

**NEW**

# Guiding your shift towards synthetic solutions

Easily - Safely - Successfully



Anaesthetics

Haemostatics

Bone grafts

**Membrane**

## ***R.T.R. + Membrane***

Resorbable bilayer synthetic membrane  
for Guided Tissue Regeneration



# Why a membrane is key for a successful procedure?

## Triple action of a membrane

1

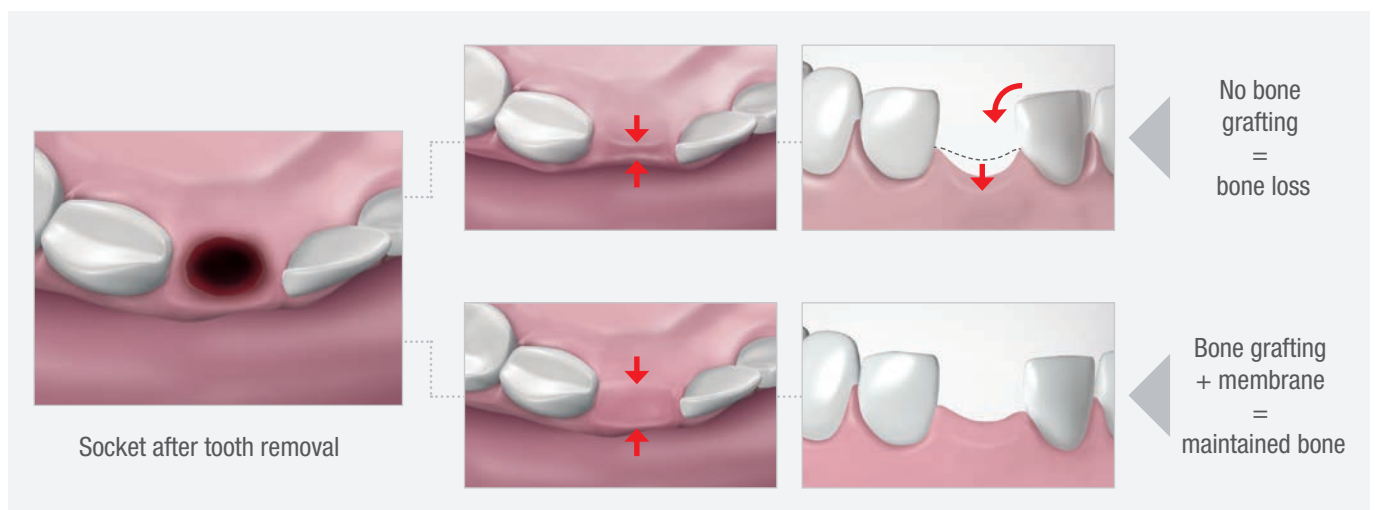
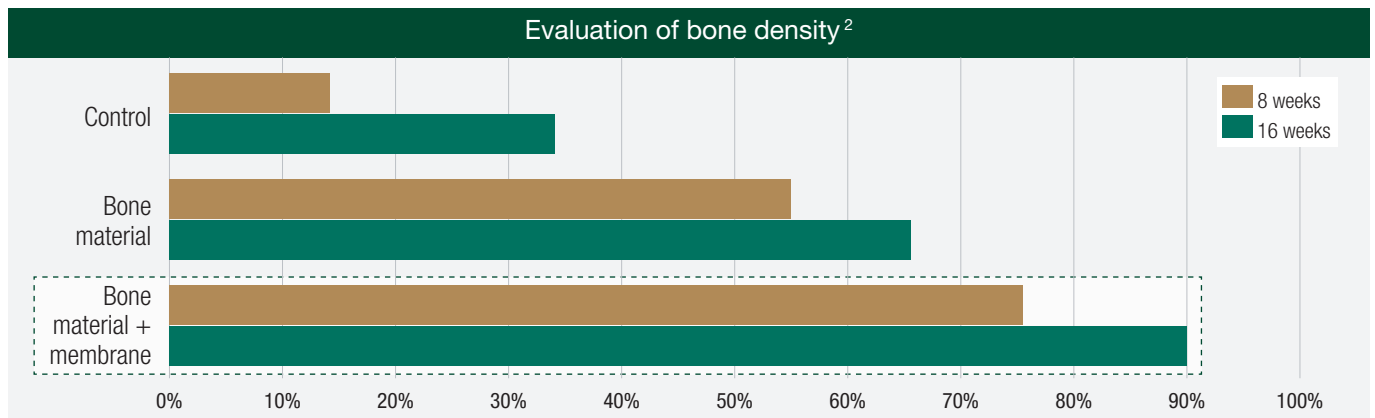
Forms barrier to prevent migration of epithelial cells and supports recruitment of bone cells from the blood clot

2

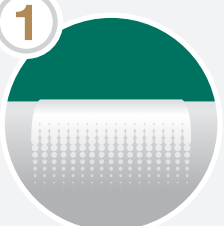
Maintains the bone graft and the blood clot

3


Prevents resorption of the bone which can lose up to 30% of its volume<sup>1</sup>




# Ideal features of a membrane

- 

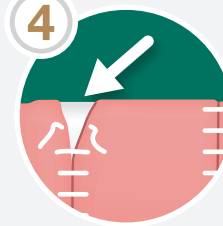
**1**

Resorbable
- 


**2**

Universal use with no risk of cross-contamination
- 

**3**

Great barrier to succeed in your guided tissue regeneration
- 

**4**

No need for a second intervention if exposed
- 

**5**

Easy to handle

R.T.R.+ Membrane meets all expectations for successful guided tissue regeneration.



# 100% resorbable

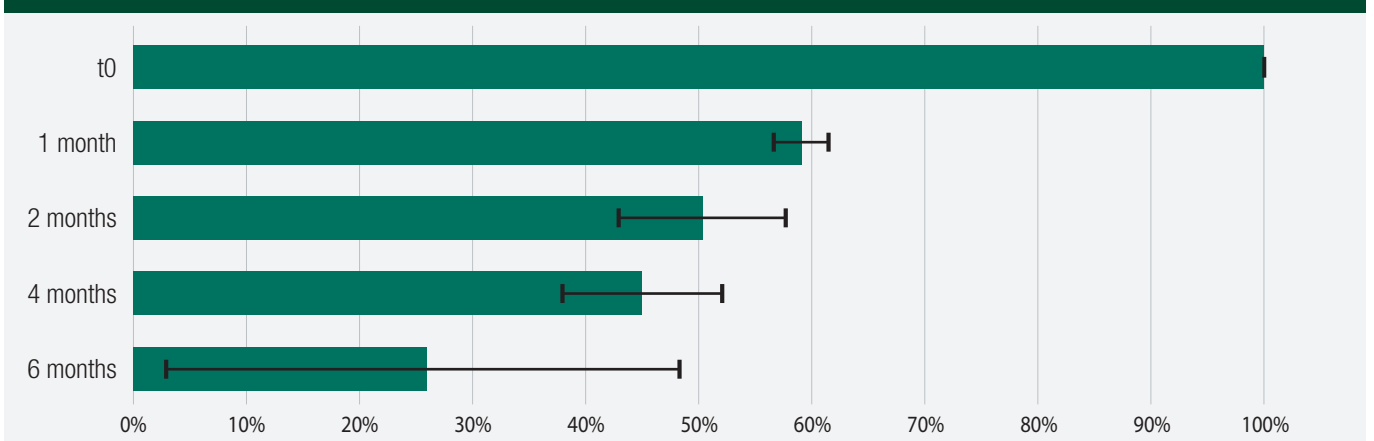
Easy  
on the  
patient

No need  
for a second  
surgery

Full  
resorption in  
6 months



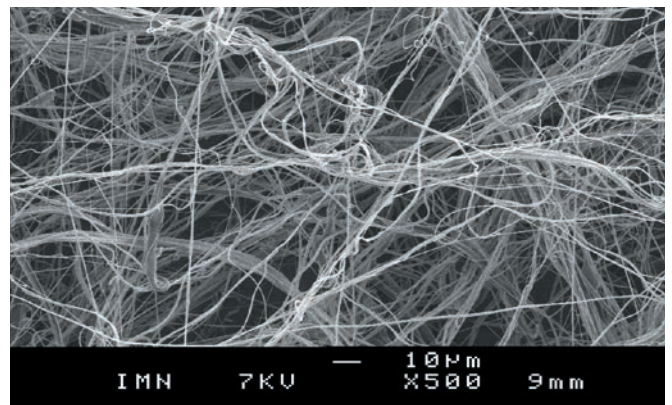
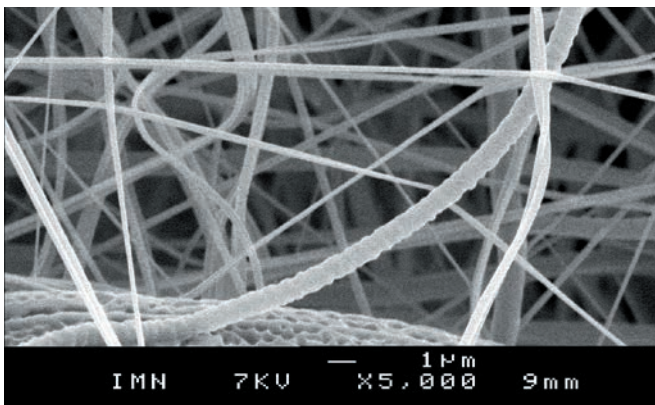
Evolution of the resorption of the membrane<sup>3</sup>





# 100% synthetic

A universal solution with no risk of cross-contamination



### What is PLGA?

The poly(lactic-co-glycolic acid) is a biodegradable and biocompatible copolymer. 100% natural, it comes from tapioca, corn or sugar cane starch.  
 PLGA = PLA (polylactic acid) + PGA (polyglycolic acid).  
 PLGA is biodegraded into lactic and glycolic acids, naturally present in the body.

# Great barrier to succeed in your guided tissue regeneration

A bilayer structure for greater efficiency

Barrier effect up to 4 weeks

Bone and soft tissue regeneration guaranteed up to 4 months

## Technical insight

### 1 Upper layer

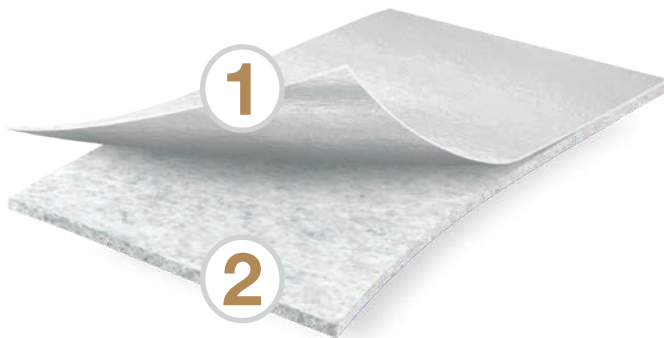
Dense layer, smooth, 25 µm.

- Barrier effect to prevent gingival growth in place of the bone.

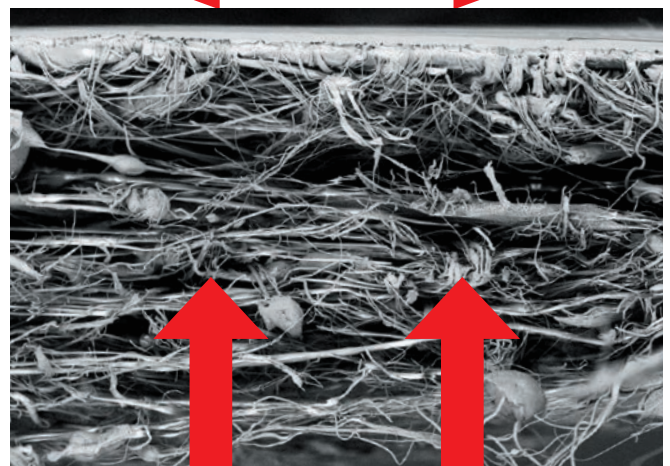
### 2 Lower layer

Microfibre layer, 400-500 µm.

- 85% porosity to allow bone cells to attach and develop.



**Barrier effect**  
Prevents gingival tissue ingrowth.



**Scaffold effect**  
Promotes cell infiltration and guided bone healing.

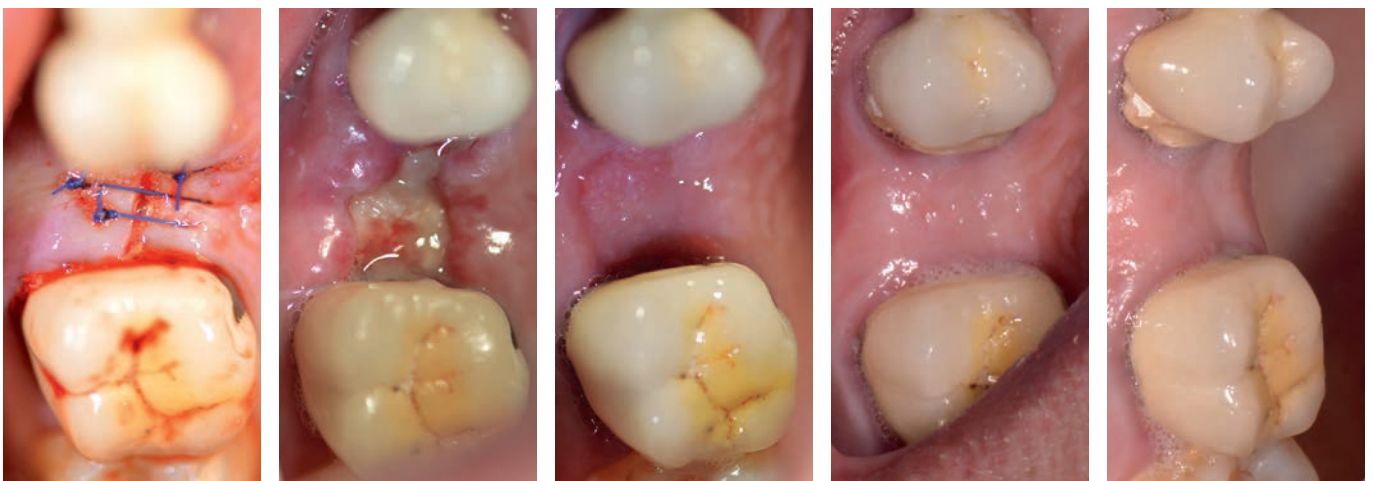
# No need for a second intervention if exposed

Unsentitive  
to saliva  
enzymes

Does not  
degrade  
when exposed

In case of suture rupture, leave the membrane in place, it will guide the tissues to heal.

## Technical insight



Pictures of membrane regeneration with suture rupture.



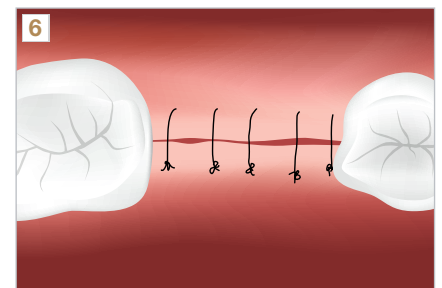
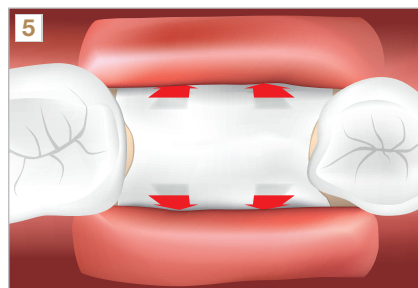
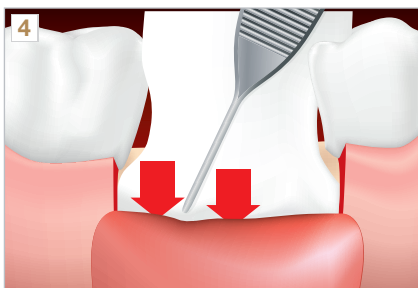
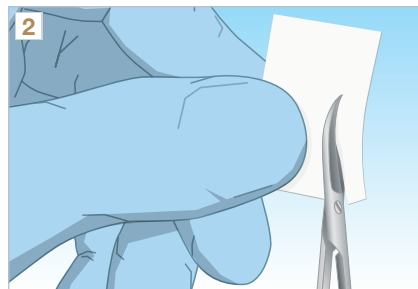
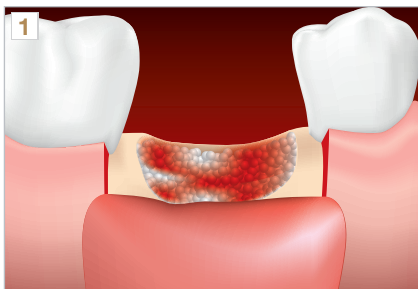
# Easy to handle

Same properties  
wet or dry

Doesn't fold after contact with blood.

Good adhesion  
to the tissues

No need to pin or suture the membrane.



## Technical specifications

<b>Membrane thickness</b>	350 - 550 µm
<b>Dense layer</b>	Barrier function - prevents gingival growth in place of bone
<b>Microfibre layer</b>	85% porosity - allows bone cells to attach and develop
<b>Available sizes</b>	15x20 mm - 15x25 mm - 20x30 mm - 30x40 mm
<b>Compatibility</b>	With every bone graft
<b>Indications</b>	GTR, GBR
<b>Duration of barrier effect</b>	4 weeks
<b>Resorption time</b>	4-6 months
<b>Sterilisation</b>	γ irradiation
<b>Shelf life</b>	3 years

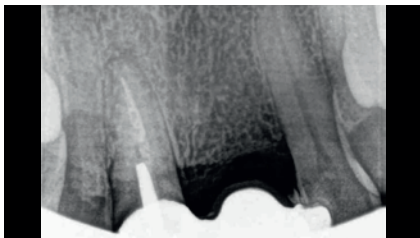


# Case studies

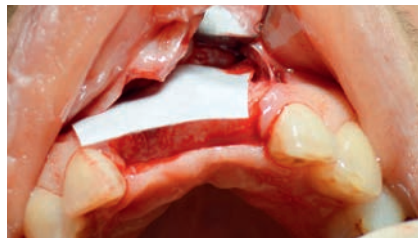
## Socket preservation after soft tissue healing at 6 weeks

Dr. Hoornaert, Nantes, France

A 51-year-old patient presented with a mobile bridge to replace the upper central incisors on a single support (tooth 11 - upper right 1).



Extraction at T0: upper central incisor is extracted and a temporary prosthesis is placed.



Guided Tissue Regeneration at 6 weeks: placement of the R.T.R.+ Membrane between the flap alveolar wall covering the bone substitute.



Clinical situation at day 10: no sign of inflammation.



Implant placement at 6 months in positions 11 (upper right 1) and 21 (upper left 1).



Clinical situation at 14 months with final restoration.

## Socket preservation after soft tissue healing at 6 weeks

Dr. Hoornaert, Nantes, France

A 55-year-old patient presented with loss of dental crown (tooth 36 - lower left 6) with root still present.



T0: root extraction and socket cleaning.



T6: socket preservation using R.T.R.+ Membrane.



T12: a thin layer of fibrin being epithelialised on the membrane.

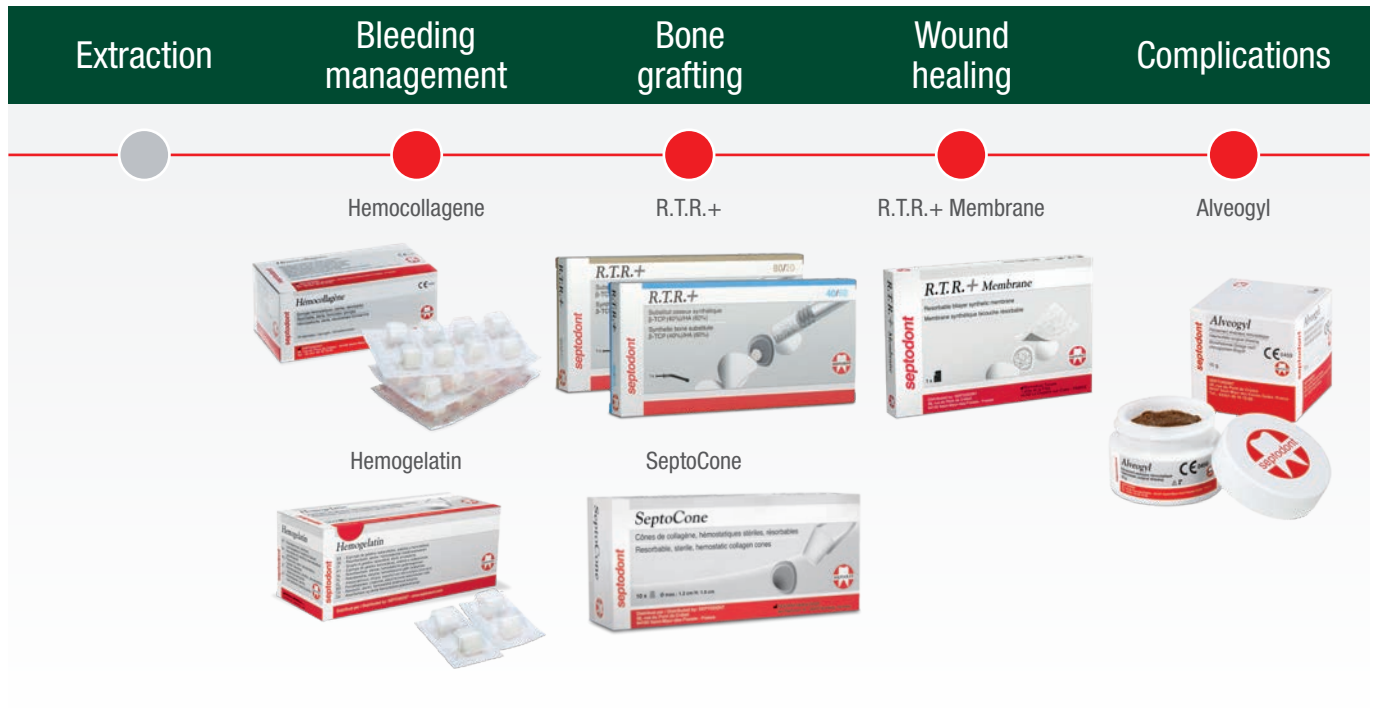


Implant placement at 6 months.

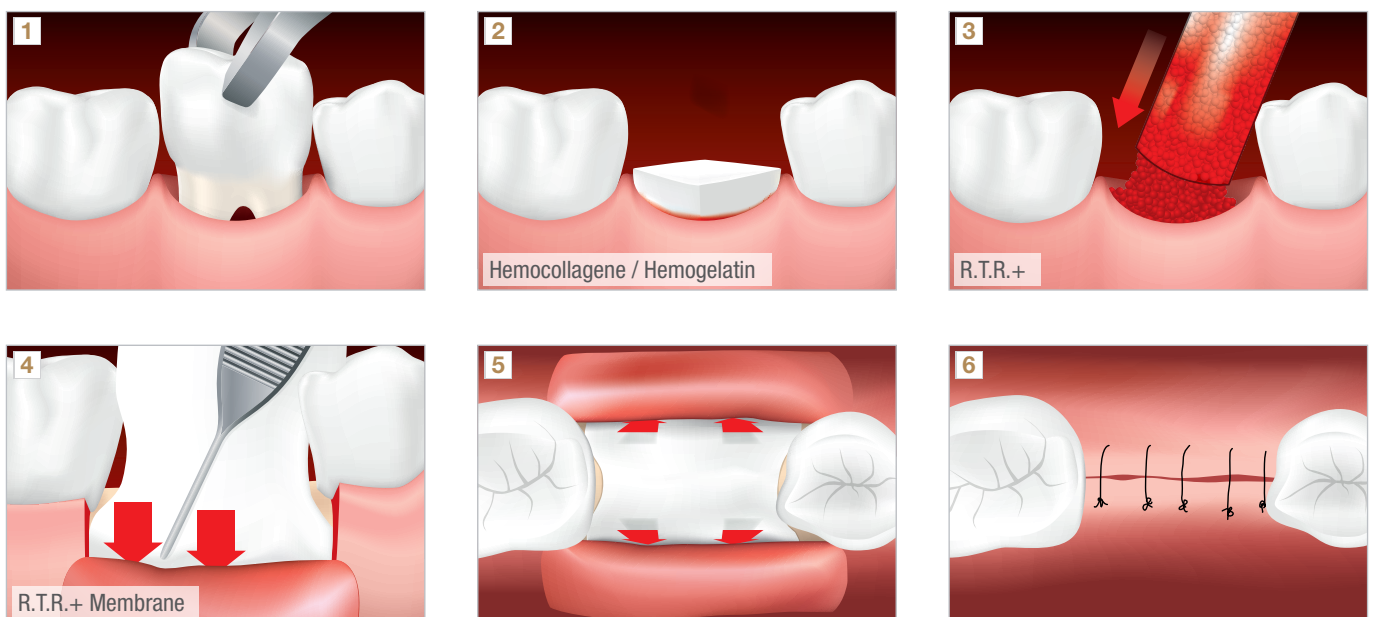


Final restoration at 8 months.

# A full range of solutions to succeed in your extraction procedures



## The extraction procedure



# Focus on the R.T.R.+ procedure

## 100% synthetic, 100% resorbable

Ideal biphasic composition for bone grafting. Fully synthetic and resorbable bone graft.



### The stable hydroxyapatite (HA)

Acts as a scaffold offering an ideal structure for cellular adhesion.  
Provides long term stability thanks to its slow resorption.



### The fast resorbing $\beta$ -TCP

Immediately begins to release calcium and phosphate ions into micropores enhancing bioactivity.

**80%  $\beta$ -TCP**  
**20% Hydroxyapatite**



- Helps natural bone formation in a short time.
- Resorption in 3 to 9 months.

**40%  $\beta$ -TCP**  
**60% Hydroxyapatite**



- Fully respects the creation pace of natural bone.
- Resorption in 9 to 12 months.

## Improve your bone grafting results







Products	Article numbers
<b>Bleeding management</b>	
Hemocollagene	01170
Hemogelatin	10585H
<b>Bone grafting</b>	
SeptoCone	10584G
R.T.R.+ 40/60	10419X
R.T.R.+ 80/20	10420Y

Products	Article numbers
<b>Wound healing</b>	
R.T.R.+ Membrane 15x20mm	11674T
R.T.R.+ Membrane 15x25mm	11675U
R.T.R.+ Membrane 20x30mm	11676V
R.T.R.+ Membrane 30x40mm	11677W
<b>Complications</b>	
Alveogyl	5712U

Sources:

- 1) Hsi Kuei Lin, Yu Hwa Pan, Eisner Salamanca, Yu Te Lin 5 and Wei Jen Chang. Int. J. Environ. Res. Public Health 2019, 16, 4616; Prevention of Bone Resorption by HA/ $\beta$ -TCP + Collagen Composite after Tooth Extraction: A Case Series.
- 2) MYOUNGHWAN KIM, JOONG-HYUN KIM, JAE YEONG LEE, KIRAE CHO, SEONG SOO KANG, GONHYUNG KIM, MIN JAE LEE and SEOK HWA CHOI, In Vivo March 2008, 22 (2) 231-236; Effect of bone mineral with or without collagen membrane in ridge dehiscence defects following premolar extraction.
- 3) Internal data: resorption time measured in animal experimentation after subcutaneous application of the membrane in rats.

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