

**Name of Journal:** *Artificial Intelligence in Gastroenterology*

**Manuscript NO:** 57853

**Manuscript Type:** MINIREVIEWS

**Artificial intelligence for the study of colorectal cancer tissue slides**

Formica V *et al.* AI in CRC

Vincenzo Formica, Cristina Morelli, Silvia Riondino, Nicola Renzi, Daniele Nitti, Mario Roselli

## Abstract

Artificial intelligence (AI) is incredibly gaining momentum as companion diagnostic in a number of fields in oncology. In the present mini-review we summarize main uses

### Match Overview

1	<b>Internet</b> 31 words crawled on 08-Jun-2020 <a href="http://clincancerres.aacrjournals.org">clincancerres.aacrjournals.org</a>	1%
2	<b>Internet</b> 31 words crawled on 23-Feb-2020 <a href="http://cancerimmunolres.aacrjournals.org">cancerimmunolres.aacrjournals.org</a>	1%
3	<b>Crossref</b> 26 words Ole-Johan Skrede, Sepp De Raedt, Andreas Kleppe, Tarjei S Hveem et al. "Deep learning for prediction of colorectal ...	1%
4	<b>Crossref</b> 25 words Cynthia Reichling, Julien Taieb, Valentin Derangere, Quentin Klopfenstein et al. "Artificial intelligence-guided tissue an	1%



Artificial Intelligence for the study of colorectal cancer tissue slide



ALL

IMAGES

VIDEOS

764,000 Results

Any time ▼

## Researchers use artificial intelligence to predict ...

<https://www.news-medical.net/news/20190704/Researchers-use-artificial-intelligence-to...> ▼

Jul 04, 2019 · The study involved the analysis of 1,553 **digital tissue slides** with data on **RNA expression, gene mutations** and **clinical progression** using the latest **machine vision** and artificial intelligence ...

## Artificial intelligence classifies colorectal cancer using ...

<https://medicalxpress.com/news/2020-06-artificial-intelligence-colorectal-cancer...> ▼

Jun 24, 2020 · The method recognizes **cancer tissue** without prior **staining** or other marking and, consequently, also works automatically with the **aid of artificial intelligence**. Unlike ...

## Artificial intelligence-guided tissue analysis combined ...

<https://www.ncbi.nlm.nih.gov/pubmed/31780575>

with **colon cancer**. However, additional prognostic markers could be detected on **pathological slides** using **artificial intelligence tools**. DESIGN: We have developed a software to detect **colon tumour**, healthy mucosa, stroma and immune cells on CD3 and CD8 **stained slides**. The **lymphocyte density** and

**Author:** Cynthia Reichling, Julien Taieb, Vale... **Publish Year:** 2020

## Artificial intelligence classifies colorectal cancer using ...

<https://news.rub.de/english/press-releases/2020-06-24-protein-research-artificial...> ▼

Jun 24, 2020 · The method recognises **cancer tissue** without prior staining or other marking and, consequently, also works automatically with the aid of **artificial intelligence**. Unlike the conventional differential diagnosis of microsatellite status, which takes about one day, the new method requires only about half an hour.





ALL

IMAGES

VIDEOS

1,260,000 Results

Any time ▼

## Researchers use artificial intelligence to predict ...

<https://www.news-medical.net/news/20190704/...> ▼

Jul 04, 2019 · The **study** involved the analysis of 1,553 digital **tissue slides** with data on RNA expression, gene mutations and clinical progression using the latest machine vision and **artificial intelligence** ...

## Artificial intelligence-guided tissue analysis combined ...

<https://gut.bmj.com/content/69/4/681> ▼

Apr 01, 2020 · **Objective** Diagnostic tests, such as Immunoscore, predict prognosis in patients with **colon cancer**. However, additional prognostic markers could be detected on **pathological slides** using **artificial intelligence tools**. Design We have developed a software to detect colon tumour, **healthy mucosa**, stroma and immune cells on CD3 and CD8 **stained slides**.

Cited by: 4

Author: Cynthia Reichling, Julien Taieb, Valentin ...

Publish Year: 2020

## Artificial Intelligence Classifies Cancer Types, Predicts ...

<https://www.genengnews.com/news/artificial...> ▼

Jul 29, 2020 · Leveraging the Cancer Genome Atlas, they applied this approach to hundreds of molecular alterations in **tissue slides** of more than 5,000 patients across 14 major tumor types.

## Artificial intelligence classifies colorectal cancer using ...

<https://medicalxpress.com/news/2020-06-artificial...> ▼

Jun 24, 2020 · The method recognizes **cancer tissue** without prior staining or other marking and, consequently, also works automatically with the aid of **artificial intelligence**. Unlike the conventional ...

## PLCOI-634: Deep learning-based prediction of colorectal ...

<https://cdas.cancer.gov/approved-projects/2635> ▼

Jun 18, 2020 · Aim 1: Use **artificial intelligence** approaches to quantify **histopathological patterns** across H&E-stained **histopathology slide images** (from whole sections and **tumor microarrays**) of **colorectal tumors** and correlate these with matched molecular features from previously measured histopathological, **genomic**, and transcriptomic data.

## Predicting Survival From Colorectal Cancer Histology ...

<https://pubmed.ncbi.nlm.nih.gov/30677016>





1,260,000 Results

Any time ▼

## [Researchers use artificial intelligence to predict ...](#)

<https://www.news-medical.net/news/20190704/...> ▼

Jul 04, 2019 - The **study** involved the analysis of 1,553 digital **tissue slides** with data on RNA expression, gene mutations and clinical progression using the latest machine vision and **artificial intelligence** ...

## [Artificial intelligence-guided tissue analysis combined ...](#)

<https://gut.bmj.com/content/69/4/681> ▼

Apr 01, 2020 - **Objective Diagnostic tests**, such as Immunoscore, predict prognosis in patients with **colon cancer**. However, additional prognostic markers could be detected on **pathological slides** using **artificial intelligence tools**. Design We have developed a software to detect **colon tumour**, **healthy mucosa**, stroma and immune cells on CD3 and CD8 **stained slides**.

**Cited by:** 4

**Author:** Cynthia Reichling, Julien Taieb, Valentin ...

**Publish Year:** 2020

## [PLCOI-634: Deep learning-based prediction of colorectal ...](#)

<https://cdas.cancer.gov/approved-projects/2635> ▼

Jun 18, 2020 - Aim 1: Use **artificial intelligence** approaches to quantify **histopathological patterns** across **H&E-stained histopathology slide images** (from whole sections and **tumor microarrays**) of **colorectal tumors** and correlate these with matched molecular features from previously measured histopathological, **genomic**, and transcriptomic data.

## [Artificial intelligence classifies colorectal cancer using ...](#)

<https://medicalxpress.com/news/2020-06-artificial...> ▼

Jun 24, 2020 - The method recognizes **cancer tissue** without prior staining or other marking and, consequently, also works automatically with the aid of **artificial intelligence**. Unlike the conventional ...

## [Artificial Intelligence in Colorectal Cancer Screening ...](#)

<https://www.gastroenterologyadvisor.com/colorectal...> ▼

Aug 21, 2020 - Recently, Alessandro Repici, MD, of the Digestive Endoscopy Unit at the Humanitas Research Hospital in Rozzano, Italy, and colleagues conducted the **Artificial Intelligence for Colorectal Adenoma Detection Rate (AID) study** (ClinicalTrials.gov Identifier: NCT04079487) to evaluate the safety and efficacy of a new CAdE system in the detection of