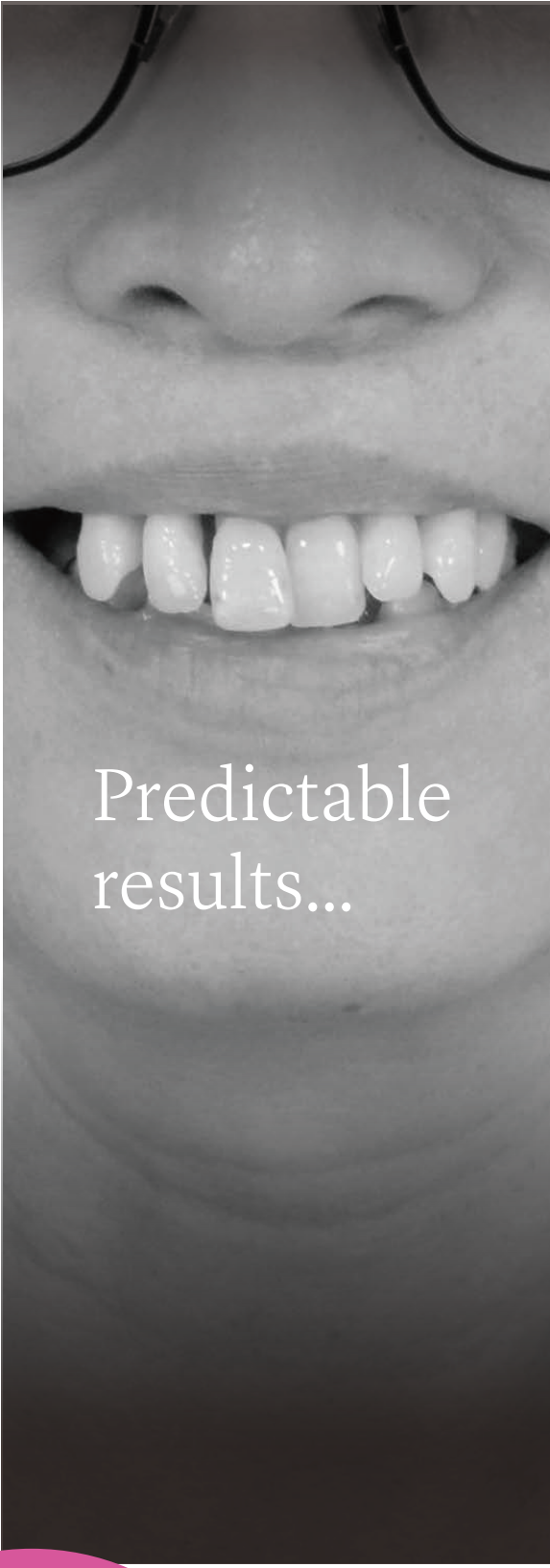


Digital workstation
R2 STUDIO Q™

Predictable
results...

exactly
as planned

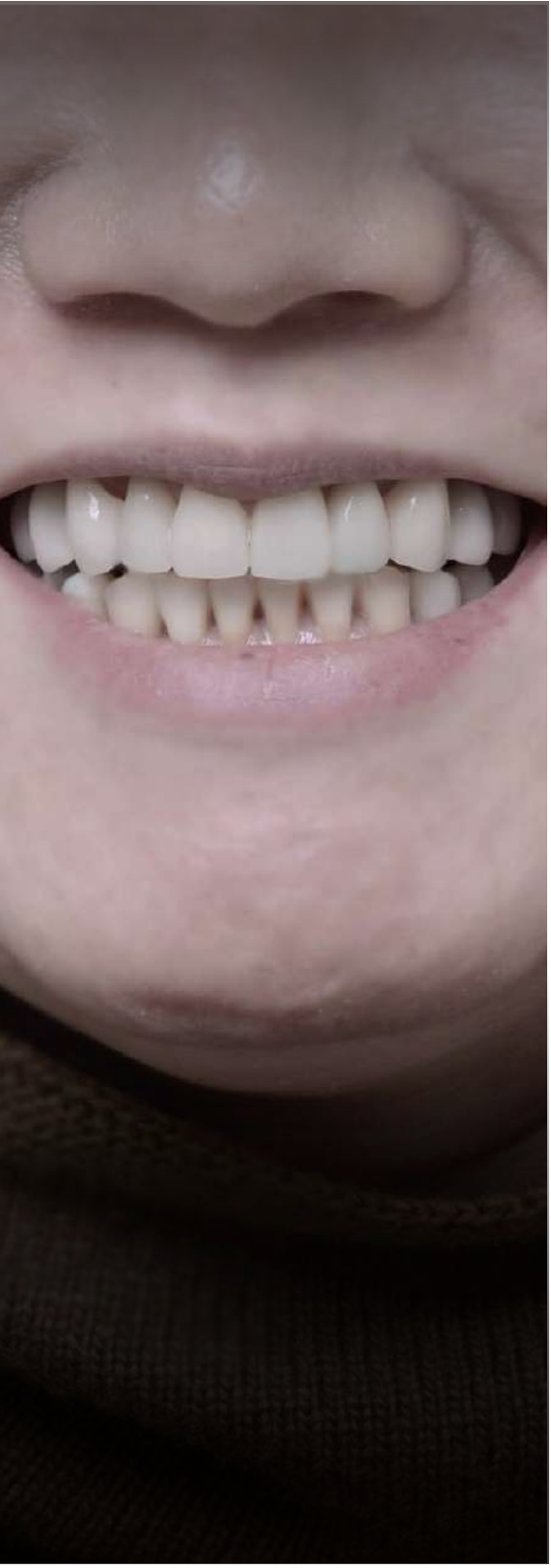
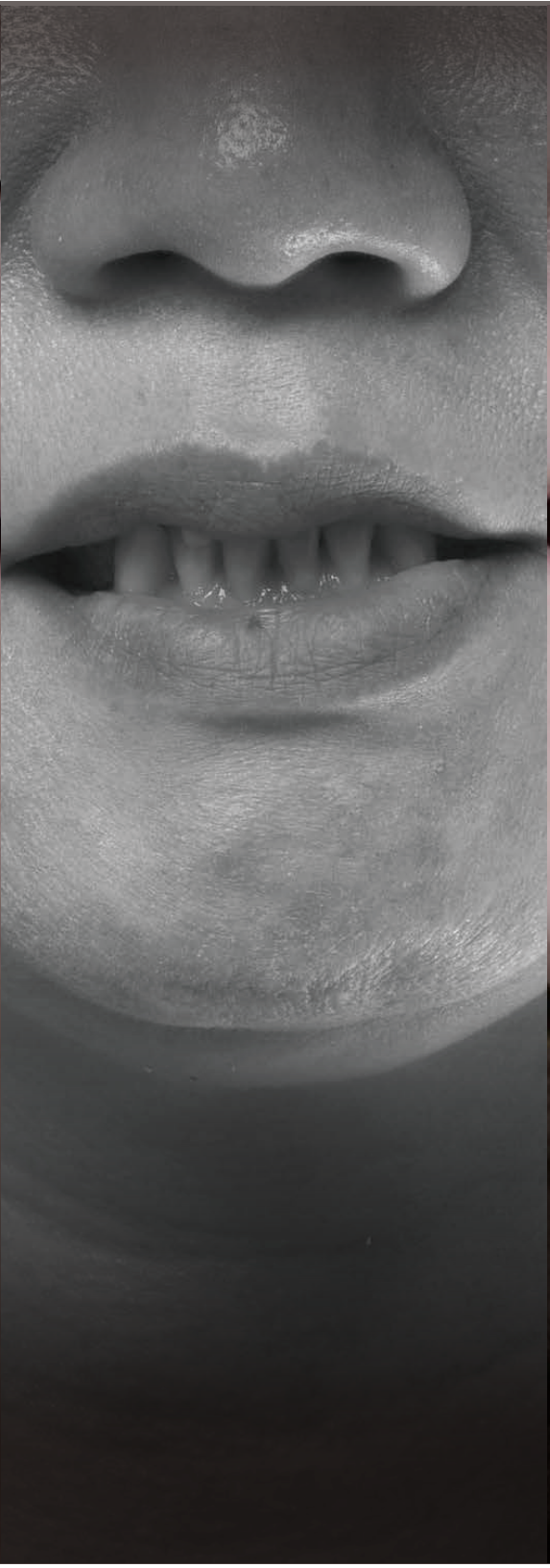




Predictable
results...



exactly
as planned



R2 STUDIO Q™ ?

Evolution :
from simple **CT OBSERVATION** to
a **PERFORMING workstation!**

Total workstation!

An integrated workstation that combines CBCT, facial, and impression scans to generate a digital patient for developing treatment plans, consulting with patients, and exchanging information with the lab to achieve the final results... exactly as planned.

4 most important aspects of dental treatment

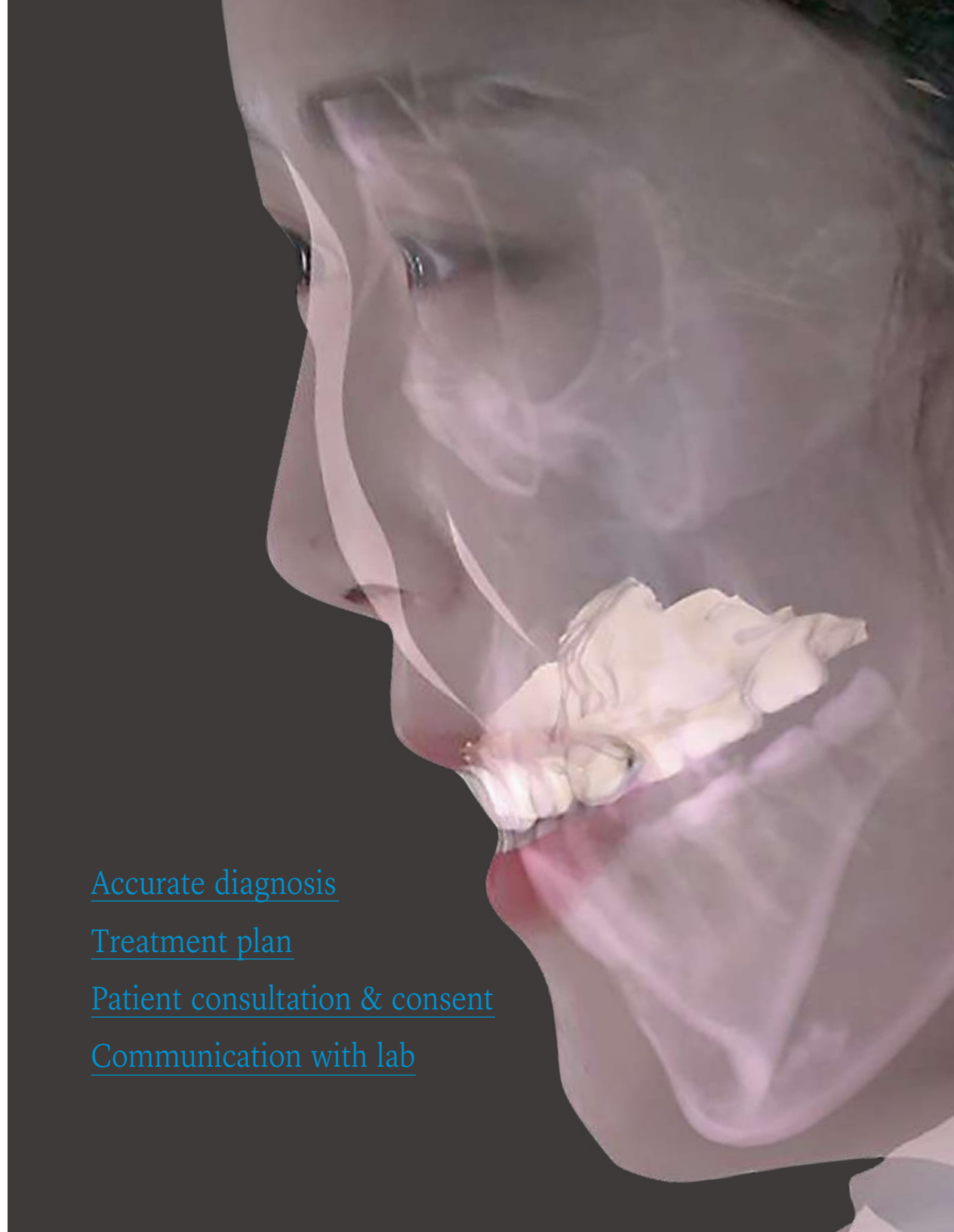
The critical essentials for dental treatment are an accurate diagnosis, a treatment plan, patient consent, and communication with the lab. Using a digital patient, R2 Studio Q can facilitate an error-free diagnosis and identify the most favorable treatment plan, enabling clear consultation with patients and effective digital communication with the lab, that lead to the optimal outcome. As an integrated workstation, R2 Studio Q performs all these processes in one device using one software.

[Accurate diagnosis](#)

[Treatment plan](#)

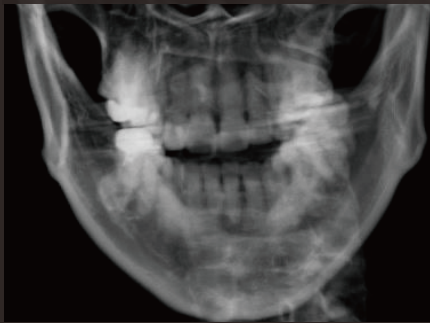
[Patient consultation & consent](#)

[Communication with lab](#)



Q.

How to start full-arch aesthetic treatment?



Determining a patient's problems accurately is impossible when using erroneously superimposed images from a CBCT with a small FOV, as these images lack the complete skeletal information, or from CTs without a corrective function for incorrect head positioning during CT scanning.

R2 STUDIO Q™ can generate a 'digital patient' within 10 minutes for a predictable diagnosis.

01 CBCT reorientation



The critical initial step is to establish an accurate reference. Thus, to determine the patient's mid-facial plane, the patient's head position in the CT scans needs to be adjusted and aligned with the FH plane.

02 Impression scan & matching



An STL file obtained from an impression scan is then matched with the reorientated DICOM file to reproduce the arches.

03 Completed digital patient artificial intelligence



The imported facial scan data is automatically matched with the CT images to complete the digital patient for diagnosis and treatment planning.

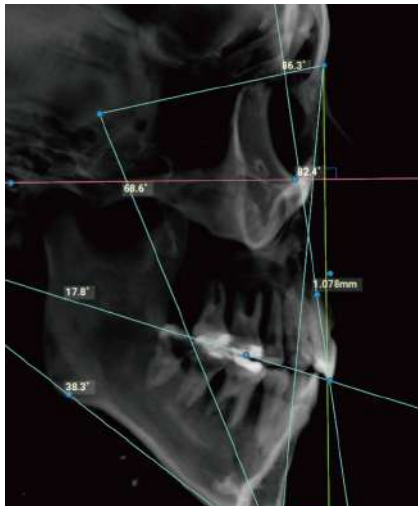
Patent Pending

The digital patient creation function using R2 Studio Q™ artificial intelligence and R2GATE DOD is patent pending.



Digital Oral Design (DOD) is used to create a **patient-specific treatment plan**, allowing for easier patient consultation and treatment completion as planned.

04 Facial pattern analysis



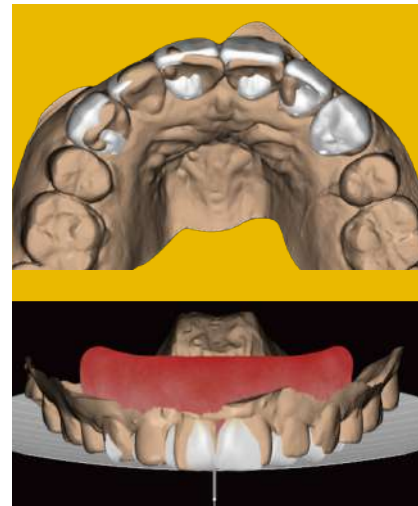
To identify any underlying complications in advance, such as inter-arch problems or malocclusions, a facial pattern analysis can be conducted using 3D cephalo images generated from the reorientated DICOM file.

05 Creating ideal smile line using DOD



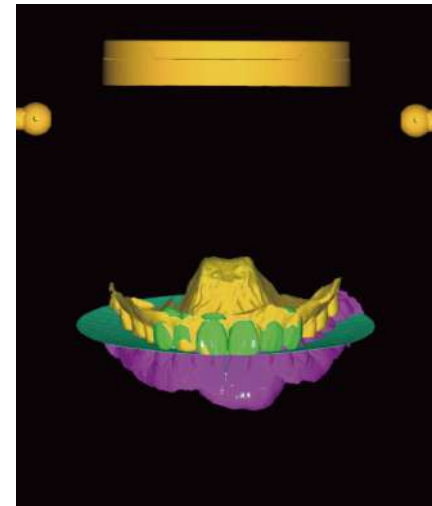
The DOD functions facilitate the arrangement of the reference teeth (6 anterior teeth) based on 'golden' proportions in a library, while visually checking the patient's smile line. The ideal positions are then selected while concurrently observing the mid-facial plane, smile line, profile, and jawbone all at the same time.

06 Reasonable treatment plan: orthodontic, implant, or prosthetic?

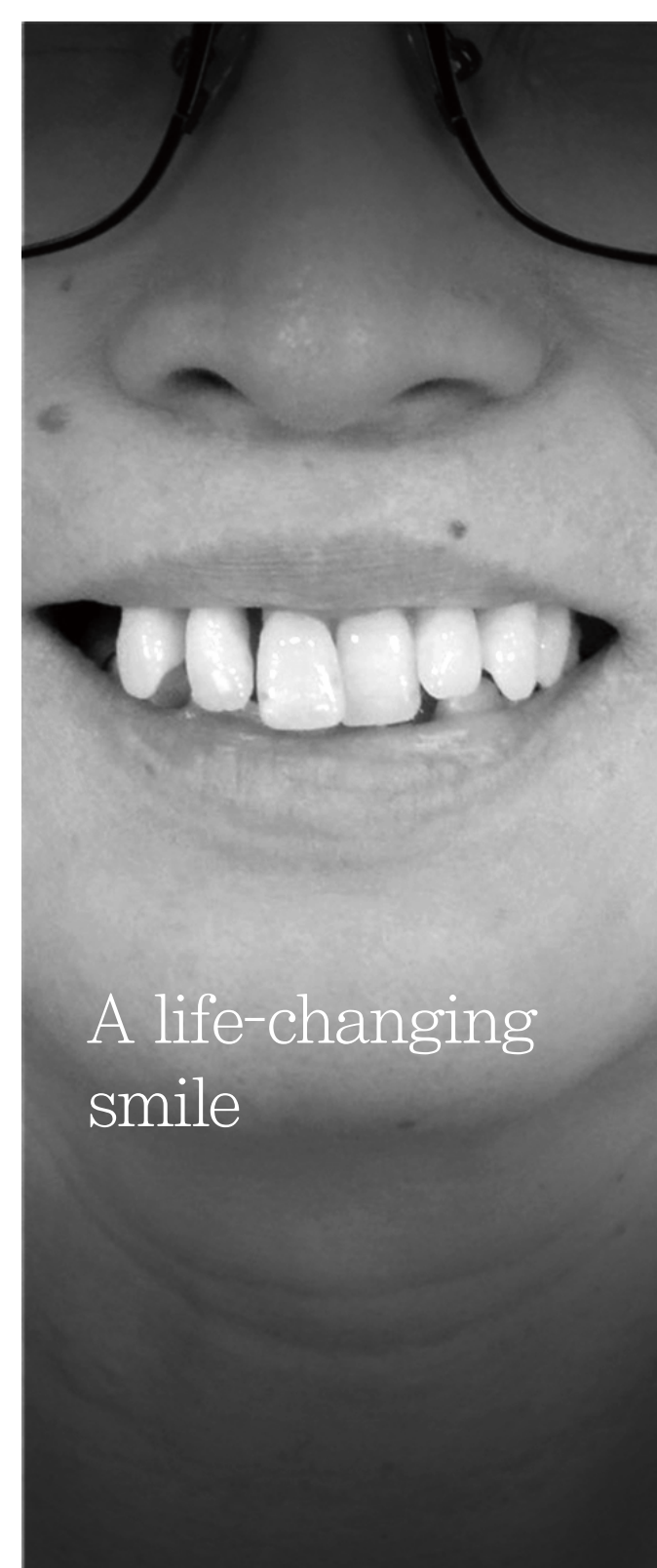


Using the built-in EZ wax-up function and teeth arrangement library, a wax-up is created based on the ideal occlusal table. Appropriate treatment options can then be selected by comparing the ideal teeth with the positions of the existing teeth.

07 Easy data extraction for effective communication with lab team



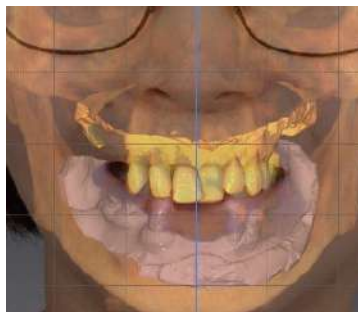
After deciding on the treatment option, the data can be extracted into an STL file, as required. The data (compatible with both ExoCAD and 3Shape) allow the lab team to understand the treatment plan clearly.



Case 1 | using the R2STUDIOQ™

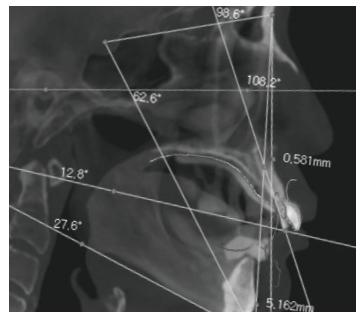
Predictable results

01



A digital patient is generated by merging the patient's CT, facial, and impression scans. The head position is adjusted with CBCT reorientation, and the mid-facial plane is set as the treatment reference.

02



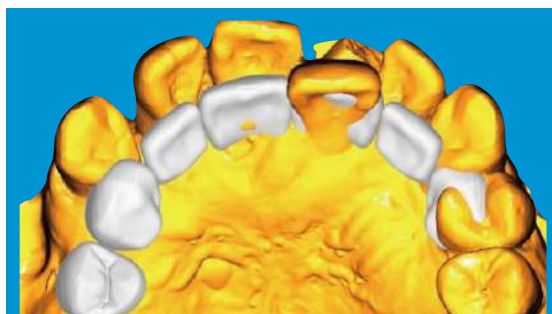
According to the 3D-cephalo analysis, the patient's inter-arch relations are normal. However, the quadrant 1 teeth are shown to protrude more than the normal range.

03



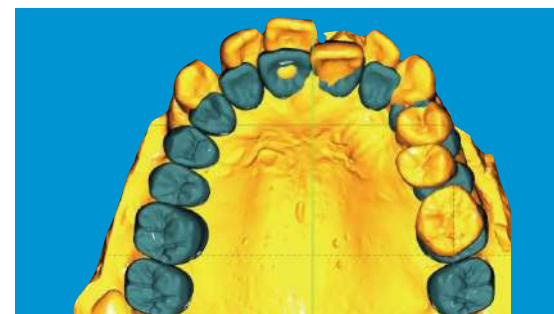
Using Digital Oral Design (DOD), the patient's STL file is hidden, the patient's smile line is reviewed, the 6 anterior teeth are arranged using the golden ratio in the library, and the teeth are adjusted for size and position.

04



The DOD results are then used to consult with the patient. As there was no problem with the inter-arch relations, the available treatment options were orthodontic or immediate implant placement. Along with the treatment duration and cost information, the patient was easily able to understand the treatment concepts via intuitive images of the implant placement after extraction and prosthetic restoration.

05



After determining the treatment plan, a full wax-up was performed, and the upper and lower occlusal relations and vertical dimension of the occlusion were checked. The wax-up data was re-entered into DOD and used as a reference for the implant placement.

Everything as planned

06



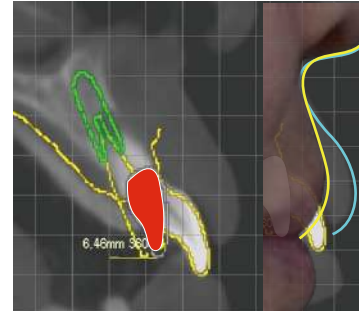
The full wax-up data was entered into DOD to check the occlusal relations, including the vertical dimension. A digital face-bow transfer was also prepared for the physical articulator transfer later.

07



The implant placement positions were determined by referring to the condition of the wax-up and alveolar bone. For the area requiring a sinus graft, it was decided to perform the bone grafting first, followed by implant placement later.

08



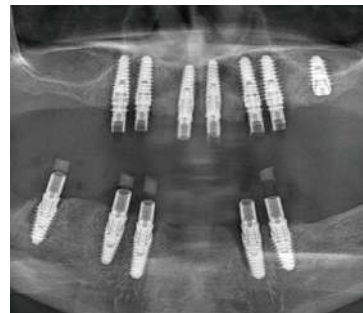
The implant positions in the maxillary anterior region and positions of the final prostheses were evaluated to ensure that the upper lip-line would conform within the normal range.

09



The diagnostic data was extracted from DOD and delivered to the lab team, who then designed an implant guide and One-Day temporary prostheses that were sent to the treatment team. The implant guide is a key tool for accurate implant placement based on the diagnosis.

10



The implants were placed using the R2 Guide, along with a simultaneous maxillary sinus lift for subsequent implant placement. The One-Day temporary prostheses were connected after measuring the implant placement torque and ISQ values.

11



This photo was taken after completing the implant procedure and connecting the One-Day temporary prostheses. As the aesthetics and some functions were restored, the additional implants were placed once the bone graft area had healed. The temporary prostheses were subsequently replaced with custom abutments and definitive prostheses.



Case 2 | using the R2 STUDIO Q™

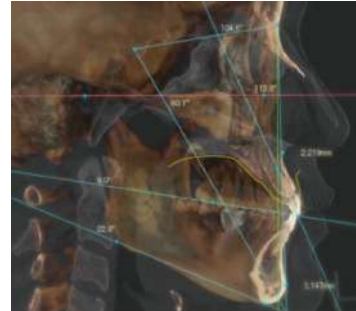
Predictable results

01



A digital patient was generated by merging the patient's CT, facial, and impression scans. The head position was adjusted via CBCT reorientation and the mid-facial plane was set as a reference for treatment later.

02



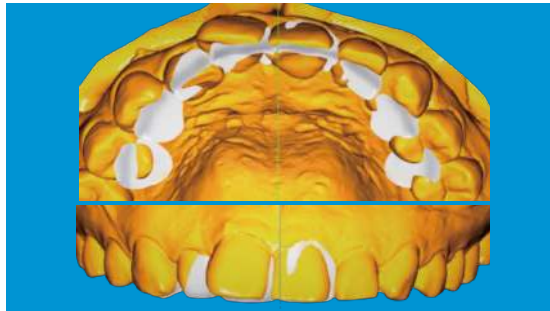
The digital cephalo analysis showed no problems in the inter-arch relations.

03



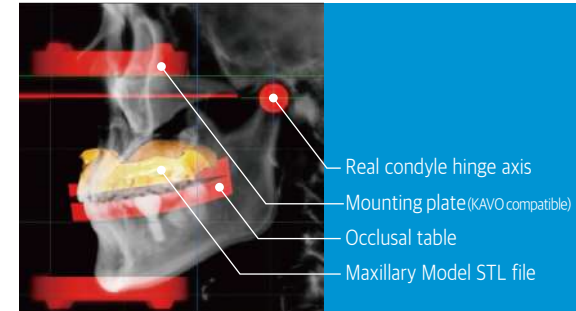
Digital Oral Design (DOD) was used to check the patient's smile line and to determine the top and bottom positions and sizes of the 6 anterior teeth according to the library. The bucco-lingual positions and axes of the 6 anterior teeth were then reviewed again using the digital cephalo analysis tool.

04



The final consultation with the patient was carried out using the DOD results. As the patient's circumstances only allowed three days for treatment, laminate treatment after reducing the teeth was selected over orthodontic treatment or immediate implant placement.

05

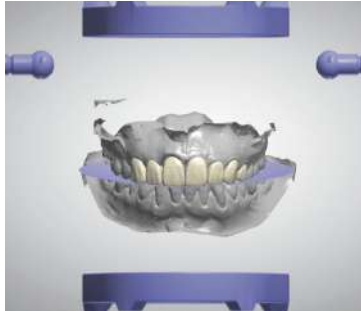


For a professional wax-up to minimize any interference with the aesthetics and occlusion, a digital face-bow and occlusal splint libraries were included to conduct a digital face-bow transfer, and the data was extracted as an STL file and transmitted to the lab.

Please finish
within three days!

Everything as planned

06



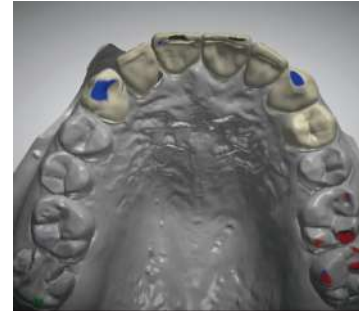
The digital face-bow data was loaded into the CAD program. Plus, the patient's mid-facial plane, current teeth, relative positions of the 6 anterior teeth in the library, occlusal table, and condyle hinge were all loaded into the program to enable a precise wax-up.

07



The digital library of the KaVo articulator was loaded into the CAD program to simulate any occlusal interferences.

08



Any areas of possible interference were detected and reduced before completing the wax-up.

09



The completed wax-up and maxillary model were merged, extracted, and printed using a 3D printer. The teeth were also included in the printed model using putty to fabricate a simple tooth reduction guide.

10

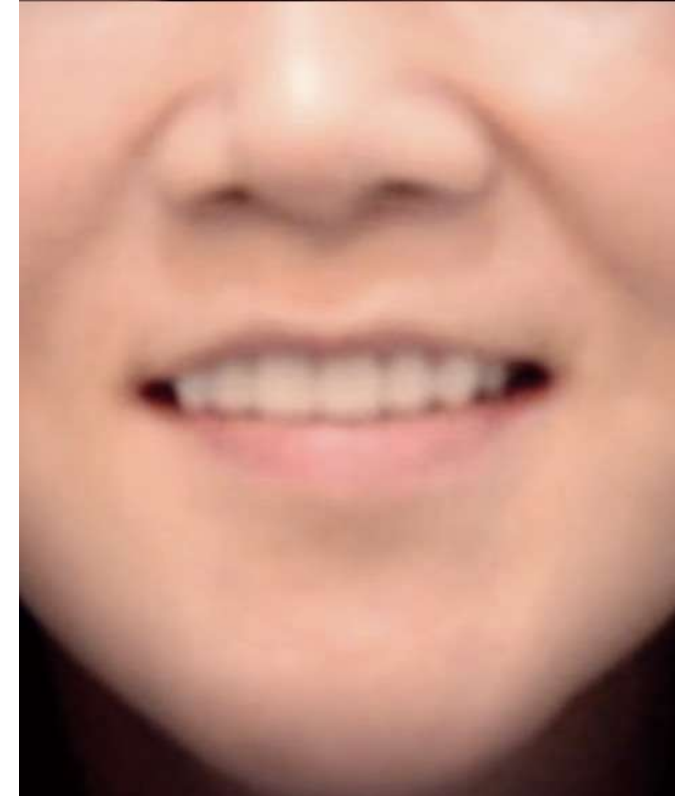
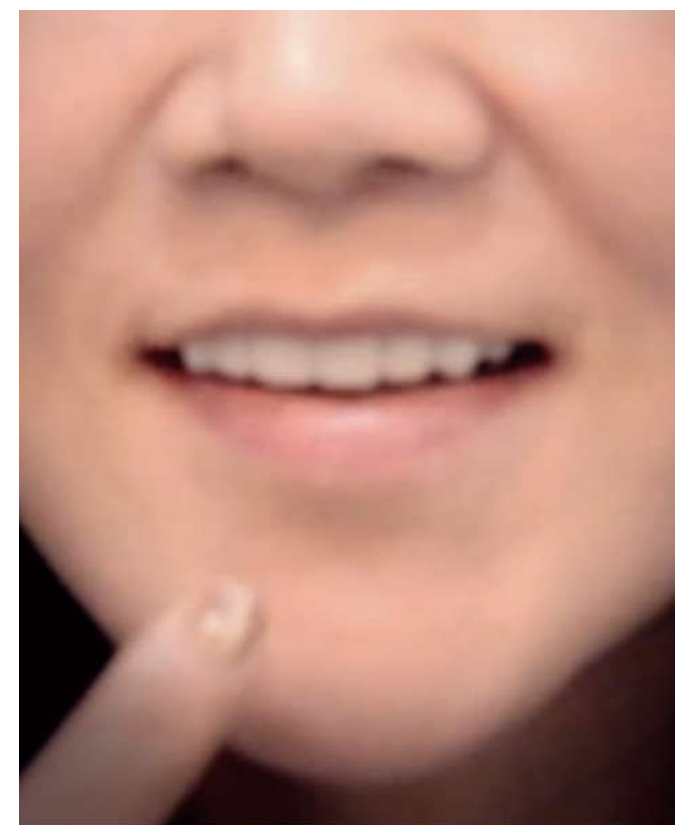


The completed wax-up was extracted separately to fabricate a PMMA temporary shell. The teeth were reduced, the temporary shell was bonded, and the final positions, aesthetics, and occlusal interferences were all checked. The final teeth design and positions were confirmed through consultation with the patient.

11



Once the patient was satisfied, the temporary shell design (as modified) was used to fabricate the final prostheses. In this case, the patient strongly requested a very bright color.





Digital workstation
R2 STUDIO Q™

CBCT

- 18x16 wide FOV
- 18x16 CBCT scan: 16 secs
- light & flexible FOV control
- precise & accurate scanning 3D facial scan

3D Facial scan

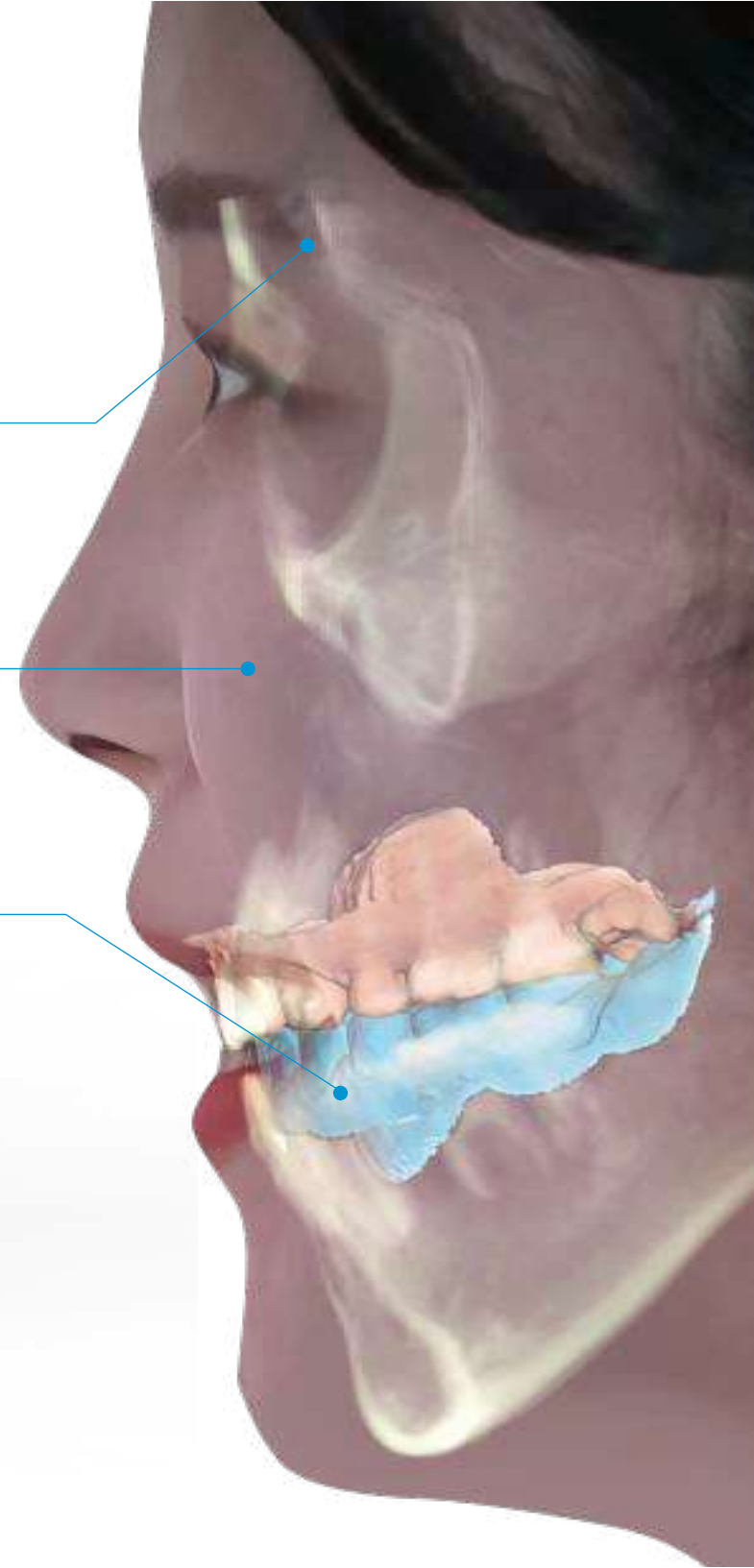
- 3D depth camera (1280x720)
- independent photo-taking module
- full 3D smiling face scan: 5 secs
- 1800x848 full-size 3D file (OBJ format)
object (impression) scan

Object (impression) scan

- easy scan process
- impression scan: 20 secs
- automatic STL conversion process
- model file generation (open STL format)

Patent Pending

The digital patient creation function using R2 Studio Q™ artificial intelligence and R2GATE DOD is patent pending.



R2 STUDIO Q™ – technology NOW that's **10 years AHEAD**



Incomparable!
R2 STUDIO Q™ is
the only digital workstation!

R2 Studio Q creates a digital patient using CT, facial, and impression scans and includes software to enable accurate reference set-up and analysis, optimal treatment planning, and perfect execution. R2 Studio Q is the only all-in-one solution that combines both software and hardware.

Product	Care**** CS****	Plan**** ProMax****	R2 STUDIO Q™
FOV	20 x 17	16 x 17 (Stitching)	18 x 16
Facial Scan	Optional	Optional	Included
Object Scan	Optional	Optional	Included
Software	Optional	Optional	R2GATE

Predictable
results...

exactly
as planned



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