New Genomic Features of Cervical Cancer Identified

January 25, 2018 By Damon Runyon Cancer Research Foundation

Akinyemi I. Ojesina, MBBS, PhD (Damon Runyon Fellow ’08-’11), of University of Alabama at Birmingham, worked with The Cancer Genome Atlas Research Network to identify novel genomic and molecular characteristics of cervical cancer that will aid in the subclassification of the disease and may help define personalized therapies for each individual patient. The new study conducted a comprehensive analysis of the genomes of 178 primary cervical cancers, and found that more than 70 percent of the tumors had genomic alterations in either one or both of two important cell signaling pathways (PI3K/MAPK and TGF-beta). The researchers also found that a subset of tumors did not show evidence of human papillomavirus infection. Certain cervical cancers contained mutations in genes that normally put ‘brakes’ on the immune system, suggesting treatment with immunotherapy “checkpoint inhibitors” may be effective against these cancers. The report was published in the scientific journal Nature. Read more here.

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