

Subject Outline: Cosmetic Dermatology III



Course: Graduate Certificate in Cosmetic Dermatology

Subject: Cosmetic Dermatology III: Surface Active Procedures

Credit Points: 3

Year/Semester Delivered: 1

Pre requisite: Cosmetic Dermatology I: An Introduction and Cosmetic Dermatology II: The Cosmetic Consultation

Subject Outline:

This subject will cover the various key aspects of surface active procedures (SAP) in cosmetic dermatology including but not limited to:

- Skin rejuvenation techniques
- Physics and safety of SAP
- Comparison of treatment options and the
- Development of appropriate treatment plans

Components that comprise the subject may be divided into 4 broad sections:

- Lasers, lights and radiofrequency devices
- Cosmetic Treatment of specific skin conditions
- Non-laser surface active procedures
- Skin care, cosmetics and cosmeceuticals

A: Lasers, lights and radiofrequency devices:

- a. Physics
- b. Safety considerations
- c. Types of light based systems:
 - i. Visible light systems and intense pulsed light (IPL)
 - ii. Non-ablative infrared
 - iii. Fractionated photothermolysis
 - iv. Ablative resurfacing
- d. Special considerations
 - i. Treatment of Extra-facial skin
 - ii. Treatment of skin of colour
- e. Photodynamic therapy

B: Cosmetic treatment of specific skin conditions:

- a. Skin cancer and cutaneous dysplasia
- b. Sun damaged skin
- c. Atrophic acne scarring
- d. Keloids and hypertrophic scars
- e. Hirsutism
- f. Rosacea and facial erythema
- g. Dyspigmentation including:
 - i. Hyperpigmentation
 - ii. Hypopigmentation
- h. Striae
- i. Cellulite
- j. Treatment of tattoos
- k. Hyperhidrosis
 - i. Microwave
 - ii. RF
 - iii. HIFU

C: Other non-laser SAP

- a. Chemical Peeling
 - i. Classification
 - ii. Benefits of commonly used agents
 - iii. Risks of commonly used agents
 - iv. Uses
- b. Dermabrasion
- c. Microdermabrasion
- d. Needling
- e. Radiofrequency
- f. Fine wire Diathermy
- g. High intensity focused ultrasound

D: Skin care, cosmetics and cosmeceuticals

- a. The building blocks of skin care
 - i. Cleansers
 - ii. Toners and Astringents
 - iii. Moisturisers
- b. Photo-protective agents
- c. Cosmeceuticals
 - a. Types of preparations
 - i. Vitamins and antioxidants
 - ii. Hydroxyacids
 - iii. Retinoids
 - iv. Peptides
 - v. Botanicals

Successful completion of this subject will provide the student with a strong foundational knowledge of the selection, application of and risks associated with surface active procedures and an ability to make judgments on their application to their patients.

This subject is supported by online an online module containing topic content, additional resources (including but not limited to, additional readings and/or pre-readings, online references, self-diagnostic quizzes images etc.).

Subject Learning Outcomes:

After completing this subject, students will be able to:

- SLO 1:** Analyse the physics and safety of surface active procedures (SAPs)
- SLO 2:** Critically appraise techniques of skin rejuvenation, utilizing theories and concepts to analyse current practice.
- SLO 3:** Develop treatment plans based on current practice and patient history and presentation.
- SLO 4:** Compare and contrast surface active treatment options to develop surface active cosmetic treatment plans for specific skin conditions.
- SLO 5:** Demonstrate a comprehensive understanding of non-laser SAPs including photo-rejuvenation using visible and infrared light
- SLO 6:** Apply a comprehensive knowledge and understanding of skin care products to integrate their use with cosmetic treatment plans
- SLO 7:** Demonstrate an in-depth knowledge of the mechanisms of action, safety and efficacy profiles and common and serious side effects and contraindications of treatment with laser devices.

The online module may also, where appropriate, contain additional related learning outcomes specific to the component sections.

Student Workload:

Reference should be made to the ACD Academic Awards Framework Policy to provide a guide as to the minimum time a full time student should spend working on this subject.

In general, “Over a semester, a 3 Credit Point (CP) subject will have a total of at least **36 hours timetabled teaching/student contact time associated with it.**”

Generally, this time will be comprised of a mix of online virtual classroom teaching sessions (approx. 80%) and work-place based instruction and/or assessment if or where appropriate.

“1CP will equate to a minimum of 2.5 hours **personal study** time per week for the full time student. Over a semester (20 weeks) this equates to 150 hours of personal study time for a 3 CP subject”.

As this graduate certificate course is essentially an online course with respect to ‘interaction with content/theoretical concepts’, students will be expected to spend a considerable portion of their personal study time per week over the semester period of 20 weeks working in the respective subject online support modules.

Timetabled student contact/teaching time will be focused on extension of the content of the course that is provided via the online modules.

Teaching:

- Weekly scheduled virtual F2F classroom teaching sessions (utilizing synchronous webinar technology and asynchronous discussion space systems where appropriate)
- Access to topic specific recorded lectures via e-learning portal
- Student self-study using online content support materials
- Work-placed based instruction and/or assessment if or where appropriate.

Assessment:

Assessment of the student outcomes may utilise any or all of the tools listed as appropriate.

- Formal MCQs
- Written Assignment(s) (Reports/reflections etc.,)
- Virtual classroom contributions
- Case based discussion/report (Topics nominated from sections)
- Research/Journal paper analysis/reflection

Assessment task	Weight	Subject Learning outcomes assessed	Curriculum Learning Outcomes	Due date
MCQ Exam/Quizzes	50%	SLO 1 – 3, 5 - 7	CLO 1 - 6	TBA
Assignment 1: Case Study Report 1*	15%	SLO 1 – 3, 5 - 7	CLO 1 - 6	TBA
Assignment 2: Case Study Report 2*	15%	SLO 1 – 3, 5 - 7	CLO 1 - 6	TBA
Assignment 3: Research Report: Comparison of SAP options/techniques	15%	SLO 4	CLO 7	TBA
Virtual Classroom participation/contribution	5%	SLO 1 – 3, 5 - 7	CLO 1 - 6	Weekly

* **Case study reports must** be comprehensive and must as a minimum include:

- Patient history summary
- Examination findings/ assessment and consequent differential diagnoses
- Treatment plan(s)
- Risk analysis
- Images if appropriate (consented)

Refer also to the Portfolio/Logbook Assessment/Evaluation Rubric for more detailed guidance on requirements.

Recommended Resources:

General (Covering all sections)

- Cosmetic Dermatology: Alam, Hayes, Gladstone and Tung. ISBN: 978-0-7020-3143-4
- Surgery of the Skin; Robinson et al.
- Procedures in Cosmetic Dermatology Series (Various)

Section Specific resources:

Lasers

- Robinson J.K et al., Surgery of the Skin 2nd Edition. 2010 Elsevier, **Chapters: 24 (Chemical Peels), 30 (Laser hair removal), 31 (Microdermabrasion and Dermabrasion), 32 (Laser treatment of tattoos and pigmented lesions) and 33 (Energy based treatment of the ageing face).**
- Procedures in Cosmetic Dermatology Series: 2006 Elsevier London **Chapters: 2 (Laser Treatment of vascular lesions), 3 (Laser Treatment of pigmented lesions), 4 (Laser hair removal), 7 (Laser resurfacing), 8 (Non-surgical body contouring), 9 (Non-surgical skin tightening)**
- Smalley P.J Laser Safety: Risks, hazards and control measures. Laser Therapy 2011; 20(2): 95-106
- Raulin C. Karsai S., Laser and IPL technology in Dermatology and Aesthetic Medicine 2011 Springer-Verlag Berlin
- Hruza G J, Auram M. Lasers and lights: Procedures in Cosmetic Dermatology. 3rd edition.
- Refer to the online module for additional Journal Readings

Cosmetic Treatment of skin conditions

- As above
- Procedures in Cosmetic Dermatology Series: 2006 Elsevier London **Chapters: 20 (Facial redness)**
- Refer to the online module for additional Journal Readings

Non-Laser surface active procedures

- Procedures in Cosmetic Dermatology Series: Rubin, Choosing the Correct Peel. 2006 Elsevier London
- Procedures in Cosmetic Dermatology Series **Chapters 8 (Non-surgical body contouring), 9 (Non-surgical skin tightening)**
- Bologna J L et al., Dermatology, 3rd ed., 2012, Elsevier. USA
- Christie AR, Advanced Skin Innovations with Dermapen, 2nd ed, 2014, Corri J Matthews DermapenWorld, Sydney.
- Aust MC et al, 2010, Percutaneous collagen induction. Scarless skin rejuvenation: face or fiction?, Clin Exp Dermatol, 35: 437-39.
- El Domyati M et al, 2015, Microneedling therapy for atrophic acne scars. An objective evaluation, J Clin Aesth Dermatol, 8(7): 36-42.
- Fabbrocini G et al, 2009, Acne scarring treatment using skin needling, Clin Exp Dermatol: 1-6.
- Garg S et al, 2014, Combination therapy in the management of atrophic acne scars, J Cutan Aesthet Surg, 7(1): 18-23.

- Ha RY et al, 2005, Analysis of facial skin thickness: defining the relative thickness index, *Plast Reconstr Surg*, 115(6): 1769-73.
- Badran MM et al, 2009, Skin penetration enhancement by a microneedle device (Deramroller) in vitro: dependency on needle size and applied formulation, *Eur J Pharma Sci*, 39:511-23.
- Cachafeiro T et al, 2016, Comparison of nonablative fractional erbium laser 1340nm and microneedling for the treatment of atrophic acne scars: a randomised clinical trial, *Dermatol Surg*, 42:232-41.
- Aust MC, Fernandes D, Kolokythas P, Kaplan HM, Vogt PM. Percutaneous collagen induction therapy: an alternative treatment for scars, wrinkles, and skin laxity. *Plast Reconstr Surg*. 2008;121(4):1421-1429.
- MC, Reimers K, Gohritz A, et al. Percutaneous collagen induction: Scarless skin rejuvenation: fact or fiction? *Clin Exp Derm*. 2010;35(4):437-439.
- Kim YC, Park JH, Prausnitz MR. Microneedles for drug and vaccine delivery. *Adv Drug Deliv Rev*. 2012;64(14):1547-1568.
- Sahni K, Kassir M. Dermafrac™: An innovative new treatment for periorbital melanosis in a dark-skinned male patient. *J Cutan Aesthet Surg*. 2013;6(3):158-160.
- Refer to the online module for additional Journal Readings

Skin care cosmetics and cosmeceuticals

- Procedures in Cosmetic Dermatology Series: 2006 Elsevier London **Part 1:** Defining the cosmeceutical realm, **Part 2:** Cosmeceutical Actives Chapters, 4 – 9 and 10 - 16, **Part 3:** The application of cosmeceuticals to dermatologic practice, Chapters 19 -24, **Part 4:** Cosmeceutical Myths, **Part 5:** New Research.
- Zhou Chen, Jin Young Seo, Yeon Kyung Kim, Se Rah Lee, Kyu Han Kim, Kwang Hyun Cho, Hee Chul Eun, and Jin Ho Chung, Heat Modulation of Tropoelastin, Fibrillin-1, and MatrixMetalloproteinase-12 in Human Skin In Vivo *J Invest Dermatol* 124:70 –78, 2005
- Elizabeth M. Zettersten, MD, Ruby Ghadially, MD, Kenneth R. Feingold, MD, Debra Crumrine, BS, and Peter M. Elias, MD San Francisco, California. Optimal ratios of topical stratum corneum lipids improve barrier recovery in chronologically aged skin (*J Am Acad Dermatol* 1997;37:403-8.)
- Epstein H (2009). "Cosmeceutical vehicles". *Clin. Dermatol.* **27** (5): 453–60.
- Refer to the online module for additional Journal Readings

Curriculum Mapping:

CDIII: Surface Active Procedures

Successful completion of this subject will provide the student with a strong foundational knowledge of the selection, application of and risks associated with surface active procedures and an ability to make judgments on their application to their patients.

Course Learning Outcomes

- CLOC 1:** Demonstrate the development of an appropriate knowledge base in the field of Cosmetic Dermatology.
- CLOC 2:** Demonstrate a comprehensive understanding of the cosmetic consultation, patient selection and rights.
- CLOC 3:** Demonstrate a comprehensive understanding of the treatment options available to the cosmetic patient.
- CLOC 4:** Utilise an evidence based approach to analysis of patient needs.
- CLOC 5:** Formulate cosmetic treatment plans by synthesizing a detailed knowledge of facial anatomy and a comparison of treatment modalities.
- CLOC 6:** Distinguish between cosmetic treatments by assessing their probable outcomes against potential risks.
- CLOC 7:** Critically appraise current practice and/or research in the domain of cosmetic dermatology and its various sub-domains

Subject Learning Outcomes

- SLO 1:** Analyse the physics and safety of surface active procedures (SAPs)
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