COURSE OBJECTIVES

- Provide clinicians with a clear, accessible understanding of how AI works and where it can enhance gastroenterology
- Train participants in the practical interpretation, validation, and safe application of AI tools (CADe, CADx, CADq)
- Offer real clinical examples across the digestive tract — from detection to diagnosis and quality assurance
- Discuss regulatory, ethical, and implementation challenges relevant to clinical adoption
- Evaluate participants' knowledge and readiness through a final structured assessment

COURSE PROGRAM

09h00 Welcome and Introduction

Topics:

- Opening remarks
- Course goals, structure, and expected outcomes
- Overview of AI's transformative potential in digestive healthcare

09h15 SESSION I – AI FOR DUMMIES: THE BASICS EVERY CLINICIAN SHOULD KNOW

Chair: Miguel Mascarenhas

Focus:

- What is Artificial Intelligence? (CADe, CADx, CADp, CADq explained simply)
- How AI "sees" medical images — an intuitive explanation of deep learning
- Myths and realities: AI is not magic, but mathematics
- Understanding datasets, bias, and why validation matters

Interactive Element:

- Short "AI Mythbusters" quiz to check intuitive understanding

Learning Outcome:

- Participants gain accessible, jargon-free foundations for interpreting AI concepts confidently

10h00 SESSION II – AI IN REAL ENDOSCOPY PRACTICE: LESION DETECTION and PROGNOSTICS

Chairs: Bruno Rosa | Maria José Temido

Focus:

- CADe systems in colonoscopy, upper GI, and capsule endoscopEvidence on ADR, PDR, and miss-rate reduction
- When AI helps — and when it can mislead
- Operator–AI synergy: vigilance, attention, and feedback
- CADp systems is Inflammatory Bowel Diseases (IBD) and Colorectal anastomic dehiscences

Learning Outcome:

- Recognize where AI can meaningfully enhance lesion detection and impact prognosis

11h15 Coffee Break

11h30 SESSION III – AI FOR CHARACTERIZATION, DECISION SUPPORT and QUALITY OF CARE

Chairs: Miguel Mascarenhas e Bernardo Moura

Focus:

- CADx: differentiating neoplastic from non-neoplastic lesions
- Real-time "optical biopsy" and its diagnostic accuracy
- Capsule enteroscopy and high-resolution manometry decision-making assisted by AI
- Role of AI in bilio-pancreatic endoscopy in lesion characterization;
- CADq for mucosal coverage, withdrawal time, and completeness monitoring;
- Using AI for quality metrics auditing, training, and feedback

Learning Outcome:

- Confidently interpret AI visual outputs to guide endoscopic decision-making
- Understand how AI improves quality, consistency, and procedural standardization

13h00 Lunch Break

14h30 LIVE – SESSION – GI Genius ® Medtronic

15h00 SESSION V – IMPLEMENTATION, REGULATION and FUTURE DIRECTIONS

Chair: Luís Lourenço

Focus:

- How to validate AI tools before clinical use
- CE marking, FDA pathways, and PCCP (Predetermined Change Control Plans)
- Data governance, privacy, and accountability in practice
- Integrating AI safely into clinical units and electronic workflows
- Emerging technologies and multidisciplinary collaboration
- How to build a culture of AI literacy within endoscopy units

Discussion and Debate:

- "Who is responsible when AI fails?" – shared decision-making and liability

Learning Outcome:

- Identify practical steps to implement and validate AI tools safely in hospitals
- "From innovation to clinical routine: where should Portugal lead?"

15h45 Coffee Break

16h00 FINAL EXAM AND CERTIFICATION

Format:

- 20-question multiple-choice digital exam
- Immediate feedback and collective correction
- Certification of successful completion (SPG–NIAG)

Exam Scope:

- Covers fundamental concepts, clinical interpretation, validation, and implementation principles

Outcome:

- Participants receive a Certificate of Competency in AI in Digestive Healthcare

16h45-17h00 END OF COURSE AND CLOSING REMARKS