

Supplementary Table 1. Core technical components and DOPS-based assessment framework of the standardized colonoscopy training program

Domain	Procedural component	Core training and assessment focus
Basic manipulation skills	Understanding the structure of the endoscopic system	Familiarity with the endoscopic system and its basic components
	Left-hand control	Appropriate use of air, water, suction control, and control wheels
	Right-hand manipulation	Appropriate torque control and jiggling during scope manipulation
	Coordinated use of both hands	Smooth bimanual coordination during scope handling and advancement
Anatomical understanding & documentation	Recognition of the anatomical characteristics of each colonic segment	Correct recognition of major segmental anatomy during colonoscopy
	Image documentation of key anatomical landmarks	Appropriate identification and documentation of key anatomical landmarks
Insertion & advancement skills	Advancement through the rectosigmoid junction	Safe and effective advancement through the rectosigmoid junction
	Advancement through the splenic flexure	Appropriate navigation through the splenic flexure
	Advancement through the hepatic flexure	Appropriate navigation through the hepatic flexure
	Successful cecal intubation	Successful completion of insertion to the cecum

Each item was rated by faculty using a 3-point scale: Excellent, performed smoothly and appropriately without major correction; Satisfactory, performed with minor correction or partial assistance; Needs improvement, unable to perform adequately or required substantial guidance.

DOPS, Direct Observation of Procedural Skills.