Report TECENTRIQ® - atezolizumab

Product & Mechanism of action	Authorized indications Licensing status	Essential therapeutic features	NHS impact
Substance: atezolizumab **Brand Name:** Tecentriq ® **Originator/licensee:** Roche Registration GmbH **Classification:** NI **ATC code:** L01XC32 **Orphan Status:** **Eu:** No **Mechanism of action:** atezolizumab is a monoclonal antibody designed to recognize and bind to PD-L1 (expressed on cancer cells to switch off the action of immune cells) increasing the immune system's ability against cancer cells and slowing disease progression[1].	**Authorized Indication:** **EMA:** atezolizumab as monotherapy is indicated as adjuvant treatment following complete resection and platinum-based chemotherapy for adult patients with NSCLC with a high risk of recurrence whose tumours have PD-L1 expression on ≥ 50% of TC and who do not have EGFR mutant or ALK positive NSCLC[2]. **Route of administration:** IV **Licensing status** **EU CHMP P.O. date:** 22/04/2022 **EU Speed Approval Pathway:** No --- **ABBREVIATIONS:** **AEs**: Adverse Events **ALK:** anaplastic lymphoma kinase **BSC:** Best Supportive Care **CHMP:** Committee for Medicinal Products for Human Use **DFS**: disease-free survival **EGFR:** epidermal growth factor receptor **HR:** hazard ratio **IC:** immune cells **ITT:** intention-to-treat **M.A.:** Marketing Authorization **NSCLC:** non-small cell lung cancer **P.O.:** Positive Opinion **pts:** patients **SAEs:** Serious Adverse Events **TC:** tumour cells	**Summary of clinical EFFICACY:** **IMpower010 (NCT02486718):**is a randomised, multicentre, open-label, phase III study. Eligible pts (n=1005) were ≥18 years old with completely resected stage IB to IIIA NSCLC. Pts, after adjuvant platinum-based chemotherapy (one to four cycles), were randomly assigned (1:1) to receive adjuvant atezolizumab (n=507) 1200 mg every 21 days for 16 cycles (or 1 year) or best supportive care (n=498)including observation and regular scans for disease recurrence. The primary endpoint was DFS and it was observed in the stage II–IIIA population subgroup whose tumours expressed PD-L1 ≥1% of tumour cells, in all pts in the stage II–IIIA population and in the ITT population in stage IB–IIIA. In the stage II–IIIA population whose tumours expressed PD-L1 ≥1% of tumour cells, 35% of pts (88:248) in the atezolizumab group and 46% (105:228) pts in the BSC care group had DFS events (stratified HR 0·66; CI 95%; p=0·0039). In all pts in the stage II–IIIA population, 39% (173:442) ptsreceiving atezolizumab and 45% (198:440) receiving BSC had DFS events (HR 0·79; p=0·020). In the ITT population, 37% (87:507) pts receiving atezolizumab and 43% (212:498) receiving BSC had DFS events. In the ITT population, which comprised pts with stage IB–IIIA disease, the boundary for statistical significance for DFS was not crossed (HR 0·81; p=0·040) [3]. **Summary of clinical SAFETY:** Safety population included 990 pts, 495 each in atezolizumab and BSC groups. AEs of any grade occurred in 93% (459:495) of ptsreceiving atezolizumab and in 71% (350:495) receiving BSC. Grade 3 or 4 events occurred in 22% (108 pts) receiving atezolizumab vs. 12% (57 pts) receiving BSC and the most common reported were increased alanine (2%) oraspartate (1%) aminotransferase and pneumonia (1%) in the atezolizumab group and only pneumonia (1%) in the BSC group. Grade 5 events were reported in 2% (8 pts) receiving atezolizumab vs. 1% (3 pts) receiving BSC. SAEs occurred in18% of pts in the atezolizumab group vs. 8% in the BSC group. Treatment-related AEs occurred in 68% (335:495) pts, of grade 3 or 4 severity in 11% (53:495) pts in the atezolizumab group. The most common atezolizumab-related AEs were hypothyroidism (11%), pruritis (9%) and rash (8%). Treatment-related SAEs occurred in 7% (37:495) pts in the atezolizumab group. Grade 5 atezolizumab-related AEs occurred in 1% of pts [3]. **Ongoing studies:** ● ***For the same indication:*** *Yes* ● ***For other indications:*** *Yes* **Discontinued studies (for the same indication):** *Yes* --- **References:** 1.https://www.ema.europa.eu/en/documents/product-information/tecentriq-epar-product-information_en.pdf 2. https://www.ema.europa.eu/en/medicines/human/summaries-opinion/tecentriq-4 3. https://www.clinicalkey.com/service/content/pdf/watermarked/1-s2.0-S0140673621020985.pdf?locale=it_IT&searchIndex= 4. https://gallery.farmadati.it/Home.aspx 5. https://www.iarc.who.int/news-events/latest-world-cancer-statistics-globocan-2012-estimated-cancer-incidence-mortality-and-prevalence-worldwide-in-2012/ 6. https://www.aiom.it/wp-content/uploads/2020/10/2020_LG_AIOM_Polmone.pdf 7. https://acsjournals.onlinelibrary.wiley.com/doi/full/10.3322/caac.20107 8. https://pubmed.ncbi.nlm.nih.gov/26712084/ 9. https://www.nejm.org/doi/full/10.1056/nejmoa1501824 10. https://www.esmo.org/guidelines/guidelines-by-topic/lung-and-chest-tumours/clinical-practice-living-guidelines-metastatic-non-small-cell-lung-cancer 11. https://www.clinicaltrials.gov/ct2/home	**Cost of therapy**: 4,602.75€* for one IV vial1.200 mg 20 ml [4]. Price for one cycle: 4,602.75€. **ex-factory price* **Epidemiology:** primary lung cancer remains the most common malignancy after non-melanocytic skin cancer[5].In 2020, about 41,000 new cases of lung cancer were estimated in Italy (27,550 in men and 13,300 in women): it is the second most frequent malignancy in men (14%) and the third in women (7%)[6].NSCLC accounts for 80%-90% of lung cancers [7]. Approximately 23 to 28% of pts with advanced NSCLC have a high level of PD-L1 expression[8-9]. ----- **POSSIBLE PLACE IN THERAPY:** for pts with advanced NSCLC and PD-L1 expression ≥ 50%, with no EGFR or ALK genomic tumour aberrations and who do not have contraindications to use immunotherapy, pembrolizumab is considered a standard first-line option.Atezolizumab represents a promising first-line treatment option in pts with high PD-L1 expression[10]. **OTHER INDICATIONS IN DEVELOPMENT:** SCLC, Malignant Pleural Mesothelioma, Thymic Carcinoma, Urinary Tract Cancer, DLBCL, NHL,Cutaneous T-cell lymphoma, Rectal Cancer, Breast Cancer, Bladder Cancer, other [11]. **SAME INDICATION IN EARLIER LINE(S) OF TREATMENT:** No **OTHER DRUGS IN DEVELOPMENT for the SAME INDICATION:** No *Service reorganization: Yes *Possible off label use: No

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