

Pancreatic Cancer

We analyzed our data at Intelligencia AI to generate a high-level view of pancreatic cancer’s current and potential future state of drug development.



Globally, while pancreatic cancer is the 12th most common cancer, it is also the 5th most common cause of death from cancer in the U.K. and the 3rd most common in the U.S.^{1,2,3}. The leading causes of pancreatic cancer are smoking, obesity, diabetes and certain rare genetic conditions.



The most common type of pancreatic cancer is pancreatic adenocarcinoma, which accounts for about 90% of the cases⁴. About 1-2% of the cases fall under neuroendocrine tumors, which are less aggressive and lethal, compared to pancreatic adenocarcinoma⁵.



Early diagnosis is difficult due to the lack of specific symptoms until the disease has advanced⁴. Its relative 5-year survival rate is 13%, one of the lowest in oncology⁶. Neuroendocrine cancers typically have better outcomes.

HOW IS PANCREATIC CANCER CURRENTLY TREATED?

Commonly used types of treatment⁷:

- Surgery
- Radiation therapy
- Chemotherapy
- Chemoradiation therapy
- Targeted therapy

In the past five years, the following drugs or regimens are the only ones that have received regulatory approval by the FDA: Olaparib, Lutetium Lu 177 dotatate, and the NALIRIFOX (liposomal irinotecan, 5-fluorouracil, oxaliplatin) regimen.

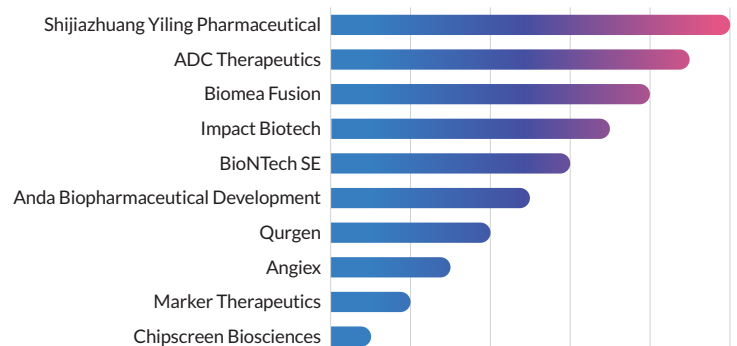
Olaparib is a small molecule inhibitor targeting Poly (Adenosine Diphosphate-Ribose) Polymerase (PARP). Lutetium Lu 177 dotatate is a peptide receptor radionuclide that targets somatostatin receptors (SSTRs). NALIRIFOX is a chemotherapy regimen.

DETAILS IN THE DATA: HERE’S WHAT WE LEARNED ABOUT PANCREATIC CANCER

In analyzing our data⁸, we identified:

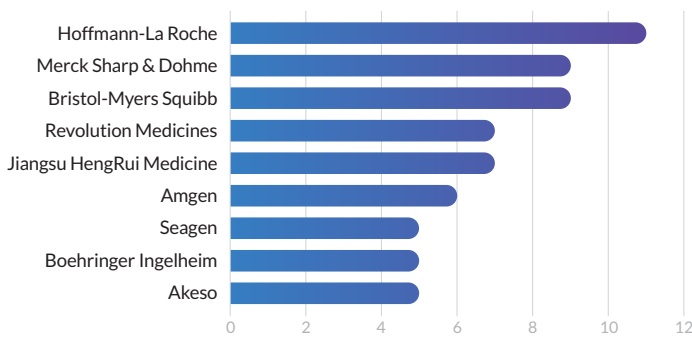
- 332 ongoing industry-led, FDA-track interventional clinical development programs* among which:
 - 132 are in Phase 1 or 1b,
 - 182 are in Phase 2 or 1/2 and
 - 18 are in Phase 2/3 or Phase 3.
- The programs mentioned above are conducted by 191 different primary sponsors and correspond to 321 investigational drugs/drug combinations, covering 136 different drug modalities/modality combinations.

Top 10 Sponsors in Pancreatic Cancer - Ranked by Intelligencia AI Pipeline Performance Score



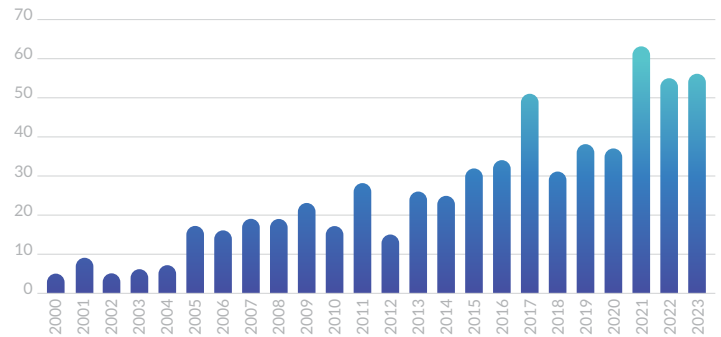
Our pipeline performance score leverages our patented AI-driven probability of technical and regulatory success (PTRS) assessments.

Sponsors With Highest Number of Active Pancreatic Cancer Clinical Programs



These are the top sponsors based on the number of ongoing pancreatic cancer clinical programs*.

Distribution of Pancreatic Cancer Clinical Programs by Year of Initiation Since 2000



Over the past two decades, pancreatic cancer clinical development has seen a slow, upward trend, with 2017 being a significant outlier.

- Among our industry-led FDA-track historical programs, 31% transitioned from Phase 1 to Phase 2 and 10% from Phase 2 to Phase 3.
- There have been 13 drugs (run by 12 different sponsors) that have not received prior FDA approval in pancreatic cancer and are being tested in Phase 3 trials.
- The majority of these 13 drugs are either chemotherapies or small-molecule inhibitors (SMIs).
 - The exceptions are RYZ101 and Lu 177 Edotreotide, which are radiopeptides; Immuncell-LC, a cytokine-induced killer cell formulation; Trabedersen, an anti-sense nucleotide (ASO); and Diethyl Dihydroxyhomospermine, a polyamine analogue.
- Regarding Mechanism of Action (MoA), the most common targets would be tubulin and DNA topoisomerase 1 for the chemotherapies, and SSTRs for the radiopeptides. There is quite a bit of variety in the targets of SMIs.

PERSPECTIVE: WHAT DOES THIS ALL MEAN?

Despite significant advances in oncology, the main treatments for pancreatic cancer include surgery and chemotherapy. Taking into account the extremely small number of recent approvals, as well as the disease's significantly low 5-year survival rate, pancreatic cancer drugs indeed constitute an unmet need for the patients. It is a need that the pharmaceutical industry seems eager to address, especially when considering that almost every non-approved Phase 3 asset currently in development is run by a different sponsor.

However, innovation does not seem to prevail in this cancer setting. Immunotherapy, which has revolutionized cancer treatment in the past decade, has had limited success in pancreatic cancer. Most currently active late-phase programs focus on new chemotherapy formulations or SSTR-targeting radiopeptides. Biomarkers must be identified for early detection and treatment in advanced stages. In the foreseeable future, most of the industry will focus on already established targets and pathways.

About Intelligencia AI

Intelligencia AI™ leads the way in leveraging proprietary data, biomedical expertise and artificial intelligence (AI) with its patented technology to address significant challenges in the pharmaceutical industry. These challenges include lengthy drug development timelines, excessive costs, and unsustainable return on investment (ROI). Its suite of AI-powered solutions delivers actionable insights crucial in mitigating risks and enhancing decision-making associated with drug development by providing an accurate, unbiased assessment of a drug's probability of success. Founded in 2017, Intelligencia AI is headquartered in New York, NY, with offices in Athens, Greece, and employs 110 individuals globally. Visit intelligencia.ai to discover more.

References

- 1 <https://www.wcrf.org/cancer-trends/pancreatic-cancer-statistics/>
- 2 <https://www.pcrf.org.uk/about-pancreatic-cancer/facts-figures/>
- 3 <https://seer.cancer.gov/statfacts/html/pancreas.html>
- 4 Ryan DP, Hong TS, Bardeesy N. Pancreatic adenocarcinoma. N Engl J Med. 2014 Sep 11;371(11):1039-49. doi: 10.1056/NEJMra1404198. PMID: 25207767
- 5 World Cancer Report. World Health Organization. 2014. Chapter 5.7. ISBN 978-92-832-0429-9
- 6 <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2024/2024-cancer-facts-and-figures-acf.pdf>
- 7 <https://www.cancer.gov/types/pancreatic/patient/pancreatic-treatment-pdq>
- 8 Data as of November 12, 2024



*A program (also known as clinical pipeline or drug pipeline) is the clinical development of a drug (or a set of drugs in case of combination therapies) by a pharmaceutical company (alone or in collaboration with other partners) for an indication. A program consists of a set of clinical trials with the ultimate goal of approval for marketing. Each program has unique and specific parameters that can potentially justify a separate regulatory approval. Specifically, the definition of a clinical program is one of unique drug(s), drug dosage, mode of administration, adjuvant state, indication, sponsor, disease severity (e.g. stage of disease), line of treatment and biomarker information used as inclusion criteria.