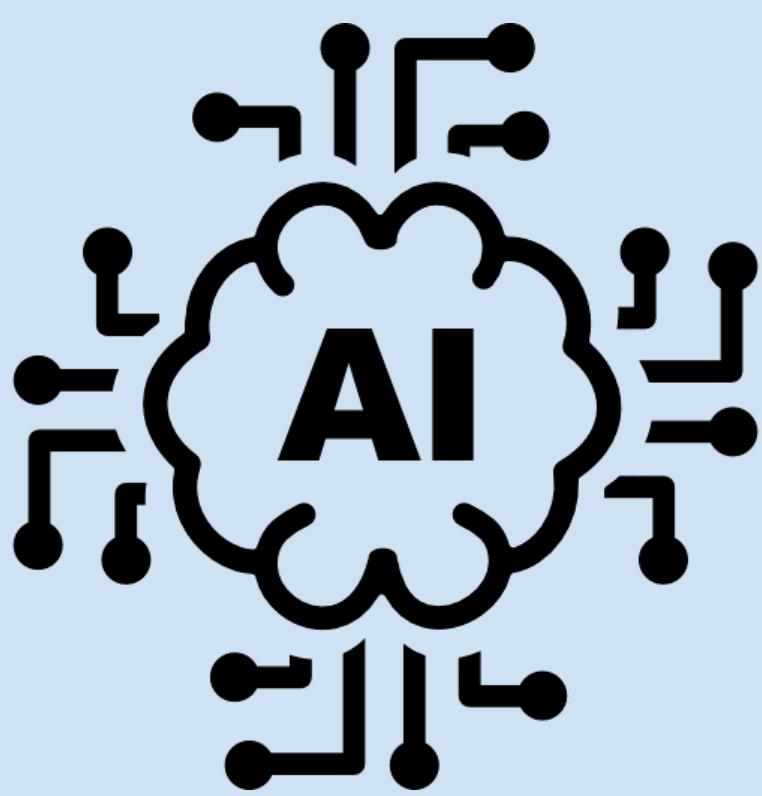


Artificial Intelligence (AI) Applications in General Surgery in the United States: A Bibliometric Analysis

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CONTEXT

Evaluating the current state of AI applications and mapping their bibliometric landscape is essential to guide research development and anticipate future trends



SEARCH STRATEGY



("AI" OR "Artificial Intelligence" OR "Computer Reasoning" OR "Machine Intelligence" OR "Computer Vision System" OR "Computer Vision") AND ("Surgery" OR "General Surgery" OR "Surgical Conditions" OR "Surgical Procedures" OR "Operative Procedures" OR "Laparoscopy" OR "Laparotomy" OR "Robotic Surgery" OR "Minimally Invasive Surgery").

AIM

To analyze the productivity and thematic focus of research connecting general surgery topics and AI in the United States.

METHODOLOGY

Bibliometric search - Web of Science Database
Between 2020 and 2025
Annual publication trends, institutions, author and source-specific metrics, country collaborations and endpoints.



RESULTS

59 Studies were included. 39/66% original 20/33% reviews
Most (17/29%) were published in 2023

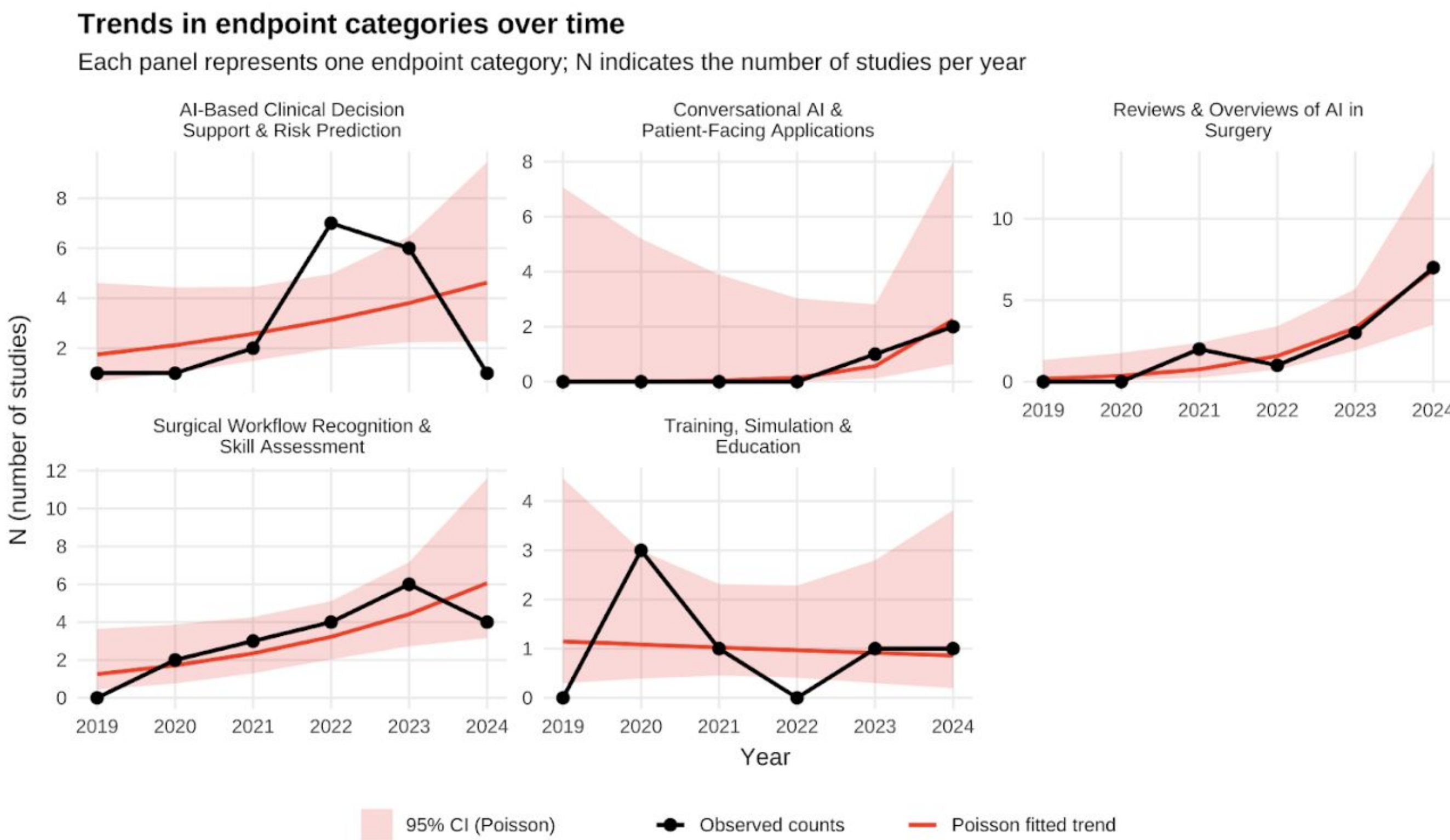
The most frequent topic was "Surgical workflow recognition and skill assessment" (19/32.2%)

The leading journals were "Surgical Endoscopy" (9/15.3%) and "Surgery" (6/10.2%)

Institutional collaboration was reported in 18 studies (30.5%). The United Kingdom was the top international partner, followed by Canada.

Massachusetts General Hospital was the most productive U.S. institution.

Funding was mostly governmental, although most studies declared none.



CONCLUSION

AI-related surgical research has grown steadily, particularly in workflow and phase recognition. Expanding patient-facing applications and physician training could enhance education, improve care delivery, and reduce workload nationally and globally.