To estimate the **Potential Peak Sales** for **adagrasib (Krazati)** in the indication of KRAS G12C-mutated locally advanced or metastatic non-small cell lung cancer (NSCLC) 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 follow a structured approach. Since specific data such as exact patient numbers, pricing, or market penetration might not be publicly available, I will outline the methodology and make reasonable assumptions based on general market trends, epidemiology, and drug pricing in oncology.

Step 1: Define the Target Patient Population

- **Indication**: KRAS G12C-mutated locally advanced or metastatic NSCLC in patients who have received at least one prior systemic therapy.

- **Mutation Prevalence**: KRAS G12C mutation occurs in approximately 12-14% of NSCLC patients (based on published literature).

- **NSCLC Incidence**: Using epidemiology data for NSCLC in the specified regions (US, EU5, China, Japan), we estimate the total number of NSCLC patients and then calculate the subset with KRAS G12C mutation.

- **Eligible Patients**: Focus on advanced/metastatic NSCLC patients (Stage IIIB-IV), which typically account for ~60-70% of NSCLC cases, and further narrow to those who have received prior therapy (second-line or later).

Estimated NSCLC Incidence (2023, approximate annual new cases):

- **US**: ~230,000 new NSCLC cases (American Cancer Society).

- **EU5**: ~320,000 new NSCLC cases (based on GLOBOCAN and regional data).

- **China**: ~800,000 new NSCLC cases (high incidence due to smoking and pollution).

- **Japan**: ~120,000 new NSCLC cases (GLOBOCAN data).

KRAS G12C Mutation and Eligible Population:

- KRAS G12C mutation: ~13% of NSCLC cases.

- Advanced/metastatic (Stage IIIB-IV): ~65% of cases.

- Second-line or later (prior therapy): Assume ~50% of advanced/metastatic patients progress to second-line.

Estimated KRAS G12C-mutated, advanced/metastatic, second-line NSCLC patients (approximate):

- **US**: 230,000 * 0.13 * 0.65 * 0.5 = ~9,700 patients.

- **EU5**: 320,000 * 0.13 * 0.65 * 0.5 = ~13,500 patients.

- **China**: 800,000 * 0.13 * 0.65 * 0.5 = ~33,800 patients.

- **Japan**: 120,000 * 0.13 * 0.65 * 0.5 = ~5,100 patients.

- **Total**: ~62,100 patients across all geographies.

Step 2: Estimate Market Share

- The problem assumes a **20% to 30% share of treated patients** for adagrasib.

- For peak sales calculation, we'll use the midpoint of **25% market share**.

- **Treated Patients with Adagrasib** (25% share):

- **US**: 9,700 * 0.25 = ~2,425 patients.

- **EU5**: 13,500 * 0.25 = ~3,375 patients.

- **China**: 33,800 * 0.25 = ~8,450 patients.

- **Japan**: 5,100 * 0.25 = ~1,275 patients.

- **Total**: ~15,525 patients.

Step 3: Estimate Annual Drug Cost per Patient

Adagrasib is a targeted oncology drug, and pricing for such therapies is high, especially in developed markets. We assume:

- **US**: Annual cost ~$240,000 per patient (based on pricing of similar drugs like sotorasib [Lumakras], which costs ~$20,000/month).

- **EU5**: Annual cost ~$180,000 per patient (lower due to price negotiations and healthcare systems).

- **Japan**: Annual cost ~$200,000 per patient (similar to US but with some discounts).

- **China**: Annual cost ~$100,000 per patient (significantly lower due to market access challenges, pricing regulations, and local competition).

Step 4: Calculate Potential Peak Sales

Peak sales are calculated as: **Number of treated patients * Annual cost per patient**.

- **US**: 2,425 patients * $240,000 = **$582 million**.

- **EU5**: 3,375 patients * $180,000 = **$607.5 million**.

- **China**: 8,450 patients * $100,000 = **$845 million**.

- **Japan**: 1,275 patients * $200,000 = **$255 million**.

- **Total Peak Sales**: $582M + $607.5M + $845M + $255M = **~$2.29 billion**.

Range of Peak Sales (20% to 30% market share):

- **20% share** (lower end): Total treated patients = ~12,420 * respective costs = **~$1.83 billion**.

- **30% share** (upper end): Total treated patients = ~18,630 * respective costs = **~$2.75 billion**.

Thus, **Potential Peak Sales** for adagrasib in this indication across the US, EU5, China, and Japan are in the range of **$1.83 billion to $2.75 billion**, with a midpoint of **~$2.29 billion**.

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

A 1% share of treated patients corresponds to 1% of the total eligible patient population in each geography.

- **US**: 9,700 patients * 0.01 = 97 patients * $240,000 = **$23.3 million**.

- **EU5**: 13,500 patients * 0.01 = 135 patients * $180,000 = **$24.3 million**.

- **China**: 33,800 patients * 0.01 = 338 patients * $100,000 = **$33.8 million**.

- **Japan**: 5,100 patients * 0.01 = 51 patients * $200,000 = **$10.2 million**.

- **Total $ Value of 1% Share**: $23.3M + $24.3M + $33.8M + $10.2M = **$91.6 million**.

Thus, the **$ value of a 1% share of treated patients** across the US, EU5, China, and Japan is approximately **$91.6 million**.

Final Answer:

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

- Range: **$1.83 billion to $2.75 billion**.

- Midpoint: **~$2.29 billion**.

- Breakdown by geography (at 25% share):

- US: **$582 million**.

- EU5: **$607.5 million**.

- China: **$845 million**.

- Japan: **$255 million**.

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

- Total: **$91.6 million**.

- Breakdown by geography:

- US: **$23.3 million**.

- EU5: **$24.3 million**.

- China: **$33.8 million**.

- Japan: **$10.2 million**.

Notes and Assumptions:

- These calculations are based on approximate epidemiology data, mutation prevalence, and pricing estimates for targeted oncology drugs. Actual numbers may vary based on real-world market dynamics, competition (e.g., sotorasib), pricing negotiations, and patient access.

- Peak sales assume stable market share and no significant disruption from competitors or new therapies during the peak period.

- Treatment duration is assumed to be one year for simplicity; actual duration may vary based on progression-free survival and real-world evidence.

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