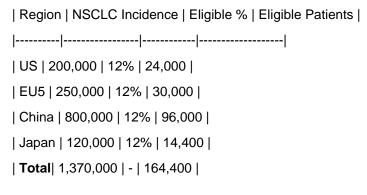
To estimate the **Potential Peak Sales** for atezolizumab (Tecentriq) in the adjuvant treatment of stage II to IIIA non-small cell lung cancer (NSCLC) with PD-L1 expression ≥1% in the US, EU5 (Germany, France, Italy, Spain, UK), China, and Japan, as well as the **\$ value of a 1% share of treated patients** in these geographies, we need to follow a structured approach. Since specific data on patient numbers, pricing, and market penetration may not be fully available, I will use reasonable assumptions based on publicly available data, epidemiology, and market trends. Below is a detailed step-by-step estimation:

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#### **Step 1: Define the Target Patient Population**

- **Indication**: Adjuvant treatment for stage II to IIIA NSCLC patients with PD-L1 expression ≥1% after resection and platinum-based chemotherapy.
- Epidemiology of NSCLC:
- NSCLC accounts for ~85% of all lung cancer cases.
- Stage II to IIIA NSCLC represents ~30-40% of NSCLC cases (resectable early-stage disease).
- PD-L1 expression ≥1% is observed in ~50-60% of NSCLC patients (based on clinical trial data and real-world evidence).
- Annual Incidence of NSCLC (approximate numbers for 2023):
- US: ~200,000 new cases.
- EU5: ~250,000 new cases (combined across the 5 countries).
- China: ~800,000 new cases (largest lung cancer burden globally).
- Japan: ~120,000 new cases.
- Eligible Population (Stage II-IIIA, PD-L1 ≥1%, post-resection, and chemotherapy):
- Assuming 35% of NSCLC cases are Stage II-IIIA and 55% have PD-L1 ≥1%, and ~80% undergo resection and chemotherapy, the eligible population is roughly **10-15% of total NSCLC incidence**.

#### Estimated Eligible Patients per Year:

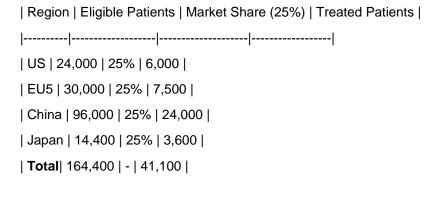


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# **Step 2: Market Share Assumption**

- The problem states a 20-30% share of treated patients for atezolizumab in this indication.
- Given competition from other immunotherapies (e.g., pembrolizumab, durvalumab) and standard of care, we will assume a **midpoint of 25% market share** for peak sales calculation.

#### Treated Patients with Atezolizumab:



#### **Step 3: Treatment Cost and Duration**

- Annual Cost of Atezolizumab:
- Atezolizumab is typically administered every 3 weeks for up to 1 year in the adjuvant setting (based on clinical trial protocols like IMpower010).
- US list price for atezolizumab is ~\$12,000 per dose (based on historical data for Tecentriq). For 17 cycles (1 year), this equates to ~\$204,000 per patient per year.
- Pricing in other regions is typically lower due to healthcare systems and negotiations:
- EU5: ~60-70% of US price (~\$130,000 per patient/year).
- Japan: ~70% of US price (~\$140,000 per patient/year).
- China: ~30-40% of US price (~\$70,000 per patient/year due to significant price reductions under national reimbursement schemes).

#### Annual Cost per Patient:

```
| Region | Cost per Patient/Year |
|------|
| US | $204,000 |
| EU5 | $130,000 |
| China | $70,000 |
| Japan | $140,000 |
```

# Step 4: Calculate Potential Peak Sales (at 25% Market Share)

Peak sales are calculated as: Treated Patients × Annual Cost per Patient.

Thus, the **Potential Peak Sales** for atezolizumab in this indication across the specified geographies is approximately **\$4.4 billion** at a 25% market share (midpoint of 20-30%).

- At 20% market share: ~\$3.5 billion.
- At 30% market share: ~\$5.3 billion.

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## **Step 5: Calculate \$ Value of 1% Share of Treated Patients**

A 1% share of treated patients corresponds to 1% of the eligible patient population being treated with atezolizumab.

#### 1% Share of Treated Patients:

Thus, the **\$ value of a 1% share of treated patients** across these geographies is approximately **\$175 million**.

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## **Final Answer:**

1. Potential Peak Sales for Atezolizumab (at 20-30% market share):

- At 25% market share: \$4.4 billion (range: \$3.5 billion to \$5.3 billion).

- Breakdown by region:

- US: \$1,224 million

- EU5: \$975 million

China: \$1,680 millionJapan: \$504 million

#### 2. \$ Value of 1% Share of Treated Patients:

- Total: \$175 million

- Breakdown by region:

- US: \$49.0 million

- EU5: \$39.0 million

- China: \$67.2 million

- Japan: \$20.2 million

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### **Notes and Assumptions:**

- These calculations are based on approximate epidemiology data, pricing, and treatment duration. Real-world data may vary due to differences in healthcare access, reimbursement, and competition.
- Peak sales assume steady-state market penetration, which may take several years post-launch to achieve.
- Pricing in China is assumed to be significantly lower due to volume-based procurement and national drug price negotiations.
- The adjuvant setting typically involves a finite treatment duration (1 year), so sales are tied to annual incident cases rather than prevalent cases.