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ADVANCED LUNG CANCER, THERAPEUTIC POSSIBILITIES

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Introduction: According to the Brazilian Manual of Clinical Oncology, which was updated in 2019, oncological therapy for non-small cell lung cancer (NSCLC) varies according to staging. Some genetic and molecular alterations in these tumors may determine the indication of molecular target therapy (TAM) and/or immunotherapy (IMT). **Objective:** Identify important genetic and molecular alterations in the determination of TAM and IMT in the NSCLC. **Methodology:** Literature review through search of articles in the MEDLINE database, via PubMed, using the terms: "non-small cell lung cancer" [and] "mutation" [and] "EGFR" [and] "ALK". The search filters were applied: "associated data" and "articles published in the last 1 year". The eligibility criteria of the articles were those applied in the filters and the articles associated with the proposed theme. 5 of the 14 results found for this study were used. Nine studies were excluded because they were outside the search category and inclusion criteria. Data extraction, analysis of results and writing of this review were carried out. **Revision of Literature:** Detection of mutually exclusive mutations, called conductors or drivers, select CPNPC with indication of TAM. In this sense, there are A*naplastic Lymphoma Kinase* (ALK) and *Human Epidermal Growth Factor Receptor 1* (EGFR). EGFR mutation indicates the use of drugs that block EGFR (anti-EGFR). ALK mutation indicates use of ALK tyrosine kinase inhibitor drugs. On the other hand, overexpression greater than or equal to 50% of programmed cell death ligand protein 1 (PDL1) in NSCLC indicates immunotherapy (IMT) in the form of monotherapy. When PDL1 expression is below this value, chemotherapy with or without IMT is indicated. **Conclusion:** It was possible to identify the genetic and molecular alterations that determine the use of TAM and IMT in patients with NSCLC. It is concluded that in the presence of PD-L1 equal to or greater than 50%, IMT in a monotherapy regimen is indicated, in the first antineoplastic line for advanced NSCLC; whereas, EGFR mutation indicates the use of TAM with anti-EGFR and ALK mutation indicates the use of anti-ALK tyrosine kinase.
Keywords: ALK; Non-small cell lung cancer; EGFR; Mutation.

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