To estimate the **Potential Peak Sales** for selpercatinib (Retevmo) in the indication of locally advanced or metastatic non-small cell lung cancer (NSCLC) with RET gene fusion 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. This involves estimating the eligible patient population, market share, pricing, and treatment duration. Since exact data may not be publicly available, I will use reasonable assumptions based on epidemiology, market trends, and publicly available information.

Step 1: Key Assumptions and Inputs

1. **Indication and Target Population**: Selpercatinib is approved for NSCLC patients with RET gene fusion, which accounts for approximately **1-2% of all NSCLC cases**.

2. **Market Share**: As per the query, assuming a **20% to 30% share of treated patients** in this indication.

3. **Geographies**: US, EU5 (Germany, France, Italy, Spain, UK), China, and Japan.

4. **Pricing**: Pricing for targeted therapies like selpercatinib can vary by region. Based on available data, the annual cost of selpercatinib in the US is approximately **$250,000 per patient** (adjusted for discounts and adherence). Costs in EU5 and Japan are typically lower (60-80% of US price), and in China, they are significantly lower due to pricing regulations (30-50% of US price).

5. **Treatment Duration**: Assuming an average treatment duration of **1 year** for advanced NSCLC patients (based on progression-free survival data from clinical trials like LIBRETTO-001).

6. **Epidemiology**: Incidence of NSCLC and proportion of RET fusion cases are estimated based on published data.

Step 2: Estimate Eligible Patient Population

NSCLC incidence varies by region. Below are approximate annual new cases of NSCLC and the proportion with RET fusion (1-2%):

Region	NSCLC Annual Incidence (New Cases)	RET Fusion (1.5% of NSCLC)	Eligible Patients (RET Fusion)
US	200,000	1.5%	3,000
EU5	300,000	1.5%	4,500
China	700,000	1.5%	10,500
Japan	100,000	1.5%	1,500
Total	**1,300,000**	**1.5%**	**19,500**

Notes:

- RET fusion prevalence is assumed at 1.5% (midpoint of 1-2%) based on literature.

- Incidence numbers are rounded estimates from cancer statistics (e.g., American Cancer Society, WHO, and local cancer registries).

Step 3: Estimate Treated Patients with Selpercatinib

Assuming a market share of **20% to 30%** among eligible patients:

| Region | Eligible Patients | 20% Market Share (Treated Patients) | 30% Market Share (Treated Patients) |

|---|---|---|---|

| US | 3,000 | 600 | 900 |

| EU5 | 4,500 | 900 | 1,350 |

| China | 10,500 | 2,100 | 3,150 |

| Japan | 1,500 | 300 | 450 |

| **Total** | **19,500** | **3,900** | **5,850** |

Step 4: Estimate Annual Pricing per Patient

Pricing varies by region due to healthcare systems, negotiations, and discounts:

| Region | Annual Cost per Patient (USD) |

|---|---|

| US | $250,000 |

| EU5 | $175,000 (70% of US price) |

| China | $100,000 (40% of US price) |

| Japan | $200,000 (80% of US price) |

Notes:

- US pricing is based on reported costs for selpercatinib (~$20,000/month, adjusted for adherence and discounts).

- EU5 and Japan prices are discounted due to payer negotiations.

- China pricing is lower due to market access programs and local pricing regulations.

Step 5: Calculate Potential Peak Sales

Peak sales are calculated as:

Peak Sales = Treated Patients x Annual Cost per Patient

At 20% Market Share:

Region	Treated Patients	Annual Cost per Patient (USD)	Peak Sales (USD Million)
US	600	$250,000	$150
EU5	900	$175,000	$158
China	2,100	$100,000	$210
Japan	300	$200,000	$60
Total	**3,900**		**$578 Million**

At 30% Market Share:

Region	Treated Patients	Annual Cost per Patient (USD)	Peak Sales (USD Million)
US	900	$250,000	$225
EU5	1,350	$175,000	$236
China	3,150	$100,000	$315
Japan	450	$200,000	$90
Total	**5,850**		**$866 Million**

Potential Peak Sales Range: **$578 Million to $866 Million** annually across the US, EU5, China, and Japan for this indication.

Step 6: Calculate $ Value of 1% Share of Treated Patients

A 1% share of treated patients corresponds to 1% of the eligible patient population being treated with selpercatinib.

Region	Eligible Patients	1% of Eligible Patients	Annual Cost per Patient (USD)	Value of 1% Share (USD Million)
US	3,000	30	$250,000	$7.5
EU5	4,500	45	$175,000	$7.9
China	10,500	105	$100,000	$10.5
Japan	1,500	15	$200,000	$3.0

| **Total** | **19,500** | **195** | | **$28.9 Million** |

$ Value of 1% Share of Treated Patients: Approximately **$28.9 Million** annually across these geographies.

Final Answer

1. **Potential Peak Sales for Selpercatinib** in locally advanced or metastatic NSCLC with RET fusion (assuming 20% to 30% market share):

- **$578 Million to $866 Million** annually across the US, EU5, China, and Japan.

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

- Approximately **$28.9 Million** annually across the US, EU5, China, and Japan.

Caveats:

- These estimates are based on assumptions for epidemiology, pricing, and market share. Actual figures may vary due to real-world uptake, competition (e.g., pralsetinib by Blueprint Medicines), diagnostic testing rates, and payer dynamics.

- Peak sales may take several years to achieve depending on market penetration and approval timelines in each region.

- This analysis focuses solely on the NSCLC indication with RET fusion and does not account for other approved indications for selpercatinib (e.g., thyroid cancer).