To estimate the **Potential Peak Sales** for belantamab mafodotin-blmf (Blenrep) in the indication of relapsed or refractory multiple myeloma (RRMM) 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 on patient numbers, pricing, and market penetration may not be fully available, I will outline the methodology and provide reasonable assumptions based on publicly available information and market trends for oncology drugs, particularly in multiple myeloma.

Key Steps and Assumptions

1. **Target Patient Population**: Estimate the number of eligible patients with relapsed or refractory multiple myeloma (RRMM) who have received at least 4 prior therapies in the specified geographies.

2. **Market Share**: Use the provided range of 20% to 30% share of treated patients to estimate the number of patients treated with belantamab mafodotin-blmf.

3. **Drug Pricing**: Estimate the annual cost of treatment per patient based on available data or analogs for similar therapies in RRMM.

4. **Peak Sales Calculation**: Multiply the number of treated patients by the annual cost per patient to calculate peak sales.

5. **Value of 1% Share**: Calculate the value of treating 1% of the eligible patient population in each geography.

Step 1: Estimate Eligible Patient Population

Multiple myeloma is a rare cancer, and the subset of patients with RRMM who have received at least 4 prior therapies is even smaller. Based on epidemiology data and market reports:

- **US**: Approximately 32,000 new cases of multiple myeloma annually, with ~10-15% reaching 4+ lines of therapy (LoT). This translates to ~3,200-4,800 eligible patients.

- **EU5**: Combined incidence is ~40,000 new cases annually. Assuming a similar proportion reach 4+ LoT, eligible patients are ~4,000-6,000.

- **Japan**: Incidence is ~8,000 new cases annually, with eligible patients ~800-1,200.

- **China**: Incidence is ~20,000-25,000 new cases annually, with eligible patients ~2,000-3,000 (lower access to advanced therapies may reduce this number, but we assume similar progression rates for simplicity).

Total eligible patients (mid-range estimates):

- US: ~4,000

- EU5: ~5,000

- Japan: ~1,000

- China: ~2,500

- **Total**: ~12,500 patients

Step 2: Market Share (20%-30%)

Assuming a 20%-30% share of treated patients:

- At 20% share: ~2,500 patients treated.

- At 30% share: ~3,750 patients treated.

Breaking this down by geography (proportional to patient population):

- **US**: 4,000 patients → 800 (20%) to 1,200 (30%)

- **EU5**: 5,000 patients → 1,000 (20%) to 1,500 (30%)

- **Japan**: 1,000 patients → 200 (20%) to 300 (30%)

- **China**: 2,500 patients → 500 (20%) to 750 (30%)

Step 3: Drug Pricing

Belantamab mafodotin-blmf (Blenrep) is a novel antibody-drug conjugate, and pricing for such therapies in RRMM is high due to the advanced stage of disease and limited treatment options. Based on analogs like other RRMM therapies (e.g., daratumumab, pomalidomide, or CAR-T therapies):

- **US**: Annual cost per patient is estimated at ~$200,000-$250,000.

- **EU5**: Pricing is typically 30-50% lower than the US due to healthcare system negotiations, so ~$120,000-$150,000 per patient.

- **Japan**: Similar to EU5, ~$120,000-$150,000 per patient.

- **China**: Pricing is significantly lower due to market access challenges and local pricing policies, ~$50,000-$80,000 per patient.

For simplicity, use mid-range estimates:

- US: $225,000

- EU5: $135,000

- Japan: $135,000

- China: $65,000

Step 4: Potential Peak Sales Calculation

Peak sales are calculated as (number of treated patients) x (annual cost per patient) for each geography.

At 20% Market Share:

- **US**: 800 patients x $225,000 = **$180 million**

- **EU5**: 1,000 patients x $135,000 = **$135 million**

- **Japan**: 200 patients x $135,000 = **$27 million**

- **China**: 500 patients x $65,000 = **$32.5 million**

- **Total Peak Sales (20%)**: **$374.5 million**

At 30% Market Share:

- **US**: 1,200 patients x $225,000 = **$270 million**

- **EU5**: 1,500 patients x $135,000 = **$202.5 million**

- **Japan**: 300 patients x $135,000 = **$40.5 million**

- **China**: 750 patients x $65,000 = **$48.75 million**

- **Total Peak Sales (30%)**: **$561.75 million**

Thus, the **Potential Peak Sales** range is approximately **$375 million to $562 million** across the US, EU5, Japan, and China.

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

A 1% share of treated patients corresponds to 1% of the eligible patient population in each geography. Calculate the number of patients and multiply by the annual cost per patient.

- **US**: 1% of 4,000 = 40 patients x $225,000 = **$9 million**

- **EU5**: 1% of 5,000 = 50 patients x $135,000 = **$6.75 million**

- **Japan**: 1% of 1,000 = 10 patients x $135,000 = **$1.35 million**

- **China**: 1% of 2,500 = 25 patients x $65,000 = **$1.625 million**

- **Total Value of 1% Share**: **$18.725 million**

Final Answer

- **Potential Peak Sales for belantamab mafodotin-blmf** in the US, EU5, China, and Japan (assuming 20%-30% market share): **$375 million to $562 million**.

- **$ Value of 1% Share of Treated Patients**:

- US: **$9 million**

- EU5: **$6.75 million**

- Japan: **$1.35 million**

- China: **$1.625 million**

- Total: **$18.725 million**

Notes and Caveats

- These estimates are based on assumptions about patient population, pricing, and market share. Real-world data may vary due to factors like reimbursement, competition (e.g., other RRMM therapies like CAR-T or bispecific antibodies), and market access barriers, especially in China.

- Belantamab mafodotin-blmf received accelerated approval, and its sales potential could be impacted by confirmatory trial outcomes or safety concerns (e.g., ocular toxicity, which has been noted in clinical trials).

- Peak sales typically occur several years after launch as market penetration increases, and these figures assume steady-state adoption at the 20%-30% level.