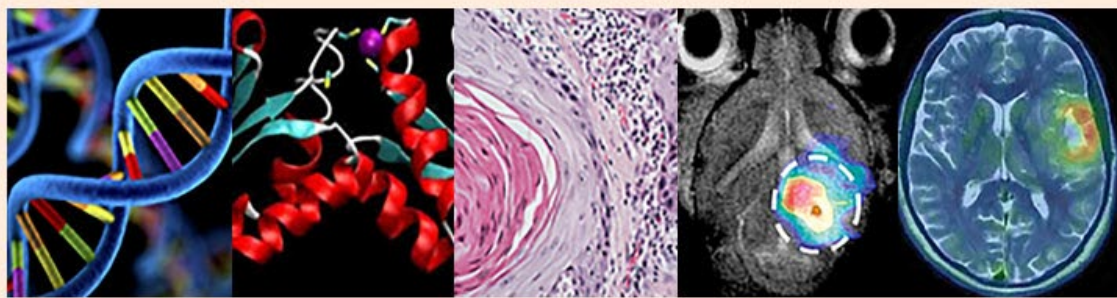# Workshop on Co-Clinical Imaging Roadmap

Co-Clinical Imaging in Advancing Precision Oncology

May 21, 2024
### 9:30 am -12:00 pm EDT
NCI SG 406-408-410 & Webex*

Rationale, Vision, Opportunities, Challenges

- ❖ **Animal models to enable co-clinical imaging trials**
- ❖ **Image acquisition and data processing considerations to harmonize co-clinical imaging trials**
- ❖ **Informatics needs to support integration of co-clinical imaging datasets, data mining, and advanced computing**

* **Register via** https://events.cancer.gov/cip/cirp
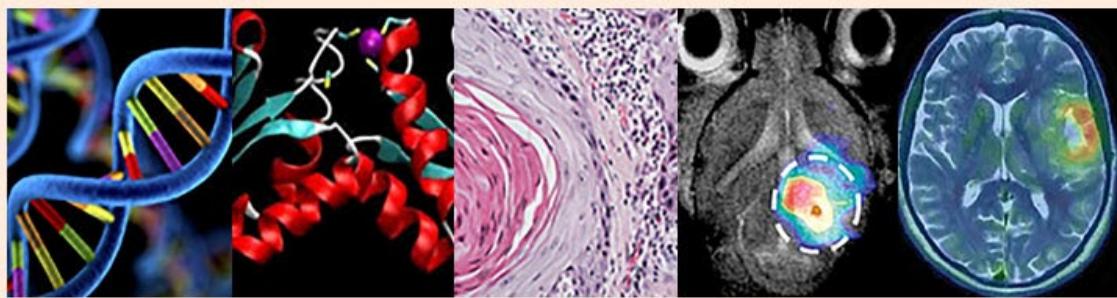
Co-Clinical Imaging in Advancing Precision Oncology

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Co-clinical trials are therapeutic investigations in which subtype-matched co-clinical animal models, such as patient-derived tumor xenografts (PDX) or genetically engineered mouse models (GEMM), are employed to inform a corresponding therapeutic clinical trial, either retrospectively or prospectively. A co-clinical imaging trial is a co-clinical trial in which a given translational imaging method is employed to assess/predict therapeutic outcome in both the preclinical and clinical arms of the co-clinical trial. The Co-clinical Imaging Research Resource Program (CIRP) of the National Cancer Institute (NCI) focuses on optimization of quantitative imaging methods to harmonize co-clinical imaging trials as well as dissemination of knowledgebase to support co-clinical imaging trials. The role of co-clinical imaging in precision oncology, however, is not well defined in NCI's recent publication of the new precision oncology initiative. As we approach the 10-year milestone of the CIRP, we would like to formulate a clear vision which outlines the role co-clinical imaging will play in advancing precision oncology. To that end, the CIRP aims to publish a White Paper highlighting the intersection points of co- clinical imaging in advancing precision oncology in the continuum of clinical trial design. In this segment of the CIRP annual meeting, we will define precision oncology in the context of the NCI's prior precision oncology initiative, NCI-MATCH, and the NCI's new initiatives, ComboMatch, MyeloMATCH, and iMATCH. We will provide the rationale for co-clinical imaging trial design to advance the NCI's precision oncology initiative through examples derived from the CIRP network and elsewhere. These examples will set the foundation for discussion topics as they relate to: animal models to enable co-clinical imaging trials, image acquisition and data processing considerations to harmonize co-clinical imaging trials, and finally informatics needs to support integration of co-clinical imaging datasets, data mining, and advanced computing. Leaders in respective fields will provide a summary of the current state, opportunities, and challenges in a given domain which will be followed by engaging discussions. Participants at the meeting are encouraged to share their thoughts and relevant experiences before, during or after the discussion. The goal of the discussion is to gather information and feedback to support the development of the White Paper.