**Brand Name:** Tecentriq
**Generic:** atezolizumab
**Type:** monoclonal antibody
**Year Accepted/Phase:** 2016

## Mechanism:

Atezolizumab blocks PD-L1 from binding to its receptors PD-1 and B7.1, thereby enhancing the immune system's ability to recognize and attack tumor cells.

## Chemical Structure: N/A

## Indication:

Tecentriq is indicated for various types of cancer, including NSCLC, SCLC, urothelial carcinoma, TNBC, and HCC, often in combination with other therapies.

## Clinical trials:

**OAK Trial (Phase III)**
**Pubmed:** https://pubmed.ncbi.nlm.nih.gov/30017645/
**Purpose:** Evaluate the efficacy and safety of atezolizumab compared to docetaxel in patients with previously treated NSCLC.
**Dates:** Conducted from 2013 to 2016.
**Results:** The OAK trial showed that atezolizumab significantly improved overall survival (OS) compared to docetaxel. Median OS was 13.8 months for atezolizumab versus 9.6 months for docetaxel.
**Impact:** These results led to the FDA approval of atezolizumab for the treatment of patients with metastatic NSCLC who have disease progression during or following platinum-containing chemotherapy in October 2016.

**IMpower130 Trial (Phase III)**
**Pubmed:** https://pubmed.ncbi.nlm.nih.gov/31122901/
**Purpose:** Evaluate the efficacy of atezolizumab combined with chemotherapy (carboplatin and nab-paclitaxel) in chemotherapy-naive patients with metastatic non-squamous NSCLC.
**Dates:** Conducted from 2015 to 2018.
**Results:** The IMpower130 trial demonstrated that the combination of atezolizumab with chemotherapy significantly improved OS and progression-free survival (PFS) compared to chemotherapy alone. Median OS was 18.6 months for the combination versus 13.9 months for chemotherapy alone.
**Impact:** This trial supported the approval of atezolizumab in combination with chemotherapy for first-line treatment of metastatic non-squamous NSCLC in December 2018.

**IMpower150 Trial (Phase III)**
**Pubmed:** https://pubmed.ncbi.nlm.nih.gov/29863955/
**Purpose:** Evaluate the efficacy of atezolizumab combined with chemotherapy (carboplatin and paclitaxel) and bevacizumab in patients with metastatic non-squamous NSCLC.
**Dates:** Conducted from 2015 to 2017.
**Results:** The IMpower150 trial showed that the addition of atezolizumab to the combination of chemotherapy and bevacizumab significantly improved OS and PFS. Median OS was 19.2 months for the atezolizumab combination versus 14.4 months for the chemotherapy and bevacizumab combination.
**Impact:** These results led to the approval of atezolizumab in combination with chemotherapy and bevacizumab for first-line treatment of metastatic non-squamous NSCLC in December 2018.

**IMpower133 Trial (Phase III)**
**Pubmed:** https://pubmed.ncbi.nlm.nih.gov/29863955/
**Purpose:** Assess the efficacy of atezolizumab combined with chemotherapy (carboplatin and etoposide) in patients with extensive-stage small cell lung cancer (ES-SCLC).
**Dates:** Conducted from 2016 to 2018.
**Results:** The IMpower133 trial demonstrated that atezolizumab combined with chemotherapy significantly improved OS and PFS compared to chemotherapy alone. Median OS was 12.3 months for the combination versus 10.3 months for chemotherapy alone.
**Impact:** This trial led to the FDA approval of atezolizumab in combination with chemotherapy for the first-line treatment of ES-SCLC in March 2019.

**IMvigor211 Trial (Phase III)**
**Pubmed:** https://pubmed.ncbi.nlm.nih.gov/30280641/
**Purpose:** Evaluate the efficacy of atezolizumab compared to chemotherapy in patients with locally advanced or metastatic urothelial carcinoma who have disease progression during or following platinum-based chemotherapy.
**Dates:** Conducted from 2014 to 2017.
**Results:** Although the trial did not meet its primary endpoint of improving OS in the overall population, atezolizumab showed a meaningful clinical benefit in patients with high PD-L1 expression.
**Impact:** These results supported the use of atezolizumab in patients with locally advanced or metastatic urothelial carcinoma, especially those with high PD-L1 expression.

**IMblaze370 Trial (Phase III)**
**Pubmed:** https://pubmed.ncbi.nlm.nih.gov/31003911/
**Purpose:** Evaluate the efficacy and safety of atezolizumab (Tecentriq) in combination with cobimetinib versus regorafenib in patients with metastatic colorectal cancer (mCRC) who have received at least two prior regimens of chemotherapy.
**Dates:** Conducted from December 2015 to February 2018.
**Results:** The IMblaze370 trial did not meet its primary endpoint. The combination of atezolizumab and cobimetinib did not show a statistically significant improvement in overall survival (OS) compared to regorafenib. Median OS was 8.9 months for the atezolizumab and cobimetinib combination versus 8.5 months for regorafenib.
**Impact:** Despite the negative results, the IMblaze370 trial provided valuable insights into the complexities of treating mCRC and highlighted the challenges in developing effective immunotherapy combinations for this type of cancer.