

INTRODUCTION

Colorectal cancer is a common malignant tumor of the digestive system and a major cause of cancer-related deaths, while colonoscopy is the gold standard for colorectal cancer screening. Bowel cleansing is a crucial step before colonoscopy, where bowel cleansing agents play an important role in cleansing. Among all the bowel cleansing agents, sodium picosulfate (SPMC) and polyethylene glycol (PEG) are two types widely used in clinical practice.

RESULTS

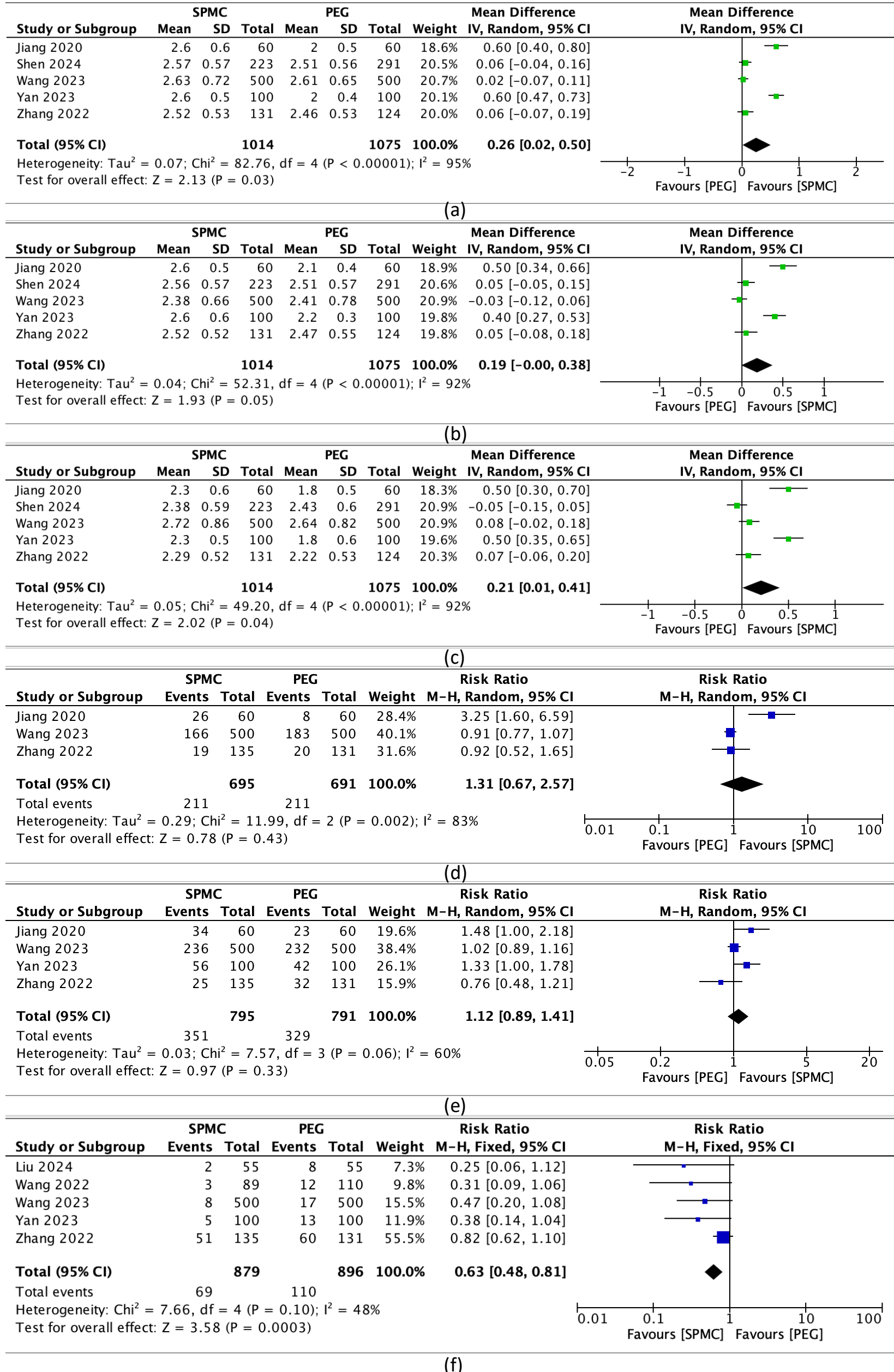
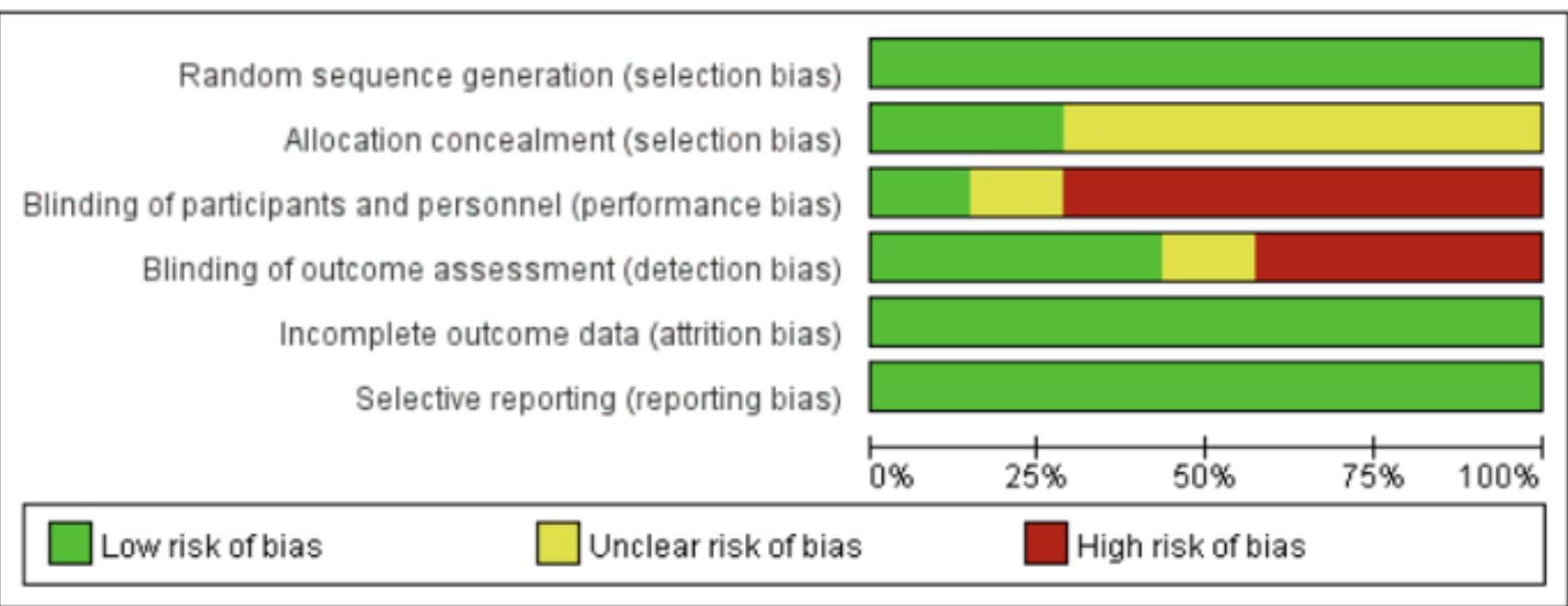
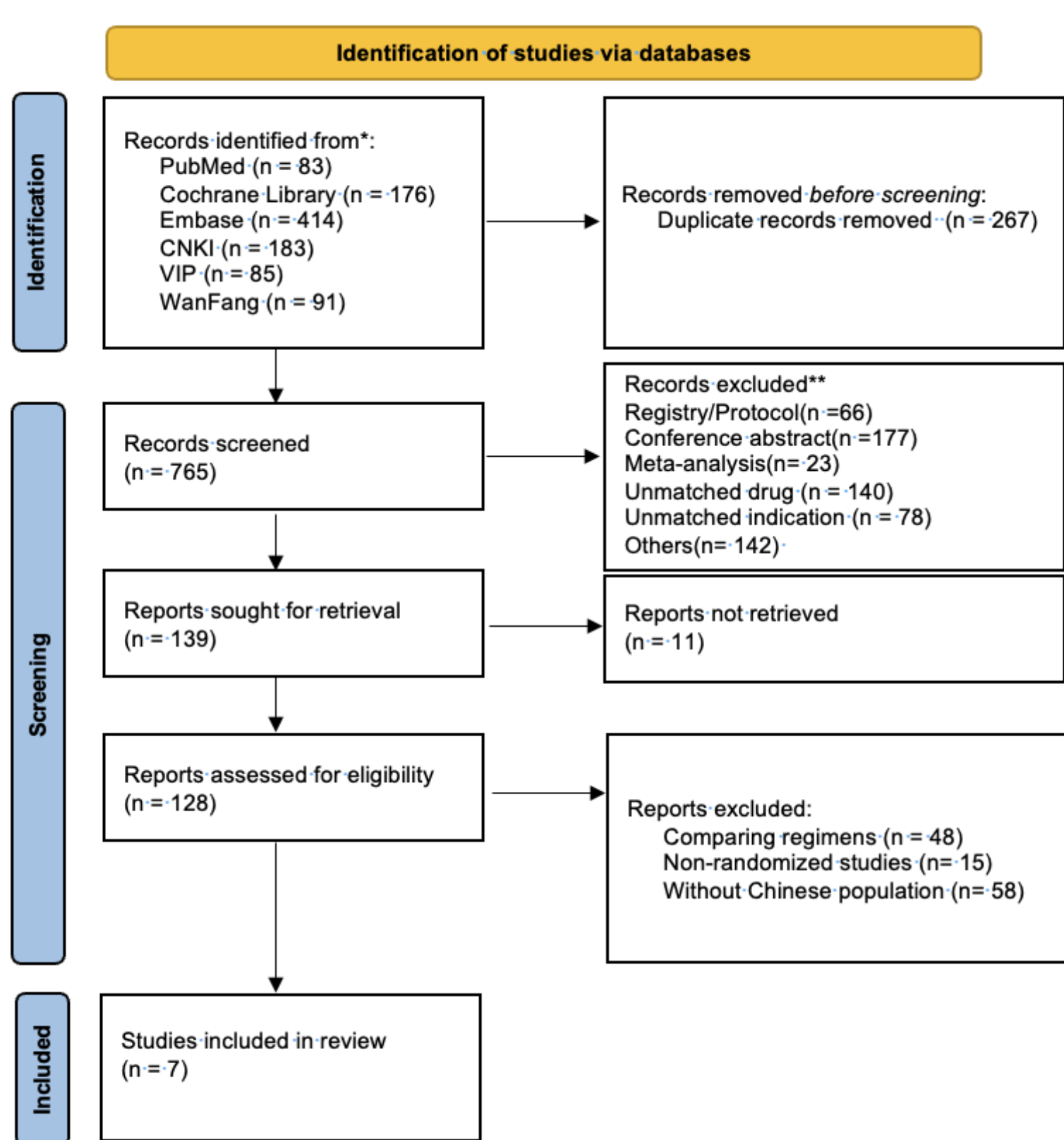
Seven studies were included in the analysis. The Cochrane risk-of-bias tool indicated an unclear overall risk of bias for most studies, especially regarding allocation concealment. Regarding BBPS scores, no statistically significant difference was observed between the two agents in transverse colon cleanliness (MD 0.19; 95% CI 0.00 to 0.38). However, SPMC demonstrated superior efficacy over PEG in left colon cleanliness (MD 0.26; 95% CI 0.02-0.50) and right colon cleanliness (MD 0.21; 95% CI 0.01-0.41). SPMC showed higher ADR compared to PEG with no statistically significant difference (RR 1.31; 95% CI 0.67-2.57), while similarly there was no statistically significant difference in PDR between the agents (OR 1.12; 95% CI 0.89-1.41). The overall incidence of AEs was significantly lower with SPMC than with PEG (RR 0.63; 95% CI 0.48-0.81), indicating better safety for SPMC.

OBJECTS

Previous studies comparing the efficacy and safety between SPMC and PEG for colonoscopy preparation in Chinese populations have reported inconsistent results. We therefore conducted a meta-analysis to compare the performance of these two agents for colonoscopy in Chinese patients.

METHOD

We systematically searched PubMed, Cochrane Library, Embase, CNKI, VIP and WanFang Data for studies evaluating the efficacy or safety of these two bowel cleansing agents in Chinese populations. The primary effectiveness endpoint was the Boston Bowel Preparation Scale (BBPS), with secondary endpoints including polyp detection rate (PDR) and adenoma detection rate (ADR). Safety outcomes involved the incidence of adverse events (AEs).



(a) Forest plot of BBPS in left colon; (b) Forest plot of BBPS in transverse colon; (c) Forest plot of BBPS in right colon; (d) Forest plot of ADR; (e) Forest plot of PDR; (f) Forest plot of the incidence of AEs.

Abbreviation: BBPS Boston Bowel Preparation Scale, ADR Adenoma Detection Rate, PDR Polyp Detection Rate, AEs Adverse Events

CONCLUSION

In Chinese populations, SPMC demonstrates better bowel preparation efficacy as measured by BBPS in the left and right colon. Meanwhile, SPMC exhibits a more favorable safety profile. However, due to limitations in study quality and sample size, additional real-world evidence is required to validate these findings.

REFERENCES

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