

Abstract

Colonoscopy is used in colorectal cancer (CRC) screening either as an independent screening method (screening colonoscopy) or following a positive result of a primary screening test (eg. fecal occult blood test, FOBT). Preventive colonoscopy is the collective name for screening and FOBT+ colonoscopy.

Due to the considerable variability in the detection of colorectal neoplasia between individual endoscopists, colonoscopy quality indicators were introduced. Adenoma detection rate (ADR) and polyp detection rate (PDR) are defined as the proportion of colonoscopies in which at least one adenoma (for ADR) or polyp (for PDR) was detected to the total number of colonoscopies performed. ADR is considered a key indicator of the quality of colonoscopy. Adenoma per colonoscopy (APC), defined as the total number of adenomas detected relative to the total number of colonoscopies performed, is the most accurate indicator currently available. However, APC limit values have not yet been set. Both ADR and APC are validated indicators, but their evaluation is time-consuming and personnel-intensive, which limits their use in clinical practice.

The main purpose of the presented work is to simplify the monitoring of colonoscopy quality by introducing a more user-friendly indicator, which does not require histological verification and has the potential to increase endoscopist compliance. Such an indicator is PDR. The aim of the work was to describe the correlation of PDR to ADR and to APC respectively, then to determine the conversion factors for estimating ADR and APC from PDR.

In the prospective multicenter study 1,614 asymptomatic individuals aged 45-75 years with preventive colonoscopy were included. Based on the Spearman correlation coefficient, the PDR/ADR and PDR/APC correlations were shown to be strong and statistically significant. Conversion factors were determined based on linear regression. The minimum required ADR standard of 25 % then corresponds to a PDR of 35 %. A minimum required standard of 0.5 was defined for APC. The results of the presented prospective study are comparable with the available retrospective data. PDR is an effective and readily available quality indicator that can be used to evaluate the detection of colorectal pathologies instead of ADR or APC.