Odin Vision

CADU: AI in the Oesophagus

Case study: Barrett's with Dysplasia
Dr Rehan Haidry, BSc (Hons), MBBS, MD, FRCP
Consultant gastroenterologist and interventional endoscopist at University College Hospital, London. Associate Professor at University College London. Clinical Collaborator with Odin Vision

The clinical challenge

Oesophageal cancer has a 5-year survival rate of less than 20% and it is one of the six less survivable cancers[1].

Studies have shown that up to 25% of early cancers in the oesophagus are missed during endoscopy procedures[2].

CADU is an artificial intelligence system that aids endoscopists to characterise Oesophageal tissue.

CADU is an Artificial Intelligence system that analyses regions visually consistent with Barrett's Oesophagus and provides information to aid the user to characterise the tissue as dysplastic or non-dysplastic.

[1] Thrift AP. The epidemic of oesophageal carcinoma: Where are we now?. Cancer Epidemiol 2016; 41: 88-95

[2] Visrodia K, Singh S, Krishnamoorthi R et al. Magnitude of missed esophageal adenocarcinoma after Barrett's esophagus diagnosis: A systematic review and meta-analysis. Gastroenterology 2016; 150: 599-607

Patient background

5 years ago, a 65-year-old man experienced symptoms of reflux. He was referred by a gastroenterologist for a gastroscopy. During the course of the procedure, Barrett's oesophagus was diagnosed, biopsies were taken and a 5-year follow-up procedure was recommended.

Gastroscopy with CADU

Dr Rehan Haidry performed the 5-year surveillance gastroscopy with the support of Odin Vision's CADU system.

During inspection of the oesophagus CADU detected a subtle abnormal area in the Barrett's segment in the oesophagus in keeping with dysplasia/ early cancer. Dr Haidry performed a curative endoscopic resection of the abnormal area during the same endoscopic session.

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Dr Haidry on CADU

"Lesions arising in Barrett's are often very subtle and can be overlooked by experienced endoscopists. I have myself been caught out occasionally and therefore anything we can use to enhance our decision making and real-time sampling is invaluable"

"Enhanced Decision Making"

"Using the CADU system was extremely straightforward and very intuitive to use. In our patient it was accurately able to support my interpretation of a very subtle area of abnormality. The system was clear and visibly easy to interpret but also did not add any extra time to the procedure. If anything, it enhanced decision-making and reduced the time I would have taken to inspect the oesophagus. This is only the start - AI will be a significant development for our evaluation of patients with this premalignant condition, allowing us to improve detection and guide therapy."