

Pancreatic Cancer Research Program

Strategic Plan

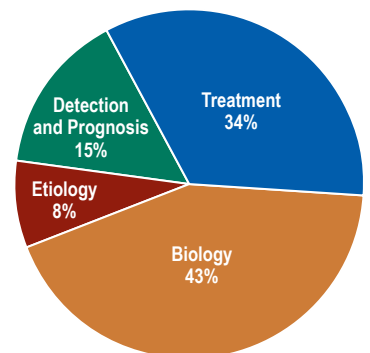
INTRODUCTION

The Congressionally Directed Medical Research Programs (CDMRP) represents a unique partnership among the U.S. Congress, the military, and the public to fund innovative and impactful medical research in targeted program areas. Programs managed by the CDMRP have formalized strategic plans that identify: program-specific research priorities; how to best address these urgencies; short- and long-term goals; investment strategies; and ways to identify and evaluate program successes with respect to the priorities.

The Pancreatic Cancer Research Program (PCARP) Strategic Plan identifies the high-impact research goals most important to its stakeholders while providing a framework that is adaptable to changes in the medical research environment to address those goals. This plan has been formulated to provide greater clarity of the program's goals over time. Congress appropriates funding for the PCARP on an annual basis; there is no guarantee of future funding. The PCARP Programmatic Panel members will review the Strategic Plan during the program's annual Vision Setting meeting and update it as necessary.

BACKGROUND AND OVERVIEW

Pancreatic cancer research has been funded by the CDMRP since 2011 through the Peer Reviewed Cancer Research Program (PRCRP) as one of the congressionally directed topic areas of the program. From FY11 through FY18, the PRCRP invested \$23.7 million (M) through 53 awards in pancreatic cancer research. PRCRP invested in a broad range of different research types, from detection and diagnosis to treatment, with 43% of the research investment investigating the biology of the disease. The pie chart shows the PRCRP percentage of awards for Common Scientific Outline (CSO) categories from FY11-FY18. The CSO is a classification system organized around seven broad areas of scientific interest in cancer research, which include:



1. Biology
2. Etiology (causes of cancer)
3. Prevention
4. Early Detection, Diagnosis, and Prognosis
5. Treatment
6. Cancer Control, Survivorship, and Outcomes Research
7. Scientific Model Systems

The FY20 Department of Defense Appropriations Act provided \$6M to establish the PCARP. With this new program, the PCARP will continue to invest in research focusing on advancing the understanding, diagnosis, and treatment of pancreatic cancer for the benefit of Service members, Veterans, their families, and the American public.



The PCARP developed the following mission and vision statements:

VISION: A diminished burden of pancreatic cancer among Service members, Veterans, their families, and the American public

MISSION: Promote rigorous, innovative, high-impact research that leads to new pancreatic cancer diagnostic and therapeutic tools through collaboration

RESEARCH AND FUNDING ENVIRONMENT

STATE OF THE SCIENCE

Pancreatic cancer is an aggressive disease that is difficult to detect. There is no screening test available to identify the disease and, because there may be no symptoms present, it is often diagnosed at an advanced stage after the cancer has spread to other organs in the body. Standard treatment avenues for cancer, such as chemotherapy and radiation, have limited effectiveness in pancreatic cancer patients. Based on current Surveillance, Epidemiology, and End Results (SEER) data from the National Cancer Institute (NCI), there were an estimated 56,770 new cases of pancreatic cancer diagnosed in the U.S. during 2019. Pancreatic cancer is also the eleventh most common type of cancer in the United States, representing 3.2% of all new cancer diagnoses every year. The five-year survival rate for those with pancreatic cancer is just over 9%.

RESEARCH AND FUNDING LANDSCAPE

Through promotion of rigorous, innovative, high-impact collaborative research that will lead to new pancreatic cancer diagnostic and therapeutic tools, the PCARP will advance our understanding of the biology and genetics of pancreatic cancer in patients and improve appropriate treatments and quality of life for pancreatic cancer patients. Funding for pancreatic cancer research comes from a variety of sources and through a number of different programs. Many are funded by the federal government through the NIH/NCI and CDMRP. For example, the Cancer Biomarkers Research Group within the Division of Cancer Prevention at NCI promotes research to identify, develop, and validate biological markers for early cancer detection and cancer risk assessment. Activities include development and validation of promising cancer biomarkers, collaborative databases and informatics systems, and new technologies or the refinement of existing technologies. A member of this group serves on the FY20PCARP Programmatic Panel.

Funding also comes from a wide range of non-governmental organizations, including the Lustgarten Foundation, Seena Magowitz Foundation, Pancreatic Cancer Action Network (PanCAN), and National Pancreas Foundation (NPF). Several members of the FY20 PCARP Programmatic Panel and Stakeholders serve as advocates for pancreatic cancer research in those non-governmental organizations.

The PCARP will continually monitor the research landscape for potential advances that could impact future research, including new technologies that can provide better understanding of pancreatic cancer and its diagnosis. In developing the PCARP Strategic Plan, the FY20 PCARP Programmatic Panel members reviewed the current research and funding environment for pancreatic cancer and considered the existing research portfolios and emerging technologies that offer the potential to transform understanding, diagnosis, and treatment of pancreatic cancer. The PCARP must strategize its efforts within this environment and effectively respond to changes in it to maximize the value and impact of PCARP-funded research.

STRATEGIC DIRECTION

Based upon the current state of pancreatic cancer research, the funding landscape provided by other federal and private organizations and the needs of the pancreatic cancer community, the PCARP developed its overall strategic direction during the inaugural vision setting meeting. The strategic direction includes four elements that provide the framework for the program:

- Fill gaps and advance knowledge that will drive new and innovative clinical trials for pancreatic cancer.
- Expand pancreatic cancer expertise by bridging diverse scientific fields.
- Facilitate a multidisciplinary approach to advancing scientific knowledge of pancreatic cancer.
- Recruit and retain young investigators dedicated to pancreatic cancer research.

This strategic direction of the PCARP will positively impact Service members, Veterans, their families, as well as the general public.



NEAR- TO LONG-TERM STRATEGY

STRATEGIC GOALS – NEAR-TERM FOCUS

The PCARP created eight Focus Areas that will help fulfill its strategic direction during the Program's first year and beyond. The PCARP Focus Areas will be re-evaluated each fiscal year to ensure that they remain on track with the Program's strategic direction.

- Understanding precursors, origins, and early progression of pancreatic cancer
- Understanding the events that promote pancreatic cancer metastasis
- Understanding the relationship between oncogenic signaling and the tumor microenvironment that drives drug resistance and therapeutic response
- Integrating biologic and imaging biomarkers to drive more precise and earlier detection and prognosis
- Defining viable tumor burden
- Promoting supportive care and patient-reported outcomes, quality of life, and perspectives during treatment and survivorship
- Advancing new drug development targeted toward cancer sensitivity and resistance mechanisms including immune mechanisms of resistance
- Developing pharmacological, immunological, or genetic interception approaches

STRATEGIC GOALS – MID- TO LONG-TERM FOCUS

- Develop a cost-effective approach for the early detection of curable pancreatic cancer that is known by patients and physicians and in widespread use
- Reduce the incidence and mortality due to pancreatic cancer by primary prevention and early detection
- Invest in science that will make a significant contribution to the development and testing of an approved therapy for pancreatic cancer that will have a meaningful impact on survival and quality of life.

INVESTMENT STRATEGY

NEAR- TO MID-TERM

Over the next several years, the PCARP will consider projects that will bring innovative, impactful ideas into the pancreatic cancer field, as well as build collaborations between basic and clinician scientists. The program will invest the Congressional appropriations in the following award mechanisms to meet the strategic direction outlined previously:

IDEA DEVELOPMENT AWARD

- Supports the development of innovative, high-risk/high-reward research that could lead to critical discoveries or major advancements that will accelerate progress in improving outcomes for individuals with pancreatic cancer.
- Supports innovative ideas with the potential to yield impactful data and new avenues of investigation.
- Promotes the development of young investigators focused on a career in pancreatic cancer research through an Early-Career Investigator Partnering Principal Investigator option.

TRANSLATIONAL RESEARCH PARTNERSHIP AWARD

- Supports partnerships between clinicians and research scientists that will accelerate the movement of promising ideas in pancreatic cancer toward clinical applications.
- Supports the development of translational research collaborations between two independent investigators to address a central problem or question in pancreatic cancer in a manner that would be less readily achievable through separate efforts.

OUTCOMES/METRICS – TRACKING AND INFORMING FUTURE INITIATIVES

The PCARP will measure its success in the near term based on successful investments in the focus areas important to fulfilling the strategy. Longer-term success will be evaluated based on contributions to the scientific community, follow-on research that is attributed to PCARP-funded projects, and the impact of PCARP-funded research on diagnostics, clinical treatments and interventions.



NEAR-TERM (3-7 YEARS)

- Amount of funding invested in each focus area
- Contributions to the scientific community
 - Publications
 - Presentations
 - Patent applications and patents
- Formation of multi-disciplinary partnerships

LONG-TERM (8+ YEARS)

- Sustained and measurable impact on pancreatic cancer patients
 - Increased survival of pancreatic cancer patients through the development and clinical testing of effective diagnostics, biomarkers, and therapeutics
 - Changes in the standard of care for pancreatic cancer patients
- Sustained and measurable impact on the pancreatic cancer research community
 - Increased publications, presentations, reports of invention and patents
 - Mentorship and career advancement of early career clinicians and researchers
 - Development of lasting collaborations between basic scientists and clinicians engaged in the care of pancreatic cancer patients