

Discovery of frequent mutations in a gene encoding a Wnt-pathway E3 ubiquitin ligase in colorectal and endometrial cancers.

M. Giannakis^{#1,2}, E. Hodis^{#1,2}, X.J. Mu^{1,2}, M. Yamauchi¹, J. Rosenbluh^{1,2}, K. Cibulskis², G. Saksena², M.S. Lawrence², Z.R. Qian¹, R. Nishihara¹, E.M. Van Allen^{1,2}, W.C. Hahn^{1,2}, S.B. Gabriel², E.S. Lander², G. Getz², S. Ogino¹, C.S. Fuchs¹, L.A. Garraway^{1,2*}

¹Department of Medical Oncology, Dana-Farber Cancer Institute, Harvard Medical School, Boston, Massachusetts, USA.

²Broad Institute of MIT and Harvard, Cambridge, Massachusetts, USA.

[#]Co-first authors

* Corresponding Author

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Abstract

We report somatic mutations of RNF43 in over 18% of colorectal adenocarcinomas and endometrial carcinomas. RNF43 encodes an E3 ubiquitin ligase that negatively regulates Wnt signaling. Truncating mutations of RNF43 are more prevalent in microsatellite-unstable tumors and show mutual exclusivity with inactivating APC mutations in colorectal adenocarcinomas. These results indicate that RNF43 is one of the most commonly mutated genes in colorectal and endometrial cancers.