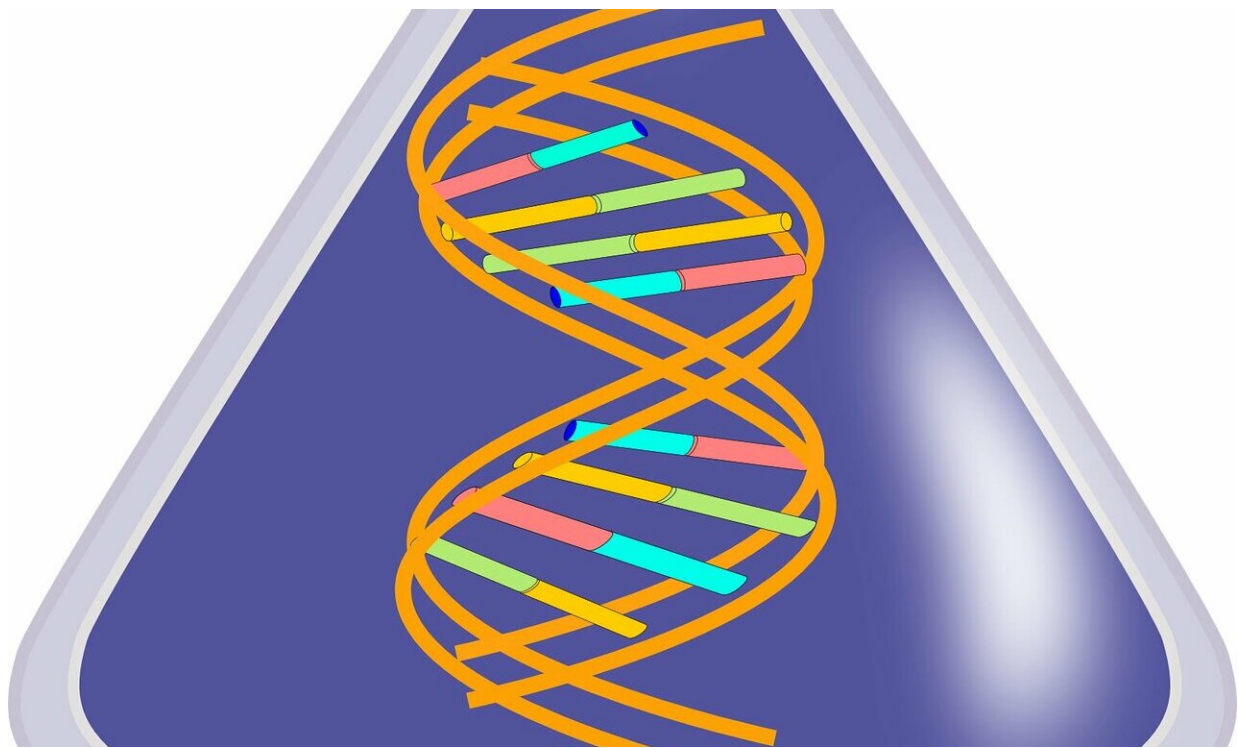


Using RNA splicing events to identify colon cancer subtypes is a more reliable and cost-effective method

August 23 2024, by Leslie Orr



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Researchers discovered an alternative way to classify distinct types of colon cancer, making the information more valuable to patients and their doctors as they consider treatment.

Currently, colon cancers can be classified into four subtypes based on [gene expression patterns](#), yet this method can be unreliable and is very costly, scientists said.

In the new proof-of-concept study, a team at Wilmot Cancer Institute, collaborating with a German company, Indivumed Therapeutics, found that using RNA splicing events rather than gene-expression analysis offers more precise and lower cost tumor-type identification.

When a patient is diagnosed, this step—identifying the unique characteristics and molecular properties of tumors—is crucial to determining prognosis and what medications may work best to attack the disease.

Hucky Land, Ph.D., deputy director at Wilmot and chair of the University of Rochester Medical Center Department of Biomedical Genetics, is corresponding author of the [article](#) published in *Gastroenterology*.

He credits Aslihan Ambeskovic, Ph.D., lead bioinformatics analyst in the Land lab, for conducting most of the work using RNA sequencing data from hundreds of human colon cancer tissue samples. Matthew N. McCall, Ph.D., associate professor of Biostatistics, is also a co-author.

Calling the discovery "a significant advance based on biological principles that is highly translational," Land noted that the next step is to develop a [diagnostic test](#) suitable for the clinic.

Colorectal cancers have a complex landscape of genetic and epigenetic alterations. Some subtypes, for example, may respond better to immunotherapy while certain [chemotherapy regimens](#) may be the correct approach for other subtypes.

Researchers believe their newly discovered subtype identifier is accurate and reliable because variation in RNA splicing holds more relevant information in each cancer specimen.

More information: Aslihan Ambeskovic et al, Exon Skipping-based Subtyping of Colorectal Cancers, *Gastroenterology* (2024). [DOI: 10.1053/j.gastro.2024.08.016](https://doi.org/10.1053/j.gastro.2024.08.016). [www.gastrojournal.org/article/... \(24\)05357-5/abstract](http://www.gastrojournal.org/article/S0016-5053(24)05357-5/abstract)

Provided by University of Rochester Medical Center

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