Standardized Umbilical Reproducible Entry (SURE): a ten-step, single-instrument umbilical access technique for gynecologic laparoscopy

The Whittaker SURE technique. One Kocher clamp carries the surgeon from skin to held fascia. Five checks confirm entry before the trocar.

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RRM Academy

22nd International Clinical & Scientific Congress for Restorative Reproductive Medicine
Orlando, Florida · October 9 to 10, 2026

Why entry matters

Injury at laparoscopy clusters at entry. Decades of trials have not settled how to enter. The Cochrane review pooled 57 randomized trials, 9,865 participants, and 25 entry techniques. Its verdict: evidence was insufficient to support one technique over another. Vascular and visceral events are too rare, and the trials too small, to separate. Failed entry is the one outcome where a comparison reached moderate-quality evidence. Meanwhile surgeons tent the skin and feel secure. The fascia stays untouched, its position unknown.

What is the same, and what is new

TECHNIQUE	WHAT IT DOES	WHAT SURE SHARES	WHAT SURE DOES DIFFERENTLY
Hasson open entry	Cutdown to the peritoneum, blunt cannula placed under direct vision	Named layers found under control, never a blind pass from skin	The peritoneum is never opened by dissection. The skin opening stays 5 mm
Closed Veress entry	Blind needle pass from a skin incision, insufflation, then trocar	The needle, insufflation before the trocar, the opening-pressure read	The needle starts at a fascia already seen, held, and confirmed
Direct optical entry	Layers identified through the lens as the trocar advances	Layer-by-layer identification as the governing safety principle	Layers identified by hand and eye at the wall, before the needle
SURE	**Ten fixed steps, one Kocher clamp, Veress through held fascia**	**Mechanical feedback of open entry, 5 mm footprint of closed entry**	**One instrument, one order, five named checkpoints, every case**

Prior art, stated plainly. Hilgers 1992 elevated the anterior rectus fascia with two Kocher clamps for the Veress pass, in 243 patients. Kiran 2022 dissected to fascia, then elevated it. Shamiyeh 2009 measured what the lift adds. The maneuver is published. SURE claims the fixed order and named checks.

The technique

1. **Setup. Standard gynecologic positioning and preparation.**
   A fixed setup makes every case comparable.
2. **Skin. Kocher clamps grip the inferior umbilical skin and spread it flat.**
   A flat target sets the incision line.
3. **Incision. An 11 blade cuts a 5 mm skin incision.**
   Small enough to stay minimally invasive; admits the clamp.
4. **Dissect to fascia. The Kocher dissects bluntly down to the fascia.**
   Reads this patient's adipose depth before any blind step.
5. **Grasp the fascia. The clamp takes the fascia itself.**
   Held fascia has a known location.
6. **Lift and watch. The clamp lifts and the whole abdominal wall moves.**
   Wall movement confirms the tissue held is fascia.
7. **Veress through held fascia. Left hand holds the clamp, right hand drives a standard clear-hub needle. Two pops felt.**
   Fascia, then peritoneum. Held tissue makes both readable.
8. **Drop test (optional; adds little once opening pressure is read).**
   Kept by preference. The opening pressure carries the evidence.
9. **Insufflate, watching the opening pressure. Working pressure 15 mmHg.**
   Opening 8 to 10 mmHg or below; above that, stop and reposition.
10. **Confirm with the camera. Any 5 mm trocar. Inspect the entry site first.**
    Direct vision closes the confirmation chain.

> **The Kocher stays closed on the fascia until safe entry and insufflation are confirmed. Fascia is closed only if the site was enlarged.**

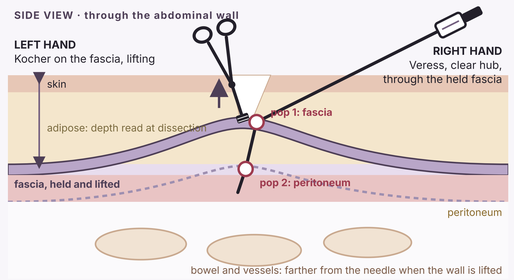
The confirmation cascade

Five checks before the trocar, set out the way a cockpit checklist is: challenge on the left, response on the right, read in order every time, even when nothing feels wrong.

SURE ENTRY	BEFORE THE TROCAR
☐ Clamp	**FASCIA, NOT SKIN**
☐ Lift	**WALL MOVES** — confirms fascia (not subcutaneous tissue)
☐ Veress	**2 POPS** — fascia, then peritoneum
☐ Opening pressure	**< 8 TO 10 mmHg** — if higher: STOP, reposition
☐ Camera	**ENTRY SITE CONFIRMED**

Read aloud, in order. Any item not confirmed: stop, reposition, read again.

What the hands feel and see

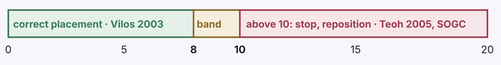


Schematic, not to scale. The clamp stays closed on the fascia until entry and insufflation are confirmed.

Evidence for the opening-pressure check

Read the opening pressure. Vilos 2003 measured it in 52 women: 8 mmHg or below always indicated correct placement. Teoh 2005, in 345 women, found the first five insufflation pressures 100% sensitive for preperitoneal insufflation, never reported below 10 mmHg. SOGC grades the 10 mmHg indicator II-1 A. The two thresholds bracket a band of 8 to 10 mmHg; the reading can vary with adipose depth and the patient. No series has measured opening pressure after a pass through held fascia.

OPENING PRESSURE AT FIRST CO2 FLOW, mmHg



8 to 10 mmHg or below is accepted; the reading varies with adipose depth and the patient.

Proposed study

Stage 1 is a prospective single-surgeon series. Every case in a row, entered by SURE, no selection, definitions set first. A retrospective audit of the author's three years and more than 300 cases comes first, to fix the definitions. Hilgers 1992 reported 243 patients and Vilos 2003 reported 259 women, so that range is the published norm. Stage 2 repeats it across surgeons once the fellowship teaches it. Reproducibility can only be tested that way. Both stages stratify by BMI, because many entry trials left out high BMI.

1. First-attempt entry success: one pass, opening pressure at or below threshold, no repositioning. Primary.
2. Number of Veress passes.
3. Opening pressure, plus the first five insufflation pressures.
4. Extraperitoneal insufflation: preperitoneal, subcutaneous, omental.
5. Time from skin incision to confirmed pneumoperitoneum.
6. Injury and conversion: vascular, visceral, solid organ, or entry by another route.

Skin-to-fascia depth is logged at dissection. It reads this patient's adipose depth.

Limits

SURE has no audited outcome data yet. The author has used it consistently at high volume for three years, more than 300 cases, with no entry complication and no failed entry, but that is an unaudited recollection, not a series. The safety argument stays a mechanism and a hypothesis, to be measured, not asserted. One surgeon, one center, no comparison group. In the study, known umbilical hernia and prior midline surgery are excluded and entered at Palmer's point. The drop test is kept by preference; the published tests show little value. Guideline statements on wall elevation address injury avoidance, not layer confirmation.

We want your feedback

SURE is a working model. It is written down so it can be argued with. If you enter differently, we want the difference: what you hold, what you feel, what you read before the trocar. If you have entry data from your own series, we want that too. Disagreement about step 8, the drop test, is especially welcome.

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Why it teaches

Steps 5 through 7 are the teachable core. The fellow feels fascia bite and hold, and feels fat slip. A fixed order builds muscle memory. Dissection depth reads adipose in real time. Two pops are felt, not guessed. Four checkpoints can be attested, each seen once and done once: fascia grasped, wall movement named, pops reported, opening pressure read aloud.

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Disclosure. The author declares no competing financial interest. Speaker honorarium and travel support for this congress were provided by IIRRM. A generative AI language model assisted with structural drafting and prose editing; all conceptual claims, citations, and quantitative data were generated and verified by the author.

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