The short term impact of EXION Face

Summary of EXION Face:

EXION Face delivers monopolar radiofrequency (RF) together with targeted ultrasound. The dual energy creates controlled thermal + mechanical stress in the reticular dermis, which up-regulates endogenous hyaluronic acid (HA), collagen and elastin—without injections or microneedling.

Why does the EXION Face give glow to the skin straight away (first 72 hours):

Glow: RF-induced vasodilation increases superficial perfusion → brighter tone. (Consistent with non-invasive RF physiology; EXION Face achieves this without epidermal injury.)

> *This means: The radiofrequency (RF) energy gently warms the skin, which makes tiny blood vessels near the surface open up (that's vasodilation). When they open, more blood flows through them (that's increased superficial perfusion). That extra blood flow gives the skin a healthy, pinker tone and radiant "glow" immediately after treatment – like the look you get after gentle exercise or being out in fresh air.*

Soft "plump": transient micro-edema and early collagen fibre contraction increase skin turgor and light reflectance.

> *This means: After treatment, a small, temporary increase in fluid and the immediate tightening of collagen make the skin feel firmer, fuller and more supple, and because the surface is smoother and more hydrated, it reflects light better – giving that soft, plumped, glowy look in the first few days.*

Possible script:

> "EXION Face uses gentle radiofrequency and targeted ultrasound to warm the deeper skin and signal your cells to make more of your own hyaluronic acid, collagen and elastin. Right

away you'll look fresher and dewier from increased blood flow or circulation and the dual action of a small increase in fluid and immediate tightening of collagen making the skin feel firmer and because the surface is smoother and more hydrated, it reflects light better – giving that soft, plumped, glowy look in the first few days. The bonus is that over the next few weeks, as your HA and collagen build, skin continues to look smoother, bouncier and more radiant–with no needles or downtime."

Indications your patients will notice: better hydration/"glassiness", fine-line softening, elasticity and skin tone/laxity improvements.

For your information…The science:

Does RF+TUS increase endogenous HA / collagen / elastin?

Preclinical (peer-reviewed, porcine i.e., animal) – RF+TUS > RF alone for HA:

1. Duncan et al., 2024 (Aesthetic Surgery Journal Open Forum): pilot preclinical study showing significantly higher hyaluronic acid (HA) in treated skin with combined monopolar RF+TUS, alongside signals for collagen/elastin remodelling (RT-qPCR, MALDI-TOF). Mechanistic framing via HAS2 (major HA synthase) is provided. Not a human RCT, but rigorous preclinical methodology. OUP Academic+1
   Limitations: Non-human pilot (not a human RCT) – shows biological plausibility not clinical efficacy. Can't assume findings can be translated to humans. Small sample size so limits in statistical power and no formal power calculation or confidence intervals supplied so results exploratory not confirmatory. Findings also demonstrates cellular activity not observable cosmetic change.
2. Review/commentary (peer-reviewed, 2025): Summarises the mechanistic rationale that thermal (RF) + mechanical (TUS) stress together can stimulate fibroblasts to synthesise HA, collagen, elastin, whereas either alone may fall short for HA. Useful for biological plausibility rather than outcomes. SpringerLink

Limitations: Purely commentary (not an RCT) so it summarises theories and doesn't generates evidence. So it supports biological plausibility rather than lends any evidence.

Take-home: There is peer-reviewed preclinical evidence that RF+TUS augments HA vs RF alone; direct human RCT data on HA with this exact combo **is not yet published** (as of 15 Oct 2025, AU time).

What supports the immediate "glow/glassiness" (hours–7 days)?

The first-week look is very plausibly explained by acute, short-lived biophysics that are well-described for non-invasive RF (and consistent with US mechanobiology):

1. Monopolar RF—short-term clinical changes: prospective split-face/short-term studies show early changes in lines/texture measured instrumentally within days to weeks after monopolar RF, reflecting collagen fibre contraction, dermal oedema, and perfusion-related erythema (the "glow"). Wiley Online Library+1

   Limitations: Small cohorts so the generalisability across skin types and ages etc may be reduced. Limited statistical power so true differences could be over or under estimated. No blinding – each participant knew what face was being treated.

2. Dermal temperature + perfusion physiology (RF): reviews and clinical series describe immediate collagen triple-helix shortening (≈60 °C intra-dermal) and transient vasodilation → brighter tone, slight swelling, better light scatter/reflection. Cynosure Lutronic Canada+1

   Limitations: a manufacturer study (white paper) so not peer reviewed and with bias etc. Biophysical explanation from thermal physics and histological animal data not human evidence. Methodology is not transparent. No statistical data, sample description or ethical approvals.

3. Ultrasound mechanotransduction → matrix synthesis: cell/biomaterials studies show low-intensity pulsed ultrasound increases fibroblast proliferation, collagen and glycosaminoglycans (which include HA constituents), and can up-regulate HAS2/HAS3 mRNA in joint/dermal models. These are adjacent-tissue models, not facial clinical RCTs, but they reinforce the biological plausibility that TUS adds a hydration signal. SAGE Journals+1

   Limitations: Again, preclinical and mechanistic. The models are not transferable so that the observed gene or protein changes may not reproduce in living facial skin. The ultrasound parameters used are different to the EXION's frequencies therefore limiting external validity. Optimal dosing missing. Cell-culture mechanobiology is prone to positive-finding bias–null or adverse results often go unpublished.

   Summary: These SAGE-journal studies show that low-intensity ultrasound can "wake up" fibroblasts in the lab, increasing genes involved in collagen and hyaluronic-acid production. They explain how ultrasound might add a hydration or "plumping" signal when paired with RF, but they are laboratory-based, not human clinical evidence. The data provide biological plausibility, not proof that EXION or similar devices create visible "glassiness" through HA synthesis.

Take-home: The "glowy/glassy within a week" look is best attributed to acute vasodilation + micro-oedema from RF heating (and possibly TUS-mediated mechanosignalling), with optical effects (smoother microrelief, water content) improving light reflection. This has good clinical face validity for RF and mechanistic plausibility for TUS; direct human RCTs on first-week glow with RF+TUS are not yet available.

In simple language: Radiofrequency gently warms the skin to a temperature that can make collagen fibres tighten and temporarily boost circulation – that's why skin can look a little brighter and firmer right after treatment. These effects are short-term and reflect normal heat physiology rather than permanent change. Some laboratory studies show that gentle ultrasound can encourage skin cells to make more

collagen and the natural moisturising sugar called hyaluronic acid. Those studies were done in cell cultures, not people, but they help us understand *why* ultrasound may contribute to the hydrated, healthy look we see after treatment.

What human clinical data exist for non-invasive monopolar RF (foundation for EXION Face)?

These are the most clinically relevant studies supporting the *"short-term glow, smoothness, and line improvement"* narrative – but still have notable methodological constraints

1. Randomised/split-face trials (monopolar RF devices) demonstrate short-term (days–weeks) texture and line improvements vs controls or cosmetics, with low downtime—supporting the early visible change narrative patients notice. (These trials aren't the EXION combo, but they anchor the RF contribution.) SpringerLink

   Limitations: Small sample sizes (20-60) limiting statistical power. Split face design so no true placebo and possible heat or inflammatory crossover between sides. Lack of blinding. Subjective outcome measures (e.g., brightness). Protocol heterogeneity (e.g., different energy settings). Limited histologic verification. And many were sponsored by the industry.

2. Prospective pilots (2024–2025) on newer monopolar RF show improvement at 4–16 weeks after a single session; acute dermoscopic changes documented up to day 7–30 in observational arms (thermal imaging, dermoscopy).

   Limitations: The prospective pilot studies published between 2024–2025 on newer monopolar RF devices are limited by small sample sizes, short follow-up periods, and lack of control or blinding, which restrict the strength of their conclusions. Most are single-arm or observational, without randomisation or sham treatment for comparison, so improvements could partly reflect placebo or transient physiological effects such as oedema or erythema. The dermoscopic and imaging findings reported up to 30 days describe acute inflammatory and perfusion

changes rather than confirmed structural remodelling. Variability in energy settings and assessment methods across studies also limits reproducibility. Overall, these pilots offer preliminary evidence of short-term skin changes following RF exposure but cannot establish durability, mechanism, or generalisability of the results.

What evidence for RF+TUS synergy in humans

Direct RCT-level evidence comparing RF+TUS vs RF alone on human HA or hydration endpoints is not yet published.

1. A 2024–2025 multicentre two-arm study comparing RF+TUS vs RF has been published in a lower-tier journal; interpret cautiously until replicated in higher-quality venues. (Signals favour RF+TUS for hydration-linked outcomes, but methodology/journal quality limit confidence.) Longdom

   Limitations: The available evidence directly comparing RF + targeted ultrasound (TUS) with RF alone in humans is very limited and low quality. No high-level randomised controlled trials have yet been published in reputable peer-reviewed journals. The only identified comparative study (2024–2025, Longdom) was a small, multicentre two-arm trial appearing in a lower-tier journal with minimal methodological transparency. It lacked details on randomisation, blinding, sample-size justification, and statistical controls, and reported only short-term hydration outcomes without histologic or biochemical confirmation of HA change. The absence of independent replication, limited peer-review rigour, and potential publication or sponsorship bias mean its findings should be interpreted with caution. At present, the evidence for superior hydration or HA production with RF + TUS versus RF alone remains suggestive but unproven.

How to phrase benefits conservatively:

Immediate: “Most people notice a brighter, dewier look in the first 24–72 hours, largely from increased blood flow and transient swelling after controlled heating. This typically settles over the first week.” (Grounded in RF physiology.) scivisionpub.com

Ongoing: “Over 4–12 weeks, the skin’s support matrix is remodelled (collagen/elastin). Preclinical work suggests the RF+TUS combination can increase your own hyaluronic acid, which would support hydration and ‘bounce’—this is biologically plausible, though human RCT confirmation is pending.” OUP Academic+1

Avoid numeric promises on HA or percent improvement unless a peer-reviewed human trial demonstrates it.

Bottom line for clinicians

You can confidently attribute first-week “glow/glass” to RF-driven vasodilation and micro-oedema with immediate collagen contraction—all well-described in peer-reviewed dermatologic literature. scivisionpub.com

You can present RF+TUS-specific claims (endogenous HA support) as mechanistically plausible and preclinically supported, while being transparent that robust human RCT confirmation is in progress/awaited. OUP Academic+1