L7 BULLETIN

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ACADEMIC

Age related SAQ questions breakdown

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“The Anatomy of the Aging Face: A Review”

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CLINICAL

UNDERSTANDING ‘TISSUE COVERAGE’ IN RELATION TO AGEING FACIAL TISSUES

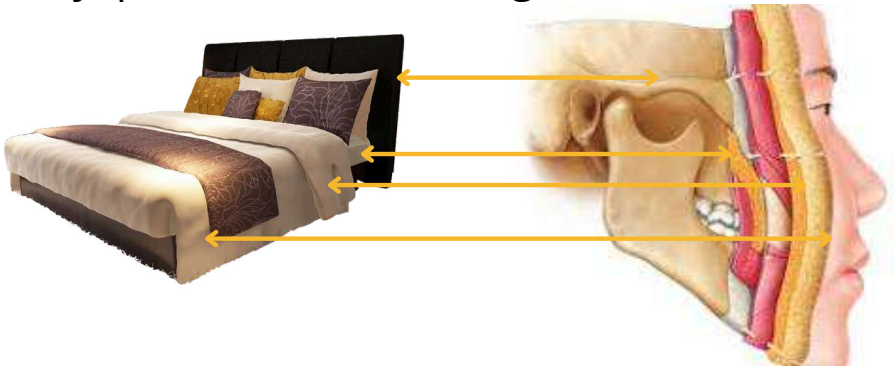
Overview

Often, when we are treatment planning for dermal filler in the ageing patient, we discuss ‘tissue coverage’ and which product to use and where. This article will address the term tissue coverage and how this relates to your product choice for patients.

What does ‘tissue coverage’ mean?

In dermal fillers for ageing patients, 'good tissue coverage' is a term that underscores the importance of the thickness and quality of the skin and subcutaneous tissue where the filler is to be injected. This is a crucial consideration when selecting the appropriate type of dermal filler, as it directly impacts the natural-looking results and helps to avoid complications like visibility or palpability of the filler under the skin.

When teaching, I often use the analogy of a bed. The bedframe relates to the skull, the mattress, the deep fat pads, the mattress topper, the musculature, the duvet, the superficial subcutaneous fat, and the duvet cover, which is the skin. Each relates to the different layers of the face. This can be related to the ‘coverage aspect. If the bed has a poor quality mattress and duvet, then anything placed on the bed-frame may be more easily seen. This can be related to tissue coverage, if the overlying tissues are thinner or lacking in quality, placement of a lifting dermal filler may be more obvious.



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Applications for treatment planning

Dermal fillers are typically injected into different layers of the skin depending on their specific properties and intended effects:

- **Superficial dermis:** Suitable for fine lines and surface wrinkles.
- **Mid to deep dermis:** Used for moderate lines and volume enhancement.
- **Subcutaneous and supraperiosteal layers**: Appropriate for deep volume restoration and contouring.
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The rheology of dermal fillers, essentially their flow under pressure, is determined by properties like:

- **Cohesivity**: How well the gel sticks together.
- **Elasticity (G' or G prime):** The gel's firmness influences how well it can lift and support the tissue.
- **Viscosity:** Resistance to flow, affecting how easily the gel can be injected and how it spreads in the tissue.

FEATURE	RESTYLANE LYFT	RESTYLANE VOLYME
G Prime (Firmness)	High - Indicates a firmer gel, suitable for substantial lifting and support.	Lower - Softer and more malleable, better for gentle volume enhancement.
Typical Use	Deeper injections for correcting pronounced volume loss and contouring deeper facial structures.	Creating volume with a focus on a natural feel and integration with existing tissues.
Ideal For	Patients needing significant contouring and support in deeper layers of the face.	Patients looking for subtle volume enhancement, especially in visible and tactile sensitive areas.
Considerations	- Not suitable for aging patients with poor tissue coverage. - Risk of being palpable or visible under thin, delicate skin.	- More adaptable and flexible, suitable for older adults with thinner skin. - Minimizes the risk of irregularities.
Advantages	Provides strong structural support and can effectively redefine facial contours.	Ensures a smooth, natural-looking enhancement; integrates well in areas with less natural padding.
Potential Drawbacks	May cause unnatural contours or visible lumps in patients with thinner skin or less tissue coverage.	While versatile, might require more product or additional treatments for achieving pronounced lifting comparable to higher G prime fillers like Lyft.

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Dermal Filler Layers and Rheology

As we have an understanding of the various features of dermal fillers, and what 'tissue coverage' means from a patient assessment point of view, let's discuss how this could be practically applied to different scenarios.

Restoration of the anterio-medial cheek at Supraperiosteal layer

Restylane Lyft would be suitable for restoration as improved tissue coverage

Restylane Volyme would be suitable for restoration as tissue coverage would not be ameanable to the projecting qualities of Lyft.

Conclusion

It is integral to treatment planning to consider the various layers of tissues and their quality to determine the best rheology of product to place and why. This will ensure the reduction of complications and optimise treatment results for your patients.

Dr Bryony Elder BChD: Level 7 Lead

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Ageing related - SAQ questions

Unit 1: Anatomy, Pathophysiology and Dermatology for Aesthetic Injectable Therapies - AC 4.1 - Question 1

Examine the impact of the process of ageing in relation to the injectable treatment options available.

This question is asking you to look at how the aging process affects the skin and then discuss how injectable treatments can be used to address or mitigate these effects. Analyse how injectable options can help counter the impact of aging on the skin.

- Consider how the aging process affects the skin i.e. elasticity.
- Consider volume loss. How can injectable treatments be used to restore volume?
- Explore how injectable treatments can address wrinkles associated with aging.
- Consider preventative treatment options.
- Discuss the effectiveness of combining different injectable treatments for a holistic approach to addressing multiple signs of aging.
- Emphasize the importance of managing patient expectations and providing realistic information about the outcomes of injectable treatments.

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Unit 1: Anatomy, Pathophysiology and Dermatology for Aesthetic Injectable Therapies - AC 4.2 - Question 2

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Analyse alternative treatment options where injectable treatment options are not advised due to ageing processes.

This question is asking you to look at other ways to address aging-related concerns when using injectable treatments is not recommended. Analyze different treatment options that can be considered when injectables are not the preferred or suitable choice due to the effects of aging.

Acknowledging the situations where injectable treatments may not be recommended due to the aging process, perhaps due to certain health conditions, preferences, or other factors this could include:

- Topical Skincare Products
- Non-Surgical Skin Tightening Procedures
- Facial Exercises and Massage
- Hyaluronic Acid Serums
- Nutritional Support
- Sun Protection
- Evidence your answers

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JOURNAL CLUB

The Anatomy of the Aging Face: A Review

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Wolfgang Redka-Swoboda, MD[5] Isaac Zilinsky, MD[6] Tatjana Pavicic, MD[7]

Overview

The paper "The Anatomy of the Aging Face: A Review" by Sebastian Cotofana et al. explores the anatomical changes in the face due to aging and their impact on facial rejuvenation procedures. It highlights that the face is organised into five layers: skin, subcutaneous fat, musculoaponeurotic layer, loose areolar connective tissue, and periosteum, each affected differently by ageing.

The skin experiences changes in thickness, pigmentation, and elasticity, becoming thinner and more transparent in areas like the infraorbital region. Subcutaneous fat is divided into compartments that shift and change volume over time, contributing to facial sagging. The musculoaponeurotic layer, including the SMAS, is crucial for surgical facelifts, while the loose areolar tissue and periosteum undergo changes that affect the overall structure and support of the face. Understanding these layered changes is essential for achieving safe, natural, and long-lasting results in facial rejuvenation.

Layered Structure of the Face

The face is organised into five distinct layers, each playing a unique role in facial appearance and function. The outermost layer is the skin, which varies in thickness, pigmentation, and adherence across different regions of the face. Beneath the skin lies the subcutaneous fat, organized into compartments by fibrous septae. The musculoaponeurotic layer, including the superficial musculoaponeurotic system (SMAS), is crucial for surgical procedures like facelifts. The fourth layer, loose areolar connective tissue, contains deep fat compartments and serves as a gliding plane for facial muscles. The innermost layer is the periosteum, which includes deep fascia in various regions and provides attachment points for other structures, supporting the facial skeleton.

Skin (Layer 1)

The skin of the face shows significant regional variation in thickness, pigmentation, and subcutaneous adherence. For example, in the infraorbital region, the skin is particularly thin and transparent, revealing the underlying orbicularis oculi muscle, which can give the area a bluish tint. With ageing, the skin undergoes changes such as loss of elasticity and changes in pigmentation, which contribute to the visible signs of ageing. The adherence of the skin to underlying structures also varies, influencing how facial expressions are formed and contributing to the overall facial appearance.

Subcutaneous Fat (Layer 2)

Subcutaneous fat in the face is divided into distinct compartments by fibrous septae, and its thickness and presence vary across different regions. These compartments can change in volume with age, contributing to facial sagging and volume loss. Ethnic differences and individual variability also play a role in the distribution and characteristics of subcutaneous fat. Changes in these fat compartments, such as hypertrophy or atrophy, are significant factors in the aging process, affecting facial contours and the appearance of wrinkles and folds.

Musculoaponeurotic Layer (Layer 3)

The musculoaponeurotic layer, particularly the SMAS, has received significant attention due to its importance in facelift procedures. This layer includes the superficial cervical fascia in the neck and is continuous with the SMAS in the face, which is integral to facial structure and expression. Alterations in this layer, such as shortening, duplication, or refixation, form the basis of many surgical rejuvenation techniques. Understanding the properties and changes in this layer is crucial for achieving effective and natural-looking results in cosmetic surgery.

Loose Areolar Connective Tissue (Layer 4)

The loose areolar connective tissue layer contains deep fat compartments that differ in morphology from the superficial fat. This layer serves as a gliding plane for facial muscles, facilitating smooth movement and expression. Age-related changes in this layer can affect the stability and position of facial fat, leading to shifts in facial volume and contour. The organization and boundaries of these deep fat compartments are essential for understanding facial anatomy and planning effective rejuvenation procedures.

Periosteum (Layer 5)

The periosteum layer, which includes deep fascia in various facial regions, provides critical structural support and attachment points for ligaments and muscles. Changes in the periosteum and the underlying bone structure with age can significantly affect the facial contour and the overall appearance. These changes influence the origin and stability of facial ligaments and muscles, contributing to the signs of aging such as sagging and loss of definition in the facial features. Understanding these changes is vital for planning surgical interventions and achieving long-lasting rejuvenation results.

Age-Related Changes in Facial Structures

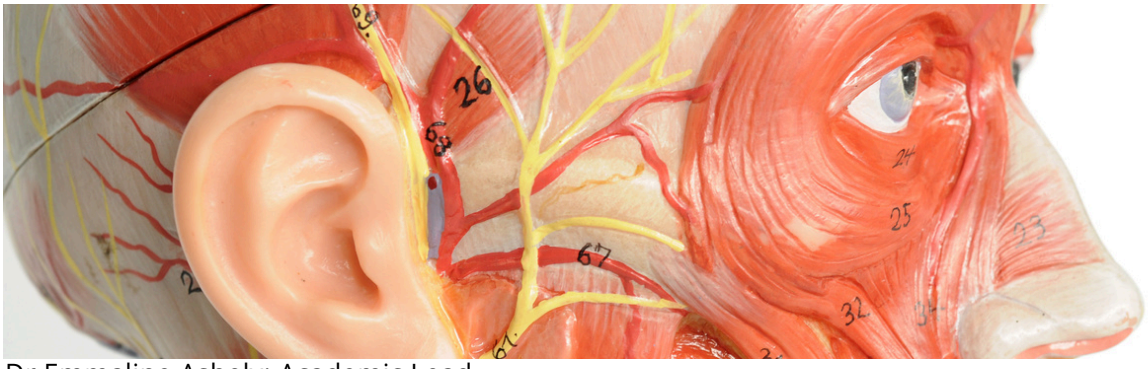
Facial aging is a complex process involving continuous changes in bones, ligaments, muscles, and fat. The facial bones undergo lifelong changes, affecting the shape and support of the face, such as lateral translation of orbits and changes in the maxillary angle. Facial ligaments, composed of collagen and other proteins, may show fatigue and contribute to sagging with age. Facial muscles experience sarcopenia, leading to changes in muscle tone and length, affecting facial expressions and contributing to wrinkle formation. Both superficial and deep facial fat compartments undergo changes, such as hypertrophy and volume loss, impacting facial volume and contour. These combined changes must be considered for effective facial rejuvenation.

Clinical Implications

For successful facial rejuvenation, it is essential to understand the interplay between bones, ligaments, muscles, and fat. Each of these structures contributes differently to the appearance of the aging face, and rejuvenation procedures must address these changes comprehensively. Knowledge of the layered anatomy allows for safe, natural, and long-lasting results in both surgical and non-surgical approaches. Tailoring treatments to individual anatomical changes ensures more effective and satisfactory outcomes for patients seeking facial rejuvenation.

Conclusion

A thorough understanding of the anatomy and age-related changes of the face is crucial for achieving successful facial rejuvenation. The interplay between bones, ligaments, muscles, and fat must be considered to restore a youthful appearance effectively. Future research is needed to further elucidate these complex relationships and improve the strategies for facial rejuvenation. Awareness of these factors helps guide appropriate and effective rejuvenation therapies, ensuring patient safety and satisfaction.



Dr Emmaline Ashely: Academic Lead

EVENT RUNDOWN

COURSEWORK SESSIONS

We have now launched our much anticipated coursework sessions. Please check your emails for the the full schedule and links to register, register via your Dashboard or download the guide here.

No.	Date	Time	Session
1	Monday 3rd June	7pm - 8pm	Welcome, Housekeeping, Accountability & Skin Part 1
2	Monday 17th June	7pm - 8pm	Skin/Anatomy
3	Monday 1st July	7pm - 8pm	Ethics/Professionalism
4	Monday 15th July	7pm - 8pm	Patient Assessment
5	Monday 29th July	7pm - 8pm	Critical Appraisal
6	Monday 5th August	7pm - 8pm	Complications
7	Tuesday 20th August	7pm - 8pm	Case Studies
8	Monday 2nd September	7pm - 8pm	Submission & Q&A

EVENT RUNDOWN

UPCOMING COURSES

Don't miss our exciting lineup of courses this summer! Enhance your skills and stay ahead in the field with our specialised training sessions. Here's what's coming up:

- Saturday 10th August 2024 - Foundation - Newcastle
- Saturday 10th August 2024 - Mentoring - London
- Sunday 11th August 2024 - Advanced - Newcastle
- Sunday 11th August 2024 - Advanced - London
- Saturday 7th September 2024 - Lip - London
- Saturday 7th September 2024 - Polynucleotides - Newcastle
- Saturday 14th September 2024 - Polynucleotides - London
- Sunday 22nd September 2024 - PRP - London
- Saturday 28th September 2024 - Foundation - London
- Saturday 28th September 2024 - Foundation - Newcastle
- Saturday 28th September 2024 - Mentoring - London
- Sunday 29th September 2024 - Advanced - London
- Sunday 29th September 2024 - Advanced - Newcastle

PARTICIPATION IN ACQUISITION AESTHETICS RESEARCH & DEVELOPMENT

Join Us in Shaping the Future of Aesthetic Medicine

We are excited to invite you to participate in an important research and development initiative conducted by Acquisition Aesthetics. Your insights and expertise are invaluable to us as we strive to advance the field of aesthetic medicine. By contributing to our questionnaire, you will play a crucial role in guiding future innovations and improving practices within the industry.

About the Questionnaire

This comprehensive questionnaire focuses on Level 7: Perceptions and Experiences of Healthcare Professionals Undertaking a Diploma in Aesthetics. It covers a wide range of topics, including:

- Experiences and challenges faced during the Level 7 diploma
- Perceptions of the curriculum and training methods
- Impact of the diploma on professional practice and patient outcomes

Your responses will help us identify key areas for research and development, ensuring that we continue to meet the evolving needs of both practitioners and patients.

Why Participate?

- Influence Innovation: Your feedback will directly impact the development of new services, techniques, and educational programs.
- Advance the Field: Contribute to the body of knowledge that drives the future of aesthetic medicine.
- Win an Amazon Voucher: Participants will be entered into a draw for a chance to win a £100 Amazon voucher.

How to Participate

- Access the Questionnaire: Link - https://forms.gle/3VDxu22JtkEAT2ED8 click the link to access the online survey.
- Complete the Survey: The questionnaire will take approximately 10 minutes to complete.
- Submit Your Responses: Ensure you submit the questionnaire by the deadline Friday 4th October.

Thank you for your participation and for contributing to the future of aesthetic medicine. We look forward to your valuable insights!