HEPATOCELLULAR CARCINOMA (HCC) IN ALASKA NATIVE PEOPLE: EPIDEMIOLOGY, SURVEILLANCE AND MANAGEMENT

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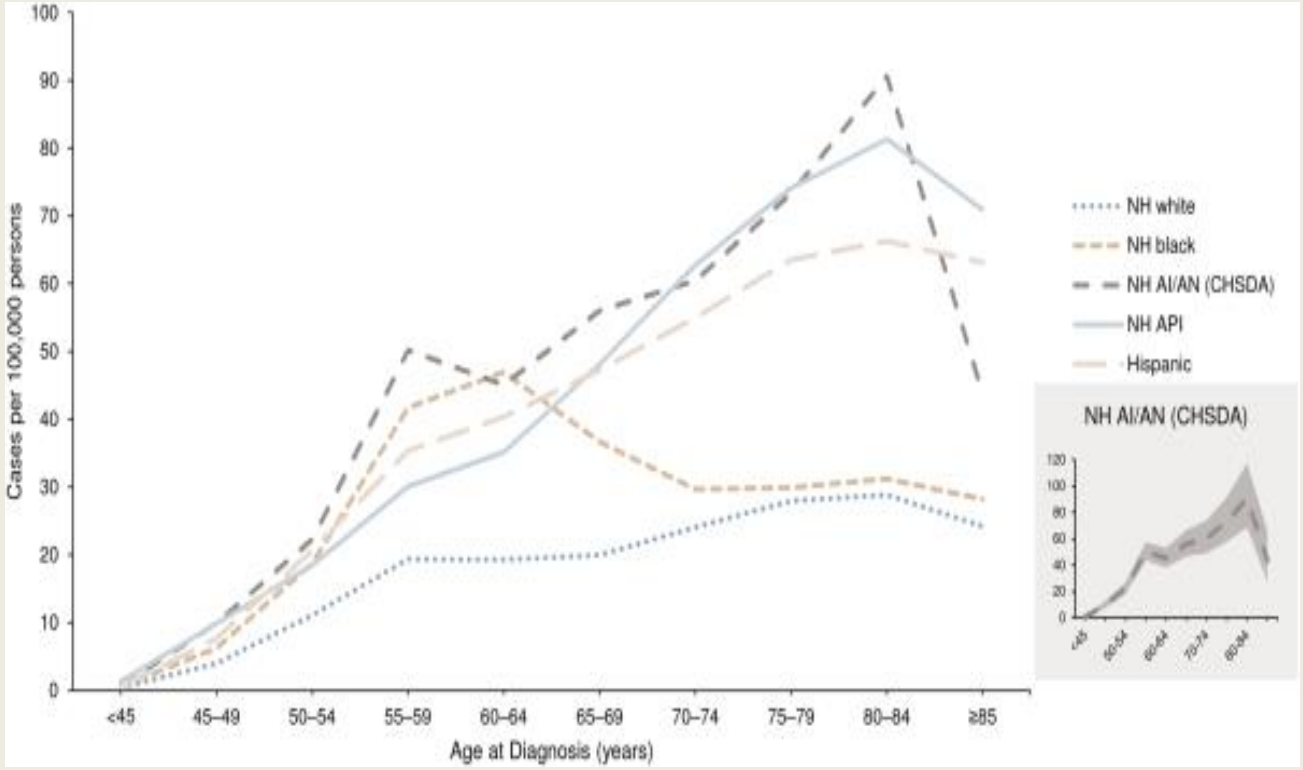
CONFLICTS OF INTEREST

- Brian McMahon: None
- Our Program has 2 research grants from Gilead Sciences neither of which funds any of our salaries

GOALS OF PRESENTATION

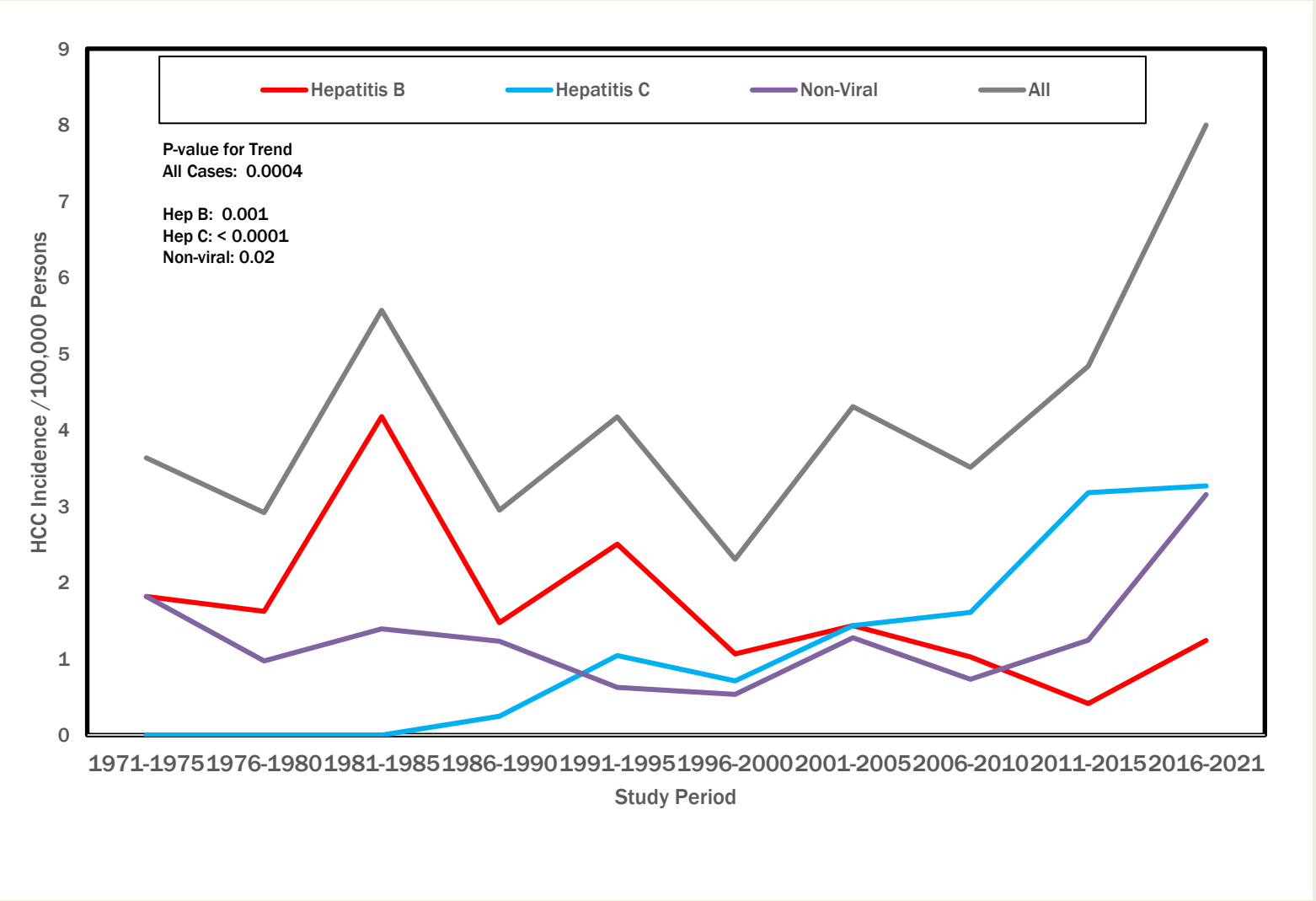
- Discuss incidence of hepatocellular carcinoma (HCC) in American Indian and Alaska Native Populations:
- Changes in the incidence and etiology in the last couple of decades
- Discuss major etiologies of cirrhosis and HCC
- Discuss risk factors for developing HCC in associated etiologies:
  - Hepatitis B virus (HBV)
  - Hepatitis C virus (HCV)
  - Non-alcoholic fatty liver disease (NAFLD)
  - Alcoholic cirrhosis
  - Other etiologies of cirrhosis and HCC
- Reducing the incidence of HCC: What must be done

ANNUAL REPORT TO THE NATION ON THE STATUS OF CANCER, 1975-2012, FEATURING THE INCREASING INCIDENCE OF LIVER CANCER



Cancer
9 MAR 2016 DOI: 10.1002/cncr.29936
http://onlinelibrary.wiley.com/doi/10.1002/cncr.29936/full#cncr29936-fig-0002

Incidence of Hepatocellular Carcinoma (HCC) in the Alaska Native Population:1971 through 2022



HOW TO DECREASE MORBIDITY AND MORTALITY IN AMERICAN INDIAN/ALASKA NATIVE AI/AN PEOPLE DUE TO HEPATOCELLULAR CARCINOMA (HCC) AND CIRRHOSIS

- Identify AI/AN Persons with underlying liver diseases early
- Determine the cause (etiology) of the underlying liver condition
  - Linkage to care
  - Prevent progression of this condition
    - Life style changes
    - Medication or other modalities
  - Cure condition if curative treatment is available
- Identify those with underlying liver condition at risk for HCC and initiate surveillance to detect HCC at an early and curable stage
    - Anyone with advanced fibrosis (F3) or cirrhosis (F4)
    - Persons with hepatitis B without cirrhosis at risk of HCC
- Apply most effective treatments for those who develop HCC
- Promote research, both scientific and community-based, to prevent and treat HCC

UNDERLYING CAUSES OF LIVER CANCER IN ALASKA NATIVE PEOPLE (ALL BUT HEP B FOR AI)

- Hepatitis B: in men 40 years and older, women 50 years and older, those who have family members who had liver cancer and those who have a cancer cause type (F)
- Hepatitis C: Those persons with cirrhosis, even if they have been cured
- MAFLD
- Alcoholic Liver Disease
- Other: Autoimmune Hepatitis/PBC?
- What to do
  - Identify these persons early
  - Treat their underlying condition
  - Asses the level of fibrosis
  - If they have F3 or F4 fibrosis, initiate surveillance

FINDING PERSONS AT RISK FOR HCC AND BY IDENTIFYING THOSE AT RISK FOR LIVER DISEASE

- Annual risk for those at highest risk ranges between 1 and 3/100,000
- HCV: CDC and USPSTF recommends all adults be tested once and high risk persons regularly
  - Baby boomers: Baby Boomers are at highest risk, 40% may have acquired HCV without using drugs
  - Evaluate HCV infected persons for advanced fibrosis and cirrhosis as they need surveillance:
  - For recently infected young persons the risk is low as incubation 20-40 years
- NAFLD: Identify those with NASH: Risk is high for those with F3/F4 fibrosis
  - Important to note that NAFLD frequently is co-present in persons with HCV and HBV
- Alcoholic Liver Disease: Annual risk in those with cirrhosis is lower ~1%/year
  - Reason may be that persons with ALD who continue to drink may die of liver failure
    - Once a person with cirrhosis quits alcohol the risk of HCC drops dramatically

Risk of Developing HCC from Time of Liver Biopsy by Fibrosis Stage

Outcome	Time Period	None/Mild (Metavir 0-1) (n = 150)	Moderate (Metavir 2) (n = 131)	Severe (Metavir 3) (n = 88)	Cirrhosis (Metavir 4) (n = 38)
HCC	3-Year	0.0% (0.0, 3.2) (n = 118)	0.0% (0.0, 3.4) (n = 103)	1.1% (0.2, 7.7) (n = 65)	3.3% (0.5, 21.4) (n = 25)
	5-Year	1.0% (0.1, 6.9) (n = 95)	1.0% (0.1, 6.6) (n = 87)	1.1% (0.2, 7.7) (n = 54)	13.4% (4.4, 36.7) (n = 16)
	7-Year	1.0% (0.1, 6.9) (n = 81)	2.3% (0.6, 9.1) (n = 72)	6.0% (1.9, 18.2) (n = 42)	35.0% (16.5, 64.4) (n = 11)
	10-Year	1.0% (0.1, 6.9) (n = 52)	4.6% (1.4, 4.8) (n = 44)	8.4% (3.1, 21.6) (n = 27)	
	# of Cases	2	4	7	9

Bruden D et al. Hepatology 2017;66:37-45

NAFLD

- Incidence is not well described
- Some studies suggest increase risk in persons without cirrhosis independent of fibrosis
- Once cirrhosis is well established, life style changes of weight loss and exercise even if successful might not reduce subsequent risk of HCC

WHAT MEASURES MIGHT REDUCE RISK OF HCC

- HCV:
  - Diagnosis and treatment (cure) in persons with HCV
  - Programs to reduce acquisition of HCV, including opioid addiction treatment, clean needles
- NAFLD:
  - Progress in reducing obesity including diet, exercise, drugs such as appetite suppresses, obesity surgery, drugs that block hepatic steatosis and hepatic fibrosis
  - Other conditions including hemochromatosis, AIH, PBC etc.: early diagnosis and treatment

ASSESSING LEVEL OF FIBROSIS IN PERSONS WITH LIVER DISEASE

- Non-invasive serologic markers of fibrosis
  - APRI
  - FIB4
  - NAFLD Fibrosis Score
  - Commercial markers: Expensive, not that much better than above free markers
    - Fibrosure, FibroSpect2, and others
- Vibration Controlled Transient Elastography (VCTE or FibroScan®)
- Other sonographic techniques
- Magnetic resonance elastography (MRE)
- Liver Biopsy

'Simple Scores' for Predicting Presence of Advanced (F3/4) Fibrosis

NAFLD Fibrosis Score

= -1.675 + 0.037 x **Age** + 0.094 x **BMI** + 1.13 x **IFG/diabetes** + 0.99 x **AST/ALT ratio** - 0.013 x **Platelets** - 0.66 x **Albumin**.

- A score of less than -1.455 excludes fibrosis (NPV 88-93%).
- A score of greater than 0.676 predicts fibrosis (PPV 82-90%). AOC 0.85

FIB-4 Score

= (**Age** * **AST**) / (**Platelets** * Sqrt (**ALT**))

- A score of less than 1.3 excludes fibrosis (NPV 95%)
- A score greater than 3.25 predicts fibrosis (PPV ~70%)

www.qxmd.com

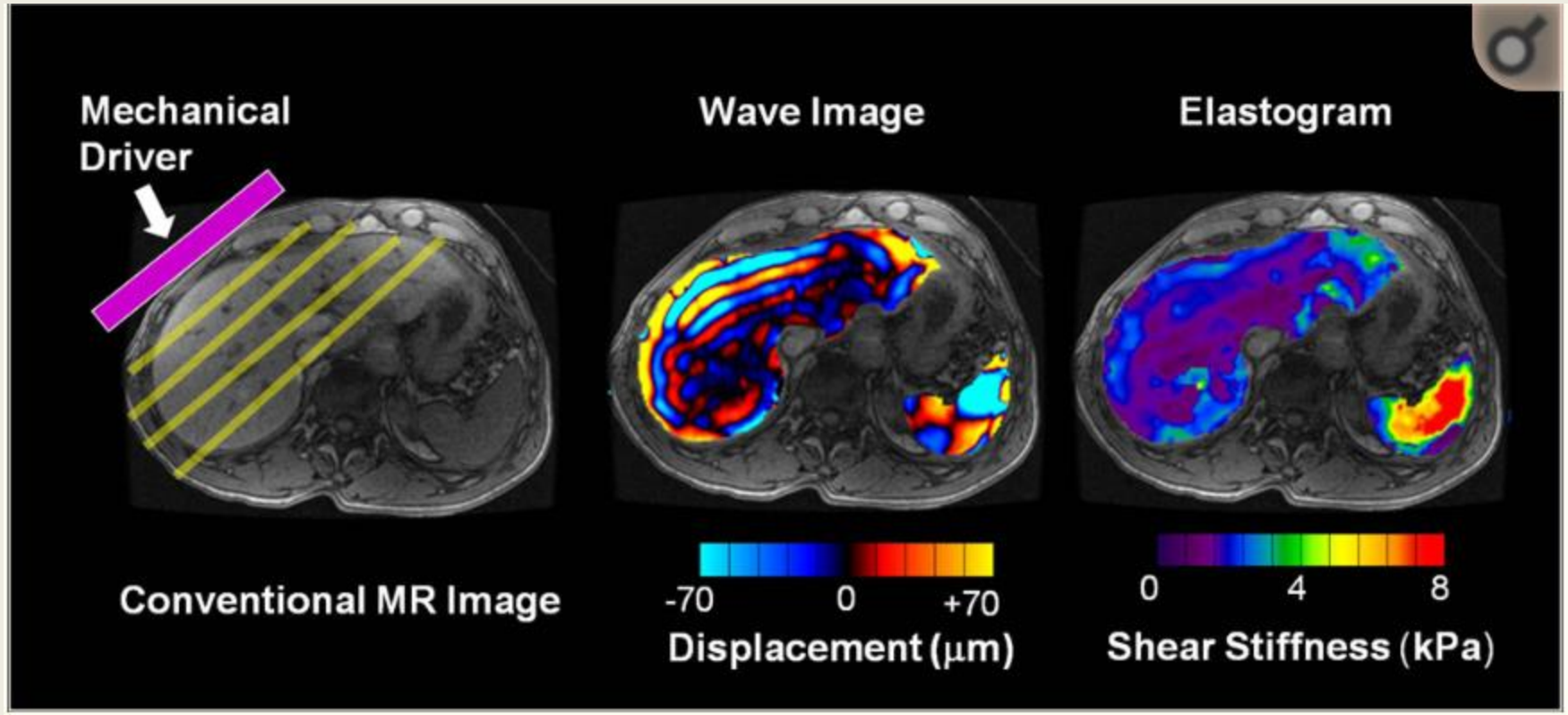
ngulo et al, Hepatology 2007: 45(4) 846

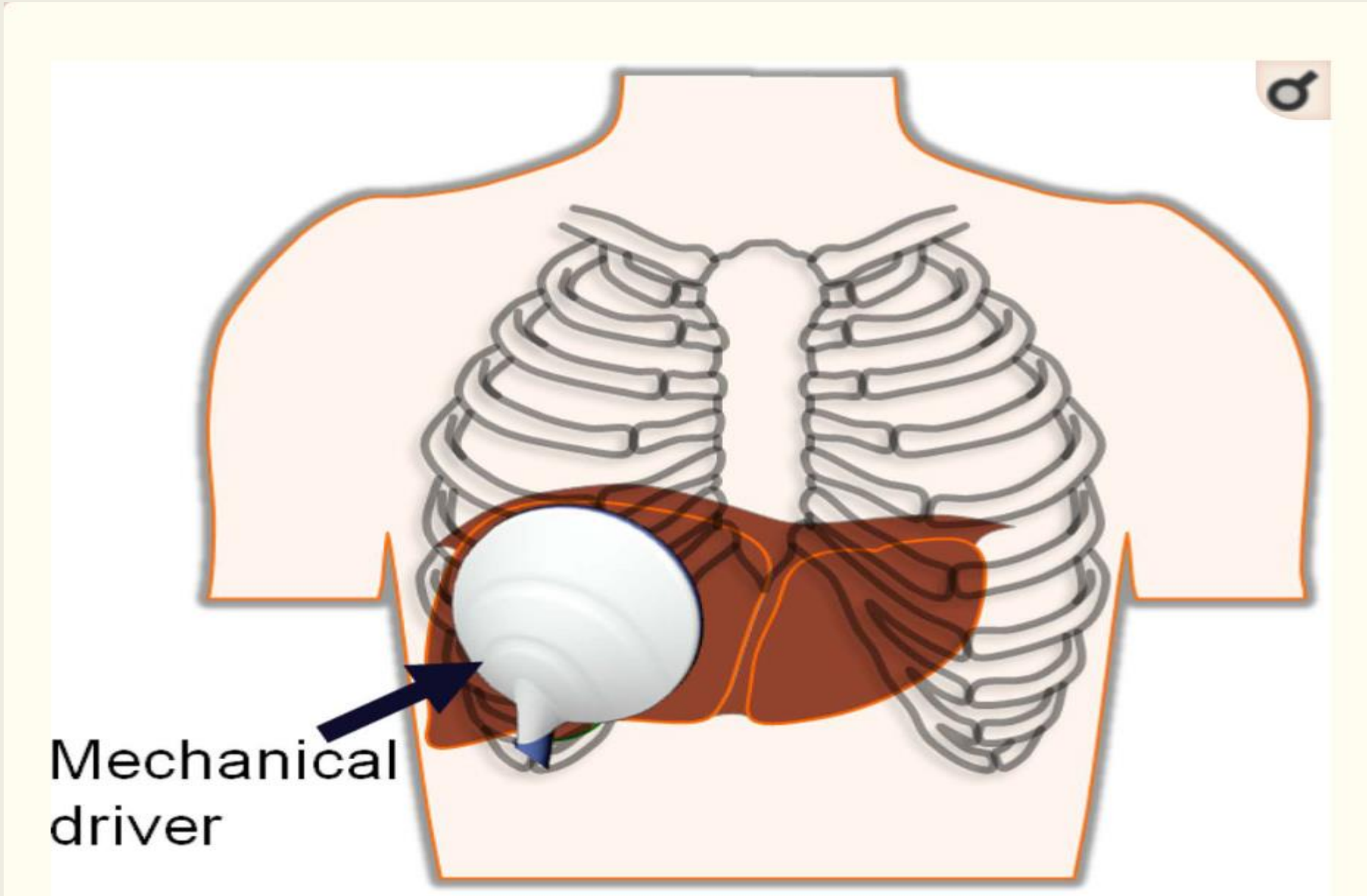
Sterling et al, Hepatology 2006: 43, 1317; McPherson et al, Gut 2010: 59(9), 1265

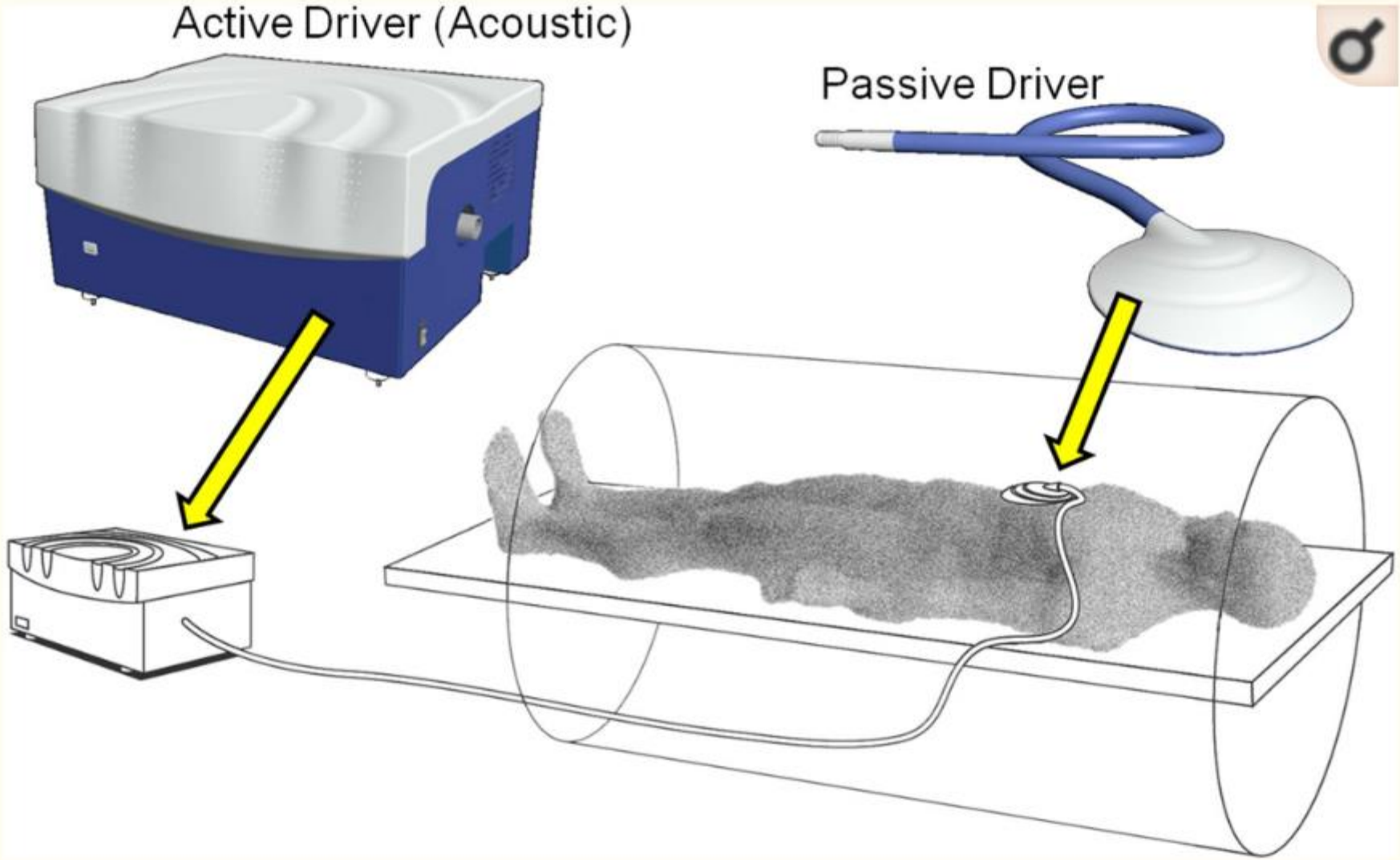
TRANSIENT ELASTOGRAPHY

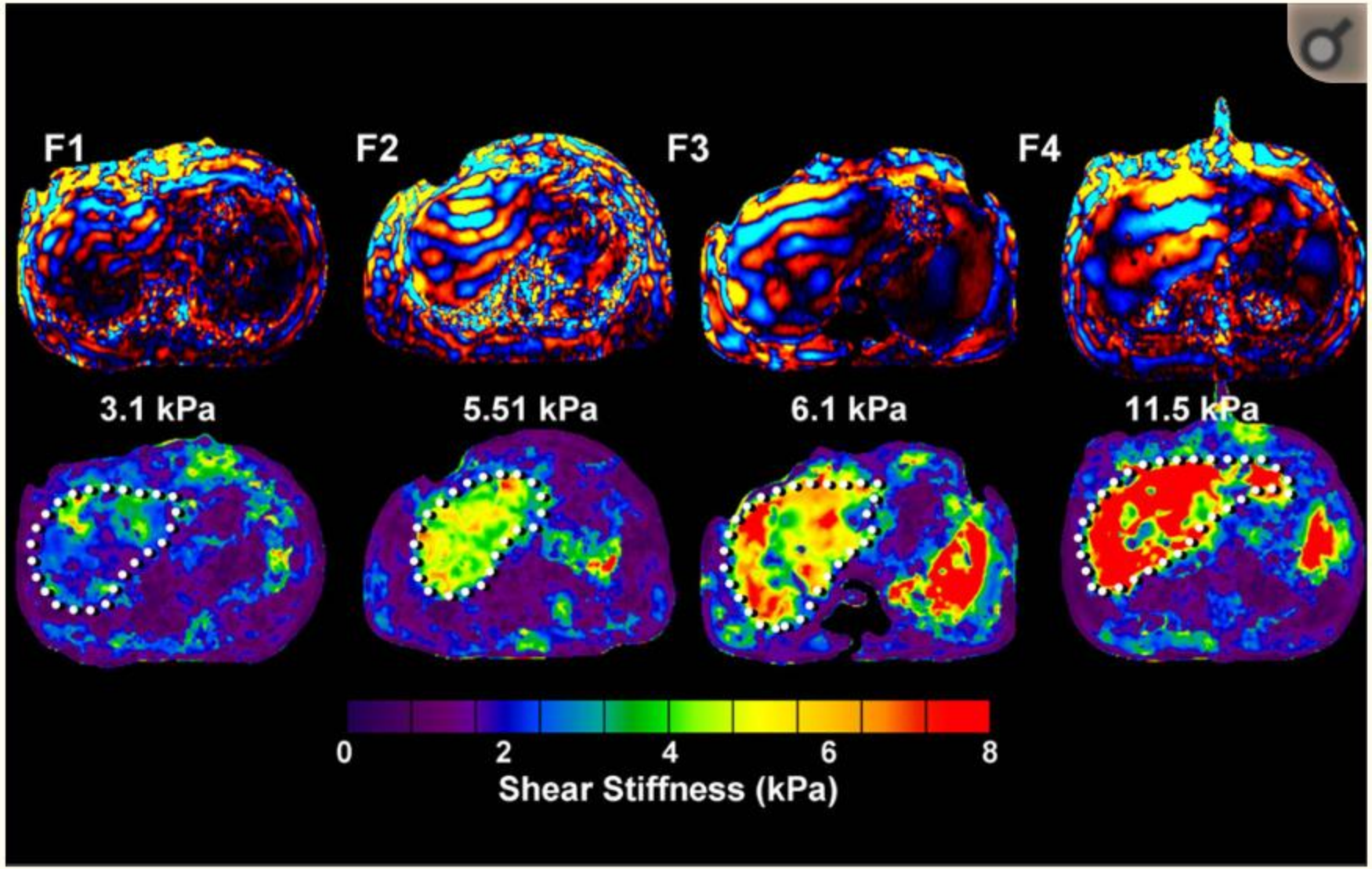
- Allows painless and simultaneous measurement of two quantitative parameters:
- Liver stiffness expressed in kPa
  - Correlated to liver fibrosis [1]
- Controlled Attenuation Parameter (CAP™) expressed in dB/meter
  - Correlated to liver steatosis [2]
- Both quantitative parameters are assessed on the same volume of liver tissue
- 100 times bigger than liver biopsy

1. Friedrich Rust, et al. *Gastroenterology*. 2008; 2. Sasso, et al. *Journal of Viral Hepatitis*. 2011.

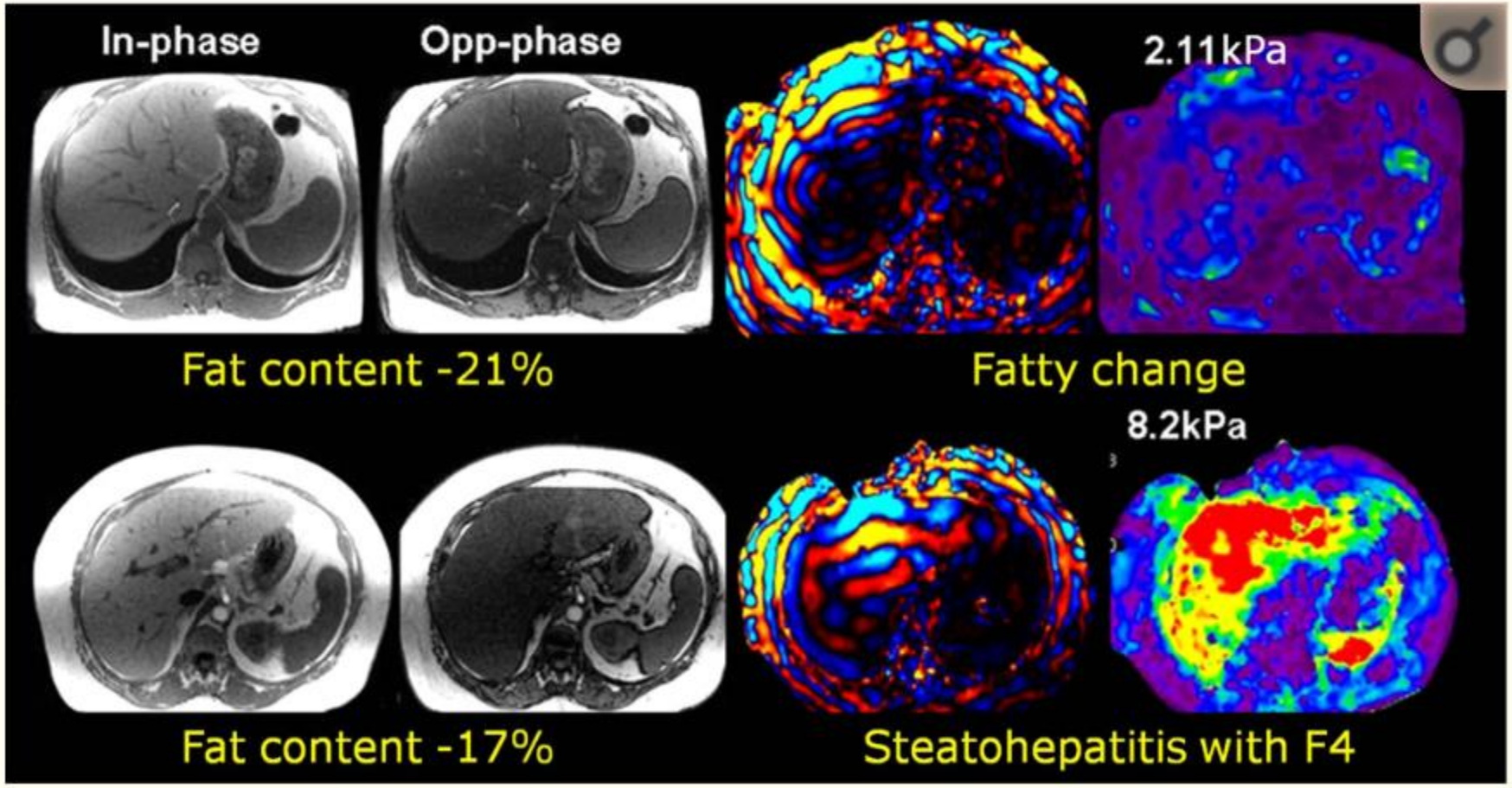

Mechanical
Driver
Wave Image
Elastogram
Conventional MR Image
-70
0
+70
Displacement (μm)
0
4
8
Shear Stiffness (kPa)


Mechanical
driver


Active Driver (Acoustic)
Passive Driver


F1
F2
F3
F4
3.1 kPa
5.51 kPa
6.1 kPa
11.5 kPa
0
2
4
6
8
Shear Stiffness (kPa)

Upper Panel: NAFL with no Fibrosis; Lower Panel: Steatosis with Cirrhosis



WHAT SCREENING METHODOLOGIES TO USE AND HOW FREQUENTLY

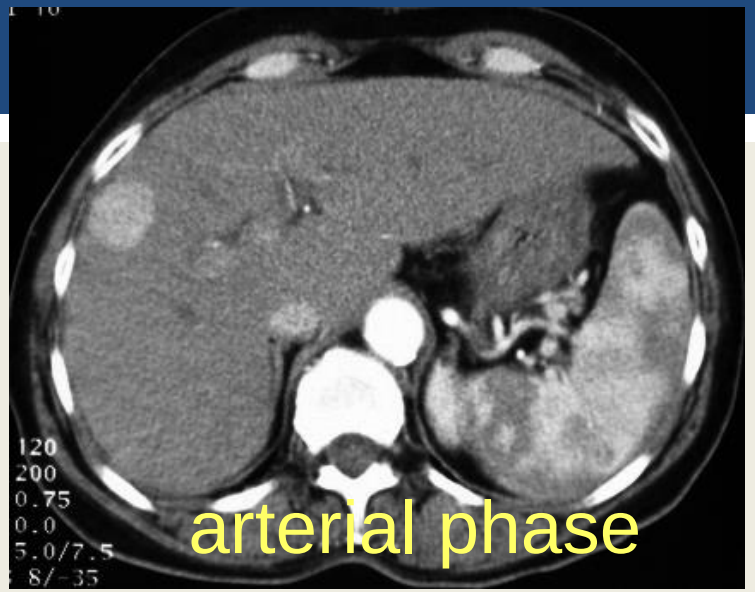
- Ultrasound of the liver and AFP every 6 months. Insurers will cover this in patients with cirrhosis

AASLD Guideline for HCC Hepatology 2018;67:358-380
Download for free at AASLD.org under practice guidelines

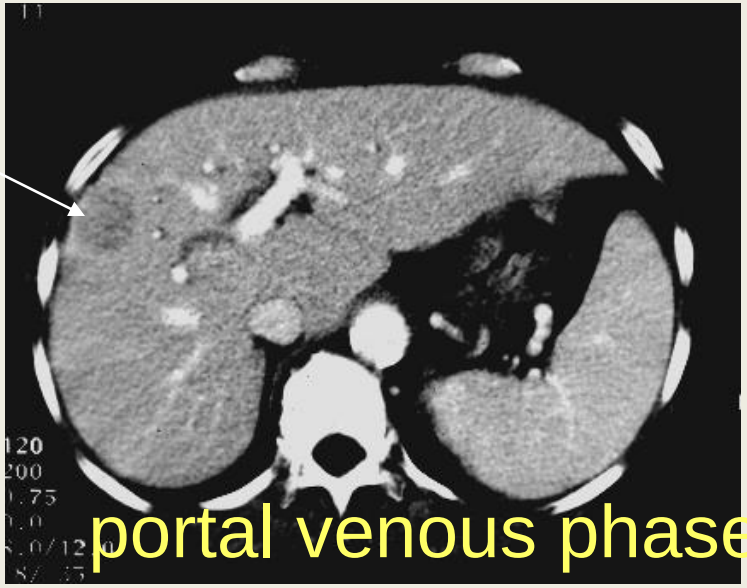
IMAGING MODALITIES FOR HCC SURVEILLANCE

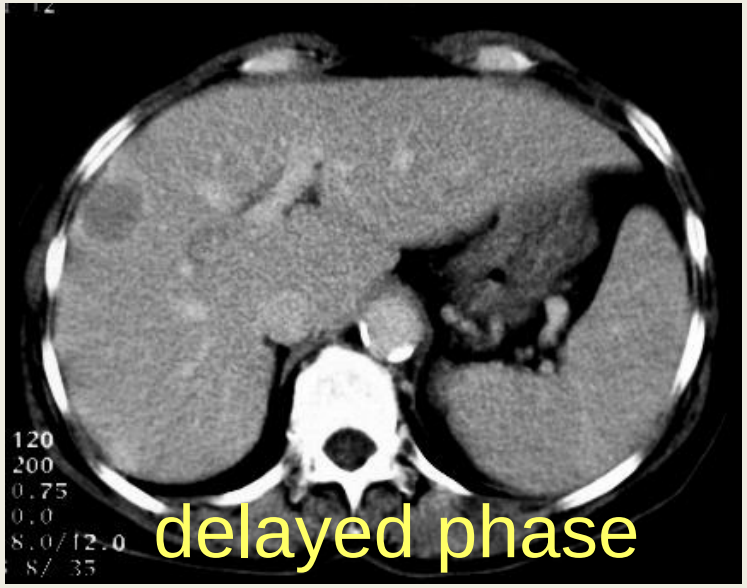
Imaging	Advantages	Disadvantages
Ultrasound	• Non-Invasive • Availability is ubiquitous • Low cost	• Highly operator & technique dependent -directly proportional to operator experience & skill • Low Sensitivity in Obesity • Soft tissue assessment • Low sensitivity in other Disease states
CT 4 Phase	• High sensitivity	• Risk of high radiation • High cost
MRI	• High sensitivity • High resolution	• Limited availability • Extremely high cost • GAD accumulation

MULTIPHASIC CT FOR HEPATOCELLULAR CARCINOMA



Washout Phase





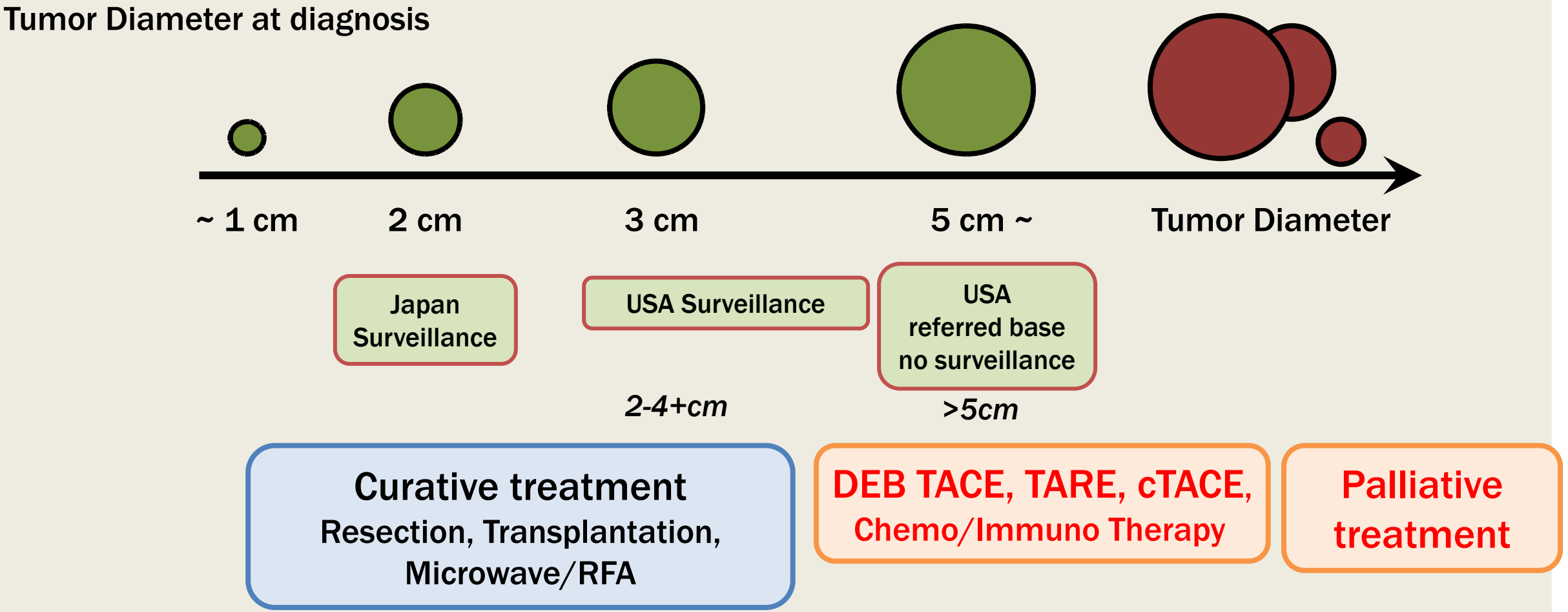
SENSITIVITY OF HCC DETECTION

Size	US	CT	MRI
Per-nodule	92/200 (46%)	126/194 (65%)	126/175 (72%)
<2cm	20/96 (21%)	35/88 (40%)	33/70 (47%)
2-4cm	44/71 (62%)	59/74 (80%)	66/77 (86%)
≥4cm	28/33 (85%)	32/32 (100%)	27/28 (96%)
Per-patient	88/138 (64%)	113/149 (76%)	99/117 (85%)

638 Liver transplant 225 (35%) HCC,
23 excluded *(infiltrative, multifocal)*

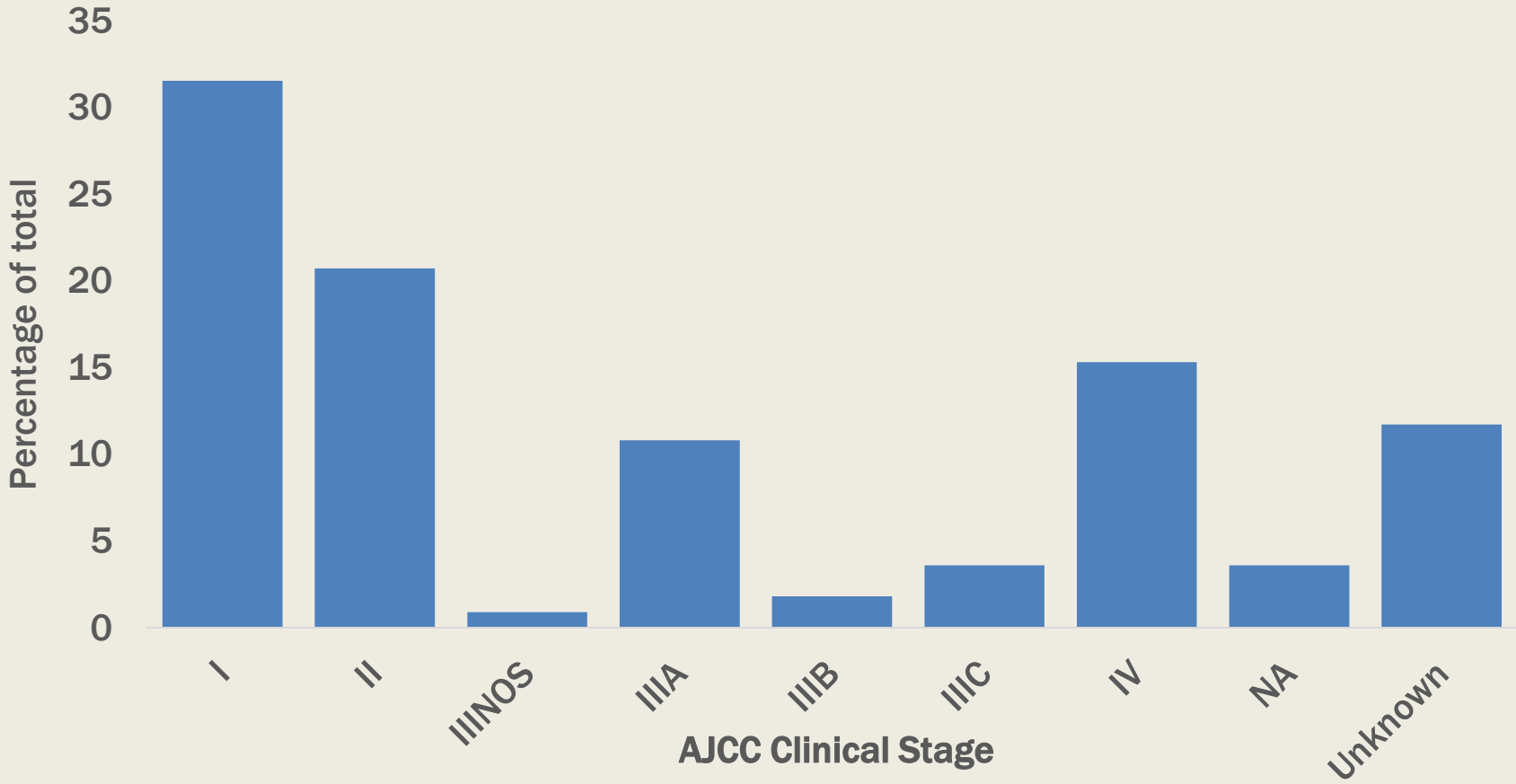
Yu NC. et al Clin Gastroenterol Hepatol 2011;9:161-167

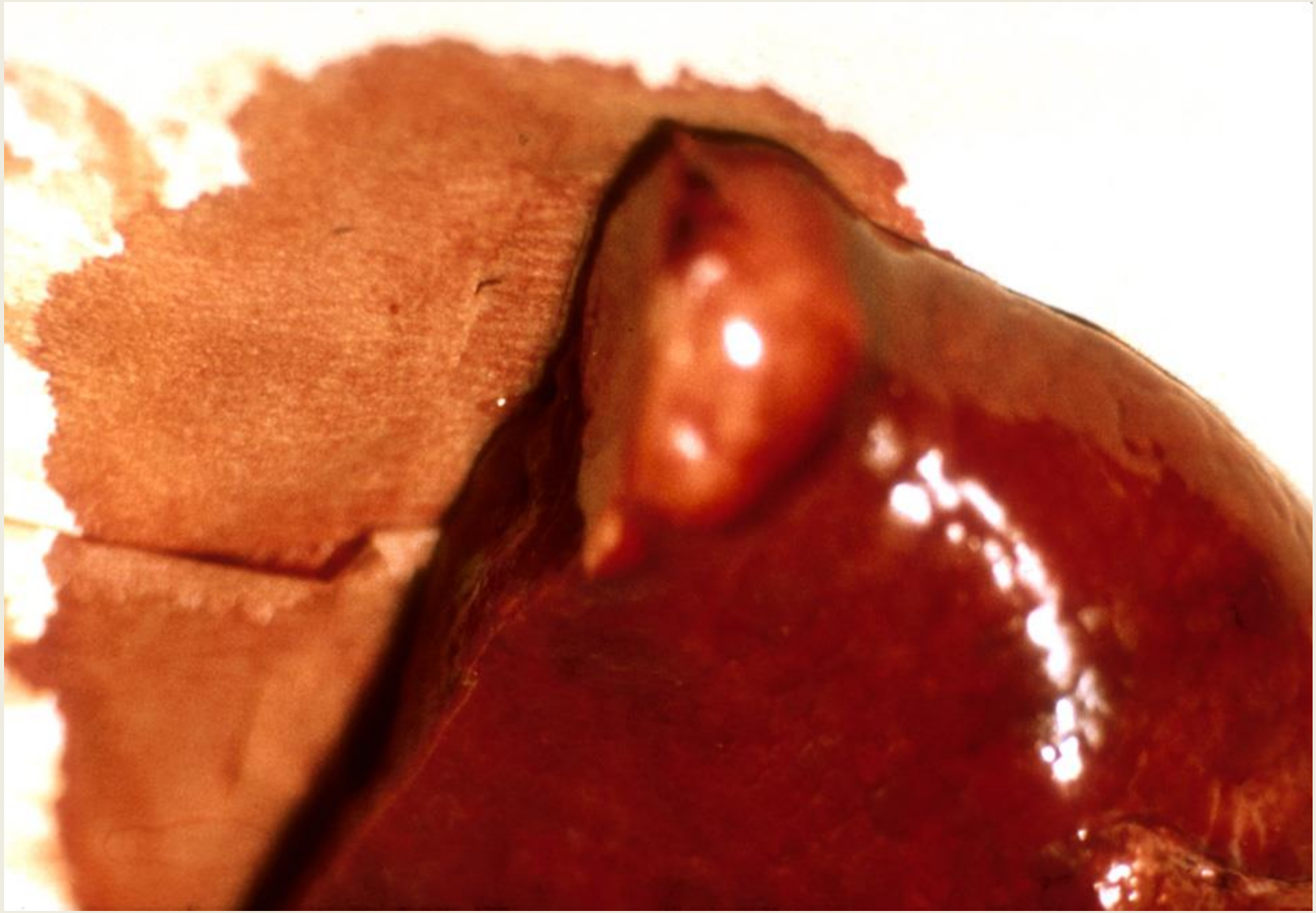
WHY IS HCC SURVEILLANCE BENEFICIAL?
HCC TREATMENT OPTIONS: EARLIER IS BETTER



4/1/2014

STAGE DISTRIBUTION OF LIVER CANCERS AMONG AN PEOPLE, 2004-2016





ABLATION DEMO

rita animation.mpg

TREATMENT OF EARLY HCC

- Ablative therapies, Radiofrequency and Microwave can be curative HCC tumors 3cm or less.
  - If tumor is reachable in right lobe or in medial segments of the left lobe, procedure can be done in radiology suite using percutaneous US or CT guidance with conscious sedation
    - Patient will be out the door in 2-3 hours and back to full activity in 3 days
  - If tumor is deep in left lobe or near diaphragm or major vessel, ablation via laparoscopic approach is necessary and patient hospitalized overnight and back to full activities in 1 week
- Surgical resection of single lesions usually under 5 cm
- Liver Transplantation
  - 3 or less lesions,
  - All in one lobe,
  - Total diameter <7cm,
  - Largest <5cm

Survival data of Sorafenib, and other oral multikinase inhibitor, positive phase III trials in hepatocellular carcinoma

Study	Drug	Setting	Median OS (months)	HR (95% CI)
SHARP20	Sorafenib vs placebo	1st-line	10.7 vs 7.9	0.69 (0.55-0.87)
Asia-Pacific21	Sorafenib vs placebo	1st-line	6.5 vs 4.2	0.68 (0.50-0.93)
REFLECT49	Lenvatinib vs sorafenib[a]	1st-line	13.6 vs 12.3	0.92 (0.79-1.06)
RESORCE46	Regorafenib vs placebo	2nd-line	10.6 vs 7.8	0.63 (0.50-0.79)
CELESTIAL50	Cabozantinib vs placebo	2nd-/3rd-line	10.2 vs 8.0	0.76 (0.63-0.92)
REACH-262	Ramucirumab vs placebo	2nd-line	8.5 vs 7.3	0.71 (0.53-0.95)

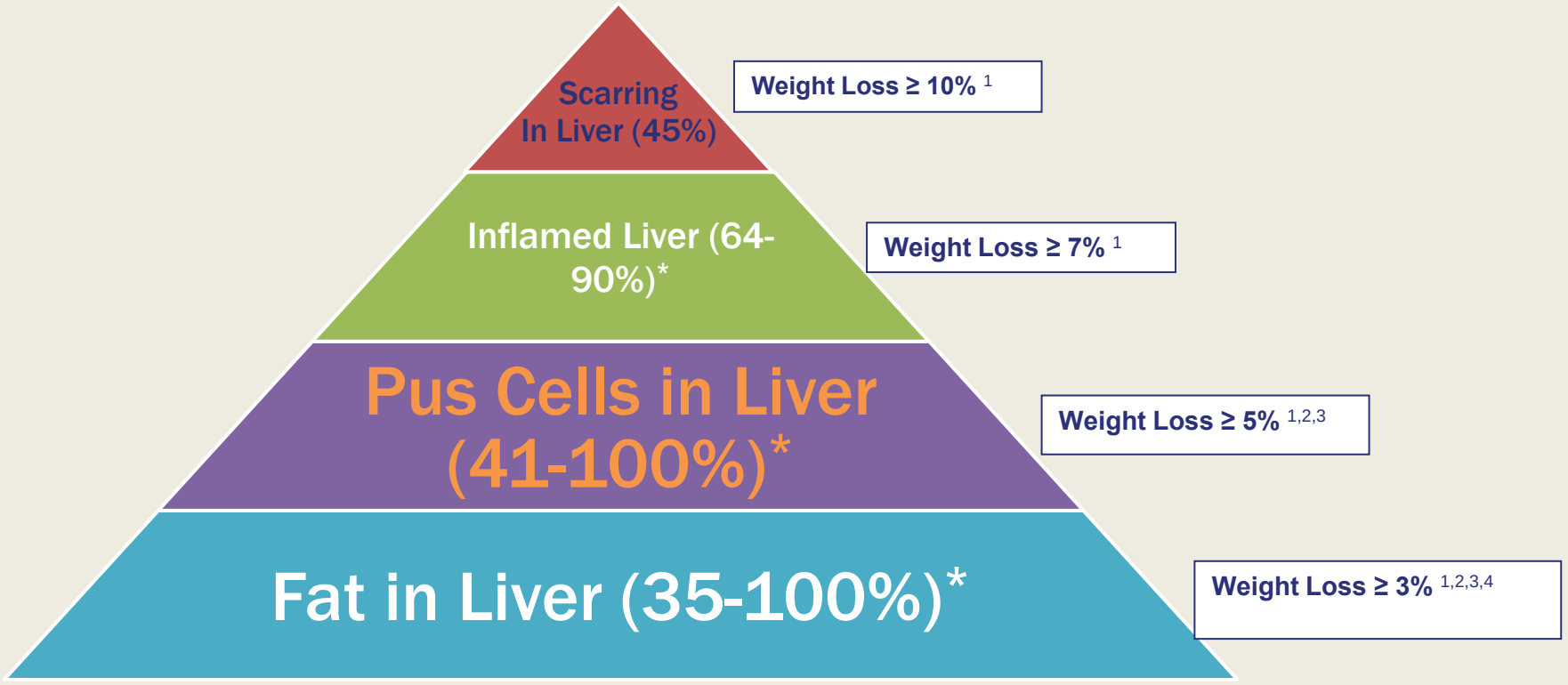
Should we subject patients to these drugs and the sometimes severe side effects?

COFFEE IS GOOD FOR YOUR LIVER

- Many studies have shown this.
  - Recent large study in England about one million people with cirrhosis followed for 10 years.
    - Persons didn't drink coffee had twice the death and liver cancer risk compared to those who drank any kind of coffee: decaf, drip, espresso or instant
- All coffee: instant, espresso, drip, decaf works
  - Reduces risk of liver cancer and liver related death
  - Benefit is not in the caffeine, it is in the bean

WEIGHT LOSS PYRAMID: LIFE STYLE MODIFICATION REDUCES NASH SEVERITY

With Weight Loss How Fast Does the Liver Improve



1. Vilar-Gomez. *Gastroenterology* 2015; 2. Promrat. *Hepatology* 2010; 3. Harrison. *Hepatology* 2009; 4. Wong. *J Hepatol* 2013
*Depending on degree of weight loss

CONCLUSION

- Identify patients at risk for liver disease and screen for diagnosis
- Ascertain the stage of liver fibrosis
- Initiate every 6 month surveillance with liver US and AFP for those at highest risk of HCC including all persons with advanced fibrosis or cirrhosis
- Remember that there are significant limitations to our screening modalities and to keep a high level of suspicion
- Detecting HCC tumors early can lead to long-term survival
- HCC that is to advanced to ablate, resect or transplant is ultimately fatal as unlike other cancers, no chemotherapy for cure is available

CONCLUSIONS

- Overall survival for HCC is poor due to under identification of persons at risk and inadequate surveillance.
- Surveillance for HCC to detect tumors early is beneficial and can greatly prolong survival
- Need for better radiographic and biomarker tools to detect HCC earlier and reduce false positive lesions
- Can we combine risk factors (age, genotype, viral load etc.) to come up with better algorithms for frequency of surveillance
- We need better treatment modalities for treating non-curable HCC
- Globally to reduce HCC due to hepatitis B, Vaccinate all newborns and reduce aflatoxin exposure
- Treatment of active viral replication to reduce incidence in both HBV and cure HCV

American Indian/Alaska Native Cancer Prevention and The Impact of Historical Trauma

NACDD- AI/AN Best Practices in Models of Care

January 25TH, 2023

Celena Donahue

Public Health, Health Equity Advocate, Facilitator, Sr. Quality Improvement Specialist

Agenda

Welcome and introductions

Topics:

- -History
  - - Historical Trauma
  - - What Works

Q&A

Wrap Up

Learning Objectives

1. Identify successful AI/AN local models with evidence-based recommendations for cancer prevention

2. Increase knowledge of how AI/AN historical trauma influences health seeking behaviors with cancer prevention services

3. Improve understanding of how health programs can impact cancer screenings within Native American populations

Disclaimer

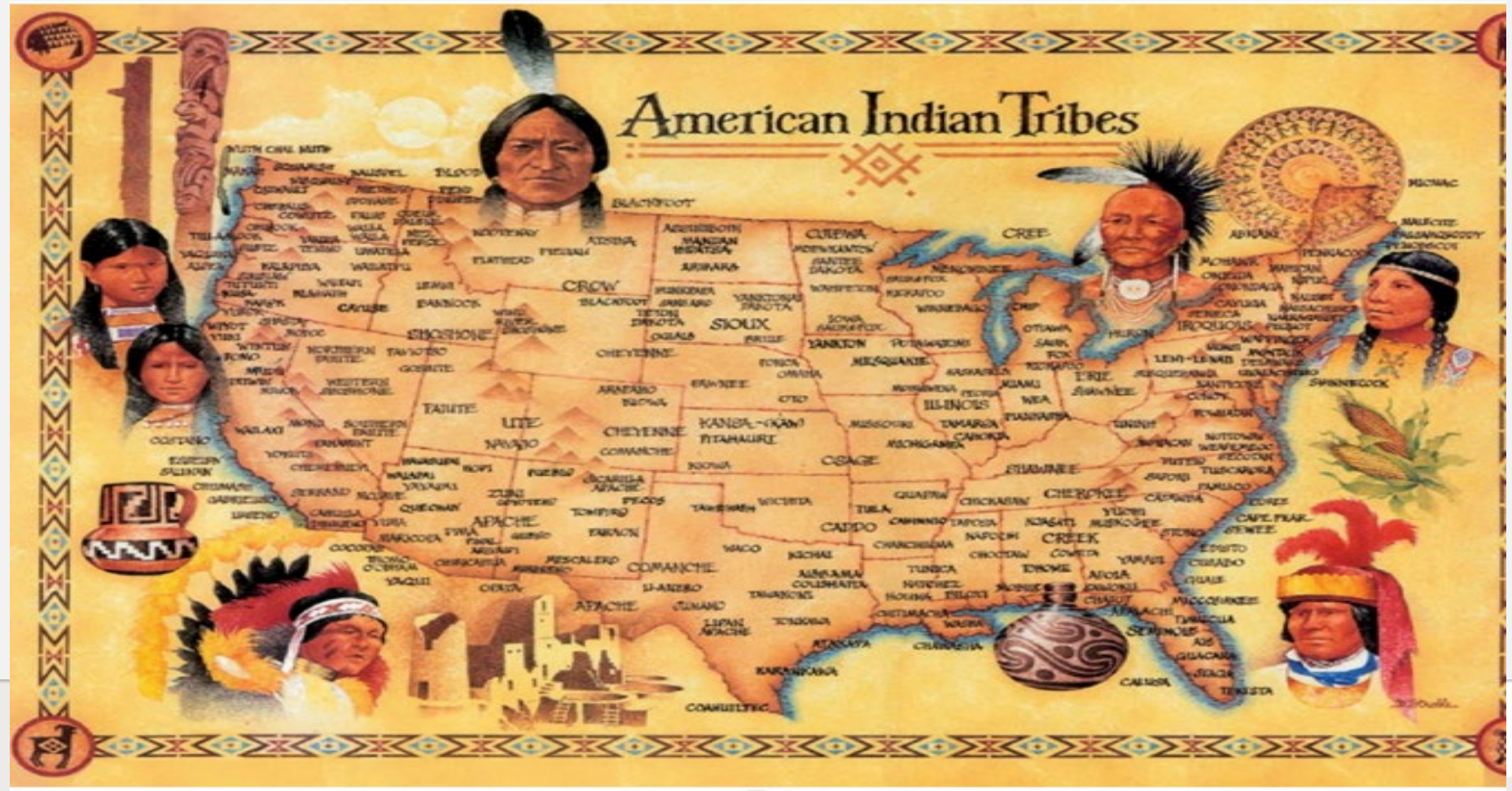
- ✓ This training is not comprehensive or exhaustive
- ✓ No one or two individuals represent the AI/AN perspective
- ✓ Participation in today's session is essential for optimal learning

Honoring Original Indigenous Land

We gratefully acknowledge the Native Peoples on whose ancestral homelands we gather, as well as the diverse and vibrant Native communities who make their home here today.

-NMAI Land Acknowledgement

Land Acknowledgement



Whose Land are you on?

Colonization and AI/AN Policy, Timeline

1769: Spanish Mission Era (AI enslavement)
1819: US Civilization Fund Act (forced AI children into boarding schools)
1823: Mexican colonization, dispossession of native lands (813 land grants)
1848: Gold Rush Era and mass murder
1850: Government & Protection of Indians Act (bounty on AI adults, enslavement of AI children (males – 30, females 25); repealed in 1867, 4 years after the Emancipation Proclamation
1852: Eighteen unratified treaties (7.5M Acres)
1873-98 Reservation/Rancheria Era (36/16 established)
1883: Code of Indian Offences – US Legislation outlawing AI religious practices
1893: General Allotment Act (breaking up and privatizing reservation lands)
1951: Termination Era – Rancheria Act of 1958 (23 Rancherias terminated)
1975: Indian Self-Determinations and Education Act (PL93-638)
1978: American Indian Religious Freedom Act

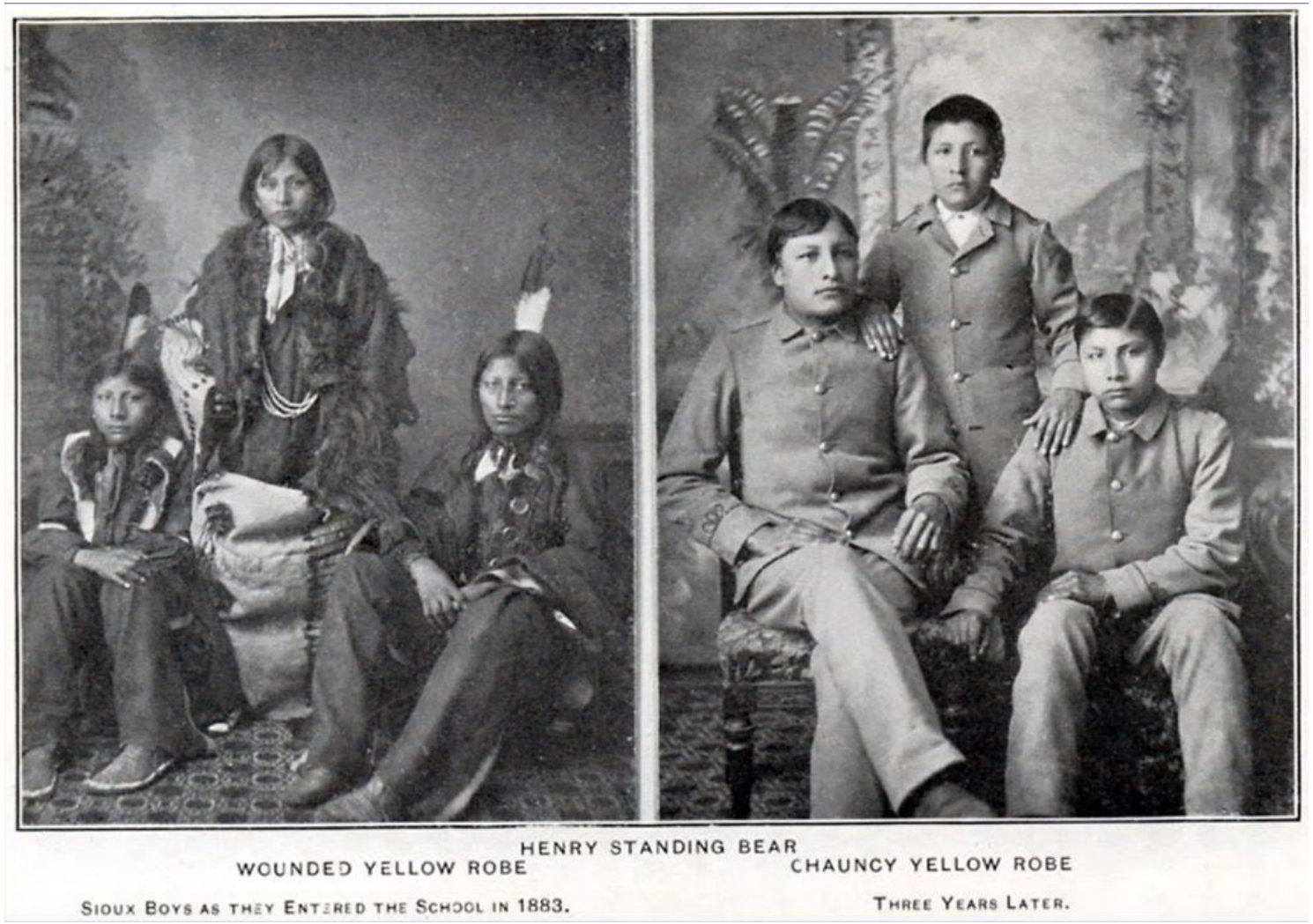
WHAT IS HISTORICAL TRAUMA?

What is historical trauma? Historical trauma is “a constellation of characteristics associated with massive cumulative of trauma across generations” (Brave Heart, 1999).

“These events don’t just target an individual, they target a whole collective community…the trauma is held personally and can be transmitted over generations

Historical Trauma

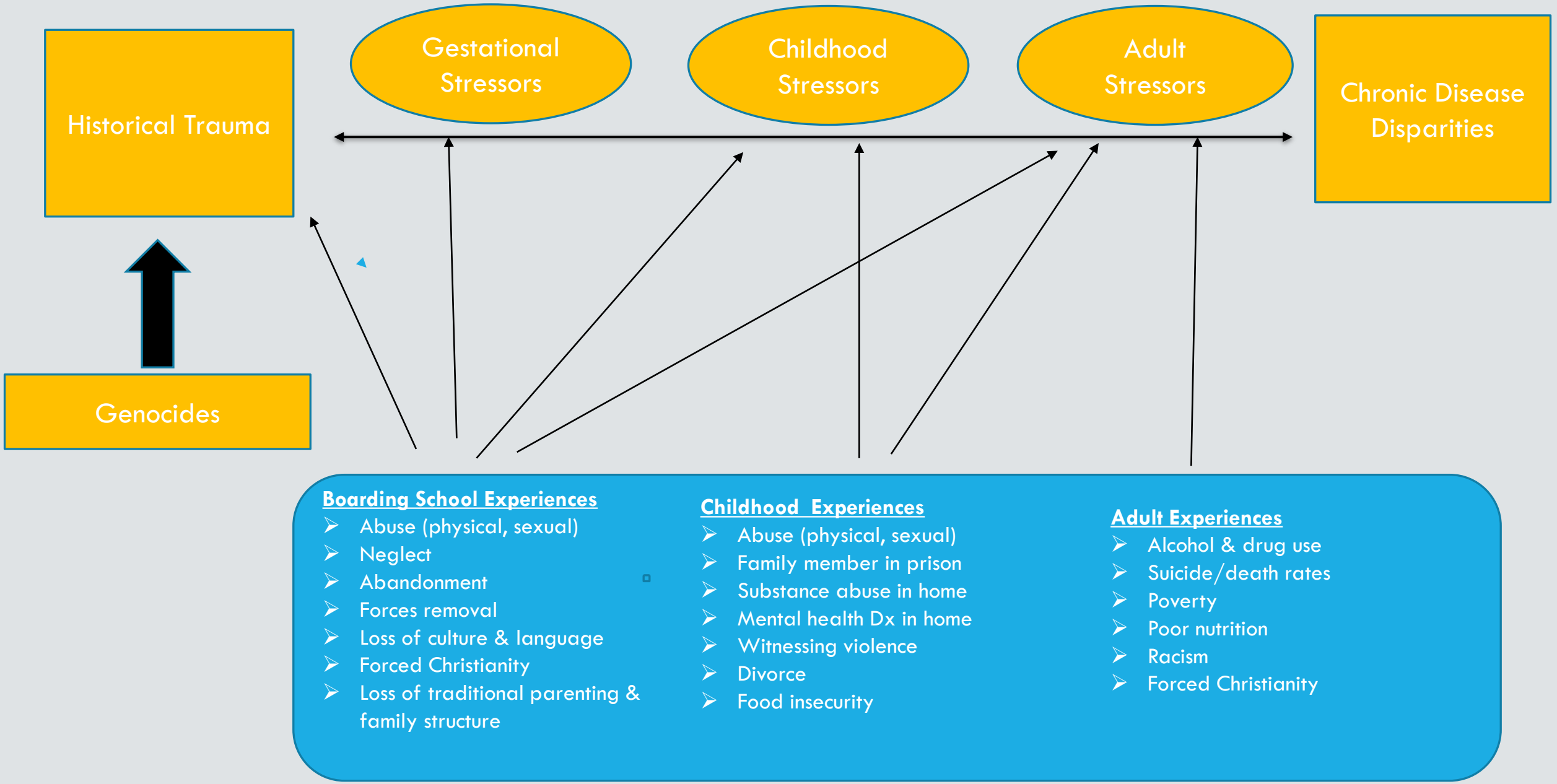
Today, current and generational issues affect Native American communities, families, and individuals. There is no simple solution. Historically, Native Americans have been marginalized by government policies, such as sending Native children to boarding schools where they are taught to assimilate, resulting in the displacement or extermination of communities. There can be a feeling among Native Americans that “Everybody hates you,” and these attitudes and conflicts are passed down through generations. Additionally, there are problems with economic and political disparity.



HENRY STANDING BEAR
WOUNDED YELLOW ROBE
CHAUNCY YELLOW ROBE

SIOUX BOYS AS THEY ENTERED THE SCHOOL IN 1883.

THREE YEARS LATER.


Historical Trauma
Genocides
Gestational Stressors
Childhood Stressors
Adult Stressors
Chronic Disease Disparities
Boarding School Experiences
Abuse (physical, sexual)
Neglect
Abandonment
Forces removal
Loss of culture & language
Forced Christianity
Loss of traditional parenting & family structure
Childhood Experiences
Abuse (physical, sexual)
Family member in prison
Substance abuse in home
Mental health Dx in home
Witnessing violence
Divorce
Food insecurity
Adult Experiences
Alcohol & drug use
Suicide/death rates
Poverty
Poor nutrition
Racism
Forced Christianity

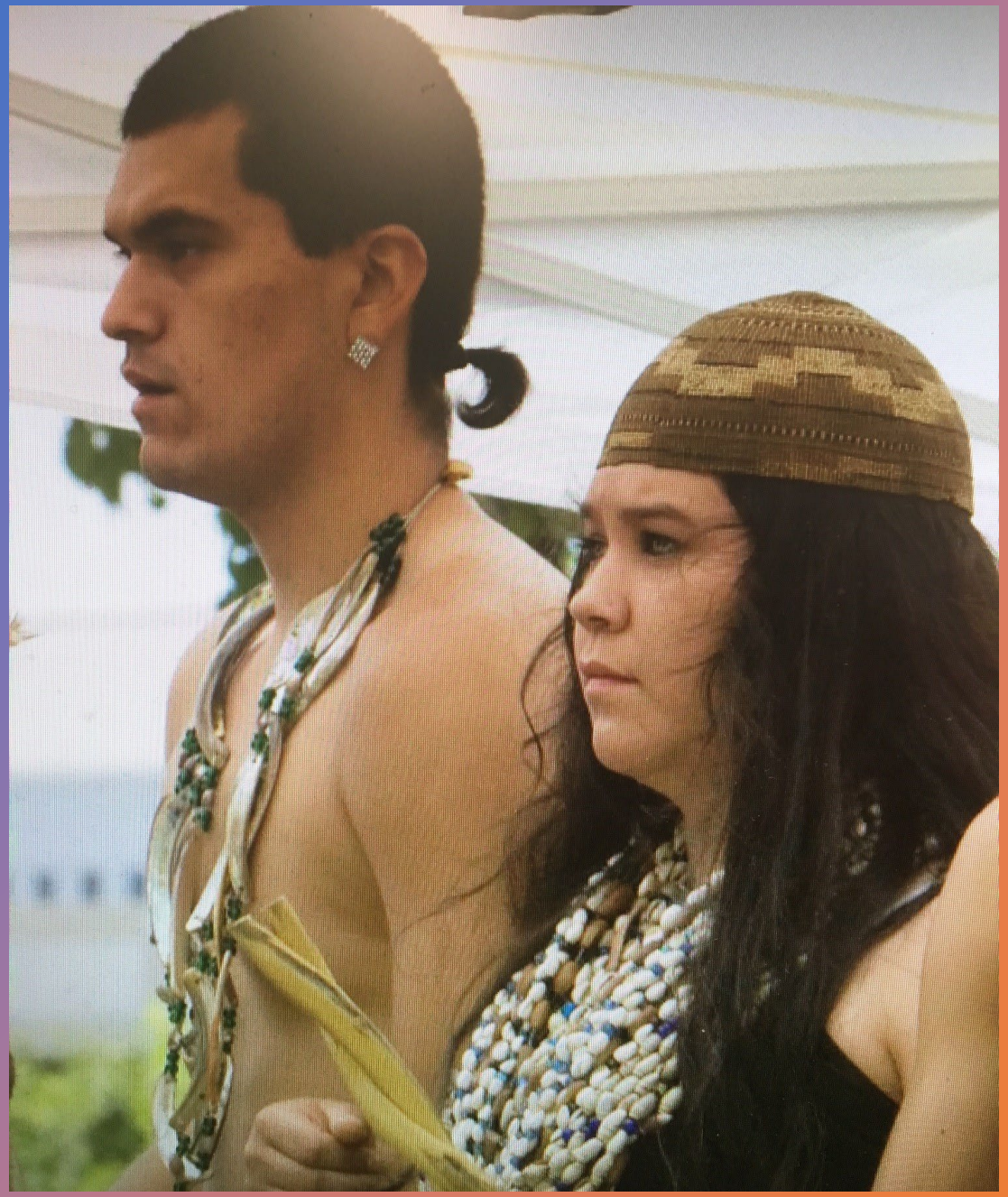
Historical Trauma, Truth, & Healing

Historical trauma is entirely different than consciously holding onto the past when it resides in your ancestral memory and DNA. It results in numerous defense mechanisms, developmental malfunctions, and behavioral issues. This is scientific and is supported in studies.

-Tony Ten Fingers/Wanbli Nata'u, Oglala Lakota

Disparity vs Equity

Disparities measure HARM whereas **Equity** measure PROGRESS



AI/AN are more likely to get certain cancers compared to non-Hispanic White people

American Indian and Alaska Native people have much higher rates of getting several cancers, including lung, colorectal, liver, stomach, and kidney cancers, compared to non-Hispanic White people in the United States.

Culture is Prevention

Successful prevention efforts need to be able to hold complex truths in Native communities:

The realities of historical trauma and structural violence and the profound resiliency that has allowed Native communities to survive-and thrive- within these harsh contexts….concepts such as cultural connectedness, narrative resilience, honoring treaties, conflict resolution, [truth and] reconciliation, community empowerment, family cohesion, and cultural affinity [as concepts].

Move UPRIVER

To "Move ***"upriver"*** means we need to advance health equity by reducing structural and social drivers of health inequities *ALL levels*

#1

Improve INDIVIDUAL social needs and network

#2

Improve COMMUNITY level social determinants of health

#3

Improve internal INSTITUTIONAL drives of health inequity

What are Social Drivers (SDOH)

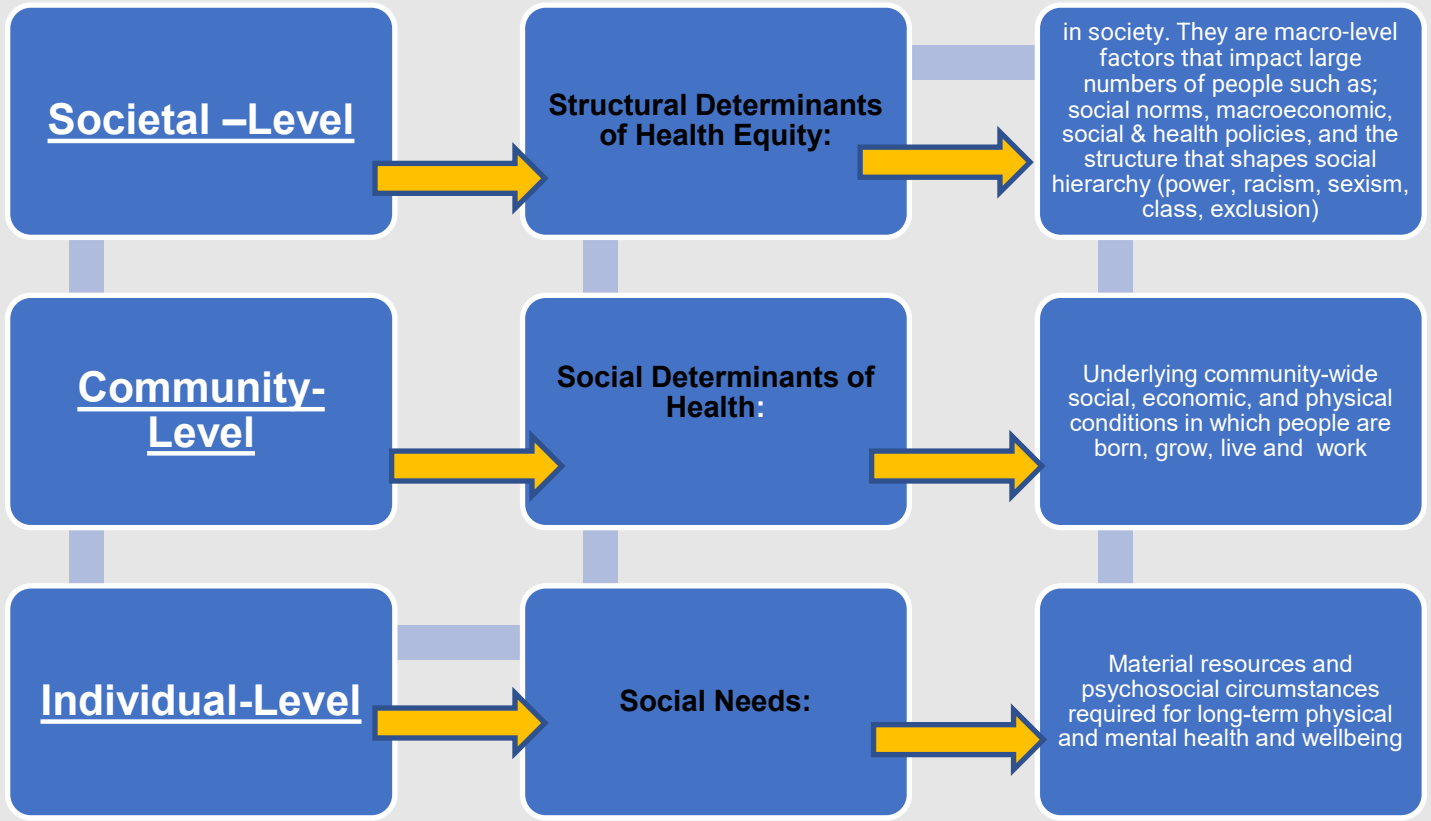
Social determinants of health (SDOH) *are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.*

The Role of Social Determinants of Health on Cancer Prevention

Structural Determinants of Health Equity

Social Determinants of Health

Individual Social Needs



How Can Cancer Rates Be Lowered Among AI?AN?

American Indian and Alaska Native people have some of the highest rates of getting certain cancers in the United States. To help lower the number of cancer:

1

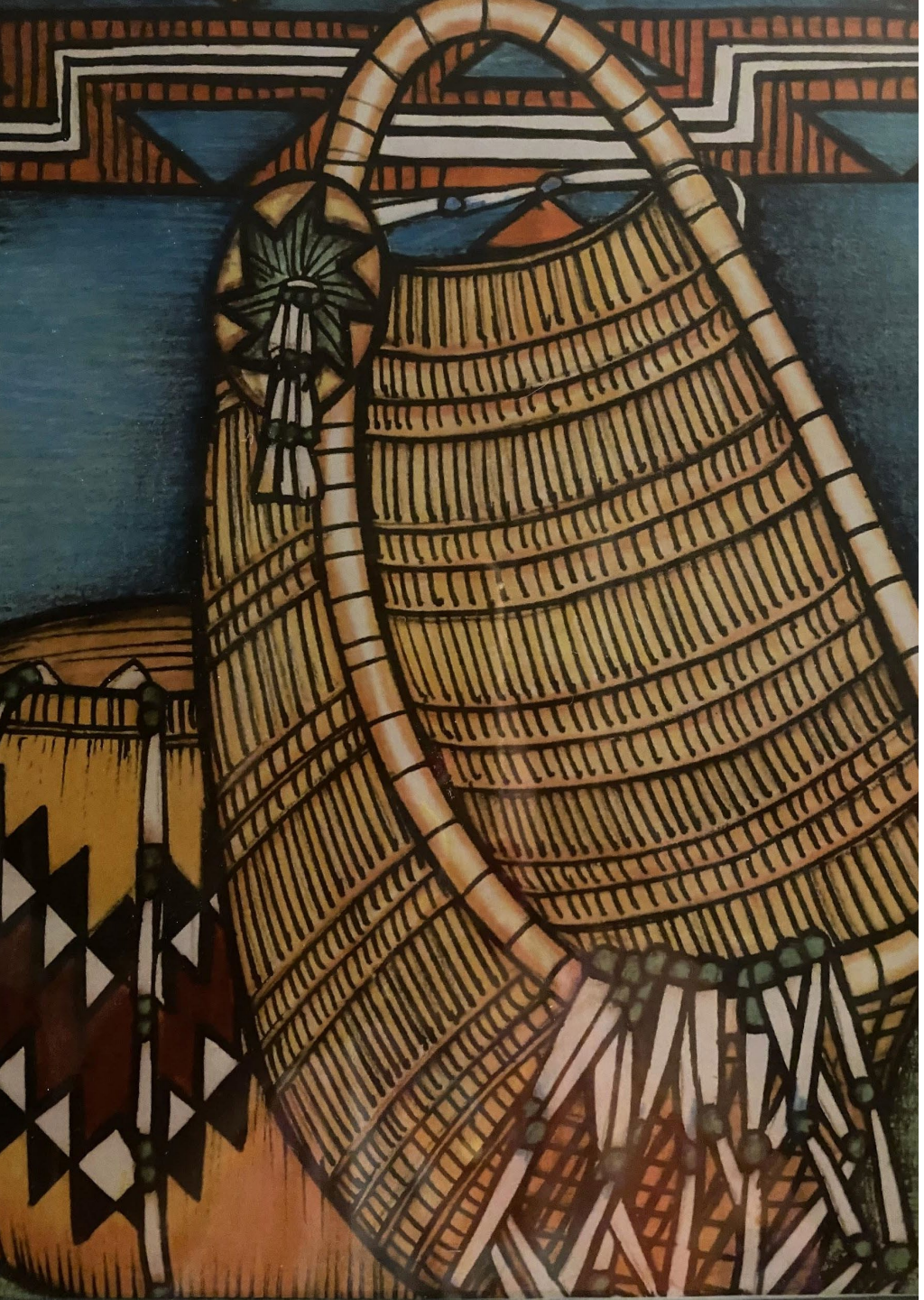
Making sure AI/AN people get cancer screening tests. Screening tests can prevent some common cancers or find them early, when they are easier to treat.

2

Making sure preventive health care services and programs are available to help people quit smoking.

3

Developing programs that promote healthy eating and keeping a healthy weight.



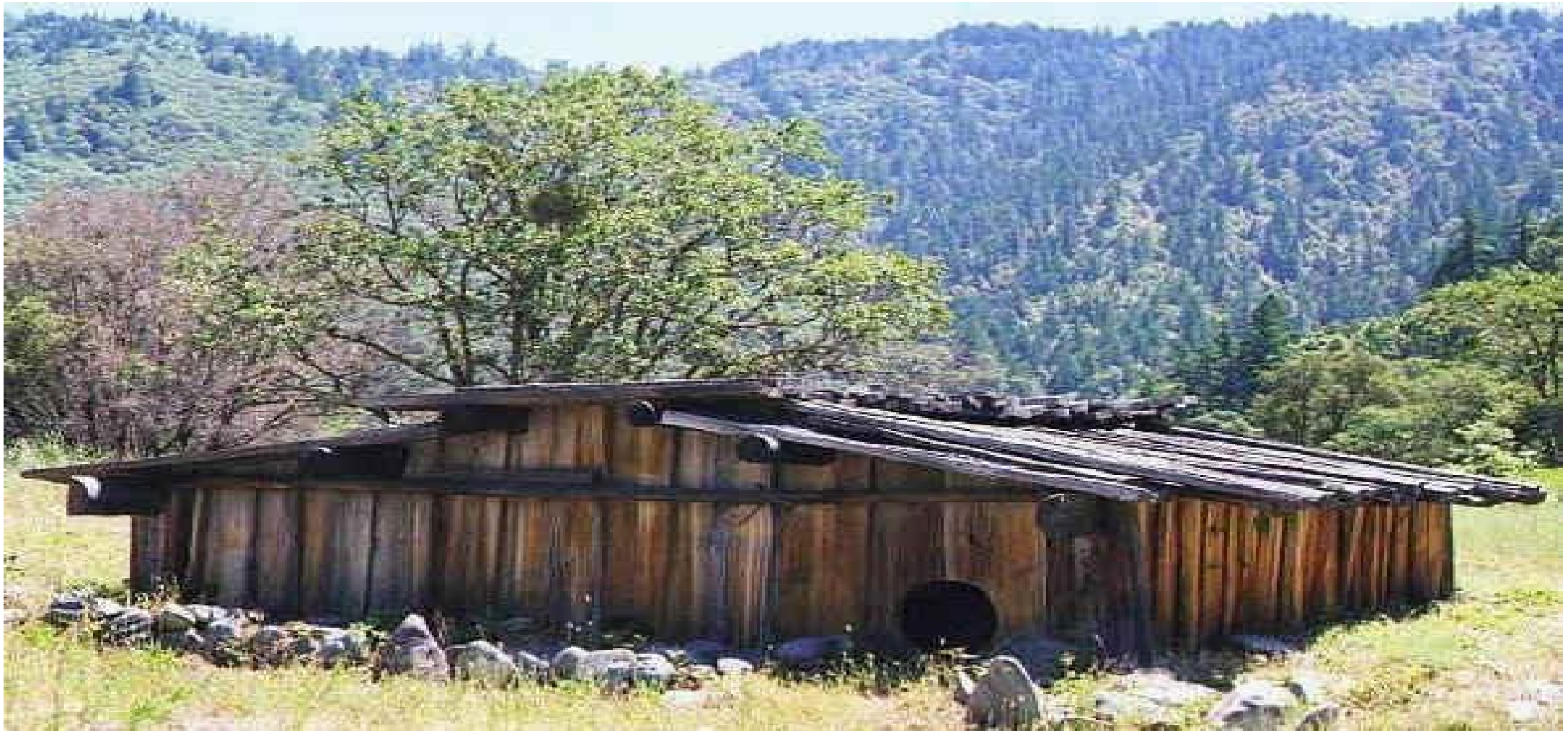
It’s easy to feel overwhelmed by the need for cultural competence to reduce health care disparities—but there are things we can do to make progress towards more equitable care.

Providers should be aware that racial and ethnic disparities exist, and that they are supporting to help eliminate these disparities while preserving the culture.

We believe in using our way…

"Native Communities have the wisdom to find a solution." Our knowledge, education, and way of learning, has been through gathering, storytelling, and songs, that are passed down through generations".

Cancer Screening: WHAT WORKS



System Influence, Culture As Prevention

Evidence-based interventions have proven to increase CRC screening rates, such as:

- **Client and provider reminders**
- **Provider assessment and feedback**
- **Reduction of structural barriers**

Community asset for Social Norm Change

- Small media
- Partnerships
- Culture positive messages about Colorectal Cancer Screening

Reducing Structural Barriers: *Talking Circle*

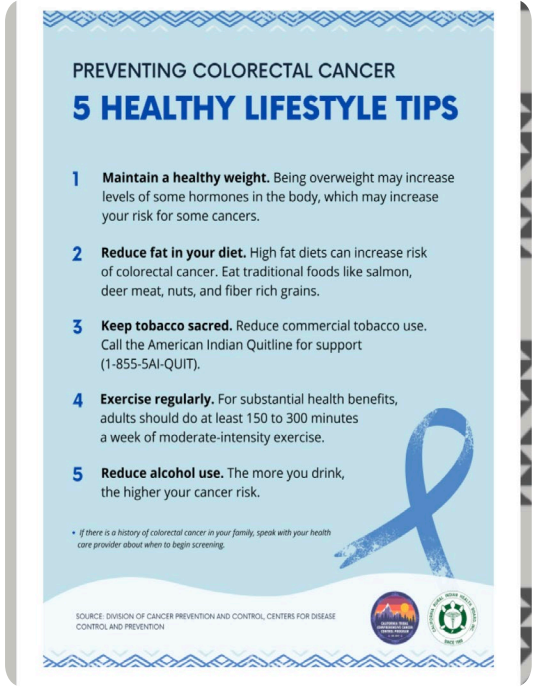
Storytelling has been our way of teaching and learning for centuries...

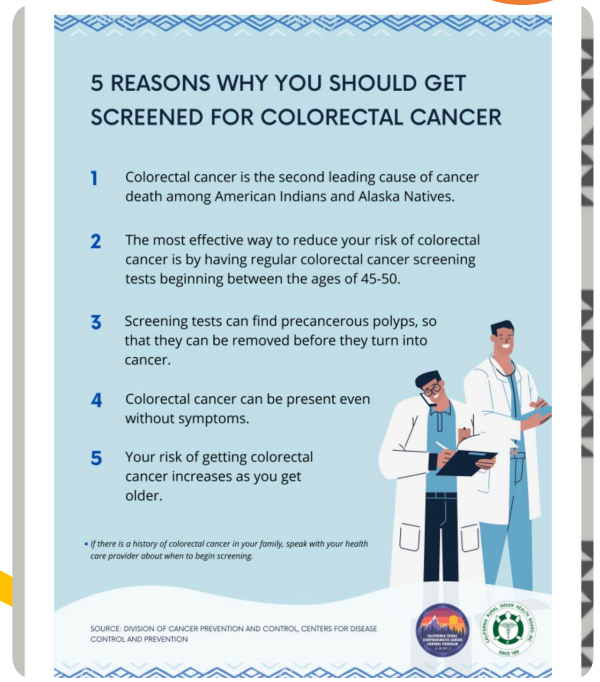
As Americans Indians, we are story tellers. That is how we gather and pass down knowledge and information. From the beginning of time; our way has been through story telling and gathering. Talking Circles has been used as a culturally appropriate way to address barriers at a patient, community, and staff level.

Small Media/Health Communication

- Dissemination of general health information content. Includes promotion of guidelines, literature, provider and patient information and best practices.

- *Make sure materials are Culturally appropriate*





Quality Improvement Processes

- ✓Proving technical assistance , such as QI coaching, to a health system to improve the systems measurable outcomes, such as a screening rate, using QI principles and tools.

- ✓Working with Tribes, Tribal Coalition, American Cancer Society, National Coalitions, State Boards, etc.

K'ima:w means "good medicine" in the Hupa Language

Provider Influence, Team

Cultural Competency Training

Trauma Informed Care

Motivational Interviewing

Cultural Coordinators

Goal: Culture positive messages about cancer screening

Culture is Prevention

- *Culture [and experiences] affects how people communicate with, understand, and respond to health care providers. It is crucial for providers to be culturally competent—acknowledge the beliefs, languages, traditions, health practices [and traumatic experiences] of patients, and apply that knowledge in care delivery.*

AN/AI Traditional Beliefs and Practices to Health, Wellness, Spirituality and Healing.

- ✓ Know your history (cultural values)
- ✓ Listen to AI/AN needs
- ✓ Be adaptable, more culturally sensitive and reflective (in approach, materials, etc.)
- ✓ Bring in the experts

Q & A
Thank you!

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Facilitator, Sr. Quality Improvement Specialist

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Cancer Prevention Across the Lifespan

Successful Local Models and Approaches for Cancer Prevention in American Indian and Alaska Native Communities

Kellen Polingyumptewa, Coordinator

Hopi Women's Health Program

Hopi Cancer Support Services

HOPI Cancer Support Services

HOPI Cancer Support Services

- Hopi Women's Health Program
  - CDC Federal Funding
- Partnership for Native American Cancer Prevention (NACP)
  - NCI Sub-award Funding
- Hopi Tobacco Education and Prevention Program
  - AZ State Funding
- Colorectal Cancer Screening Program
  - NCI Sub-award Funding
- Hopi Cancer Assistance Fund
  - Financial Assistance

HOPI Cancer Support Services

Hopi Women's Health Program	• CDC Federal Funding
Partnership for Native American Cancer Prevention (NACP)	• NCI Sub-award Funding
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Colorectal Cancer Screening Program	• NCI Sub-award Funding
Hopi Cancer Assistance Fund	• Financial Assistance

HOPI Cancer Support Services

Leading Causes of Mortality for Hopi Men

Top three causes:

- Unintentional Injuries
- Cardiopulmonary issues
- Cancer

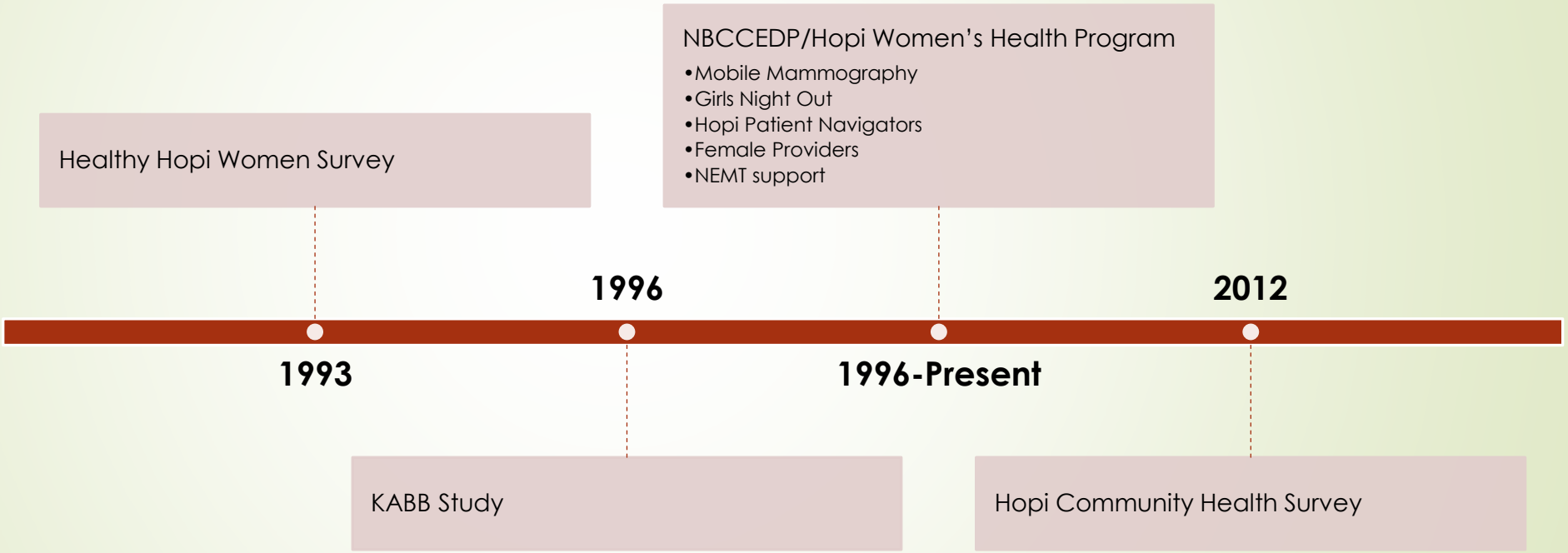
Top Five Cancer Incidences for Hopi Men

- Colorectal
- Prostate
- Gallbladder
- Stomach
- Renal/Kidney

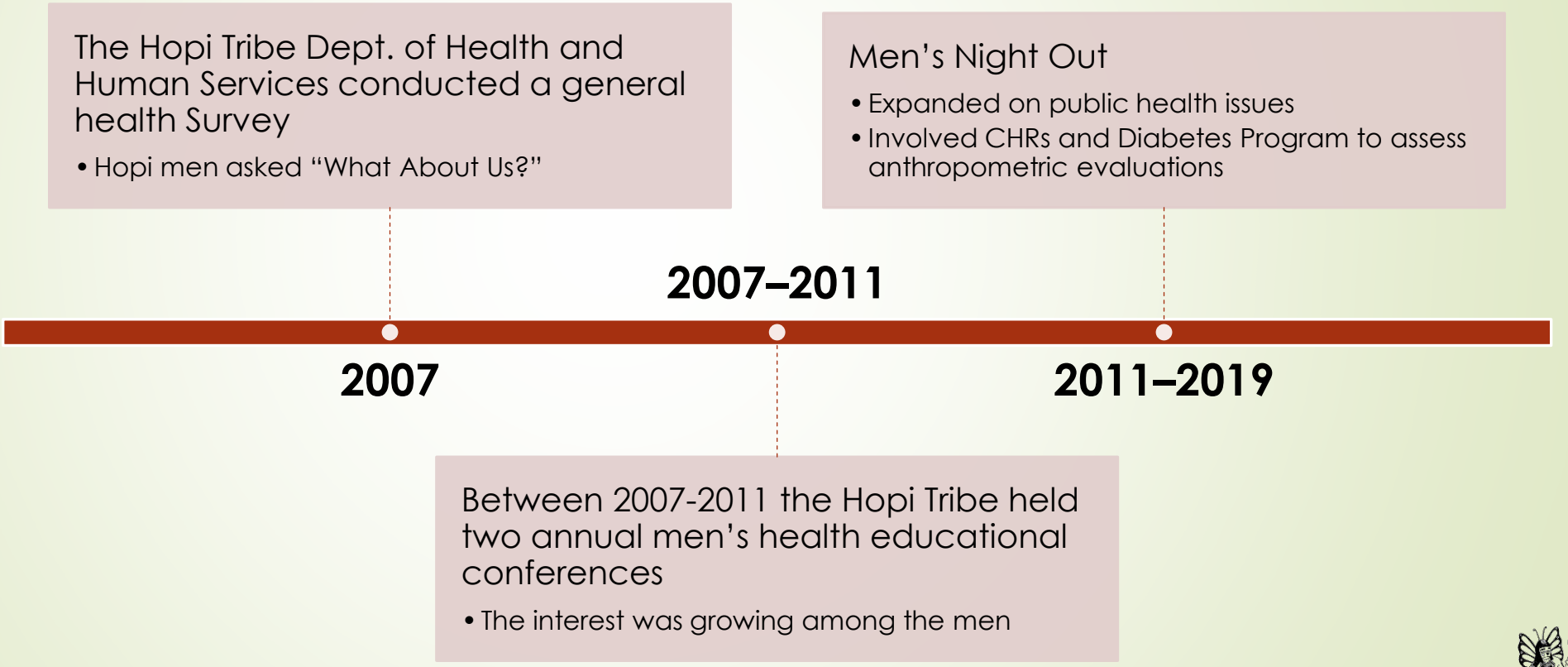
Resource: (Batai, et al., 2020)

HOPI Cancer Support Services

Women's Health Initiative



Men Health Initiative

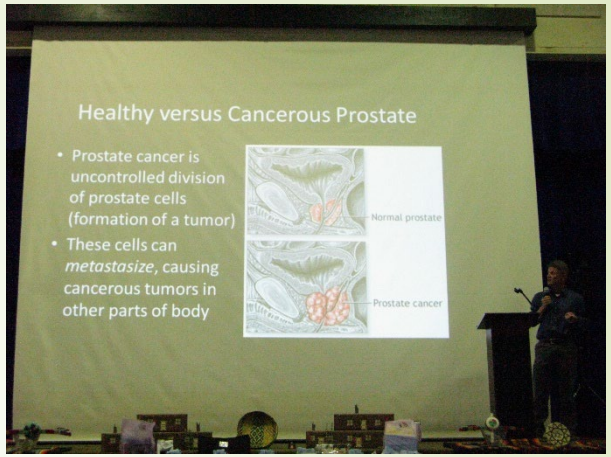


(Native American Cancer Research Corporation, 2011)

HOPI Cancer Support Services

Men's Health Initiative

- 2012 – Applied for additional grant funding for men's health activities
  - Applied new strategies:
    - Created a fun inviting environment by involving a entertainment (powwow drum groups, comedians, etc.)
    - Included more screening such as Oral Health Screenings from NAU Dental Program
  - Outcomes
    - 112 men attended
    - Radio and word of mouth advertisement worked better
    - Provided additional men's health mini sessions through out the year
    - More topics that are not cancer specific



HOPI Cancer Support Services

Men's Health Initiative

- 2012-2017
  - MAN UP: Men's Health Conference
    - Applied new strategies:
      - Used MAN UP to challenge men
      - Involved more community presentation on cultural and wellness
      - Included a Wellness Expo
    - Outcomes
      - Avg. Attendance 200-214 participants
      - Improved response to wellness and screening programs
      - Changes in community attitude toward cancer and screening for men

HOPI Cancer Support Services

Strategies

Recruitment/Involvement

- Combine cancer education with other health events
- Collaborate with health system to provide health education and services outside of the clinical setting
- Promote health and wellness that includes the familial support
- Offer support and resources at these events

Messaging

- Focus on tradition and family values
- Provide stories of people within the community
- Focusing on personal health as a part of family health

(Native American Cancer Research Corporation, 2011)

(Katai, et al., 2022)

HOPI Cancer Support Services

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HOPI Cancer
Support Services

Thank you

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HOPI Cancer Support Services

Successful Local Models and Approaches for Cancer Prevention in American Indian/Alaska Native Communities

Cancer Prevention Across the Lifespan:
https://chronicdisease.org/page/cancerprograms/cancer-prevention-across-the-lifespan/

International Association for Indigenous Aging: https://iasquared.org/
https://iasquared.org/

Alaska Native Medical Center: https://anmc.org/

California Colorectal Cancer Coalition: https://www.cacoloncancer.org/

Hopi Tribe Cancer Support Services: https://www.hopi-nsn.gov/tribal-services/department-of-community-health-services/cancer-support-services/