Treatment of Advanced Non–Small Cell Lung Cancer

Selumetinib is a genotype-directed targeted therapy for patients with KRAS-mutant lung cancers. In this multinational, randomized clinical trial by Jänne and colleagues of 510 patients with advanced non–small cell lung cancer, the addition of selumetinib to the cytotoxic agent docetaxel did not improve progression-free survival compared with docetaxel alone. In an Editorial, Kaufman and Stinchcombe discuss why this promising therapy may not have been successful and suggest that the next generation of targeted therapies may have to address acquired mechanisms of resistance as well as primary oncogenic molecular events.

Postmarket Safety of Novel Therapeutics

The US Food and Drug Administration (FDA) approves the marketing and labeling of new drugs based on data from clinical trials, but uncommon or long-term safety risks may only become evident when novel therapeutics are used in much larger patient populations and for longer periods of time in the postmarket period. To characterize the frequency of postmarket safety events, Downing and colleagues conducted a retrospective cohort study of all novel therapeutics approved by the FDA between 2001 and 2010. Postmarket safety events were reported for nearly one-third of approved novel therapeutics and were more frequent among therapeutics receiving accelerated approval.

Global Kidney Health Care

Although acute kidney injury and chronic kidney disease lead to high health care costs, poor quality of life, and serious adverse health outcomes, kidney disease has been insufficiently addressed in global disease control strategies. In this study by Bello and colleagues, survey responses from national nephrology society leadership, policy makers, and patient organization representatives in 125 of 130 countries affiliated with the International Society of Nephrology show significant variability in the current capacity for kidney care across the world, including important gaps in services and the workforce. In an Editorial, Mandayam and Winkelmayer suggest that global increases in risk factors for chronic kidney disease, such as diabetes, hypertension, and obesity, may further stress available resources for disease management.
Screening for Thyroid Cancer: USPSTF Statement

The estimated 5-year survival rate for thyroid cancer overall is 98% but ranges from 99% for localized disease (68% of cancer cases at diagnosis) to 55% for distant disease (4% of cancer cases at diagnosis). To assess the benefits and harms of screening for thyroid cancer in asymptomatic adults, the US Preventive Services Task Force (USPSTF) reviewed the diagnostic accuracy of screening and the benefits and harms of treating screen-detected thyroid cancer. On the basis of its review, the USPSTF recommends against screening for thyroid cancer in asymptomatic adults. In an Editorial, Cappola discusses the limitations of current methods for evaluating suspicious nodules and suggests that a low-cost imaging technique or reliable biomarker might help to reduce thyroid cancer mortality.

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Screening for Thyroid Cancer: Evidence Report

The incidence of thyroid cancer is increasing, but most thyroid cancers have an excellent prognosis. To inform USPSTF deliberations on thyroid cancer screening and the treatment of early thyroid cancer in asymptomatic adults, Lin and colleagues reviewed 67 studies of 583,914 participants. The evidence was insufficient to demonstrate that population-based or targeted screening can decrease mortality rates; moreover, treatment of indolent cancers can increase the risk of patient harms.

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Genomic Sequencing for the Healthy Individual

Genetic risk prediction for common diseases is challenging, even with the best available technology. This JAMA Insights article by Evans and colleagues compares the risks and benefits of whole-genome sequencing vs a focus on the small number of well-understood human genes known to modify the risks of preventable diseases. In an Editorial, Feero discusses the potential of new health technologies for individualizing clinical practice and introduces a new JAMA series on genomics and precision health.

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