

## Cancer Intervention and Surveillance Modeling Network: Scientific Update

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

## Cancer Intervention and Surveillance Modeling Network (CISNET)



- NCI Sponsored Consortium of Modelers Focused on
  - Modeling the Impact of Cancer Control Interventions (Screening, Treatment, Primary Prevention) on Current and Future Trends
  - Optimal Cancer Control Planning
- Funding
  - Originally funded in two phased in rounds (FY00 and FY02)
  - Refunded in FY05 total of 15 grants funded in breast, prostate, colorectal and lung cancer
  - 8 Affiliate Members (Funded through other mechanisms joined CISNET collaboration)
- http://cisnet.cancer.gov/

## CISNET Provides Tools for the Evaluation of Delivery of Interventions at the Population Level



## **Discovery**

and Statistical
and Statistical
Relationships
Necessary for the
Development of
Multi-Cohort
Population Models

## **Development**

Data Sources and
Realistic Scenarios
to Evaluate Past
Population Impact of
Interventions and
Project Future
Impact

## **Delivery**

Synthesis of
Relevant Scenarios
for Informing Policy
Decisions and
Cancer Control
Planning &
Implementation

**CISNET I** 

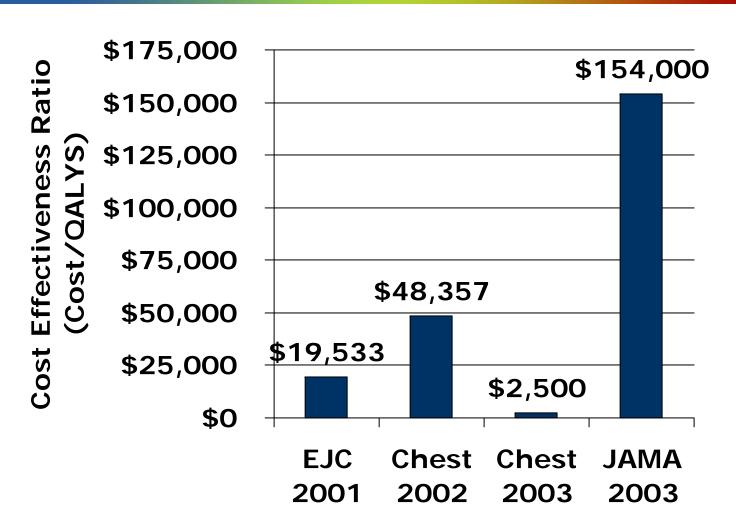
**CISNET II** 



# What's Different about CISNET From Other Modeling Efforts?

## Four Independent Published Studies on the Cost Effectiveness of CT Screening for Lung Cancer





Differences in target population, screening frequency, stage shift, assumptions about lead time and overdiagnosis, sensitivity

## **Comparative Modeling**



- Central questions to be addressed by all groups with a common set of inputs and outputs
  - Reproducibility across model adds credibility to results
  - Differences points out areas for further study in a systematic way
- NCI was applauded by the ISPOR\* task force on good modeling practices for setting up CISNET as a forum to compare model results and articulate reasons for discrepancies
  - \*ISPOR International Society for Pharmacoeconomics and Outcomes Research

## **CISNET Outreach and Collaborations**



United States Preventive Services Task Force, Agency for Health Care Research and Quality (AHRQ)

Support of Task Force Evidence Reviews

#### **Centers for Disease Control, Division** of Cancer Prevention and Control

Studies to guide CDC in designing new programs or enhancing existing ones









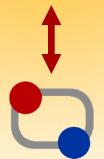






American College of Radiology Imaging Network (ACRIN)

Cost Effectiveness Study for National CT Colonography Trial



Center for Medicare and **Medicaid Studies (CMS)** 

Technology Assessments to support National Coverage Determinations

NCI, Division of Cancer Biology (DCB)

Link Integrative Cancer Biology Program molecular level models to tumor growth and population level models developed by CISNET

# CISNET Modeling to guide public health research and priorities



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## **Speakers**



- Breast Group
  - Jeanne Mandelblatt, M.D. Georgetown University
- Colorectal Group
  - Ann Zauber, Ph.D. Sloan Kettering Institute for Cancer Research
- Prostate Group
  - Ruth Etzioni, Ph.D. Fred Hutchinson Cancer Research Center