Special Issue

Innovations in Hollow Viscera Imaging: Engineering Breakthroughs and Clinical Translation

Message from the Guest Editors

Here's a concise version:

Bioengineering Advances in Hollow Viscera Imaging

Imaging hollow abdominal viscera faces challenges like dynamic morphology and low contrast. Emerging bioengineering solutions—such as swallowable capsules, Al-enhanced reconstruction, and functional impedance mapping—are improving resolution, reducing invasiveness, and enabling functional assessment.

This Special Issue highlights innovations bridging technology and clinical use, including:

- High-resolution functional imaging
- Minimally invasive micro-robotic devices
- Computational modeling of viscera–wall interactions
- Al-driven diagnostics (e.g., generative Al, reinforcement learning for Crohn's detection)
- Advanced materials (e.g., stretchable sensors, enzyme-activated markers)
- 3D-printed phantoms, smart stents, and biomarker chips

We welcome research on magnetic actuation, optoacoustic probes, CFD analysis, biocompatibility, cybersecurity, and cost-benefit evaluations.

Guest Editors

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Impact Factor 3.7 CiteScore 5.3 Indexed in PubMed



mdpi.com/si/237781

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Message from the Editor-in-Chief

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Editor-in-Chief

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