



# NCI Director's Consumer Liaison Committee

## Welcome and Overview

Shelton Earp, MD, Director, UNC Lineberger  
May 19, 2011

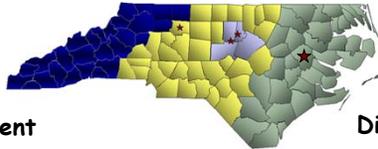


# UNC Lineberger: A Public Comprehensive Cancer Center

**Basic research:**  
Molecular, cellular, &  
animal model research



**Clinical & Translational Research:**  
Diagnostics & therapeutics



**Clinical Care:**  
Patient-centered excellence



### Economic Development

Intellectual property  
Attract & start companies



### Dissemination & Outreach

AHEC, community & clinical practice,  
quality, anchor counties

### UNC System Partners

East Carolina Univ., NC State,  
NC Central Univ.

**Population Sciences**  
Epidemiology, prevention, early detection,  
minority disparities, & health Outcomes



# UNC Lineberger Organizing Faculty Across a Great University

**Research**  
315 Members  
12<sup>th</sup> in NCI Funding  
\$220M Cancer-Related Funding  
34 multi-investigator grants

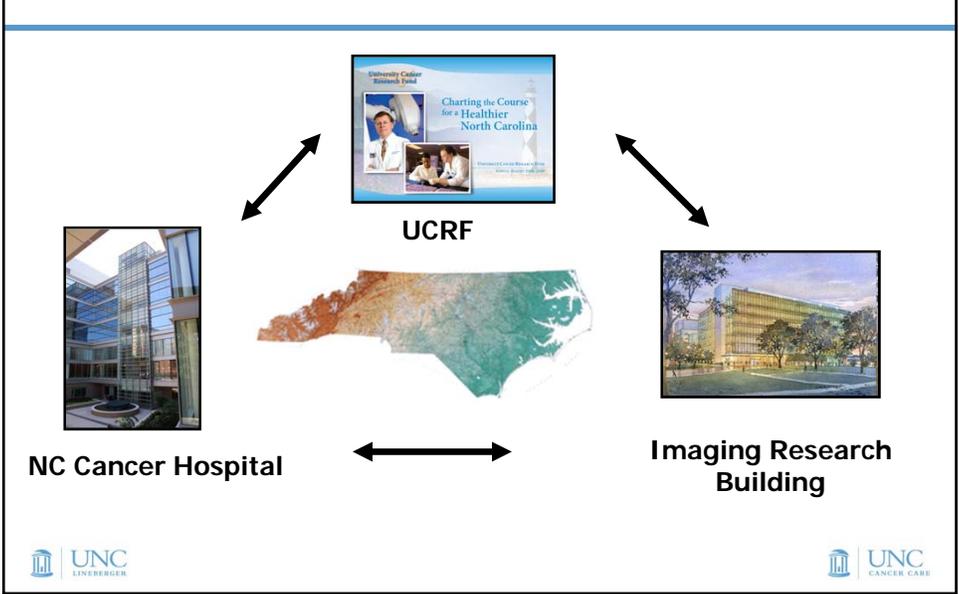
**Clinical**  
125,000 Patient visits  
4,000 New patients  
850 on therapeutic trials

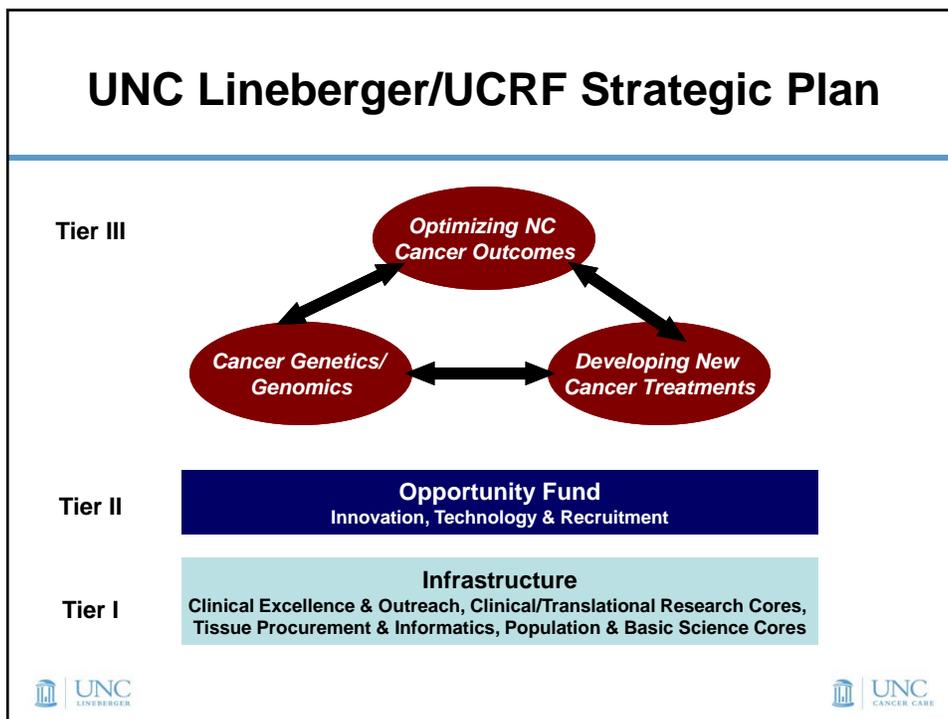
**Training**  
26 pre & post-doctoral training grants

UNC LINEBERGER

UNC CANCER CARE

## Extraordinary Support from the State







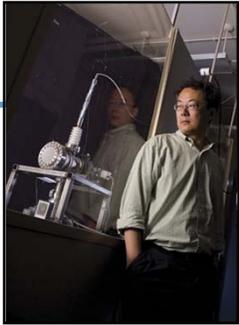
**Howard McLeod, PharmD**  
Washington University  
Institute for Pharmacogenomics and Individualized Therapy (IPIT)



**Bill Zamboni, PharmD, PhD**  
University of Pittsburgh  
Translational Oncology and Nanoparticle Drug Development Initiative  
GLP Analytic Facility



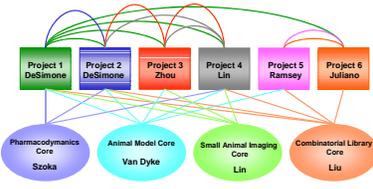
**Stephen Frye, PhD**  
Former head, GSK world-wide med chem  
Center for Integrative Chemical Biology and Drug Discovery (CICBDD) NCI-funded Chemical Biology Drug Discovery Consortium



**Otto Zhou**

## Center of Cancer Nanotechnology Excellence

*Developing New Cancer Treatments*





**Joe DeSimone**



**\$2M GO Grant**

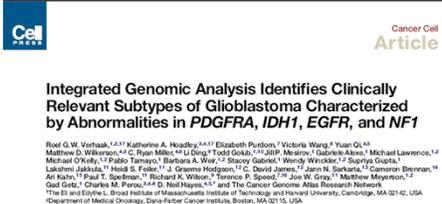


**Imaging, therapeutics, & vaccines**



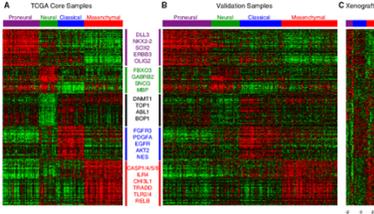

## NCI Cancer Genome Atlas: Glioblastoma Subtypes

*Cancer Genetics/ Genomics*



**Chuck Perou, PhD**  
**Lisa Carey, MD**  
**Katie Hoadley, PhD**





**Neil Hayes, MD**

The Cancer Genome Atlas

Next Generation Sequencing and Bioinformatics



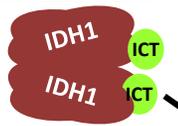

Developing New  
Cancer Treatments

## Targeting Mutant IDH1

Cancer Genetics/  
Genomics

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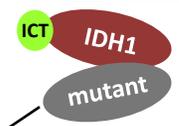
**Normal cells**



**IDH1** **ICT** → **α-KG**

**IDH1** **ICT** → **α-KG**

**IDH1 mutated**



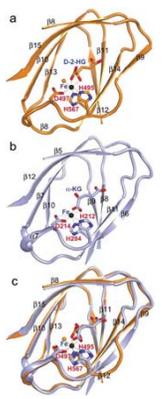
**ICT** **IDH1 mutant** → **2-HG**

**α-KG** ↓

**2-HG** ↑

α-KG-dependent dioxygenases ↓

JmJc Histone Demethylases



**Science 324:261 (2009)**  
Yue Xiong

Targeting *IDH1* and *IDH2* mutated glioma and AML

Cell-permeable α-KG to restore α-KG

Inhibitors of mutant *IDH1/2* to block the 2-HG

**Yue Xiong & Stephen Frye: IDH1 Drug Discovery Program**

NEXT funding




### Overview: North Carolina as a Laboratory Platforms for Quality of Care & Survivorship Research

Optimizing NC  
Cancer Outcomes

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- **UNC Hospital-based survivorship cohort**
  - Target accrual: 10,000 patients
  - Pretreatment epidemiologic and psychosocial data
  - Extraction of pathology, clinical, and treatment data
  - Germline DNA and genomic analysis of tumor samples
  - Yearly follow-up
  - Consent form allows re-consent for future studies
  - Potential co-development with SAS
  
- **ICISS (Integrated Cancer Information Surveillance Systems)**
  - State tumor registry data (44,500 cases yearly)
  - Claims data: Medicare, Medicaid, State, BCBS
  - BRFSS, Epidemiologic, GIS data, etc.
  - Understanding care and quality in the state

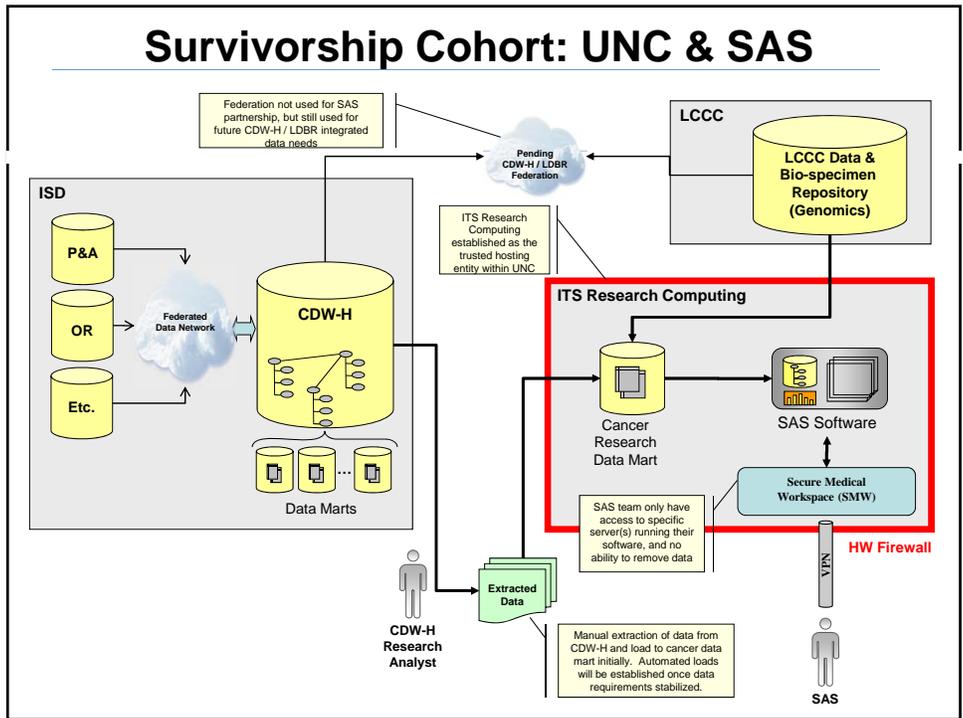
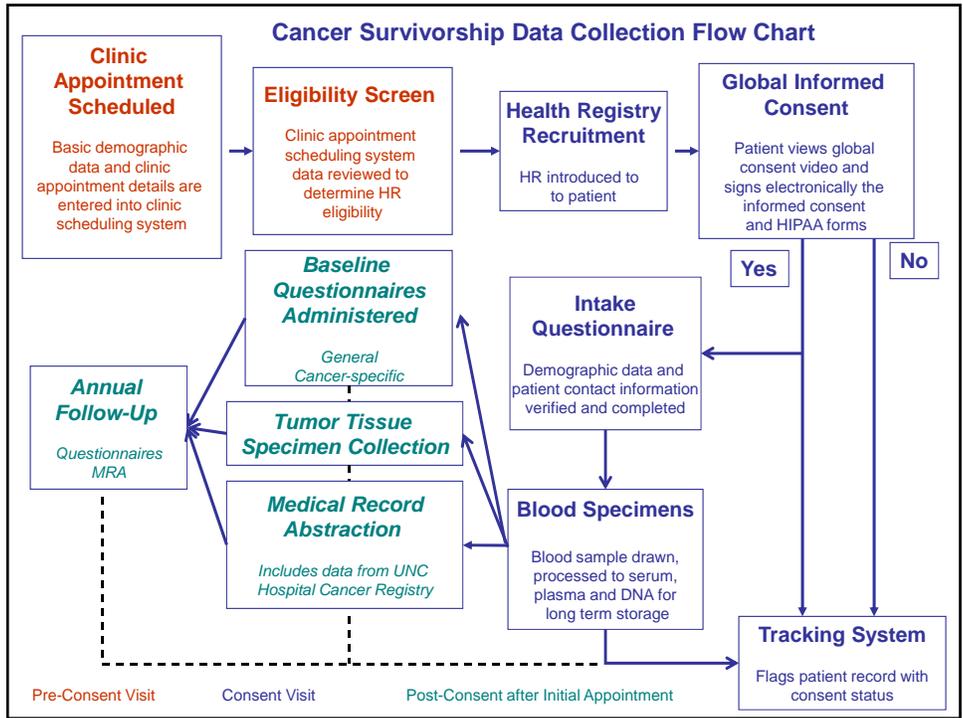
Andy Olshan

Marci Campbell





## Carolina Breast Cancer Study: Phase III

- Population-based
  - Molecular etiology to clinical outcomes
- 3,000 cases
- 50% African American
- 50% under age 50
- Clinical follow-up in the community setting



Senator Jeanne Lucas



## North Carolina: A Laboratory

**Optimizing NC  
Cancer Outcomes**

**Research**  
**ICISS**  
 Quality of Care  
 Comparative effectiveness  
 Outcomes – state-wide database  
 Prevention & early detection



- LEGEND**
- Assessment and Support for Achieving Prevention (ASAP)
  - + Patient Navigator Evaluation
  - Barbershop Physical Activity Pilot
  - + Reducing Disparities in Breast Cancer Screening
  - ★ HPV/Cervical Cancer Social Marketing Campaign
  - + Smoke Free Policies (In Development)
  - + Improving Colorectal Cancer Screening
  - ▲ UNC Cancer Network - Clinical Outreach
  - ★ Jeanne Hopkins Lucas Study
  - + UNC Cancer Survivorship Cohort
  - NC SPEED Outreach Network
  - + UNC Lineberger Lancer Armstrong Cancer Survivorship Center

**Disease-Specific Tumor Boards by Telemedicine**  
**Sites: 18                      Oncologist Offices: 28**



# Telemedicine Operation

- Tumor Boards -- Working Methods
  - Five active boards
  - Delivering information, scheduling, reporting
  - UNC Radiology receives remote images
  - UNC Pathology reviews slides from sites
  - Staff schedule and support remote sites
- Clinical Trials
  - Trial start-up meetings
  - Staff training
- Psycho-Oncology & Genetics Consultations
  - Rural areas
- Active CME Credit Hours
  - GI, Breast, Heme / Lymphoma, Head & Neck
- Radiation Oncology Education
- Bioethics(UNC, Duke, NC State)
- Protocol Review Committee
  - (UNC, ECU, Rex)
- Challenges/Opportunities
  - Stimulate utilization by practitioners
  - Scheduling for UNC faculty and community MDs
  - Use of centralized (hospital) vs smaller office sites
  - Use for consultation in rural areas



Brooke Burnworth, Michael Young, & Kari Hess

Equipment costs to date - \$2M  
 Yearly operating costs - \$350K  
 Need to expand faculty



# UNC Lineberger Clinical Trials Network



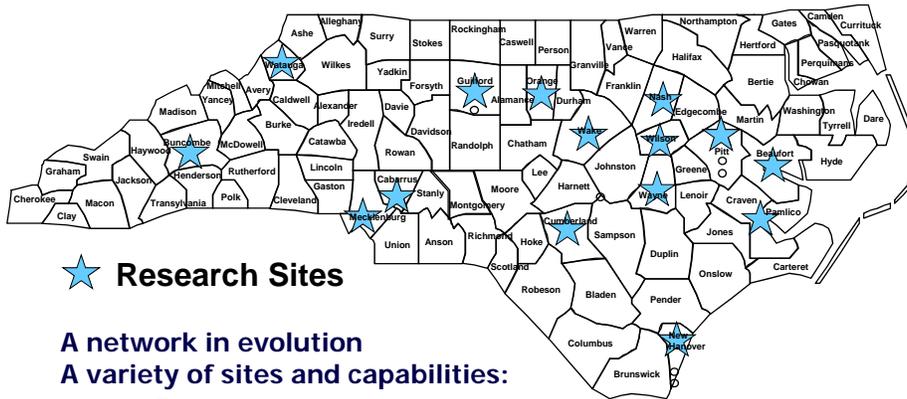
- Functions:
  - Staff at UNC, Rex, and ECU
  - Initial visits, assess capability, negotiate master agreements
  - Correlative science – specimen storage
  - Contract vendor delivers investigational drugs
  - UNC Lineberger holds INDs



Key Staff:  
 Brian Kiley, Madlyn Ferraro, Joy Ostroff



# UNC Lineberger Clinical Trials Network

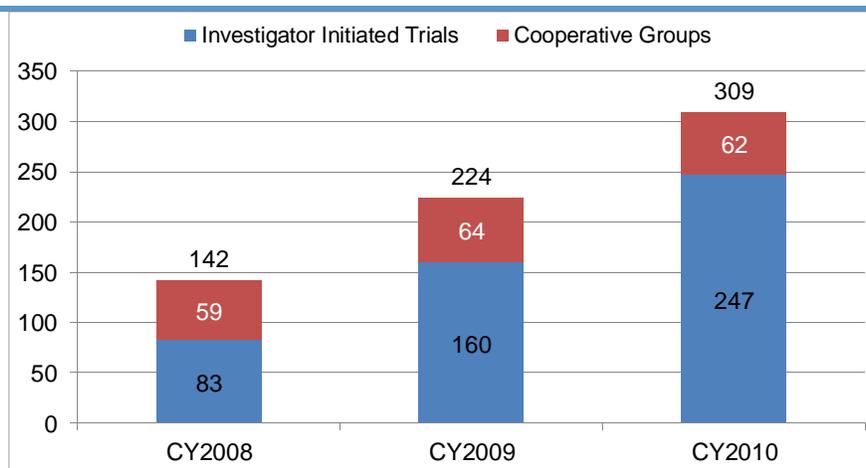


★ Research Sites

**A network in evolution**  
**A variety of sites and capabilities:**  
 Trials accrual  
 Prevention/survivorship research  
 Tissue procurement



# Network Accrual



# Questions?

