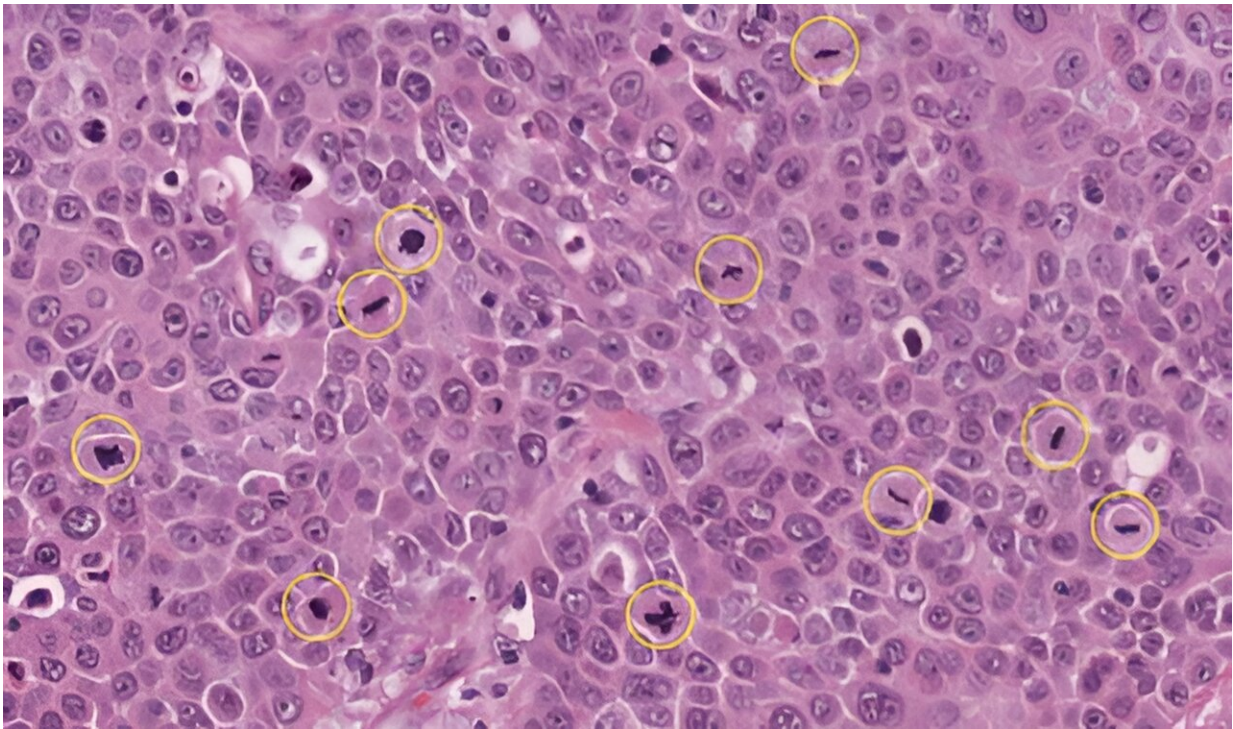


AI tool developed to help grade cancer based on cell divisions

January 31 2024



Cells dividing under the microscope. Credit: University of Warwick

Ahead of World Cancer Day on 4 February, scientists are revealing a cutting-edge artificial intelligence (AI) tool designed to help grade cancer, by analyzing cell division.

In numerous cancer types, counting the number of cells undergoing

division, known as mitotic figures, serves as a key indicator of cancer aggressiveness, or grade. This information helps inform treatment pathways, making it a crucial assessment tool. Traditional mitosis counting is both time-consuming and plagued by poor reliability. To address this, scientists have developed a new tool, [MitPro](#), which uses AI to count and profile mitosis.

Histofy, a spin-out company from The University of Warwick that is leading developer of AI solutions for pathology, has engineered the tool to accurately profile mitosis throughout the entire [tumor](#) sample. This identifies the most suitable areas for further analysis.

The tool enhances the current standard of care for grading various cancers, such as [breast cancer](#) and sarcomas, by accurately identifying dividing cancer cells. In this context, an elevated count of dividing cells indicates a fast-growing or highly aggressive tumor.

Traditionally, pathologists perform this cell counting, but due to time constraints, it is limited to a small portion of the tumor. With the power of AI, MitPro can count these dividing cells more accurately and over the entire tumor, providing a better indication for the cancer grade and leading to enhanced [patient care](#) and management.

Professor David Snead, Chief Medical Officer at Histofy, and a Consultant Pathologist at the University Hospitals Coventry and Warwickshire (UHCW) said, "Despite its paramount importance, mitosis assessment can be laborious and suffers from reproducibility issues. We are thrilled to introduce MitPro, a solution that not only improves current practice, but also enables detailed profiling of cell proliferation across the entire tumor."

Chief Technology Officer at Histofy, Simon Graham, Department of Computer Science at the University of Warwick, said, "AI holds

tremendous potential in facilitating better cancer care. MitPro helps to improve current grading systems across a range of cancers by more accurately assessing the rate in which cancer cells are dividing."

To facilitate the widespread adoption of AI in [clinical settings](#), Histofy is integrating with established pathology image management systems, including Sectra.

Provided by University of Warwick

Citation: AI tool developed to help grade cancer based on cell divisions (2024, January 31)
retrieved 28 April 2024 from
<https://medicalxpress.com/news/2024-01-ai-tool-grade-cancer-based.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.