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

Diana Redwood, PhD, MPH

Traditional territories of Alaska Native Cultures

Provided by: Alaska Native Heritage Center

2x

“Black and Alaska Native individuals have a higher incidence of and mortality rate from colorectal cancer compared with the general population.”

U.S. Preventive Services
TASK FORCE

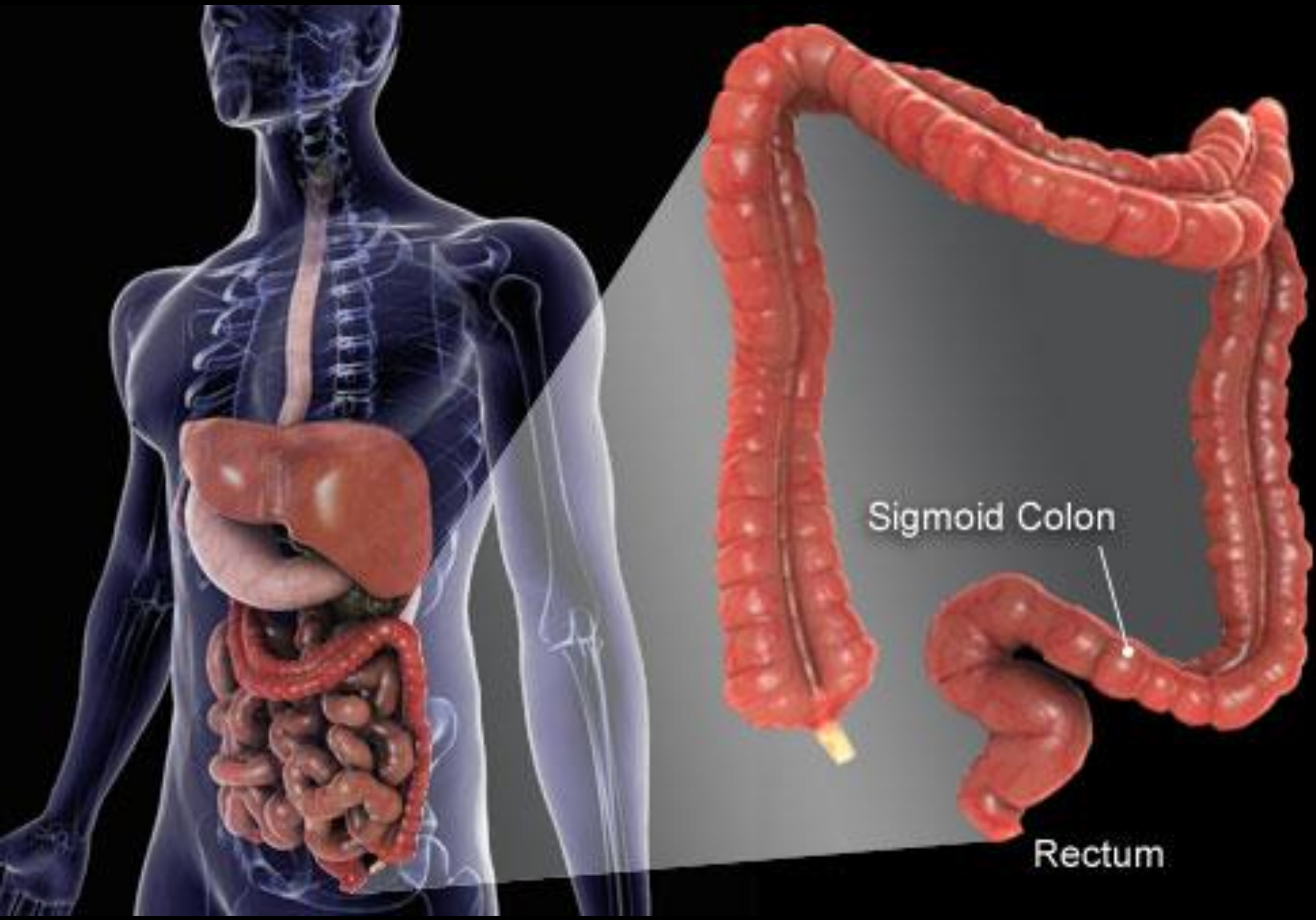
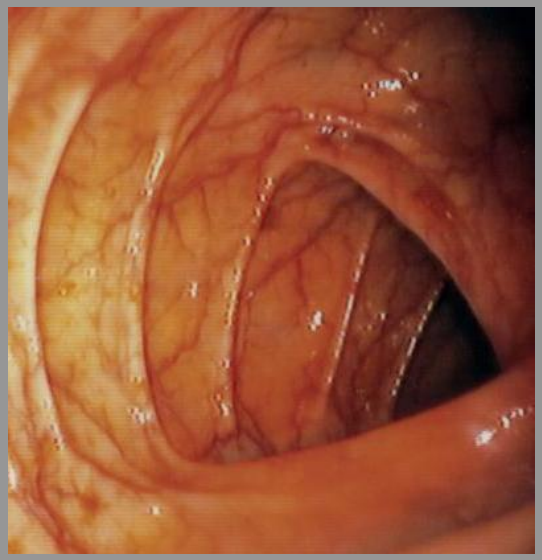
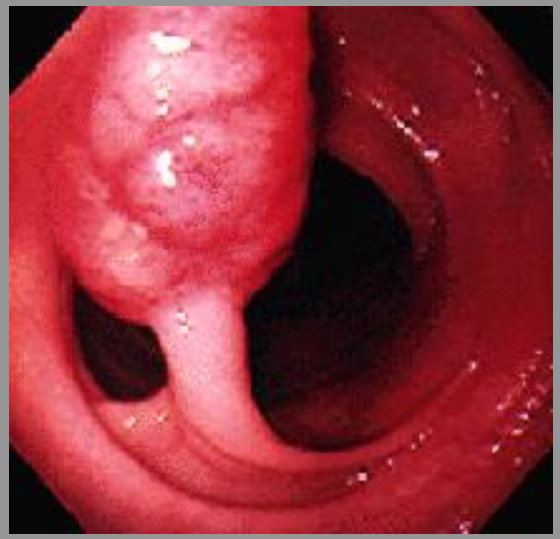
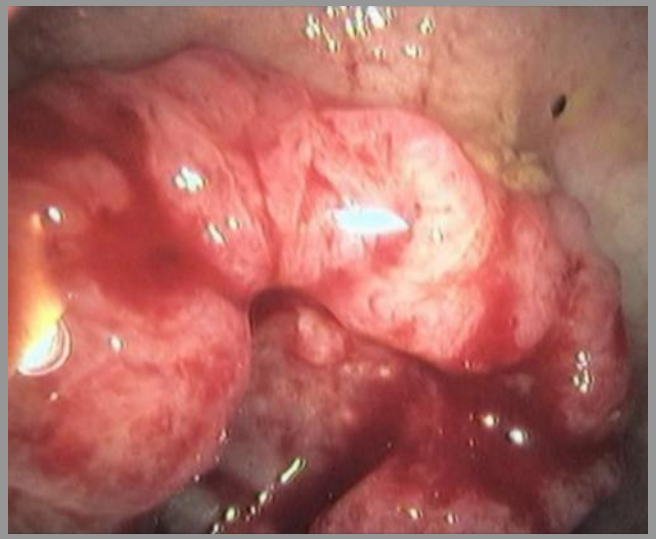


Photo Source: www.medicalinfo-y3n.blogspot.com

More than 95% of Colorectal Cancers Follow Adenoma-Carcinoma Sequence

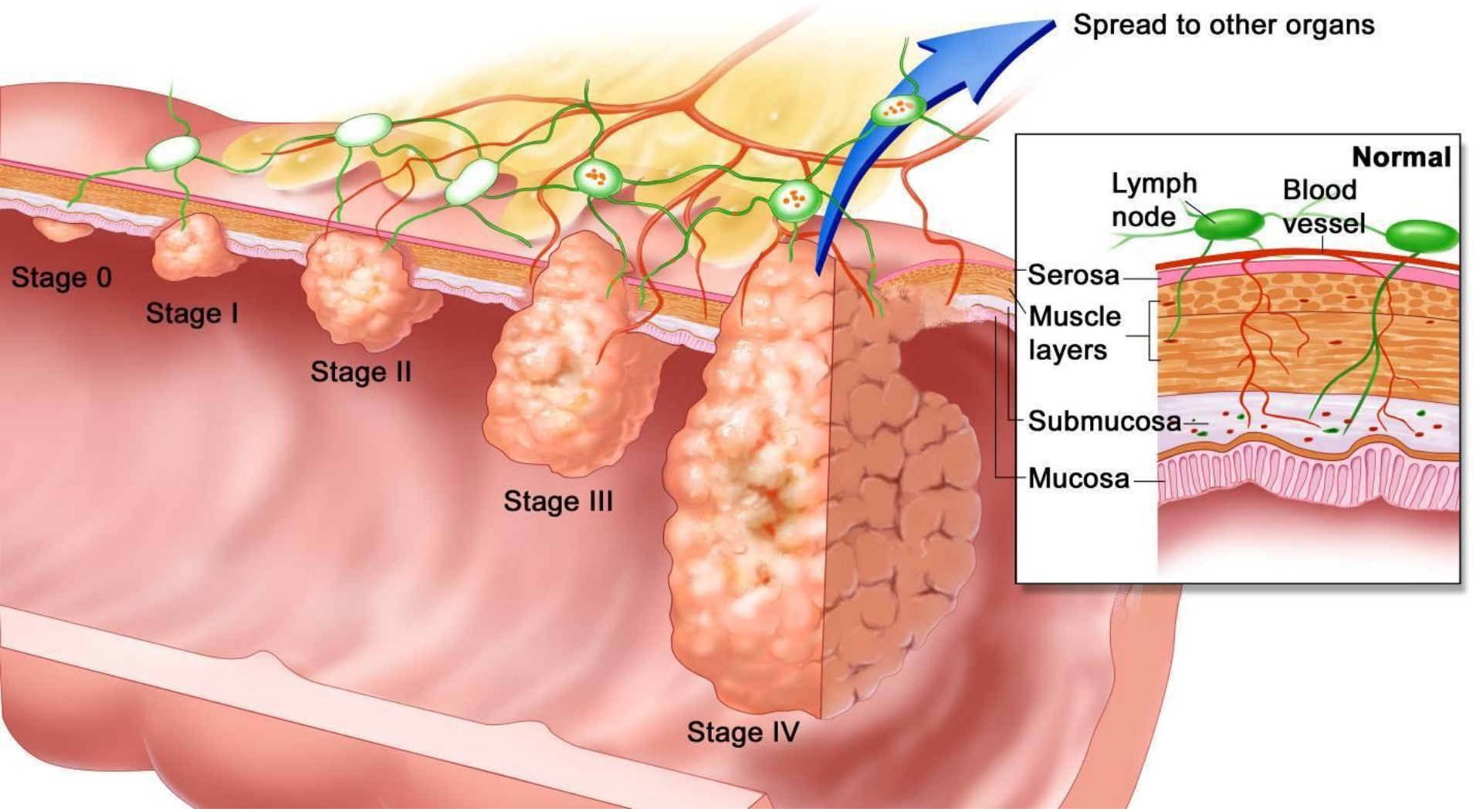




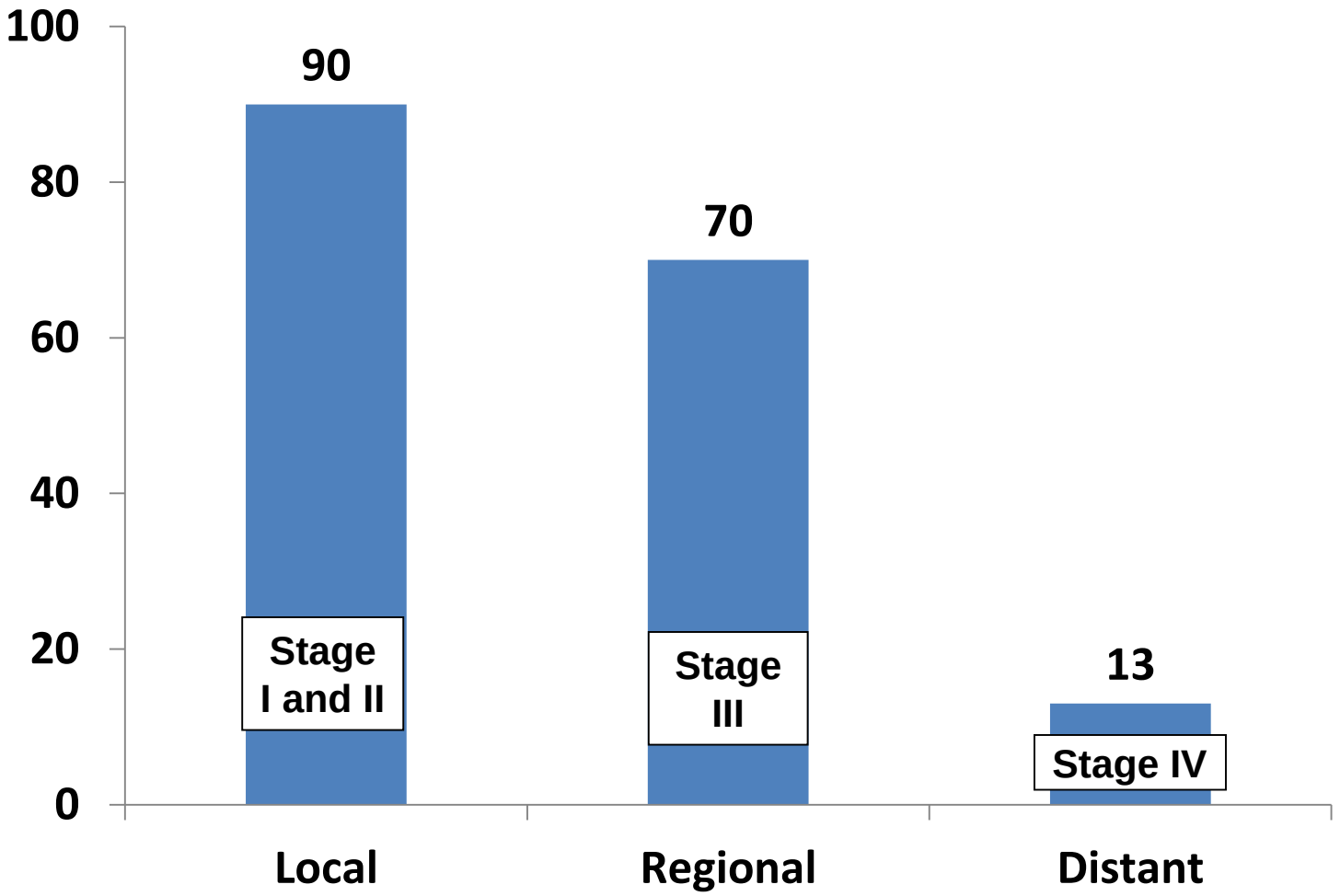


Normal Colon → Polyp → Colon Cancer

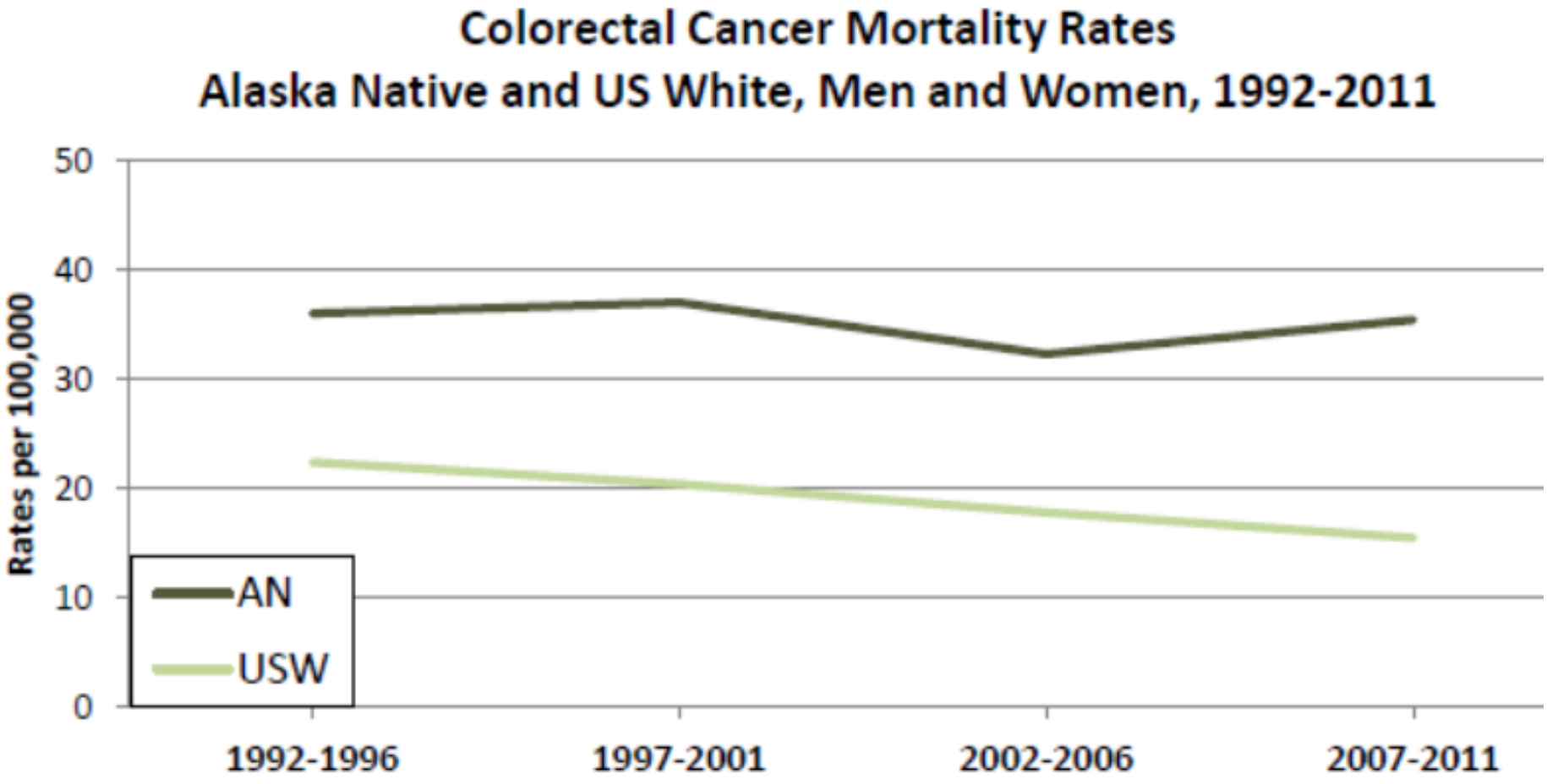
Colon Cancer

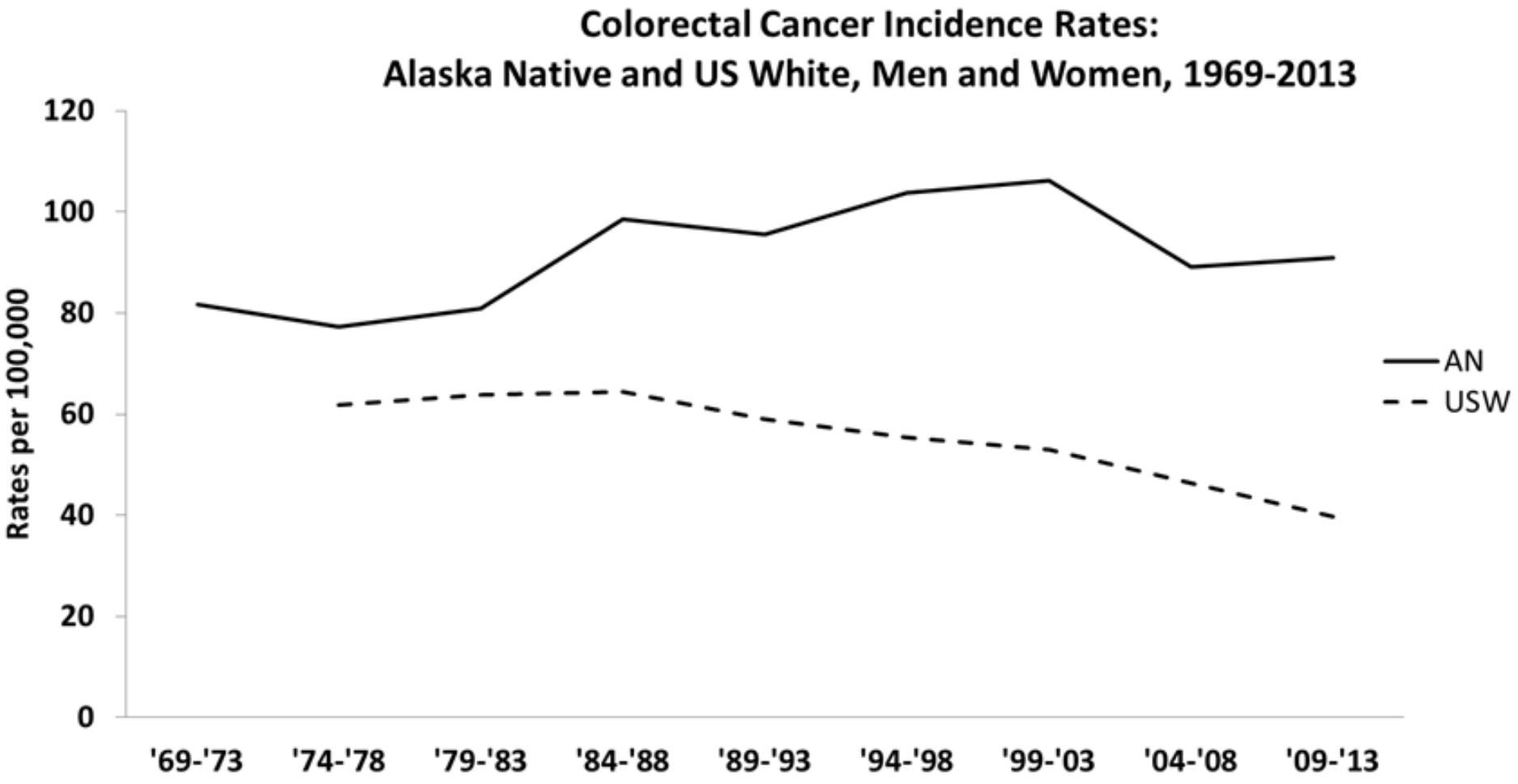


Five-Year Survival Rates (%)

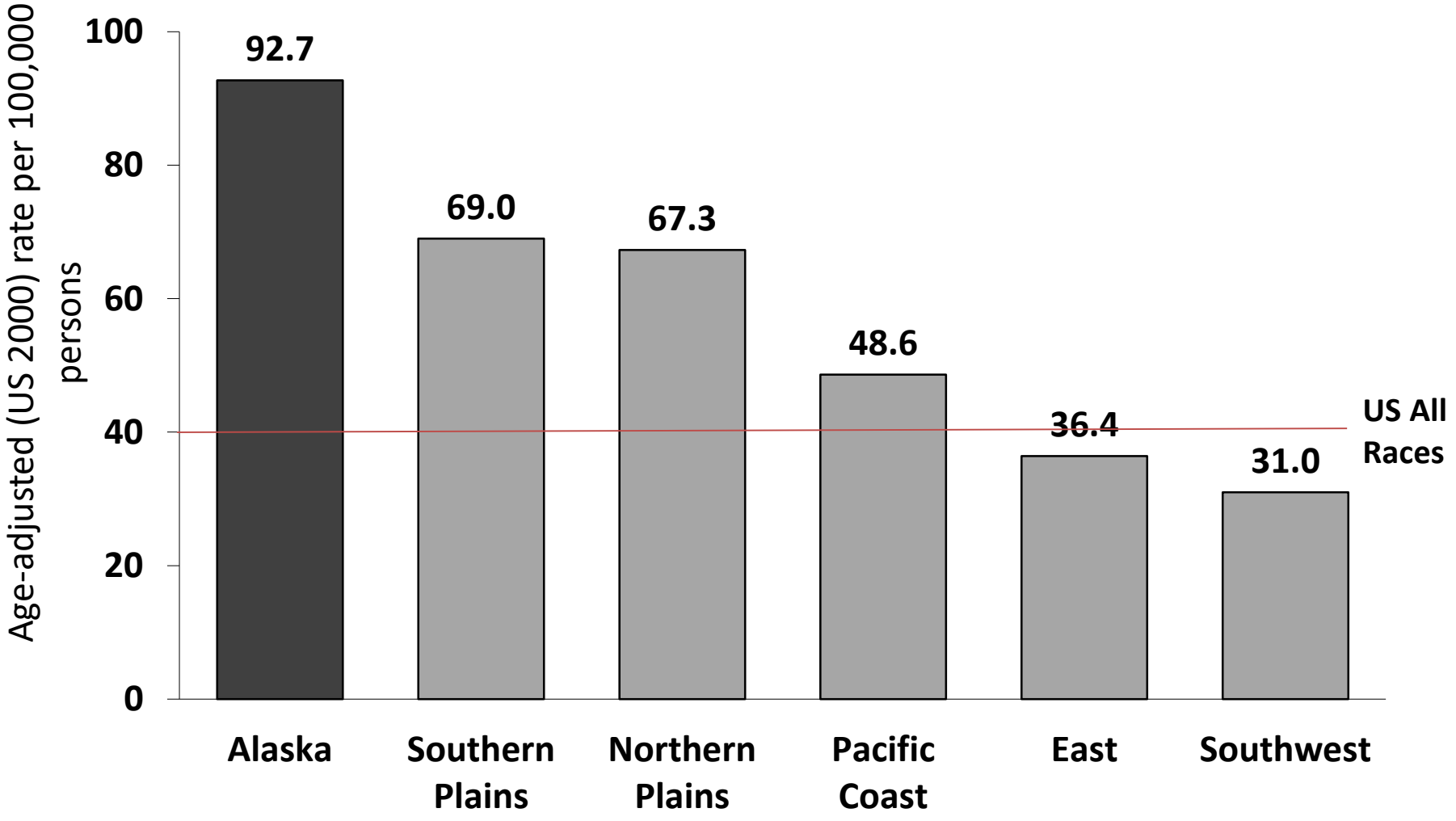


Data Source: American Cancer Society. *Colorectal Cancer Facts & Figures 2014-2016*.


Colorectal Cancer Mortality Rates
Alaska Native and US White, Men and Women, 1992-2011
Rates per 100,000
50
40
30
20
10
0
AN
USW
1992-1996
1997-2001
2002-2006
2007-2011


Colorectal Cancer Incidence Rates:
Alaska Native and US White, Men and Women, 1969-2013
Rates per 100,000
120
100
80
60
40
20
0
'69-'73
'74-'78
'79-'83
'84-'88
'89-'93
'94-'98
'99-'03
'04-'08
'09-'13
AN
USW

Colorectal cancer incidence rates, AI/AN and NHW, both sexes, 2005-2009, CHSDA counties



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

American Cancer Society

For more information on the different ways you can be tested, call 1.800.227.2345 or visit www.cancer.org/NYNJ.

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

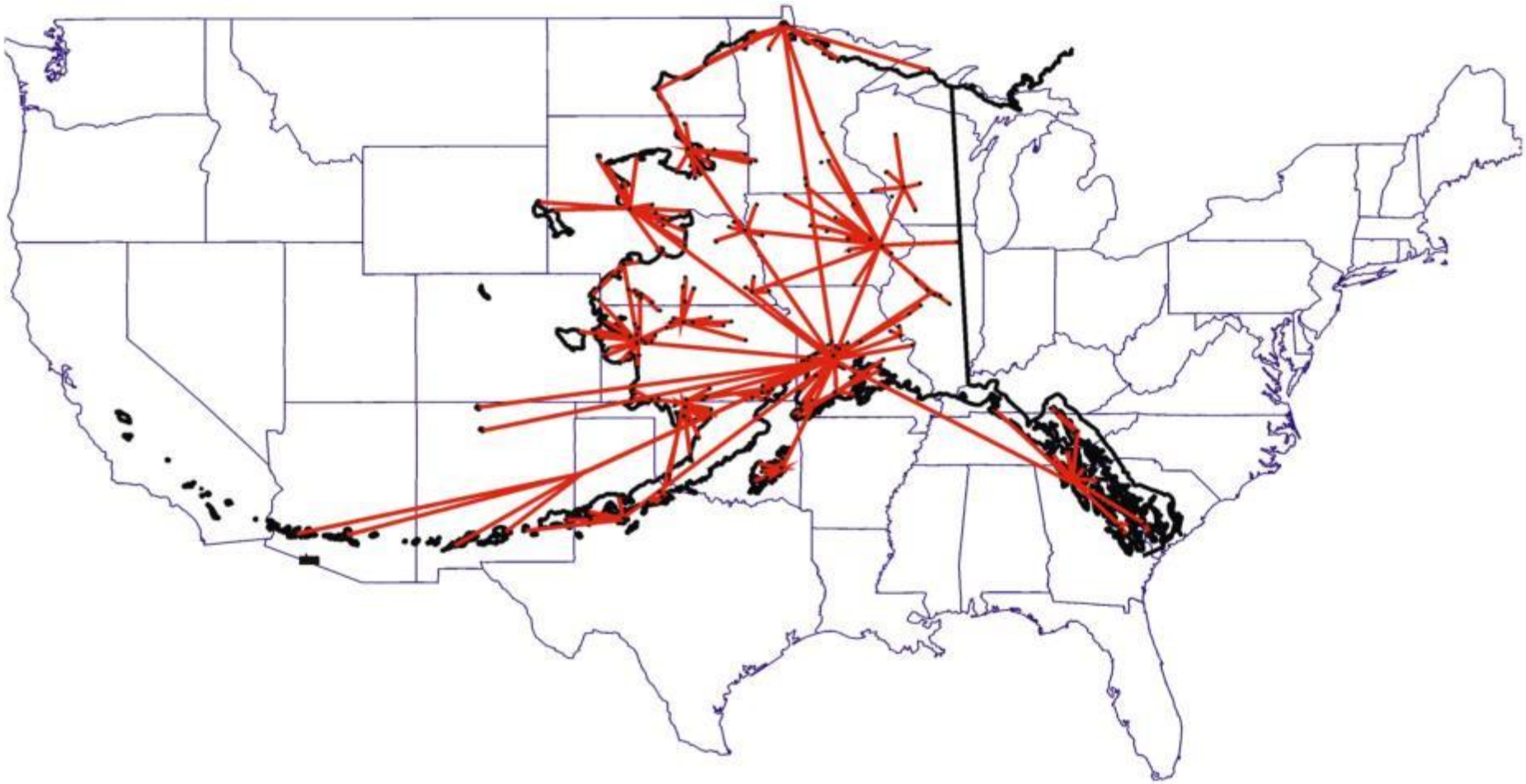
Persons at **increased risk due to family** or personal history should be screened with colonoscopy and at an earlier age than the general population.

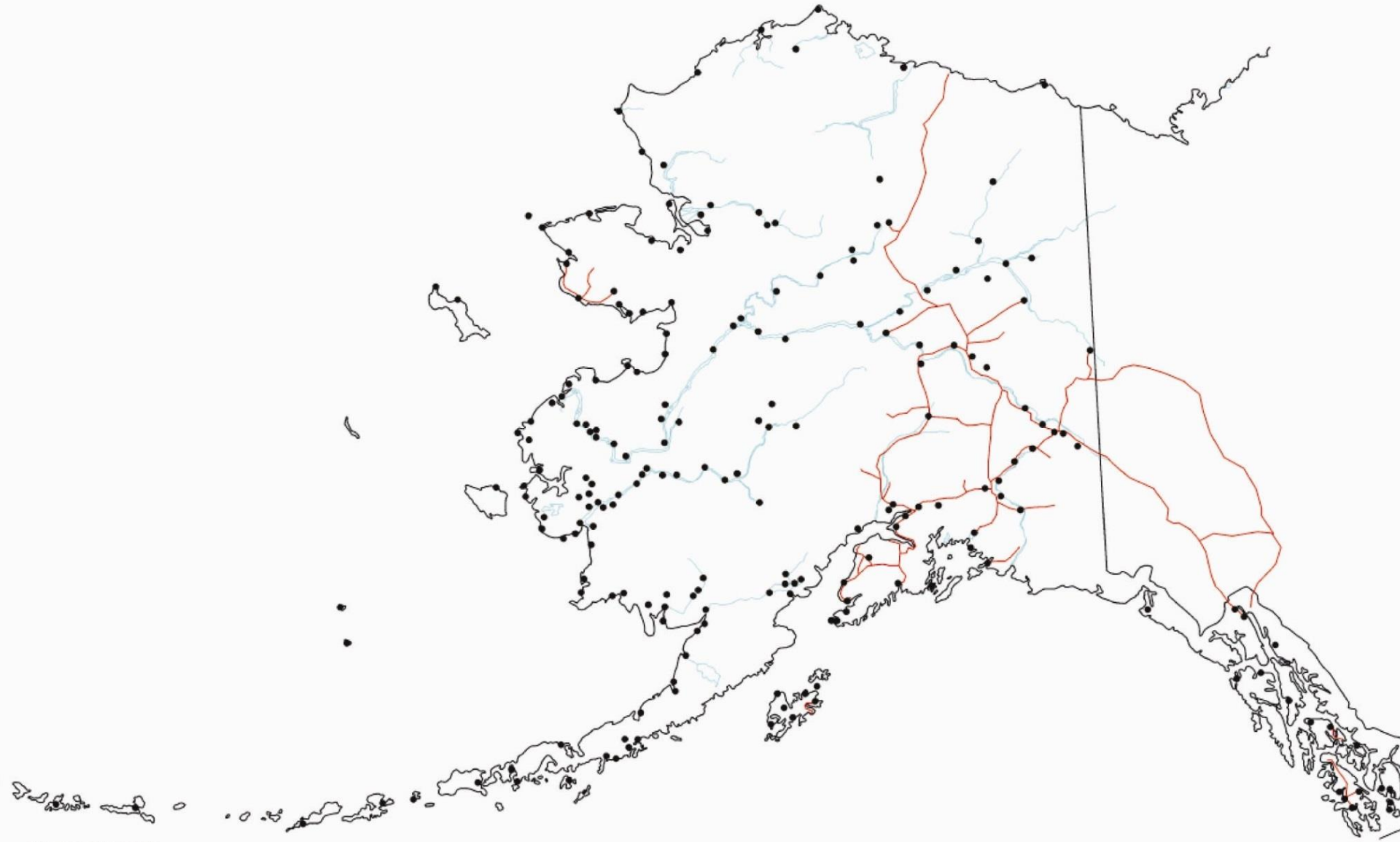
CRC screening guidelines: Family history

- 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





Map provided by R. Hall
Alaska Native Tribal Health Consortium
Division of Information Technology
www.anthc.org


Reeve Air Alaska
POLARIS

Why don’t people get screened?

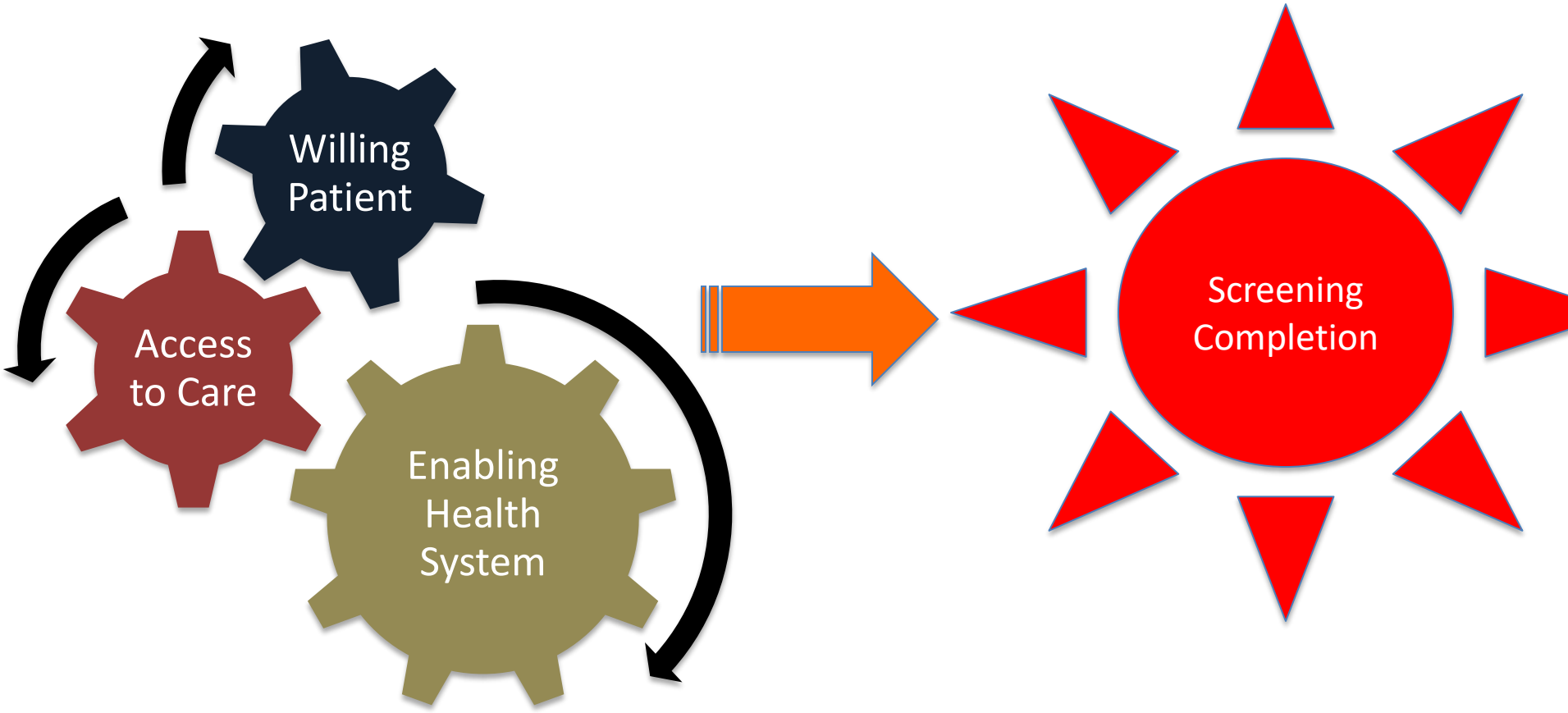
Personal factors

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

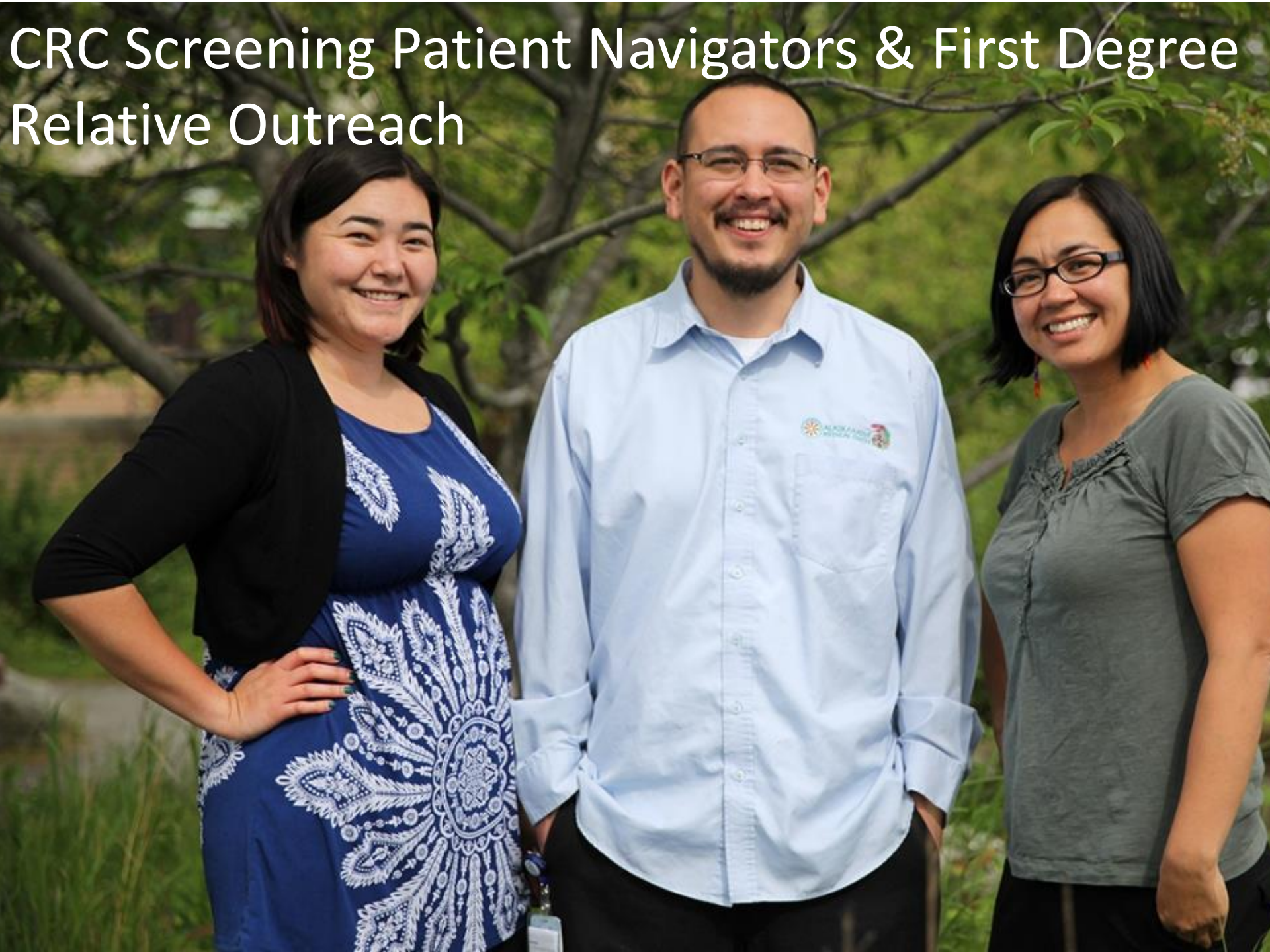
System factors

- 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

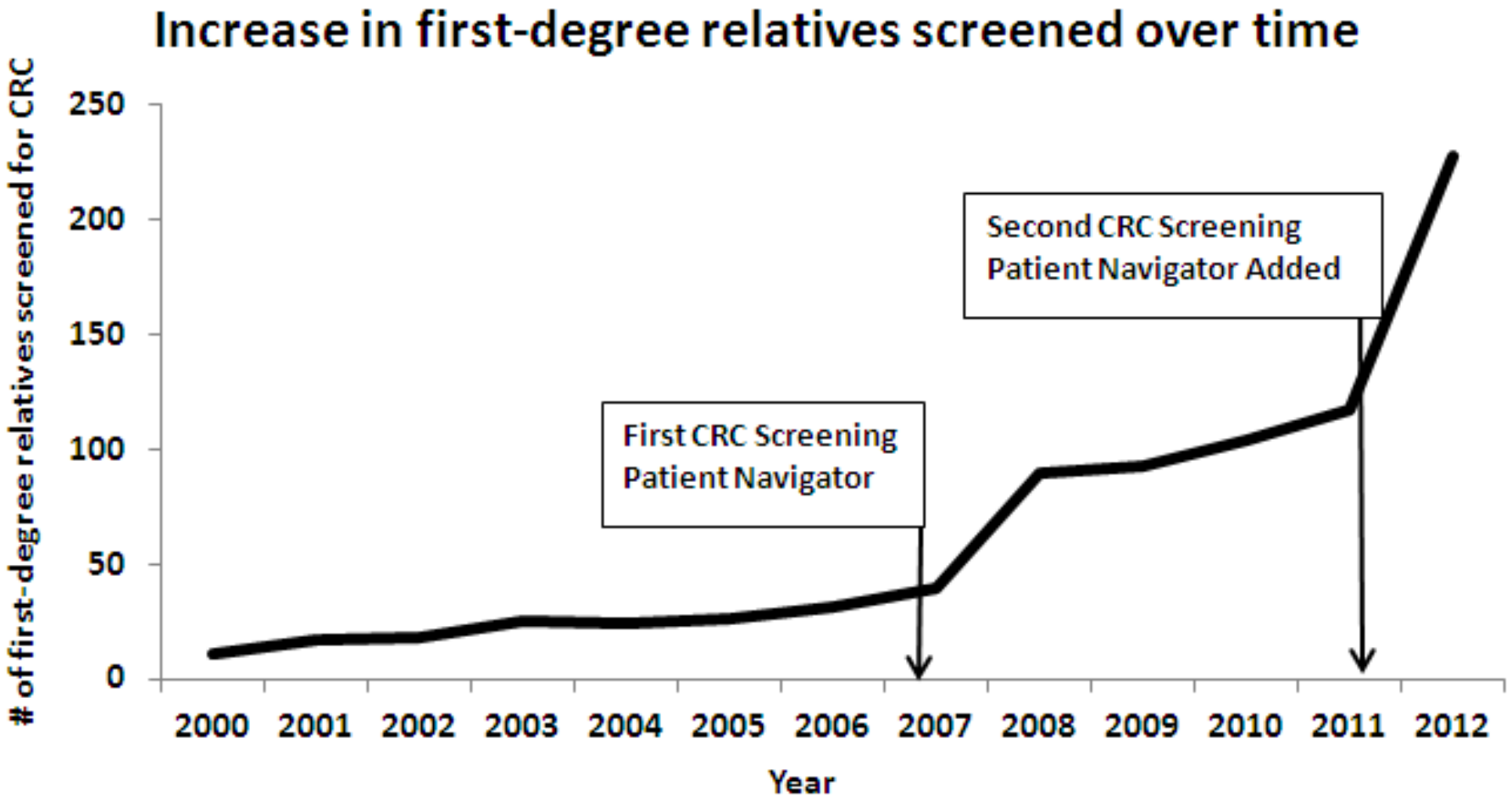


CRC Screening Patient Navigators & First Degree Relative Outreach



ANTHC Alaska Native Colorectal Cancer Family Outreach Program

Photo courtesy of Bristol Bay Area Health Corporation


Increase in first-degree relatives screened over time
# of first-degree relatives screened for CRC
250
200
150
100
50
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Year
First CRC Screening Patient Navigator
Second CRC Screening Patient Navigator Added

Getting Ready for Your Colonoscopy: A How-To-Video (5:04)

Steve Gets Ready for his Colonoscopy (4:39)

Awakening Choices (6:45)

Getting Ready for Your Sigmoidoscopy (4:22)

Margaret Gets Ready for her Sigmoidoscopy (4:29)

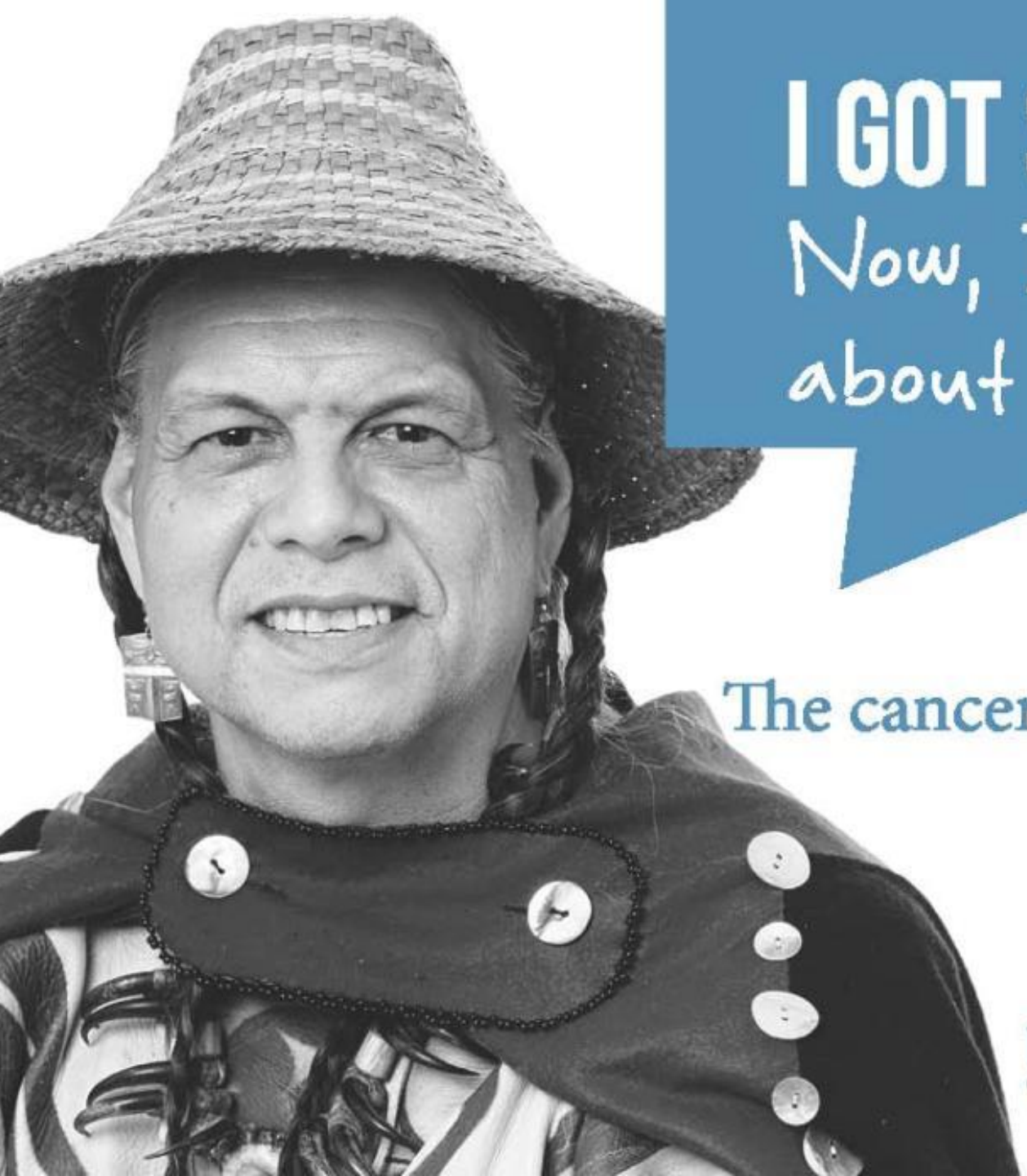
Love Your Colon :30 TV PSA

"Words of Wisdom" :30 TV PSA 2 Versions

50?

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

The cancer ~~you~~ I can prevent. alaskacolonhealth.org



I GOT SCREENED.

Now, I'm talking about it.

The cancer ~~you~~ I can prevent.

Colorectal Cancer

alaskacolonhealth.org

David Baines, M.D.

Tsimshian and Tlingit Tribal Elder

http://alaskacolonhealth.org/assets/TheCancerICanPrevent.mp4

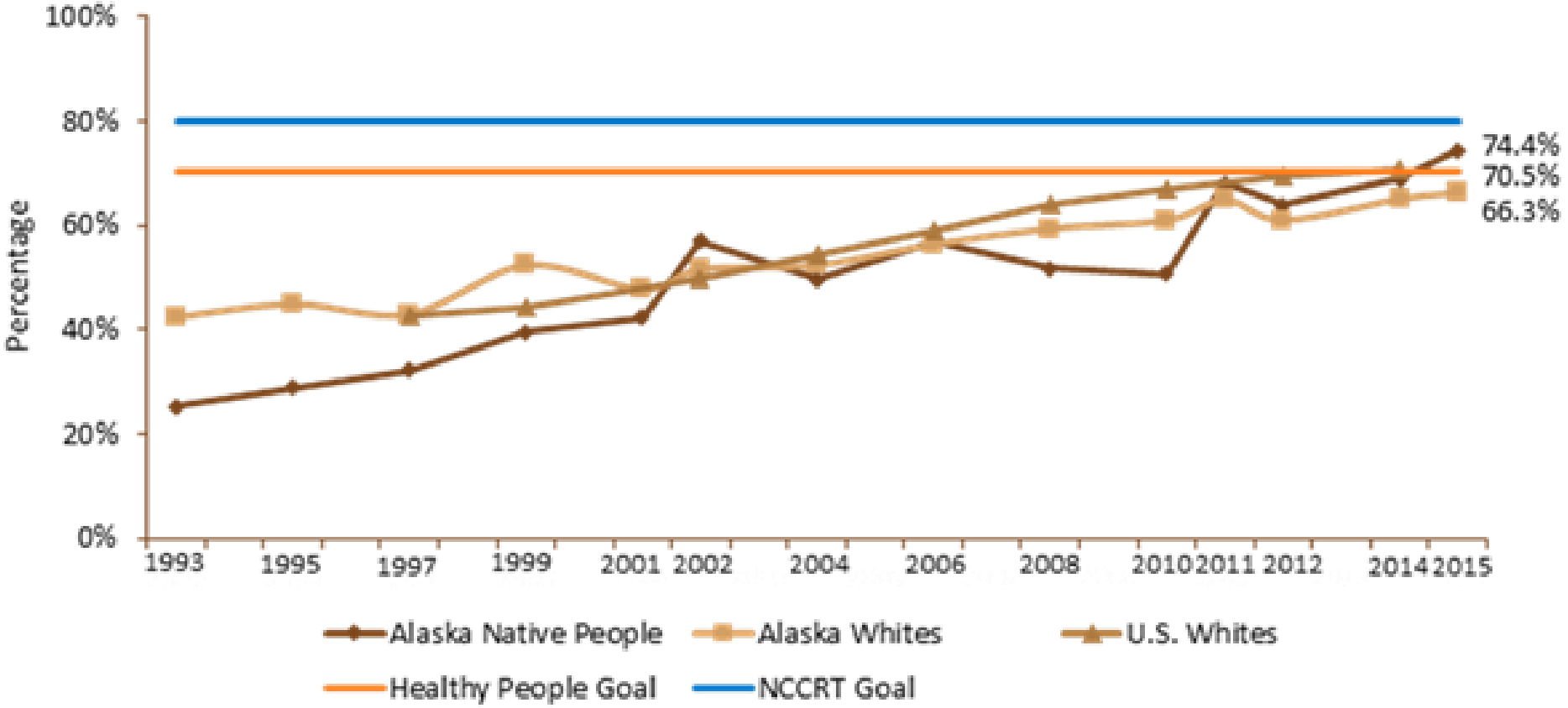
*Redwood et al. *Prev Chronic Dis* 2013; 10:E40

Photo courtesy of Norton Sound Health Corpora

Photo courtesy of BBAHC CRC Control Program

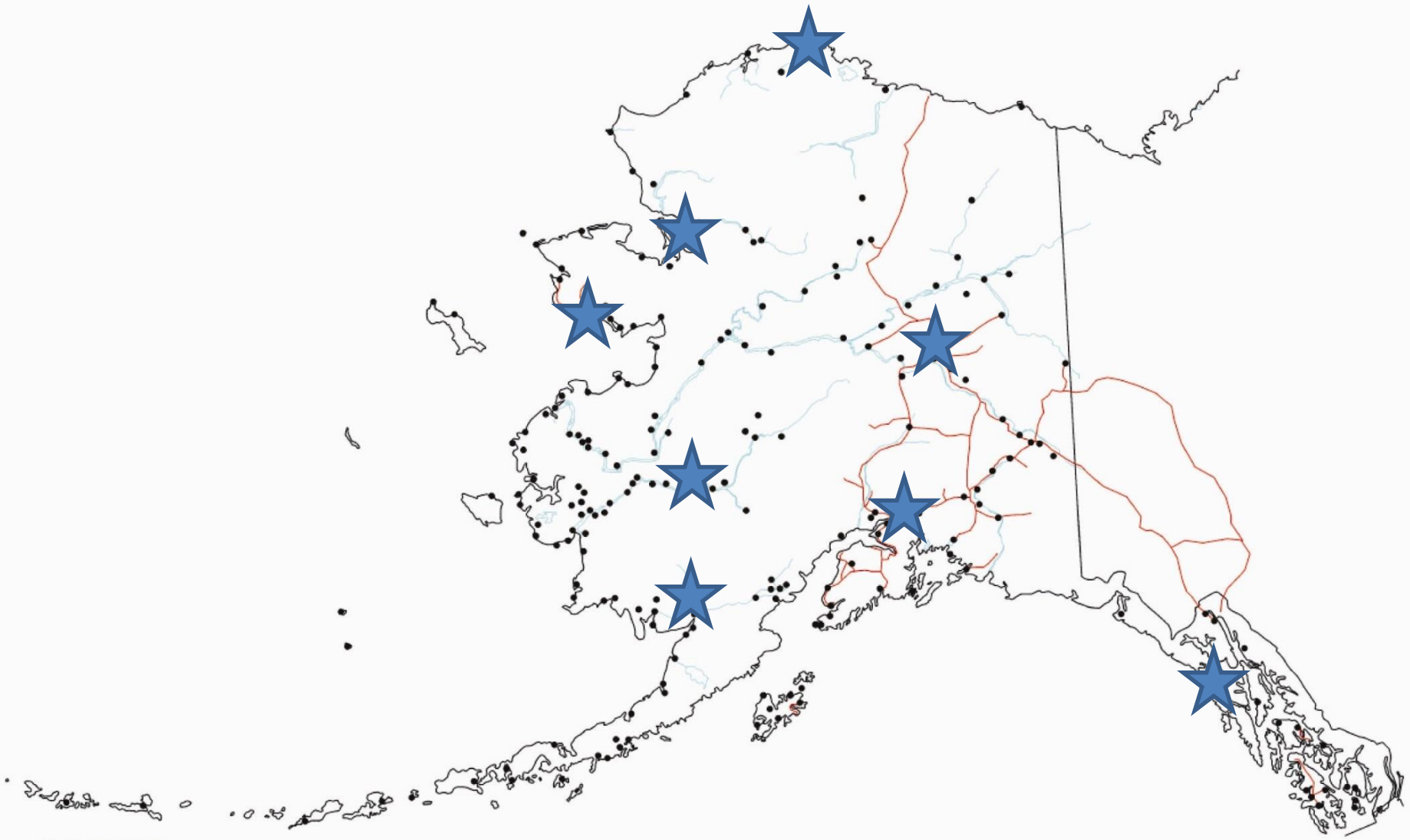
Polypmen in the Parade

Colorectal Cancer Screening, Adults (50+ Years), BRFSS 1993-2015



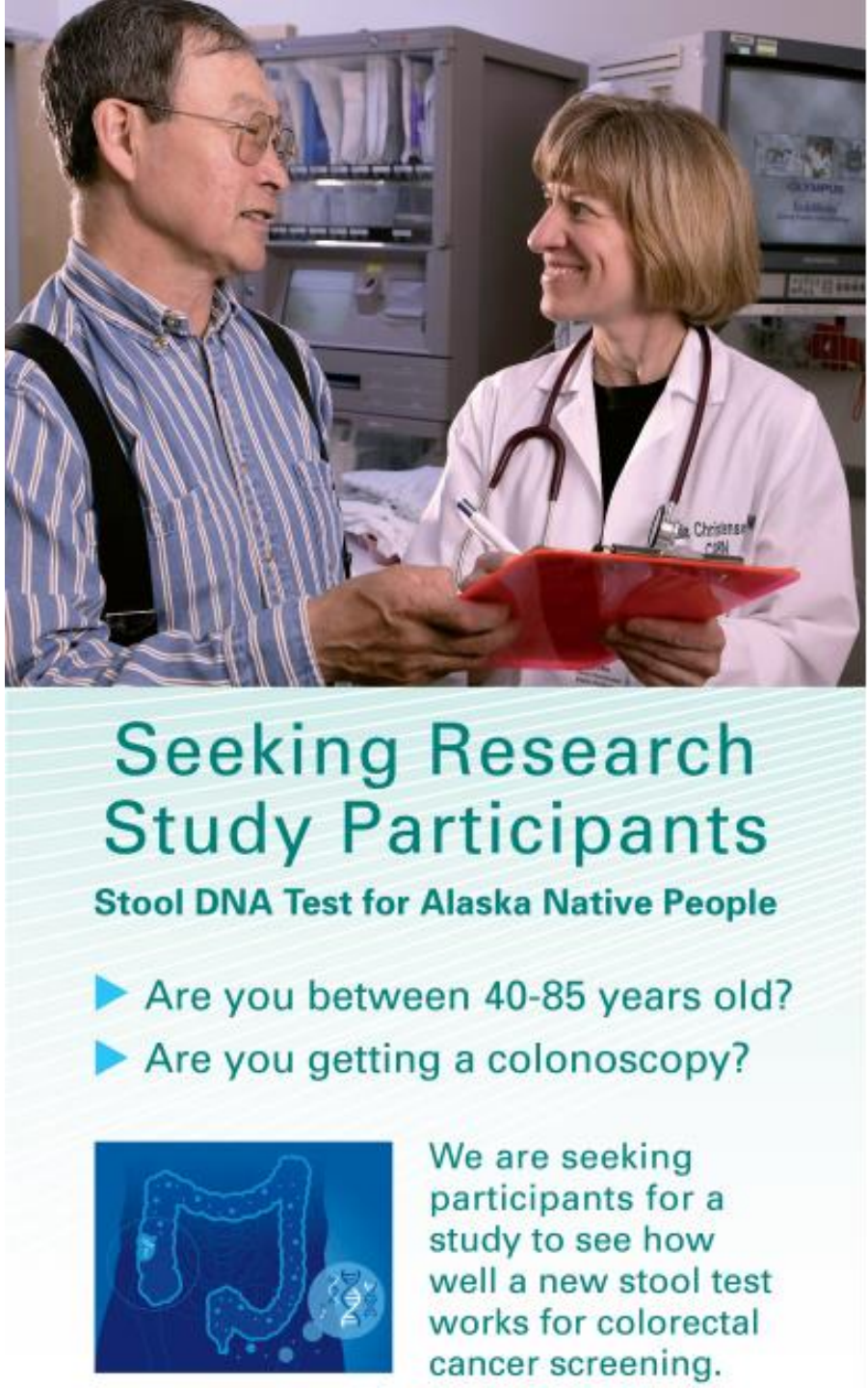
Data Sources: State of Alaska, Division of Public Health, Behavioral Risk Factor Surveillance System; Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System
Note: Data presented are for flexible sigmoidoscopy or colonoscopy ever

Colonoscopy in the Alaska Tribal Health System



Alaska Cologuard Study 2012-2015

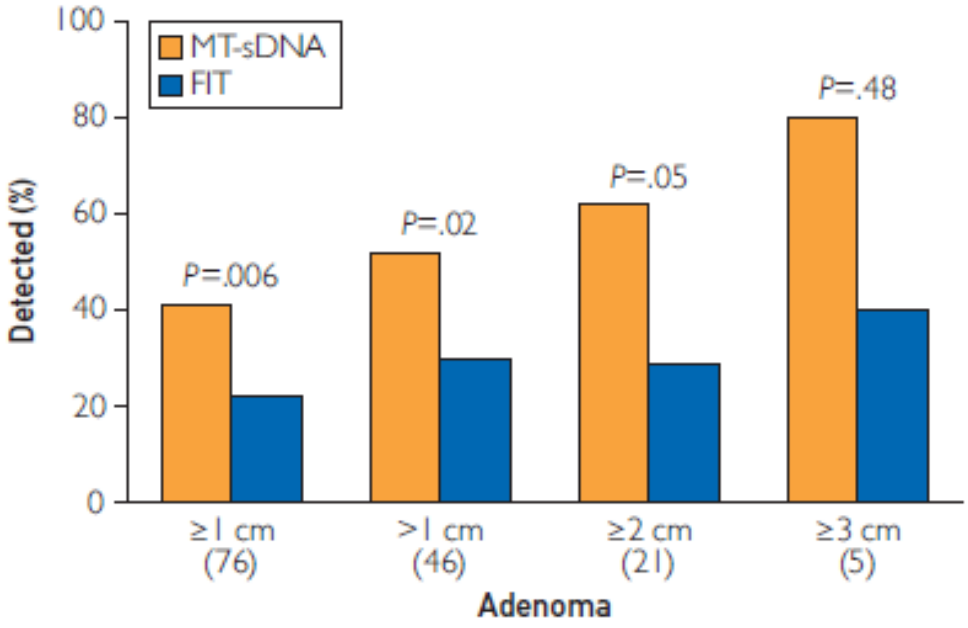
Funding provided by Schultze Family Foundation

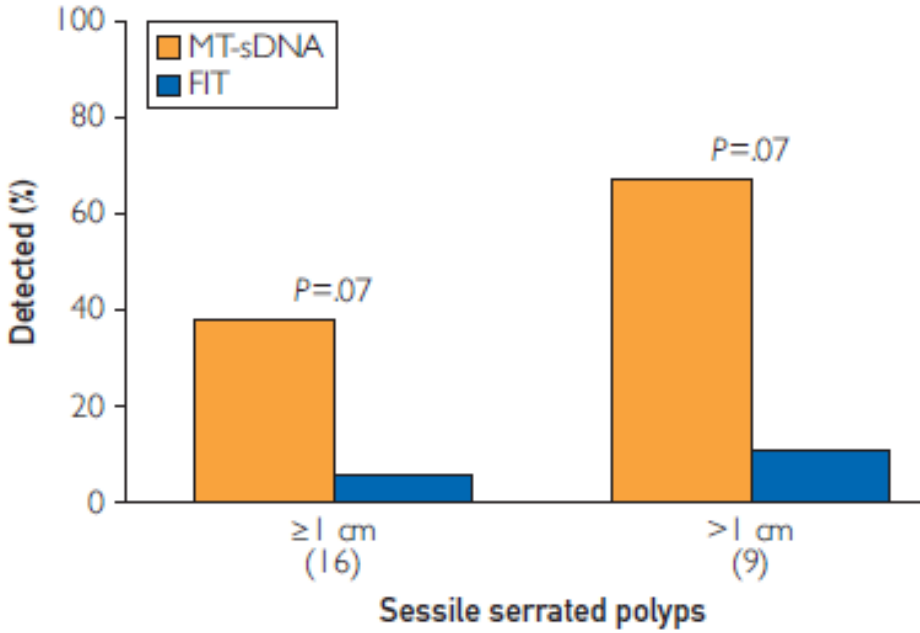


Stool DNA test (Cologuard)

Detection of Premalignant Polyps

Cologuard (MT-sDNA) vs FIT

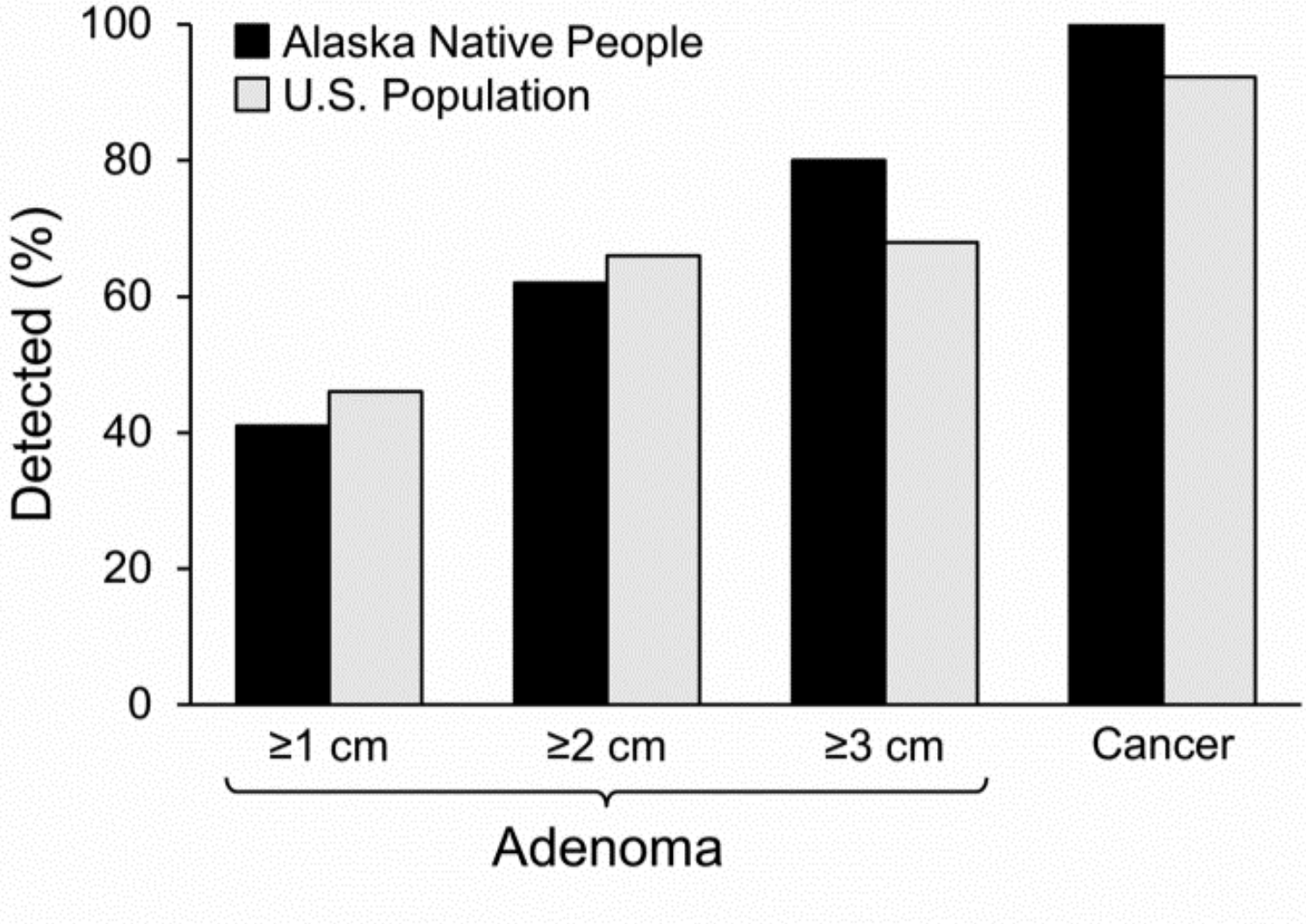




Redwood et al. Mayo Clin Proc 2016; 91:61

Cologuard Detection of Colorectal Neoplasia

Alaska Native vs General US Population Studies



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

ALASKA NATIVE
EPIDEMIOLOGY
CENTER

Diana Redwood, PhD, MPH Senior Epidemiologist

TEL: 907-729-3959 EMAIL: dredwood@anthc.org

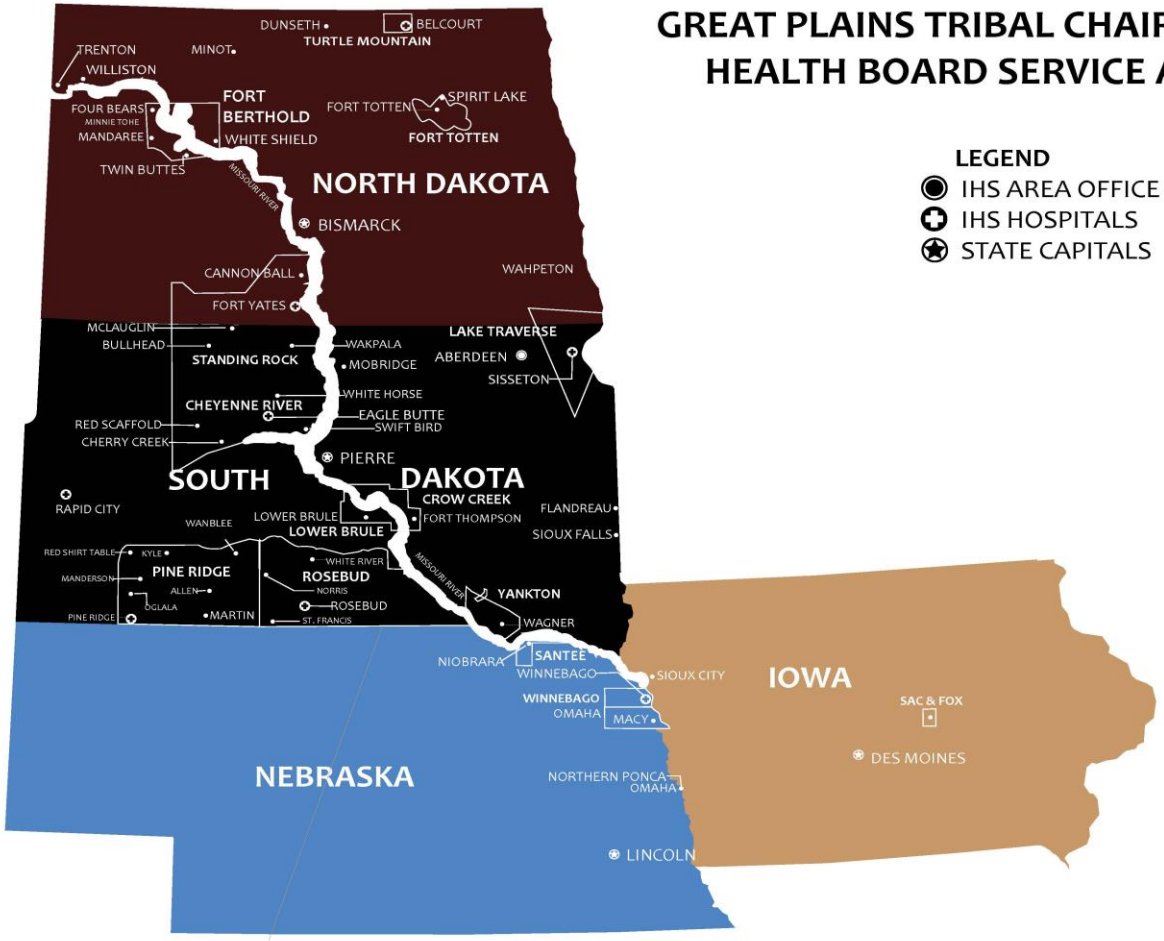
Great Plains Colorectal Cancer Screening Initiative (GPCCSI)

Presented by Tinka Duran, Gina Johnson and Terri Rattler

"So That The People May Live"

"Hecel Oyate Kin Nipi Kte"

GREAT PLAINS TRIBAL CHAIRMEN'S HEALTH BOARD SERVICE AREA



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

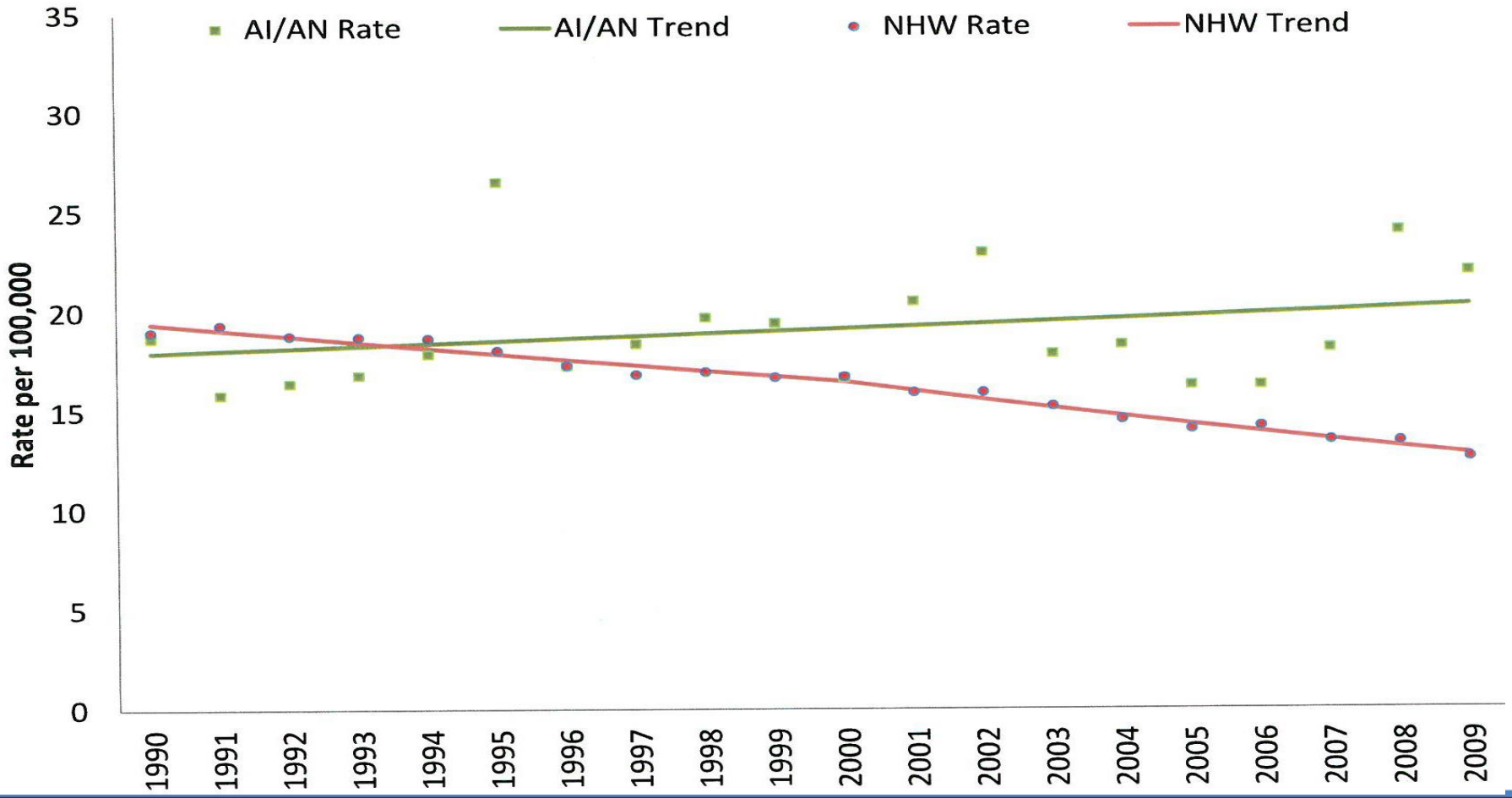
Woodrow Wilson Keeble Memorial (SWO)

Yankton Service Unit

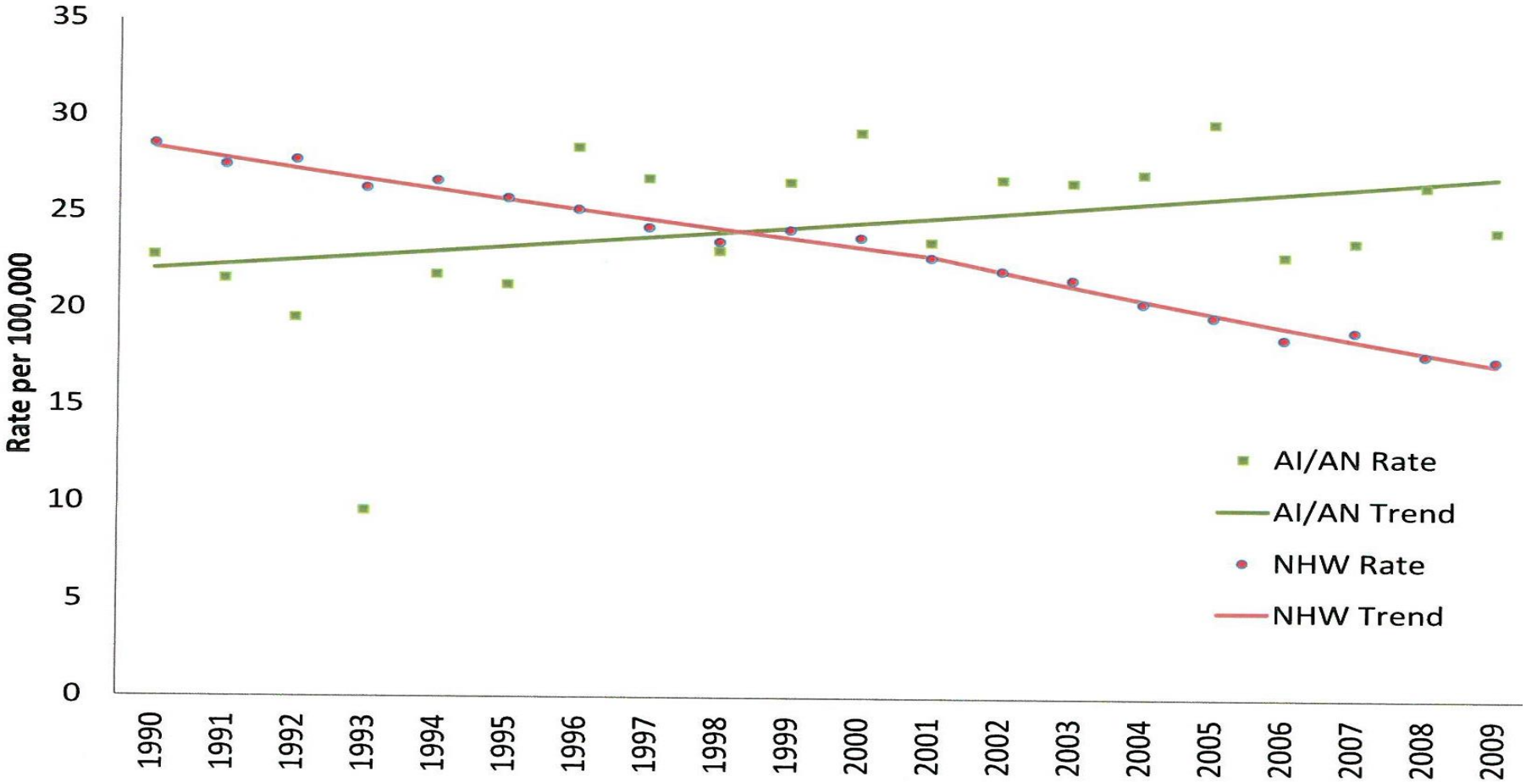
Is Colorectal Cancer Common Among American Indians?

- 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.

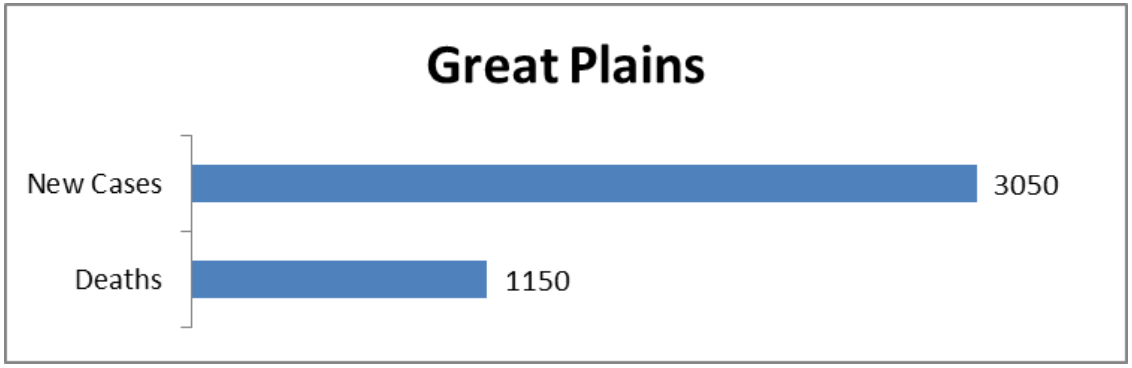
Age-adjusted Colorectal Cancer Death Rates and Joinpoint Trend Lines in CHSDA Counties, 1990-2009, Females

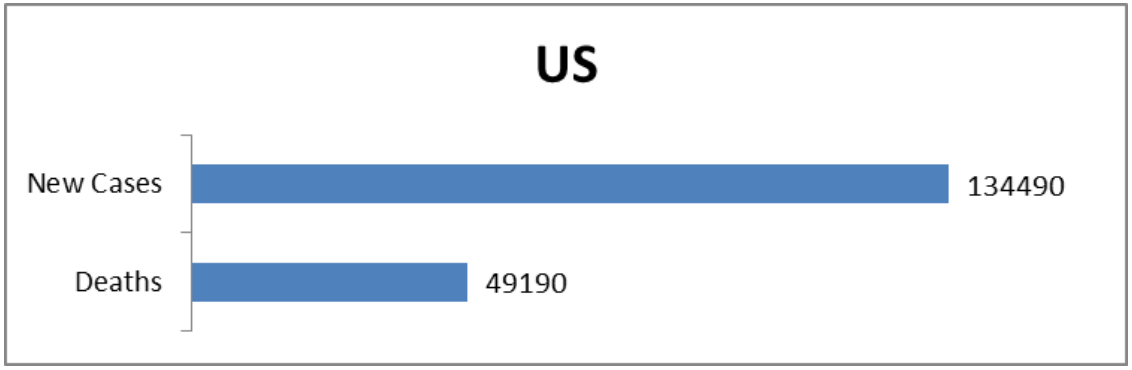


Age-adjusted Colorectal Cancer Death Rates and Joinpoint Trend Lines in CHSDA Counties, 1990-2009, Males



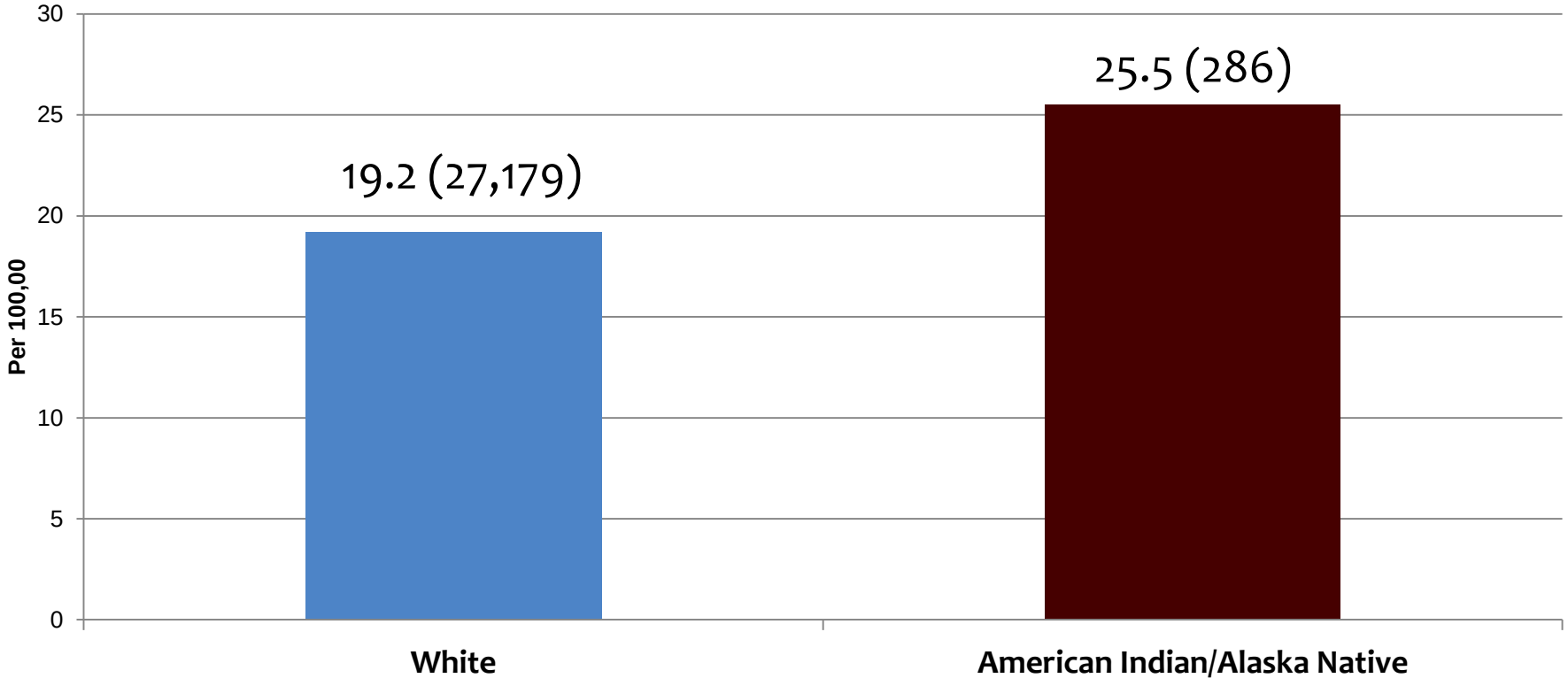
2016 CRC Data All Races U.S.



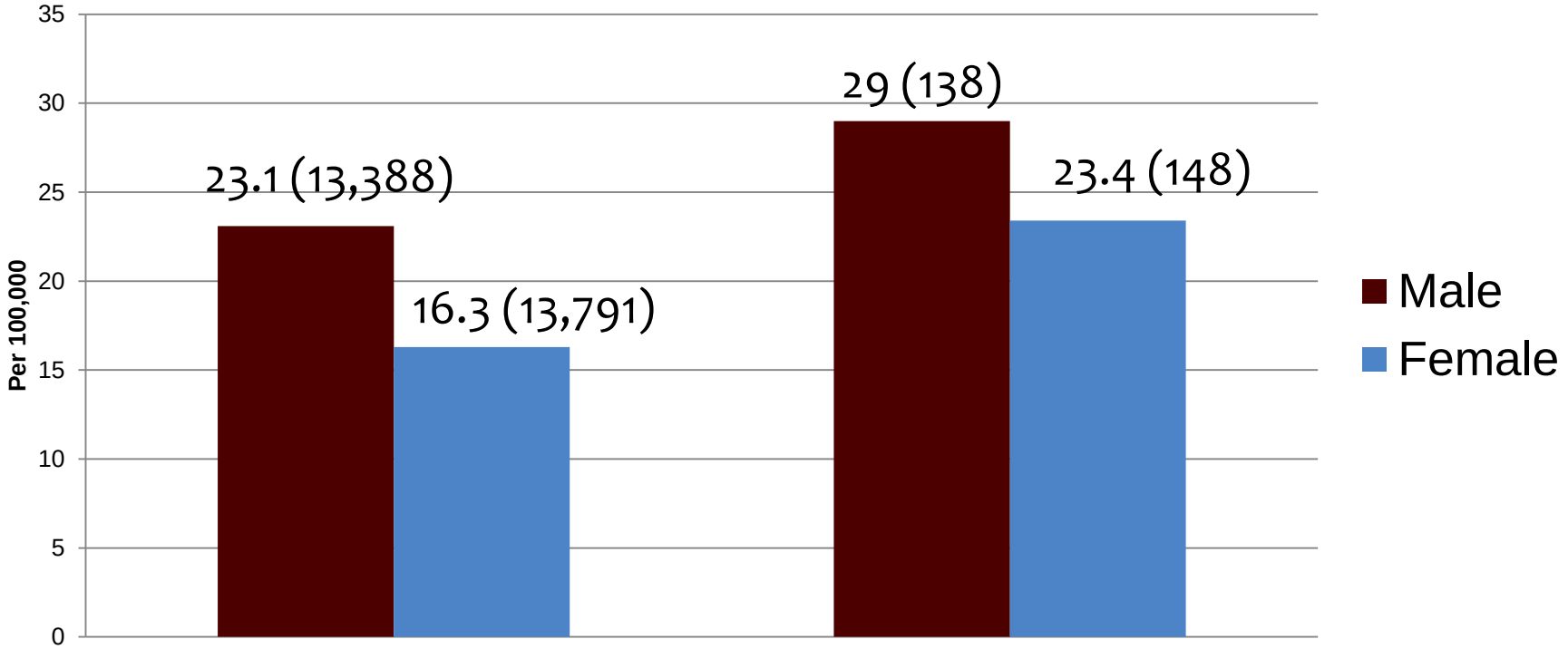


http://www.cancer.org/acs/groups/content/@research/documents/document/acspc-047079.pdf

GPA Mortality/Death CRC 1994-2013



GPA Mortality/Death CRC 1994-2013



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

Photo Source: http://www.hypertensionnetwork.com/en/know--hta/risk-factors-that-increase-the-risk-of-hypertension.html

- 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

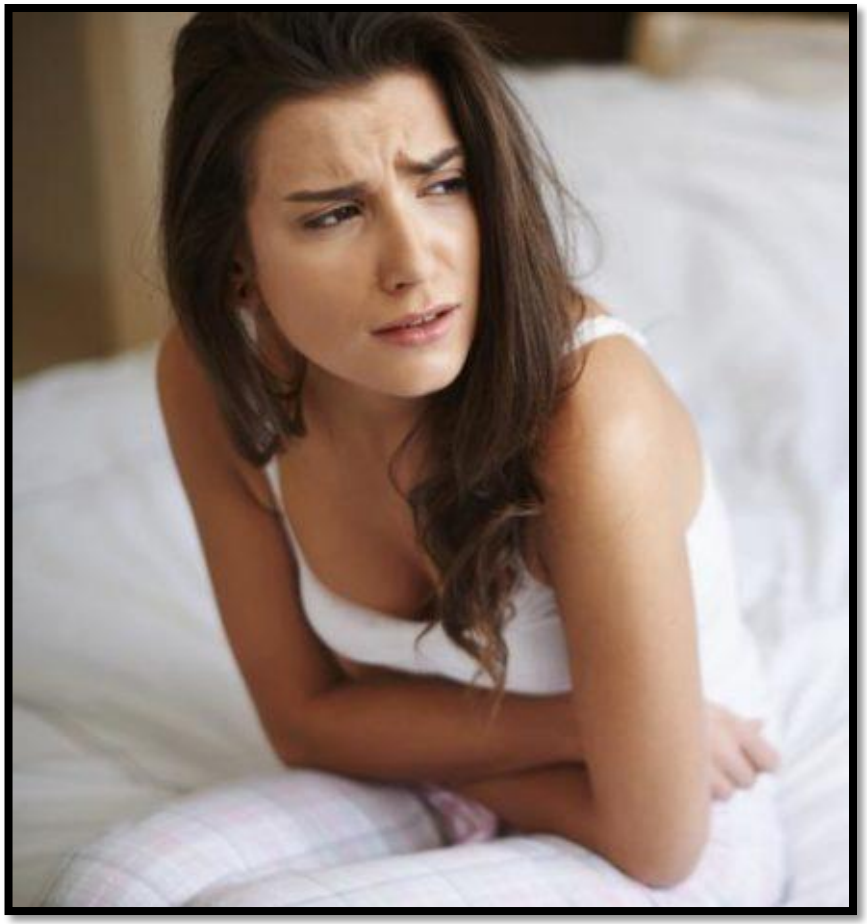


Photo Source: https://www.healthsiren.net/colon-ca-warning-signs/3/

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

"So That The People May Live" "Hecel Oyate Kin Nipi Kte"

Pre and Post Test

Rollin Colon Pre-Test[1]

For internal Use Only	
Event date:	Event location:

1. What is your age? ❑ Under 40 ❑ 40 to 49 ❑ 50 to 75 ❑ 76 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 to 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 their first screening for colorectal cancer? ❑ 40 ❑ 50 ❑ 65
7. Which test screens for colorectal cancer? ❑ Fecal Occult Blood Test (FOBT) ❑ Mammogram ❑ Prostate Specific Antigen (PSA)	8. Have you been screened for colorectal cancer? ❑ Yes ❑ No ❑ Not sure

Turn to back page

Prepared by GPTCHB, GPCCSI, and ACET, Inc. 31

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? ❑ Fecal Occult Blood Test (FOBT) ❑ Mammogram ❑ Prostate Specific Antigen (PSA)	6. Do you plan to get a colorectal cancer screening in the future? ❑ Yes ❑ No ❑ Not sure

7. Did the Rollin Colon help you understand the importance of colorectal cancer screening?

Yes, a lot	Yes, some	No, not much	Not sure
❑	❑	❑	❑

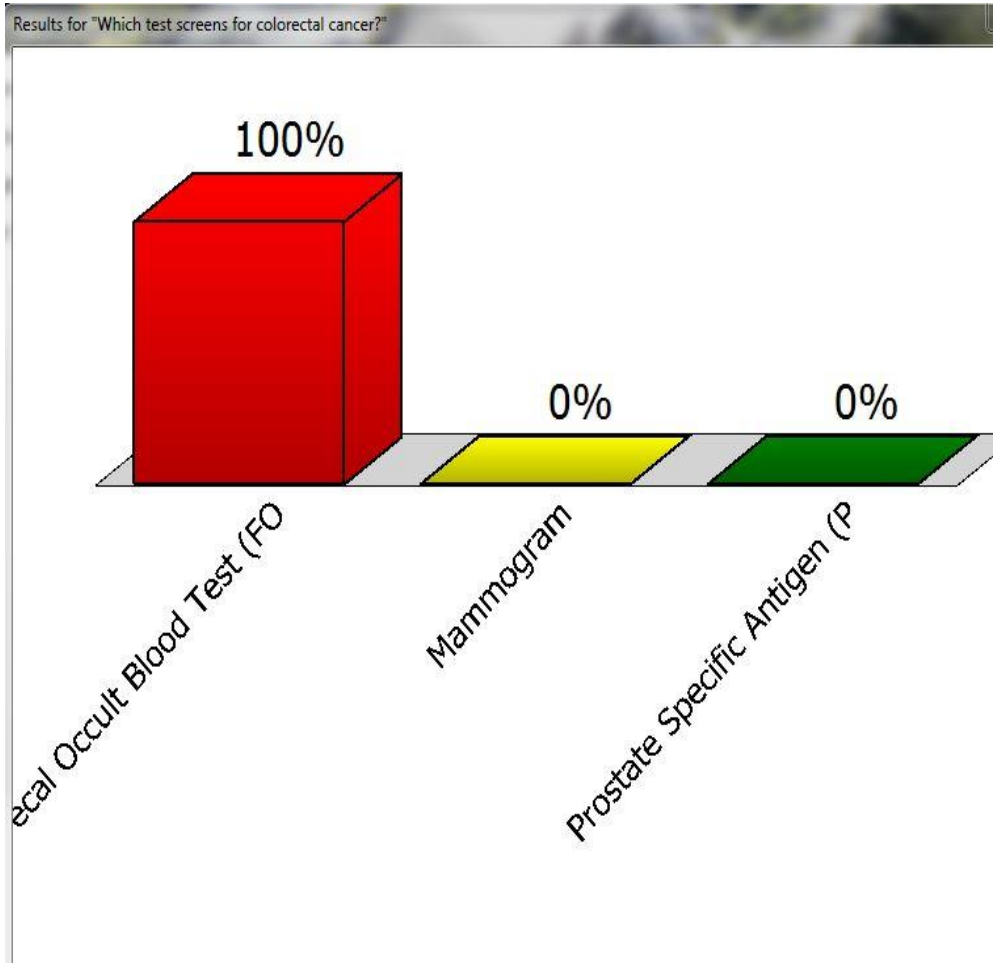
Thank you!

Prepared by NPCCCP, GPCCSI, and ACET, Inc. 32

Audience Response System

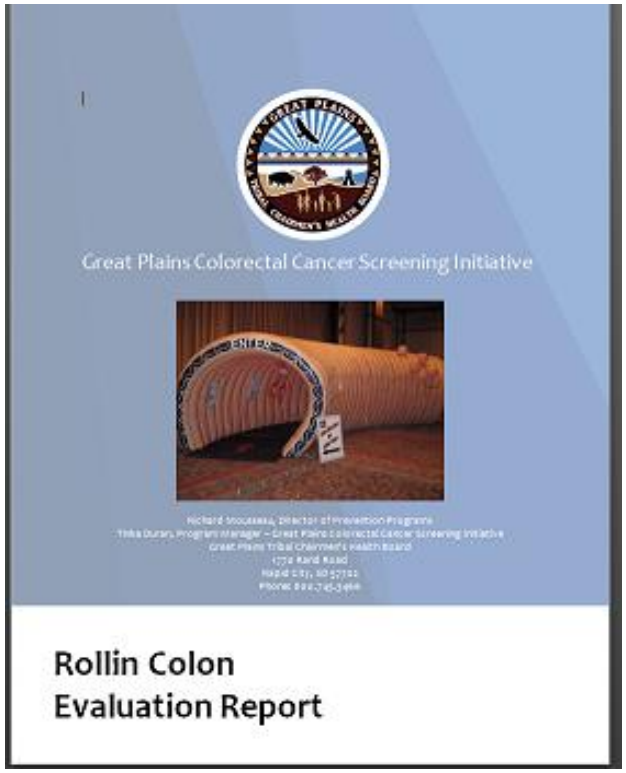
- Anonymous
- Improves audience attention
- Increases knowledge

Audience Response System



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

Evaluation Report



"So That The People May Live" "Hecel Oyate Kin Nipi Kte"

GPCCSI Resources

Colorectal Cancer Fact Sheet

Cancer Health Facts

Awareness. Hope. Believe. Cure. Love. Early Detection. We Can Win This Fight.

Numbers at a Glance

2nd
Leading cause of cancer and leading cause of cancer death—Colorectal Cancer

9 out of 10
If found EARLY, 9 out of 10 will survive

1 out of 10
If found LATE, 1 out of 10 survive

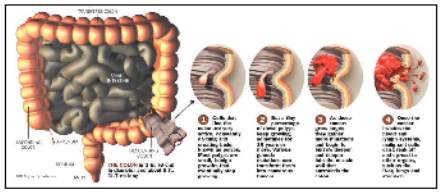
53%
Colorectal cancer is 53% higher in Northern Plains American Indians

49,380
People will die from colorectal cancer this year

Northern Plains Tribal Tobacco Technical Assistance Center

What is Colorectal Cancer?

Colon cancer is cancer of the large intestine (colon), the lower part of your digestive system. Rectal cancer is cancer of the last several inches of the colon. Together, they're often referred to as colorectal cancers.



Colon cancer—from Polyp to Tumor

Most cases of colon cancer begin as small, noncancerous (benign) clumps of cells called adenomatous polyps. Colorectal cancer occurs when some of the cells that line the colon or the rectum become abnormal and grow out of control. The abnormal growing cells create a tumor, which is the cancer.

Polyps may be small and produce few, if any, symptoms. For this reason, doctors recommend regular screening tests to help prevent colon cancer by identifying polyps before they become colon cancer.

Risk Factors for Colorectal Cancer

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

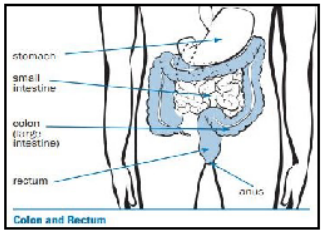
Older age	Racial and ethnic background	Inflammatory intestinal conditions	Inherited syndromes	Family history	Low-fiber, high-fat diet
Diabetes	Obesity	Smoking	Heavy alcohol use	Radiation therapy	Sedentary lifestyle

Source: http//www.cdc.gov ; http://www.cancer.org ; http://www.coloncancer.net ; http://www.americanindiancancer.org ; http://www.mayoclinic.org

FACT SHEET

Colorectal Cancer

What is Colorectal Cancer?



Colon and Rectum

Photo source: Centers Disease and Control

Colorectal cancer is cancer that occurs in the colon or rectum. Sometimes it is called colon cancer. The colon is the large intestine or large bowel. The rectum is the passageway that connects the colon to the anus.

Third Most Common Cancer in the US

In 2015, there were over 90,000 new cases of colorectal cancer in the United States. Colorectal cancer 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 or a loved one is age 50 or older, please consider getting screened for colon cancer.

Who Gets Colorectal Cancer?

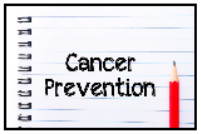
- Both men and women.
- Most often found in people 50 or older.
- The risk increases with age.

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. Colorectal cancer usually starts from polyps, or unusual growth, in the colon or rectum. Over time, some polyps can turn into cancer.

Colon 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.

To learn more, visit www.gptchb.org or visit us on social media.

This publication was supported by Cooperative Agreement #DP15-1502. The contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services

"So That The People May Live" "Hecel Oyate Kin Nipi Kte"

Resources

Hecel Oyate Kin Nipi Kte "So that the People May Live"

FIT Colorectal Cancer Screening Guide

Fecal Immunochemical Test

The 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 1 sample to be examined by the lab for blood. The FIT has no dietary restrictions.

*Must return completed FOBT within 2 weeks. ** Keep in safe place at room temperature—less than 89*F. Keep out of direct sunlight.

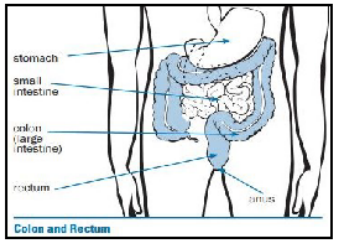
Colorectal Cancer Risk Factors:

- 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 diarrhea or constipation
- A feeling that your bowel does not completely empty
- Persistent abdominal discomfort

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.



Colon and Rectum

Photo from the Centers Disease and Control

Dietary Restrictions

Consult your local laboratory.

Do Not Take the FIT Test if:

- Have diarrhea
- On menstrual cycle

Taking the test while suffering from either of these symptoms may cause a false positive.

What to Expect from the FIT 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. Return the test to your health care provider or laboratory.

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

Colorectal Cancer is:

Preventable.
Treatable.
Beatable.

Great Plains Colorectal Cancer Screening Initiative
Great Plains Tribal Chairmen's Health Board
1770 Rand Rd | Rapid City, SD 57702 | (P) 605.721.1922 | (F) 605.721.1932 | www.gptchb.org

Hecel Oyate Kin Nipi Kte "So that the People May Live"

FOBT Colorectal Cancer Screening Guide

Fecal Occult Blood Test

The 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 lab for blood.

*Must return completed FOBT within 2 weeks. ** Keep in safe place at room temperature—less than 89° F. Keep

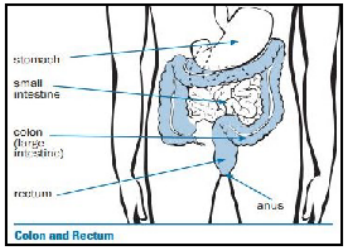
Colorectal Cancer Risk Factors:

- 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 diarrhea or constipation
- A feeling that your bowel does not completely empty
- persistent abdominal discomfort

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.



Colon and Rectum

Photo source: Centers Disease and Control and Prevention

Dietary Restrictions

Consult your local laboratory.

Do Not Take the FOBT Test if:

- Have diarrhea
- On menstrual cycle

Taking the test while suffering from either of these symptoms may cause a false positive.

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 all 3 collection cards with the information requested, including date and time of collection.

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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=XqvtOqMBpIg

Media

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

Media

17-GPAIHS-0037-Colorectal Cancer Radio Spot-with-Jingles (2).mp3

"So That The People May Live" "Hecel Oyate Kin Nipi Kte"

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?

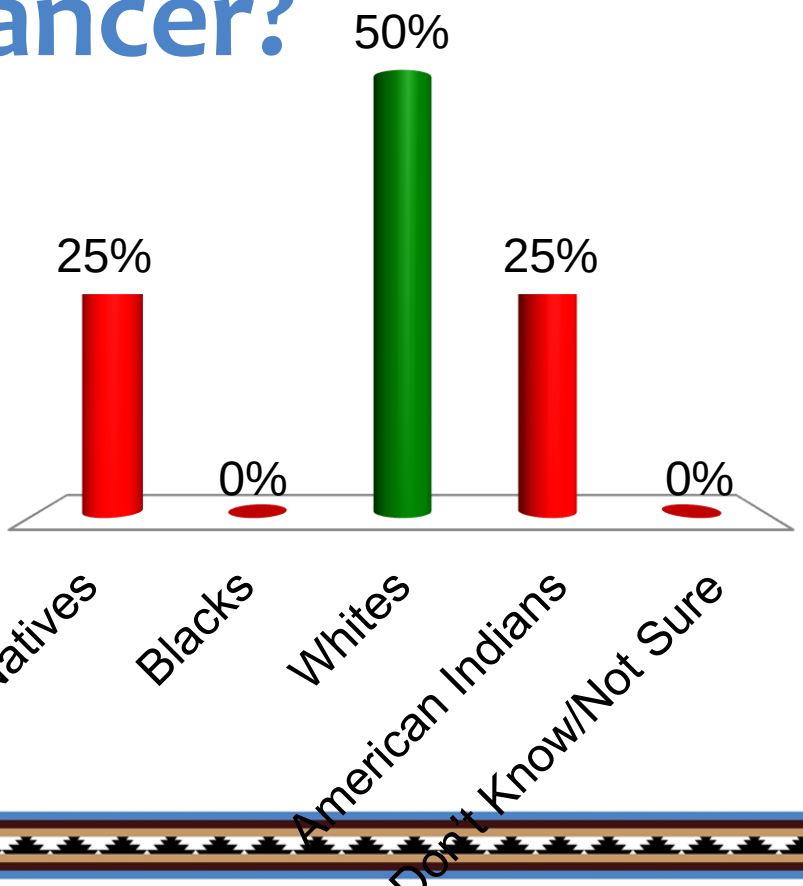
A. Alaska Natives

B. Blacks

C. Whites

D. American Indians

E. Don't Know/Not Sure

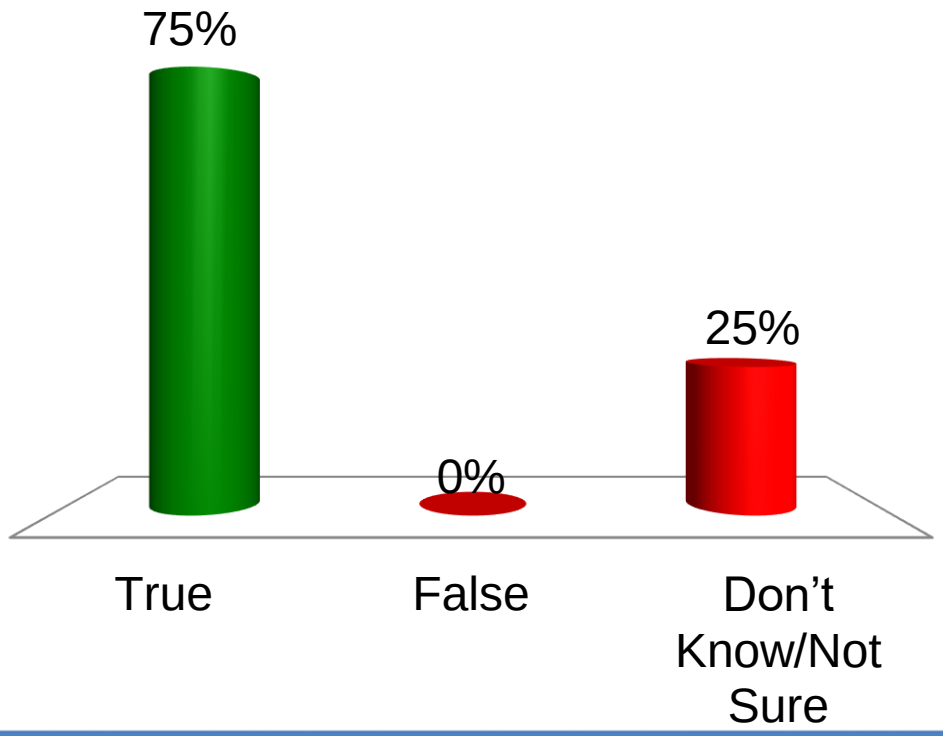


People with family history of colorectal cancer should be screened at an earlier age?

A. True

B. False

C. Don't Know/Not Sure



What is the 3rd common cancer among Great Plains American Indians?

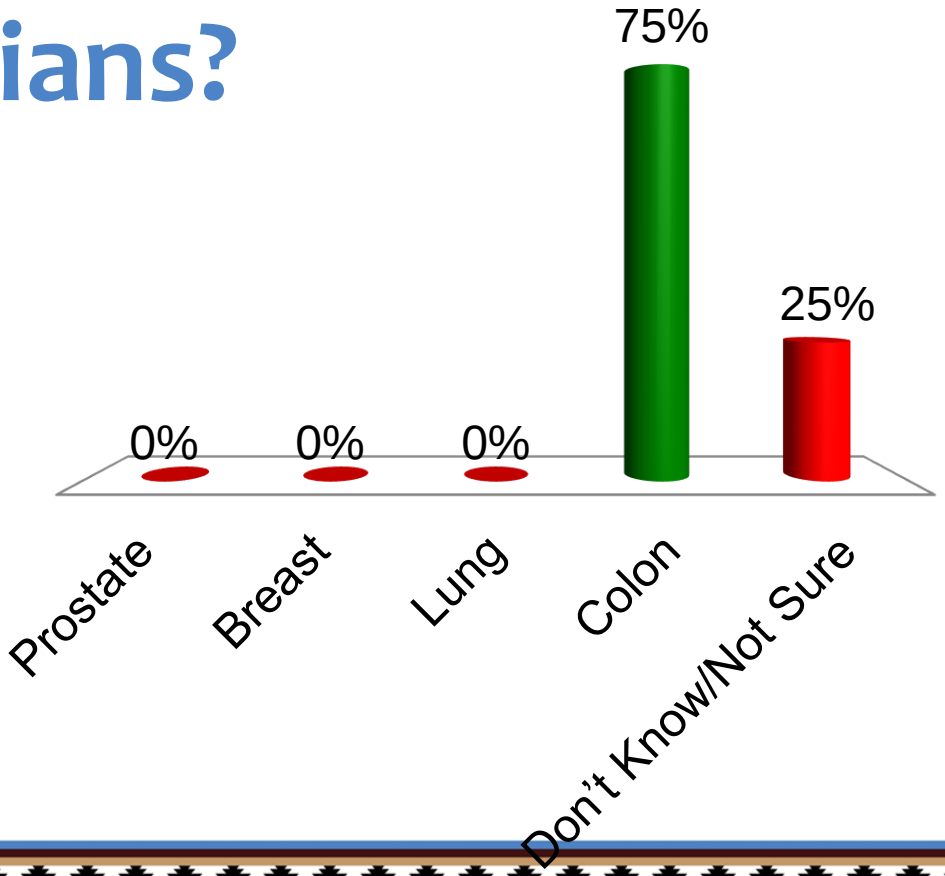
A. Prostate

B. Breast

C. Lung

D. Colon

E. Don't Know/Not Sure

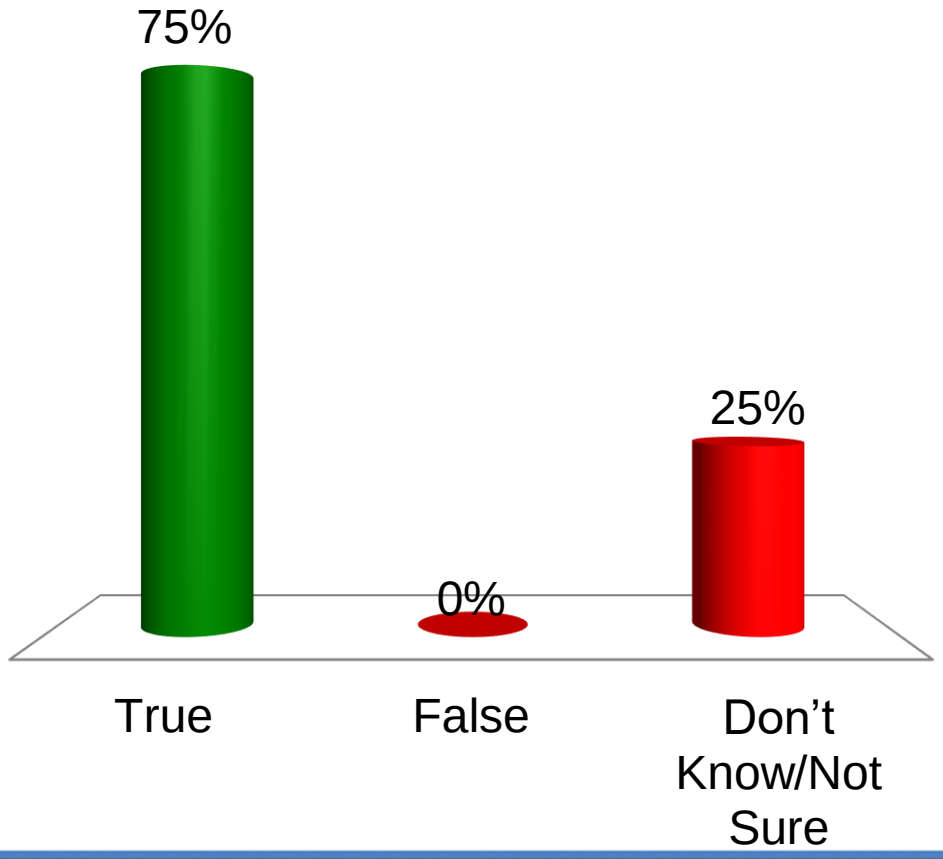


People with colon cancer can experience no symptoms?

A. True

B. False

C. Don't Know/Not Sure



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