

Survey-based assessment of market readiness for single-use duodenoscopes in Europe – will single-duodenoscopes be the future?

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Keywords: single-use; duodenoscopes; ERCP

Objective

Contaminated patient-ready duodenoscopes used for endoscopic retrograde cholangiopancreatography (ERCP) procedures have caused multiple infection outbreaks worldwide¹. Due to a complex design, duodenoscopes are difficult to reprocess properly, leading to new innovative single-use duodenoscopes entering the market.

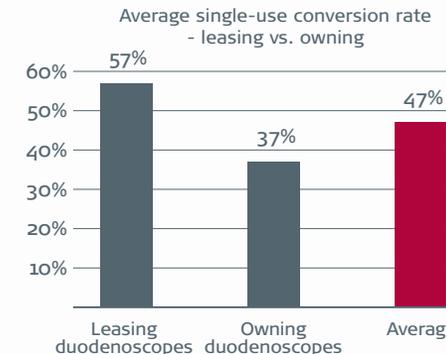
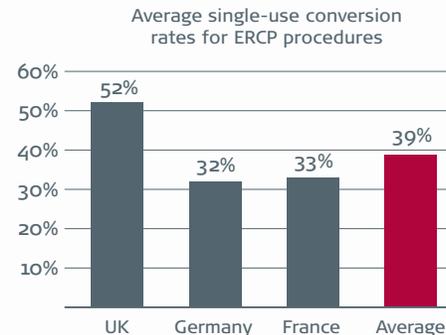
The aim of this study was to assess the perception of single-use duodenoscopes and investigate the market readiness for adopting the new single-use technology amongst the three largest markets in Europe.

Methods

Between February 17, 2020 and March 16, 2020 a total number of 105 gastroenterology physicians performing ERCPs answered an electronic survey about their willingness to convert from reusable duodenoscopes to single-use duodenoscopes. The survey was conducted amongst 35 ERCP physicians in France, Germany, and UK, respectively. Data were collected using QuestionPro and analyzed in Microsoft Excel.

Results

Across France, Germany, and UK, ERCP physicians would on average convert 39% of their conventional ERCP procedures to be performed with single-use duodenoscopes. In the UK, ERCP physicians would on average convert more than half of all their ERCP procedures to be performed with single-use duodenoscopes (52%). Germany and France would on average convert 32% and 33% of the procedures, respectively. Physicians who are currently leasing their duodenoscopes will on average convert 57% of their ERCP procedures from reusable to single-use duodenoscopes. This is a significantly larger share, relative to physicians who owns all duodenoscopes, who on average will convert 37% of all ERCP procedures ($p = 0.029$).

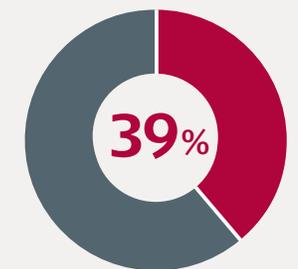


Additionally, physicians who are members of value committees had a significantly higher rate of willingness to convert from reusable to single-use duodenoscopes compared to non-members of value committees (48% vs. 35%, $p = 0.021$). When asked about the most important qualities associated with single-use duodenoscopes, "cost transparency" ranked the highest (23%) followed by "eliminated risk of cross-contamination" (20%) and "availability" (19%).

Conclusion

This study found that there is an interest for adopting the innovative single-use duodenoscopes for ERCP procedures in European countries. Results show that endoscopy units currently leasing duodenoscopes would convert a significantly higher share of ERCP procedures to be performed with single-use duodenoscopes.

Physicians who are members of value committees were more inclined to convert more procedures to single-use.



Average single-use conversion rate

References

1. R. V. Rubin, Zachary A., Kim, Stephen, Thaker, Adarsh M., Muthusamy, "Safely reprocessing duodenoscopes: current evidence and future directions," *Lancet Gastroenterol Hepatol*, vol. 3, no. 1, pp. 499-508, 2018.