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IN BRIEF

IMMUNOTHERAPY

No effect of CAR-T-cell infusion on infection risk

In an observational study, the incidence of infectious events was monitored in 133 patients with acute lymphoblastic leukaemia, chronic lymphocytic leukaemia, or non-Hodgkin lymphoma treated with anti-CD19 CAR T cells in a phase I/II study. Within 28 days after infusion, 23% of patients had infections. The infection density was 1.19 infections per 100 days at risk in this initial period of time and 0.67 infections per 100 days between 29–90 days after infusion. Invasive fungal infections occurred in 5% of the patients, and life-threatening or fatal infections in 4% of them. The incidence, distribution, and severity of infections observed in this study are similar to those observed in clinical trials of salvage or primary chemotherapy for patients with the same malignacies. Therefore, strategies established in other settings to prevent infections in immunocompromised patients could be adapted to improve outcomes of CAR-T-cell therapy.

ORIGINAL ARTICLE Hill, J. A. *et al.* Infectious complications of CD19-targeted chimeric antigen receptor-modified T cell immunotherapy. *Blood* http://dx.doi.org/10.1182/blood-2017-07-793760 (2017)

LUNG CANCER

First-in-man phase I trial with lorlatinib

Acquired resistance to therapy with tyrosine kinase inhibitors (TKIs) is common in patients with *ALK* or *ROS1*-rearranged non-small-cell lung cancer (NSCLC). Lorlatinib is a novel TKI of both ALK and ROS1 specifically designed to inhibit mutations driving resistance to other ALK TKIs, and to penetrate the blood–brain barrier. A phase I dose-escalation study of this TKI was conducted in 54 patients with NSCLC and disease progression after receiving other TKIs. An objective response was observed in 46% of patients with *ALK* rearrangements, 50% of patients with *ROS1* rearrangements, and 42% of patients who had received two or more TKIs. The most common treatment-related adverse events were hypercholesterolaemia (72%), hypertriglyceridaemia (39%), peripheral neuropathy (39%), and peripheral oedema (39%). Lorlatinib is currently being compared with crizotinib in the frontline in a phase III randomized trial in patients with *ALK*-rearranged NSCLC.

ORIGINAL ARTICLE Shaw, A. T. *et al.* Lorlatinib in non-small-cell lung cancer with *ALK* or *ROS1* rearrangement: an international, multicentre, open-label, single-arm first-in-man phase 1 trial. *Lancet Oncol.* http://dx.doi.org/10.1016/S1470-2045(17)30680-0 (2017)

COLORECTAL CANCER

Defining location effect in nonmetastatic disease

The prognostic value of primary tumour location for overall survival, which is well established in patients with metastatic colorectal cancer, was investigated in 1,869 patients with stage III nonmetastatic colorectal cancer receiving adjuvant FOLFOX (5-fluorouracil, leucovorin and oxaliplatin) with or without cetuximab. In the whole population, a right-sided tumour location was associated with shorter survival after relapse and shorter overall survival than left sidedness, but was not prognostic for disease-free survival (DFS). In patients with *RAS*-mutant disease, DFS was more favourable in those with right-sided versus left-sided tumours, and the opposite pattern was observed in those with both wild type *RAS* and *BRAF*; in addition no differences related to microsatellite stability status or cetuximab treatment were observed.

ORIGINAL ARTICLE Taieb, J. *et al.* Association of prognostic value of primary tumor location in stage III colon cancer with *RAS* and *BRAF* mutational status. *JAMA Oncol.* http://dx.doi.org/10.1001/jamaoncol.2017.3695 (2017)