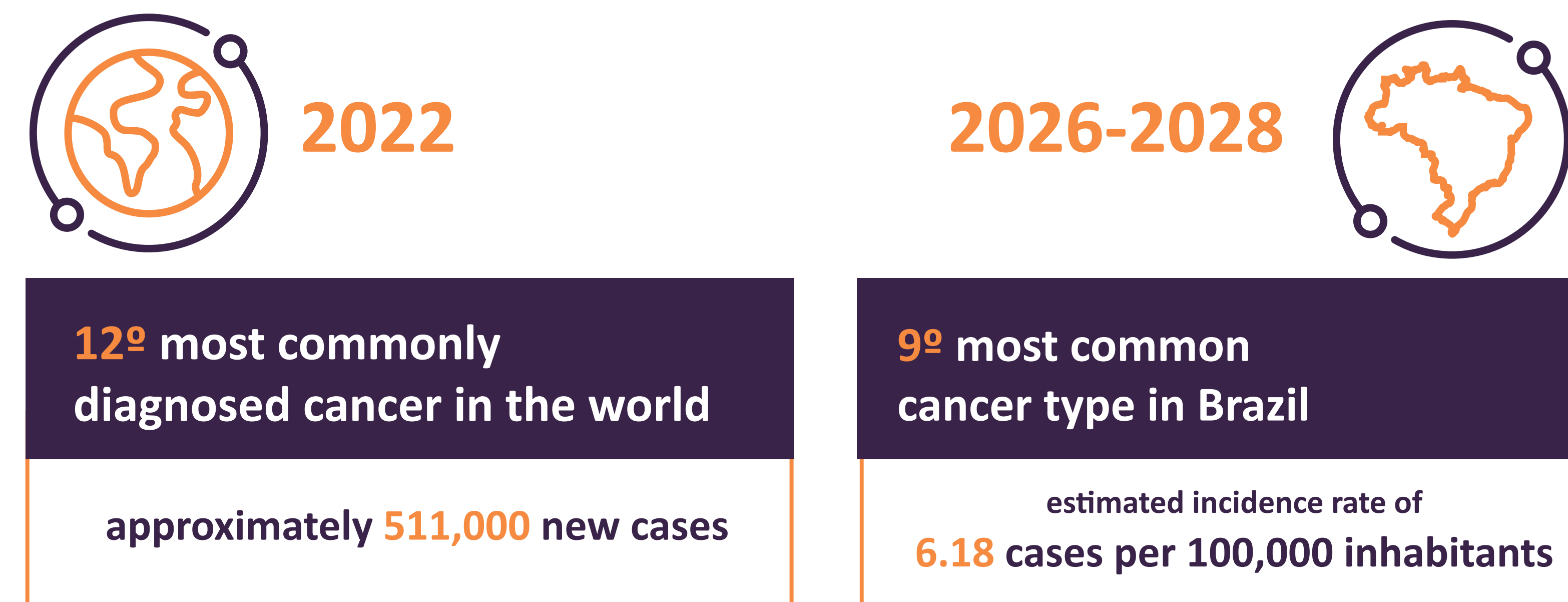


### BACKGROUND

Pancreatic cancer (PCa) remains one of the most lethal malignancies worldwide, characterized by late diagnosis, aggressive tumor biology, and limited therapeutic responsiveness. In 2022, pancreatic cancer was the 12th most commonly diagnosed cancer worldwide, with approximately 511,000 new cases, accounting for 2.6% of all cancer cases. The estimated number of new pancreatic cancer cases in Brazil for each year of the 2026–2028 triennium is 13,240, corresponding to an estimated incidence rate of 6.18 cases per 100,000 inhabitants. Excluding non-melanoma skin cancer, pancreatic cancer is the ninth most common cancer type. Despite representing a relatively small proportion of total cancer incidence, PCa imposes disproportionate clinical and economic burden due to high mortality rates and intensive healthcare resource utilization (HCRU). The disease is frequently diagnosed at advanced stages, largely due to nonspecific early symptoms and lack of effective screening strategies. As a result, curative surgical resection is feasible in a minority of patients, while the majority require systemic therapies or palliative care. Even among treated patients, rapid clinical deterioration often limits the ability to receive sequential lines of therapy. From a health system perspective, pancreatic cancer imposes significant direct costs, driven by hospitalizations, systemic treatments, diagnostic procedures, and supportive care. In private healthcare systems, understanding real-world patterns of care, treatment sequencing, and cost distribution is critical for optimizing resource allocation and identifying unmet clinical needs.

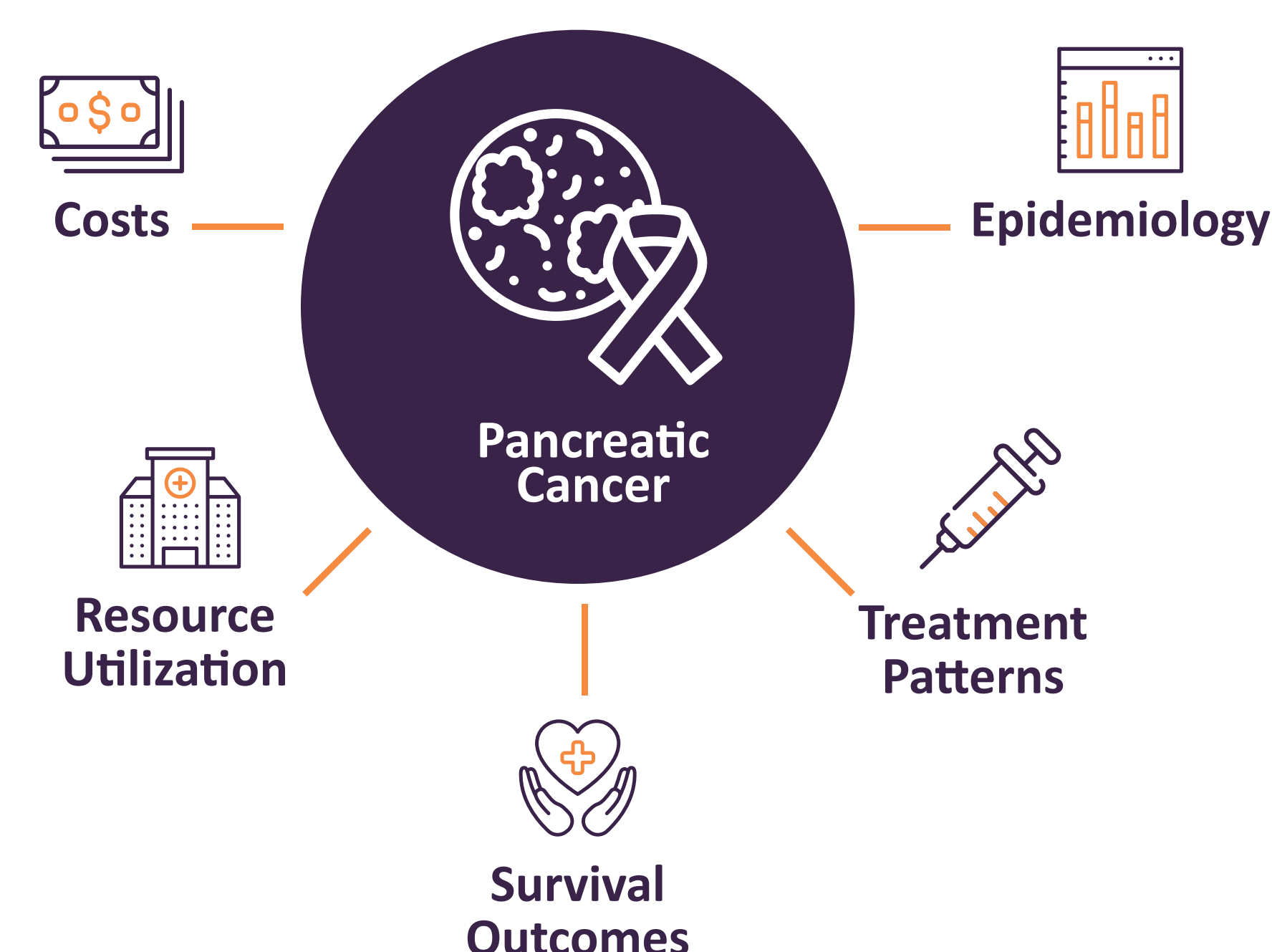


From a health system perspective, pancreatic cancer imposes significant direct costs driven by



### OBJECTIVES

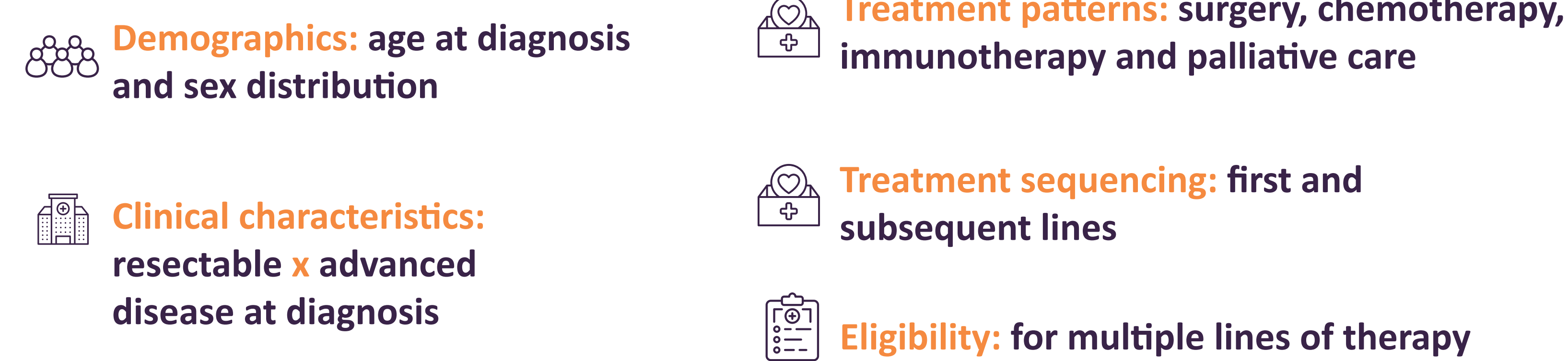
This study provides a comprehensive real-world evaluation of pancreatic cancer within a private healthcare plan, focusing on epidemiology, treatment patterns, survival outcomes, healthcare resource utilization, and associated costs over a six-year period.



### METHODS

This retrospective observational study used administrative claims data from a private healthcare plan, from January 2019 to December 2024. The database provided information on demographics, diagnoses, procedures, hospitalizations, and costs. Adult patients (≥18 years) with pancreatic cancer were identified using ICD-10 code C25 and included if they had at least one claim associated with this diagnosis during the study period. The following domains/DATA were analyzed: demographics (age at diagnosis and sex distribution), clinical characteristics (resectable versus advanced disease at diagnosis), treatment patterns (surgery, chemotherapy, immunotherapy, and palliative care), treatment sequencing (first and subsequent lines), and eligibility for multiple lines of therapy. HCRU was assessed on an annual per-patient basis and included outpatient visits, emergency room (ER) visits, diagnostic and laboratory tests, therapeutic procedures, and hospitalizations.

Direct medical costs were estimated from the payer perspective and reported as annual cost per patient (USD), stratified into hospitalizations, chemotherapy, and other medical services (tests, visits, and procedures). Descriptive statistics summarize baseline characteristics and outcomes. Overall survival was estimated using Kaplan-Meier methods. Comparisons between groups were performed using chi-square or Fisher's exact tests for categorical variables and Student's t-test for continuous variables. Statistical significance was defined as  $p < 0.05$ .



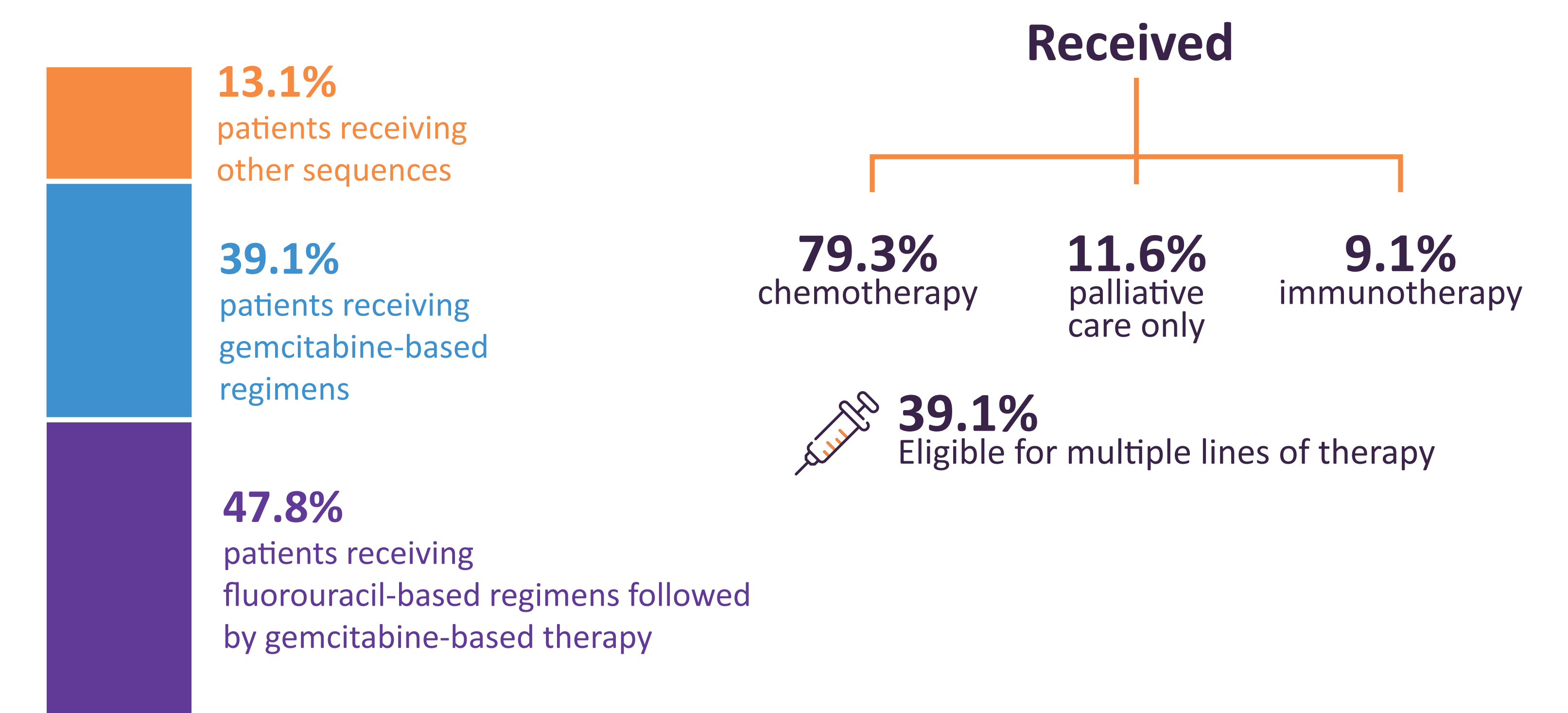
### RESULTS

Among 54,829 beneficiaries, the prevalence of pancreatic cancer was 167 cases per 100,000 individuals. Patients with pancreatic cancer had a mean age of 72 years, and 52% were female. At diagnosis, 32.5% of patients had resectable disease, whereas 67.5% presented with advanced disease, confirming the predominance of late-stage diagnosis. Patients with resectable disease were predominantly treated with surgery alone. Among those with advanced disease, chemotherapy was the most common approach (79.3%), followed by palliative care only (11.6%) and immunotherapy (9.1%). Treatment sequencing showed variability, with 47.8% of patients receiving fluorouracil-based regimens followed by gemcitabine-based therapy, 39.1% receiving gemcitabine-based regimens, and 13.1% other sequences. Notably, only 39.1% of patients remained eligible for multiple lines of therapy. Healthcare resource utilization was substantial, with a mean annual per-patient use of 7.8 outpatient visits, 3.0 emergency visits, 113.3 diagnostic tests, 6.1 therapeutic procedures, and 1.7 hospitalizations. The mean annual cost per patient was USD 20,195, with hospitalizations accounting for 40.1% of total costs, chemotherapy for 28.7%, and other services comprising the remainder. Five-year survival rates were significantly higher in patients with resectable disease compared to those with advanced-stage diagnosis (51.4% vs. 21.4%;  $p < 0.05$ ).

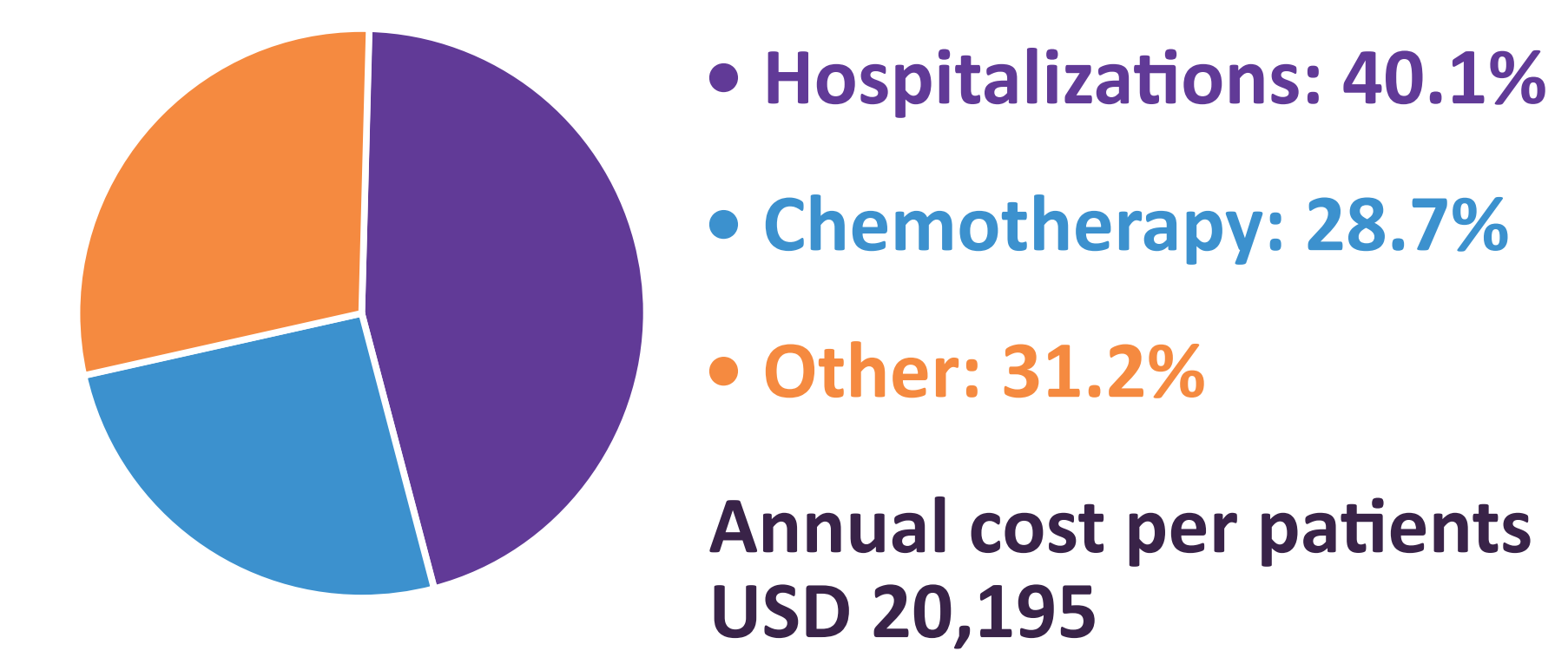
#### Population



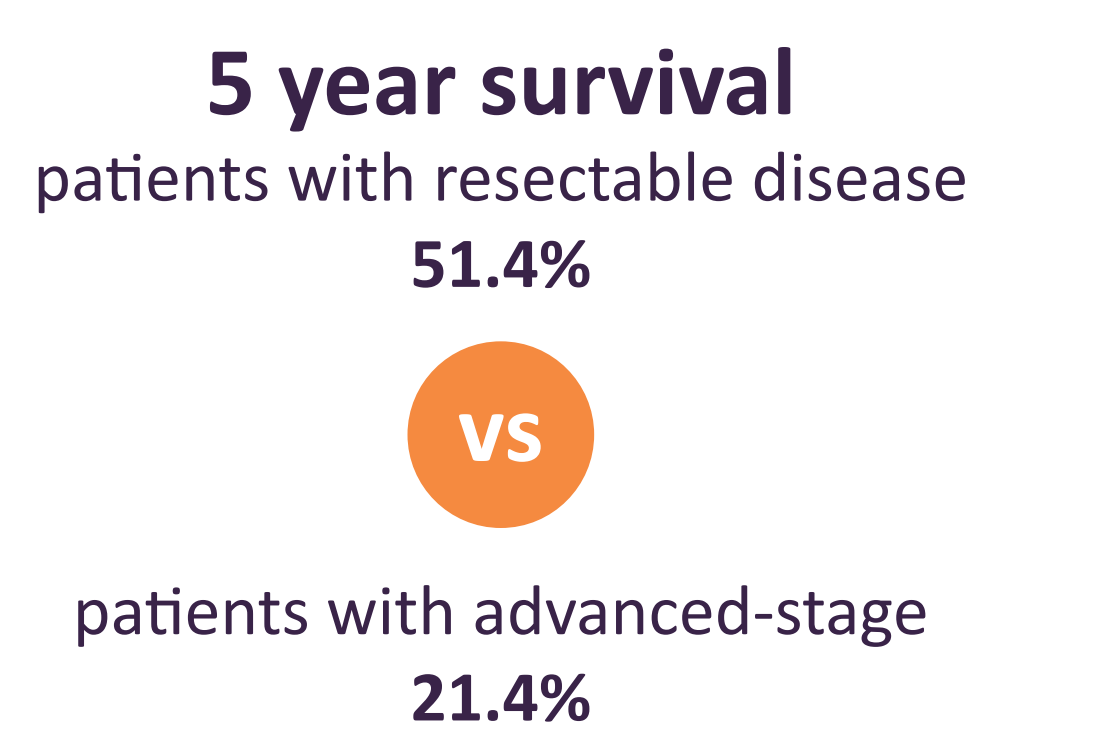
#### Treatment



#### Cost Distribution



#### Survival Rates



### CONCLUSION

Pancreatic cancer within a private healthcare system is characterized by late-stage diagnosis, high clinical complexity, and substantial economic burden. The predominance of advanced disease at diagnosis drives poor outcomes, limits treatment opportunities, and increases healthcare utilization. Although chemotherapy remains the backbone of treatment, its effectiveness is constrained by rapid clinical deterioration, as reflected by the low proportion of patients eligible for multiple lines of therapy. HCRU is considerable, particularly due to the high volume of diagnostic testing and hospitalizations, both of which significantly contribute to overall costs. This economic burden is multifactorial, reflecting not only treatment intensity but also disease-related complications. The marked survival advantage observed in resectable cases highlights the critical importance of earlier detection. At the same time, there remains a substantial unmet need for more effective and better-tolerated therapies capable of overcoming the dense stromal microenvironment characteristic of pancreatic tumors. Future efforts should focus on improving early detection and risk stratification, optimizing and standardizing treatment sequencing, expanding access to more tolerable and effective therapies, and implementing strategies to reduce hospitalization rates and disease-related complications. Addressing these gaps is essential to improve clinical outcomes while ensuring healthcare system sustainability.

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