To estimate the **Potential Peak Sales** for **tisotumab vedotin-tftv (Tivdak)** in the indication of recurrent or metastatic cervical cancer with disease progression on or after chemotherapy, as well as the **$ value of 1% share of treated patients** in the US, EU5 (Germany, France, Italy, Spain, UK), China, and Japan, we need to follow a structured approach. Since specific data such as exact patient numbers, pricing, or market penetration may not be publicly available, I will outline the methodology and make reasonable assumptions based on general market trends, epidemiology, and drug pricing in oncology. You can refine these numbers with more precise data if available.

Step 1: Key Assumptions and Methodology

1. **Indication and Patient Population**: The drug is approved for adult patients with recurrent or metastatic cervical cancer who have progressed on or after chemotherapy. This is a second-line or later-line treatment, so the eligible patient population is a subset of all cervical cancer patients.

2. **Market Share**: We are assuming a 20% to 30% share of treated patients in this indication.

3. **Pricing**: Oncology drugs, especially antibody-drug conjugates (ADCs) like tisotumab vedotin, are expensive. A typical annual cost for such drugs can range from $100,000 to $200,000 per patient in the US, with lower costs in other regions due to pricing regulations or negotiations.

4. **Epidemiology**: Cervical cancer incidence and prevalence vary by region. We will estimate the number of eligible patients (recurrent/metastatic, progressed after chemotherapy) as a fraction of total cervical cancer cases.

5. **Peak Sales**: Peak sales are typically achieved 5-7 years after launch, assuming optimal market penetration and before patent expiry or competition.

Step 2: Estimating Eligible Patient Population

Recurrent or metastatic cervical cancer patients who progress after chemotherapy represent a smaller subset of total cervical cancer cases. Approximately 30-50% of cervical cancer cases may progress to advanced stages, and of those, a subset will fail first-line chemotherapy.

Incidence and Eligible Patients (Rough Estimates):

- **US**: ~14,000 new cervical cancer cases annually (American Cancer Society). Assuming 30-40% are recurrent/metastatic and progress after chemo, eligible patients ~1,500-2,000.

- **EU5**: Combined incidence ~34,000 new cases annually (ECIS - European Cancer Information System). Assuming similar progression rates, eligible patients ~3,500-5,000.

- **China**: ~130,000 new cases annually (highest incidence globally, WHO). Assuming progression rates, eligible patients ~13,000-20,000.

- **Japan**: ~13,000 new cases annually (WHO). Eligible patients ~1,300-2,000.

Total eligible patients across regions: **~19,300-29,000**.

Step 3: Market Share and Treated Patients

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

- **20% share**: ~3,860-5,800 treated patients.

- **30% share**: ~5,790-8,700 treated patients.

Breakdown by Region (Proportional to Eligible Patients):

- **US**: 20%-30% of 1,500-2,000 = 300-600 patients.

- **EU5**: 20%-30% of 3,500-5,000 = 700-1,500 patients.

- **China**: 20%-30% of 13,000-20,000 = 2,600-6,000 patients.

- **Japan**: 20%-30% of 1,300-2,000 = 260-600 patients.

Step 4: Pricing per Patient

- **US**: Annual cost ~$150,000 per patient (mid-range for ADCs).

- **EU5**: Annual cost ~$80,000-$100,000 per patient (lower due to pricing negotiations).

- **China**: Annual cost ~$30,000-$50,000 per patient (significant discounts due to market dynamics and government policies).

- **Japan**: Annual cost ~$80,000-$100,000 per patient (similar to EU5).

Step 5: Potential Peak Sales Calculation

At 20% Market Share:

- **US**: 300-400 patients × $150,000 = **$45M-$60M**.

- **EU5**: 700-1,000 patients × $90,000 (avg.) = **$63M-$90M**.

- **China**: 2,600-4,000 patients × $40,000 (avg.) = **$104M-$160M**.

- **Japan**: 260-400 patients × $90,000 (avg.) = **$23M-$36M**.

- **Total Peak Sales (20%)**: **$235M-$346M**.

At 30% Market Share:

- **US**: 450-600 patients × $150,000 = **$67.5M-$90M**.

- **EU5**: 1,050-1,500 patients × $90,000 = **$94.5M-$135M**.

- **China**: 3,900-6,000 patients × $40,000 = **$156M-$240M**.

- **Japan**: 390-600 patients × $90,000 = **$35M-$54M**.

- **Total Peak Sales (30%)**: **$353M-$519M**.

Thus, **Potential Peak Sales** for tisotumab vedotin-tftv in this indication across the US, EU5, China, and Japan are estimated to be in the range of **$235M-$519M**, depending on market share (20%-30%).

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

First, calculate total eligible patients and 1% of that:

- Total eligible patients: ~19,300-29,000.

- 1% share: ~193-290 patients.

Revenue per 1% Share by Region:

- **US**: 1% of 1,500-2,000 = 15-20 patients × $150,000 = **$2.25M-$3M**.

- **EU5**: 1% of 3,500-5,000 = 35-50 patients × $90,000 = **$3.15M-$4.5M**.

- **China**: 1% of 13,000-20,000 = 130-200 patients × $40,000 = **$5.2M-$8M**.

- **Japan**: 1% of 1,300-2,000 = 13-20 patients × $90,000 = **$1.17M-$1.8M**.

- **Total $ Value of 1% Share**: **$11.77M-$17.3M**.

Thus, the **$ value of 1% share of treated patients** across these geographies is approximately **$11.8M-$17.3M**.

Final Answer

- **Potential Peak Sales for tisotumab vedotin-tftv** in recurrent or metastatic cervical cancer (US, EU5, China, Japan):

- At 20% market share: **$235M-$346M**.

- At 30% market share: **$353M-$519M**.

- **$ Value of 1% Share of Treated Patients**: **$11.8M-$17.3M**.

Note: These estimates are based on assumptions about patient populations, pricing, and market penetration. Actual figures may vary depending on real-world data, competition, reimbursement policies, and other market dynamics. If you have access to specific data (e.g., exact patient numbers, pricing, or market research), these estimates can be refined further.