

L U C A
DE STAVOLA



**HARD AND SOFT TISSUE
AUGMENTATION 2.0**



Hard and soft tissue augmentation 2.0

by Dr. Luca De Stavola



SUMMARY



Topic:

Key factors in bone augmentation procedures from the perspective of hard and soft tissue management



Objectives:

At the end of this course you will be able to:

- Define the reconstructive surgery goal
- Plan a bone harvest at mandibular level
- Define reconstructive surgical steps
- Know soft tissue handling concepts
- Choose materials to graft
- Manage crestal augmentation with particular reference to horizontal, vertical and three-dimensional defects
- Collect, prepare and optimize autologous bone for the surgical treatment
- Do a computer-guided bone regeneration surgery



About the author:

Luca De Stavola, DMD is an emerging international speaker for what concerns bone regeneration techniques and reconstruction of severe intraoral bone defects by adopting a digital approach.

LEVELS

Difficulty ●●●●

Theory ●●●

Practice ●●●●

KEY INFO



English



On Demand



Implantology - Block graft



18 h



6 lectures + ReLIVE Session

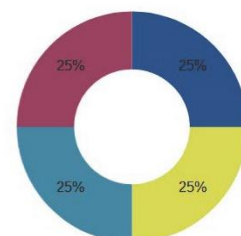


Surgery Yes



NO

SKILLS YOU WILL LEARN



■ Key Factors of Bone Augmentation
■ Digital Approach of Bone Augmentation
■ Soft Tissue Management
■ Live Streaming Surgery



Why to enroll?

- You will discover the latest clinical innovation in bone regeneration and grafting techniques from the perspective of hard and soft tissues.
- You will learn the benefits of adopting a digital approach that is more safe, comfortable and predictable respect a free-hand one.
- Discover the latest trends in horizontal and vertical soft tissue re-establishment and how to reduce tension in wound closure.

Description of the course:

Dr. Luca De Stavola and **osteocom** welcome you to “**Hard and soft tissue augmentation 2.0**”, a learning experience created to analyse the **latest trends** and **innovations** in bone regeneration treatments from the perspective of **hard and soft tissues**.

We have divided the video course into **three thematic modules**, each consisting of two **theoretical lectures** and a **clinical review** followed by a **final Re-LIVE Surgery** summarizing everything discussed in the course.

The **first module** will cover the **key factors** in **bone augmentation procedures**, starting from **anatomical** and **biological factors** up to the **strategies** to increase the **stability** and the **effectiveness** of these treatments.

In the **second module**, the **benefits** of adopting a **digital approach** instead of a free-hand one will be highlighted and an innovative and very useful SW such as **Safecut** will be presented.

In the **third** and last **module**, the focus will be on **soft tissue management**, a crucial factor according to Dr. De Stavola.

Join “**Hard and soft tissue augmentation 2.0**” and start **performing your bone regeneration treatments like a pro!**

In particular, by attending this course you will learn:

- **Decision criteria** in bone augmentation procedures
- How to **improve the predictability** of your bone augmentation procedures
- **Biological and anatomical principles** in bone augmentation treatments
- How the digital technologies can help us to manage **bone healing**
- How to **improve** the overall **predictability** of the treatment

At the end of this course you will be able to:

- Define the reconstructive **surgery goal**
- **Plan a bone harvest** at a mandibular level
- Define reconstructive **surgical steps**
- Know soft tissue **handling concepts**
- **Choose materials** to graft
- Manage **crestal augmentation** with particular reference to horizontal, vertical and three-dimensional defects
- Collect, prepare and optimize **autologous bone** for surgical treatment

Who is this course for?

The course is particularly recommended for all **implantologists** that want to achieve a deeper knowledge of **soft and hard tissue** management, **Khoury's technique** and bone augmentation and regeneration principles.



MODULE 1: BONE AUGMENTATION: KEY FACTORS

Module Description:

In this first didactic module, **Dr. De Stavola** will analyse the **decision criteria** of **bone augmentation procedures**, paying specific attention to how to improve their overall **predictability** by looking at the **biological factors** and at the surgical performances that might influence their outcomes.

In the following video lectures, participants will discover how to reach a real predictable **primary wound healing** and how to generate a **high implant stability**

Dr. De Stavola will also discuss how **digital technologies** can be useful in key treatment phases such as preliminary **planning** and **bone harvesting**.

Video Lecture 1 - Decision criteria in bone augmentation (1h 25min)

Description:

When soft and hard tissues **aren't well represented** in terms of **volume** or aren't in the **right position**, it becomes mandatory to perform **good bone regeneration** in order to achieve the **osseointegration** of the implant.

Participants will discover that their goal will be to have a **new bone formation** in the area of the **defect**, otherwise **implants can't be placed**.

Dr. De Stavola will analyse the **biological diagnosis** in bone grafting, the **surgical techniques** that may affect the final result, the **surgical goals** and, finally, the **rationale** behind the choice of the right **graft material**.

Topics:

- **Biological factors** influencing bone augmentation procedures
- How to strongly **improve the predictability** of bone regeneration procedures
- How to deal with **huge deficiencies** of bone in **vertical** and **mesio-distal direction**
- The relevance of **angiogenesis** in guided bone regeneration
- **Inductive** and **mechanical factors** influencing the formation of new osteoblasts
- How **surgical choices** may affect the **final outcome**?

Video Lecture 2 - Macro-stability and strain related to the bone augmentation process (1h 20min)

Description:

How to achieve stability from a **surgical point of view**?

In this second video lecture, Dr. De Stavola will explain in detail the **treatment procedures** to reach **great stability** of the **graft material** placed inside the defect. Participants will learn that **macro-stability** is affected by the environment and on how the bone augmentation is performed: **mechanical factors** influencing the overall stability will be deeply analysed, as well as the surgical factors that may influence the final result.

Topics:

- The **mechanical factors** influencing our treatment stability: fixated membrane VS non-fixated membrane
- When to use **titanium reinforcements** to improve stability
- How to properly support **biological bone formation**
- **Graft positioning**: inside or outside the anatomical contour
- How to **preserve** the graft material **stability**?

1st Re-LIVE Session: Clinical Review and Discussion about key factors in bone augmentation procedures (1h 45min)

Description:

In this **Re-LIVE Session** Dr. De Stavola will **review** all the **topics** covered during the first **two presentations**, showing **surgical videos** and exemplary **clinic cases**, discussing them in a step-by-step modality.

Special emphasis will be given to the **difficulties** that may emerge in the search of **bone vascular support** and to the **analysis** of the **area of the defect**.

Topics:

- Why may we have difficulties on reaching proper bone vascular support?
- How can we understand if there's or there isn't a good vascular support in the area of the defect?
- When analysing a defect, which axial level should we primarily consider?

MODULE 2: DIGITAL APPROACH OF THE BONE REGENERATION

Module Description:

In this second didactic module, Dr. De Stavola will discuss the required surgical procedures to perform a bone harvesting in the proper way.

Participants will thus discover how the digital world has changed the way of planning and performing the Khoury's Technique.

Several surgical clips will be shown and Safecut®, a useful software for digital planning, will be explained in a step-by-step modality.

Video Lecture - Benefits of computer guided approach in bone regeneration (1h 30min)

Description:

Thanks to this lecture, participants will deepen their knowledge about bone harvesting procedures and donor sites; in particular, Dr. De Stavola will explain that the best donor site is the retromolar area.

The retromolar area is the first choice for the clinician because is more predictable, less risky at a neurological point of view and it doesn't cause intraoperative pain.

Then Dr. De Stavola will describe the differences between a free hand approach and a computer guided one in order to obtain a **bone regeneration** highlighting the benefits of the second one approach both for patients and clinicians.

Topics:

- Mandibular **bone harvesting**
- Why does Dr. De Stavola prefer to work on the **retromolar area**?
- **Differences** between final outcomes reached with or with no **autologous bone harvesting**
- Problems in managing osteotomy in the **retromolar area**
- How and when is recommended placing **bony picks**
- Where do we place the **surgical lines** while performing **osteotomy**
- How to treat the **upper jaw defect**

Video Lecture - Bone graft digital planning (1h 30min)

Description:

Dr. De Stavola, in this video lecture, will discuss the fundamental relevance of **adopting a digital approach** to perform **bone harvesting** and **bone regeneration** procedures.

Participants will discover that the clinician has to **bring the defect into the digital world** in order to measure its **mesio-distal dimension** so that it's possible to define the dimension of the **needed bone harvest**.

Participants will then receive a detailed **explanation of Safecut®**, an innovative SW that is used to determine the osteotomy lines and the 3D dimension of the defect; the clinician's goal is to keep a strong correlation between what it's been performed in the clinical field and what has been digitally planned in the preliminary stages of the treatment.

Topics:

- The importance of bringing the defect in the **digital world** for the diagnosis
- Safecut® computer guided **bone harvesting**
- The treatment of the **harvested bone block**
- **Anatomy** of the donor site
- The **Safecut® concept**: step-by-step surgical aspects
- **Tunnel approach** to open the site and the **fixation of the lamina** in the area of the defect

2nd Re-LIVE Session: Clinical Review and Discussion about computer guided approach and digital planning (1h 35min)

In this **Re-LIVE Session**, Dr. De Stavola will explore some of the **most important topics** covered in the previous video lectures regarding **digital planning** and **computer-guided surgery**.

From the correct **timing** and **type** of **anaesthesia** to the **anatomy** of the **donor site**, through an analysis of possible **risk factors** and useful **planning software** to a discussion of **post-operative discomfort** for the patient and a comparison between **freehand and computer-guided surgery**: each topic will be presented and discussed in step-by-step mode with the aid of **clinical videos**.

MODULE 3: SOFT TISSUE MANAGEMENT

Module Description:

This final module will be completely dedicated to the **soft tissue management** during **bone regeneration procedures**.

According to Dr. De Stavola it's highly important to obtain a **primary wound healing** to have an **optimal regeneration** and to reach an excellent **functional** and **esthetic outcome**.

Specific soft tissue management aspects such as **flap design** and its **passivation** to achieve good **flap tension** or the **protective function** of the tissue towards the wound will be tackled.

Video Lecture 5 - Soft tissue management - Part 1 (1h 30 min)

Description:

In this video lecture Dr. De Stavola will introduce some **crucial aspects** regarding **soft tissue management** in bone regeneration procedures.

In particular, participants will understand, with the help of some explanatory **clinical clips**, that all **regenerative techniques** must have **primary wound healing** and that any time there's an infection it means that there has been a **surgical mistake** in the soft tissue management phase.

Topics:

- **Design** and **passivation** of the flap
- **Differences** between flap design in the **mandibular** or **maxillary** section
- **Complication rate** in vertical bone augmentation procedures
- Flap **elongation** and **incision** lines
- How to obtain a **mid-crestal wound sealing** at the end of the surgery

Video Lecture 6 - Soft tissue management - Part 2 (1h 15min)

Description:

This second video lecture on soft tissue management will focus on the **strategies** for performing **flap designs**, flap **elongations** and **wound closures**.

Participants will understand that **flap management** is a key factor for the **regenerative treatments**: Dr. De Stavola will thus explain how to manage the flap elongation and how to work in a **conservative way** causing **minimum damage** to the tissue surface.

Topics:

- Focus on soft tissue **anatomy**
- Flap **design, flap elongation and wound closure**
- Single and mattress **suture protocols**
- Is **tension** related to the graft?

- Differences between vestibular and lingual flaps

3rd Re-LIVE Session: Clinical Review and Discussion about soft tissue management (1h 30min)

Description:

In this **Re-LIVE Clinical Review**, Dr. De Stavola will explain the **proper techniques** that can help to **preserve** and **enhance** the **quality** and **quantity** of **soft tissues** during bone regenerative treatments.

Starting from the correct **flap design** to access to the surgical site while **minimizing damage** to the tissue surface, passing through other crucial aspects like **suturing techniques** up to **post-operative care**; every key factor will be discussed in this clinical review.

Final Re-LIVE Surgery (2h 35min)

Description:

This final **Re-LIVE Surgery** aims to **summarize all the elements** analysed and discussed throughout this learning experience.

A **complete surgery** lasting more than **two and a half hours** with **step-by-step commentary** by Dr. De Stavola will be shown.

REFERENCES:

- **“The vestibular shifted flap design for vertical bone augmentation in the maxilla: case report and technical notes”** by L. De Stavola, F. Fistarol, A. Fincato, J. Tunkel.
- **“Posterior mandible anatomy: surgical considerations in relation to bone harvesting procedures”** by F. Fistarol, L. De Stavola, A. Fincato and E. Bressan.
- **“Mandibular bone block harvesting from the retromolar region: a 10-year prospective clinical study”** by F. Khoury and T. Hanser.
- **“The role of cortical perforations in bone regeneration: a systematic review”** by J. Alvira-Gonzalez and L. De Stavola.
- **“Healing pattern of bone regeneration in membrane-protected defects: a histologic study in the canine mandible”** by R.K. Schenk, D. Buser, W. Hardwick and C. Dahlin.
- **“The influence of the bucco-palatal distance on sinus augmentation outcomes”** by Avila et al, 2010.
- **“The significance of angiogenesis in guided bone regeneration”** by Schmid et al, 1997 COIR.



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Bio Autore:

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