

# **The University of New Mexico Comprehensive Cancer Center**

**One of Only 45 National Cancer Institute Comprehensive Centers**

**The Official Cancer Center of New Mexico**

**Consortium Partners: Lovelace Respiratory Research Institute,  
Los Alamos National Laboratory, Sandia National Laboratories**



**Cheryl L. Willman, MD**

The Maurice and Marguerite Liberman Distinguished Chair in Cancer Research

Professor of Pathology and Internal Medicine

Director and CEO, UNM Comprehensive Cancer Center

UNIVERSITY OF NEW MEXICO CANCER CENTER





## 15 YEARS AGO WE PROMISED

That with your support, we would build New Mexico's finest and most comprehensive cancer treatment program to assure that *all* New Mexicans would have access to world class cancer care and benefit from advances in cancer research, *right here*, in our home state, surrounded by families and friends who love and support them

## AND WE DELIVERED!

Because of You and for You

# Mission

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- To build a single cancer-focused clinical and research enterprise with statewide networks for cancer care delivery and clinical and community research to be of service to the people of New Mexico and the nation.

# Goals

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- Provide outstanding cancer diagnosis and treatment to all New Mexicans.
- Focus the scientific and clinical strengths of our research programs, and our education and training activities, on overcoming those cancers that have high incidence, mortality, or disparity in New Mexico's multiethnic and underserved populations.
- Translate our discoveries to clinical trials and community interventions to reduce the cancer burden and cancer health disparities of our catchment area and the nation.
- Train the next generation of cancer scientists and healthcare professionals, particularly focusing on under-represented minorities.

# UNMCC: History and Accomplishments

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**2000:**

NCI P20 CCSG Planning Grant

\$11.3 M Annual Research Funding; 56 Scientists; 9 Clinical Faculty

**2003: Received Critical State Funds for Programs and Physician/Scientist Recruitment**

**2005:**

NCI P30 CCSG: Received NCI Designation. Merit: *Excellent / Very Good*

\$23.5 M Annual Research Funding; 85 Scientists; 42 Clinical Faculty

**2007: Received Critical State Bond Funds (Cigarette Tax) for New Facilities**

**2010:**

NCI P30 CCSG 1<sup>st</sup> Renewal. Merit: *Excellent to Outstanding, "High Impact"*

\$39.7 M Annual Research Funding; 103 Scientists; 74 Clinical Faculty

**2015:**

NCI P30 CCSG 2<sup>nd</sup> Renewal. Merit: *Outstanding*; NCI COMPREHENSIVE DESIGNATION

**One of Only 45 of 1500 Cancer Programs in the Nation to be Designated Comprehensive (Top 3%)**

\$67.6 M Annual Research Funding; 125 Scientists; 116 Clinical Faculty

New Cancer Center Facilities, Programs, and Research Resources

**Economic Impact Since 2010: 33 Patents / 117 Patents Pending; 13 Start Up Companies**

**63 New Faculty Recruits (45 Members; 8 New Leaders); 17 New Endowed Chairs/Professorships**

# UNMCCC: Leadership Team

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**Cheryl Willman, MD**  
Director & CEO



**Richard Lauer, MD, FACP**  
Chief Medical Officer



**Olivier Rixe, MD, PhD**  
Associate Director,  
Clinical Research



**Alan Tomkinson, PhD**  
Associate Director,  
Basic Research



**Anita Kinney, PhD, RN**  
Associate Director,  
Cancer Population  
Sciences



**Scott Ness, PhD**  
Associate Director,  
Shared Resources



**Angela  
Wandering-Ness, PhD**  
Associate Director,  
Education, Training



**Carolyn Muller, MD**  
Associate Director,  
UNM Women's  
Cancer Center



# UNMCCC: Leadership Team

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**Linda Cook, PhD**  
Cancer Control  
Research Leader



**MaryAnn Osley, PhD**  
Cancer Genetics,  
Epigenetics & Genomics  
Research Leader



**Steve Belinsky, PhD**  
Cancer Genetics,  
Epigenetics & Genomics  
Research Leader



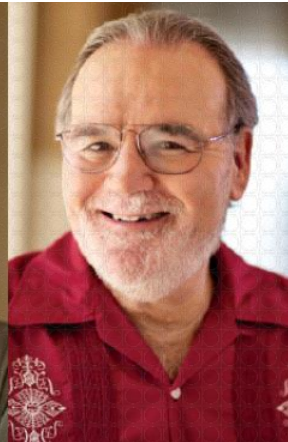
**Bridget Wilson, PhD**  
Translational Cancer  
Biology & Signaling  
Research Leader



**Eric Prossnitz, PhD**  
Translational Cancer  
Biology & Signaling  
Research Leader



**Renata Pasqualini, PhD**  
Cancer Therapeutics  
Research Leader



**Larry Sklar, PhD**  
Cancer Therapeutics  
Research Leader



**Wadih Arap, MD, PhD**  
Distinguished Scientist  
Translational Research



**Cosette Wheeler, PhD**  
Distinguished Scientist  
Public Health/Population  
Research

# UNMCCC: Senior Staff Leaders

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**Rodney Martinez**  
Chief Financial Officer

**Rae Ann Paden, MPH**  
Chief Administrative  
Officer

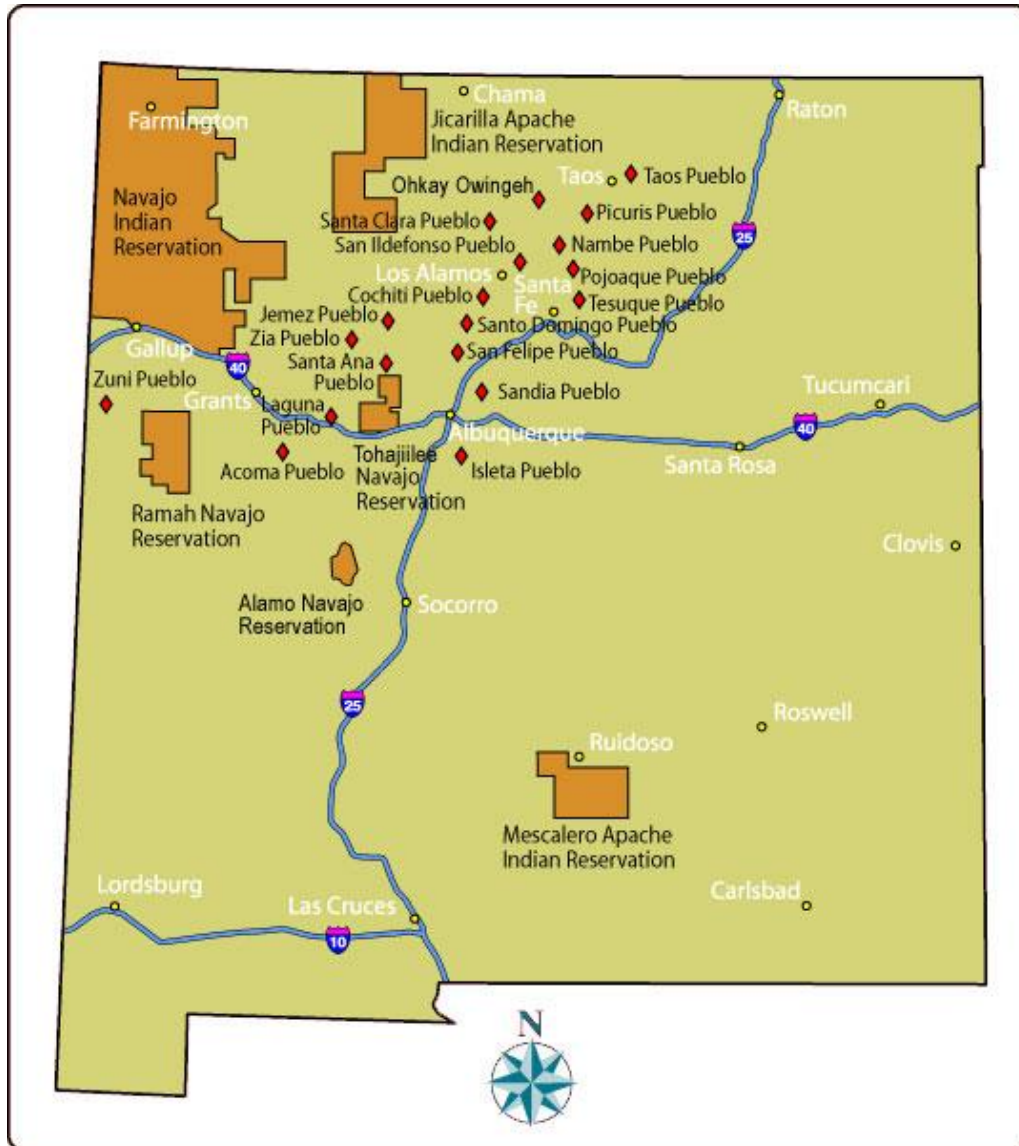


**Teresa Stewart, MHA**  
Administrative Director  
Clinical Research Office

**Melissa Fitzmaurice  
Neligan, MPH, CRA**  
Director, Research  
Administration

**Justin Schroer**  
Director of Development

# UNMCCC: Distinguishing National Characteristics



1. Multiethnic, multicultural, and geographically dispersed populations with strikingly different patterns of cancer incidence, mortality, disparity
2. Statewide registries and networks to facilitate cancer prevention and cancer care delivery research

***NM Tumor Registry***

***NM HPV/PAP Screening Registry***

***Project ECHO***

3. Integration of regional scientific and technologic strengths (engineering, computing, imaging, micro/nano-technology) of consortium partners (***LANL, SNL, LLRI***) to create unique research programs and capabilities
4. Statewide cancer clinical trials and cancer care delivery research network

***NM Cancer Care Alliance***



# A National Comprehensive Cancer Center:

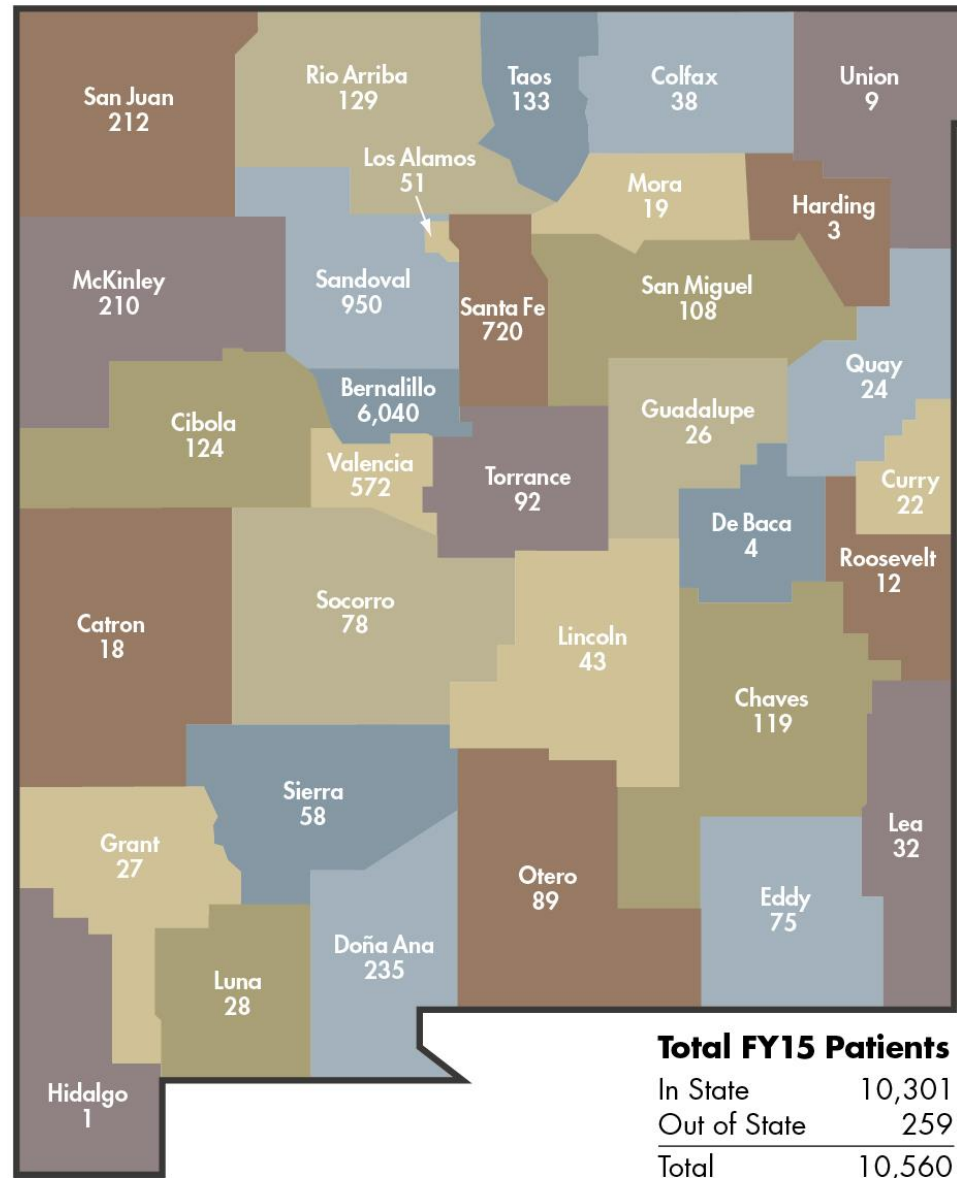
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1. Delivers the highest quality, integrated, comprehensive cancer diagnosis and treatment by teams of cancer physicians (medical, surgical, and radiation oncologists) who work together with nurses, pharmacists, supportive care staff (nutrition, psychosocial support), and other professionals to develop an individualized treatment plan for each patient.

*At UNMCCC: New Mexico's largest team of cancer physicians, 116 cancer doctors in every cancer specialty recruited from the finest medical schools in the nation, provide care to more than 10,000 cancer patients each year from every county in New Mexico in > 135,000 ambulatory clinic visits.*

# UNMCCC: Clinical Programs and Metrics

- **New Mexico's Official Cancer Center and only NCI Comprehensive Cancer Center**
- **State's Largest Team of Cancer Specialist**
  - **116** Oncology Trained M.D. Physicians
  - **125** Research Program Members and Cancer Scientists (MD / PhD)
  - **448** Clinical Staff (Nurses, Pharmacists, Lab)
- **State's Only Comprehensive Cancer Treatment Program: Fully Integrated Cancer Care (Medical, Surgical, Radiation GYN, Pediatric; Palliative Care)**
- **Accreditations / Quality Commendations**
  - NCI, TJC, ASCO QOPI, ACOS Commission on Cancer, ACR / Radiation Oncology
- **FY15 Patients Seen:**
  - **59%** From Bernalillo County
  - **41%** Out of County
  - **62%** From 4 County Area
  - **52%** Hispanic/American Indian/Minority



# A National Comprehensive Cancer Center:

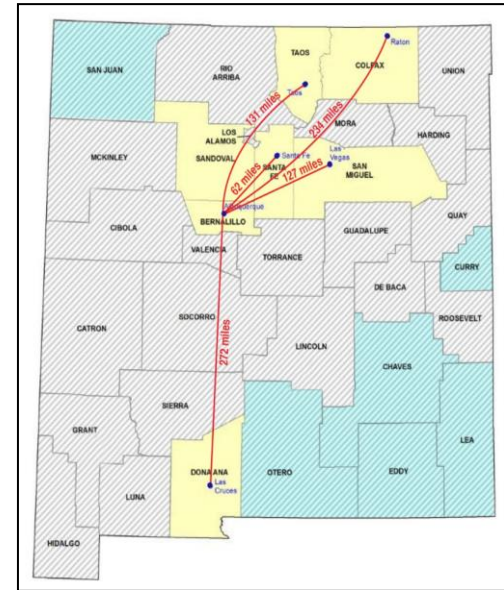
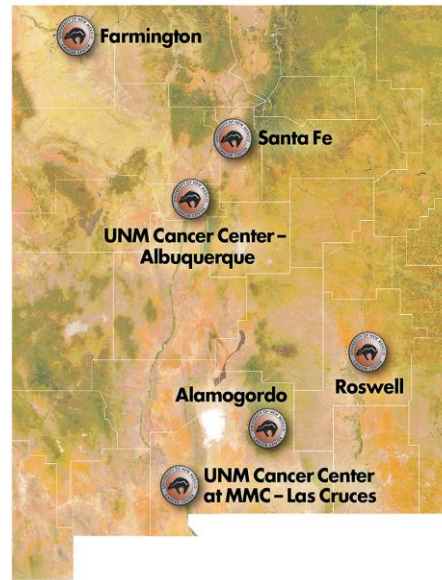
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2. Provides access to the newest and most effective treatments in cancer clinical trials sponsored by the National Cancer Institute, Pharmaceutical Industry, and,
3. Translates its own scientific discoveries into new cancer diagnostics, treatments, and prevention agents.

*At UNMCCC: Working with community health systems, we built the New Mexico Cancer Care Alliance, a statewide clinical trials network providing access to new cancer drugs and treatments in over 160 clinical trials each year. The NCI deemed this an “exemplary national model for cancer health care delivery.”*

*At UNMCCC: We are opening the Total Cancer Care / ORIEN Project (January 2016) where all UNM cancer patients will undergo tumor genome sequencing to identify cancer-causing mutations that can be targeted with the newest treatments.*

# Special Characteristics: Statewide Cancer Clinical Trials Network



## The New Mexico Cancer Care Alliance (NMCCA)

- Non-profit (501c3) public-private joint venture: UNMCC, 5 health systems, community oncologists
- Governed by constitution and bylaws creating a single statewide cancer IRB and integrated infrastructure for the management and oversight of clinical interventions and trials
- Based at UNMCC; UNMCC Director is Board Chair with authority over all UNM and NMCCA trials
- Financial support: UNMCC, NM Health Systems, and NCI (2003-14: MBCCOP U10CA86780)

## Awarded NCI NCORP (U01CA189856: Multi-PI Royce/Muller; CCDR: Kinney)

- Merit Score: 10; “exceptional, exemplary model for the nation of academic/community network”
- Fully funded as “high accruing site” with high case reimbursement
- Integration of **Project ECHO**: enhance community accrual and facilitate cancer care delivery research



# A National Comprehensive Cancer Center:

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4. Conducts world class cancer research, in our laboratories, clinics, and communities, to discover the causes and cures for those cancers particularly affecting New Mexicans, to overcome New Mexico's and the nation's cancer burden, and to promote economic development.

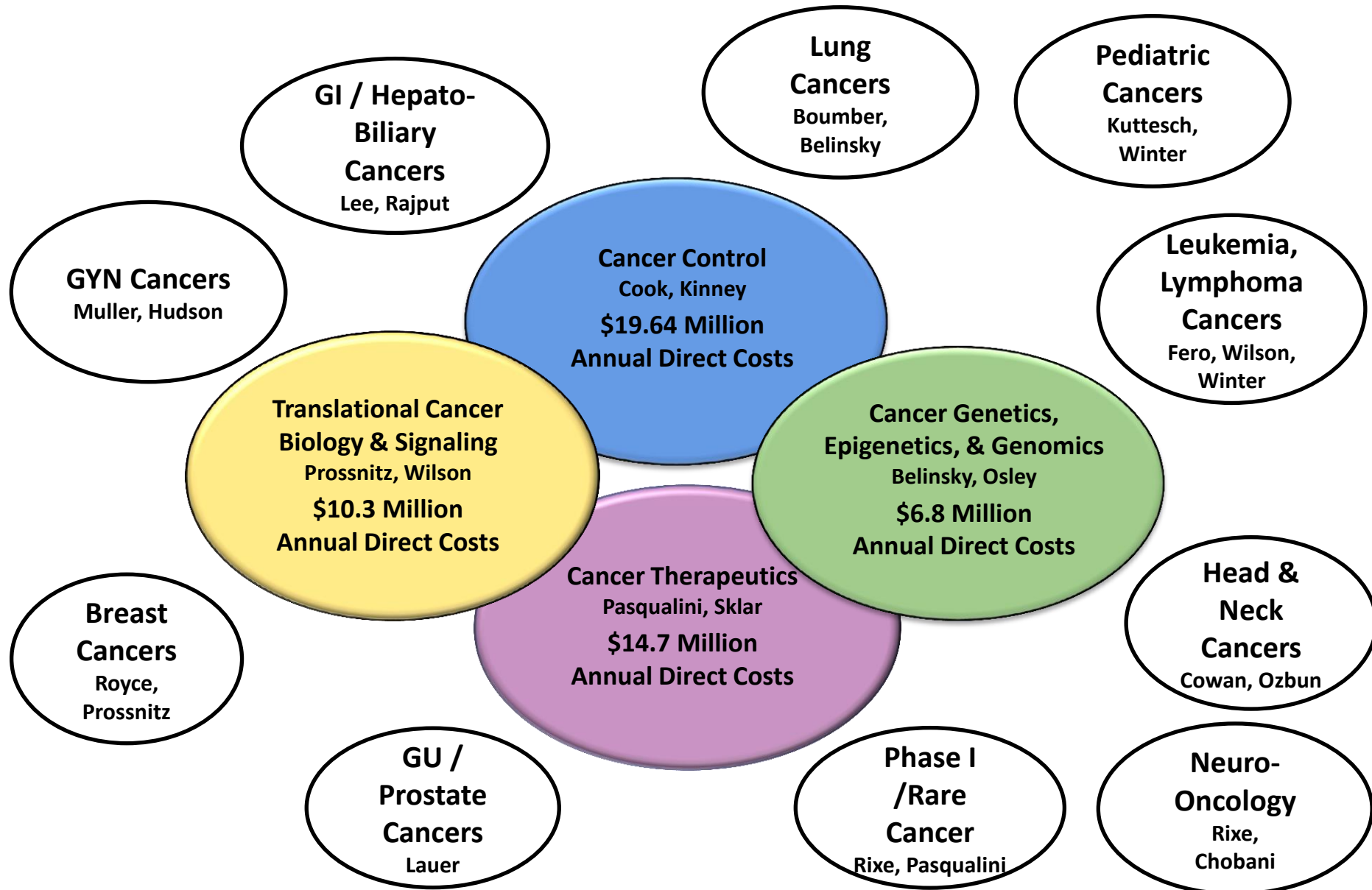
*At UNMCCC: Supported by \$71 million annually in federal and private research funds, 132 scientists work with partners at LANL, SNL, LLRI, and State Universities to discover the causes and develop more effective cancer treatments.*

*At UNMCCC: We have developed new diagnostics and drugs for leukemia, breast cancer, ovarian cancer, prostate cancer, liver and pancreatic cancer, brain cancer, and melanoma.*

*At UNMCCC: Since 2010, UNM cancer scientists have been awarded >50 new patents, with 117 patents pending, and have started 13 new biotechnology companies.*

# UNMCCC: Research Programs and Clinical Work Groups

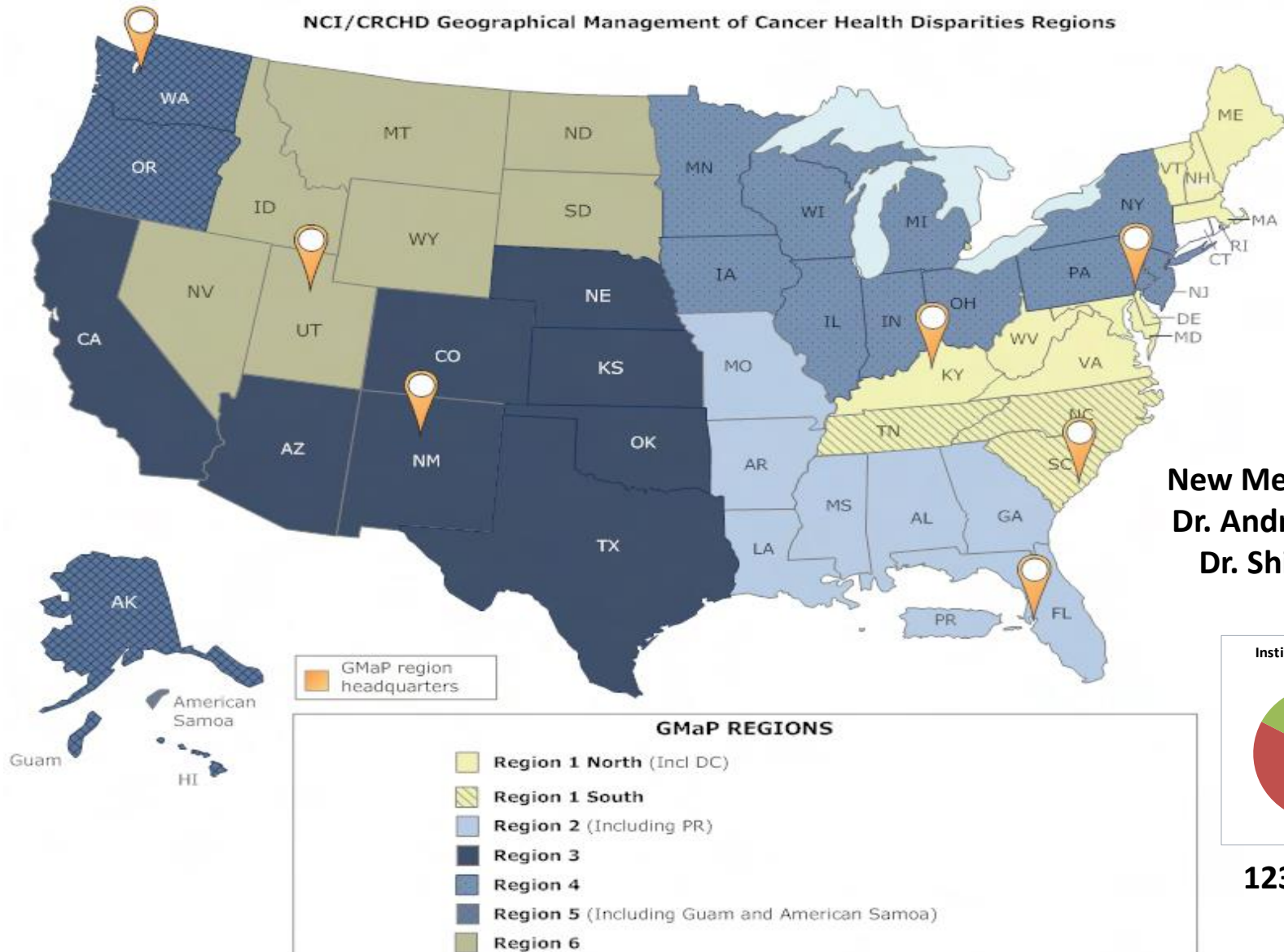
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# New NCI Award: UNMCCC Designated Region 3

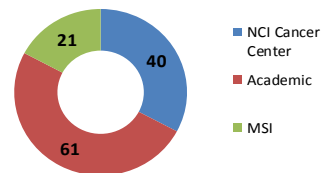
## GMaP (Geographical Management of Cancer Health Disparities)

NCI/CRCHD Geographical Management of Cancer Health Disparities Regions



**New Mexico Leaders:**  
**Dr. Andrew Sussman**  
**Dr. Shiraz Mishra**

Institutional Members (FY11-FY13)



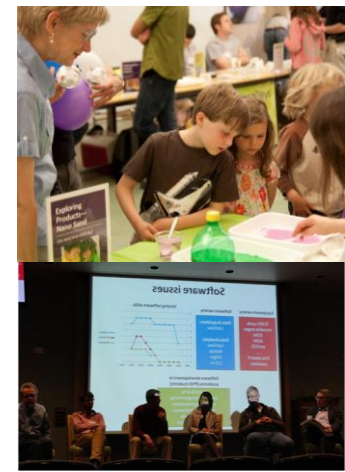
**123 Institutional Members**

# A National Comprehensive Cancer Center:

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5. Educates, trains, and mentors the next generation of cancer physicians, scientists, nurses, pharmacists, and healthcare professionals to assure that New Mexico and the nation have a highly qualified healthcare workforce.

*At UNMCCC: Since 2010, UNM has trained 276 cancer scientists (Masters, PhDs and fellows) and 158 cancer health care professionals (physicians, nurses, pharmacists).*





# UNMCCC Strategic Plans (2015 – 2020)

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- Provide outstanding comprehensive cancer diagnosis and treatment
- Conduct outstanding cancer research
- Discover the causes and cures for cancer and translate discoveries into new cancer diagnostics and therapeutics
- Reduce New Mexico's cancer burden by discovering and intervening on the genetic, environmental, social, and behavioral factors that contribute to the distinct patterns of cancer incidence, mortality, and disparity in our populations
- Educate, train, and mentor students and fellows in our laboratories, clinics, and communities, with an emphasis on training under-represented minorities

# UNMCCC Strategic Plans (2015 – 2020)

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1. Continued Growth of Cancer Center Clinical Operations with Development of New Services and Expansion of Statewide Cancer Care Network

*Challenges: Statewide Transportation Network; Adequate/ Affordable Housing*

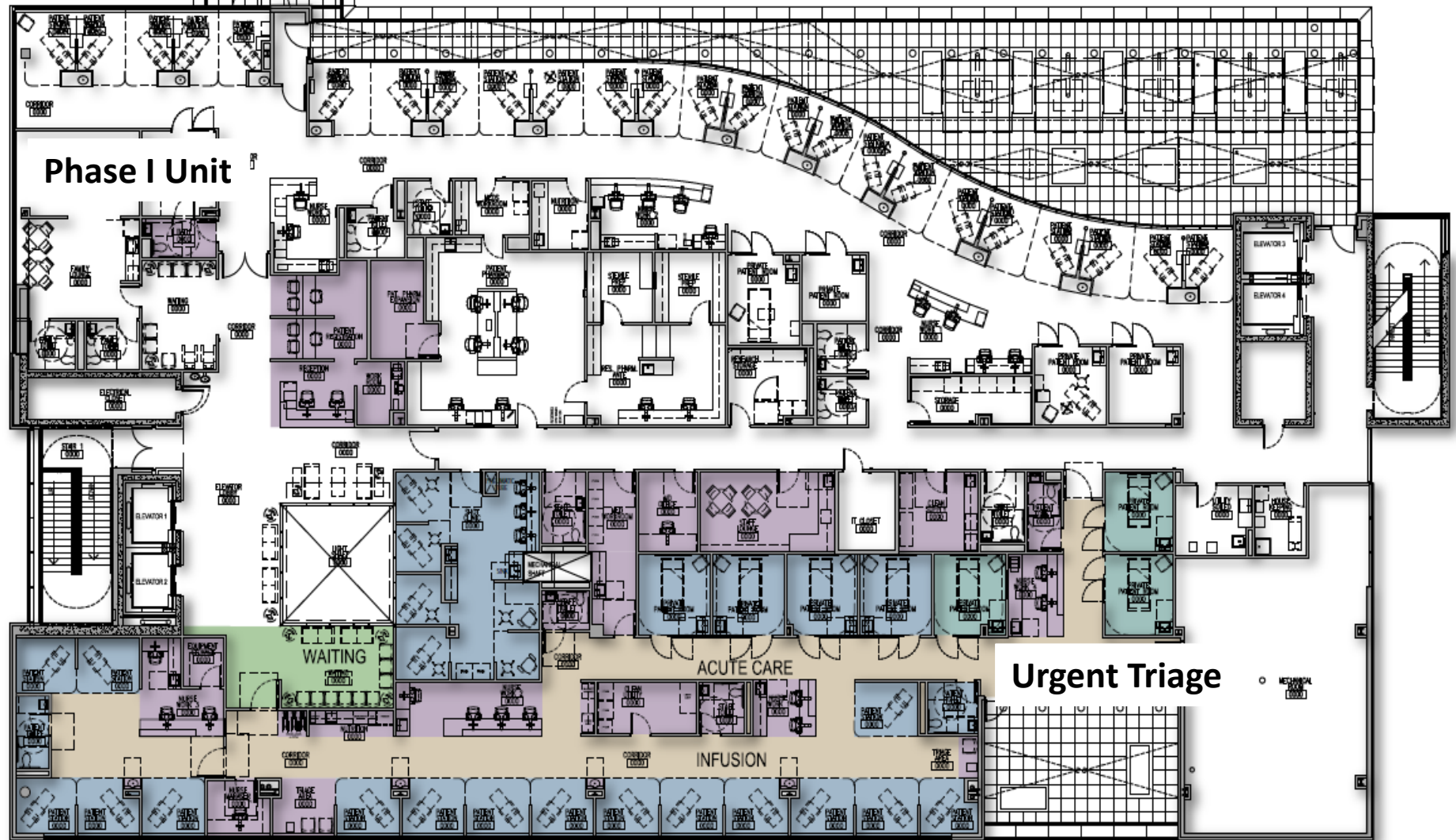
2. Pro-Active Management of ACA / Healthcare Changes
3. Complete Finish Out of Cancer Treatment Facility:
  - 9/14: Approved by UNM Regents, HED, and State Board of Finance
  - 10/15: Plans Completed; Contract Awarded to Jaynes Corporation
  - 9/16: Scheduled Completion; Cost: \$12 Million
  - 2<sup>nd</sup> Floor: Women's Cancer Programs (North Side) and Surgical Specialty Clinics (South Side) including GI, GU, Head/Neck, Pulmonary
  - Adolescent and Young Adult Oncology Clinics / Cancer Survivorship Clinics
  - 4<sup>th</sup> Floor: Expansion of Infusion; Bone Marrow Transplant; Phase I Program
  - 1<sup>st</sup> Floor: Café and Food Service
4. Continued Critical Faculty and Staff Recruitments
5. Launch New Tumor Sequencing / Trial Matching Project

# **Facility Finish Out / New Cancer Service Lines**

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- New Cancer Service Lines to Be Opened (Fall 2016):
  - The UNM Women's Cancer Center (Breast, GYN Cancers)
  - Integration of Additional Cancer Surgical Specialties in Multidisciplinary Clinics: Head/Neck Cancers (Dental Medicine; Maxillofacial Reconstruction); GU/Prostate Cancers
  - State's Only Accredited Bone Marrow / Stem Cell Transplantation and Cell-Based Therapies Program (2-3 Years of Development)
  - Phase I (First in Human) Clinical Trials Unit
  - Adolescent and Young Adult Cancer Clinic (Age: 15-30 Years)
  - Neuro-Oncology Clinic: Brain and Spinal Cord Tumors
  - Cancer Survivorship, Palliative Care, Rehabilitation Clinics and Programs

# UNMCCC 4<sup>th</sup> Floor Finish Out



**Phase I Unit**

**Urgent Triage**

**Transplant / Stem Cell Unit**



# UNMCC 2<sup>nd</sup> Floor Finish Out

## UNM Women's Cancer Center

## Multidisciplinary/Surgery Clinics

# Strategic Physician / Scientist Recruitments

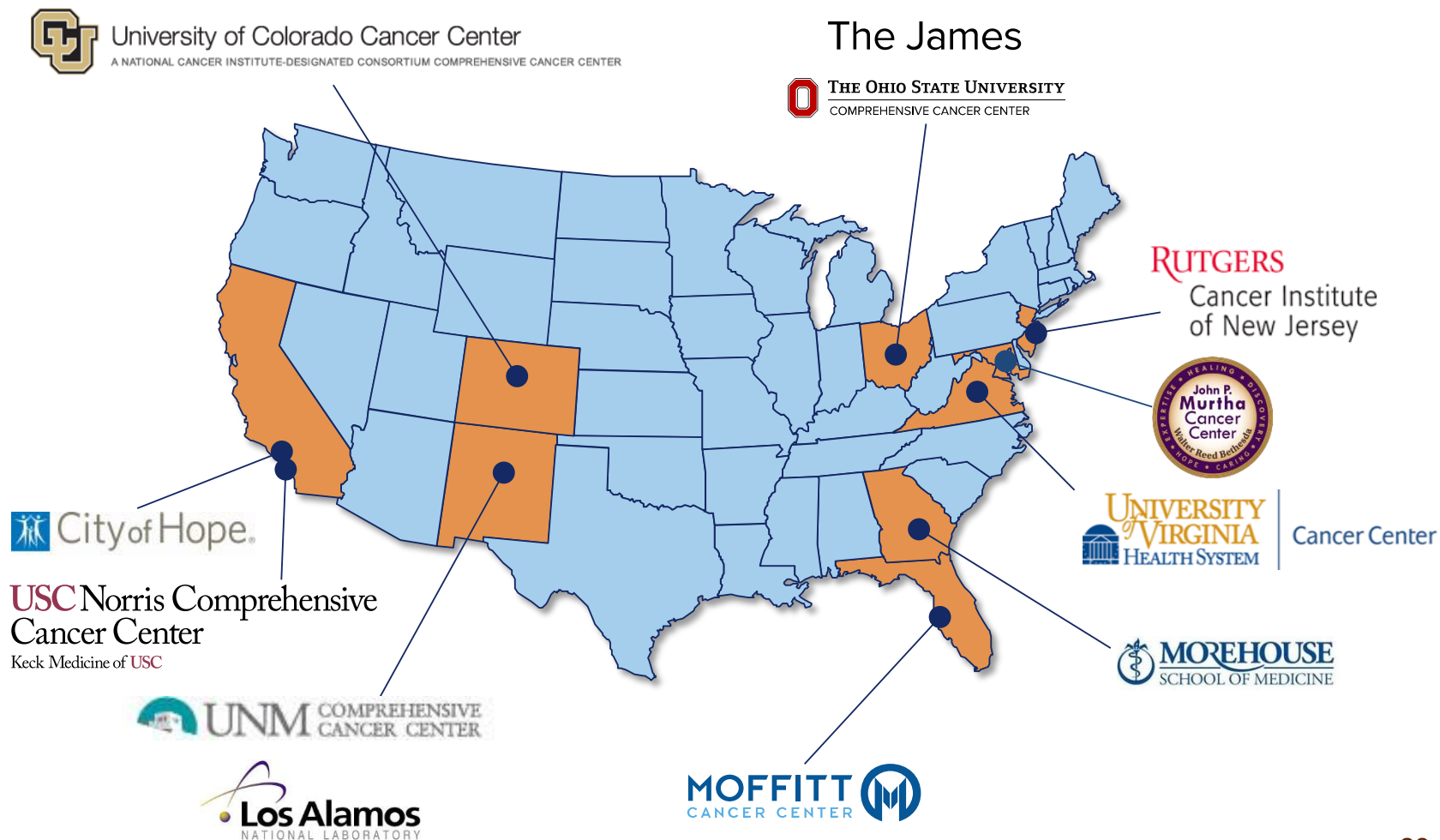
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- Cancer Physicians
  - Medical Oncologists:
    - Head and Neck Cancers
    - Melanoma / Sarcoma
    - GI / Liver Cancers (2)
    - Lung Cancer
    - Breast Cancer
    - Hematologic Malignancies (Blood Cancers) / Transplant (2)
  - Gynecologic Oncologist
  - Surgical Oncologist – Breast, Plastic/Reconstruction
- Cancer Scientists
  - Cancer Epidemiology, Prevention, Intervention (3)
  - Laboratory-based Cancer Research (6-8)
  - Genome Sequencing / Bioinformatics / Biostatistics (3-4)

# Tumor Genome Sequencing to Targeted Therapy

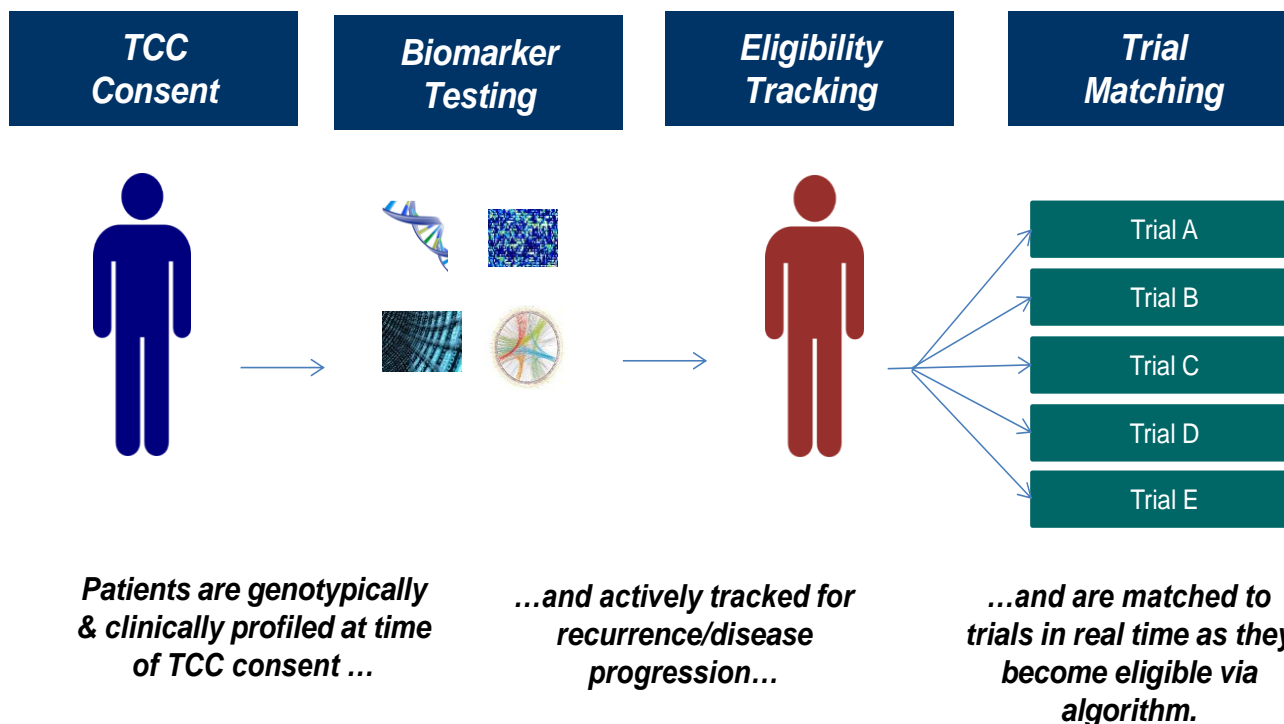
## Total Cancer Care / ORIEN Network

Collaboration of Nation's Leading Cancer Centers  
Annual New Patient Volumes: 100,000

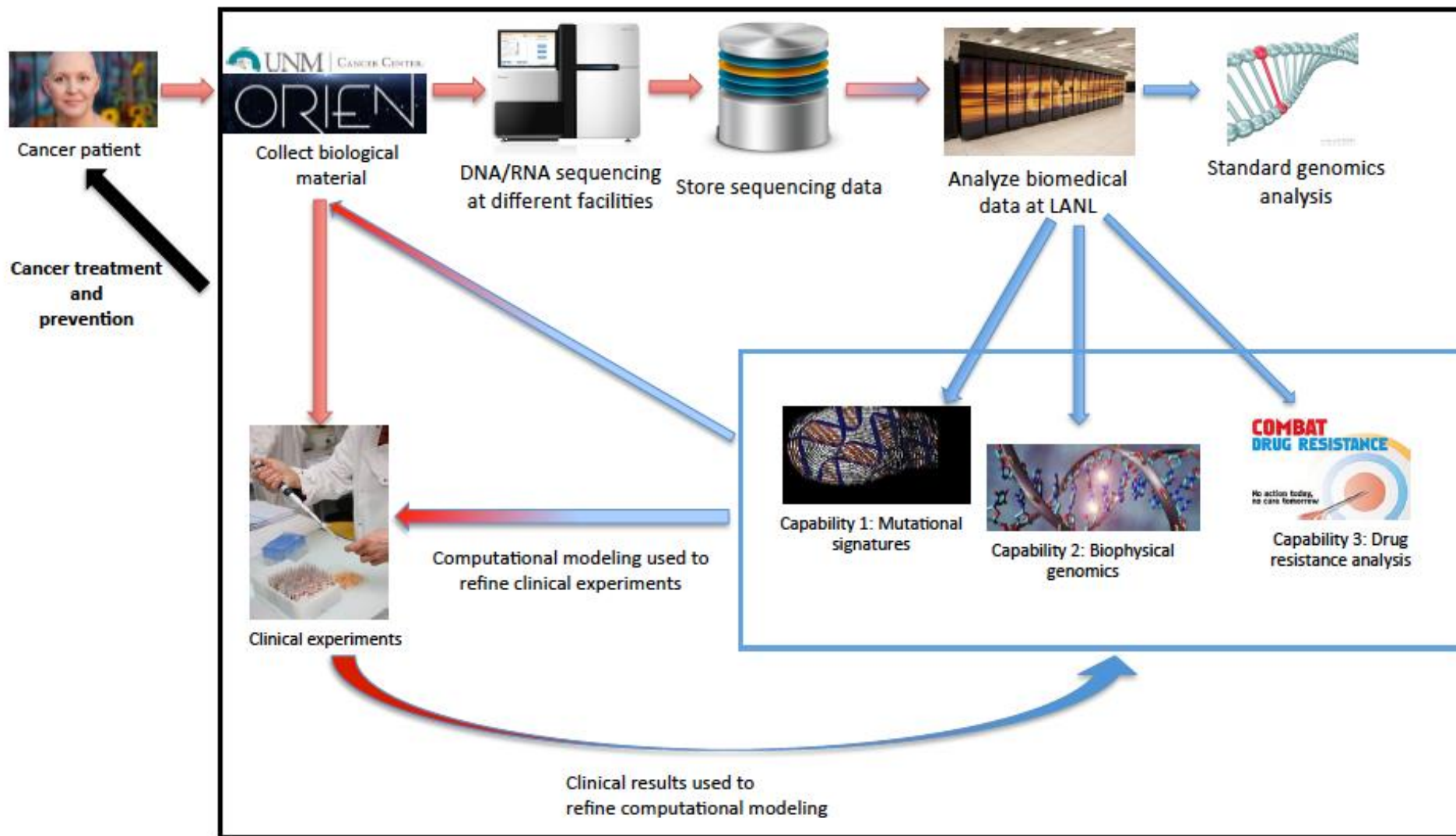


# New Precision Cancer Medicine Clinical Trial Matching Opportunity: An Alliance of NCI Cancer Centers and Pharma

***ORIEN is launching a “cohort surveillance” to actively track patients for enrollment to biomarker driven clinical trials***







**UNMCCC and LANL: Co-Design and Big Data Computational Cancer Capabilities**  
**Ludmil B. Alexandrov, Boian S. Alexandrov, and Gnanakaran Sandrasegaram**

# Known or speculative causes of mutational signatures





