Cost-effectiveness of Osimertinib in Advanced Lung Cancer

Osimertinib is a potent, irreversible, epidermal growth factor receptor (EGFR) tyrosine kinase inhibitor (TKI) that blocks both the common EGFR-activating mutations and the T790M mutation. The FLAURA trial compared osimertinib with first-generation EGFR-TKIs in treatment-naive patients with advanced non-small cell lung cancer and EGFR mutation and found that progression-free survival was superior with osimertinib. Is moving osimertinib to front-line therapy cost-effective? Aguiar et al extracted patient data from the FLAURA trial to compare the cost-effectiveness of osimertinib with first- and second-generation EGFR TKIs over 10 years. They found that at current costs, osimertinib is not cost-effective for first-line therapy of EGFR-mutated NSCLC.

Immune Profiling of Lynch Syndrome Premalignant Lesions

Colorectal carcinomas in patients with Lynch syndrome (LS) arise in a background of mismatch repair deficiency and are associated with immune infiltrates; when those infiltrates develop in the course of oncogenesis is unclear. Chang et al compared the immune profile of LS premalignant lesions with that of familial adenomatous polyposis premalignant lesions, LS carcinoma, and sporadic colorectal cancers from The Cancer Genome Atlas. The LS polyps had low mutational and neoantigen rates but had an immune activation profile characterized by CD4+ T cells, proinflammatory, and checkpoint molecules. These findings show that immunity may not depend on mutational burden and neoantigens.

Incidence of Diabetes After Cancer Development

Does cancer increase the risk of diabetes? Hwangbo et al followed a Korean population cohort of 524,089 men and women observed for up to 10 years, 15,130 individuals developed cancer, and 26,610 developed diabetes. After adjustment for potential confounders, the risk for diabetes associated with cancer development remained present. Pancreatic and kidney cancers were the ones most associated with increased diabetes risk. Oncologists should bear in mind this evidence that cancer is associated with diabetes risk independent of traditional diabetes risk factors.

Interstitial Pneumonitis in Nivolumab-Treated Lung Cancer

Treatment with an immune checkpoint inhibitor can cause inflammatory and autoimmune-associated adverse events. Tyrosine kinase inhibitors (TKIs) can also induce inflammation such as pneumonitis. Oshima et al evaluated 20,516 patients with non-small cell lung cancers derived from the US Food and Drug Administration’s Adverse Events Reporting System and questioned whether nivolumab potentiated TKI-associated pneumonitis. A higher proportion of pneumonitis was found with combination treatment vs those receiving TKIs alone. An increase in pneumonitis should be monitored for inpatients receiving dual therapy. Tang and coauthors provide an Invited Commentary.

Research Letter

Postoophorectomy Hormone Therapy in BRCA1 Carriers

Hormone therapy (HT) is prescribed for women to control symptoms of menopause but is limited for use in breast cancer due to fear of stimulating tumor growth. Kotsopoulos et al questioned whether BRCA1 mutation carriers would be harmed by HT use. This prospective, longitudinal cohort study of 872 BRCA1 mutation carriers who underwent bilateral oophorectomy surveyed women about HT use. Overall, HT use after oophorectomy was not associated with an increased risk of breast cancer. These data suggest that HT might be used safely in this population.

Immune Profiling of Lynch Syndrome Premalignant Lesions

Colorectal carcinomas in patients with Lynch syndrome (LS) arise in a background of mismatch repair deficiency and are associated with immune infiltrates; when those infiltrates develop in the course of oncogenesis is unclear. Chang et al compared the immune profile of LS premalignant lesions with that of familial adenomatous polyposis premalignant lesions, LS carcinoma, and sporadic colorectal cancers from The Cancer Genome Atlas. The LS polyps had low mutational and neoantigen rates but had an immune activation profile characterized by CD4+ T cells, proinflammatory, and checkpoint molecules. These findings show that immunity may not depend on mutational burden and neoantigens.

Incidence of Diabetes After Cancer Development

Does cancer increase the risk of diabetes? Hwangbo et al followed a Korean population cohort of 524,089 men and women observed for up to 10 years, 15,130 individuals developed cancer, and 26,610 developed diabetes. After adjustment for potential confounders, the risk for diabetes associated with cancer development remained present. Pancreatic and kidney cancers were the ones most associated with increased diabetes risk. Oncologists should bear in mind this evidence that cancer is associated with diabetes risk independent of traditional diabetes risk factors.

Interstitial Pneumonitis in Nivolumab-Treated Lung Cancer

Treatment with an immune checkpoint inhibitor can cause inflammatory and autoimmune-associated adverse events. Tyrosine kinase inhibitors (TKIs) can also induce inflammation such as pneumonitis. Oshima et al evaluated 20,516 patients with non-small cell lung cancers derived from the US Food and Drug Administration’s Adverse Events Reporting System and questioned whether nivolumab potentiated TKI-associated pneumonitis. A higher proportion of pneumonitis was found with combination treatment vs those receiving TKIs alone. An increase in pneumonitis should be monitored for inpatients receiving dual therapy. Tang and coauthors provide an Invited Commentary.