The University of Arizona Cancer Center

The National Cancer Institute-Designated Comprehensive Cancer Center serving the State of Arizona

David S. Alberts, MD
Director, The University of Arizona Cancer Center
Regents Professor of Medicine, Pharmacology, Nutritional Sciences, Public Health, and BIO5 Institute
UACC Multidisciplinary Cancer Specialty Clinics

- BMT-Leukemia
- Breast Cancer
- Gastrointestinal Cancers
- Genitourinary
- Gynecologic
- High-Risk Cancers
- Lymphoma
- Neuro-Oncology
- Pediatric Hematology/Oncology
- Sarcoma Skin Cancer
- Thoracic Oncology
UACC Growth and Development Timeline

1972
1976
1978
1982
1986
1987
1990
1998
2003
2005
2006
2007
2008
2014

2008: Opening of Orange Grove Cancer Clinic (UACC in partnership with UMC)

2014: Opening of UACC Ambulatory Care Research Facility (250,000 sq ft); to break ground in 2013 downtown Phoenix
The University of Arizona Cancer Center
Offsite Offices, Community Affiliates, and Clinical Affiliates

- With an annual research budget of more than $60 million, UACC research facilities employ more than 450 Arizonans statewide

- Nearly 1,000 Arizonans participate in UACC studies annually
The University of Arizona Cancer Center Research Programs

**Therapeutic Development**
- Robert Dorr, PhD
- Michael Bookman, MD

**Cancer Biology**
- Setsuko Chambers, MD
- Joyce Schroeder, PhD

**Cancer Imaging**
- Arthur Gmitro, PhD
- Evan Unger, MD

**Cancer Prevention & Control**
- Patricia Thompson, PhD
CHDI Board of Community Advocates

Andrew Pacheco (co-Chair)
Frank Valenzuela (co-Chair)
Edith Auslander
Jacob Bernal
Peter Chan
Nelba Chavez
Clara Curiel
Richard Elias
Judith Gordon
Hirsch Handmaker
Doug Hirano
Nancy Johnson
Tsianina Lomawaima
Ned Norris
Kendra Sabol
Fred Taylor
Binational Breast Cancer Study
Estudio Binacional de Cáncer de Mama

US PIs:
E. Martinez
P. Thompson
M. Bondy

Mexico PIs:
A. Daneri
M. Meza
L.E. Gutierrez

Funded by the Avon Foundation and
The National Cancer Institute
The Partnership for Native American Cancer Prevention (U54)

David S. Alberts, MD - Principal Investigator, UACC
Laura Foster Huenneke, PhD - Principal Investigator, NAU

Jesse Martinez, PhD - Research PI, UACC
Diane Stearns, PhD - Research PI, NAU

Margaret Briehl, PhD – Training, UACC
Jani Ingram, PhD - Training, NAU
Teshia Solomon, PhD (Choctaw) – Outreach, UACC
What is NACP?

- Collaborative Partnership with NAU and NCI
- Leverages expertise at UACC in order to enhance cancer research and training at NAU
- Provides community education programs for cancer prevention that meet the unique needs of the Hopi Tribe and the Navajo and Tohono O’odham Nations
- Increases Native American students in cancer-related careers
Research Projects

- Molecular mechanism in thrombospondin-1 mediated antiangiogenesis; Bill Montfort/Matt Gage (full)
- Cancer Risk Factors and Screening Behaviors of the Hopi Tribe; Sylvia Brown/Priscilla Sanderson (pilot)
- Prostate Cancer Risk: Role of Genetic Variation in the microRNA Stress Response to Arsenic Exposure; Ron Heimark/Jason Wilder (pilot)
1. A Native American tribal liaison will increase cancer prevention and control programs and research in Hopi, Navajo and Tohono O’odham communities.

2. A Native American tribal community expert network will expedite the cultural adaptation of cancer prevention and control programs.

3. Educational preparation for Native American tribal community lay health workers for their respective Hopi, Navajo and Tohono O’odham communities.

4. Delivery of clinical education programs tailored to Indian Health Service (IHS) physicians, nurses and health education staff of the Hopi, Navajo and Tohono O’odham.
As an example - Tohono O’odham Cancer Partnership

- Established in 2008, the Tohono O’odham Nation Division of Health addresses the problem of cancer on the Nation.
- Tohono O’odham Nation’s first comprehensive cancer plan was ratified by the Council on June 18, 2010 (Resolution No. 20-188).
- Partners include:
  - Arizona Cancer Center Partnership for Native American Cancer Prevention
  - Arizona Department of Health Services
  - Tucson Area Indian Health Services
  - Others
Tohono O’odham Cancer Plan & Implementation Priorities

- Prevention - Obesity, Tobacco Control
- Early Detection - Breast, Cervical, Colorectal, Prostate
- Quality of Life - Case Management, Palliative Care
## Training Outcomes (in the previous 2 years)

<table>
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<tr>
<th>Education Level</th>
<th>UA</th>
<th>NAU</th>
<th>Native Americans</th>
<th>Degrees</th>
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<tr>
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<td><strong>34</strong></td>
<td><strong>92</strong></td>
<td><strong>79</strong></td>
<td><strong>43</strong></td>
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</tbody>
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Sustainability for Native American Outreach & Education Activities

- Cancer disparities in Native American communities require long term multi-sector investments with
  - Tribal government
  - Academic partners
  - Cancer advocacy organizations
  - State government
  - Federal government

- Priorities must be determined by communities themselves which requires ownership and capacity building
Personalized Medicine in Oncology: An oncologist and his patient team up to share their major success against the odds

In the year 2001, I received a call from my dear friend and colleague, Dr. Suellen Crano, who told me about her newly discovered peritoneal mesothelioma, which had become resistant to standard chemotherapy and was immediately threatening her life.
I asked for and received the formalin-fixed, paraffin-embedded tissue block from her original exploratory laparotomy and did a search for druggable molecular targets.
Her cancer scored intensely positive in more than 90% of the tumor cells for the same protein (c-Kit) that drives the growth of CML and GIST.
I immediately prescribed Gleevec. She remains alive, way against the odds, on the personalized therapy, that I prescribed more than 11 years ago based on the molecular targets in her own cancer.