Pablo Laiz[1]
Ian Io Lei[2]
Ramesh P. Arasaradnam[2]
Hagen Wenzek[1]

(1) GI Digital, Inc., New York, NY, USA
(2) Department of Gastroenterology, University Hospitals Coventry and Warwickshire NHS Trust, Coventry, UK

Getting Capsules Into Patients
Using AI to Remove a Critical Barrier in Scaling Accurate GI Diagnostics

GI Digital
The Tele-GI Company

University Hospitals **NHS**
Coventry and Warwickshire
NHS Trust

01. Video Capsule Endoscopy

Minimally-invasive GI Diagnostic *Technology* with great potential

- Vitamin-pill sized camera capsule
- 2-to-15-hour non-linear video
- Up to 400,000 detailed images
- Diagnostic yield as high as tube-based endoscopy and higher than stool tests
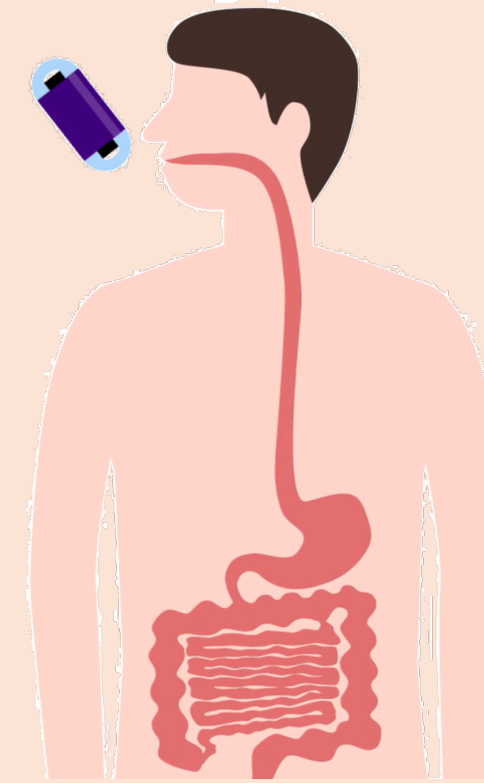
02. Challenge

Video Capsule Endoscopy Diagnostic *Process* lacks adoption

- High effort to identify or rule out pathology
- Tiring to analyze multiple videos
- Costly to conduct the procedure

03. SaMD Development

AI/ML-based Software-as-a-Medical-Device (SaMD) expert support tool for image interpretation: AiSPEED™

- Probability-based image resorting: Effort reduced from 30–120 min to 10–20 min per video
- Process automation: Consistency improved from 81% to 91% average sensitivity
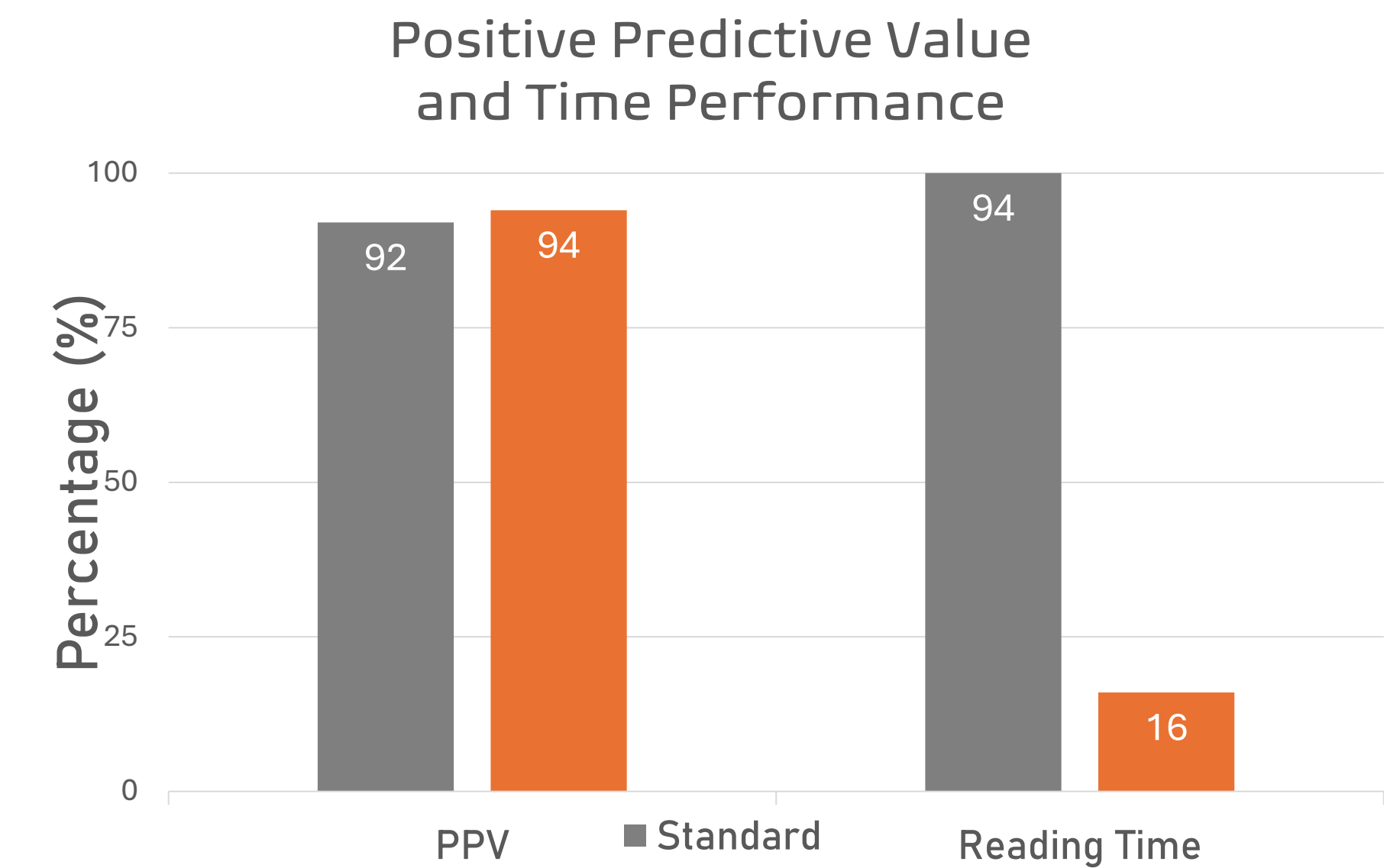→ ¼ cost per interpretation at same or better diagnostic yield

Find out more details about the results:

04. Revision Pipeline

AiSPEED™

From Time-Based Presentation
To Probability-Based Presentation
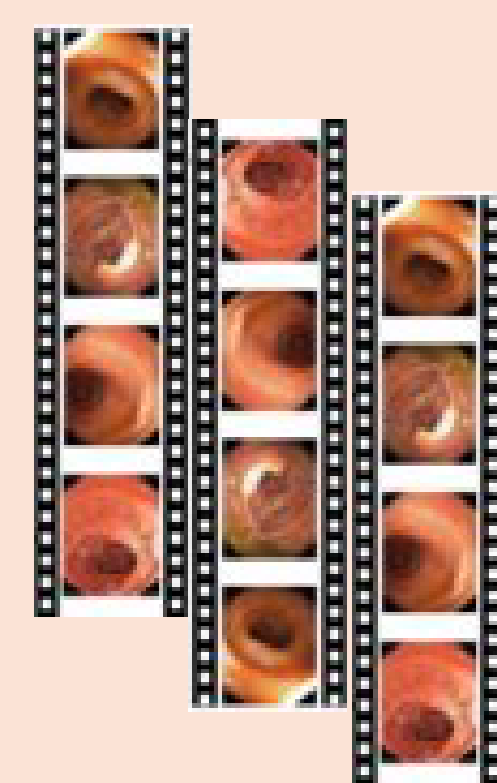
0.93%   86.30%

95.78% 03:18:05

05. Clinical Validation

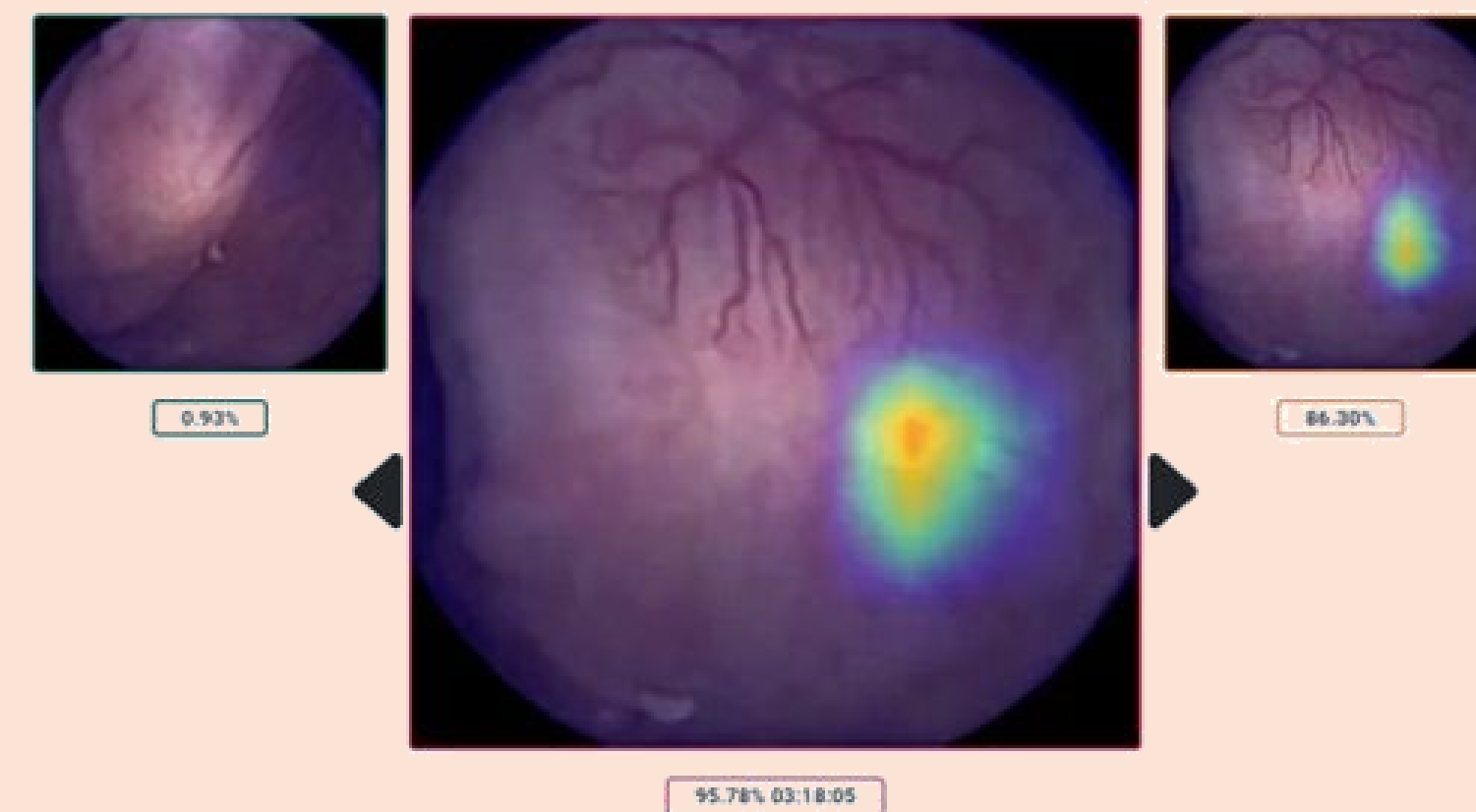NIHR (UK National Institute for Health and Care Research) funded study to validate accuracy and productivity

- n = 720 Prospective & Retrospective
- 13 NHS sites in England and Scotland

Positive Predictive Value and Time Performance

	PPV	Reading Time
Standard	92	94
	94	16

Percentage (%)

Ready for Class I Certification UKCA | CE | FDA

bsi ISO 13485 Quality Management for Medical Devices CERTIFIED

06. Outlook

- Enable whole gut video analysis
- Conduct patient risk assessment
- Standardize automated report generation

Resource preserving, high-quality, cost-effective GI diagnostics everywhere for everyone

Reference and Supplementary Materials

For an in-depth information, additional resources and references, scan the QR code, visit our website at https://gi.digital, or contact us at info@gi.digital