To estimate the **Potential Peak Sales** for tepotinib (Tepmetko) in the indication of metastatic non-small cell lung cancer (NSCLC) with MET exon 14 skipping alterations 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 make several assumptions and calculations based on available data and market analysis frameworks. Since exact patient numbers and pricing may vary, this response provides a structured estimate based on reasonable assumptions and publicly available information as of my knowledge cutoff in October 2023.

Step 1: Key Assumptions

1. **Patient Population**:

- MET exon 14 skipping alterations occur in approximately 3-4% of NSCLC patients.

- NSCLC accounts for about 85% of all lung cancer cases.

- We will estimate the total NSCLC patient population in each geography and apply the 3-4% prevalence for MET exon 14 skipping alterations.

- Assuming 20-30% of these patients are treated with tepotinib (as per the query).

2. **Pricing**:

- Tepotinib's annual cost per patient in the US is approximately $200,000 (based on similar targeted therapies for NSCLC, e.g., osimertinib or crizotinib, and adjusted for tepotinib's pricing).

- Pricing in EU5 and Japan is typically 50-70% of the US price due to healthcare system negotiations (assume ~$120,000/year).

- Pricing in China is lower due to market access and pricing controls (assume ~$60,000/year).

3. **Market Penetration**:

- Peak sales are often achieved 5-7 years post-launch, assuming maximum market penetration.

- Tepotinib received FDA approval in February 2021, so peak sales might occur around 2026-2028.

4. **Epidemiology Data** (Estimated Annual Incident NSCLC Cases):

- US: ~200,000 new NSCLC cases/year.

- EU5: ~250,000 new NSCLC cases/year (combined for Germany, France, Italy, Spain, UK).

- China: ~600,000 new NSCLC cases/year (due to high smoking rates and population size).

- Japan: ~100,000 new NSCLC cases/year.

- Total: ~1,150,000 new NSCLC cases/year across these geographies.

5. **MET Exon 14 Skipping Prevalence**:

- Assume 3.5% of NSCLC patients have MET exon 14 skipping alterations (midpoint of 3-4%).

- Not all incident cases are metastatic at diagnosis, but for simplicity, we assume a high proportion of MET exon 14 patients are diagnosed at an advanced stage (assume 80% are eligible for systemic

therapy like tepotinib).

Step 2: Calculate Eligible Patient Population

- **US**: 200,000 NSCLC cases x 3.5% MET exon 14 = 7,000 patients. Assume 80% metastatic/eligible = ~5,600 patients.

- **EU5**: 250,000 NSCLC cases x 3.5% = 8,750 patients. Assume 80% eligible = ~7,000 patients.

- **China**: 600,000 NSCLC cases x 3.5% = 21,000 patients. Assume 80% eligible = ~16,800 patients.

- **Japan**: 100,000 NSCLC cases x 3.5% = 3,500 patients. Assume 80% eligible = ~2,800 patients.

- **Total Eligible Patients**: 5,600 (US) + 7,000 (EU5) + 16,800 (China) + 2,800 (Japan) = **32,200 patients**.

Step 3: Calculate Treated Patients (20-30% Market Share)

- **Low End (20% Share)**: 32,200 x 20% = **6,440 treated patients**.

- **High End (30% Share)**: 32,200 x 30% = **9,660 treated patients**.

Breakdown by Geography:

- **US**: 5,600 x 20-30% = 1,120 to 1,680 treated patients.

- **EU5**: 7,000 x 20-30% = 1,400 to 2,100 treated patients.

- **China**: 16,800 x 20-30% = 3,360 to 5,040 treated patients.

- **Japan**: 2,800 x 20-30% = 560 to 840 treated patients.

Step 4: Calculate Potential Peak Sales

Using the pricing assumptions:

- **US**: $200,000/year x 1,120 to 1,680 patients = **$224M to $336M**.

- **EU5**: $120,000/year x 1,400 to 2,100 patients = **$168M to $252M**.

- **China**: $60,000/year x 3,360 to 5,040 patients = **$202M to $302M**.

- **Japan**: $120,000/year x 560 to 840 patients = **$67M to $101M**.

Total Peak Sales:

- Low End (20% Share): $224M (US) + $168M (EU5) + $202M (China) + $67M (Japan) = **$661M**.

- High End (30% Share): $336M (US) + $252M (EU5) + $302M (China) + $101M (Japan) = **$991M**.

Potential Peak Sales Range: **$661M to $991M annually**.

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

- Total eligible patients = 32,200.

- 1% of eligible patients = 322 patients.

Breakdown by Geography:

- **US**: 5,600 x 1% = 56 patients x $200,000 = **$11.2M**.

- **EU5**: 7,000 x 1% = 70 patients x $120,000 = **$8.4M**.

- **China**: 16,800 x 1% = 168 patients x $60,000 = **$10.1M**.

- **Japan**: 2,800 x 1% = 28 patients x $120,000 = **$3.4M**.

Total $ Value of 1% Share: $11.2M (US) + $8.4M (EU5) + $10.1M (China) + $3.4M (Japan) = **$33.1M**.

Final Answer

1. **Potential Peak Sales for Tepotinib** in the US, EU5, China, and Japan for metastatic NSCLC with MET exon 14 skipping alterations (assuming 20-30% market share): **$661M to $991M annually**.

2. **$ Value of 1% Share of Treated Patients** in these geographies: **$33.1M**.

Note: These figures are estimates based on assumptions about epidemiology, pricing, and market penetration. Real-world data may differ due to factors like competition (e.g., capmatinib, another MET inhibitor), reimbursement policies, diagnostic testing rates, and patient access. For precise figures, consult primary market research or financial reports from EMD Serono/Merck KGaA.