PIH Clinical Protocol Suite

RF Microneedling · Chemical Peel · General PIH Treatment

Provider Protocol · Fitzpatrick-weighted · Dr. V Aesthetics, PLLC · Vaidehi Patel, MD · June 2026

PROTOCOL 1 · RF MICRONEEDLING — PIH Prevention & Management

RF microneedling adds thermal energy to mechanical injury — making it more effective for collagen remodeling but carrying dual PIH risk: both from the needle channels and from the heat-induced epidermal response. **Current evidence (2026 RCT, IAPAM) confirms RF microneedling is the safest energy-based device for FP III–IV** — but 'safest' does not mean 'no risk.' Insulated needle tips reduce epidermal heat exposure; conservative settings and mandatory priming are still required.

> **FDA note (October 2025):** The FDA issued a safety communication on RF microneedling citing serious complications — burns, scarring, fat loss, nerve damage — linked to operator error and off-label use. Safe outcomes depend on proper training, correct parameters, and indicated use. This protocol applies to those conditions.

CANDIDACY GATE — Before Booking, Before Priming

CHECK	STANDARD / ACTION
Fitzpatrick type	FP I–IV: appropriate with correct settings. FP V–VI: provider assessment required; conservative settings mandatory; RF preferred over IPL/laser for these types.
Melasma history	Caution — treat as FP step up. RF microneedling has favorable melasma data but prep is mandatory. Active melasma: stabilize with topicals first.
Active skin condition	Defer if: active acne, infection, open wounds, recent retinoid use (hold 5 days), isotretinoin (hold 6 months).
Recent UV / tan	No active tan. Defer if recent sun exposure (<4 weeks). Mineral SPF is mandatory pre-treatment.
Medications	Screen for photosensitizers, anticoagulants, isotretinoin. Gold implants are a relative contraindication.
Test spot	Required for FP III+ at conservative settings. Assess at 48–72h before proceeding.

PRE-TREATMENT PRIMING — By Fitzpatrick

COMPONENT	FP I–II	FP III	FP IV–VI
Prep window	2–4 weeks	4–6 weeks	6–8 weeks minimum
Melanin suppressant	HQ-free (Brightalive)	HQ-free first; 4% HQ if melasma history	4% HQ Pigment Control + Blending Creme (Rx); confirm tolerability
Retinoid	Retinol 0.25% PM 3x/wk	Retinol 0.25% — slow introduction	Low-dose retinol only if tolerating; hold if irritation
Barrier / Antioxidant	Daily Power Defense; Gentle Cleanser	Daily Power Defense; Gentle Cleanser	Daily Power Defense; Gentle Cleanser — barrier must be intact day of treatment
SPF 50+	Daily — begin at booking	Daily — strict. Mineral preferred.	Daily — mandatory. Mineral (zinc oxide) required.

Holds before treatment	Retinol 5 days prior	Retinol 5–7 days; HQ 3 days prior	Retinol 7 days; HQ 3–5 days; confirm no active tan

DAY OF TREATMENT

CONFIRM	SETTINGS GUIDANCE
Pre-treatment checks	No active tan, skin calm and intact, no fresh retinoid, test-spot reviewed (FP III+). Confirm no new medications since consult.
Settings — FP I–II	Standard depth and energy per device protocol. Single pass. Conservative on bony prominences.
Settings — FP III	Conservative end of recommended range. Reduce energy 10–20%. Avoid stacking passes. Insulated needles required.
Settings — FP IV–VI	Most conservative settings. Single pass only. Minimum effective energy. Insulated gold-tip needles. Provider present throughout.
Expectation setting before treatment	Inform patient: erythema and mild swelling expected 24–72h. Darkening/crusting can appear and resolve — this is not PIH. True PIH appears 1–4 weeks post. When to call: any darkening persisting beyond 2 weeks.

POST-TREATMENT & PIH WATCH

Immediate (0–72h): Strict SPF 50+, no heat/sweat/sauna, gentle cleanser only, no picking or rubbing. Resume actives only after all reaction resolves per plan.

Watch window (Wk 1–4): Monitor at 48h (call or in-person for FP III+) and 2-week in-person. FP IV–VI: add 1-week check. If darkening appears beyond expected window — start PIH recovery pathway (see Protocol 3).

Persistent erythema beyond 72h: Predicts PIH — intervene early. Start Brightalive immediately. Short-course topical clobetasol 0.05% x 2 days (immediately post-procedure only) has evidence for PIH prevention in RF patients.

PROTOCOL 2 · CHEMICAL PEEL — PIH Prevention & Management

Chemical peels cause controlled chemical exfoliation. PIH risk varies significantly by peel depth and Fitzpatrick type. **Superficial peels (AHA/BHA) are the only appropriate peel type for FP IV–VI.** Medium and deep peels carry unacceptably high PIH risk in higher phototypes — evidence shows up to 92% PIH incidence with ablative procedures in FP IV+. For FP III–VI, a series of superficial peels outperforms a single aggressive session every time.

PEEL TYPE	AGENTS	FP I–III	FP IV–VI
Superficial	Glycolic (30–50%), Lactic (30–50%), Mandelic (20–40%), Salicylic (20–30%)	**Safe with prep**	**Preferred option; series approach**
Medium	TCA 20–35%, Jessner's + TCA, higher-concentration glycolic	**With mandatory prep**	**High risk. Avoid.**
Deep	Phenol, high-concentration TCA	**Expert use only**	**Contraindicated**

PRE-TREATMENT PRIMING — By Fitzpatrick

Evidence: *Priming begins at least 2–4 weeks before the peel and stops 3–5 days prior. SPF should ideally begin 3+ months before any peel procedure — at minimum 4 weeks. (Cosmoderma 2022, Kibo Clinics 2026)*

COMPONENT	FP I–II	FP III	FP IV–VI

Prep window	2–4 weeks	4–6 weeks	6 weeks minimum; superficial peels only
Melanin suppressant	Brightalive or arbutin-based; SPF daily	HQ-free first 4 wks; 4% HQ if melasma history	4% HQ mandatory. Stop HQ 3–5 days before peel.
Retinoid	Retinol PM 3x/wk — stop 5 days pre-peel	Retinol PM — slow titration; stop 7 days pre-peel	Low-dose retinol only if tolerating; stop 7 days pre-peel
SPF 50+	Daily from booking. Mineral preferred.	Daily — strict. Mineral (zinc oxide) preferred.	Daily — mandatory. Mineral SPF only.
Peel day holds	Stop retinol 5 days, all exfoliants 3 days. Clean dry skin.	Stop retinol 7 days, HQ 3 days, all exfoliants 3 days.	Stop retinol 7 days, HQ 5 days, all exfoliants 3–5 days. No waxing 48h.
Peel selection FP IV–VI	N/A — standard options	Favor mandelic or lactic over glycolic — gentler, less PIH risk	Mandelic acid (30–40%) or lactic acid only. Series of 4–6 sessions preferred over single session.

DAY OF PEEL + POST-TREATMENT WATCH

Day of: Confirm no active tan, no retinoid last 5–7 days, skin calm, no broken skin. Set expectations: peeling/flaking days 3–7 is expected — do not pick. Darkening during peeling is not PIH — PIH appears after healing.

Post-care (all types): Strict SPF 50+ from day 1. No heat, sweat, or sauna 72h. Gentle cleanser only during peeling phase. Resume actives only after full re-epithelialization.

Watch window (Wk 1–4): If darkening persists beyond expected peeling window — start PIH recovery pathway (Protocol 3). FP IV–VI: 48h check call + 2-week in-person.

■ Do not perform chemical peels on active PIH. Evidence shows 66.7% poor or no response, with risk of worsening. Wait until PIH has visibly improved before scheduling next peel.

PROTOCOL 3 · GENERAL PIH TREATMENT — Device-Agnostic Recovery Pathway

Use this pathway for any post-procedure PIH regardless of trigger — microneedling, RF, chemical peel, or spontaneous. Adjust aggressiveness based on Fitzpatrick type and pigment depth. **Prevention is more effective than treatment** — this pathway is the fallback when prevention was insufficient.

STEP	TIMEFRAME	INTERVENTION	FP ADJUSTMENT
1 Stop & Stabilize	Day 1 of PIH onset	Pause all retinoids, AHAs, BHAs, active exfoliants. Barrier support: Gentle Cleanser + Daily Power Defense + Oclipse SPF 50 twice daily. Photograph. Document onset date, procedure date, Fitzpatrick type.	*All types: same first step. FP IV–VI: mineral SPF (zinc oxide) only.*
2 HQ-free Brightening	Wk 1–6	Start Brightalive Skin Brightener (HQ-free, arbutin-based) AM + PM. Add ZO C-Bright Vitamin C Serum AM (antioxidant + tyrosinase inhibition). Oral Vitamin C 500–1000mg daily OTC. Oral Heliocare 240mg daily OTC.	*FP I–II: this stage often sufficient. FP III–VI: begin 4% HQ (Pigment Control + Blending Creme) by week 3–4 if not responding.*

3 Add Retinoid	Wk 3–4 (once stable)	Introduce Retinol Skin Brightener 0.25% or Wrinkle + Texture Repair (low %) PM 2–3x/week. Titrate slowly — if irritation, reduce frequency. Retinol accelerates pigmented cell shedding and disperses melanin granules.	*FP I–II: standard titration. FP III: slow titration — introduce q3 days first. FP IV–VI: hold until wk 4–5 minimum; confirm zero irritation before introducing.*
4 Escalate: Oral TXA	**Wk 8–10 if plateaued**	Oral tranexamic acid 250mg BID (500mg/day). Duration: 8–12 weeks. Reassess at week 12. SCREEN FIRST: DVT/PE history, thromboembolic disorder, pregnancy, renal impairment. No routine labs at low doses; obtain personal and family clotting history. Evidence: multiple RCTs show efficacy comparable to 4% HQ for melasma (JCAD 2022).	*FP I–II: rarely needed — reassess compliance first. FP III–VI: primary escalation agent.*
5 In-Office Escalation	**Wk 10+ if <50% improvement**	Superficial mandelic/lactic peel (skin fully stable, not during active PIH). Low-fluence Q-switched Nd:YAG 1064nm (FP III–IV; test spot mandatory; multiple sessions). Topical HQ 4% cycling if not already on it — 3-month on/off to prevent ochronosis.	*FP V–VI: Q-Sw Nd:YAG only — no IPL, no medium/deep peels, no laser resurfacing. All FP: no peels during active PIH — wait for visible improvement.*

DOCUMENTATION CHECKLIST — Any PIH Case

AT ONSET	AT EACH VISIT	IF PATIENT DECLINES RECOMMENDED TREATMENT
• Before photos (standard lighting, unedited) • Procedure date + onset date • Fitzpatrick type on chart • Treatment plan initiated (products, doses, oral agents) • Patient education: sun avoidance, post-care compliance	• Updated photos • Patient-reported compliance • Pigment assessment (better / same / worse) • Plan adjustments and rationale	• Document: full regimen recommended • Patient's decision noted • Limitations and PIH risk explained • Patient verbalized understanding **• Declining is their right — undocumented declining is our liability**