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Important news stories affecting the community

Q&A: Brian Kennedy on Aging and Cancer

NEWS IN DEPTH

New Nanomedicines May Better Target Tumors

RESEARCH WATCH

Selected highlights of recent articles of exceptional significance from the cancer literature

ONLINE

For more News and Research Watch, visit Cancer Discovery online at http://CDnews.aacrjournals.org.

REVIEW

Blood-Based Analyses of Cancer: Circulating Tumor Cells and Circulating Tumor DNA

D.A. Haber and V.E. Velculescu

RESEARCH ARTICLES

The ALK Inhibitor Ceritinib Overcomes Crizotinib Resistance in Non–Small Cell Lung Cancer


Précis: Ceritinib, a next-generation ALK inhibitor, has potent activity in preclinical models of crizotinib-naïve and crizotinib-resistant ALK-rearranged non–small cell lung cancer.

See commentary, p. 634

Immune Cell–Poor Melanomas Benefit from PD-1 Blockade after Targeted Type I IFN Activation


Précis: Type I IFN–associated inflammatory pathway activation combined with antibody blockade of the T-cell immunoinhibitory receptor PD-1 improves immune surveillance of melanomas.

Inflammation-Induced NFATc1–STAT3 Transcription Complex Promotes Pancreatic Cancer Initiation by Kras

X. Luo and G.-S. Feng

Précis: VEGFA genomic amplification tailors treatment of HCCs with Sorafenib

M. Isacke and M.H. Barcellos-Hoff

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EML4–ALK Fusions: Propelling Cancer but Creating Exploitable Chaperone Dependence

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Surviving Metabolic Stress: Of Mice (Squirrels) and Men

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Second-Generation ALK Inhibitors: Filling the Non"MET" Gap

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Surviving Metabolic Stress: Of Mice (Squirrels) and Men

W.N. Hait, M. Versele, and J.-M. Yang
Friboulet and colleagues report that ceritinib, a next-generation ALK inhibitor that is more selective and potent than crizotinib, is active in preclinical models of both crizotinib-naïve and crizotinib-resistant non-small cell lung cancer (NSCLC). Ceritinib retained activity against the most common crizotinib-resistant ALK mutants, although some secondary ALK mutations did confer resistance to both crizotinib and ceritinib. Structural analyses provided a mechanistic basis for these findings, as the most common secondary ALK mutations that inhibit binding of crizotinib are not predicted to impair ceritinib binding, but other mutations, which the authors have identified in patients with acquired resistance to ceritinib, are predicted to reduce ceritinib binding through steric hindrance or conformational changes of the ALK catalytic domain. For details, please see the article by Friboulet and colleagues on page 662.