



# Osteomesh<sup>®</sup>

for Septal Extension Graft



Osteopore<sup>®</sup>

# Osteomesh® for Septal Extension Graft

The incorporation of Osteomesh® strengthens the patient's septal extension graft. This bioresorbable scaffold provides good structural support to achieve long-term aesthetically pleasing nasal reconstruction outcome.

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## TISSUE ENGINEERING-BASED APPROACH

- Osteomesh® is an integrating implant for rhinoplasty, a viable alternative option for functional regeneration of tissues.
- It serves as additional support for weak or insufficient harvested graft, reducing the need for secondary cartilage harvesting surgery.<sup>1</sup>

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## BIODEGRABILITY AND BIOCOMPATIBILITY

- Polycaprolactone (PCL) is a biodegradable polymer that degrades in vivo by hydrolysis with a gradual resorption profile of 18 – 24 months.
- It possesses optimal resorption rate that maintains mechanical integrity during healing process, providing sufficient support for maintaining nose tip projection.
- It is a biocompatible material that minimizes adverse host implant reaction.

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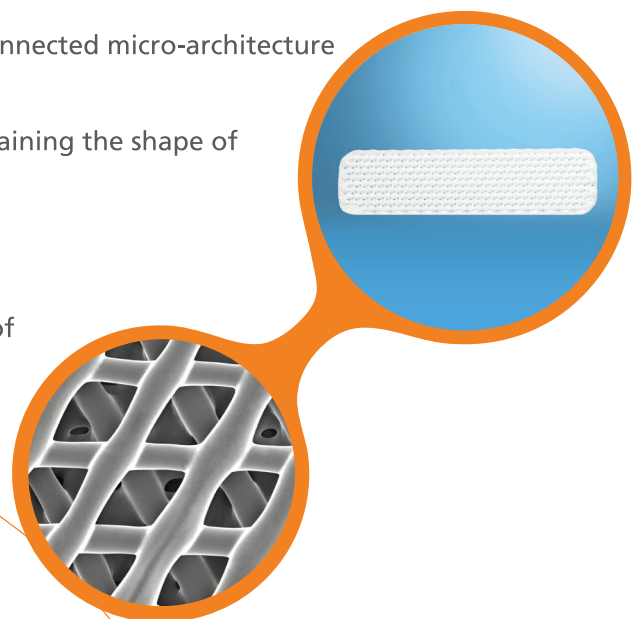
## DESIGN

### 1. POROUS MICRO-ARCHITECTURE

- Osteomesh® is designed with a porous interconnected micro-architecture that facilitates tissue ingrowth.
- It is effective as a lengthy stanchion for maintaining the shape of the nose.<sup>2</sup>

### 2. SUTURE FRIENDLY

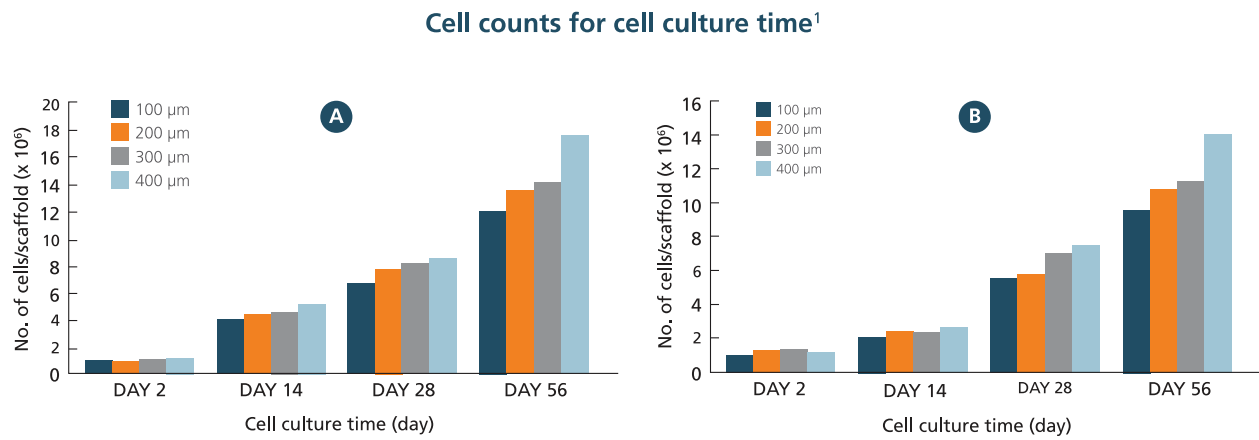
- The porous micro-architecture provides ease of securement to harvested or native cartilages with sutures.



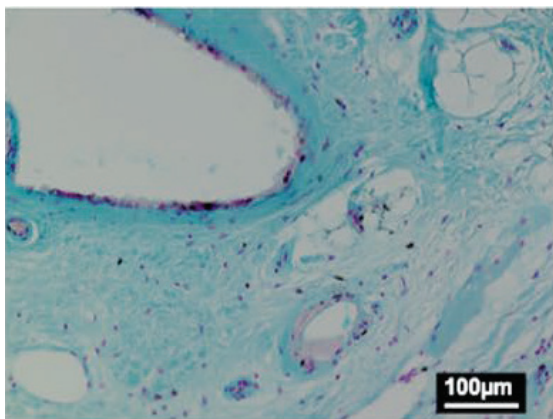
Porosity of Osteomesh®

### 3. OPTIMAL SCAFFOLD PORE SIZE

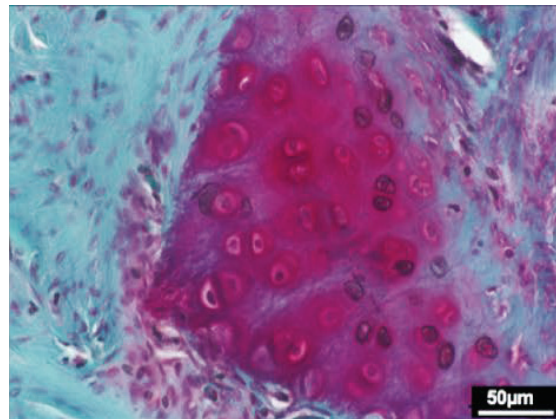
- 400µm is a suitable pore size for chondrocytes and fibroblasts growth.<sup>3</sup>



- In a 6-month animal study, histological evidence confirms the presence of cartilaginous-like matrix (bright-red colour) forming around the PCL implant.<sup>4</sup>



Blue stain (Alcian Blue) showing GAG formation



Intense red stain (Safranin-O) showing GAG formation

### 4. EASE OF USE

- Osteomesh® can be molded easily and it is very easy to manipulate.
- It reduces the operation time and reoperation.

# 4

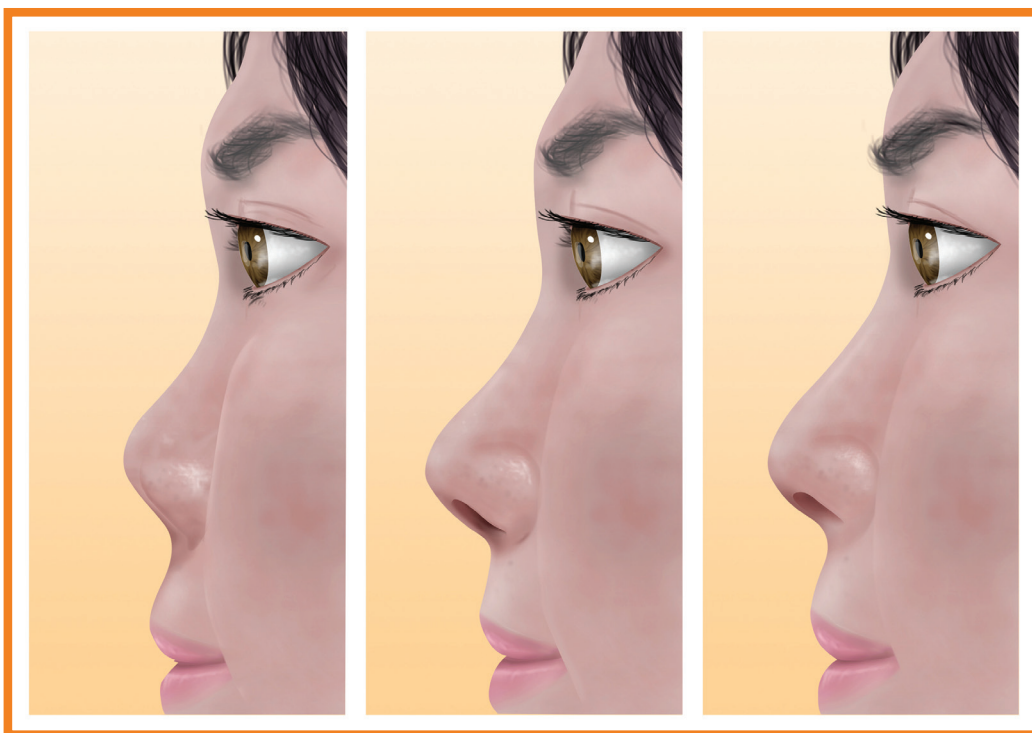
## CLINICAL ADVANTAGE<sup>1,2</sup>

### PATIENT'S PERSPECTIVE

- Low adverse reaction.
- Minimal long-term foreign body reaction.
- Good functional and aesthetic outcome.

### CLINICAL OUTCOME

- Excellent patient satisfaction (90.7% - 96.7%)<sup>1,2</sup>.
- Nasolabial angles were maintained for at least 1 year.



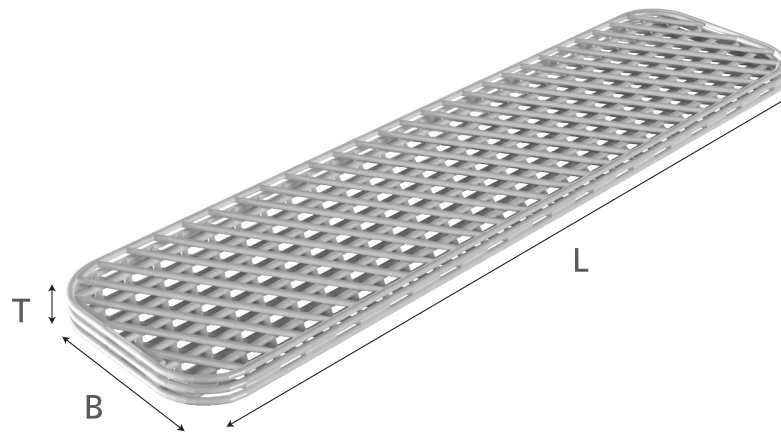
*Pre-op nasolabial angle*

*Maintenance of nasolabial angle at 3 months*

*1 year post operation*

## 5

## PRODUCT SPECIFICATIONS



<u>PRODUCT CODE</u>	<u>SIZE (L x B x T)/mm</u>
PC12 (39,10,1)	39 x 10 x 1
PC12 (39,10,1.25)	39 x 10 x 1.25

Osteomesh® is fabricated in compliance with current Good Manufacturing Practice (cGMP, EN ISO 13485) and provided sterile (gamma irradiation, EN ISO 11137).

**Recommended usage:**

It serves as an auxiliary graft material. It would be best to ensure the nasal cartilages covers the Osteomesh® completely.

**PLEASE NOTE:**

This product may not be approved yet in your country. Product indications may also vary from country to country. Please check with our local representatives for more information.

#### Reference

1. Kim, S. H. & Choi, J. Y. Surgical outcomes and complications of septal extension graft supported by 3D printed polycaprolactone plate. *Laryngoscope* **130**, 1680–1685 (2020).
2. Ahn, T. H., Heo, C. Y. & Ahn, K. C. A compound osteocartilaginous graft with polycaprolactone (PCL) mesh in Asian rhinoplasty. *Journal of Plastic, Reconstructive & Aesthetic Surgery* **12**(29), 1-2 (2020).
3. Nam, J. H., Lee, S. Y., Khan, G. & Park, E. S. Validation of the optimal scaffold pore size of nasal implants using the 3-dimensional culture technique. *Archives of Plastic Surgery* **47**, 310-316 (2020).
4. Wiggerhauser, P. S., Balmayor, E. R., Rotter, N. & Schantz, J. T. In vivo evaluation of a regenerative approach to nasal dorsum augmentation with a polycaprolactone-based implant. *Eur. J. Med. Res.* **24**, 6 (2019).

For professional use.

CAUTION: See instructions for use for full prescribing information, including indications, contraindications, warnings, and precautions.

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# Osteopore®

Empowering Natural Tissue Regeneration

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