Congressionally Directed Medical Research Programs

CDMRP

Department of Defense

https://cdmrp.army.mil

Peer Reviewed Cancer Research Program

VISION

To advance mission readiness of U.S. military members affected by cancer and to improve quality of life by decreasing the burden of cancer on Service members, their families, and the American public

MISSION

To successfully promote high-impact research for cancer prevention, detection, treatment, quality of life, and survivorship

PROGRAM HISTORY

Since fiscal year 2009 (FY09) Congress has appropriated $539.8 million (M) to the Department of Defense Peer Reviewed Cancer Research Program (PRCRP) to invest in cancer research covering over 25 topics areas. The PRCRP offers a variety of high impact funding opportunities.

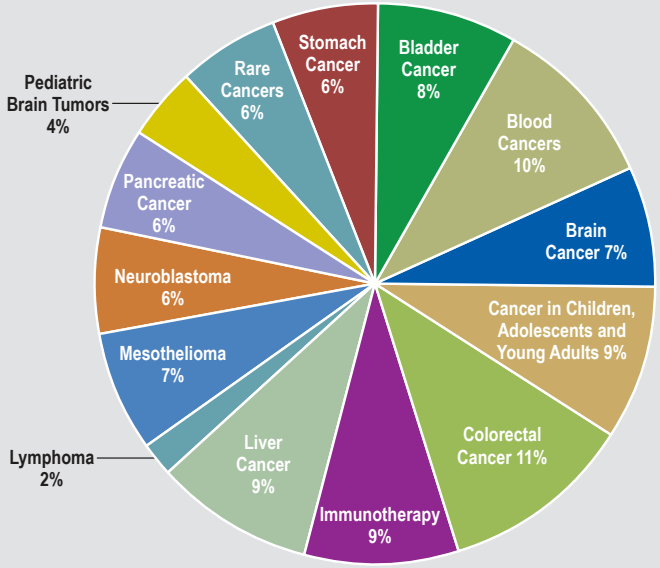
PRCRP MILITARY HEALTH FOCUS AREAS

- Environmental/exposure risk factors associated with cancer
- Mission Readiness
  - Gaps in cancer prevention, early detection/diagnosis, prognosis, and/or treatment
  - Gaps in quality of life and/or survivorship

HIGH-IMPACT ADVANCES SUPPORTED BY THE PRCRP

- Groundbreaking studies in the development of XPOVIO (Karyopharm Therapeutics) a Food and Drug Administration-approved treatment for refractory or relapsed multiple myeloma and diffuse large B-cell lymphoma
- A novel tumor slice culture method to test drug sensitivities to support personalized treatment options for colorectal cancer patients.

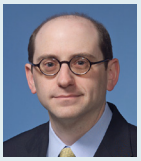
PROGRAM PORTFOLIO



TOPIC AREAS[1]

Bladder Cancer
Blood Cancers
Colorectal Cancer
Liver Cancer
Lymphoma
Pancreatic Cancer
Rare Cancers
Stomach Cancer

[1] Two program summary sheets were prepared. The following topic areas are discussed on the second program summary sheet: Brain Cancer, Cancer in Children, Adolescents, and Young Adults, Immunotherapy, Mesothelioma, Neuroblastoma, Pediatric Brain Tumors.

FY19 Topic Area	Summary	Cancer Care Spectrum
Bladder Cancer	 **Dr. Jared Brown** of the University of Colorado will design theranostic phage like nanoparticles to activate interferon genes for treatment of bladder cancer.	Treatment (1st line)
Colorectal Cancer	 **Dr. Omer Yilmaz**, Massachusetts Institute of Technology, plans to generate novel metastatic colorectal cancer (CRC) organoids with genetic mutations found in human CRC, establish them in the murine liver, and investigate the effects of the liver microenvironment on CRC.	Treatment (Metastatic)
Liver Cancer	   **Dr. Ayako Suzuki, Dr. Anna Mae Diehl,** and **Dr. Manal Abdelmalek** of Duke University plan the first controlled study to examine hepatocellular carcinoma chemoprevention by statins and to address potential sex and menopausal differences in statin-related adverse events.	Prevention
Pancreatic Cancer	 **Dr. Eric Barklis** from the Oregon Health and Science University, using state-of-the-art techniques with novel screening approaches, will characterize alpaca-generated nanobodies to unique Ras protein conformations to discover new classes of Ras protein-protein interaction inhibitors.	Biology/Etiology
Rare Cancers	 Using national Veteran's Health Administration electronic data, **Dr. Joel Rubenstein** and colleagues at the Ann Arbor VA Medical Center and University of Michigan will use machine learning to adapt and validate an automated prediction tool for esophageal adenocarcinoma, and pilot its use to increase uptake of appropriate screening.	Detection
Stomach Cancer	 **Dr. Jeffrey Brown** posits that cathartocytosis (cellular cleansing) is predictive for premalignant and malignant transformation of a variety of foregut epithelia, assaying for this process is diagnostic and novel therapeutic strategies might be developed by targeting proteins essential to cathartocytosis.	Diagnosis
Blood Cancers	 **Dr. Stephen Kron** will evaluate whether increasing protein O-GlcNAcylation protects or mitigates effects of radiation, which is an occupational risk to military personnel.	Prevention
Lymphoma	 **Dr. Javier Ogembo** plans to create and study Epstein-Barr virus (EBV) antibody-peptide conjugates to treat lymphoma, one of the cancers induced by EBV.	Treatment (1st line)

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