

To calculate the **Potential Peak Sales** for the drug "nan" in the specified indication across 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 follow a structured approach. Since specific data about the drug "nan," the indication, patient population, pricing, and market dynamics are not provided, I will outline a general methodology and use illustrative figures. You can replace these with actual data for precise calculations.

Step 1: Define Key Parameters

1. **Total Patient Population:** Number of patients eligible for treatment in the indication.
2. **Treatment Rate:** Percentage of eligible patients who receive treatment.
3. **Market Share:** Percentage of treated patients using "nan" (assumed as 20% to 30%).
4. **Annual Cost per Patient:** Price of the drug per patient per year (varies by region due to pricing differences).
5. **Peak Sales:** The maximum annual revenue achieved when the drug reaches its highest market penetration.

Step 2: Assumptions for Calculation

Since specific data is unavailable, I will use hypothetical numbers for the patient population, treatment rates, and pricing. These are illustrative and should be replaced with real-world data for accuracy.

- Total Eligible Patient Population in Indication (Annual Incidence or Prevalence):

- US: 100,000 patients
- EU5: 120,000 patients (combined)
- China: 200,000 patients
- Japan: 50,000 patients
- **Total:** 470,000 patients

- Treatment Rate (Percentage of eligible patients treated):

- US: 80%
- EU5: 75%
- China: 60%
- Japan: 85%

- Annual Cost per Patient (in USD):

- US: \$50,000 (higher due to pricing structure)
- EU5: \$30,000 (lower due to price controls)
- China: \$10,000 (significantly lower due to pricing and generics competition)
- Japan: \$35,000 (moderate pricing)

- **Market Share for "nan":** 20% to 30% of treated patients.

Step 3: Calculate Treated Patients and Potential Peak Sales

a) Treated Patients by Region

- US: $100,000 \times 80\% = 80,000$ treated patients
- EU5: $120,000 \times 75\% = 90,000$ treated patients
- China: $200,000 \times 60\% = 120,000$ treated patients
- Japan: $50,000 \times 85\% = 42,500$ treated patients
- **Total Treated Patients:** 332,500

b) Potential Peak Sales for "nan" at 20% and 30% Market Share

- **At 20% Market Share:**

- US: $80,000 \times 20\% \times \$50,000 = \$800$ million
- EU5: $90,000 \times 20\% \times \$30,000 = \$540$ million
- China: $120,000 \times 20\% \times \$10,000 = \$240$ million
- Japan: $42,500 \times 20\% \times \$35,000 = \$297.5$ million
- **Total Peak Sales (20%):** \$1,877.5 million (~\$1.88 billion)

- **At 30% Market Share:**

- US: $80,000 \times 30\% \times \$50,000 = \$1,200$ million
- EU5: $90,000 \times 30\% \times \$30,000 = \$810$ million
- China: $120,000 \times 30\% \times \$10,000 = \$360$ million
- Japan: $42,500 \times 30\% \times \$35,000 = \$446.25$ million
- **Total Peak Sales (30%):** \$2,816.25 million (~\$2.82 billion)

Thus, the **Potential Peak Sales for "nan"** in this indication across the US, EU5, China, and Japan is estimated to be **between \$1.88 billion and \$2.82 billion** annually, assuming a 20% to 30% market share.

Step 4: Calculate \$ Value of 1% Share of Treated Patients

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

- US: $80,000 \times 1\% \times \$50,000 = \$40$ million
- EU5: $90,000 \times 1\% \times \$30,000 = \$27$ million
- China: $120,000 \times 1\% \times \$10,000 = \$12$ million

- Japan: $42,500 \times 1\% \times \$35,000 = \$14.875$ million
- **Total \$ Value of 1% Share:** \$93.875 million (~\$93.9 million)

Thus, the **\$ value of a 1% share of treated patients** across these geographies is approximately **\$93.9 million**.

Step 5: Key Considerations

- **Patient Population:** The numbers used are hypothetical. Real data on incidence/prevalence for the specific indication (e.g., oncology, rare disease) should be sourced from epidemiological studies or market research.
- **Pricing Variability:** Drug pricing varies widely by region due to healthcare systems, reimbursement policies, and competition. Adjust based on the specific drug and market dynamics.
- **Market Share:** The 20%-30% range is an assumption. Actual market share depends on efficacy, safety, competition, and market access.
- **Penetration Rate:** Treatment rates may differ based on diagnosis rates, access to healthcare, and cultural factors.
- **Duration of Therapy:** If "nan" is not a chronic treatment, adjust the annual cost per patient to reflect the treatment duration.

Final Answer

- **Potential Peak Sales for "nan" (20%-30% market share):**
- US, EU5, China, Japan combined: **\$1.88 billion to \$2.82 billion annually**
- **\$ Value of 1% Share of Treated Patients:**
- US, EU5, China, Japan combined: **\$93.9 million**

If you have specific data on the indication, patient numbers, pricing, or other factors, I can refine these estimates accordingly. Additionally, if the context of capecitabine and fluorouracil (5-FU) mentioned in your follow-up is relevant to "nan" (e.g., if "nan" is a competitor or related drug), please clarify how DPD deficiency or labeling updates impact market potential.