Orthognathic surgery (corrective jaw surgery) is performed to correct various facial skeletal irregularities. The common process goes through pre-surgical orthodontic correction → surgery → post-surgery orthodontic correction, but recently, [with more accurate post-treatment prediction enabled by CT and 3-D assisted simulations, early surgery or a surgery-first method can be applied in some cases without pre-surgical orthodontic treatment.](#)

Jaw function and occlusion are important factors to consider in treating a maxillofacial deformity, so functional evaluation of the temporomandibular joint (jaw joint), or TMJ, is essential. A patient with facial asymmetry, which involves severe joint damage, needs TMJ reconstructive and corrective surgeries at the same time.

[At SMC, we apply 3-D technology throughout the entire process of a TMJ corrective surgery.](#) By predicting what will happen during the actual surgery based on a 3-D simulation, we can shorten the surgical time and develop an optimal plan for the surgery. In case of partial loss in the mandible (lower jaw) or the maxilla (upper jaw) caused by the maxillofacial tumor or trauma, we can pinpoint a bone graft location with the



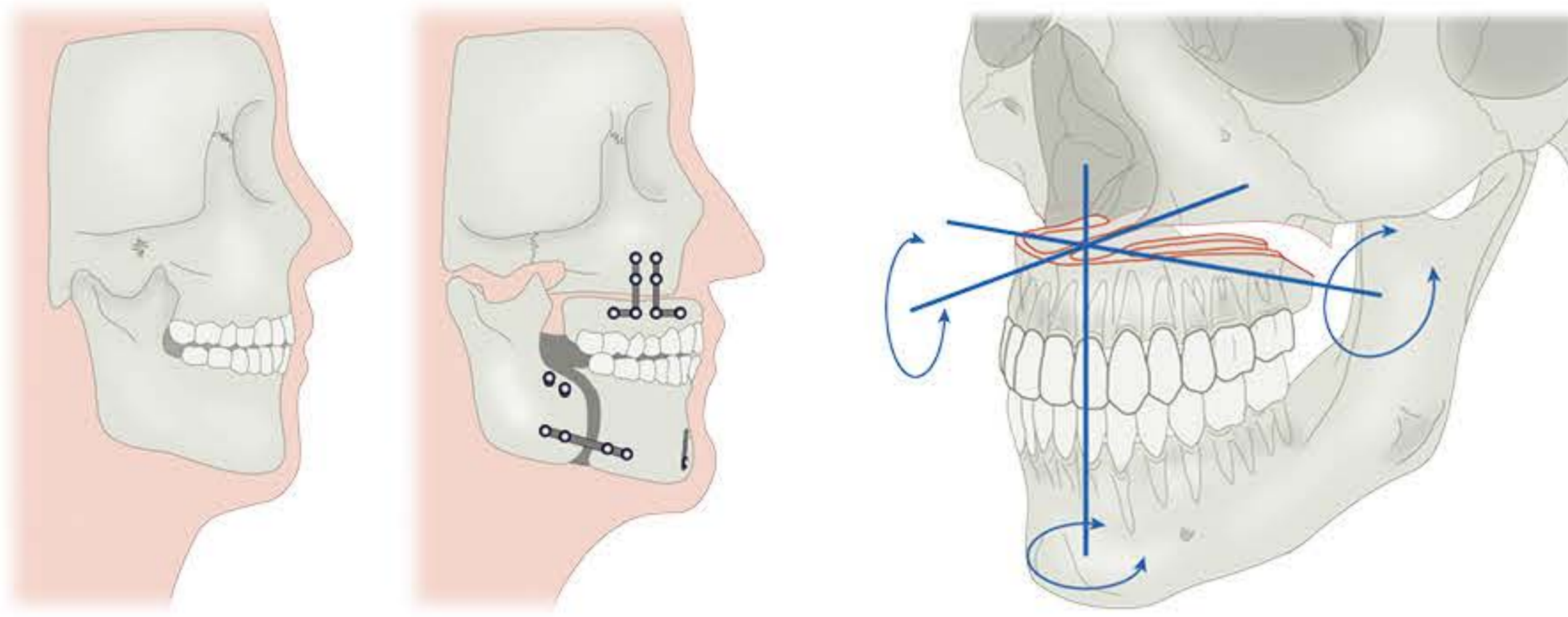
3-D technology used in preparation for orthognathic surgery



3-D printed surgical guide and intra-operative use of navigation

## How to apply state-of-the-art tools such as navigations, 3-D surgical guides, and 3-D scanners?

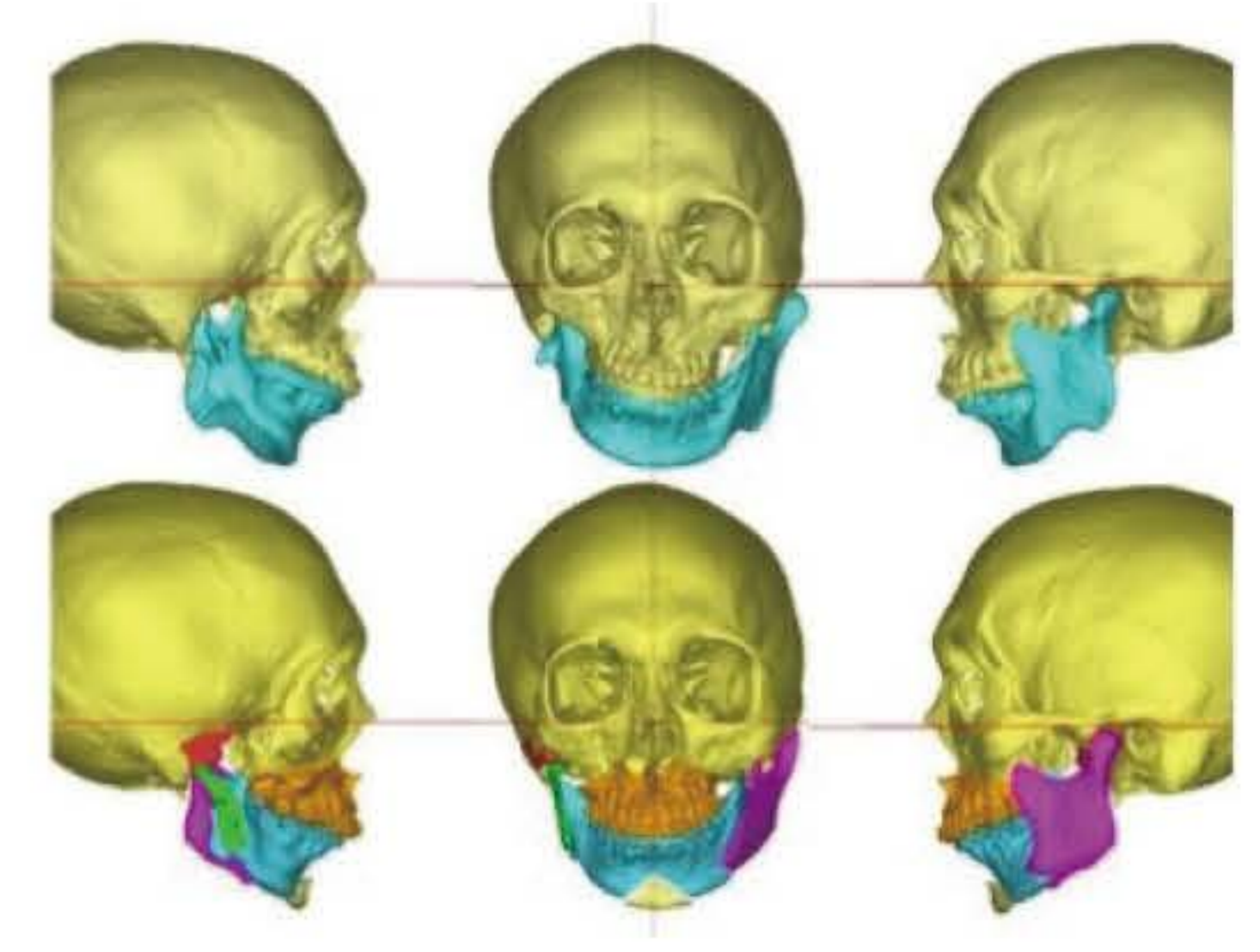
For TMJ reconstruction, the location to fix the joint must be confirmed through CT before the surgery. At SMC, we use digital models to plan surgery and predict post-surgical dental movement and simulate surgery on a 3-D model.



Relocate the jaw with up-down, left-right, and forward-backward movement planning through 3-D rotation technique



Simultaneous maxillary and mandibular orthognathic surgery

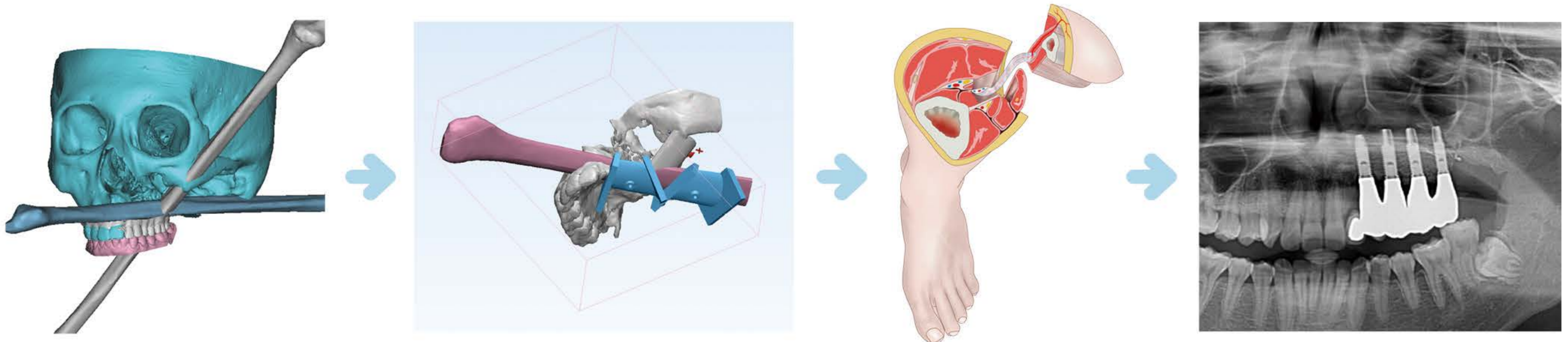


Orthognathic surgery involving TMJ reconstruction

## Maxillofacial Reconstruction

For a defect caused by maxillofacial trauma or tumor, tissue grafting is an option which can reconstruct the jaw bone and tissues. The shape and the function of the jaw bone can be reconstructed through microvascular flap grafting using the fibular bone in the leg or the iliac bone.

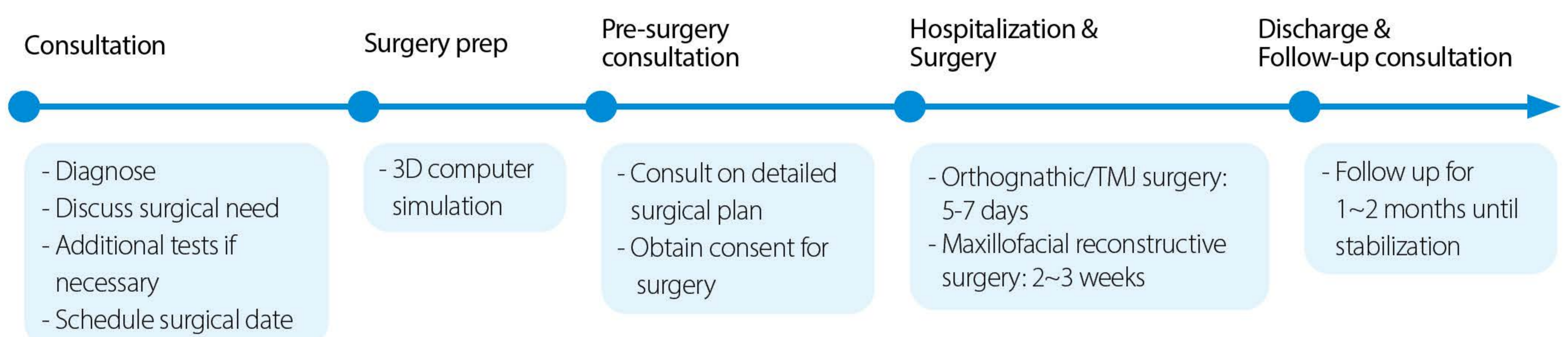
### Maxilla(upper jaw) reconstruction



### Mandible(lower jaw) reconstruction



## Procedures for TMJ/Jaw corrective and reconstructive surgery



\*The treatment process and the required time may vary depending on the patient's condition, and pre-/post-surgery correction or other additional treatments may be necessary.

# Best Professors in Maxillofacial Deformity Correction & Reconstruction



**Chang Soo Kim D.D.S, Ph.D.**

Oral and Maxillofacial Surgeon

**Areas of Expertise :**

Orthognathic Surgery  
Implant Dentistry  
Maxillofacial Trauma  
Surgical Extraction



**Jun Young Paeng D.D.S, Ph.D.**

Oral and Maxillofacial Surgeon

**Areas of Expertise :**

Maxillofacial Reconstruction  
Orthognathic Surgery  
TMJ Surgery  
Maxillofacial Implant



**Jae Myung Ahn D.D.S, Ph.D.**

Oral and Maxillofacial Surgeon

**Areas of Expertise :**

Implant Dentistry  
Maxillofacial Trauma  
Orthognathic Surgery  
Maxillofacial Reconstruction



**Hae Won Choi D.D.S, Ph.D.**

Orthodontist

**Areas of Expertise :**

Surgical Orthodontics,  
Esthetic Orthodontics,  
Invisible Orthodontics,  
Growth Modification & Dentofacial Orthopedics

## Dentistry at SMC

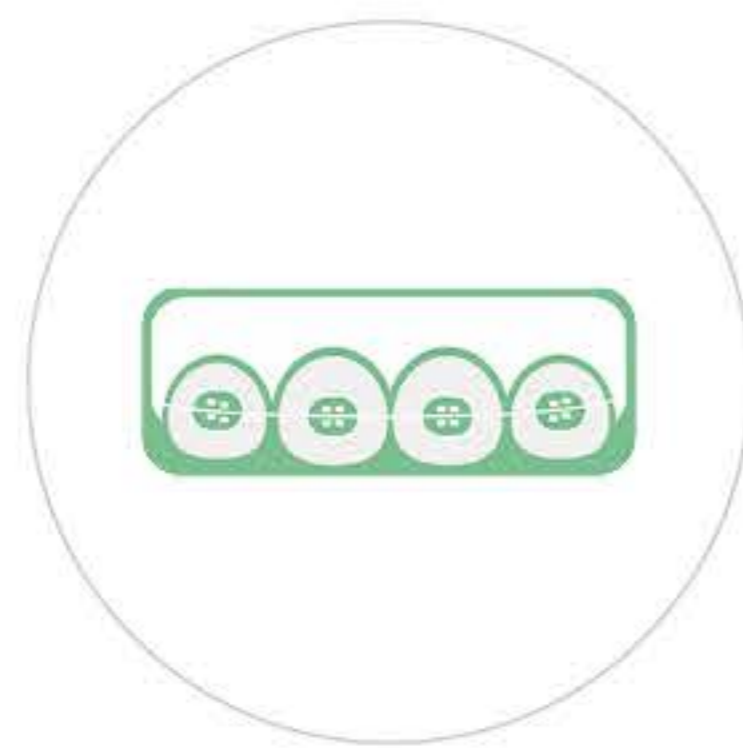
The department of Dentistry at SMC provides a full range of dental care services.

\* Sub-divisions of Dentistry at SMC

Oral and  
Maxillofacial Surgery



Orthodontics



Conservative  
Dentistry



Prosthodontics



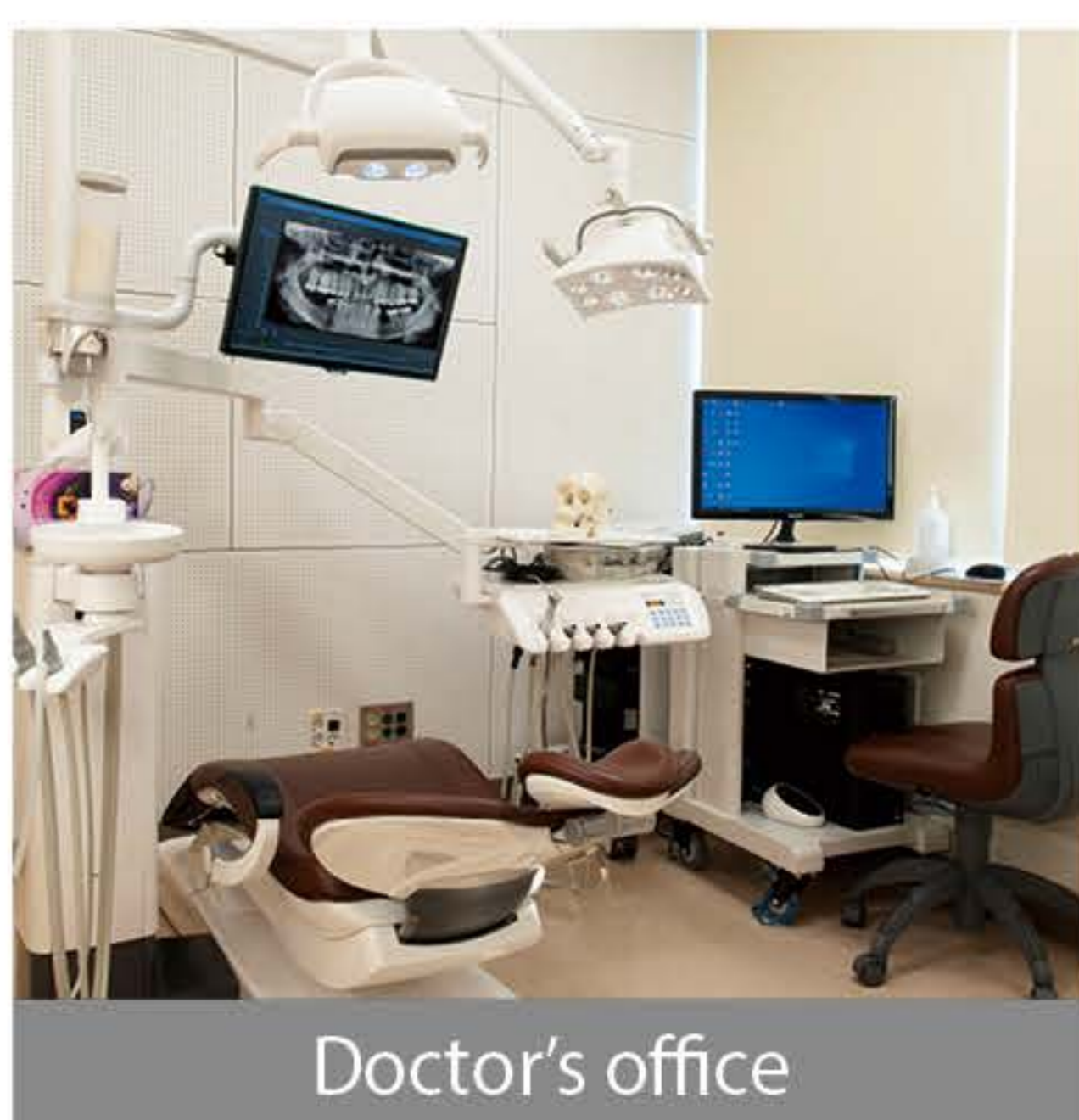
Pediatric dentistry



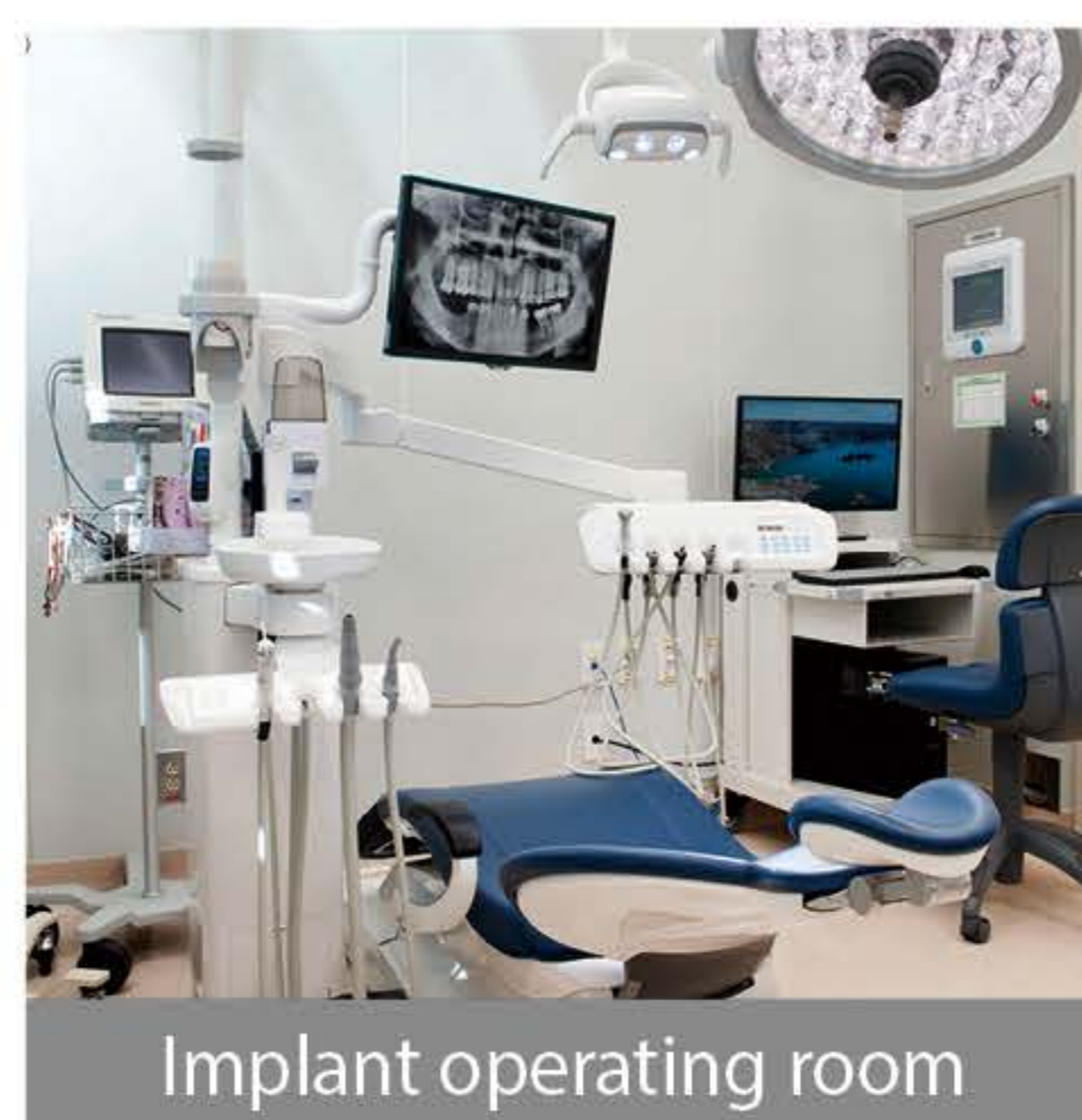
Periodonitics



The dentistry at SMC is equipped with a CT room, an X-ray room, an implant operating room and other state-of-the-art facilities. **Every doctor's office is designed for single-patient occupancy**, which ensures no interruptions and a quiet environment in which the doctor concentrates only on the treatment of the patient.



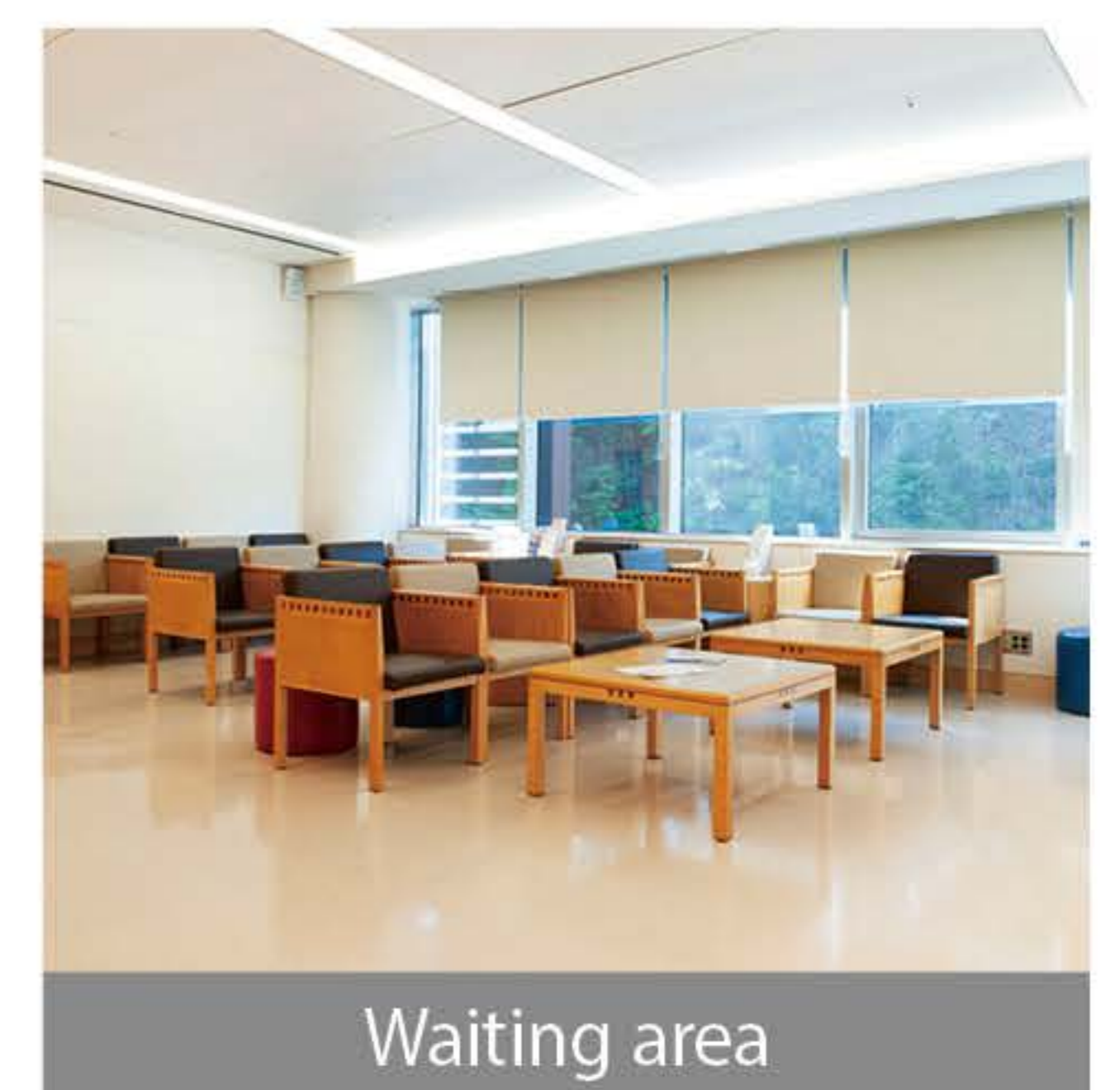
Doctor's office



Implant operating room



Dentistry CT room



Waiting area

## Contact US

### International Healthcare Center

If you would like to request an appointment at Samsung Medical Center, feel free to contact us.

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