

### Deep learning for prediction of colorectal cancer outcome ...

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)32998-8](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)32998-8)

Feb 01, 2020 · Deep learning can be used to develop biomarkers for automatic prediction of patient outcome directly from conventional histopathology images. In colorectal cancer, the marker was found to be a clinically useful prognostic marker in the analysis of a large series of patients who received consistent, modern cancer treatment.

Cited by: 71

Author: Ole-Johan Skrede, Ole-Johan Skrede, Se...

Publish Year: 2020

### Application of Deep Learning for Early Screening of ...

<https://www.hindawi.com/journals/cmmm/2020/8374317>

Aug 25, 2020 · Colorectal cancer (CRC) is a common gastrointestinal tumour with high morbidity and mortality. Endoscopic examination is an effective method for early detection of digestive system tumours. However, due to various reasons, missed diagnoses and misdiagnoses are common occurrences. Our goal is to use deep learning methods to establish colorectal lesion detection, positioning, and classification models based ...

Cited by: 2

Author: Junbo Gao, Yuanhao Guo, Yingxue Sun, ...

Publish Year: 2020

### Medical image analysis based on deep learning approach

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8023554>

History of neural networks. The study of artificial neural networks and deep learning derives from the ability to create a computer system that simulates the human brain []. A neurophysiologist, Warren McCulloch, and a mathematician Walter Pitts [] developed a primitive neural network based on what has been known as a biological structure in the early 1940s.

Author: Muralikrishna Puttagunta, S. Ravi Publish Year: 2021

### [PDF] Deep Learning Techniques for the Classification of ...

<https://www.mdpi.com/2079-9292/10/14/1662/pdf>

14 hours ago · Finally, we compared our well-trained deep learning methods on two different histological image open datasets, which comprised 5000 H&E images of colorectal cancer. The other dataset was composed of nine organizational categories of 100,000 images with an external validation of 7180 images.

### Artificial intelligence in gastrointestinal endoscopy for ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8202249>

Jun 10, 2021 · In another study, during surveillance colonoscopy, two flat lesions with low-grade dysplasia were clearly highlighted by EndoBRAIN-EYE (Cybernet Systems, Tokyo, Japan), an AI-based polyp detection system successfully adopted in previous trials to identify colorectal lesions in non-IBD patients. 33 Pending future software implementation supported by studies in IBD cohorts, this single experience suggests that this AI-based polyp detection ...

Author: Gian Eugenio Tontini, Alessandro Rim... Publish Year: 2021

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### Artificial Intelligence for Gastric Cancer Detection by ...

<https://www.rsipvision.com/ai-for-gastric-cancer-detection> ▾

However, a lack of endoscopists with colonoscopy skills has been identified and solutions are critically needed. The development of a real-time robust detection system for colorectal neoplasms is needed to significantly reduce the risk of missed lesions during colonoscopy. Artificial intelligence platforms using deep learning algorithms have made remarkable progress in general medical imaging but their clinical use in cases of upper gastrointestinal ...

Estimated Reading Time: 5 mins

### Real-time artificial intelligence for detection of upper ...

Manuscript Type: MINIREVIEWS

## Deep learning driven colorectal lesion detection in gastrointestinal endoscopic and pathological imaging

Cai YW *et al.*, AI for colorectal lesions

Yu-Wen Cai, Fang-Fen Dong, Yu-Heng Shi, Li-Yuan Lu, Chen Chen, Ping Lin, Yu-Shan Xue, Jian-Hua Chen, Su-Yu Chen, Xiong-Biao Luo

## Abstract

Colorectal cancer has the second highest incidence of malignant tumors and is the fourth leading cause of cancer deaths in China. Early diagnosis and treatment for

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Oct 04, 2019 · We developed and validated the Gastrointestinal Artificial Intelligence Diagnosis System (GRAIDS), a deep learning semantic segmentation model capable of providing real-time automated detection of upper gastrointestinal cancers, from suspicious lesions during endoscopic examinations based on 1 036 496 endoscopy images from 84 424 individuals ...

### [The potential of deep learning for gastrointestinal ...](#)

<https://www.sciencedirect.com/science/article/pii/B9780128212592000120>

Jan 01, 2021 · These promising results suggest that deep learning in the realm of capsule endoscopy will have clinically relevant outcomes for patient care. 12.3. Applications of artificial intelligence in upper endoscopy12.3.1. Introduction. Upper GI endoscopy is a common tool used for diagnostic, screening, and surveillance purposes for a variety of pathology.

Author: Robin Zachariah, Christopher Rombao... Publish Year: 2021

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<https://deepai.org/publication/survey-of-computer...> ▾

Apr 26, 2019 · This paper attempts to provide the reader a place to begin studying the application of