

TREND IN OPEN AND LAPAROSCOPIC APPENDECTOMY RATES ACROSS CENTRAL AND EASTERN EUROPEAN COUNTRIES (2015-2024)

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OBJECTIVES

The general time of the treatment of many invasive interventions have been reduced due to the minimal-invasive surgery (MIS). MIS has a paramount importance in many countries having advanced healthcare system. The purpose of the study is to compare international trends in open and laparoscopic appendectomy rates across Central and Eastern European countries.

METHODS

A retrospective comparative analysis was conducted based on surgical data from Central and Eastern Europe for the period 2015-2024. The study database was the OECD Data Explorer for Health Statistics. Appendectomy rates were analyzed per 100,000 population across three intervals (2015-2019, 2020-2022, 2023-2024), stratified by surgical approach (open vs. laparoscopic). Cumulative inpatient and day-case turnover and average proportional distributions of surgical techniques were also assessed.

RESULTS

In Central Europe, open appendectomy rates remained relatively stable (≈ 70 – $165/100,000$) with a slight recent decline, while laparoscopic rates increased steadily. In Eastern Europe, open surgery remained dominant despite a decrease over time, and laparoscopic rates were substantially lower. Inpatient care accounted for $>99.8\%$ of cases in both regions, with negligible day-case surgery ($\leq 0.14\%$). MIS adoption was markedly higher in Central vs. Eastern Europe (42.31% vs. 14.29%).

CONCLUSIONS

Substantial regional differences persist in appendectomy practice across Europe. Despite technological advances, appendectomy continues to be delivered almost exclusively as inpatient care in both regions

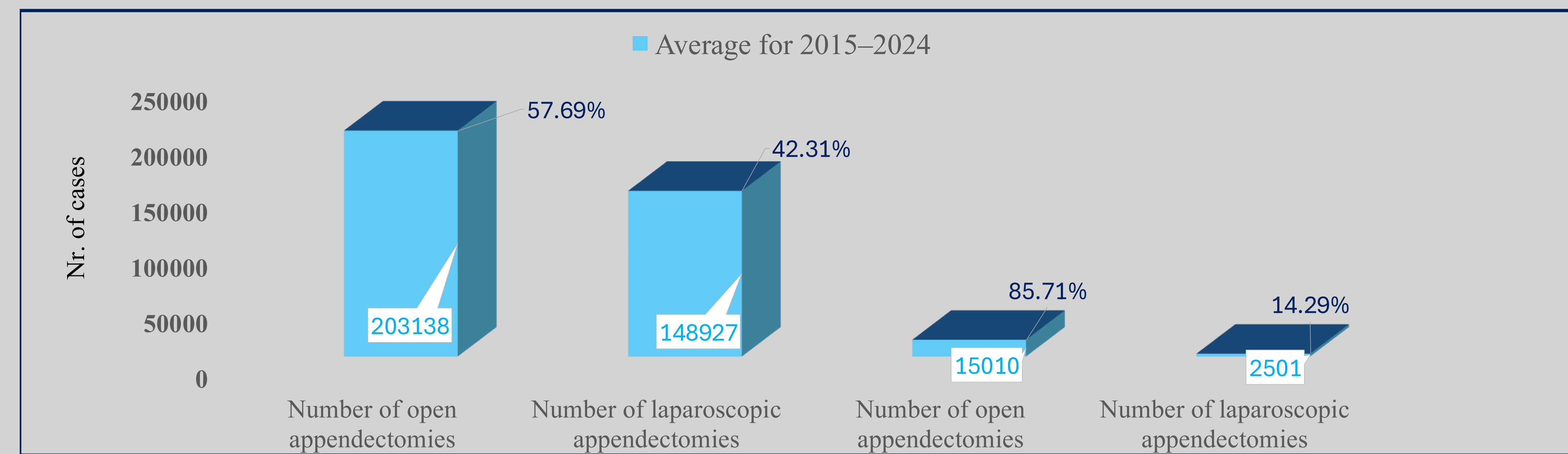


Figure 1.

Significant Regional Disparities in Minimally Invasive Appendectomy Adoption, whit percentage of patients in this category, calculated relative to the total number of patients (2015–2024)

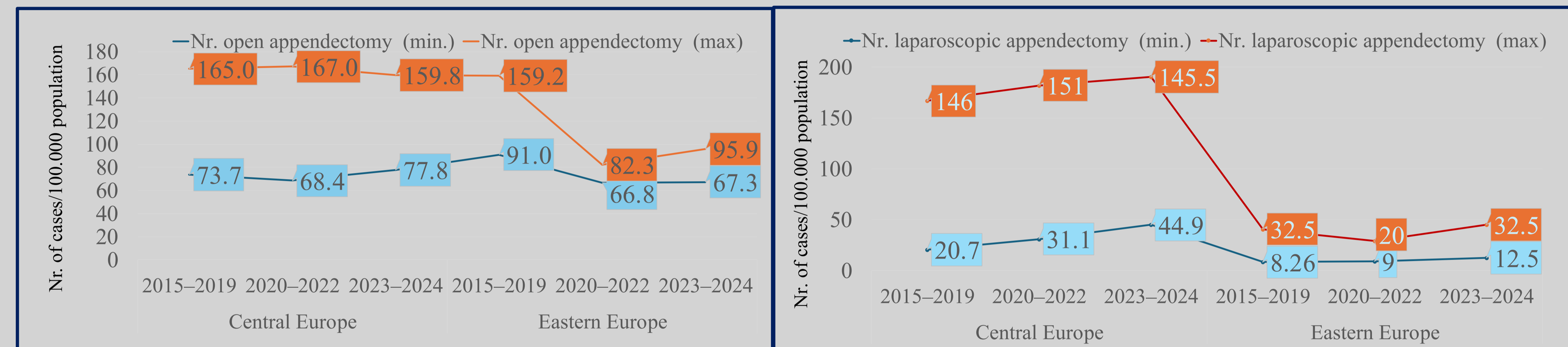


Figure 2.

Regional Differences in Open Appendectomy Rates in Central and Eastern Europe (2015–2024)

Figure 3.

Regional Differences in Laparoscopic Appendectomy Rates in Central and Eastern Europe (2015–2024)

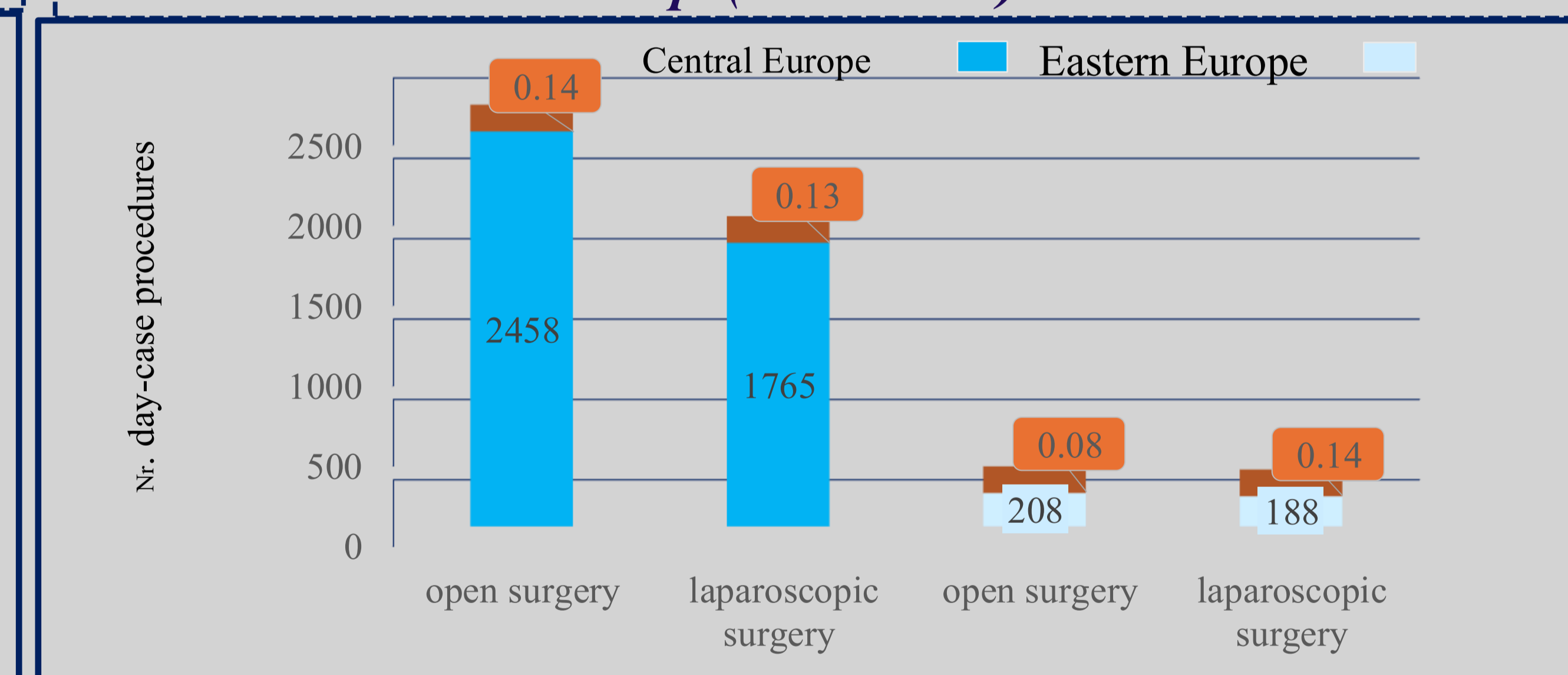
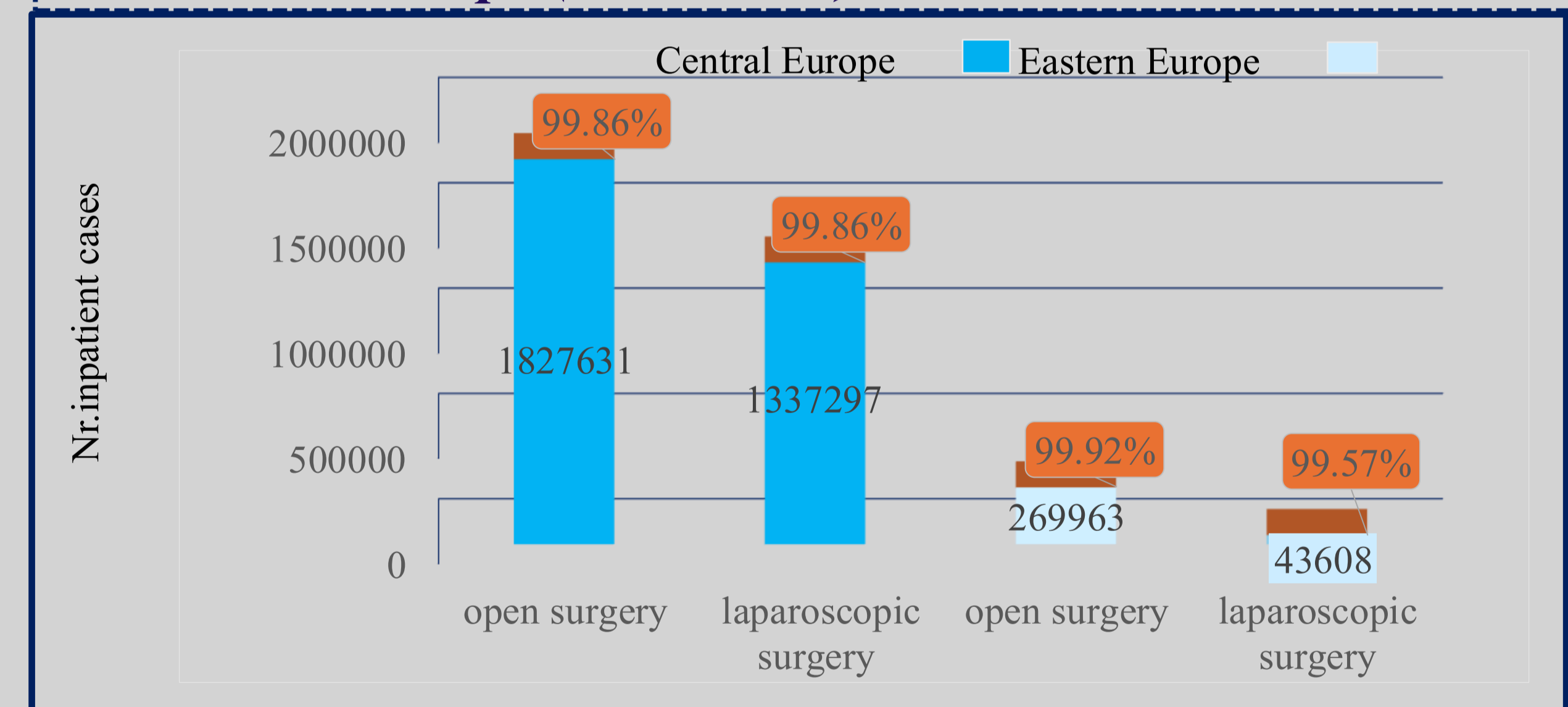


Figure 4.

Regional Differences in inpatient cases Rates in CEE (% calculated to the total nr. procedures)

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