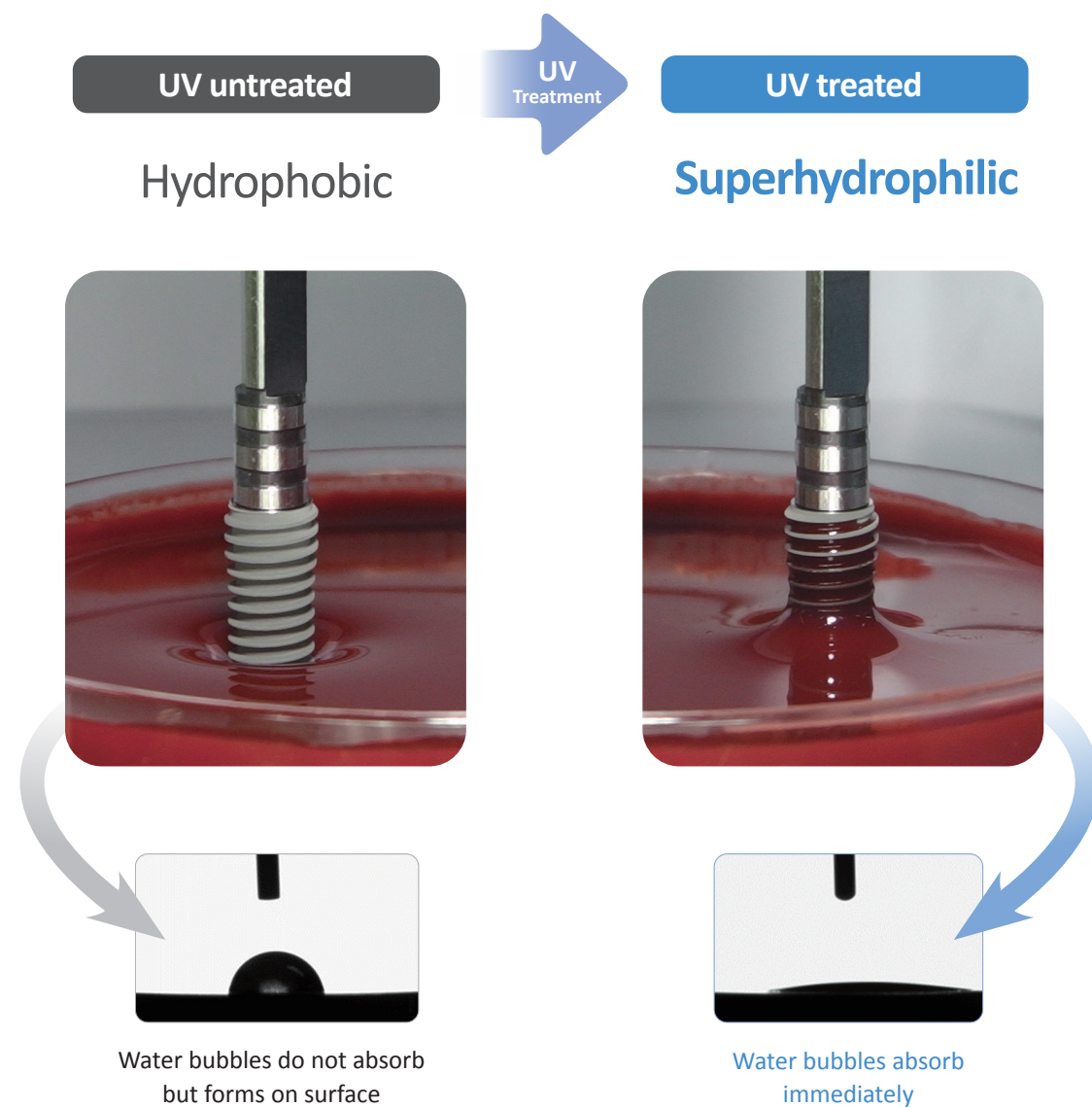


03 Experimental Results ①

Change Hydrophilicity and Increase Wettability

- Superhydrophilicity from OH Radical maximizes blood wettability and improves the adhesion of proteins and osteoblasts, speeding up initial bone formation.
- Faster loading time and shorter unstable period after placement.



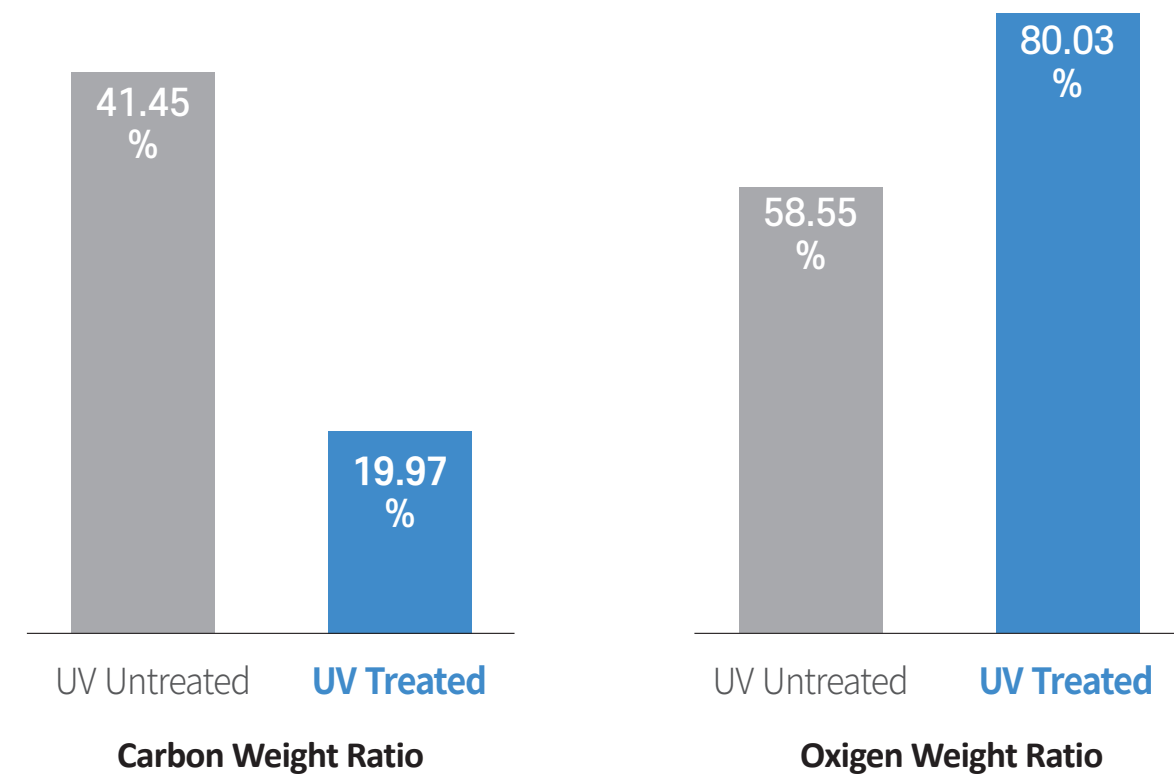
03 Experimental Results ②

Hydrocarbons Matter Removed From Implant Surface

- UV photofunctionalization could remove about half of unavoidably contaminated hydrocarbons on implant surface before placement, which increases BIC ratio.

XPS Analysis Result

By Center for Research Facilities at Pukyong National University, Korea
Specimen : Titanium disk (Ø10 * 3t)



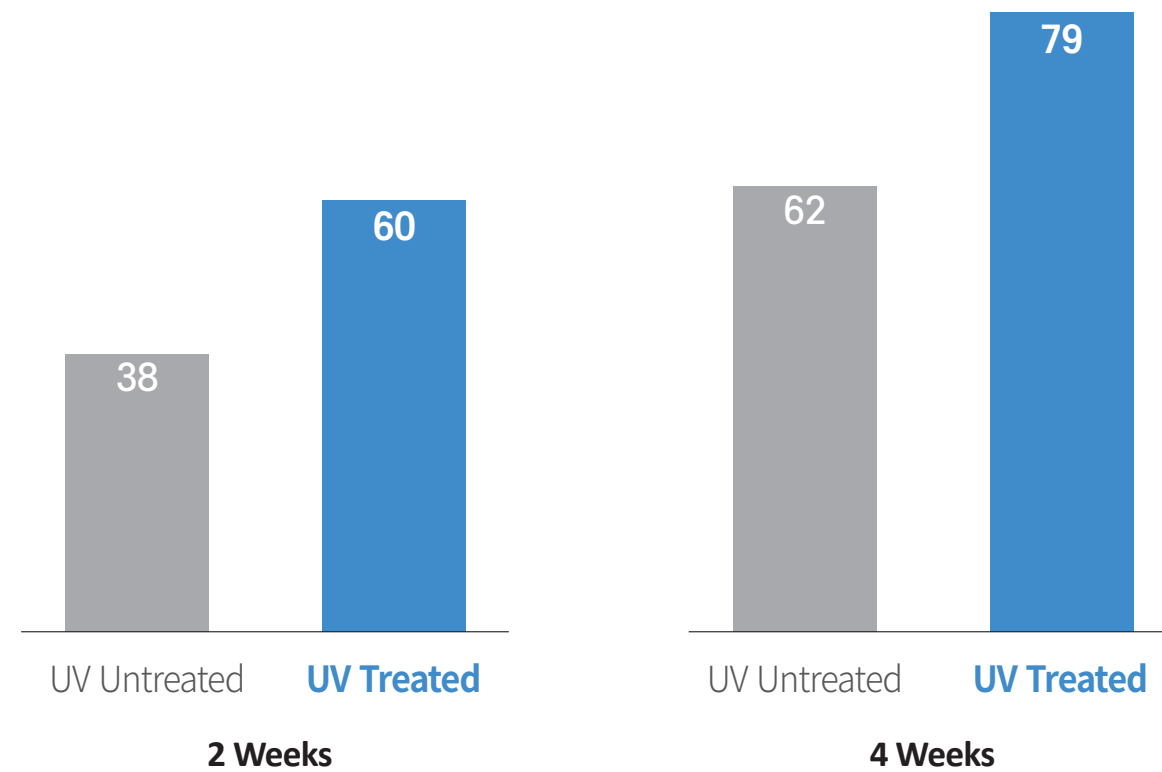
03 Experimental Results ③

Remove Hydrocarbons and Increase BIC

- UV treated implant that removes organic matter from the surface induces stable bone formation because the implant has a high BIC (Bone to Implant Contact).
- Implant failure rate is low due to the high level of bone intensity during formation.

BIC experiment after UV treatment

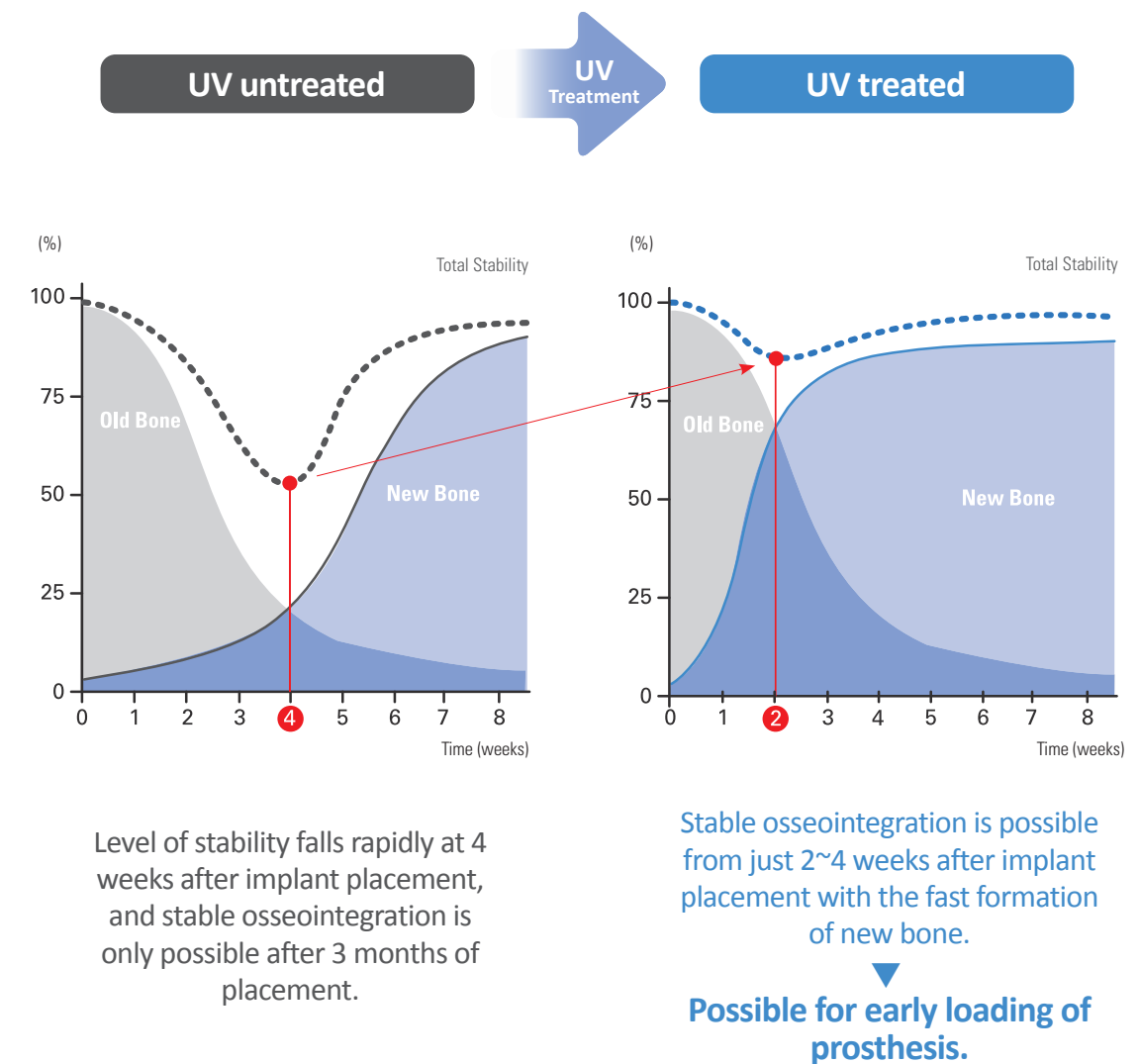
By College of Dentistry at Kyungpook University, Korea



03 Experimental Results ④

Earlier Bone Formation

- UV photofunctionalization converts the implant surface from hydrophobic to superhydrophilic and removes organic matters from the surface, therefore, this modification could accelerate osseointegration and induce early loading of the prosthesis.



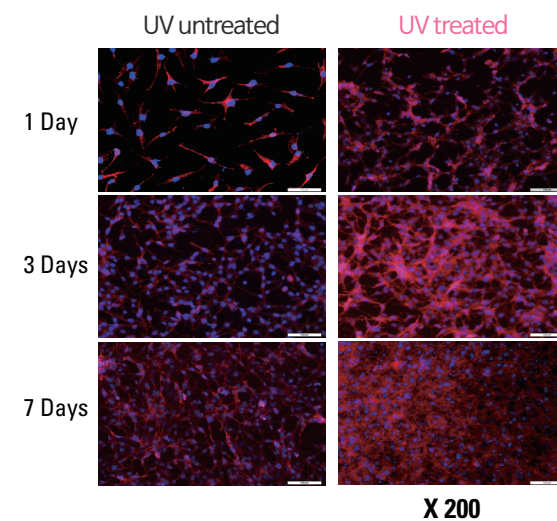
03 Experimental Results ⑤

In Vitro Test Cell Proliferation Experiments After UV Treatment

By College of Dentistry at Kyungpook University, Korea

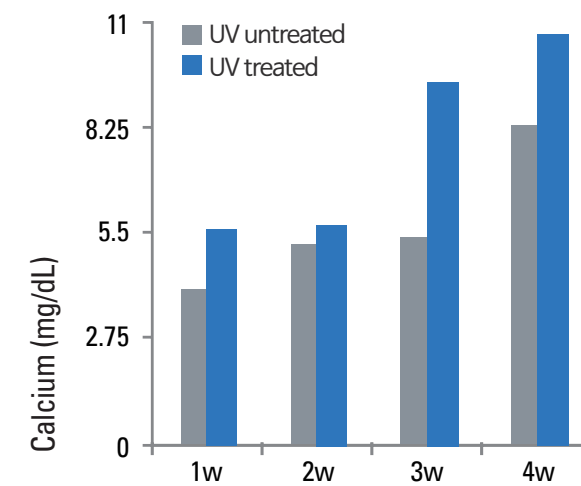
- Test specimen: Murine pre-osteoblast MC3T3-E1 cells
- UV treatment induces super hydrophilicity and increases osteoblast proliferation, attachment, and mineralization.

MC3T3-E1 Proliferation



Rate of cell growth of UV treated Ti disk increases immensely from day 3.

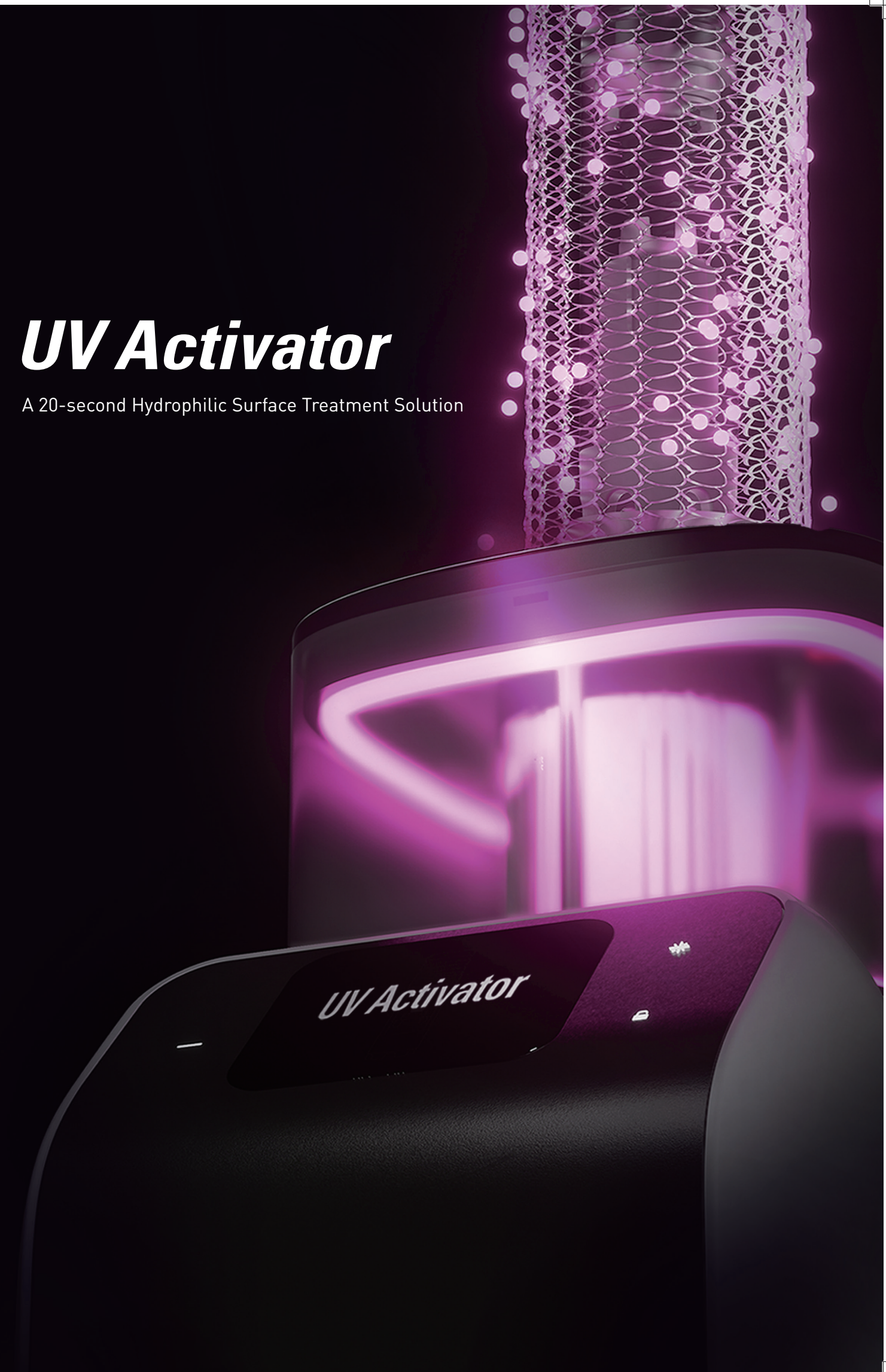
MC3T3-E1 Mineralization



Bone formation on UV treated Ti disk dramatically increased between 2~3 weeks, compared to SLA's 3~4 weeks

UV Activator

A 20-second Hydrophilic Surface Treatment Solution



04 UV Activator

Attractive to water, Attractive to patients

- The patented cutting-edge technology
- The world's first UV treatment machine in less than a minute

UV Activator



UV Active

1 Fast and Powerful

- Induces photocatalytic effect on implant surface **with just 20 seconds** of UV irradiation.
- The all-new 360° cylindrical form factor and high power increased the absorption rate of UV rays by thoroughly irradiating the titanium surface, achieving superior hydrophilicity in such a short amount of time and still dramatically boosting osseointegration.

2 Safe and Confident

- **Unique double-layer packaging** allows UV irradiation without opening an ampoule, for easier usage and to prevent even the slightest chance of contamination
- **More than 700,000 UV Active** delivered to over 20 countries around the world
- Won iF Design Award 2020, which is one of the world's top three design awards.



When do you need UV Active?

1 To secure initial stability for weak bone conditions

- **When you want to get strong initial stability without bone graft**
by Sejong Star Dental Clinic, Dr. JongHwan Park
- **When bone graft is needed on the wide-area of the maxillary sinus**
by Yedam Dental Hospital, Dr. JaeSeok Kang
- **When the implant is placed immediately after extraction**
by Michigan Dental Clinic, Dr. Hyangryeon Lee
- **When you want to replace the failed implant in the same hole**
by Yedam Dental Hospital, Dr. JaeSeok Kang

2 To complete treatment rapidly

- **When you want to greatly shorten the treatment period for final restoration**
by Essence Dental Clinic, Dr. SungBum Hong
- **When you have patients who can not visit the clinic frequently**
by JaeHyun Ahn Dental Clinic, Dr. jaeHyun Ahn

3 To differentiate from other clinics

- **When you want to distinguish your clinic from others**
by M Plant Dental Clinic, Dr. MinWoo Lee
- **When you want to differentiate your implant from other implants (Biological-Aging) is required**
by Yedam Dental Hospital, Dr. JaeSeok Kang
- **When you need to satisfy your patients' needs who want more special implants**
by M Plant Dental Clinic, Dr. MinWoo Lee

UV Active is an effective implant for :

Patients who have soft, weak or insufficient dental bone or need bone graft.

Patients who require complex surgeries such as sinus lift or edentulous case patients.

Patients who are too busy to visit the hospital often and desires fast recovery.

Patients who require immediate implant placement after extraction.

Elderly patients who have bad dental bone conditions.

Patients who require re-surgery due to implant failure.

05 Testimonials



Dr. Jaeseok Kang

Yedam Dental Hospital, Republic of Korea

Placed UV Active in the wide-area of maxillary sinus and measured ISQ. I saw rapid osseointegration after 2 months.

Strongly recommend UV Active when you need to place a lot of bone graft in the maxillary sinus or if it is just a GBR case.



Dr. Jungwook Seo

Yonsei Dental Clinic, Republic of Korea

The benefits of the UV Active are it increases the initial stability when placed after UV surface treatment and it also extends the implant shelf life.



Dr. Riley Clark

WhiteCap Institute, USA

One of my personal game-changers is UV Active which is super-hydrophilic Implant.

We have that special obligation in the doctor-patient relationship to always offer the most contemporary and best practices and although this UV light activation photo functionalization is a newer topic it's an exciting topic and we're excited to dive into it and talk about some of the benefits for us as a clinician.



Dr. Hyangryeon Lee

Michigan Dental Clinic, Republic of Korea

UV Active is perfect to use when placing an immediate temporary after extraction or for a GBR case due to its fast osseointegration rate.

My patients are very satisfied not to mention it is also very beneficial for dentists.

Case 1

Clinical Case Report

Clinical Utilization of UV Activated Implant

Dr. Hyunlak Son, Newton Dental Hospital

Patient Information: Male, 72 years
Treatment Plan: #11,13,23 extracted & #11~13, #21~23 Bridge



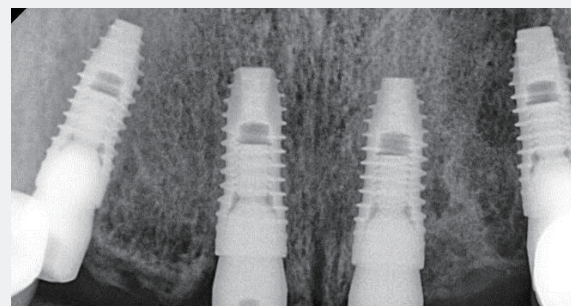
Panoramic view at Initial Examination



Panoramic photo and oral cavity photo
after the final prosthesis

Dental formula No.	Implant Size	Bone Density	ISQ					
			OP	1Week	2Week	3Week	4Week	5Week
#13	DIO HSA Ø3.8 X 10	D2~D3	65	65	75	75	76	75
#11	DIO HSA Ø3.8 X 10	D3	65	66	80	80	81	82
#21	DIO HSA Ø3.8 X 10	D3	68	68	73	73	73	74
#23	DIO HSA Ø3.8 X 10	D2~D3	80	80	82	82	83	83

ISQ measurement value per every week and after surgery



Post OP

The ISQ trend of implants placed in the anterior maxilla is observed to increase in the 2nd week, with DIONavi.
& UV Active, it was possible to achieve osseointegration in a short period of time.

Case 2

Clinical Case Report

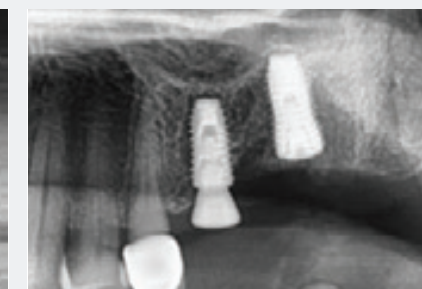
Overcoming difficult cases by using UV Activated Implant

Dr. JaeSeok Kang, Yedam Dental Hospital

Patient Information: Male, 64 years
Treatment Plan: #26~27 Bridge / #27 required extensive alveolar bone-graft at the same time



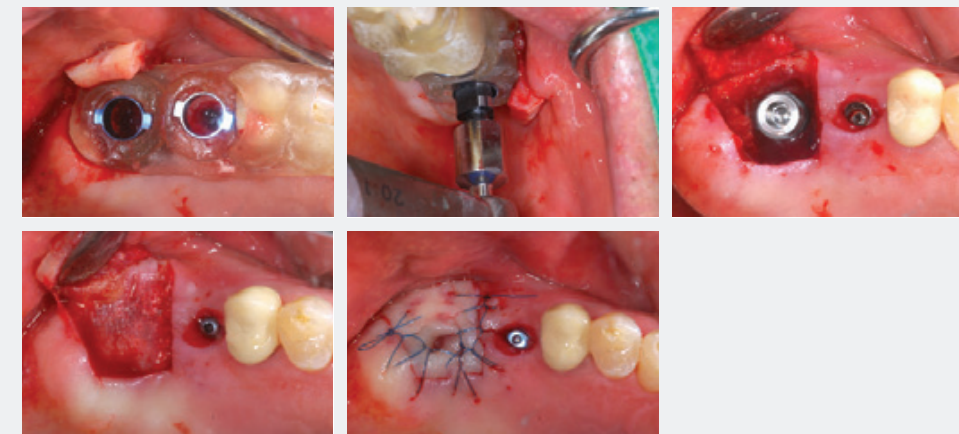
Pre OP



Post OP



Final Restoration



Dental formula No.	ISQ				
	OP	1Week	2Week	3Week	4Week
#26	67	75	81	83	85
#27	21	52	64	75	81

ISQ measurement value per every week and after surgery

In general, when extensive bone loss has progressed in the maxillary posterior, an implant is placed along with a bone graft and osseointegration time is at least 4 to 5 months. This case took a total of 3 months and the UV-irradiated implant showed a much faster osseointegration rate.