

Benchmarking surgical videos of laparoscopic cholecystectomy in a multi-institutional cohort

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Background

Benchmarking is a well-established strategy for quality improvement across multiple disciplines. However, benchmarking analyses of laparoscopic surgical videos remain limited.

To perform a benchmark analysis of laparoscopic cholecystectomy (LC) videos using an AI-based platform.

Methods

Prospective multi-center cohort (**5 centers, 2859 cases**) SurgSmart AI automated analysis system. Operative time, step duration, bleeding events, instrument usage applied "Achievable Benchmark of Care" (ABC) method

LC-Benchmark-Time

Operative time 17 min

mobilization of the hepatocystic triangle 4 min

gallbladder dissection from the liver bed 4 min

clear operative field 6 min

LC-Benchmark-Other Values

Instrument Usages

9

Clippings

5

Scissor Cuts

1

Bleeding Events

1

Critical View of Safety (CVS) Score

4/ 6

 Conclusion: Establishing objective data-driven surgical quality improvement targets