SCE 0811 Public Evidence Appendix

Dermatology and wound care

Literature review date: September 13, 2026

Controlling principle. Dermatologic and wound-healing evidence is diagnosis-, wound-, product-, route-, co-intervention-, and endpoint-specific. Biological repair or cosmetic signals must not be converted into claims of durable healing, hair restoration, or rejuvenation.

Point-by-point evidence framework

Controlling Point	Evidence focus	Interpretive boundary
Diabetic ulcers	Neuropathy, repetitive pressure, perfusion, infection, inflammation, granulation tissue, epithelialization, and wound repair.	Wound-area reduction or faster closure does not establish durable healing, recurrence prevention, limb salvage, amputation reduction, or survival benefit.
Pressure injuries	Sustained pressure/shear, tissue ischemia and deformation, inflammation, angiogenesis, matrix remodeling, and epithelial repair.	Experimental healing signals do not replace pressure redistribution, nutrition, mobility, moisture management, perfusion assessment, infection control, or debridement.
Burns	Acute barrier loss, inflammation, vascular response, epithelial repair, grafting, scar formation, and contracture.	Faster epithelialization does not by itself establish better graft take, less contracture, improved function, or superior long-term scar quality.
Radiation injury	Chronic hypoxia, vascular damage, fibrosis, impaired healing, inflammation, and tissue repair after radiotherapy.	Repair signals must be interpreted in oncologic context; cosmetic or histologic improvement does not establish restoration of irradiated tissue or long-term safety.
Scar remodeling	Fibroblast/myofibroblast activity, collagen deposition, extracellular-matrix organization, hypertrophic scar, keloid, and contracture.	Changes in collagen or appearance do not establish durable functional improvement, reduced recurrence, or broad reversal of fibrosis.
Alopecia	Diagnosis-specific follicle biology across androgenetic alopecia, alopecia areata, scarring alopecia, telogen effluvium, and treatment-related hair loss.	Hair count, shaft diameter, or photography cannot be generalized across diagnoses and do not establish durable restoration without appropriate diagnosis and follow-up.
Cosmetic skin claims	Photoaging, wrinkles, pigmentation, texture, elasticity, hydration, collagen biology, and adjunctive procedures such as microneedling.	Short-term cosmetic or biomarker changes do not establish skin rejuvenation; exact product, route, co-interventions, standardized imaging, durability, and safety must be defined.

Evidence-handling rules

Positive, negative, null, mixed, and inconclusive findings are weighted by design quality and directness rather than by whether they favor the intervention.

Mechanistic evidence, development stage, clinical efficacy, safety, regulatory status, guideline position, and manufacturing quality remain separate analytical dimensions.

Off-loading, vascular assessment, debridement, infection management, burn surgery and grafting, pressure redistribution, established scar therapy, diagnosis-specific alopecia care, and evidence-based dermatologic procedures remain the appropriate comparators.

Principal references

1. Galipeau J, Sensebé L. Mesenchymal stromal cells: clinical challenges and therapeutic opportunities. Cell Stem Cell. 2018;22:824-833.

2. Pittenger MF, Discher DE, Péault BM, Phinney DG, Hare JM, Caplan AI. Mesenchymal stem cell perspective: cell biology to clinical progress. NPJ Regen Med. 2019;4:22.

3. Relevant contemporary clinical and translational literature concerning MSC/EV interventions in diabetic ulcers, pressure injuries, burns, radiation injury, scar remodeling, alopecia, and cosmetic skin applications.

4. Disease- and wound-specific dermatology, wound-care, vascular, burn, radiation-injury, and hair-disorder guidance should control statements concerning established standard care.

5. Exact product identity, diagnosis, wound stage or phenotype, perfusion, infection status, route, dose, co-interventions, comparator, endpoint, and follow-up must be matched before evidence is generalized.