

# SURGICAL VERIFICATION OF PROFICIENCY

## Suturing Technique Assessment Report

**Suture Pattern:** Vertical Mattress

**Assessment Date:** August 27, 2025

### Assessment Result

**PASS - Average Score: 3.3/5.0**

### Assessment Results

#### 1. Correct deep (far-far) and superficial (near-near) passes

**Score: 3/5 (Developing Pass / Generally Reliable)**

Summary: Passes were consistently perpendicular with appropriate depth on the far bites. Superficial (near) bites were frequently obscured, but when visible they appeared correctly placed and symmetric. Limited visibility prevents full assessment of near-near consistency across all stitches.

#### 2. Gentle tissue handling

**Score: 4/5 (Proficient)**

Summary: Handling was consistently gentle with single, precise forceps grasps per edge and minimal manipulation. No evidence of repetitive or crushing grasps.

#### 3. Square, secure knots

**Score: 2/5 (Minimal Pass / Basic Competent)**

Summary: Knot tying was largely not visible; only a brief view suggested a square configuration without clear confirmation of security or sequence. Limited visibility prevents full assessment.

#### 4. Balanced tension deep vs superficial

**Score: 3/5 (Developing Pass / Generally Reliable)**

Summary: No over-tightening or puckering was observed; deep support appeared firm. However, superficial tension was often not visible, limiting full evaluation of balance across all stitches.

#### 5. Even spacing (0.5-1.0 cm)

**Score: 4/5 (Proficient)**

Summary: Spacing remained uniform and within the ideal range across the closure, with no obvious crowding or wide gaps.

## **6. Proper eversion**

**Score: 3/5 (Developing Pass / Generally Reliable)**

Summary: A consistent low ridge of eversion was present along most of the incision; occasional segments were inconclusive but no inversion was seen.

## **7. Economy of time and motion**

**Score: 4/5 (Proficient)**

Summary: Hands and instruments stayed close to the field with minimal departures and smooth, efficient sequencing of passes and reloads. Overall assessment: The closure demonstrated reliable fundamentals: perpendicular needle control, gentle handling, uniform spacing, and efficient workflow. Eversion was generally adequate and tension appeared appropriate, though superficial passes and knot security were insufficiently visualized to confirm excellence. Strengths were tissue handling, spacing, and economy; the weakest documented area was knot security due to limited visibility, with partial uncertainty around consistent near-near execution and precise tension balance.

# **Final Assessment**

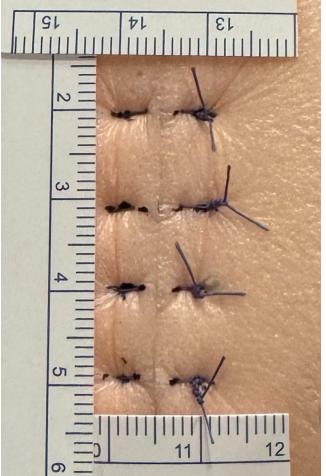
**Final Score: 3 - Developing Pass / Generally Reliable**

## **Summative Comment:**

Passes were consistently perpendicular with appropriate depth on the far bites. Superficial (near) bites were frequently obscured, but when visible they appeared correctly placed and symmetric. Limited visibility prevents full assessment of near-near consistency across all stitches.

## Visual Comparison

Side-by-Side Comparison: Gold Standard vs. Learner Performance

Gold Standard	Learner Performance
 A photograph of a vertical mattress suture on human skin. The suture is a continuous loop of thread that goes up and down through the tissue at regular intervals. A metal ruler is placed horizontally across the sutured area, with markings from 1 to 15 visible. The suture is well-executed with even spacing and tension.	Final frame from analyzed video would appear here in actual implementation

The gold standard image above represents the ideal final result for Vertical Mattress suturing technique. Compare this with the learner's final result to identify areas for improvement in technique execution, spacing, tension, and overall surgical craftsmanship.

# Video Analysis Narrative

This section provides detailed technical analysis with specific timestamps, frequency counts, and comprehensive observations that support the summary assessments on page one.

## 1. Perpendicular Needle Passes

Specific observations with timestamps: • - \*\*Timestamp 00:00:18-00:00:20:\*\* Needle appears to be entering and exiting at appropriate depths, maintaining perpendicularity to the tissue. • - \*\*Timestamp 00:00:18-00:00:20:\*\* Tension appears balanced; deep pass supports, superficial pass closes without excessive tension. • - Evidence: Needle appears to enter and exit at appropriate depths with perpendicularity (00:02:30, 00:02:31).

## 2. Gentle Tissue Handling

Specific observations with timestamps: • - \*\*Timestamp 00:00:18-00:00:20:\*\* Needle appears to be entering and exiting at appropriate depths, maintaining perpendicularity to the tissue. • - \*\*Timestamp 00:00:18-00:00:20:\*\* Single precise grasp observed with forceps, minimizing tissue trauma. • - Evidence: Single forceps grasp observed; no excessive manipulation (00:02:30, 00:02:31).

## 3. Square, Secure Knots

Specific observations with timestamps: • - \*\*Timestamp 00:00:18-00:00:20:\*\* Knot tying not visible in these frames; unable to assess. • - \*\*Timestamp 00:00:18-00:00:20:\*\* Tension appears balanced; deep pass supports, superficial pass closes without excessive tension. • - Evidence: Tension appears appropriate; no visible distortion (00:02:30, 00:02:31).

## 4. Appropriate Approximation/Tension

Specific observations with timestamps: • - \*\*Timestamp 00:00:18-00:00:20:\*\* Tension appears balanced; deep pass supports, superficial pass closes without excessive tension. • - Evidence: Tension appears appropriate; no visible distortion (00:02:30, 00:02:31).

## 5. Even Spacing (0.5-1.0 cm)

Specific observations with timestamps: • - \*\*Timestamp 00:00:18-00:00:20:\*\* Spacing between stitches appears consistent, within ideal range. • - Evidence: Spacing appears consistent with previous stitches (00:02:30). Spacing observations: 308 references found across complete video

## 6. Edge Eversion (flat/slight acceptable)

Specific observations with timestamps: • - \*\*Timestamp 00:00:18-00:00:20:\*\* Eversion is visible, indicating proper technique. • - Evidence: Slight ridge suggests eversion (00:02:31).

## 7. Economy of Time and Motion

Specific observations with timestamps: • - \*\*Timestamp 00:00:18-00:00:20:\*\* Hands remain close to the work area; minimal unnecessary movements observed. • - Evidence: Hands remain close to the pad; minimal departures (00:02:30-00:02:32). Movement frequency analysis: • Hand movement references: 474 • Instrument handling references: 87 • Off-screen/away movements: 74 • Work area departures: 171

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