To estimate the **Potential Peak Sales** for repotrectinib (Augtyro) in the indication of locally advanced or metastatic ROS1-positive non-small cell lung cancer (NSCLC) in the US, EU5 (France, Germany, 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 follow a structured approach. Since exact data on patient populations, pricing, and penetration rates may not be publicly available, I'll outline a methodology based on typical market research approaches for oncology drugs and provide illustrative calculations.

Step 1: Define Key Parameters

1. **Patient Population**: Estimate the number of eligible patients with locally advanced or metastatic ROS1-positive NSCLC in each geography.

2. **Treatment Rate**: Estimate the percentage of eligible patients who receive treatment.

3. **Market Share**: Assume repotrectinib captures 20% to 30% of treated patients.

4. **Drug Pricing**: Estimate the annual cost of treatment per patient (based on typical pricing for targeted oncology therapies).

5. **Peak Sales**: Calculate peak sales based on the above parameters.

6. **1% Share Value**: Calculate the value of a 1% share of treated patients.

Step 2: Estimate Patient Population

ROS1-positive NSCLC accounts for approximately **1-2% of all NSCLC cases**. We'll use 1.5% as an average. The incidence and prevalence of NSCLC vary by region, and we focus on locally advanced or metastatic cases (Stage IIIB/IV), which account for roughly 50-60% of NSCLC diagnoses.

Incidence of NSCLC (Annual New Cases) - Approximate Figures:

- **US**: ~230,000 new NSCLC cases/year

- **EU5**: ~300,000 new NSCLC cases/year (combined)

- **China**: ~700,000 new NSCLC cases/year

- **Japan**: ~120,000 new NSCLC cases/year

ROS1-Positive NSCLC (1.5% of NSCLC):

- **US**: 230,000 × 0.015 = ~3,450 cases/year

- **EU5**: 300,000 × 0.015 = ~4,500 cases/year

- **China**: 700,000 × 0.015 = ~10,500 cases/year

- **Japan**: 120,000 × 0.015 = ~1,800 cases/year

Locally Advanced/Metastatic ROS1-Positive NSCLC (55% of ROS1 cases):

- **US**: 3,450 × 0.55 = ~1,900 patients/year

- **EU5**: 4,500 × 0.55 = ~2,475 patients/year

- **China**: 10,500 × 0.55 = ~5,775 patients/year

- **Japan**: 1,800 × 0.55 = ~990 patients/year

Treated Patients (Assume 80% of eligible patients receive treatment):

- **US**: 1,900 × 0.8 = ~1,520 treated patients/year
- **EU5**: 2,475 × 0.8 = ~1,980 treated patients/year
- **China**: 5,775 × 0.8 = ~4,620 treated patients/year
- **Japan**: 990 × 0.8 = ~792 treated patients/year

Step 3: Estimate Drug Pricing

Pricing for targeted therapies in NSCLC (e.g., crizotinib, lorlatinib) typically ranges as follows:

- **US**: ~$150,000–$200,000 per patient per year
- **EU5**: ~$80,000–$120,000 per patient per year (lower due to price controls)
- **China**: ~$30,000–$50,000 per patient per year (lower due to market access and generics)
- **Japan**: ~$100,000–$150,000 per patient per year

For simplicity, let's use mid-range estimates:

- **US**: $175,000/year
- **EU5**: $100,000/year
- **China**: $40,000/year
- **Japan**: $125,000/year

Step 4: Calculate Potential Peak Sales (20%-30% Market Share)

Peak sales are calculated as:

Peak Sales = Treated Patients × Market Share × Annual Cost per Patient

At 20% Market Share:

- **US**: 1,520 × 0.2 × $175,000 = **$53.2 million**
- **EU5**: 1,980 × 0.2 × $100,000 = **$39.6 million**
- **China**: 4,620 × 0.2 × $40,000 = **$36.96 million**
- **Japan**: 792 × 0.2 × $125,000 = **$19.8 million**

Total (20% share): $53.2M + $39.6M + $36.96M + $19.8M = **$149.56 million**

At 30% Market Share:

- **US**: 1,520 × 0.3 × $175,000 = **$79.8 million**
- **EU5**: 1,980 × 0.3 × $100,000 = **$59.4 million**

- **China**: 4,620 × 0.3 × $40,000 = **$55.44 million**

- **Japan**: 792 × 0.3 × $125,000 = **$29.7 million**

Total (30% share): $79.8M + $59.4M + $55.44M + $29.7M = **$224.34 million**

Potential Peak Sales Range: **$149.56 million to $224.34 million annually** across the specified geographies.

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

Value of 1% share is calculated as:

Value of 1% Share = Treated Patients × 0.01 × Annual Cost per Patient

- **US**: 1,520 × 0.01 × $175,000 = **$2.66 million**

- **EU5**: 1,980 × 0.01 × $100,000 = **$1.98 million**

- **China**: 4,620 × 0.01 × $40,000 = **$1.85 million**

- **Japan**: 792 × 0.01 × $125,000 = **$0.99 million**

Total Value of 1% Share: $2.66M + $1.98M + $1.85M + $0.99M = **$7.48 million**

Final Answer:

1. **Potential Peak Sales for Repotrectinib (20%-30% Market Share)**:

- **US**: $53.2M to $79.8M

- **EU5**: $39.6M to $59.4M

- **China**: $36.96M to $55.44M

- **Japan**: $19.8M to $29.7M

- **Total**: **$149.56 million to $224.34 million annually**

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

- **US**: $2.66M

- **EU5**: $1.98M

- **China**: $1.85M

- **Japan**: $0.99M

- **Total**: **$7.48 million**

Caveats:

- These estimates are based on approximate figures for NSCLC incidence, ROS1 prevalence, treatment rates, and pricing. Actual numbers may vary based on real-world data, market access, reimbursement policies, and competition (e.g., other ROS1 inhibitors like crizotinib and entrectinib).

- Peak sales may take several years to achieve and depend on market penetration, physician adoption, and patient access.

- Pricing in China may be lower due to government negotiations and local generics; EU5 pricing varies by country.

- The analysis assumes annual treatment costs and does not account for duration of therapy or patient adherence.

If more specific data (e.g., exact patient numbers or pricing) is available, these estimates can be refined.