Division of Cancer Prevention:
Impact of Prevention & Screening Research

National Cancer Advisory Board
Board of Scientific Advisors
Joint Meeting
December 2014

Barry Kramer, MD, MPH
Director
Division of Cancer Prevention
Recent NCAB and BSA Presentations on DCP Research

- Prostate Cancer Screening (Dec. 2011)
- DCP Research Priorities (March 2013)
- NCI Community Oncology Research Program (June 2013 and Sept. 2014)
- Molecular Characterization of Screen-Detected Lesions (Nov. 2013)
- Colorectal Cancer Screening (Dec. 2013)
- Early Detection Research Network (June 2014)
- Aspirin for Cancer Prevention (June 2014)
Phases of Cancer Prevention Research Continuum

1. Hypothesis Development
2. Methods Development
3. Controlled Intervention Trials
4. Defined Population Studies
5. Implementation Projects

Research Training
Core Issues in Screening and Prevention

• It is difficult to make healthy people better off than they already are.
  • It is sometimes easy to make healthy people worse off.
• Strong evidence of benefit is important when putting large numbers of healthy people in harm’s way.
Clinical & Public Health Impact of Screening Studies

- **ASCUS-LSIL Triage (ALTS) Trial**: Established the role of HPV testing in triaging low-grade cervical lesions
- **National Lung Screening Trial**: Grade “B” recommendation from US Preventive Services Task Force mandates 3rd party payment (May 2013)
- **Prostate Cancer Screening**: Grade “D” recommendation against routine screening (Dec. 2013)
- **Ovarian Cancer Screening**: Grade “D” recommendation against screening (Sept. 2012)
Clinical & Public Health Impact of Prevention Studies

• **SERMS/Breast Cancer Prevention:** Grade “B” recommendation to discuss use of tamoxifen or raloxifene in women at increased risk for breast cancer (Sept. 2013)

• **Beta-Carotene and Vitamin E Trials:** Grade “D” recommendation against beta-carotene and vitamin E supplements to prevent cancer and cardiovascular disease (Feb. 2014)
Research Directions and Resources

- NCI Community Oncology Research Program (NCORP): a national network for studying the effects of healthcare organizations on prevention & care
- ASPREE Trial to study aspirin in the elderly
- Molecular Characterization of Screen-Detected Lesions/Overdiagnosis RFA: Closed Sept. 18, 2014
- Prostate, Lung, Colorectal, Ovarian (PLCO) Trial Biorepository: a national resource
NCI Cancer Prevention Fellowship Program: Training the Next Generation

• Post-doctoral intramural fellowship for early-career scientists
• Independent, mentored research in cancer prevention
• Multidisciplinary
• Up to 4 years funding support
• 10-15 fellows selected annually
Fellows’ Scientific Disciplines
(1987-2012, n = 248)
Areas of Potential Expansion in Prevention and Screening Research

• Microbiomics
  o Obesity/energy exchange
  o Role in carcinogenesis
  o Immunomodulation
  o Risk identification
• Immunoprevention
  o Oncogenic infections
  o Non-infection related
• HPV gaps
  o Less than 3 doses
  o HPV self-collection
  o HPV therapeutic vaccines
• Genomics of pre-malignant lesions (“pre-TCGA”)