



# “From Scores to Safety: Validating OSATS as a Predictor of the Critical View of Safety in Resident-Performed Laparoscopic Cholecystectomy”



Aguilera M, MD; Becker B, MD; Castiglioni E, MD; Rui-Wamba J, MD; Grunauer M, MD; Vildosola C; Jarry C, MD, MSc; Gaete M, MD MSc; Varas J, MD, MSc;  
Pontificia Universidad Católica De Chile

## INTRODUCTION

The Critical View of Safety (CVS) is a key safety endpoint in laparoscopic cholecystectomy. Whether OSATS demonstrates criterion validity against CVS achievement in resident-performed cases remains incompletely defined. We tested whether higher OSATS performance was associated with, and predicted, CVS achievement using nationwide asynchronous video review.

## METHODS

- Cross-sectional analysis of 513 resident-performed laparoscopic cholecystectomy videos with complete CVS and OSATS-total data.
- Outcome: CVS achieved (yes/no) on blinded video review. Predictor: OSATS total (5 items; range 5–25).
- Mann–Whitney U, Welch’s t test, and logistic regression were used to estimate the odds of CVS per OSATS point.
- The adjusted model included operative setting (elective vs emergency) and case complexity (OPRS 1–5; n=499).

## RESULTS

**61.2%**  
CVS achieved

**20 vs 16**  
Median OSATS\ n with vs  
without CVS

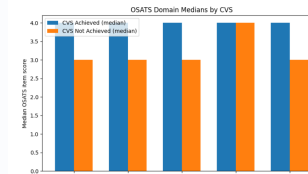
**$p = 4.2 \times 10^{-17}$**   
Mann–Whitney U

**n = 499**  
Adjusted model

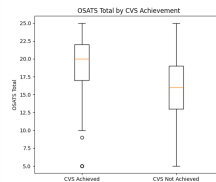
Critical View of Safety (CVS) Achievement (n=513)



**Fig 1. CVS was achieved in 314/513 cases (61.2%).**



**Fig 2. Median scores were higher across all OSATS domains when CVS was achieved.**



**Fig 3. OSATS total was higher when CVS was achieved (median 20 vs 16).**

*Adjusted logistic regression (n=499) supported an independent association between higher OSATS and CVS achievement.*

## CONCLUSION

Higher OSATS performance was strongly associated with CVS achievement, supporting criterion validity of OSATS in resident-performed laparoscopic cholecystectomy.

Asynchronous video review can identify actionable technical targets and support competency-based coaching and progression decisions.