To calculate the **Potential Peak Sales** for the drug "nan" in the specified indication across the US, EU5 (France, Germany, Italy, Spain, and the 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 specific data about the drug "nan," the indication, patient population, pricing, and market penetration are not provided, I will outline a general methodology with illustrative figures. You can adjust the numbers based on specific data for more accuracy.

Step 1: Define Key Assumptions

1. **Indication and Patient Population**: Assume "nan" targets a specific oncology indication (e.g., non-small cell lung cancer or breast cancer). We will estimate the number of treated patients in each geography based on epidemiology data for the indication.

2. **Market Share**: Assume a 20% to 30% share of treated patients as given in the query.

3. **Pricing**: Assume an annual treatment cost per patient. Oncology drugs often range from $50,000 to $150,000 per patient per year in developed markets (US, EU5, Japan) and lower in China due to pricing controls (e.g., $20,000–$50,000).

4. **Treated Patient Population**: We will estimate the number of treated patients based on incidence, diagnosis rates, and treatment eligibility for the indication. For illustrative purposes, let's assume a common oncology indication like non-small cell lung cancer (NSCLC).

Estimated Treated Patients (Illustrative for NSCLC):

- **US**: ~200,000 new NSCLC cases annually; assume 60% are treated with systemic therapies = ~120,000 treated patients.

- **EU5**: ~250,000 new cases; assume 60% treated = ~150,000 treated patients.

- **China**: ~700,000 new cases; assume 50% treated due to access limitations = ~350,000 treated patients.

- **Japan**: ~100,000 new cases; assume 70% treated = ~70,000 treated patients.

- **Total Treated Patients**: 120,000 (US) + 150,000 (EU5) + 350,000 (China) + 70,000 (Japan) = **690,000 patients**.

Annual Treatment Cost per Patient (Assumption):

- US: $100,000

- EU5: $80,000

- Japan: $80,000

- China: $30,000 (due to lower pricing and generics/negotiations)

Step 2: Calculate Potential Peak Sales for 20% to 30% Market Share

Peak sales are calculated as:

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

At 20% Market Share:

- **US**: 120,000 patients × 20% × $100,000 = **$2.4 billion**
- **EU5**: 150,000 patients × 20% × $80,000 = **$2.4 billion**
- **China**: 350,000 patients × 20% × $30,000 = **$2.1 billion**
- **Japan**: 70,000 patients × 20% × $80,000 = **$1.12 billion**
- **Total Peak Sales (20%)**: $2.4B + $2.4B + $2.1B + $1.12B = **$8.02 billion**

At 30% Market Share:

- **US**: 120,000 patients × 30% × $100,000 = **$3.6 billion**
- **EU5**: 150,000 patients × 30% × $80,000 = **$3.6 billion**
- **China**: 350,000 patients × 30% × $30,000 = **$3.15 billion**
- **Japan**: 70,000 patients × 30% × $80,000 = **$1.68 billion**
- **Total Peak Sales (30%)**: $3.6B + $3.6B + $3.15B + $1.68B = **$12.03 billion**

Thus, the **Potential Peak Sales** for "nan" in this indication across the specified geographies ranges from **$8.02 billion (20% share)** to **$12.03 billion (30% share)** annually.

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

The value of a 1% share is calculated as:

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

- **US**: 120,000 patients × 1% × $100,000 = **$120 million**
- **EU5**: 150,000 patients × 1% × $80,000 = **$120 million**
- **China**: 350,000 patients × 1% × $30,000 = **$105 million**
- **Japan**: 70,000 patients × 1% × $80,000 = **$56 million**
- **Total Value of 1% Share**: $120M + $120M + $105M + $56M = **$401 million**

Thus, the **$ value of a 1% share of treated patients** across these geographies is approximately **$401 million**.

Summary of Results

1. **Potential Peak Sales for "nan" (20% to 30% market share):**

- 20% share: **$8.02 billion**

- 30% share: **$12.03 billion**

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

- US: **$120 million**

- EU5: **$120 million**

- China: **$105 million**

- Japan: **$56 million**

- Total: **$401 million**

Notes and Caveats

- The numbers above are illustrative and based on assumptions for NSCLC as the indication. Actual figures will depend on the specific indication, patient population, pricing, market access, competition, and reimbursement policies in each geography.

- Factors such as patent life, generic/biosimilar competition, and market penetration rates could impact peak sales.

- If you have specific data on "nan" (e.g., indication, target population, or pricing), I can refine the calculations accordingly.

Let me know if you'd like me to adjust the assumptions or focus on a different indication!