Joint Design of Advanced Computing Solutions for Cancer

JDACS4C

Exascale technologies driving advances

NCI National Cancer Institute

DOE Department of Energy

Cancer driving computing advances
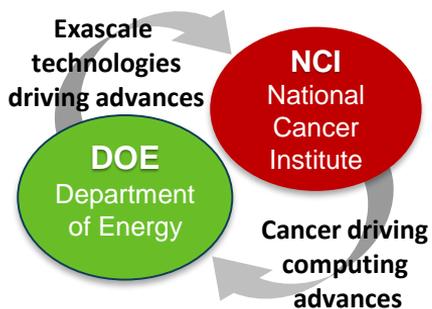
Initiatives Supported NSCI and PMI

NIH NATIONAL CANCER INSTITUTE

Argonne NATIONAL LABORATORY

OAK RIDGE National Laboratory

Lawrence Livermore National Laboratory

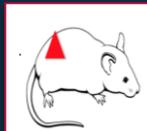Los Alamos NATIONAL LABORATORY · EST. 1943 ·

Frederick National Lab for Cancer Research

Integrated Precision Oncology

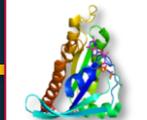Molecular　　　　　　　　　　Pre-clinical　　　　　　　　　　Population

Pre-clinical Domain – Improved predictive models
Computational/hybrid predictive models of drug response
Improved experimental design

Clinical Domain – Precision oncology surveillance
Expanded SEER database information capture
Modeling patient health trajectories

Molecular Domain – Multiscale biological models
Models for RAS-RAS complex interactions
Insight into RAS related cancers

CANcer Distributed Learning Environment (CANDLE)
Uncertainty Quantification (UQ)