Improving Colorectal Cancer Screening among Alaska Native People using the Stool DNA Test

Diana Redwood, PhD, MPH
Black and Alaska Native individuals have a higher incidence of and mortality rate from colorectal cancer compared with the general population.”
More than 95% of Colorectal Cancers Follow Adenoma-Carcinoma Sequence
Colon Cancer
Five-Year Survival Rates (%)

Colorectal Cancer Incidence Rates:
Alaska Native and US White, Men and Women, 1969-2013

- AN
- USW

Rates per 100,000

<table>
<thead>
<tr>
<th>Period</th>
<th>Rates per 100,000</th>
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<tbody>
<tr>
<td>'69-'73</td>
<td>80</td>
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<tr>
<td>'74-'78</td>
<td>70</td>
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<tr>
<td>'79-'83</td>
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<td>'89-'93</td>
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<td>'94-'98</td>
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<td>'99-'03</td>
<td>100</td>
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<tr>
<td>'04-'08</td>
<td>90</td>
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<td>'09-'13</td>
<td>80</td>
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Colorectal cancer incidence rates, AI/AN and NHW, both sexes, 2005-2009, CHSDA counties

Age-adjusted (US 2000) rate per 100,000 persons

- Alaska: 92.7
- Southern Plains: 69.0
- Northern Plains: 67.3
- Pacific Coast: 48.6
- East: 36.4
- Southwest: 31.0

US All Races
Risk Factors

Non-modifiable: Age, family history
Risk Factors

**Modifiable:** Physical inactivity, obesity, high consumption of red or processed meats, low consumption of fruits and vegetables, alcohol use, tobacco use
SCREENING SAVES LIVES
USPSTF Recommendations for Average Risk Adults Ages 50-75

Starting at age 50...

- Annual screening with high-sensitivity FOBT
- Sigmoidoscopy every 5 years, with high-sensitivity FOBT every 3 years
- Screening colonoscopy every 10 years
Persons at increased risk due to family or personal history should be screened with colonoscopy and at an earlier age than the general population.
CRC screening guidelines: Family history

• CRC in a first-degree relative (parent, sibling, children) or multiple second-degree relatives (grandparent, grandchild, uncle, aunt, nephew, niece):
  – Colonoscopy every five years starting at age 40 or ten years before the youngest case in the immediate family.
THE ALASKA NATIVE HEALTH CARE SYSTEM REFERRAL PATTERN
Same Scale Comparison - Alaska Area to Lower 48 States
Why don’t people get screened?
Personal factors

• Fear
• Discomfort/unpleasant procedure
• Feel healthy/don’t know it’s important
• Don’t want to travel/too expensive
• Too busy
System factors

- Screening not available in community
- No tracking system for screening
- Provider didn’t know patient was due
- No strong recommendation from provider
Cancer Screening Continuum

- Willing Patient
- Access to Care
- Enabling Health System
- Screening Completion
ANTHC Alaska Native Colorectal Cancer Family Outreach Program
50?

Then it's time to get screened for colon cancer. Everyone 50 and older should do it.

Just a quick reminder
It's time for your colon cancer screening.
The cancer you can prevent. alaskacolonhealth.org
I GOT SCREENED.
Now, I'm talking about it.

I
The cancer you can prevent.
Colorectal Cancer
alaskacolonhealth.org

David Baines, M.D.
Tsimshian and Tlingit Tribal Elder
Colon screening can prevent cancer.
See your provider today.

The cancer you can prevent. alaskacolonhealth.org

http://alaskacolonhealth.org/assets/TheCancerICanPrevent.mp4
BENIGN POLYPS
A fleshy growth in the lining of colon. Polyps are discovered through colonoscopies and most are benign (non-cancerous) however if not removed, a polyp can develop into colorectal cancer.
Polypmen in the Parade

Polypman says...
Colorectal Cancer is:
PREVENTABLE,
TREATABLE,
-and PREDICTABLE!

Get screened at the age of 50 years, or earlier
if you have a family history of colon cancer
www.cancer.org/epicenter/colon.html
Colorectal Cancer Screening, Adults (50+ Years), BRFSS 1993-2015

Data Sources: State of Alaska, Division of Public Health, Behavioral Risk Factor Surveillance System; Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System
Note: Data presented are for flexible sigmoidoscopy or colonoscopy ever
Colonoscopy in the Alaska Tribal Health System
Alaska Cologuard Study 2012-2015

Funding provided by Schultze Family Foundation
Stool DNA test (Cologuard)
Detection of Premalignant Polyps

Cologuard (MT-sDNA) vs FIT

Cologuard Detection of Colorectal Neoplasia
Alaska Native vs General US Population Studies

- Alaska Native People
- U.S. Population

Detected (%)

Adenoma

≥1 cm

≥2 cm

≥3 cm

Cancer
Patient and provider acceptability study & Comparative economic analysis
Thank You

• Study Participants
• Mayo Clinic
• ANMC Surgery Clinic and Pathology Dept
• Exact Sciences, Inc.
• ANTHC and SCF Research Review Committees
Diana Redwood, PhD, MPH  Senior Epidemiologist
TEL: 907-729-3959   EMAIL: dredwood@anthc.org
Great Plains Colorectal Cancer Screening Initiative (GPCCSI)

Presented by Tinka Duran, Gina Johnson and Terri Rattler
Tribal Healthcare and Indian Health Service Facility Partners

Cheyenne River Service Unit
Elbowoods Memorial (TAT)
Fort Thompson Service Unit
Flandreau Service Unit
Lower Brule Service Unit
Omaha Service Unit
Nebraska Urban Indian Health
Ponca Service Unit
Pine Ridge Service Unit
Rapid City Service Unit
Rosebud Service Unit
Sac and fox Service Unit
Santee Sioux Nation Health Center
Spirit Lake Service Unit
Standing Rock Service Unit
Trenton Service Unit
Turtle Mountain Service Unit
Winnebago Service Unit
Woodrow Wilson Keeble Memorial (SWO)
Yankton Service Unit
Is Colorectal Cancer Common Among American Indians?

- Yes, colorectal cancer is the third most common cancer for Great Plains American Indians.

- Occurs more often in Great Plains American Indian tribes than Whites and American Indians in other regions of the U.S. except for Alaska Natives.

- Most likely to affect American Indian men and women over the age of 50.
Age-adjusted Colorectal Cancer Death Rates and Joinpoint Trend Lines in CHSDA Counties, 1990-2009, Females
Age-adjusted Colorectal Cancer Death Rates and Joinpoint Trend Lines in CHSDA Counties, 1990-2009, Males
2016 CRC Data All Races U.S.

**Great Plains**

- New Cases: 3050
- Deaths: 1150

**US**

- New Cases: 134490
- Deaths: 49190

GPA Mortality/Death CRC 1994-2013

Per 100,000:
- White: 19.2 (27,179)
- American Indian/Alaska Native: 25.5 (286)
GPA Mortality/Death CRC
1994-2013

Per 100,000

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
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<tr>
<td>1994-2013</td>
<td>23.1 (13,388)</td>
<td>16.3 (13,791)</td>
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<tr>
<td>2013</td>
<td>29 (138)</td>
<td>23.4 (148)</td>
</tr>
</tbody>
</table>
Who Can Get Colorectal Cancer?

Anyone.

Men and women of all ages and races get CRC.

The good news is that screening can prevent some from getting the disease and dying from it.
Cancer Risk Factors

- Family History of Colorectal Cancer
- Tobacco
- Diet & Physical Activity
- Sun & UV Exposure
- Radiation Exposure
- Pollution

Signs and Symptoms of Colon Cancer

• Persistent abdominal discomfort
• Unexplained Weight Loss
• Weakness or Fatigue
• There also can be no symptoms

Photo Source: https://www.healthsiren.net/colon-ca-warning-signs/3/
Signs and Symptoms of Colon Cancer

• Rectal Bleeding
• Change in diarrhea or constipation
• A feeling that your bowel doesn’t completely empty
You May Reduce Colorectal Cancer

• When you turn 50, get screened
• Avoid smoking
• Limit alcohol intake
• Eat lots of fruits, vegetables and whole grains
• Exercise regularly

Photo Source: http://www.photoshop.com/products
Rollin’ Colon
Placards

1. Symptoms

2. Polyps

Abnormal growths of the inner lining of the colon! During a colonoscopy, precancerous polyps can be identified and removed before they may develop into colon cancer. Polyps can be flat, oval, dome-like, or on a stalk.
Pre and Post Test

**Rollin Colon Pre-Test**

- **For External Use Only**
- **Event Date:**

<table>
<thead>
<tr>
<th>Event locations</th>
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1. What is your age?
   - Under 40
   - 40 to 49
   - 50 to 59
   - 60 or older

2. What is your gender?
   - Female
   - Male
   - Other

3. Does colorectal cancer always have symptoms you can feel?
   - Yes
   - No

4. Does removing a polyp from your colon help prevent cancer?
   - Yes
   - No

5. If you have a family member with colorectal cancer, are you at a higher risk of having it too?
   - Yes
   - No

6. At what age should a person have the first screening for colorectal cancer?
   - 40
   - 50
   - 65

7. Which test screens for colorectal cancer?
   - Flexible Colonoscopy (FOBT)
   - Mammogram
   - Prostate Specific Antigen (PSA)

8. Have you been screened for colorectal cancer?
   - Yes
   - No
   - Not sure

---

**Rollin Colon Post-Test**

1. Does colorectal cancer always have symptoms you can feel?
   - Yes
   - No

2. Does removing a polyp from your colon help prevent cancer?
   - Yes
   - No

3. If you have a family member with colorectal cancer, are you at a higher risk of having it too?
   - Yes
   - No

4. At what age should a person have their first screening for colorectal cancer?
   - 40
   - 50
   - 65

5. Which test screens for colorectal cancer?
   - Flexible Colonoscopy (FOBT)
   - Mammogram
   - Prostate Specific Antigen (PSA)

6. Do you plan to get a colorectal cancer screening in the future?
   - Yes
   - No
   - Not sure

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*Turn to back page*

Prepared by: NPPCCD, GPCCS, and ACET, Inc.
Audience Response System

- Anonymous
- Improves audience attention
- Increases knowledge
Audience Response System

- Voting system displays data immediately
- Creates fun learning environment
- Gathers data for reports
Evaluation Report

Great Plains Colorectal Cancer Screening Initiative

Rollin Colon
Evaluation Report
GPCCCSI Resources

Cancer Health Facts

What is Colorectal Cancer?

Numbers at a Glance

2nd
Leading cause of cancer and cancer death—Colon and Rectal Cancer

9 out of 10
if found early, 5 out of 10 will survive

1 out of 10
if found late, 1 out of 10 will survive

53%
colon cancer is 53% higher in Northern Plains American Indians

49,380
People will die from colon cancer this year

Colorectal Cancer Fact Sheet

Risk Factors for Colorectal Cancer

Risk factors that may increase your chance of getting colon cancer include:

- Age: Older age
- Race and ethnic background
- Inflammatory bowel disease
- Inherited conditions
- Personal or family history of colorectal cancer
- Low fiber, high-fat diet
- Smoking
- Heavy alcohol use
- Radiation therapy
- Sedentary lifestyle

Colorectal Cancer

What is Colorectal Cancer?

Colorectal cancer is cancer that occurs in the colon or rectum. It is the third leading cause of cancer-related deaths in the US, but it doesn’t have to be. If everyone aged 50 years or older had regular screening tests, at least 60 percent of deaths from this cancer could be avoided. If you’re a loved one is 50 or older, please consider getting screened for colon cancer.

Who Gets Colorectal Cancer?

- Both men and women
- Most often found in people 50 or older
- The risk increases with age

Are You at High Risk?

Your risk for colorectal cancer may be higher than average if:

- You or a close relative have had colorectal polyps or colorectal cancer
- You have inflammatory bowel disease
- You have a genetic syndrome such as familial adenomatous polyposis (FAP) or hereditary non-polyposis colorectal cancer

Screening Saves Lives

If you’re 50 or older, a colorectal cancer screening could save your life. Colon cancer usually begins with polyps, or unusual growths, in the colon or rectum. Over time, some polyps can turn into cancer.

Colorectal cancer screenings can find polyps, so they can be removed before they turn into cancer. Screenings also find colorectal cancer early. When it is found early, there is a greater chance of being cured.

Resources

FIT Colorectal Cancer Screening Guide

Fecal Immunochemical Test (FIT) is a lab test used to check stool samples to detect blood. Blood in the stool may indicate colon cancer or polyps in the colon or rectum through not all cancers or polyps bleed.

You will collect a sample to be examined by the lab for blood. The FIT has no dietary restrictions.

*Must return completed FIT within 2 weeks.
** Keep in safe place at room temperature—less than 80°F, keep out of direct sunlight.

Colon Cancer Risk Factors:
- Age 50-75
- Family history
- History of breast or ovarian cancer
- Inflammatory bowel disease
- Colon polyps

Signs and Symptoms of Colorectal Cancer:
- Rectal bleeding
- Unexplained weight loss
- Weakness or fatigue
- Change in bowel habits
- A feeling that your bowel does not completely empty
- Persistent abdominal discomfort

What to Expect from the FIT Collection Kit:
You will receive a kit from your health care provider. At home, you use a stick or brush to obtain a small amount of stool. Return the test to your health care provider or laboratory.

FOBT Colorectal Cancer Screening Guide

Fecal Occult Blood Test (FOBT) is a lab test used to check stool samples for hidden (occult) blood. Occult blood in the stool may indicate colon cancer or polyps in the colon or rectum through not all cancers or polyps bleed.

You will collect 3 samples to be examined by the lab for blood.

*Must return completed FOBT within 2 weeks.
** Keep in safe place at room temperature—less than 80°F, keep out of direct sunlight.

Colon Cancer Risk Factors:
- Age 50-75
- Family history
- History of breast or ovarian cancer
- Inflammatory bowel disease
- Colon polyps

Signs and Symptoms of Colorectal Cancer:
- Rectal bleeding
- Unexplained weight loss
- Weakness or fatigue
- Change in bowel habit
- A feeling that your bowel does not completely empty
- Persistent abdominal discomfort

What to Expect from the FOBT Collection Kit:
You will receive a test kit from your health care provider. At home, you use a stick or brush to obtain a small amount of stool. You will need to collect 3 samples from 3 different days. Return the test to your health care provider or laboratory.

* Fill out collection cards with the information requested, including date and time of collection.

American Indians in the Northern Plains region are affected by cancer more than American Indians in other regions and compared to whole U.S. population.

Colorectal Cancer is:
Preventable.
Treatable.
Beatable.
Show Your Blue CRC Awareness Campaign
March CRC Awareness Campaign-Photo Contest

Trenton Indian Health Service Staff

Center for American Indian and Alaska Native Health – Porcupine, SD
March CRC Awareness Campaign-Mailing Distribution

- Over 40 mailings went out to the Northern Plains area
- Factsheets, brochures, posters, stickers, photo campaign info.
  - IHS Tribal Healthcare facilities
  - Tribal Administration buildings we continue to distribute
- Lessons learned
Media

https://www.youtube.com/watch?v=XqvtOqMBplg
Media

https://www.youtube.com/watch?v=1w2WTxsTlgQ
Media

17-GPAIHS-0037-Colorectal Cancer Radio Spot-with-Jingles (2).mp3
Carry On The Tradition of Life

Colorectal Cancer is:

Preventable
Treatable
Beatable

Get Screened!
Post Questions
Of the following groups which is less likely to be diagnosed with colorectal cancer?

A. Alaska Natives
B. Blacks
C. Whites
D. American Indians
E. Don’t Know/Not Sure
People with family history of colorectal cancer should be screened at an earlier age?

A. True
B. False
C. Don’t Know/Not Sure
What is the 3rd common cancer among Great Plains American Indians?

A. Prostate
B. Breast
C. Lung
D. Colon
E. Don’t Know/Not Sure
People with colon cancer can experience no symptoms?

A. True
B. False
C. Don’t Know/Not Sure

75% True
0% False
25% Don’t Know/Not Sure
Thank you

GREAT PLAINS TRIBAL CHAIRMEN’S HEALTH BOARD (GPTCHB)
1770 Rand Road
Rapid City, SD 57702

Phone: 605.721.1922
Toll Free: 1.800.745.3466
Fax: 605.721.1932

Email: info@gptchb.org