Healthcare Resource Utilization and Economic Burden of Metastatic Pancreatic Cancer: A US Commercial and Medicare Claims Analysis From 2020 to 2023

EE56

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BACKGROUND

- Pancreatic cancer (PC) is a common cause of cancer-related death, with increasing global incidence and low survival rates[1,2]
- The 5-year relative survival rate (2014–2020) for US patients with metastatic PC (mPC) was 3.1%[3]
  - Between 2017 and 2020, 68.8% of new PC cases occurred in patients ≥65 years of age[3]
  - Approximately 50%–55% of patients have mPC at diagnosis[4]
- Recent data on the disease burden of mPC is limited
- This study may help to elucidate the overall treatment landscape and identify the unmet need that remains in patients with mPC

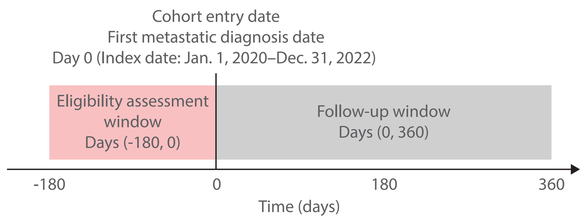
OBJECTIVE

- This retrospective study aimed to estimate the direct disease burden on healthcare resource utilization (HRU), all-cause costs, and to describe first-line (1L) treatment patterns in patients with mPC

METHODS

- Adult US patients with first mPC diagnosis (index date) between January 1, 2020 and December 31, 2022 were identified (**Figure 1**)
  - Patients with continuous enrollment with medical coverage ≥6 months prior to the first mPC diagnosis were included
  - The Merative MarketScan Commercial and Medicare Claims and Encounters Database was used in the study
  - The database encompasses both commercial and Medicare data
  - Medicare data has included both the Medicare Advantage and Medicare Supplemental population since 2020
- All-cause HRU was estimated via inpatient, outpatient, and emergency room (ER) visits and cumulative length of stay (ie, number of hospital days)
- Per-patient-per-month (PPPM) all-cause HRU and costs in US dollars (USD) for 1 year from index date were calculated
- 1L treatments that started ≤90 days from index date were categorized as FOLFIRINOX-based, gemcitabine + paclitaxel–based (gem-pac), others, or no 1L

Figure 1. Study design



RESULTS

- The analysis identified 2318 patients with mPC: 68.6% (1589/2318) with commercial insurance and 31.4% (729/2318) with Medicare coverage (**Table 1**)
- Overall, 75.8% (1204/1589) of patients with commercial insurance and 71.7% (523/729) of patients with Medicare had ≥1 inpatient visit; 99.8% (1586/1589) and 99.6% (726/729) of patients had ≥1 outpatient visit, respectively; 44.7% (711/1589) and 44.9% (327/729) of patients had ≥1 ER visit, respectively

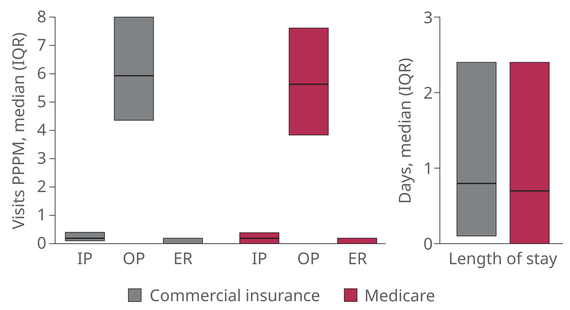
Table 1. Baseline characteristics at index date

	Total	Commercial	Medicare
Patients, n (%)	2318 (100)	1589 (100)	729 (100)
Index year, n (%)			
2020	729 (31.4)	530 (33.4)	199 (27.3)
2021	788 (34.0)	526 (33.1)	262 (35.9)
2022	801 (34.6)	533 (33.5)	268 (36.8)
Age at index, median (range), years	61 (18–98)	58 (18–65)	74 (60–98)
Sex, n (%)			
Male	1261 (54.4)	887 (55.8)	374 (51.3)
Female	1057 (45.6)	702 (44.2)	355 (48.7)
Geographic regions, n (%)			
Northeast	371 (16.0)	250 (15.7)	121 (16.6)
North central	794 (34.3)	384 (24.2)	410 (56.2)
South	872 (37.6)	713 (44.9)	159 (21.8)
West	275 (11.9)	238 (15.0)	37 (5.1)
Unknown	6 (0.3)	4 (0.3)	2 (0.3)
Site of metastasis at index[a], n (%)			
Liver	1262 (54.4)	892 (56.1)	370 (50.8)
Lung	232 (10.0)	124 (7.8)	108 (14.8)
Peritoneum/ retroperitoneum	283 (12.2)	197 (12.4)	86 (11.8)
Lymph nodes	510 (22.0)	363 (22.8)	147 (20.2)
Bone	100 (4.3)	66 (4.2)	34 (4.7)
Gastrointestinal tract	231 (10.0)	157 (9.9)	74 (10.2)
Other sites	220 (9.5)	141 (8.9)	79 (10.8)

[a]Each site was counted when multiple sites were recorded.

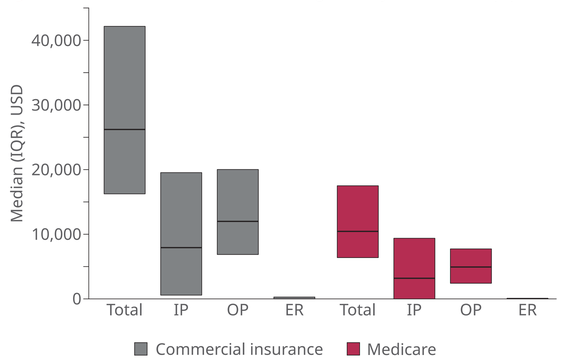
- Median healthcare visits are reported in **Figure 2**; the mean (standard deviation [SD]) number of outpatient visits was 6.6 (3.41) and 6.1 (3.21) with commercial insurance and Medicare, respectively
- Median costs are reported in **Figure 3**; the mean (SD) total cost was $34,215 (30,525) and $15,158 (20,637) with commercial insurance and Medicare, respectively
- The most frequent 1L treatments with commercial insurance and Medicare are reported in **Figure 4**
  - Overall, 25.7% of patients with commercial insurance and 43.2% with Medicare did not receive treatment

Figure 2. HRU during the 1-year follow-up period



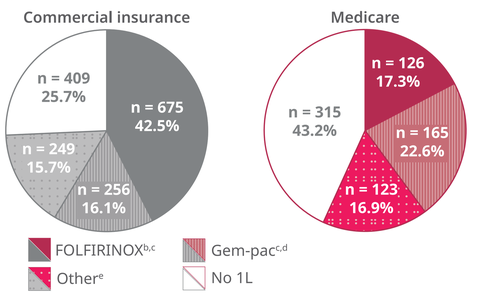
ER, emergency room; HRU, healthcare resource utilization; IP, inpatient; IQR, interquartile range; OP, outpatient; PPPM; per patient per month.

Figure 3. All-cause PPPM costs during the 1-year follow-up period



ER, emergency room; IP, inpatient; IQR, interquartile range; OP, outpatient; PPPM, per patient per month; USD, US dollars.

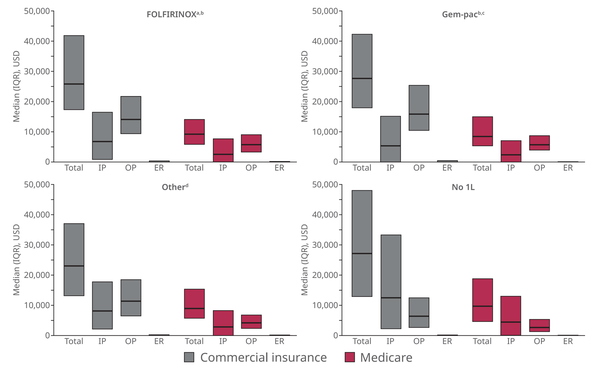
Figure 4. 1L treatments[a]



[a]Starting from top-center and moving clockwise, data are presented in order: FOLFIRINOX, gem-pac, other, no 1L; [b]FOLFIRINOX included fluorouracil, irinotecan, and oxaliplatin, with or without leucovorin (folinic acid). Levoleucovorin and leucovorin, as well as irinotecan and irinotecan liposomal, were counted interchangeably; [c]Alone or plus other drug(s); [d]Paclitaxel and nab-paclitaxel were counted interchangeably; [e]1L treatments other than FOLFIRINOX-based or gem-pac regimens.
1L, first-line; gem-pac, gemcitabine + paclitaxel-based.

- Median costs by 1L treatment are reported in **Figure 5**
- For patients with commercial insurance:
  - Mean (SD) inpatient costs were: FOLFIRINOX, $12,566 (17,189); gem-pac, $11,835 (20,214); other, $13,610 (16,966); no 1L, $29,712 (45,801)
  - Mean (SD) outpatient costs were: FOLFIRINOX, $17,450 (12,168); gem-pac, $19,864 (16,079); other, $13,888 (10,318); no 1L, $10,496 (14,134)
- For patients with Medicare:
  - Mean (SD) inpatient costs were: FOLFIRINOX $5489 (9171); gem-pac, $5144 (7282); other, $6154 (10,055); no 1L, $11,528 (27,868)
  - Mean (SD) outpatient costs were: FOLFIRINOX, $8283 (7542); gem-pac, $8132 (4226); other, $6123 (4605); no 1L, $4165 (4529)

Figure 5. All-cause PPPM costs by 1L treatments during the 1-year follow-up period



[a]FOLFIRINOX included fluorouracil, irinotecan, and oxaliplatin, with or without leucovorin (folinic acid). Levoleucovorin and leucovorin, as well as irinotecan and irinotecan liposomal, were counted interchangeably; [b]Alone or plus other drug(s); [c]Paclitaxel and nab-paclitaxel were counted interchangeably; [d]1L treatments other than FOLFIRINOX-based or gem-pac regimens.
1L, first-line; ER, emergency room; gem-pac, gemcitabine + paclitaxel-based; IP, inpatient; IQR, interquartile range; OP, outpatient; PPPM, per patient per month; USD, US dollars.

LIMITATIONS

- Because the study utilized claims data, diagnosis records were not curated or validated against medical charts, which may have led to misclassification regarding metastatic diagnosis
- Because the study focused only on patients in the MarketScan Research Database who were commercially insured or had Medicare Advantage or Medicare Supplemental coverage, the results may not be reflective of or generalizable to the entire mPC population

CONCLUSIONS

- A high burden of both HRU and costs in patients with mPC was demonstrated
  - Average monthly inpatient costs were higher among patients who did not receive 1L treatment than those who received 1L treatment
- Further research is needed to understand the high proportion of patients with mPC who did not receive any 1L treatment in this dataset
  - This highlights the unmet need for novel treatments that reduce the overall burden of mPC

References

1. Principe DR et al. *Front Oncol.* 2021;11:688377; **2.** Ushio J et al. *Diagnostics* (Basel). 2021;11:562; **3.** NCI surveillance, epidemiology and end results program; Cancer stat facts: Pancreatic cancer. (Accessed March 5, 2025, at https://seer.cancer.gov/statfacts/html/pancreas.html.); **4.** Park W et al. *JAMA.* 2021;326:851-62.

Disclosures

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