

CONDITIONS · FACE · SCARS

Acne scars: types and treatment options

Ice pick, boxcar and rolling scars are three different structural problems that answer to different tools. Most faces carry a mixture, which is why assessment comes before any device or injectable is chosen.

KEY FACTS

The classification	Ice pick, boxcar and rolling atrophic scars (Jacob et al.), plus raised hypertrophic and keloid scars. Flat dark or red marks are pigment, not scars.
Ice pick	Narrow (under about 2 mm), deep, V-shaped tracts, often deeper than a resurfacing laser reaches.
Boxcar	Wider, sharp-walled, flat-bottomed depressions: the resurfacing responders.
Rolling	Broad undulations tethered from below by fibrous bands: released, not resurfaced.
The mixed rule	Most people carry two or three types on one face, which is why mapping precedes any treatment.
Timing rule	Scar treatment begins after acne is under control, so new scars are not forming behind each repair.
Honest endpoint	Improvement, not erasure. No method returns skin to a state where a scar never formed.

Why the shape of a scar decides its treatment

“Acne scars” is a category, not a diagnosis. Scar shape encodes the injury beneath. An ice pick scar is a deep tract punched by a ruptured follicle; a boxcar is a block of lost dermis with intact edges; a rolling scar is skin of near-normal quality pulled downward by fibrous tethers to deeper tissue. Same disease, three structural problems, and a treatment suited to one is irrelevant for another. Resurface an ice pick scar and you polish the rim of a well. Subcise a boxcar and nothing changes, because nothing was tethered.

“If someone offers you one treatment for your acne scars, they haven't looked closely enough.”

Dr Sin Yong

The scar types at a glance

SCAR TYPE	WHAT IT LOOKS LIKE	WHAT LIES BENEATH	TOOLS USUALLY CONSIDERED	WHAT DOES NOT HELP
Ice pick	Narrow, deep, pore-like pits	A narrow tract running deep into the dermis	TCA CROSS; punch techniques (referred on)	Surface resurfacing alone; scar creams
Boxcar	Round or oval depressions with sharp edges and a flat base	A block of lost dermis with intact edges	Fractional ablative resurfacing; TCA CROSS or punch techniques for deeper boxcars	Subcision alone, as nothing is tethered
Rolling	Broad, wave-like undulations with soft, sloping edges	Fibrous bands tethering skin to deeper tissue	Subcision, with filler or biostimulator support, then energy-based remodelling	Resurfacing alone; topical products
Hypertrophic and keloid	Raised, firm scars; keloids spread beyond the original spot	Excess collagen production	Injection-based keloid pathway, silicone and selected lasers	Resurfacing or subcision planned for depressed scars
Flat dark or red marks (PIH, PIE)	Flat discolouration with no dent	Pigment or dilated vessels rather than lost tissue	Pigment or vascular treatment, with sun protection	Scar revision techniques, which treat depth rather than colour

A simple stretch test you can do at home

Pull the skin beside a scar taut with two fingers under a bright overhead light.

- Rolling scars flatten when the surrounding skin is gently pulled taut, and look deepest under overhead or side light.
- Boxcar scars soften slightly on stretch but keep their sharp edges.
- Ice pick scars barely change; they can look like large open pores.
- A clinical mapping at consultation confirms and counts them. Photograph progress in the same light, at the same angle, every time.

Matching the method to the scar

No single treatment corrects every acne scar. Options are layered because mixed scarring involves more than one structure, and the order matters: resurfacing remodels skin in whatever position it finds it, so a tethered scar is released before it is resurfaced.

OPTION	WHAT IT DOES	WHAT IT CANNOT DO	WHAT RECOVERY INVOLVES
Subcision	A needle or blunt cannula passed beneath the scar divides the fibrous bands, so the depressed skin can lift from below	Does not resurface texture, soften scar edges or reach narrow ice pick tracts	Bruising and swelling over the treated area that settle on their own

OPTION	WHAT IT DOES	WHAT IT CANNOT DO	WHAT RECOVERY INVOLVES
Fractional CO2 resurfacing	Ablative fractional resurfacing softens scar edges and refines surface texture while the dermis remodels	Does not release tethering; not the primary tool for deep ice pick scars	Redness, fine crusting and peeling while the surface renews; strict sun protection afterwards
RF microneedling	Radiofrequency delivered at a controlled depth remodels scar tissue with limited surface disruption	Does not lift a tethered scar on its own; does not treat flat pigmented marks	Short-lived redness and pinpoint marks
TCA CROSS	High-strength trichloroacetic acid placed into the base of each narrow scar prompts collagen from within	Not suited to wide rolling scars or whole areas; carries a pigment risk in darker skin	A small crust on each treated scar that sheds as the skin heals
Collagen-stimulating injectable	Supports an atrophic area from beneath where volume has been lost, usually after release	Does not change scar edges or surface texture; does not raise an ice pick scar	Possible swelling or bruising at injection points
Surgical options (referred on)	Punch excision, elevation or grafting removes or raises an isolated deep scar	Does not improve surrounding texture; exchanges a pit for a fine surgical mark	Sutures and wound care set by the operating doctor

Punch techniques and formal scar revision are not part of Dr Sin Yong's own scar work; where they are indicated, he refers on to dermatology or plastic surgery and plans any resurfacing around that. Subcision, although it uses a needle beneath the skin, is a non-surgical release technique carried out in clinic.

“You can resurface a tethered scar indefinitely. The tether keeps pulling it down.”

Dr Sin Yong

Two rules that protect your result

- Control the acne first. Active disease keeps manufacturing new scars behind every repair, so the acne programme comes first when lesions are still appearing.
- Expect a campaign, not an event. Collagen remodelling matures gradually between treatments, so a plan is staged and reviewed. Improvement in depth, edge definition and how light falls on the skin is the realistic goal; anyone describing scar removal in a single visit is describing neither the evidence nor the biology.

What does not help

- Scar creams and oils on established atrophic scars: a structural deficit does not refill from the surface.
- Aggressive scrubbing or home dermarollers: uncontrolled micro-injury on scar-prone skin risks new damage, including post-inflammatory pigmentation in Asian skin.
- One-device packages: a clinic offering a single modality will treat every scar as the type its machine handles.
- Waiting for scars to fade: time softens edges, not deficits.

Laser in darker skin

Fractional laser can be used in Fitzpatrick III to V skin, with settings chosen conservatively for pigment-prone skin and strict aftercare, because post-treatment pigmentation is the known risk. Flat brown marks left after breakouts are treated separately with pigment-focused approaches rather than resurfacing.

NEXT STEP

Consultations with Dr Sin Yong are by appointment at Orchard Road, Singapore. WhatsApp a short note on your concern to +65 8023 7170 (replies within clinic hours: Mon–Fri 10am–8pm, Sat 11am–3pm). Every assessment is carried out personally; options explained include waiting, no treatment or referral.

SOURCES

- Jacob CI, Dover JS, Kaminer MS. Acne scarring: a classification system and review of treatment options. *Journal of the American Academy of Dermatology*, 2001.
- Fabbrocini G et al. A review and update of treatment options using the acne scar classification system. *Dermatologic Surgery*, 2015.
- Evidence-based management of cutaneous scarring in dermatology, part 2: atrophic acne scarring. *Archives of Dermatological Research*, 2022.
- Source pages: drsinyong.com/acne-scar-types/ and drsinyong.com/acne-scar-treatment-singapore/