

Recent Advances of Immunotherapy in Cell Lung Cancer

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Emerging evidence on the role of the antitumor activity of the immune system has generated great interest in immunotherapy even for tumors that were historically considered as non-immunogenic. Immunotherapy in non-small cell lung cancer (NSCLC) treatment is currently focusing on development of inhibitors of the molecular mediators of cancer-induced immunosuppression (immune checkpoints) to boost antitumor immune responses. Blocking inhibitory pathways such as the CTL antigen 4 (CTLA-4) and programmed cell death 1 (PD-1) checkpoint pathways with monoclonal antibodies has generated antitumor immune responses that are transforming cancer therapeutics. PD-1 and programmed cell death ligand 1 (PD-L1) antibodies have shown durable responses in NSCLC, with a favorable safety profile and manageable side effects. The activity of immune checkpoint inhibitors is currently being assessed in treatment-naïve patients with PD-L1–positive advanced NSCLC. Combinatorial approaches with other immune checkpoint inhibitors, chemotherapy, or targeted agents are being explored in ongoing clinical trials, and may improve outcome in NSCLC.