

Terminology of Skin Treatments in Aesthetic Cosmetology

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Abstract: The rapid expansion of aesthetic cosmetology has created a dense and sometimes inconsistent vocabulary for describing skin treatments. Terms such as skin rejuvenation, resurfacing, chemical peeling, microneedling, fractional laser, non-ablative therapy, intense pulsed light, and photobiomodulation are widely used in clinical practice, scientific publications, and commercial communication, yet they are not always employed with equal precision. This article examines the terminology of skin treatments in aesthetic cosmetology with the aim of clarifying how key procedural terms are defined, grouped, and differentiated in dermatologic and cosmetic literature. The study is based on an analytical review of clinical reviews, systematic reviews, and professional sources addressing skin resurfacing, energy-based devices, minimally invasive procedures, and photoaging management. The findings show that the terminology of aesthetic skin treatments is structured around several central oppositions: invasive versus non-invasive, ablative versus non-ablative, full-field versus fractional, mechanical versus chemical versus energy-based action, and corrective versus rejuvenative indications. The review also demonstrates that terminological precision is not merely linguistic; it has direct implications for patient selection, expectations, safety communication, and scientific comparability. The article argues that a standardized terminological approach should distinguish between mechanism of action, tissue depth, treatment objective, and recovery profile. Such an approach helps separate medical terminology from marketing language and supports more accurate interdisciplinary communication in aesthetic cosmetology.

Keywords: Aesthetic cosmetology, skin treatments, terminology, skin rejuvenation, resurfacing, chemical peel, microneedling, laser resurfacing, intense pulsed light, photobiomodulation.

Introduction: Aesthetic cosmetology operates at the intersection of dermatology, cosmetic science, and procedural medicine, and this position has generated a broad technical vocabulary for describing interventions directed at photoaging, dyschromia, surface irregularity, scars, laxity, and texture change. In contemporary usage, the same treatment may be described in different contexts as a cosmetic procedure, a cutaneous resurfacing technique, a rejuvenation therapy, or a skin remodeling modality. At the same time, some terms that appear precise in

commercial settings remain only loosely standardized in medical discourse. This is especially evident in the language of skin treatments, where terms often combine histologic meaning, device mechanism, intended indication, and expected downtime in a single label. As a result, terminological analysis is important not only for linguistics, but also for clinical communication and scientific clarity.

The phrase skin treatment itself is semantically broad. In aesthetic practice it may refer to procedures aimed at exfoliation, epidermal renewal, dermal remodeling,

pigment correction, vascular correction, textural refinement, or combined rejuvenation. Some procedures act mainly at the epidermal level, as in superficial chemical peeling or microdermabrasion, whereas others target the dermis through thermal, mechanical, or photobiologic pathways, as in fractional lasers, radiofrequency microneedling, or red-light photobiomodulation. Because of this diversity, the terminology of aesthetic cosmetology cannot be organized solely by brand names or consumer-facing descriptors; it must be tied to mechanism, depth, and indication.

Another reason to examine terminology is the role of skin phenotype in treatment discourse. A large part of procedural language in aesthetic dermatology is linked to Fitzpatrick skin phototypes because risk, especially post-inflammatory hyperpigmentation, may vary across skin types. The Fitzpatrick system remains the most widely used classification in clinical practice, even though later literature has pointed out its limitations and the need to distinguish pigmentation from photosensitivity more carefully. In the terminology of aesthetic skin treatments, references to “safe in all skin types” or “higher risk in darker phototypes” are therefore not incidental; they are part of the semantic structure of procedure description.

The aim of this article is to analyze the terminology of skin treatments in aesthetic cosmetology and to identify the principal lexical categories through which these procedures are described. The study focuses on the most recurrent clinical terms in current literature and examines how they distinguish mechanism, tissue interaction, and therapeutic intention.

The material consisted of professional and scientific sources retrieved from dermatology organizations and PubMed-indexed reviews addressing chemical peels, microneedling, microdermabrasion, laser resurfacing, intense pulsed light, radiofrequency microneedling, photodynamic therapy, photobiomodulation, and skin phototype classification. Sources were selected because they contained definitional or classificatory information relevant to terminology rather than only isolated outcome data. Priority was given to review articles and authoritative professional texts that explicitly described procedure names, mechanisms, indications, and adverse-effect vocabulary.

The analysis proceeded by grouping terms into four semantic domains. The first domain was procedural intention, including labels such as rejuvenation, resurfacing, remodeling, and correction. The second was mechanism of action, including chemical, mechanical, thermal, photothermal, radiofrequency, and photobiomodulatory language. The third domain was tissue interaction, especially the oppositions ablative/non-ablative and full-field/fractional. The fourth was treatment context, including minimally invasive, non-invasive, downtime, recovery, complications, and skin of color terminology. The goal was not to create a dictionary, but to identify the organizing principles of the professional lexicon of aesthetic skin treatment.

The analysis showed that one of the most common umbrella terms is skin rejuvenation. In the literature, this phrase usually refers to interventions intended to improve signs of photoaging such as fine lines, roughness, lentigines, dyschromia, and textural irregularity. The term is broad and outcome-oriented rather than mechanistic. It may therefore include chemical peels, microneedling, lasers, IPL, photodynamic therapy, and photobiomodulation, even though these procedures act through different pathways. Because of its breadth, skin rejuvenation functions as a superordinate term rather than a precise procedural category.

Closely related to rejuvenation is the term resurfacing, but the two are not identical. Resurfacing typically denotes a procedure that intentionally removes, vaporizes, exfoliates, or remodels the superficial skin layers in order to induce regeneration and improve surface quality. Chemical peels, ablative lasers, and some fractional laser procedures fall naturally under this term. By contrast, a treatment may be rejuvenative without being strongly resurfacing, as is often the case with photobiomodulation or some non-ablative light-based therapies. In terminological terms, rejuvenation is the broader semantic field, while resurfacing indicates a more specific form of tissue-directed renewal.

Within resurfacing language, chemical peel is one of the most stable and historically established terms. Reviews define chemical peeling as the application of a chemical agent to the skin to produce controlled destruction of portions of the epidermis and

sometimes dermis, followed by regeneration and remodeling. Terminologically, chemical peels are commonly classified by depth: very superficial, superficial, medium, and deep in older classifications, or more commonly superficial, medium, and deep in later reviews. This depth terminology is crucial because the label of the peel encodes its expected tissue injury and therefore its indication, recovery time, and risk profile. Agents such as alpha-hydroxy acids, salicylic acid, trichloroacetic acid, and phenol are named not only chemically but procedurally, since they imply different peeling depths.

A second major lexical group is formed by mechanical resurfacing terms. Microdermabrasion is generally described as a non-invasive treatment that gently exfoliates the skin surface. Compared with the terminology of peels and lasers, the semantic emphasis here is on superficiality and low invasiveness. The procedure belongs to the exfoliative branch of skin treatment vocabulary rather than the remodeling branch, because its clinical description usually centers on smoothing, brightening, and evening tone rather than deep collagen remodeling. This difference illustrates how terminology in aesthetic cosmetology often reflects biologic depth indirectly through verbs such as exfoliate, abrade, stimulate, coagulate, or resurface.

The term microneedling occupies an intermediate place in the lexicon because it is mechanically initiated but biologically remodeling. Reviews define it as a minimally invasive procedure using fine needles to create controlled punctures or microchannels in the skin. In both professional and patient-oriented language it is frequently called collagen induction therapy, a secondary term that emphasizes mechanism rather than instrument. This dual naming pattern is significant: microneedling describes the physical method, whereas collagen induction therapy frames the expected biologic response. In practice, the former is more concrete and device-centered, while the latter is more explanatory and persuasive.

An important extension of this terminology is radiofrequency microneedling or fractional microneedle radiofrequency. Here the procedural name combines two mechanisms: needle penetration and radiofrequency energy delivery. Reviews describe it as a minimally invasive treatment that induces

dermal remodeling and neocollagenesis through thermal energy delivered via microneedles. Semantically, the term is hybrid because it retains the language of microneedling while importing the energy-based vocabulary of radiofrequency. This is also where the adjective fractional becomes central. In such contexts, fractional indicates treatment delivered in discrete microscopic zones rather than uniformly across the entire field.

The opposition between ablative and non-ablative is one of the most important terminological axes in aesthetic skin treatment. In laser literature, ablative refers to modalities that remove or vaporize tissue, while non-ablative refers to modalities that create thermal injury or dermal stimulation without removing the epidermis to the same extent. This distinction is not merely technical; it structures expectations about efficacy, recovery, and risk. Ablative carbon dioxide and erbium:YAG lasers are historically linked with stronger resurfacing, whereas non-ablative technologies are described as involving less downtime but usually more modest or gradual improvement. The same contrast appears in broader rejuvenation discourse, where stronger intervention is often balanced against longer recovery.

A related opposition is full-field versus fractional resurfacing. Full-field resurfacing treats the skin surface more uniformly, while fractional resurfacing creates microscopic columns or zones of injury surrounded by untreated tissue, allowing faster healing. Modern reviews describe fractional laser resurfacing as a major technological evolution because it preserves efficacy while reducing downtime compared with traditional full-field ablative resurfacing. Terminologically, fractional has become one of the most productive adjectives in aesthetic device language and now appears not only with lasers, but also with radiofrequency and other energy-based platforms.

Another major terminological cluster concerns light- and energy-based devices. Intense pulsed light is especially interesting linguistically because it is often grouped with lasers in everyday speech even though it is not a laser. Reviews emphasize that IPL uses broad-spectrum light rather than a single coherent wavelength. In procedural terminology, IPL is therefore a light-based technology rather than a true laser modality. Nevertheless, in rejuvenation discourse it

often appears near laser vocabulary because both are used for photodamage, dyschromia, and vascular or pigmentary targets. The distinction remains essential for scientific precision.

The term photodynamic therapy belongs to another branch of light-associated terminology and refers to a combined modality involving a photosensitizer and a light source. In rejuvenation literature it has been described as improving lentigines, roughness, fine lines, and complexion. Here the procedural name explicitly encodes a sequence: photosensitization followed by light activation. This differs from IPL or laser terminology, which is often source-centered, and from photobiomodulation terminology, which is effect-centered.

The vocabulary of photobiomodulation, sometimes also called low-level light therapy or red-light therapy, reflects a newer semantic tendency in aesthetic cosmetology. In these terms the emphasis shifts away from ablation or controlled injury and toward biologic modulation. Recent reviews describe photobiomodulation as non-invasive use of red or near-infrared light for conditions including acne, scars, wound healing, and skin rejuvenation. In patient-facing professional language, red-light therapy is often presented as complementary rather than standalone, which shows how terminological framing can affect perceived therapeutic status. Photobiomodulation is the more technical scientific term, whereas red-light therapy is the more accessible popular term.

The results also showed that downtime is a major contextual term in this field. Although not a mechanism term, it appears repeatedly in descriptions of peels, lasers, and microneedling. It functions as a pragmatic clinical descriptor meaning the period of visible recovery or social interruption after treatment. In aesthetic language, downtime often serves as a bridge term linking technical intensity and consumer expectations. Alongside downtime, words such as erythema, edema, post-inflammatory hyperpigmentation, and recovery profile form the adverse-effect lexicon of skin treatment terminology. These terms are especially important in the description of procedures for darker skin types, where pigmentary risk is a recurring consideration.

Finally, the analysis showed that many treatment

names in aesthetic cosmetology are semantically compound. Expressions such as fractional ablative CO₂ laser resurfacing, temperature-controlled bipolar microneedle fractional radiofrequency, or platelet-rich plasma–assisted microneedling are built by stacking modifiers that encode energy source, delivery pattern, depth logic, and adjunctive component. This compounding tendency makes the terminology highly informative but also potentially opaque to non-specialists. It is one reason why consumer language often simplifies terms, sometimes at the cost of precision.

The terminological system of aesthetic cosmetology is therefore best understood as multidimensional rather than merely nominative. A treatment name rarely identifies only one thing. It usually conveys at least four layers of meaning: the tool or energy source, the mode of tissue interaction, the target depth or pattern, and the expected clinical effect. For example, the term fractional ablative laser resurfacing simultaneously identifies a laser-based modality, an ablative tissue effect, a fractional delivery pattern, and a resurfacing objective. The richness of the lexicon reflects the technological complexity of the field, but it also explains why the same procedure may be misunderstood if only one lexical layer is noticed.

A second observation is that professional terminology and marketing terminology do not always overlap. In clinical and review literature, the dominant organizing terms are ablative, non-ablative, fractional, chemical peel, microneedling, photobiomodulation, and IPL. In commercial settings, by contrast, broader consumer-friendly phrases such as glow treatment, collagen boost, or skin renewal may replace mechanism-based terms. This shift tends to increase appeal while decreasing specificity. From an academic perspective, the problem is not that consumer language exists, but that it may obscure clinically relevant distinctions between exfoliation, resurfacing, remodeling, and light-based modulation.

The terminology also reveals a movement in modern aesthetic practice from destructive language to modulatory language. Older descriptions of peels and ablative lasers openly emphasized controlled destruction followed by regeneration. Newer terms, especially in radiofrequency and light-based modalities, increasingly foreground stimulation,

remodeling, rejuvenation, and biomodulation. This lexical change mirrors technological developments aimed at lower downtime and improved tolerability, but it may also soften perceptions of risk. For scientific writing, it remains important to preserve terms that accurately express tissue interaction rather than relying only on aspirational vocabulary.

Another important point is that terminological precision matters for cross-study comparison. If one paper uses laser rejuvenation as a general label and another distinguishes between full-field ablative resurfacing and fractional non-ablative treatment, the apparent similarity may conceal major procedural differences. The same issue arises with terms like chemical peel if depth is not specified, or with microneedling if adjunctive radiofrequency or PRP is omitted from the description. Standardized terminology therefore supports reproducibility and better interpretation of outcomes.

The review further suggests that skin-type language should remain integrated into procedural terminology. Descriptions such as safe for all skin tones or higher risk of post-inflammatory hyperpigmentation are not optional clinical footnotes; they are part of the meaning of the procedure in practice. In aesthetic cosmetology, where many treatments are elective, the semantics of safety and suitability are especially important. As criticism of the Fitzpatrick system has shown, however, even long-established classification terms require careful use and may need supplementation with more precise descriptors of pigmentation and photosensitivity.

CONCLUSION

The terminology of skin treatments in aesthetic cosmetology is a structured professional language shaped by mechanism, tissue depth, treatment pattern, therapeutic aim, and recovery profile. Terms such as skin rejuvenation and resurfacing function at different levels of generality, while labels such as chemical peel, microneedling, fractional laser, intense pulsed light, and photobiomodulation identify more specific procedural families. The most productive terminological oppositions in the field are invasive/non-invasive, ablative/non-ablative, and full-field/fractional, and these distinctions have practical significance for safety, expectations, and scientific

reporting. A more standardized use of terminology in aesthetic cosmetology would improve interdisciplinary communication and help separate evidence-based professional language from commercially simplified phrasing.

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