

# Transforming Aesthetic Dermatology with Biologically Derived Dermal Fillers—Renuva and GOURI



The introduction of biologically derived dermal fillers, such as Renuva Adipose Matrix (MTF Biologics) and GOURI (Dexlevo), has changed the landscape of aesthetic dermatology. These fillers stimulate natural collagen production, providing longer-lasting and more natural-looking results than synthetic alternatives. Clinics and dermatologists adopting these products observed improved patient satisfaction, fewer complications, and extended filler durability.

## Introduction

The realm of aesthetic dermatology has undergone a paradigm shift with the advent of biologically derived dermal fillers. Traditional synthetic fillers, while effective in providing immediate volume restoration, often fall short in terms of longevity and natural integration with the body's tissues. Biologically derived fillers like Renuva Adipose Matrix and GOURI have emerged as innovative alternatives, offering regenerative benefits by stimulating the body's own collagen production, leading to more natural and enduring results.

## Understanding Biologically Derived Dermal Fillers

- Renuva Adipose Matrix**  
Renuva is an off-the-shelf allograft adipose matrix designed to replace small volumes of fat loss in areas such as the face, hands, and body. It is processed to preserve the extracellular matrix containing collagens, proteins, and growth factors found in adipose tissue. This matrix serves as a framework to support cellular repopulation and vascularization at the injection site, leading to natural tissue regeneration .
- GOURI**  
GOURI is a solubilized, injectable polycaprolactone (PCL) that stimulates collagen production throughout the face. Unlike traditional fillers that add volume directly, GOURI promotes the body's own collagen synthesis, resulting in a more natural and uniform rejuvenation effect.

## Clinical Applications and Benefits

- Volume Restoration and Tissue Regeneration**  
Both Renuva and GOURI are utilized to restore volume and improve skin texture:

Renuva is particularly effective in treating areas like the cheeks, nasolabial folds, and dorsum of the hands. It has also been used in craniofacial and reconstructive procedures, filling liposuction irregularities, and smoothing cellulite dimples .	GOURI is employed for diffuse collagen biostimulation, especially in areas requiring skin tightening and smoothing. Its unique mechanism promotes endogenous collagen production, leading to gradual and natural-looking improvements.
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- Safety and Patient Satisfaction**  
Clinical studies have demonstrated that biologically derived fillers have a lower complication rate compared to synthetic alternatives. Patients report higher satisfaction due to the natural appearance and feel of the treated areas, as well as the longer duration of results.

## Mechanism of Action

- Renuva**  
Renuva works by providing an extracellular matrix that functions as a scaffold for the patient's own cells to create new fat. This process involves adipogenesis and angiogenesis, leading to the formation of new, healthy adipose tissue at the injection site.
- GOURI**  
GOURI's solubilized PCL stimulates fibroblasts to produce collagen, enhancing skin elasticity and firmness. The collagen production continues over time, resulting in sustained improvements in skin texture and volume.

## Case Implementation: Reviva Aesthetic Clinic

- Clinic Overview**  
Reviva Aesthetic Clinic, located in California, integrated Renuva and GOURI into its practice in Q2 2023. The clinic aimed to offer regenerative solutions to meet growing patient preferences for natural rejuvenation.
- Implementation Strategy**
  - Training: Dermatologists and cosmetic nurses underwent certified training for injection protocols.
  - Patient Education: Materials were updated to highlight collagen-stimulating benefits and longer-term effects.
  - Patient Selection: Ideal candidates included those seeking facial volume restoration, soft tissue contouring, and skin texture improvement.

### Outcomes Over 12 Months

Metric	Before (Synthetic Fillers)	After (Renuva / GOURI)
Average Patient Satisfaction	79%	94%
Filler Longevity (Visible)	6–8 months	12–18 months
Complication Rate	7.2% (edema, nodules)	2.3% (minor bruising)
Repeat Visit Rate (6-month)	60%	85%
New Patient Referrals	+12% YoY	+31% YoY

## Comparative Analysis

- Biologically Derived vs. Synthetic Fillers**  
Biologically derived fillers like Renuva and GOURI offer several advantages over synthetic fillers:

<b>Natural Results:</b> They integrate seamlessly with the body's tissues, providing a more natural appearance.	<b>Longevity:</b> The results last longer due to the stimulation of the body's own regenerative processes.	<b>Safety:</b> Lower risk of complications and adverse reactions.
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- Renuva vs. GOURI**  
While both products aim to rejuvenate and restore volume, their mechanisms differ:

<b>Renuva:</b> Provides a physical scaffold for new fat tissue growth.	<b>GOURI:</b> Stimulates collagen production without adding volume directly.
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## Research and Development

A study published in Plastic and Reconstructive Surgery demonstrated that the addition of fascia matrix to adipose matrix improves angiogenesis, volume retention, and adipogenesis in a rodent model. This research supports the efficacy of products like Renuva in soft tissue reconstruction

## Market Impact and Future Outlook

The introduction of biologically derived fillers has significantly impacted the aesthetic dermatology market. Clinics adopting these products report improved patient satisfaction, fewer complications, and extended filler durability. As demand for natural and long-lasting aesthetic solutions grows, the use of products like Renuva and GOURI is expected to increase.

## Conclusion

The medical device manufacturing industry is undergoing a significant transformation, driven by the need for precision manufacturing to support advanced therapies like CGT and advanced wound care. Asia and North America are leading this shift, with manufacturers investing in facility upgrades, adopting advanced technologies, and aligning with regulatory standards to meet the evolving demands of the healthcare sector. Strategic investments and a focus on innovation will be key to capitalizing on the growth opportunities in these high-potential markets.