

IMPROVEMENT OF COLONOSCOPIC IMAGE QUALITY USING A NEW LED ENDOSCOPIC SYSTEM WITH SPECIALIZED NOISE REDUCTION

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Poster

Colorectal

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A multicenter observational study comparing a new LED endoscopy system (EP-8000 with EC-860ZP) to a previous system found significantly improved brightness, reduced halation, and enhanced lesion visibility across white light, blue light, and linked color imaging modes.

KEY POINTS

- The study enrolled 150 patients across three groups at two institutions from January 2024 to January 2025, comparing the new EP-8000 with EC-860ZP colonoscope against the previous VP-7000 with EC-760ZP system.
- For cecal images, the new system achieved significantly better endoscopist scores for brightness and halation in all imaging modes, with white light imaging brightness scores of 3.71 ± 0.55 versus 3.51 ± 0.58 ($p < 0.001$) and halation scores of 3.60 ± 0.51 versus 3.18 ± 0.59 ($p < 0.001$).
- Software analysis confirmed superior brightness values for the new system across all modes: white light imaging 122.7 ± 6.6 versus 110.7 ± 7.7 ($p < 0.001$), blue light imaging 99.1 ± 10.9 versus 69.3 ± 11.5 ($p < 0.001$), and linked color imaging 139.4 ± 9.2 versus 113.1 ± 10.7 ($p < 0.001$).
- Lesion images showed significantly better brightness, halation, and visibility with the new system across all imaging modes, and software assessment correlated with endoscopist evaluation, supporting its use for objective system development and validation.
- Several authors disclosed financial relationships with Fujifilm, and the endoscopic systems were lent by the manufacturer.

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