
Unit Specification

UBT472 – Enhance Appearance Using High Intensity Focused Ultrasound (HIFU)

Unit reference number: J/650/9920

Level: 4

Credits: 7

Guided Learning Hours (GLH): 21

Overview

The aim of this unit is to develop the learners' knowledge, understanding and practical skills when using HIFU techniques to enhance appearance. It covers the skills involved in providing a thorough consultation to establish client suitability for treatment and also the knowledge of how to formulate a specific treatment plan tailored to suit individual client needs and requirements. Learners will also develop the knowledge required to provide pre and post-treatment advice and post care to ensure the client receives the full benefit of the treatment.

Learning outcomes

On completion of this unit, learners will:

LO1 Interpret the environmental and safety considerations to be considered when providing HIFU treatments

LO2 Comprehend the protocols and guidelines when providing HIFU treatments

LO3 Demonstrate how to consult, plan and prepare for HIFU treatment

LO4 Demonstrate how to provide HIFU treatment

Unit content

LO1 Interpret the environmental and safety considerations to be considered when providing HIFU treatments

Promoting environmental and sustainable working practices

Taught content

- Environmental working practices, to be effective and energy efficient, heating and ventilation to meet the workplace (Health, Safety and Welfare) Regulations 1992 (or local regulation requirements to the country being delivered in) for client and employees
- Sustainable working practices – products with ingredients from sustainable sources and using sustainable packaging, efficient storage and waste disposal, record product usage

Licensing regulations for aesthetic practitioner and premises

Taught content

- Local government licensing where applicable
- Professional association licensing
- Responsibilities under local authority licensing regulations for both practitioners and premises where applicable
- Responsibilities of employers and employees
- Responsibilities of the self-employed
- Responsibilities of suppliers, manufacturers and installers

Insurance guidelines

Taught content

- Insurance policy requirements to be met to ensure professional indemnity/insurance cover is appropriate to this treatment and valid for working at this level
- Requirements for skin testing prior to treatment
- Legislative and indemnity requirements for gaining informed client consent and signature before every treatment
- Legislative and insurance requirements for obtaining medical or informed consent where required
- Acquiring client consent to photographs before and after every treatment
- Providing verbal and written post-care information
- Ensuring operator is working within the scope of their practice and competence with regard to conditions to be treated

Safety of product and equipment sourcing

Taught content

- Ensure HIFU equipment, accessories and associated products meet the regulatory requirements of the country they are being provided in and are purchased from a reliable and authentic supplier
- Ensure equipment conforms to Electrical Equipment Safety Regulations 1994/2016 as applicable
- Understand how to gain verification of legality of products and equipment sourcing
- The safety and legal reasons for using equipment, accessories and products that are licensed and meet EU standards or the relevant legislation for the country therein and the outcomes of using equipment, accessories and products which are not properly tested or contain banned substances
- Know the ethical methods of sourcing, purchasing and storing regulated treatment products including expiration dates
- Know the legal requirements and restrictions for sourcing, storing and using topical anaesthetic/numbing agents licenced in the UK/EU or relevant to the country therein
- The use of Manufacturer/Material Safety Data Sheet (MSDS) in relation to HIFU treatments

Suppliers' and manufacturers' instructions for safe use

Taught content

- Know and understand reasons for supplier and manufacturer equipment and product protocols for HIFU treatments
- Follow manufacturers protocols for skin sensitivity and test patch recommendations
- Types of products appropriate for use during HIFU treatment preparation and application, performance, post care and aftercare application, for example cleanser, topical anaesthetic where appropriate, skin antiseptic, ultrasound conductive gel, cooling mask/agent, hydrating products/serums, Sun Protection Factor (SPF)
- Follow guidelines to select appropriate transducer/cartridge/treatment heads considering treatment area, condition(s) to be treated and desired outcome
- Follow guidelines on the storage, handling, preparation, loading, use, sanitising and disposal of transducer/cartridge/treatment head (as appropriate)
- Methods of treatment application – working methodically and systematically, in a specified order, using the correct angle, pressure, settings, parameters and techniques, adapting treatment to ensure even coverage of the treatment area. Observation of desirable and undesirable clinical end-points. Frequency of treatment, course of treatments, conditions/areas suitable and unsuitable for treatment

Working in line with organisational procedures

Taught content

- Adhere to all supplier/manufacturer protocols
- Adhere to responsible marketing guidelines
- The individual responsibilities of working within a multidiscipline team
- Responsibility of working within remit of qualification boundaries
- The role of clinical governance within the aesthetic industry
- The importance of Continuing Professional Development (CPD), training, education and career opportunities

Hygiene considerations

Taught content

- Set up and work within a hygienic field. Use of suitable sterilisation and sanitisation for equipment, accessories and surfaces. Use of appropriate Personal Protective Equipment (PPE) – single use items as appropriate such as disposable gloves (latex free), plastic aprons, protective face masks. Additional single use equipment – disposable hair protectors, applicators, cotton wool, couch roll, mapping/grid drawing equipment as required – white pencil, sharpener
- Hygienic preparation and storage of multi-use items, such as clean laundered towels
- General hygiene – such as washing of hands before and after treatment, sanitising hand gel
- Disinfectant or sterilisation – use of heat or chemical methods, bactericides, fungicides, UV cabinet for storage
- Equipment – only used for intended purpose, safe usage/safe handling/storage/visual checks, correct disposal of waste products
- Correct selection, handling, loading, preparation and sanitising of HIFU transducer/cartridge/treatment head
- Waste disposal – general waste including local authority requirements
- Knowledge of infection control, bacteria, virus, fungi, parasites, prevention of
- Cross-contamination and disease transmission procedures, levels of infection control, personal immunisation (Hepatitis B), and Methicillin-resistant Staphylococcus aureus (MRSA) Herpes Simplex

Contra-indications that would prevent or restrict treatment

Taught content

- Prevent – anti-coagulant medications, cardiovascular disorders auto-immune diseases, Bell's Palsy, contagious skin diseases, extremely sensitive skin, blood disorders, haemorrhagic disorder or haemostatic dysfunction, haemophilia, history of drugs with photosensitising potential, inflammations and swellings, isotretinoin, open wounds, recent scar tissue, rosacea, severe active or cystic acne, skin cancer and undiagnosed lumps, metal/mechanical implants – pacemaker, trochlear implant
- Restrict – abrasions, active inflammatory dermatoses (i.e. psoriasis), anxiety, bruises, current medications, cuts, diabetes, epilation, epilepsy, herpes simplex, history of scarring, Intense Pulsed Light (IPL) or laser in the treatment area, large moles, long term anti-inflammatory use, piercings, poor mental and emotional state, prior cosmetic surgery, recent botulinum toxin injections or dermal fillers, breast/silicone implants, pregnancy or breastfeeding, recent dermabrasion or cosmetic skin peels, sensitive or excessively reactive skin types, supplements and herbal remedies, recent UV exposure and varicose veins

Contra-indications requiring medical referral and referral processes

Taught content

- Contra-indications to HIFU procedures requiring medical referral such as active acne, raised moles or lesions
- Skin cancer is an ever-prevalent issue. Areas of skin or moles that have uneven asymmetry, irregular, ragged or blurred borders, uneven patchy colour or an altered diameter to that previously noted, need to be identified and the client encouraged to go to their General Practitioner as a precaution
- Knowledge of organisation protocol for not naming or diagnosing specific suspected contra-indications when encouraging client to seek medical advice due to professional status, acknowledging the need for medical training to be able to diagnose without causing undue alarm. Refer in a discreet and empathetic manner

When to consult with other aesthetic professionals

Taught content

- Recognise when additional information is needed from other clinicians involved with the client and how this can be obtained in compliance with confidentiality and consent guidance and in line with current data protection legislation
- Demonstrate an understanding of when and how to request additional advice from other clinicians treating the client when applicable, in line with current data protection legislation
- Recognise when and what other aesthetic treatments may be of benefit to be used in preparation or in conjunction with HIFU, for example, microdermabrasion, skin needling, LED
- Alternative treatment options when HIFU is not appropriate or contra-indicated

Treatment of minors

Taught content

- The age at which an individual is classed as a minor and how this may differ nationally and internationally
- Why treatment should only be provided for clients over the age of 18

Hazards and risks

Taught content

- The principles of risk assessment and management
- Hazards and risks identification through risk assessment
- Putting procedures in place to ensure hazards and risks are minimised:
 - Proper training for all staff
 - Protocols to follow during consultation
 - Written and verbal post-care for client
- Adherence to suppliers'/manufacturers' guidelines
- Avoidance of injuries, burns, redness, swelling, weeping skin, hyperpigmentation, cold sores, acne outbreak, viral infection, bacterial infection and scarring
- Contra-actions and adverse reactions
- Potential associated risks with the options for pain management using topical anaesthetic/numbing agents
- Risks associated with compromised tactile response in the treatment area post-surgery/trauma, for example, C-section
- Risks associated with performing HIFU procedures over atrophy, hypertrophic and keloid scarring

LO2 Comprehend protocols and guidelines when providing HIFU treatments

Factors to consider and treatment planning

Taught content

- Identify client's wants, needs, concerns, expectations, anticipated costs, and treatment objectives. Agree realistic outcomes against client expectations, discuss pain management and potential risks relevant to HIFU procedures and the importance of considering the physical and psychological wellbeing of the client to receive HIFU treatment
- Results from skin analysis classification and characteristics, identification and discussion of skin type including Fitzpatrick skin type, Glogau photo damage, Lancer scale, phenotype and genotype, skin conditions and/or lesions present, specific areas of concern to assist in choice of the appropriate treatment and to identify realistic treatment outcomes
- Previous skin/body salon treatments – details of type of treatment, frequency, dates the treatments were received, to ensure enough time has passed for HIFU to be appropriate and to gain an insight into the client's approach to aesthetic treatments
- Satisfaction and results. Dissatisfaction could indicate body dysmorphia or client with unrealistic expectations. Protocols for how this should be managed
- Legal aspects of the responsibilities of the practitioner in providing HIFU treatments and the importance of working within the remit of qualification boundaries and competence
- Pre and post treatment advice including possible contra-actions, healing process including likely or expected contra-actions, recommended skin care/post care, diet and lifestyle advice/choices or restrictions that could positively or negatively impact on the effects of treatment including current skin/body care regime and any revisions required and to ensure client is suitable for treatment
- Medical history and any absolute or relative contra-indications that prevent or restrict treatment to ensure client is safe for treatment or if medical/other professional referral is required
- Aims of treatment – in line with client's needs and treatment objectives to improve the appearance of the face or body
- Potential cost of treatments including fee structures and treatment options, frequency, duration and potential number of treatments recommended to achieve desired treatment outcomes including likely associated timeframes
- Treatment plan should be clearly agreed between the client and practitioner and recorded on the consultation documentation with client signing to indicate informed consent

Assessing skin characteristics

Taught content

- Assessed through questioning at consultation and observation of skin, importance of using skin diagnostic equipment, such as Woods Lamp, light magnifier/glasses, skin scanner/diagnosis technology
- How to assess and recognise skin health characteristics – Fitzpatrick scale, Glogau photo damage, Lancer scale, phenotype and genotype, level of sensitivity, thickness/density of skin, epidermal thickness, healing capacity
- Recognition and understanding of skin analysis – surface hydration levels, pigmentation, photo/sun damage, vascular lesions, primary and secondary lesions, irregularities, skin texture (pore size), skin laxity, static and dynamic wrinkles, congestion/excessive oil, sensitivity, variances and location of skin thickness and adipose tissue
- Recognition and understanding of the ageing process of the skin including the effects of genetics, intrinsic and extrinsic aging and the process of collagen and elastin synthesis including fibroblastic stimulation
- How to match the treatment to suit all skin health characteristics, skin classifications, individual's treatment area(s), treatment aims and objectives
- Reasons for choosing HIFU procedures and protocols to suit the variations in skin density, sensitivity, all skin classifications, and treatment objectives

Pre and post treatment advice to provide to the client

Taught content

- Provide consultation to discuss outcomes and pre-treatment preparation
- Pre-treatment advice should include skin care preparation, the benefits of implementing a skin care routine to prepare the skin for treatment and maximise results. A 2-4 week skin preparation programme to be used at home to improve hydration, skin cell health, increase desquamation and general texture/condition of the skin. To improve healing capacity and tolerance to HIFU procedures. The positive effects of performing HIFU on healthy skin in comparison to compromised skin conditions
- Topical skin care products, for example vitamins, anti-oxidants, UV protection, alpha hydroxy acids (AHA) and beta hydroxy acids (BHA) skin care programmes prior to treatment for all skin conditions, all skin types and classifications to improve skin health and condition and minimise adverse side effects after HIFU treatments, all products must be relevant to skin health/type/condition, Fitzpatrick skin type and all skin classifications
- Active skin care of a high/professional strength concentration must be avoided for 3-5 days such as retinoids and products containing AHA's pre and post HIFU treatments. Low strength should be avoided for 48 hours post treatment
- Pre-treatment, clients should also be advised to avoid UV exposure and heat immediately prior to treatment, wear SPF minimum 30 and UVA broad spectrum protection daily
- Physical sensation and sound – Montgomery discomfort. Post-treatment physical sensation – some clients may experience tenderness in the area treated, some may feel bruised, sore, tingling or some numbness
- Post treatment skincare products to be used post treatment – physical SPF minimum 30 and UVA broad spectrum protection daily, use of moisturising/hydrating products, avoid excessive touching of the area, vitamin A, vitamin B, vitamin C, vitamin E, anti-oxidants, growth factors, peptides, copper peptides, bioflavonoids, iron, zinc and amino acids and their effects and importance in the role of collagen synthesis

- Post treatment physical sensations, possible and expected contra-actions – what they are, why they appear and how long they may last and expected reactions including likely duration, how to respond/manage complications/adverse reactions at home and when to refer to a medical practitioner – erythema, mild oedema, welting, tenderness, Montgomery discomfort, possible contra-actions and adverse reactions including likely duration – post procedure pain usually resolves within 2 hours to 2 days, tenderness to the touch is also possible (2 days to 2 weeks after treatment), mild bruising typically resolves within 2 days to 2 weeks of treatment, Nerve Effects: (Resolves within 2-6 weeks) – transient local muscle weakness may result after treatment due to inflammation of a motor nerve, transient numbness may result after treatment due to inflammation of a sensory nerve, transient pain, paraesthesia and/or tingling may be experienced, burns/scarring – the possibility of burns, which may or may not result in permanent scar formation, may occur if incorrect treatment technique is used (for example tilting transducer/cartridge/treatment head, incorrect line spacing, gel pockets), some scars may respond to medical treatment and resolve fully
- Activities to avoid that might cause contra-actions or adverse reactions, extremes of temperature and heat, contact with water, activities which cause sweating, exposure to UV
- Potential associated risks with the options for pain management using topical anaesthetic/numbing agents
- Advice offered on alternative treatments if HIFU is found unsuitable; for example, skin peels, microdermabrasion, laser skin rejuvenation, intense pulsed light (IPL), laser ultrasound, cavitation, skin needling, lipolysis, radio frequency, light emitting diode (LED)

Timing of treatments

Taught content

- Identify and understand commercial timings for treatments. Recognise variations in timings depending on other modalities added to treat skin health/type characteristics/condition
- Brow lift, jawline 30 minutes
- Face and neck 60-90 minutes
- Body treatment from 30-90 minutes depending on the area and treatment objectives
- Cleanse, topical anaesthetic where appropriate, skin antiseptic, ultrasound/conductive gel HIFU procedure, cooling mask/agent, hydrating products/serum, moisturiser, SPF
- How timings vary when other electrical modalities may be added – such as LED, micro-current, iontophoresis, electroporation, IPL, Laser

Pain threshold and sensitivity variations

Taught content

- Understanding the inflammatory response of the skin and the effects and associated risks of using over the counter (OTC) pain relief and topical anaesthetic/numbing agents and the possible effect they may have on treatment and the healing process
- Recognising skin health/types and areas of the face and body that are more sensitive, fragile and reactive to topical applications and treatment. Those that have more prominent and dilated dermal blood vessels which may contribute to an exaggerated inflammatory response
- Understanding that treatments for clients may be more uncomfortable during menstruation or ovulation
- Evaluation of results of tactile and thermal tests to the treatment area are made following supplier/manufacturer instructions. Recording of results to include whether the client can tell the difference in sensations. Record date, location of test, and products used, description of results and, if the client is unable to identify the correct sensations, a full description of response and product used
- Understanding when working over scar tissue why fine tactile response may be compromised and how this may affect the ability to perform a HIFU treatment and how to adapt the treatment
- HIFU treatment to be performed when the client is able to identify correctly different thermal and tactile sensations. It is essential that the client has full tactile sensation using the 1-10 pain threshold scale when asked
- Any change of HIFU parameters or intensity to be tested prior to full application. Follow supplier/manufacturer instructions for HIFU application for each skin type, classification and condition as they may vary

Types and purpose of HIFU equipment and products

Taught content

- Skin cleansing products to remove all make-up/skin preparations, surface oils and debris in the area
- Topical numbing agent if applicable
- Skin antiseptic to ensure area is clinically clean
- Skin mapping equipment – white pencil, sharpener, measuring guide if appropriate to the system
- Ultrasound conductive gel to ensure glide and optimum conductivity in accordance with the individual targeted treatment objectives
- Function of HIFU equipment and various transducer/cartridge/treatment heads to include how ultrasound energy is described and measured in relation to the electromagnetic spectrum and transmits energy to the varied depths of the underlying skin and tissues and the physiological effects and benefits of radio frequency energy output created from HIFU
- Depth and effects of transducer/cartridge/treatment heads to include:
 - Micro focused with high energy depth – 1.5, 3, 4.5mm for use on the face
 - 3.0mm – targets subcutaneous tissue to increase cellular activity, encourages production and reorganisation of collagen, increases skin elasticity and density
 - 4.5mm – targets the SMAS (superficial musculoaponeurotic system) layer to make heat coagulation of SMAS, improves skin structure, helps recover elasticity, reduce wrinkles and improvement of skin
 - Macro focused – 8 x bigger spot with high density of energy depth – 6, 8, 9, 10, 13mm for use on the body – targets the subcutaneous fat layer to melt fat to be excreted by metabolism
 - Cooling mask/agent, hydrating products/serum
 - Soothing aftercare moisturisers, topical anti-inflammatories, anti-oxidants, broad spectrum sunscreen

Preparation and selection of equipment and products for treatment

Taught content

- How to set up and prepare equipment and accessories on clean trolley in an ergonomic manner, to prevent strain to the practitioner and to assist in the smooth application of treatment, for example safety, time management, hygiene, organisation and professionalism
- Necessity of selecting and checking appropriate products, equipment and accessories are in good working order before the start of each treatment
- Appropriate Personal Protective Equipment (PPE) is prepared and used
- HIFU equipment and accessories
- How to select, handle, prepare, load and sanitise appropriate transducer/cartridge/treatment heads
- Differentiate between various HIFU transducer/cartridge/treatment heads in accordance with the skin classifications, characteristics, individual objectives and treatment area
- Additional equipment as agreed with the client and treatment aims and objectives and additional products to calm and protect the skin post treatment and minimise contra-actions

Preparing the skin prior to treatment

Taught content

- Cleanse the skin prior to treatment – to remove all make-up, creams/lotions, surface oils and debris
- Typical products used – Cleansers, toners, preparatory skin products, topical numbing agent where appropriate, skin antiseptic, ensure area is dried thoroughly
- Map out the treatment area and draw a grid – white pencil, sharpener, measuring guide if appropriate to the system:
 - Mapping the upper face
 - Mapping the lower face
 - Upper neck/submental
 - Mapping the body
- Apply ultrasound/conductive gel

Method of application

Taught content

- Reasons for working systematically and methodically ensuring even and full coverage, avoiding excess treatment overlap across the area to be treated
- Reasons for working within the agreed treatment area map/grid and avoiding blanked out areas:
 - Plan treatment start and end point
 - Following supplier/manufacture protocols, use the transducer/cartridge/treatment head at the correct angle, pressure, direction and speed with the correct settings and parameters
 - Maintain adequate skin support in all treatment areas, adapting as appropriate to ensure transducer/cartridge/treatment head remains in full contact and glides smoothly, avoiding discomfort or causing injury
 - Problems associated with uneven treatments, working over blanked out areas, overlapping and possible adverse reaction or injury

Adaptations to treatment

Taught content

- Adapt the treatment taking into consideration pre-existing conditions:
 - Omitting treatment to pre-existing lesions such as skin tags, moles, papules, pustules
 - Why it may be necessary to adapt pressure, direction, duration and the number of passes for different areas of the face and body
 - Different skin thickness, density, sensitivity, different treatment objectives, treating different skin characteristics of varying structure and different treatment objectives
 - Give instruction and guide the client to change expression/position to ensure all treatment areas are fully accessible
 - Treatment progression and additional/complementary treatments such as enzyme/chemical peel, microdermabrasion, LED, micro current, micro needling, iontophoresis, electroporation, IPL and laser including associated time frames
- Areas to avoid or needing special consideration:
 - Eyelids, inside the orbital bone area, Thyroid cartilage area, main nerves to avoid – supraorbital, mental, marginal mandibular, auriculotemporal. Body – avoid bony areas, spine and around the heart band

Uses, limitations, benefits and effects of HIFU products and equipment

Taught content

- Uses:
 - Improve the appearance of skin surface and texture
 - Skin renewal and rejuvenation
 - Improvement of static and dynamic wrinkles
 - Definition/lifting of cheeks/eyelids/eyebrows/jawline
 - Firming/tightening and contouring
 - Fat reduction
 - Muscle toning
 - Stimulation of collagen
 - Reduction in skin laxity
- Limitations:
 - Cannot be used on areas where there is a loss of tactile sensation
 - Limited use on specific areas of caution
 - Downtime and possible contra-actions
 - Timing between treatment, recovery and results
- Benefits/effects:
 - Reduces the appearance of static and dynamic wrinkles
 - Defines and lifts facial features
 - Redefines, contours and lifts areas of the body
 - Assists inch loss

Contra-actions associated with the treatment

Taught content

- Effects and risks of using excess pressure, incorrect angle or direction, uneven application or non-compliance to safety and hygiene practices
- Contra-actions and adverse reactions – erythema, mild oedema, welting, tenderness, Montgomery discomfort, post procedure pain, mild bruising, effects to nerves, transient local muscle weakness due to inflammation of a motor nerve, transient numbness due to inflammation of a sensory nerve, transient pain, paraesthesia and/or tingling, burns/scarring, temporary or permanent scar formation from incorrect treatment technique
- How to avoid and manage contra-actions/adverse reactions/complications at home, and when to refer to a medical practitioner

SPF and UVA specific sun protector

Taught content

- Why it is necessary to use a minimum of a UVB SPF 30 and UVA specific sun protector post treatment
- Knowledge of SPF rating system and why high % of block is required to protect the skin after HIFU treatments
 - SPF 15 = 93% UVB block
 - SPF 30 = 97% UVB block
 - SPF 50 = 98% UVB block
- Knowledge of UVA specific sun protector rating – star rating and the difference between physical and chemical sun cream

Preventing infection and promote healing

Taught content

- Understand the products necessary to prevent infection and promote healing, how they should be used before and after HIFU treatments, soothing products to be applied post treatment to cool, calm and encourage skin recovery
- To prevent infection – ensure skin is clinically clean, use of antiviral suppressant to reduce the incident of post procedural herpes simplex outbreak
- To promote healing – calming products/treatments post treatment – anti-inflammatory effects – LED, serum, mask, compress

Treatment progression and additional/complementary treatments recommendations

Taught content

- Recommendations for frequency of treatment depending on condition treated and treatment objectives, homecare
- Complementary products and treatments to be used/avoided in conjunction – topical trans-epidermal products, skin care, body products
- Knowledge of progressive remedial treatments and products as appropriate for the skin health/condition/type to promote healing and give protection
- Knowledge of how the skin and underlying structures are affected and respond to HIFU procedures and the various transducer/cartridge/treatment heads and how they vary for different Fitzpatrick skin classifications
- Knowledge of maintenance, treatment timings and use of skin care programmes at home to reinforce treatment effects
- Lifestyle factors and changes that may be required to improve effectiveness of treatment – skin care routine, healthy eating, exercise and sun protection

LO3 Demonstrate how to consult, plan and prepare for HIFU treatment

Use consultation techniques to determine the client's treatment plan

Taught content

- Consult with client, implementing a range of appropriate communications skills to identify client's treatment objectives, expectations and desired outcomes with associated timescales to ensure a realistic and achievable treatment plan is agreed
- Use illustrative diagrams and images to assist client understanding and give clear and appropriate advice and recommendations to the client to determine and agree the final treatment plan including associated timeframes to see best possible results
- All information from the consultation to be written on consultation forms in front of the client at the beginning of every treatment
- Obtain the client's agreement and signed informed consent to treatment and all required photographs prior to all treatments
- The practitioner and client must understand the implications of informed client consent, what is being agreed and the responsibility of each in terms of liability

Consult with the client

Taught content

- General information
- Relevant medical history – discuss all areas on consultation documentation including any recent herpes simplex, certain medications including anti-coagulants
- Lifestyle information – smoking, diet, water intake, current skin care routine that may need to be considered, sun exposure, hobbies
- Skin classification – assess Fitzpatrick scale, Lancer Scale, phenotype and genotype and Glogau photo damage
- Fully explain the treatment process, sensation and post treatment sensation and appearance – no significant down-time, however skin may feel warm and tender with erythema present
 - Explain potential risks/side effects/adverse reactions and contra-actions – mild oedema, welting, tenderness, Montgomery discomfort during treatment, possible contra-actions and adverse reactions including likely duration – post procedure pain usually resolves within 2 hours to 2 days, tenderness to the touch is also possible (2 days to 2 weeks after treatment), mild bruising typically resolves within 2 days to 2 weeks of treatment, Nerve Effects: (Resolves within 2-6 weeks) – transient local muscle weakness may result after treatment due to inflammation of a motor nerve, transient numbness may result after treatment due to inflammation of a sensory nerve, transient pain, paraesthesia and/or tingling may be experienced, burns/scarring – the possibility of burns, which may or may not result in permanent scar formation, may occur if incorrect treatment technique is used (for example tilting transducer/cartridge/treatment head, incorrect line spacing, gel pockets), some scars may respond to medical treatment and resolve fully

Establish the condition of the skin

Taught content

- Use magnifying lamp/glasses or skin diagnostic equipment (Woods Lamp) and perform a visual assessment of the condition and health of the skin, documenting all findings
- Skin characteristics – Skin types, Fitzpatrick scale 1-6, skin conditions, density/thickness of skin, epidermal thickness, surface hydration, hyperpigmentation (PIH), melasma, chloasma, lentigo, skin texture (pore size), skin laxity, static and dynamic wrinkles, wrinkle depth, congestion/excessive oil
- Skin conditions – open and closed comedones, milia, papules, pustules, acne, nodules, cysts, Glogau photo damage, pigmentation irregularities including post inflammatory (PIH), melasma, chloasma, lentigo, Lancer Scale, phenotype and genotype, sensitivity, Poikiloderma of Civatte, vascular lesions and irregularities, primary and secondary skin lesions, moles, birthmarks
- Level of skin sensitivity (vascular) – facial erythema, acne rosacea, telangiectasia, spider naevi
- Skin healing history – keloid formation, scars
- Identify contra-indications that may restrict, prevent or require medical referral

Explain the treatment procedures to the client

Taught content

- Positioning required for treatment, ensuring client comfort and full access to treatment area(s)
- Product and equipment including transducer/cartridge/treatment head selection to match treatment objectives, desired effects and agreed treatment plan
- The area will be cleansed thoroughly with appropriate cleansing products until all make-up, lotions, debris and surface oils are removed and cotton pads appear clean
- Skin antiseptic applied with clean gauze or cotton wool, ensure area is dried thoroughly
- Pre-treatment photographs to be taken from all appropriate angles
- Map out the treatment area in a grid with white pencil using a measuring guide if appropriate to the system
- Once set up, inform the client where the treatment will begin (depends on area being treated)
- The area will be treated following supplier/manufacture protocols in a methodical and systematic manner within the mapped out grid
- Explain the method of HIFU procedures and adaptations as required, such as duration of contact, direction, pressure, intensity, sensation, sound, as appropriate to all areas,
- After treatment, cooling and nourishing products will be applied to the skin
- Post treatment photographs to be taken from all appropriate angles
- Broad spectrum sun protection UVB and UVA is finally applied to protect the skin, explain the use of physical sun protection
- Explain potential risks/side effects/adverse effects – erythema, mild oedema, welting, tenderness, Montgomery discomfort during treatment, possible contra-actions and adverse reactions including likely duration

Select a preparatory skin care programme

Taught content

- Identify products to use 2-4 weeks prior to HIFU procedures as part of a skin priming programme at home, appropriate to skin health to improve penetration, healing capacity and tolerance
- Additional benefits could include:
 - Strengthen the skin barrier
 - Improve hydration, skin cell health, increase desquamation, encourage cellular renewal and improves general texture/condition of the skin
- As part of this skin programme the client should also be asked to wear SPF minimum 30 and UVA broad spectrum protection daily

Take pre-treatment photographs (visual media images)

Taught content

- Following organisation procedures, industry guidelines and current data protection legislation, ensuring protocols are followed for taking clinical photographs to ensure clarity and consistency. Take photographs (visual media images) in same position as post-treatment photographs (visual media images) and where possible in the same light. Position area to be treated so photographs (visual media images) are taken straight on and from both sides where applicable, zoom in on areas of concern, such as slackened jawline. Personal devices should not be used to take images of clients
- Gain written/signed client consent for photography (visual media images) and storage of clinical photographs (visual media images) and specific use of photographs (visual media images) for treatment evaluation, marketing and teaching purposes

Carry out skin sensitivity tests

Taught content

- Carry out sensitivity tests in accordance with supplier/manufacture guidelines
- Thermal and tactile tests

Select suitable equipment and products

Taught content

- Select suitable equipment and products according to treatment objectives. Choose the correct transducer/cartridge/treatment heads and products suitable to treat conditions/skin type and treatment objectives as identified in the agreed treatment plan

Explain the cooling off period

Taught content

- Provide information to the client regarding the 'cooling off' period and offer this facility between initial consultation and first treatment. Book first treatment in line with given directives on cooling off periods. Give client verbal and written information regarding the associated risks, after effects, possible contra or adverse reactions including any down-time, homecare/additional routines or modifications to current routines required, proposed outcomes and agreed treatment plans with appropriate time scales needed to achieve proposed desired outcome

LO4 Demonstrate how to provide HIFU treatments

Maintain own responsibilities for health and safety through the treatment

Taught content

- Ensure working area is set up and a safe working environment created in line with health and safety protocols and legislation
- Working in an environmentally sustainable manner

Prepare, position and protect the client and self

Taught content

- Ensure preparation complies with legal and organisational requirements. Prepare and protect client to preserve modesty. Protect client's eyes, hair when appropriate, clothing and surrounding areas depending on area of treatment
- Position the client to meet the needs of the treatment without causing them discomfort
- Clearly instruct the client and if needed guide on facial expression/positioning or supporting the body to assist in stretching the skin or use supports or pillows to ensure the position fits the needs of the treatment, does not compromise the treatment application and does not cause the client any discomfort
- Ensure effective, ergonomic positioning of couch, trolley, stool, equipment, accessories, and products to avoid injury to self, client and others
- Ensure own posture and working methods minimise fatigue and the risk of injury to self, the client and others
- Ensure the working environment is private and secure. Depending on area to be treated provide modesty towels/disposable tissue to protect clothing and provide modesty so the client does not feel exposed and vulnerable

Ensure environmental conditions are suitable for treatment

Taught content

- Ensure ventilation, temperature, ambience, lighting, wall and floor coverings are fit for purpose
- Ensure all tools and equipment and accessories are available and in safe working order
- Ensure appropriate PPE for both client and self in line with treatment protocols
- Ensure risks and hazards have been checked, for example slip and trip hazards in the working area

Ensure the use of clean equipment and materials

Taught content

- Ensure all surfaces are clean and hygienic, trolley is tidy, equipment and accessories are sanitised and products set out ergonomically
- Ensure that PPE is available and fit for purpose – clean, disposable, non-latex sterile gloves and mask for working in close proximity (as appropriate)

Safely use equipment, materials and products

Taught content

- Follow protocols for safe use including correct use of HIFU systems, selection, handling, loading, unloading/changing and sanitising of transducer/cartridge/treatment heads and application techniques for different treatment areas and objectives
- Keep tops on bottles, make sure all products are labelled clearly in line with Control of Substances Hazardous to Health COSHH

Prepare the skin

Taught content

- Ensure the client's skin is clean, sanitised, dry and prepared for HIFU treatment. Cleanse with an appropriate cleanser to ensure all make-up, surface oils, lotions and debris are removed thoroughly. Protect vulnerable areas of face/body as indicated
- Apply topical anaesthetic if appropriate and allow to take effect
- Use clean cotton wool or gauze to apply skin antiseptic, ensure area is dried thoroughly
- Map out treatment area, blanking out contra-indicated areas/areas not suitable for treatment application
- Follow supplier/manufacturer protocols/recommendations
- Apply conductive ultrasound gel to the area

Select, load and prepare the appropriate transducer/cartridge/treatment heads

Taught content

- Select the appropriate transducer/cartridge/treatment heads for treatment objectives, size of area, skin condition and all characteristics
- Check the transducer/cartridge/treatment head is loaded and securely attached to the handle and positioned correctly
- Use appropriate sanitiser to clean the handle, transducer/cartridge/treatment head prior to application to the skin and dry thoroughly

Apply the HIFU treatment

Taught content

- Provide HIFU using the correct techniques and in accordance with suppliers'/manufacturers' procedures and protocols at all times
- Apply ultrasound gel to facilitate glide and optimum conductivity in accordance with the individual targeted treatment objectives
- Work in a methodical and systematic manner to ensure full and even coverage of the agreed treatment area, ensuring duration of contact does not exceed recommended time, keeping within the mapped area to avoid uneven treatment, excessive overlap or overworking the area
- Continually discuss sensation and check client level of comfort and wellbeing throughout treatment using the 1-10 pain threshold scale
- Change transducer/cartridge/treatment heads and adjust equipment settings and parameters adapting the angle, direction and pressure of application as appropriate to each area and condition treated, to ensure full and even coverage and an effective treatment
- Avoid appropriate areas as contra-indicated and/or agreed in the treatment plan
- Visually monitor the skin throughout treatment adjusting or adapting treatment parameters as appropriate
- Know when to stop/adapt or adjust the treatment as appropriate
- Assess all areas worked to ensure even and effective treatment
- Ensure adequate and thorough removal of ultrasound conductive gel residue
- Apply appropriate aftercare products – cooling mask/agent, hydrating products/serum, moisturiser, SPF
- Ensure treatment is completed in a commercial time frame

Monitor the skin reaction and client response

Taught content

- Communicate with the client throughout regarding comfort, monitoring health, wellbeing and the sensations of treatment throughout, taking breaks as appropriate
- Visually monitor the skin's reaction and client skin response and comfort levels including degree of erythema and observation of desirable and undesirable clinical end points
- Desirable may include mild erythema and mild oedema
- Undesirable may include excessive erythema or oedema/welting, blanching or bruising
- Observe skin reaction and implement the correct course of action in the event of an adverse reaction including knowing when to stop treatment due to excessive pain/discomfort, erythema or bruising

Apply post-treatment products

Taught content

- Cooling mask/agent, moisturiser, serum with high hyaluronic acid content, broad spectrum sunscreen – physical SPF 30 minimum with UVA and UVB protection

Take post-treatment photographs (visual media images)

Taught content

- Follow protocols for taking of clinical photographs (visual media images) to ensure clarity and consistency. Take photographs (visual media images) in same position as pre-treatment photographs (visual media images) and where possible in the same light. Position area to be treated so photographs (visual media images) are taken straight on and from both sides where applicable, zoom in on areas of concern, for example slackened jawline
- Confirm client's consent for storage of clinical photographs (visual media images) and specific use of photographs (visual media images) for treatment evaluation, marketing and teaching purposes

Provide post care advice and homecare

Taught content

- Communicate with the client regarding post-treatment care, normal/expected and adverse treatment reactions
- Assess and record immediate skin response. Give client advice on post treatment sensations and expectations – Erythema, mild oedema, sensitivity
- Post-treatment physical sensation and skin healing process including adverse reactions and how to respond, level of discomfort, soreness, mild bruising, skin tenderness, tingling, numbing which can last from 2 days – 2 weeks
- Post-treatment advice
 - Increase water and protein intake
 - Avoid anti-inflammatory medications (NSAIDs) for at least 4 weeks, AHAs, BHAs and Retinoids for 48 hours
 - Avoid make-up for 24-48 hours
 - Avoid sauna and massage/facial for 2 weeks
 - Avoid vigorous exercise and other spa/beauty treatments
 - Avoid sun exposure, heat treatments and topical preparations
 - Provide advice on suitable post-treatment personal hygiene practices
 - Provide advice on suitable post-treatment products
 - Provide advice for other salon treatments which may be used or avoided in conjunction to maintain or maximise results with appropriate time frames
- Follow manufacturers' guidelines in respect of treatment intervals
- Occasional adverse side effects and adverse reactions – welting, tenderness, Montgomery discomfort, post procedure pain, tenderness to the touch is also possible, mild bruising, effects to nerves, transient local muscle weakness due to inflammation of a motor nerve, transient numbness due to inflammation of a sensory nerve, transient pain, paraesthesia and/or tingling, burns/scarring, temporary or permanent scar formation from incorrect treatment technique
- Inform the client how to manage complications/adverse reactions at home and when to refer to a medical practitioner
- Document post-treatment complications and adverse reactions with advice given in line with legislative, insurance and organisational guidelines
- Evaluation of the HIFU procedure to inform future procedures

Dispose of waste materials to meet legal requirements

Taught content

- Waste – disposed of in an enclosed foot pedal-controlled waste bin fitted with disposable, durable bin liner
- Clean handle and transducer/cartridge/treatment heads in line with supplier/manufacture instructions and store correctly
- Dispose of waste from the treatment (for example swabs/cotton wool pads) into clinical waste bags, in line with local council regulations and procedures of the country therein

Update client records

Taught content

- Accurate completion of treatment details including all settings and parameters and all transducer/cartridge/treatment heads used, client reactions, skin sensations and skin responses, observation of skin during and after treatment. Post treatment photographs (visual media images) taken immediately after treatment. Signature from client to be obtained accepting treatment results and skin response and agreement to follow all aftercare/post treatment advice. Practitioner signature to take responsibility for treatment and records completed
- Follow manufacturers' protocols for treatment intervals

Assessment requirements

Learners must complete all assessment requirements related to this unit:

1. Case Studies
2. Theory examination
3. Practical examination

1 Case studies

Learners must produce a treatment portfolio which is required to be completed under the supervision of a lecturer who must monitor the quality of the treatments performed throughout the learner's training, to ensure that they meet the given criteria.

All case studies must be completed and marked prior to the learner completing the practical and theoretical examinations.

Learners must complete case study practice demonstrating **6 treatments** (that can be combined) to cover the range, (3 on the face and 3 on the body) on a minimum of 3 separate clients.

Each practice needs to include a full medical history of the client, advanced skin assessment, before and after pictures and a full description of the conditions/characteristics to be treated. A detailed description of the application technique, equipment, transducer/cartridge/treatment heads, settings and parameters used and the duration of the treatment must also be provided.

Each application must also include an evaluation of the treatment and its outcomes, pre and post treatment skincare product recommendations and post treatment advice and reflective practice of the treatment.

Range to be included in clinical applications:

- Met the needs of a variety of clients on 6 separate occasions (3 face and 3 body)
 - New
 - Existing
- Carry out all consultation techniques
 - Questioning – verbal
 - Listening – non-verbal
 - Visual – non-verbal
 - Use of illustrative images/diagrams
 - Manual
 - Written
 - Pre-treatment photographs (visual media images) taken
- Carried out skin sensitivity tests
 - Thermal Test
 - Tactile test
- Carried out advanced skin assessment

- Considered all factors of skin type and characteristics, condition and classifications
 - Skin type and characteristics
 - Skin condition
 - Level of sensitivity
 - Skin density
 - Epidermal thickness
 - Pigmentation irregularities
 - Healing capacity
- Skin classification
 - Glogau photo-damage
 - Fitzpatrick scale
 - Lancer Scale
 - Phenotype and Genotype
- Taken all courses of necessary action
 - Explaining why treatment cannot be carried out
 - Encouraging the client to seek medical advice if applicable
 - Modification of treatment
- Used all types of equipment and accessories
 - Suitable HIFU machine
 - Selection and application of appropriate transducer/cartridge/treatment heads
 - Topical anaesthetic (if appropriate)
 - Mapping equipment, pencils, sharpener
 - Ultrasound gel/conductive medium
- Met all treatment objectives – improvement in the appearance of the face or body to include;
 - Skin renewal and rejuvenation
 - Improvement of static and dynamic wrinkles
 - Definition/lifting of cheeks/eyelids/eyebrows/jawline
 - Firming/tightening
 - Contouring
 - Fat reduction
 - Muscle toning
 - Stimulation of collagen, reduction in skin laxity
 - Smooth and improve appearance of skin texture

- All treatment areas (which may be combined)
 - Face:
 - Upper face
 - Lower face
 - Jawline
 - Décolleté
- Body - areas may include and are not restricted to:
 - Arms
 - Abdomen
 - Back fat/haunches
 - Thighs
- Recorded all types of information
 - Area treated
 - Transducer/cartridge/treatment heads used
 - Machine settings and parameters
 - Modification of treatment
 - Skin and client reactions
- Given all advice and recommendations
 - Suitable post care products and their uses
 - Suitable post care personal/skin hygiene procedures
 - Pre-treatment skincare products and lifestyle recommendations
 - Avoidance of activities which may cause contra-actions
 - Modifications to lifestyle patterns
 - Recovery and skin healing process
 - Post-treatment contra-actions and how to deal with them
 - Timing, benefits and limitations of future maintenance treatments
 - Treatments which could be given or avoided in conjunction with/after HIFU treatment
 - Present and future products and treatments recommended
 - Use of SPF products
 - Issuing of verbal and written post-care advice
 - Recording before and after photographs (visual media images)
- Reflective practice
 - Evaluation to agree and inform future outcomes
 - CPD

1. Theory examination

Learners must complete a theory examination for this unit. This will consist of a multiple choice question paper which is mapped to the relevant assessment criteria stated below.

The theory examination will test knowledge and understanding from across learning outcomes 1 and 2. Learners should use the unit content sections of this unit to aid revision since exam questions will test the full breadth of this content over time.

Learning Outcome	Assessment Criteria
LO1 Interpret the environmental and safety considerations to be considered when providing HIFU treatments	1.1 Promoting environmental and sustainable working practices
	1.2 Licensing regulations for aesthetic practitioners and premises
	1.3 Insurance guidelines
	1.4 Safety of product and equipment sourcing
	1.5 Suppliers' and manufacturers' instructions for safe use
	1.6 Working in line with organisational procedures
	1.7 Hygiene considerations
	1.8 Contra-indications that would prevent or restrict treatment
	1.9 Contra-indications requiring medical referral and referral processes
	1.10 When to consult with other aesthetic professionals
	1.11 Treatment of minors
	1.12 Hazards and risks

Learning Outcome	Assessment Criteria
LO2 Comprehend protocols and guidelines when providing HIFU treatments	2.1 Factors to consider and treatment planning
	2.2 Assessing skin characteristics
	2.3 Pre and post advice to provide to the client
	2.4 Timing of treatment
	2.5 Pain threshold and sensitivity variations
	2.6 Types and purpose of HIFU equipment and products
	2.7 Preparation and selection of equipment and products for treatment
	2.8 Preparing the skin prior to treatment
	2.9 Method of application
	2.10 Adaptations to treatment
	2.11 Uses, limitations, benefits and effects of HIFU products and equipment
	2.12 Contra-actions associated with the treatment
	2.13 SPF and UVA specific sun protector
	2.14 Preventing infection and promote healing
	2.15 Treatment progression and additional/complementary treatments recommendations

2. Practical examination

The content of LO3 and LO4 is assessed by a practical examination.

The practical examination will be conducted by an external examiner.

In preparation for the practical examination, centres are advised to ensure learners have carried out a series of formatively assessed case studies, comprising of complete practical treatments, in accordance with the practical assessment criteria for the qualification.

It is essential centres use the Practical Assessment Criteria document in order to prepare learners for the Practical Examination. This can be found on the VTCT and ITEC websites.

The Practical Examination must take place under controlled conditions, in a realistic working environment on a real client and in a commercially acceptable time frame for the practical treatment being examined.

Learning Outcome	Assessment Criteria
LO3 Demonstrate how to consult, plan and prepare for HIFU treatment	3.1 Use consultation techniques to determine the client's treatment plan
	3.2 Consult with the client
	3.3 Establish the condition of the skin
	3.4 Explain the treatment procedures to the client
	3.5 Select a preparatory skin care programme
	3.6 Take pre-treatment photographs (visual media images)
	3.7 Carry out skin sensitivity tests
	3.8 Select suitable equipment and products
	3.9 Explain the cooling off period

Learning Outcome	Assessment Criteria
LO4 Demonstrate how to provide HIFU treatments	4.1 Maintain own responsibilities for health and safety through the treatment
	4.2 Prepare, position and protect the client and self
	4.3 Ensure environmental conditions are suitable for treatment
	4.4 Ensure the use of clean equipment and materials
	4.5 Safely use equipment, materials and products
	4.6 Prepare the skin
	4.7 Select, load and prepare the appropriate transducer/cartridge/treatment heads
	4.8 Apply the HIFU treatment
	4.9 Monitor the skin reaction and client response
	4.10 Apply post-treatment products
	4.11 Take post-treatment photographs (visual media images)
	4.12 Provide post care advice and homecare
	4.13 Dispose of waste materials to meet legal requirements
	4.14 Update client records

Document History

Version	Issue Date	Changes	Role
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