Vision for Cancer Prevention and Implementation

Clinical Trials & Translational Research Advisory Committee (CTAC)
Barry Kramer, M.D.
Division of Cancer Prevention
Phases of the Cancer Prevention Research Continuum
DCP Vision for Prevention

**Vision:** Reduction in incidence (and ultimate elimination) of invasive cancers that are potentially life-threatening

**Implementation**

I. Preventive agent development
II. Early detection & biomarker research
III. Community Oncology Research Program (NCORP)
IV. Training the next generation of prevention scientists
I. Preventive Agent Development

• **Immunoprevention**
  - Frameshift vaccine via PREVENT program
  - Immuno-bridging trial with HPV vaccine

• **Chemoprevention with Multi-Use Agents**
  - Long-term follow up in ASPREE trial (low-dose aspirin)
  - Diabetes Prevention Program Outcomes Study (DPPOS)
  - Finasteride for prostate cancer prevention (PCPT)

• **Novel Delivery to Reduce Toxicities**
  - Topical drugs: tamoxifen, telapristone, bexarotene for breast cancer
  - Aerosolized and inhaled drugs: bexarotene, iloprost for lung cancer
Three Critical Components of DCP Preventive Agent Development
DCP Drug Development Programs

- Biologic Rationale/Molecular Targets/Preclinical Efficacy
- Safety/Preliminary Efficacy Phase 0/I/II Trials
- Phase III Trials
- Preclinical Program (PREVENT)
- Early Phase Clinical Program (Consortia)
- NCORP

Critical Links:
Specimen biorepositories → PCA, PQ’s
II. Early Detection and Biomarker Research

- Early detection & mitigation of overdiagnosis at molecular, clinical, population levels
  - Molecular & Cellular Characterization of Screen-Detected Lesions (MCL) Consortia
  - Pre-Cancer Atlas (PCA)
  - TMIST for breast cancer trial
  - Post-therapy surveillance
- Predictive markers in high-risk cohorts
  - New Onset Diabetes (NOD) cohort (pancreatic cancer risk)
  - Pancreatic Cancer Detection Consortia
  - Consortium on Translational Research in Early Detection of Liver Cancer
III. NCI Community Oncology Research Program (NCORP)

- Investigators (4,061)
- Components/Subcomponents (960)

Community Sites (34)
- Distributed network (25)
- Integrated System (7)
- Small Network (2)

MU Community Sites (12)
- Academic (8)
- Non-Academic (4)

Research Bases (7)
- Research Bases

Updated: September 2018
IV. Training the Next Generation of Prevention Scientists

- **Cancer Prevention Fellowship Program**
  - Multidisciplinary postdoctoral program that trains future leaders in the field of cancer prevention and control
  - Opportunities for cutting-edge research in the basic, quantitative, social and behavioral sciences, and in clinical cancer prevention
NCI Cancer Prevention Fellowship Program: History and Structure

- Celebrated its 30th anniversary in 2017
- Multidisciplinary training for post-doctoral fellows in basic, quantitative, social and behavioral sciences, clinical cancer prevention
- 37 current fellows work in several NCI divisions and at the Food and Drug Administration
- Two summer courses:
  - Principles and Practice of Cancer Prevention Control Course
  - Molecular Prevention Course