



Quality Assurance: Performing Complex Endoscopic Procedures in the Slovenian National Program for Early Detection and Prevention of Colorectal Cancer “SVIT”

Milan Stefanovič

Diagnostic Center Bled, Pod skalo 4, 4260 Bled, Slovenia

Correspondence: Milan.Stefanovic@dc-bled.si

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Colorectal cancer (CRC) is a significant health issue in Slovenia, with an incidence of 61.3 per 100,000 in 2021, ranking sixth in the EU. The SVIT program, launched in 2009, screens ~600,000 individuals aged 50–74 biennially using immunochemical fecal tests, referring positive cases for colonoscopy. Quality of endoscopic procedures is vital to reduce interval CRC and complications. Since 2015, a multidisciplinary council has centralized complex procedures (e.g., endoscopic submucosal dissection [ESD], wide-field endoscopic mucosal resection [WEMR]) to two specialized centers. From January 2015 to March 2025, 1,531 cases were reviewed: 759 patients with advanced lesions and 416 with initial carcinoma. Centralized procedures improved curative R0 resection rates (91% post-council vs. 51% pre-council) and reduced perforations from 0.092% (2009–2016) to 0.014% (2017–2021). Quality assurance, with adenoma detection rate (ADR) nearing 60% and sessile serrated lesion (SSL) detection over 13%, contributed to a 3% annual CRC incidence decline and improved five-year survival from 54% (2000–2004) to 62% (2010–2014). These results highlight the role of specialized expertise and quality control in enhancing endoscopic therapy outcomes.

INTRODUCTION

In Slovenia, colorectal cancer (CRC) affects 1,344 individuals annually (2017–2021), with a prevalence of 12,443 in 2021 [1]. The SVIT program, started in 2009, screens individuals aged 50–74, reducing CRC incidence by 3% annually for men and 2% for women since 2010 [1]. Mortality has decreased by 1.5% yearly post-2010, driven by improved endoscopic and surgical treatments [2]. High-quality colonoscopies for complex lesions are critical. Our study assesses centralized endoscopic procedures and quality assurance in SVIT.

MATERIALS AND METHODS

SVIT screens ~600,000 individuals using fecal tests, with positive cases referred for colonoscopy. Quality indicators (ADR, SSL detection) were monitored across 29 centers from 2009 to 2015 [3]. Since 2015, a council has referred complex cases to two centers for ESD or WEMR. Data from 1,531 cases (2015–2025) were analyzed for R0 resection rates and complications.

RESULTS

From 2009 to 2015, colonoscopies achieved a 98% completion rate, with ADR at 51.8% and SSL detection at 3% [3]. Post-2015 centralization increased ADR to ~60% and SSL detection to > 13%. Of 1,531 cases, 759 advanced lesion patients underwent treatment (687 endoscopic), achieving 91% R0 resections vs. 51% for 416 pre-council cases. Perforations fell from 0.092% (2009–2016) to 0.014% (2017–2021). CRC incidence dropped 3% annually, with five-year survival rising from 54% to 62% [4].

DISCUSSION

Centralization improved R0 resection rates and reduced complications. The council minimizes unnecessary surgeries, with ESD and WEMR nearing Asian standards (86% vs. 93% R0) [5]. Quality assurance addresses missed (50%) and incompletely resected (20%) lesions causing interval CRC [6]. Technological advances further lower risks. Future studies will evaluate interval CRC reduction.

CONCLUSION

SVIT's success in reducing CRC incidence and mortality underscores the value of centralized endoscopic procedures and quality assurance. High R0 resection rates and low complications support expanding clinical registries to optimize outcomes.

References

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