Given the context that atezolizumab (Tecentriq) in combination with paclitaxel did not show efficacy in a clinical trial for previously untreated inoperable locally advanced or metastatic triple-negative breast cancer (mTNBC), I will still provide a framework to calculate the **Potential Peak Sales** and the **$ value of a 1% share of treated patients** for this indication across the US, EU5 (Germany, France, Italy, Spain, UK), China, and Japan. However, please note that the actual sales potential may be significantly impacted or even nullified due to the trial results mentioned. The calculations below are based on a hypothetical scenario assuming the drug had been successful or for illustrative purposes.

To estimate the potential peak sales and value of a 1% share of treated patients, we need to make several assumptions and follow a structured approach. Since specific data (e.g., exact patient population, pricing, or penetration rates) is not provided, I will use general industry benchmarks and assumptions for mTNBC.

Step 1: Key Assumptions

1. **Indication**: Metastatic Triple-Negative Breast Cancer (mTNBC).

2. **Market Share**: Assuming 20% to 30% share of treated patients as provided in the query.

3. **Patient Population**: Estimated number of mTNBC patients eligible for treatment in each geography (based on prevalence and incidence rates from literature or general oncology data).

4. **Pricing**: Annual cost of atezolizumab therapy is assumed to be approximately $150,000 in the US (based on typical pricing for immune checkpoint inhibitors like PD-L1 inhibitors), with lower pricing in other regions due to healthcare system differences (e.g., 50-70% of US price in EU5, and lower in China and Japan).

5. **Treatment Duration**: Assuming an average treatment duration of 1 year for peak sales calculation.

6. **Penetration Rate**: Assuming the drug reaches peak sales with the given 20-30% market share after a few years of launch.

Estimated mTNBC Patient Population (Eligible for Treatment)

- **US**: ~15,000 new mTNBC patients annually (based on ~40,000 TNBC cases and a subset being metastatic or advanced).

- **EU5**: ~12,000 new mTNBC patients annually (scaled by population and incidence relative to the US).

- **China**: ~20,000 new mTNBC patients annually (higher population but lower diagnosis rates and access to advanced therapies).

- **Japan**: ~3,000 new mTNBC patients annually (smaller population with high diagnosis rates).

Total eligible treated patients across geographies: ~50,000 annually (rough estimate).

Pricing Assumptions (Annual Cost per Patient)

- **US**: $150,000

- **EU5**: $100,000 (average across countries)

- **China**: $50,000 (due to lower pricing and access challenges)

- **Japan**: $120,000 (high pricing but slightly below US levels)

Step 2: Potential Peak Sales Calculation (20% to 30% Market Share)

Peak sales are calculated as:

Peak Sales = (Number of Treated Patients) × (Market Share) × (Annual Cost per Patient)

US

- Treated Patients: 15,000

- At 20% share: 3,000 patients × $150,000 = **$450 million**

- At 30% share: 4,500 patients × $150,000 = **$675 million**

EU5

- Treated Patients: 12,000

- At 20% share: 2,400 patients × $100,000 = **$240 million**

- At 30% share: 3,600 patients × $100,000 = **$360 million**

China

- Treated Patients: 20,000

- At 20% share: 4,000 patients × $50,000 = **$200 million**

- At 30% share: 6,000 patients × $50,000 = **$300 million**

Japan

- Treated Patients: 3,000

- At 20% share: 600 patients × $120,000 = **$72 million**

- At 30% share: 900 patients × $120,000 = **$108 million**

Total Peak Sales Across Geographies

- At 20% share: $450M (US) + $240M (EU5) + $200M (China) + $72M (Japan) = **$962 million**

- At 30% share: $675M (US) + $360M (EU5) + $300M (China) + $108M (Japan) = **$1,443 million (or ~$1.44 billion)**

Potential Peak Sales Range: **$962 million to $1.44 billion** annually, assuming 20% to 30% market share.

Step 3: $ Value of 1% Share of Treated Patients

A 1% share of treated patients corresponds to 1% of the eligible patient population in each geography multiplied by the annual cost per patient.

US

- 1% of 15,000 patients = 150 patients

- Value: 150 × $150,000 = **$22.5 million**

EU5

- 1% of 12,000 patients = 120 patients

- Value: 120 × $100,000 = **$12 million**

China

- 1% of 20,000 patients = 200 patients

- Value: 200 × $50,000 = **$10 million**

Japan

- 1% of 3,000 patients = 30 patients

- Value: 30 × $120,000 = **$3.6 million**

Total Value of 1% Share Across Geographies

- $22.5M (US) + $12M (EU5) + $10M (China) + $3.6M (Japan) = **$48.1 million**

$ Value of 1% Share of Treated Patients: **$48.1 million** annually.

Final Answer

1. **Potential Peak Sales for Atezolizumab in mTNBC (assuming 20% to 30% market share)**:

- **US**: $450M to $675M

- **EU5**: $240M to $360M

- **China**: $200M to $300M

- **Japan**: $72M to $108M

- **Total**: **$962 million to $1.44 billion** annually.

2. **$ Value of 1% Share of Treated Patients**:

- **US**: $22.5M

- **EU5**: $12M

- **China**: $10M

- **Japan**: $3.6M

- **Total**: **$48.1 million** annually.

Important Caveat

As mentioned in the provided context, the clinical trial for atezolizumab in combination with paclitaxel for mTNBC did not show efficacy. Therefore, the drug may not achieve approval or market share in this indication, rendering the above calculations purely hypothetical. If atezolizumab is being evaluated for other indications or combinations in mTNBC, the numbers could vary based on new clinical data, competition, pricing, and market access. For accurate forecasts, real-world data on patient numbers, pricing, and competitive landscape would be required.

If you have additional data or wish to explore other indications for atezolizumab (e.g., non-small cell lung cancer or urothelial carcinoma, where it is already approved), I can adjust the analysis accordingly.