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Immune checkpoint inhibitors for every patient with non-small cell lung cancer? Update on immunotherapy in patients with lung cancer

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Several phase III trials on immune checkpoint inhibitor therapy in non-small cell lung cancer were recently published and changed the clinical practice. Here, non-small cell lung cancer has to be categorised first according to the presence of activating mutations and, second, according to the programmed cell death ligand 1 (PDL1) expression. Approximately 25% of patients present with a driver mutation and should be treated with tyrosine kinase inhibitors as the first-line treatment strategy for metastatic non-small cell lung cancer. Approximately 75% of patients do not present with a driver mutation and should be treated according to the presence of PDL1 expression. Patients with high PDL1 (≥50% of tumour cells) expression are candidates for immune checkpoint inhibitor monotherapy, although a combination with chemotherapy can be suggested in patients with high tumour load and fast progressing disease. Patients with intermediate (1%–49% of tumour cells) PDL1 expression are on the other hand candidates for the combination of chemotherapy with immune checkpoint inhibitor therapy according to the recently published data. Further, combination of immune checkpoint inhibitor-based therapy with chemotherapy and bevacizumab could be an option in patients with a driver mutation after the failure of available tyrosine kinase inhibitors.

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