



Native American Cancer 101 Education Modules

Native Cancer 101 Education Modules
 Mayo Clinic's Spirit of Eagles Communities Network
 Program 2 [NCI1U54CA153605]

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<http://www.NatAmCancer.org>
<http://www.NativeAmericanPrograms.org>

The original Spirit of EAGLES
 Cancer 101 (2004)
Reviewed and Revised
 (“generic versions” 2011)
 for 3 new modules

Module 4: Role of Genes in Cancer
 Module 8: Biospecimens and Biobanking
 Module 9: Chronic Conditions and Cancer



Generic Version

- ☞ Designed to be presented in its entirety through an 8-hour workshop
- ☞ Each module lasting ~30-45 minutes
- ☞ Pertinent information included in the Notes Page was not on the slides
- ☞ Facilitator's Guide was very good
- ☞ Mayo identified 4-member team plus 2 consultants to revise the modules for cultural appropriateness

Burhansstipanov, Native American Cancer Research Corporation (NACR); 1-800-537-8295; <http://www.NatAmCancer.org/>

Generic Version

- ☞ Many issues
 - ☞ T-F Knowledge assessment items
 - ☞ High literacy level
 - ☞ Boring, lacked participant interactive activities
 - ☞ Lacked relevance for most AI/AN communities
 - ☞ Questioned the feasibility of AI/AN comprehension of content via 30-45 min per module

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Native Cancer 101 Modules

- ☞ Module 4: Role of Genes in Cancer, retained none of the generic slides
 - ☞ ~75% of slides from GENA®
- ☞ Module 8: Biospecimens and Biomarkers, retained 12 of the generic slides
 - ☞ ~50% of slides from GENA®
- ☞ Module 9: Chronic Conditions and Cancer, retained ~ 10 generic slides
 - ☞ Diabetes and weight management-NPAIHB
 - ☞ NACR's Cancer 100 and other Path slides

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Examples of Interactive Activities
 (increases long-term knowledge retention)

- ☞ Genetic Jeopardy
- ☞ Chromosome ropes
- ☞ Strong Arm Case Study
- ☞ BRCA2 Family Roles Case Studies
- ☞ AI Family Tree
- ☞ Tic-Tac-Toe
- ☞ Bear and Coyote
- ☞ CYP450 “candies” for pharmacogenetics

Intermediate version of Module 4

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Other Changes

- Added AI stories to all 3 modules
- Expanded time to 1.5 to 3 hours per module
- Reduced literacy on 95% slides to grade 5-7
- Added multiple choice items (LB used ARS)
- Added detailed notes pages (within Power Point®) rather than create Facilitator Guide
- Pilot tests
 - March 27, 2012
 - April 24-25, 2012
 - May 15, 2012
 - August 10, 2012

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Pilot Test Findings

- 24 participants
 - 18 Females
 - 22 AIs
 - Age range from 18 to 75
- 20 had less than 10 hours genetic education prior to the workshop
- 90% said the content was “new” to them
- The interactive activities increased their comfort level and knowledge

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Pilot Test Findings (cont.)

- Average percent of participants who answered pre-assessment knowledge correctly = 33%
- Average percent of participants who answered post-assessment knowledge correctly = 66.36 = **33% increase**
- Asked participants, “would you recommend this workshop to your friends, family or colleagues? **100% said “yes”**”

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Examples of Cultural Modifications

Characteristics of Chronic Conditions

- Lasts one year or longer
- Requires ongoing medical care
- Limits daily activities
- Often interferes with one’s quality of life

Cancer risks that “damage” the shield of protection include factors such as:

- Age: AIANS over 50 (risk increases as you get older)
- Family history (“1st degree relative” diagnosed with cancer)
- Race, such as Alaska Nations, Northern or Southern Plains higher cancer incidence for most cancers than other tribal Nations

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Examples of Interactive Activities

Interactivity: Chromosome Ropes

- Rope chromosomes (100,000 times larger than actual chromosomes)
 - Telomere
 - Centromere
 - Single Nucleotide Polymorphism (SNP) / mutation
 - p segment
 - q segment

Case Study Real Story: Strong Arm

- When entering the lab where the students were doing their summer fellowship, an obnoxious worker from the next door lab kept hounding them to give him a blood specimen.
- Strong Arm said, “no” multiple times.
- After a few weeks of refusals, the obnoxious worker said, “we just want to get practice taking blood specimens so that my girlfriend can pass a test to be a phlebotomist.”

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Example of Knowledge Item

Which is TRUE about BRCA2?

- Is a large gene (many base pairs) on the 13th chromosome
- Is responsible for ~25% of all breast cancers
- Has no effective cancer treatments to control or manage the disease
- Is only found in females
- Don’t know / Not sure

Item	Percentage
1. Is a large gene (many base pairs) on the 13 th chromosome	52%
2. Is responsible for ~25% of all breast cancers	38%
3. Has no effective cancer treatments to control or manage the disease	10%
4. Is only found in females	0%
5. Don't know / Not sure	0%

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