



The Hidden Story of Cancer and the Unique Healthcare Challenges of our Asian and Pacific Islander Communities

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Why I'm here



KA 'AHA LĀHUI O 'OLEKONA
HAWAIIAN CIVIC CLUB OF OREGON & SW WASHINGTON

Overview

- Background
- What does it mean to be Asian?
- What does it mean to be Pacific Islander?
- The History and Healthcare Challenges in Asian Americans
- The History and Healthcare Challenges in Native Hawaiian and Pacific Islander Communities
- How you can help

What is Asian?

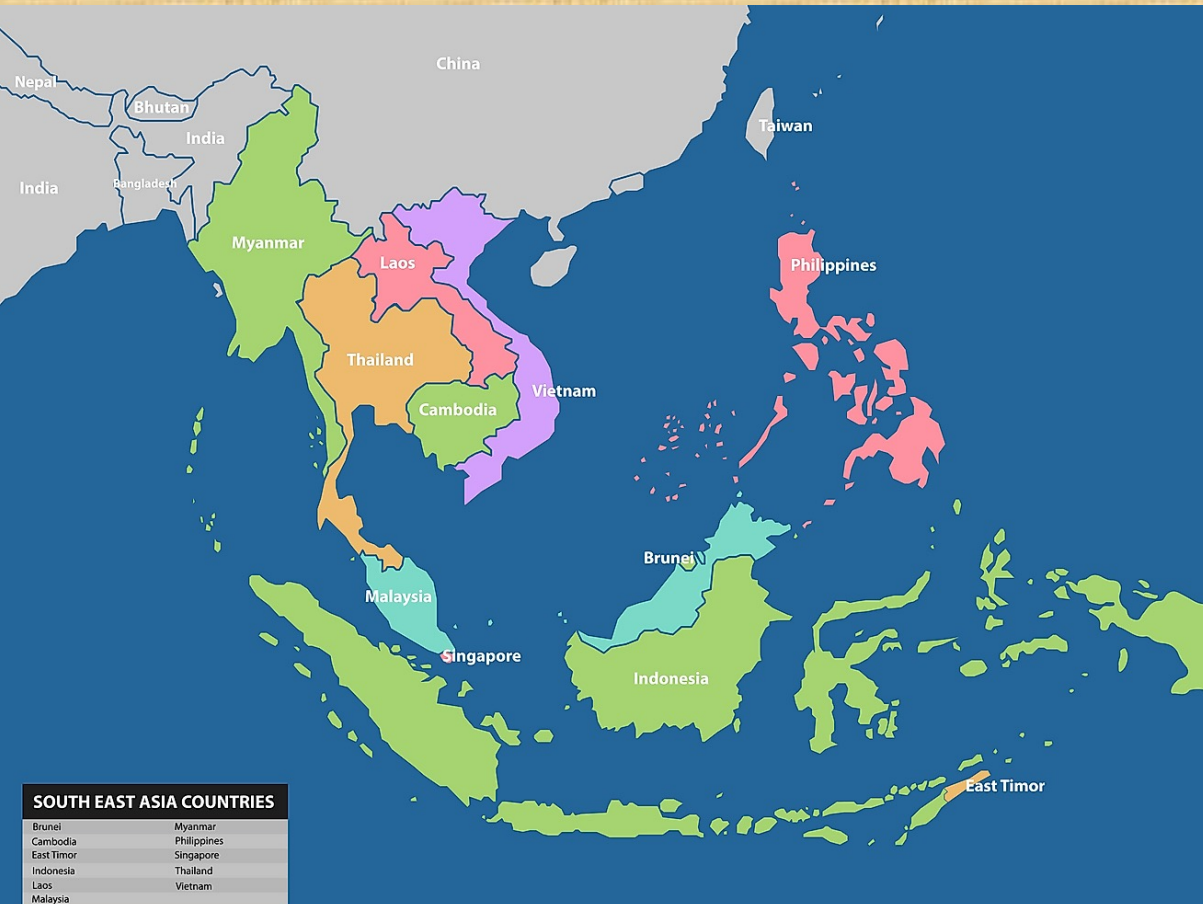


What is Asian?

- Over 20 countries

Southeast Asian

Cambodian, Filipino, Hmong, Laotian, Kampuchean, Thai, Vietnamese, Indonesian, Burmese, Malaysian



South Asian

Indian, Pakistani, Nepalese, Bhutanese, Afghani, Bangladesh, Sri Lankan

East Asian

Chinese, Japanese, Korean, Taiwanese, Mongolian

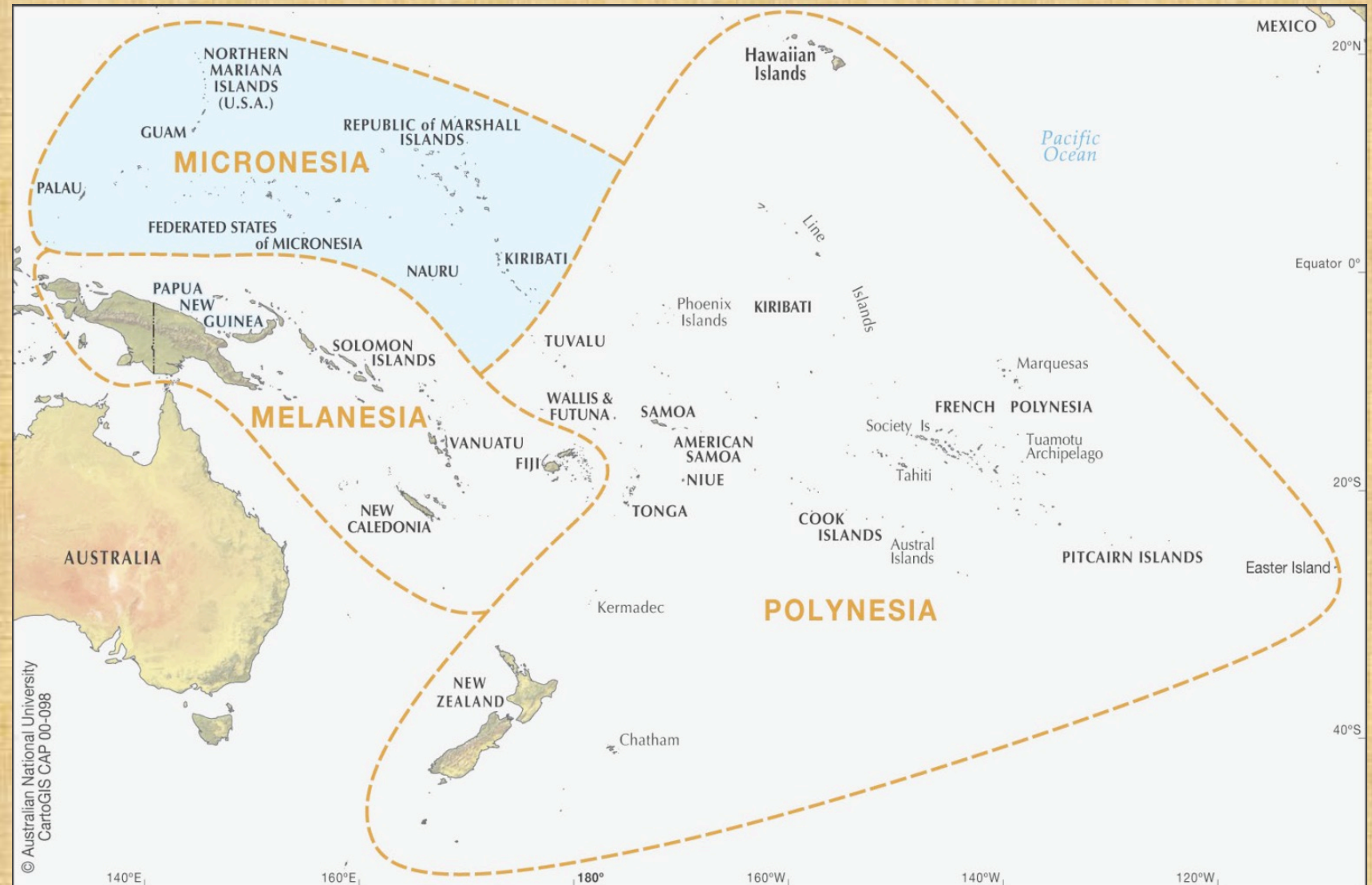


What is Pacific Islander?



What is Pacific Islander?

- Native Hawaiian
- Micronesian
- Chamorro
- Guamanian
- Polynesian
- Tahitian
- Samoan
- Tongan
- Melanesian
- Fiji Islander
- New Guinean
- Other Pacific Islander



Background

- Asian Americans are the fastest growing ethnic/racial group in the United States
- Cancer is the leading cause of death for Asian, Native Hawaiian and other Pacific Islander populations in the United States
- Most studies show that the aggregated “API” group has superior cancer outcomes than non-Hispanic White individuals but when disaggregated both Asian Americans and Native Hawaiians and Pacific Islanders have worse cancer outcomes
- There are cancer screening disparities for both Asian Americans and NHPs compared to White Americans
- Rates of obesity are rising related to Western diets and sedentary lifestyle which can lead to cancers like colorectal, prostate, breast and endometrial cancer

Most Common Cancers

Asian

- Stomach Cancer
- Liver Cancer
- Colorectal

Pacific Islander

- Colorectal Cancer
- Liver Cancer
- Lung Cancer
- Prostate Cancer
- Stomach Cancer
- Breast Cancer
- Cervical Cancer
- Skin Cancer
- Throat Cancer

Asian Americans vs. Asians

ASIAN AMERICANS

Top Cancer Sites for American Asians (2014-2018)

Cancer Incidence Rates per 100,000 – Men			
Cancer	Asian/Pacific Islander Men	Non-Hispanic White Men	Asian/Pacific Islander / Non-Hispanic White Ratio
All Sites	309.1	520.4	0.6
Colon & Rectum	37.1	42.2	0.9
Liver & IBD	19.4	11.3	1.7
Lung	45.0	60.7	0.7
Pancreas	10.9	16.3	0.7
Prostate	57.7	118.9	0.5
Stomach	13.4	7.7	1.7

*IBD = Intrahepatic Bile Duct

Source: NCI 2021. Seer Cancer Statistics Review, 1975-2018. Table 1.24 and SEER*Explorer [Accessed 7/22/2021].

https://seer.cancer.gov/csr/1975_2018/, <https://seer.cancer.gov/explorer/>

ASIANS

Top Cancer Sites for Asians (2014-2018)

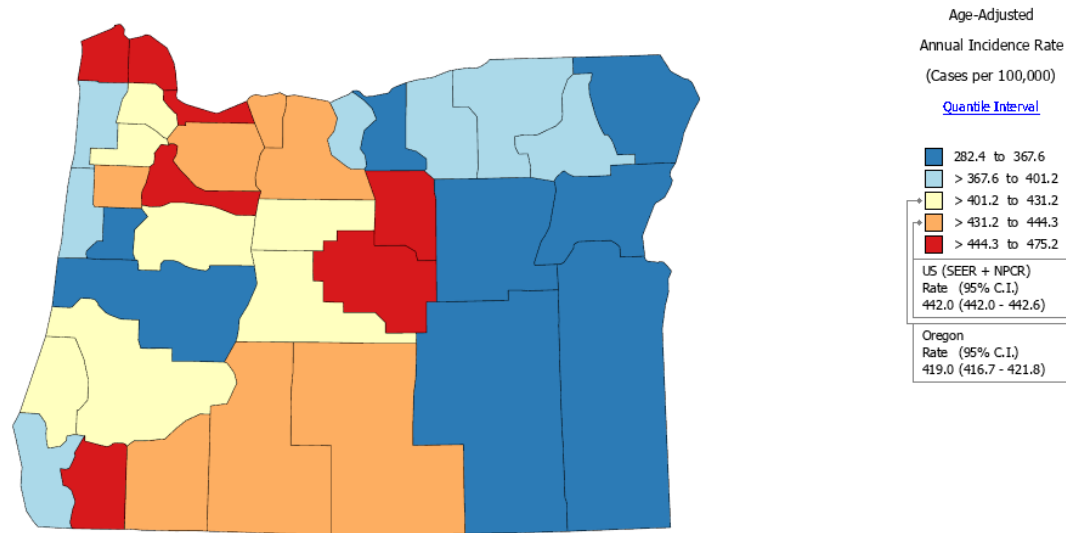
Cancer Incidence Rates per 100,000 – Women			
Cancer	Asian/Pacific Islander Women	Non-Hispanic White Women	Asian/Pacific Islander / Non-Hispanic White Ratio
All Sites	311.5	460.2	0.7
Breast	105.1	137.9	0.8
Cervical	6.4	6.7	1.0
Colon & Rectum	26.5	32.7	0.8
Liver & IBD	7.1	4.0	1.8
Lung	28.7	53.9	0.5
Pancreas	9.3	11.9	0.8
Stomach	7.6	3.8	2.0
Uterus	22.3	28.7	0.8

NCI Data 2016 - 2020

Age-Adjusted Incidence Rates by Race/Ethnicity, All Stages (2016-2020)	Oregon Rate	USA Rate
All Races (includes Hispanic)	419.2	442.3
White Non-Hispanic	425.7	461.9
Black Non-Hispanic	434.2	445.9
American Indian/Alaska Native Non-Hispanic	462.5	392.6
Asian/Pacific Islander Non-Hispanic	296.2	290.3
Hispanic (any race)	332.9	339.6

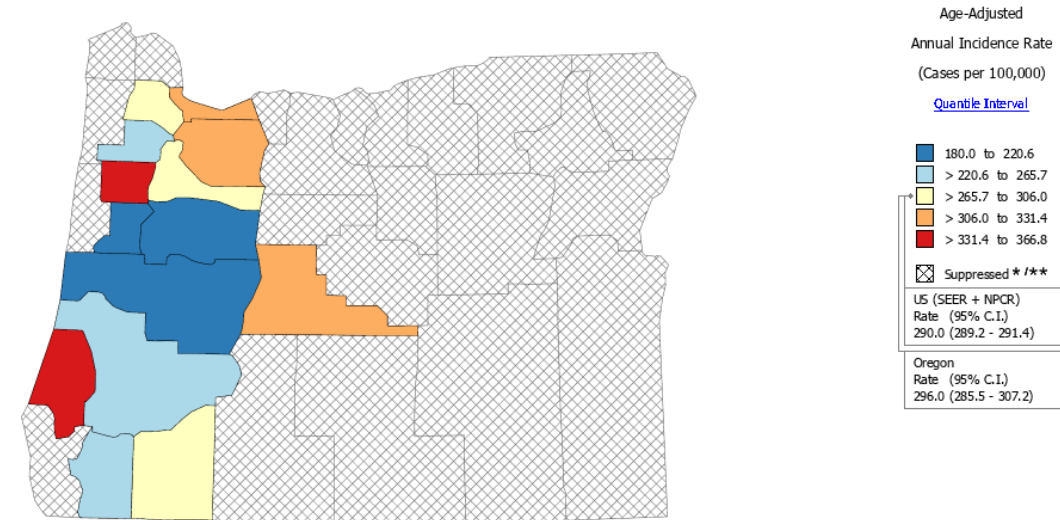
Oregon

Incidence Rates[†] for Oregon by County
All Cancer Sites, 2016 - 2020
All Races (includes Hispanic), Both Sexes, All Ages



Notes:
[State Cancer Registries](#) may provide more current or more local data.
 Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries ([for more information](#)).
[†] Incidence rates (cases per 100,000 population per year) are age-adjusted to the [2000 US standard population](#) (19 age groups: <1, 1-4, 5-9, ... , 80-84, 85+). Rates are for invasive cancer only (except for bladder which is invasive and in situ) or unless otherwise specified. Rates calculated using SEER*Stat. Population counts for denominators are based on Census populations as modified by NCI. The [US Population Data](#) File is used for SEER and NPCR incidence rates.
 Rates are computed using cancers classified as malignant based on ICD-O-3. For more information see [malignant.html](#)
 Data for the United States does not include data from Puerto Rico.

Incidence Rates[†] for Oregon by County
All Cancer Sites, 2016 - 2020
Asian/Pacific Islander Non-Hispanic, Both Sexes, All Ages



Notes:
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 Rates are computed using cancers classified as malignant based on ICD-O-3. For more information see [malignant.html](#)
^{*} Data have been [suppressed](#) to ensure confidentiality and stability of rate estimates. Data is currently being suppressed if there are fewer than 16 counts for the time period.
 Data for the United States does not include data from Puerto Rico.

Incidence Rate Report for Oregon by County

All Cancer Sites (All Stages^), 2016-2020

Asian/Pacific Islander Non-Hispanic, Both Sexes, All Ages

Sorted by Rate

County △	Age-Adjusted Incidence Rate [†] cases per 100,000 (95% Confidence Interval) ▼	CI*Rank [‡] (95% Confidence Interval) ▽	Average Annual Count ▽	Recent Trend	Recent 5-Year Trend [‡] in Incidence Rates (95% Confidence Interval) ▽
Oregon ⁶	296.2 (285.5, 307.2)	N/A	614	stable →	-0.1 (-0.9, 0.8)
US (SEER+NPCR) ¹	290.3 (289.2, 291.4)	N/A	58,857	falling ↓	-0.5 (-0.6, -0.3)
Polk County ⁶	366.8 (240.0, 532.5)	1 (1, 12)	6	*	*
Coos County ⁶	345.9 (219.0, 527.0)	2 (1, 13)	5	stable →	-0.1 (-4.5, 5.2)
Multnomah County ⁶	331.4 (312.1, 351.6)	3 (1, 7)	231	stable →	0.2 (-0.7, 1.2)
Deschutes County ⁶	321.5 (225.0, 443.9)	4 (1, 12)	8	stable →	0.2 (-5.2, 7.9)
Clackamas County ⁶	319.8 (286.6, 355.7)	5 (1, 9)	72	stable →	-0.4 (-2.1, 1.7)
Jackson County ⁶	306.0 (235.3, 391.1)	6 (1, 12)	13	stable →	1.2 (-2.6, 6.4)
Washington County ⁶	283.8 (264.4, 304.1)	7 (4, 11)	177	stable →	-2.6 (-8.0, 0.2)
Marion County ⁶	278.9 (235.5, 327.8)	8 (3, 12)	31	rising ↑	2.1 (0.1, 4.8)
Josephine County ⁶	265.7 (159.7, 419.8)	9 (1, 14)	4	stable →	0.4 (-4.9, 6.9)
Yamhill County ⁶	265.3 (167.8, 395.5)	10 (1, 14)	5	stable →	1.3 (-4.7, 9.6)
Douglas County ⁶	231.3 (138.3, 364.3)	11 (2, 14)	4	*	*
Linn County ⁶	220.6 (134.9, 342.0)	12 (2, 14)	4	falling ↓	-20.8 (-41.4, -5.4)
Benton County ⁶	198.3 (134.6, 279.3)	13 (7, 14)	7	stable →	-2.0 (-7.1, 4.3)
Lane County ⁶	180.0 (144.0, 222.0)	14 (10, 14)	19	stable →	-2.3 (-6.7, 3.6)

Our Asian American Community

The History of Asian Americans

- Anti-Asian Discrimination:

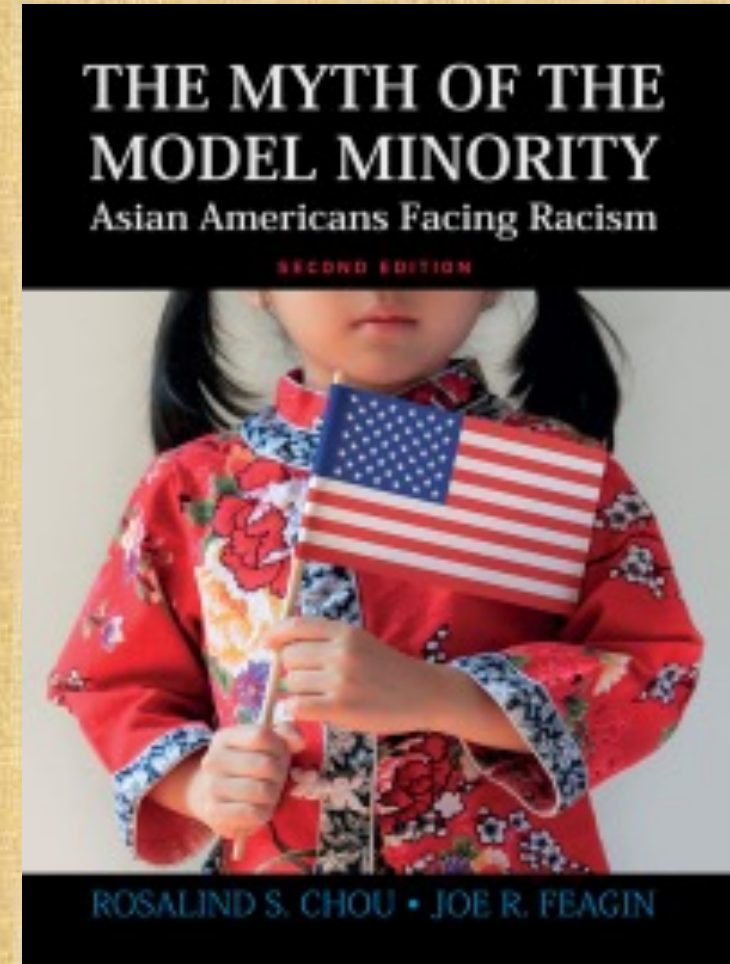
The Chinese Exclusion Act of 1882, Immigration Act of 1917, Johnson-Reed Act of 1924 and the Japanese American Internment during World War II



The History of Asian Americans

- **The “Model Minority” Myth**

- Term coined in 1966 in 2 lay articles describing the “success” of Chinese and Japanese Americans despite the long history of anti-Asian discrimination. The propaganda insinuated that Asian attributes such as work ethic, emphasis on education, family stability and assimilation helped overcome language and cultural barriers



Asian Americans and Cancer

- **AAs have a higher incidence of cancers related to infectious etiologies including liver cancer (hepatitis B), cervical cancer (HPV), nasopharyngeal cancer (EBV) and stomach cancer (*H. pylori*)**
- This is related to either the high prevalence of the infectious pathogen in their country of origin, recent immigration and/or vertical transmission

Examples

- Rates of cervical cancer are 40-87% higher in Cambodian Americans and Vietnamese Americans
- Stomach cancer is the 6th and 7th leading cause of death in Asian American men and women respectively
 - Incidence is highest in Koreans followed by Japanese and Vietnamese
 - Risk Factors for Stomach cancer include *H. pylori* infection, smoking and salt preserved foods

Asian Americans and Cancer Screenings

Screening

Breast Cancer

Percentage of women age 40 and over who had a mammogram within the past 2 years, 2018 (crude)		
Asian Women	Non-Hispanic White Women	Asian / Non-Hispanic White Ratio
57.8	68.0	0.9

Source: CDC 2021. Health United States, 2019. Table 33.

<https://www.cdc.gov/nchs/data/hus/hus19-508.pdf> [PDF 3.02MB]

Cervical Cancer

Percentage of women age 18 and over who had a Pap smear within the past 3 years, 2018 (crude)		
Asian Women	Non-Hispanic White Women	Asian / Non-Hispanic White Ratio
62.8	63.7	1.0

Source: CDC 2021. Health United States, 2019. Table 34.

<https://www.cdc.gov/nchs/data/hus/hus19-508.pdf> [PDF 3.02MB]

Colon Cancer

Adults aged 50-75 who had any colorectal test or procedure, 2018		
Asian	Non-Hispanic White Women	Asian / Non-Hispanic White Ratio
48.3	64.0	0.8

Source: CDC 2021. Health United States, 2019. Table 35.

<https://www.cdc.gov/nchs/data/hus/hus19-508.pdf> [PDF 3.02MB]

Asian Americans and Cancer

- Inequality among Asian ethnicities
 - Median household income: Indians (\$100,000) vs. Burmese (\$36,000)
 - Poverty Rates: Filipino and Indian (7.5%) vs. Burmese (35%)
 - Higher education with a bachelor's degree: 9% Bhutanese vs. 72% Indians
- Carcinogen Exposure
 - Asian Americans ranked 2nd after Black Americans for mean excess cancer incidence attributed to ambient carcinogenic Hazardous Air Pollutants (HAP)
 - A consequence of the model minority myth is that Asian Americans are not often included in research for environmental health disparities based on the false assumption that AAs have a similar risk profile to White Americans

Cultural Perceptions of Medical Care

- The term “cancer” has stigma in many Asian cultures with a negative belief that cancer is possible attributed to some form of fortune (e.g. luck, transgressions in a previous lifetime, will of a supreme power)
- Some cultural perceptions include a fatalistic view of a cancer diagnosis and faith in traditional Eastern medicine herbal remedies
- In order to maintain modesty, some cancer screenings such as breast, gynecological, prostate and colorectal cancer are deferred
- Compared to western culture that is patient-centric, Asian cultures tend to prefer a **family-centric approach** where healthcare decisions must be discussed as a family
- Some Asian cultures tend to shield/hide a cancer diagnosis from their older relatives because of the belief that doing so will prevent additional stress that might lead to worse outcomes
- Cultural Stoicism and a desire to limit health cost expenditures may lead to patients deferring care or not sharing a cancer diagnosis with family
- Hospice use is less among Asian subpopulations than other ethnic/racial groups

Challenges of Asian Americans

- There are differences among Asian subpopulations in language, culture, education, income, insurance and health seeking behaviors
- An interpreter for a specific Asian dialect is harder to find compared to Spanish and other more common languages
- Asians may be less information seeking than other groups
- Asians may be less forthcoming about symptoms (including mental health) compared to other groups
- Asians may be less accepting of screenings if they are asymptomatic

Our Native Hawaiian and Pacific Islander Community

History of the Hawaiian Islands

- The Native Hawaiian (Kanakanaka Maoli) people were united under King Kamehameha I in 1810 and recognized as an independent nation on November 28, 1843.
- In 1893, the head of the Native Hawaiian government, Queen Lili'uokalani was overthrown by a group of local businessmen and sugar planters with the assistance of the U.S. Marines. To avoid bloodshed of her people, she yielded. She was held captive in 'Iolani Palace by armed US forces for 8 months
- Native Hawaiians specific health disparities began upon European colonization
- The Native Hawaiian population dwindled from more than 700,000 to less than 24,000 by the 1900s due to endemic Western communicable diseases and centuries of isolation



The Deadly History of Radiation in the Pacific Islands

- During the Cold War, the United States detonated 67 hydrogen bombs on the Marshall Islands in Micronesia with an aggregate amount of radiation equal to 7,200 Hiroshima bombs
 - In 1986, a joint resolution known as the Compact of Free Association Act (COFA) established a relationship with the Marshall Islands, Palau and the Federated States of Micronesia and the US
 - COFA provides exclusive and strategic US military control over these islands in exchange for security, disaster relief, HEALTH COVERAGE, and economic assistance
- In French Polynesia (i.e. Tahiti/Society Islands, Tuamotu Islands, Tubuai Islands, Marquesas Islands), France performed 41 nuclear weapon tests followed by notable spikes in Thyroid cancer thereafter



Pacific Islander Culture and Cancer

- Pacific Islanders (PI) represent more than 30 nations of indigenous people
- PI people are less likely to complete routine cancer screenings such as pap smears, colonoscopies and mammograms
- NHPI people experience disproportionately high financial burden
- American Samoan women are 2X as likely to be diagnosed with, and to die from, cervical cancer, as compared to non-Hispanic whites.
- American Samoan men are 8X more likely to develop liver cancer, and Native Hawaiian men are 2.4X more likely to be diagnosed with the same disease, as compared to non-Hispanic whites.
- In Hawaii, from 2013-2015, Native Hawaiians had the highest mortality rate (404.8) for all types of cancer, as compared to whites (136.5) in the state.
- In the U.S. territory of Guam, from 2008-2012, the incidence rate was higher for all cancer types in the Micronesian population (414.7), as compared to other ethnic groups in Guam

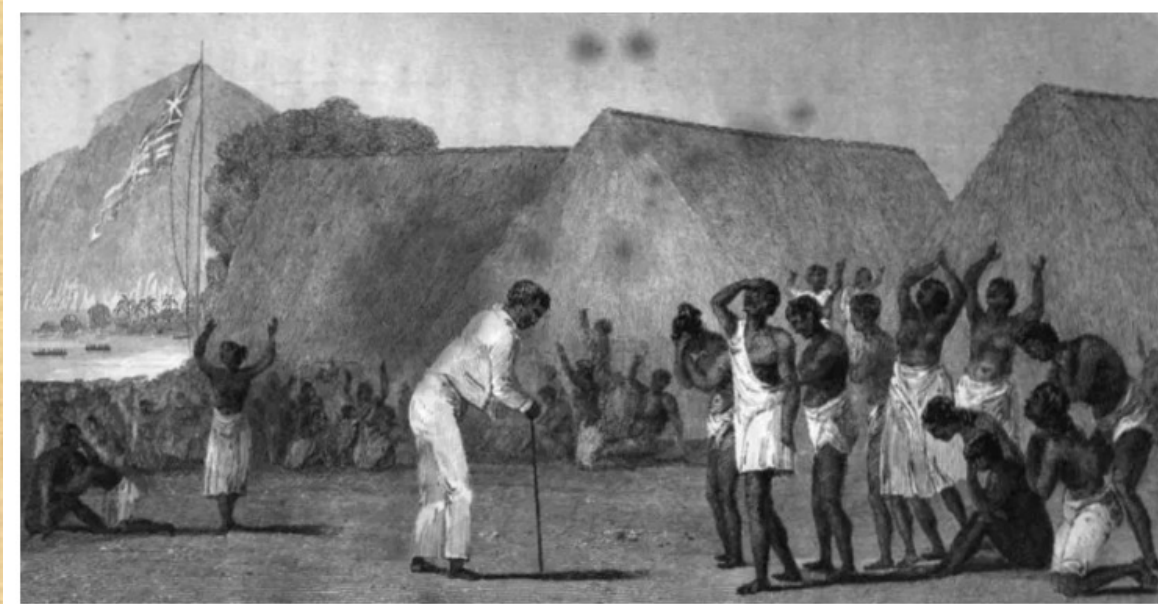
Pacific Islander Culture and Cancer

- Betel Nut chewing is common practice in Micronesia, leading to high cases of oral cavity cancer
- Adoption of western diet and sedentary lifestyle has led to the highest rates of obesity in the world which increases cancer risk
- In Micronesia
 - the rates of cervical cancer are 5-8 times higher than in the US
 - Oral cavity cancer and pharyngeal cancer is 4 times higher in Yap
 - Liver cancer rates are 2-3 times higher in Yap and Palau compared to the US
 - Breast cancer is caught at a later stage (often stage 3 or later)
 - Nasopharyngeal cancer in Micronesian men is 4 times higher than men in Hawai'i



Effects of Western Colonization

- In Hawai'i, Native Hawaiians are the most likely to be medically uninsured, impoverished, houseless and incarcerated
- Native Hawaiians have lower average annual income, postsecondary education and doctor appointment attendance due to costs
- Native Hawaiians have higher rates of chronic diseases such as diabetes, obesity, heart disease, kidney disease, substance use disorders and asthma
- The cultural perspectives, fears and distrust in the western world by the NHPI community are real and persist
- Many NHPI live in diaspora after being forced to leave their homelands because of Western demands to appropriate their Indigenous lands



Lamentation of Keopuolani. The high chiefess Keopuolani passed away in 1823 at the age of 45, from an unidentified illness. Stewart, Charles Samuel; Ellis, William (1828) *Journal of a Residence in the Sandwich Islands, During the Years 1823, 1824, and 1825* (1st ed.), London: H. Fisher, Son, and P. Jackson, p. 222.

Table 1. Cancer incidence, 5-year survival, and % diagnosed late-stage based on the Pacific Regional Central Cancer Registry 2007–2018 data. Incidence rates are reported as incidence per 100,000 people, age-adjusted to the US standard population [18].

Top Three Most Frequent Cancers in USAPI, 2007–2018									
Guam	Lung			Breast			Prostate		
	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage
	52.6	30%	90%	82.1	91%	63%	84.6	88%	49%
Commonwealth of the Northern Mariana Islands	Breast			Oropharynx			Lung		
	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage
	34.5	90%	73%	9.7	58%	76%	16.8	38%	86%
Republic of Marshall Islands	Cervical, Invasive			Lung			Breast		
	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage
	65.8	57%	49%	31.4	8%	86%	23.3	72%	61%
Republic of Palau	Lung			Liver			Prostate		
	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage
	30.3	10%	82%	23.8	7%	84%	49.9	68%	71%
Federated States of Micronesia (FSM), combined	Oropharynx			Lung			Cervical, Invasive		
	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage
	15.8	49%	67%	19.9	6%	91%	22.7	46%	72%
Chuuk, FSM	Lung			Liver			Breast		
	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage
	13.5	9%	91%	6.2	14%	100%	9.4	31%	94%
Pohnpei, FSM	Cervical, Invasive			Oropharynx			Breast		
	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage
	40.7	54%	66%	25.2	47%	64%	40.6	52%	77%
Yap, FSM	Oropharynx			Lung			Liver		
	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage	Incidence	5-year Survival	Diagnosed Late-Stage
	53	50%	71%	32.2	4%	8%	20.5	0%	73%
United States (cancer incidence per 100,000 people)	Lung	Liver	Breast	Oropharynx	Cervical, Invasive	Prostate			
	60.2	8.1	124.7	12.0	7.5	109.5			

Social Determinants of Health in Micronesia

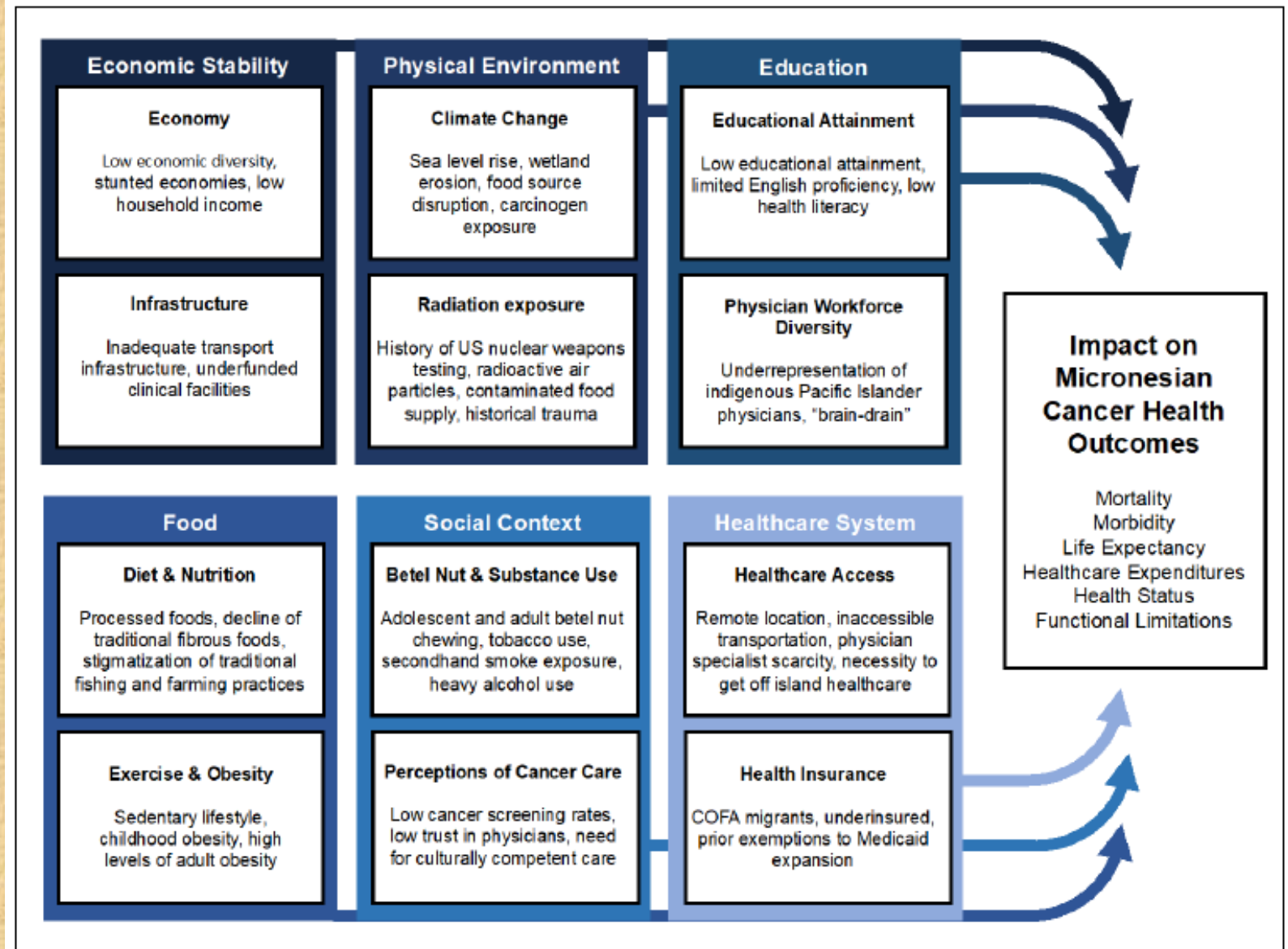
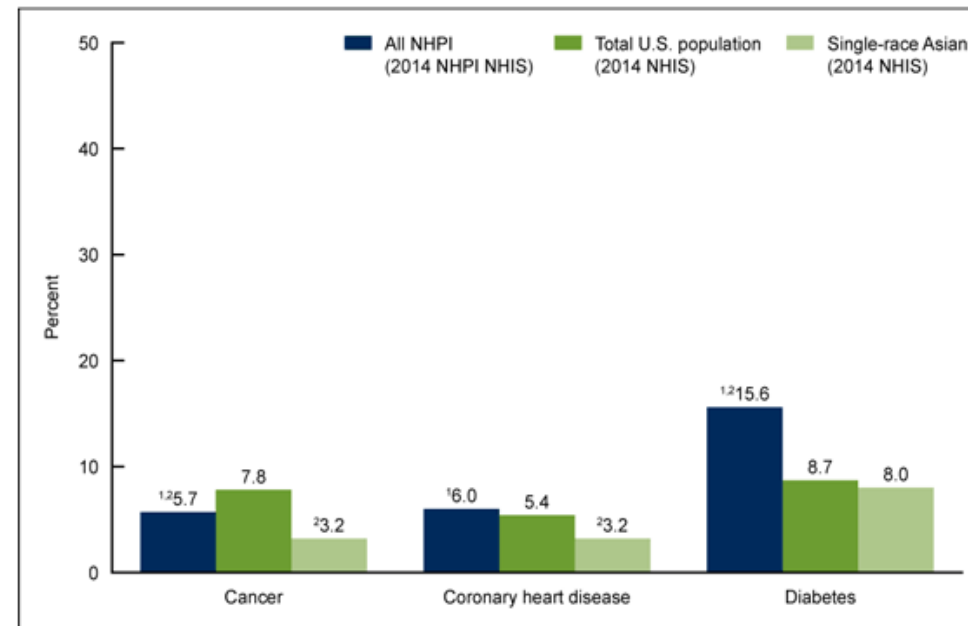


Figure 3. Conceptual framework of the social determinants of health as it pertains to Micronesian cancer disparities. Some of the known social determinants of health include economic stability, physical environment, education, food, social context, and the healthcare system.

NHPI compared to Asians

- A higher percentage of all NHPI adults (5.7%) had cancer compared with single-race Asian adults (3.2%), while the percentage for NHPI adults was lower than that for all U.S. adults (7.8%)

Figure 2. Age-sex-adjusted percentage of adults aged 18 and over with cancer, coronary heart disease, or diabetes, by race: United States, 2014



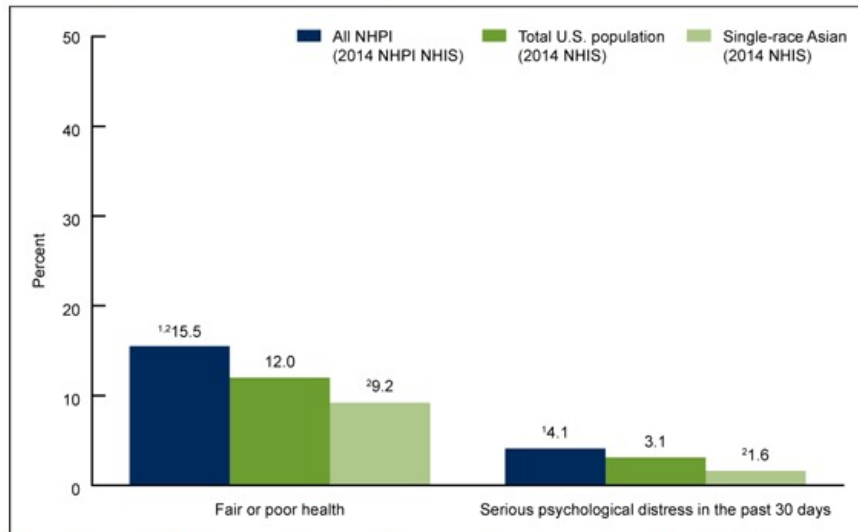
¹Significantly different from single-race Asian persons ($p < 0.05$).

²Significantly different from total U.S. population ($p < 0.05$).

NOTES: NHPI is Native Hawaiian and Pacific Islander. NHIS is National Health Interview Survey. All NHPI refers to persons who were identified as NHPI alone or in combination with other races. [Access data table for Figure 2](#).

SOURCES: NCHS, Native Hawaiian and Pacific Islander National Health Interview Survey (NHPI NHIS), 2014 and NCHS, National Health Interview Survey (NHIS), 2014.

Figure 1. Age-sex-adjusted percentage of adults aged 18 and over in fair or poor health, or who had experienced serious psychological distress, by race: United States, 2014



¹Significantly different from single-race Asian persons ($p < 0.05$).

²Significantly different from total U.S. population ($p < 0.05$).

NOTES: NHPI is Native Hawaiian and Pacific Islander. NHIS is National Health Interview Survey. All NHPI refers to persons who were identified as NHPI alone or in combination with other races. [Access data table for Figure 1](#) .

SOURCES: NCHS, Native Hawaiian and Pacific Islander National Health Interview Survey (NHPI NHIS), 2014 and NCHS, National Health Interview Survey (NHIS), 2014.

- The percentage of NHPI adults who were in fair or poor health was 15.5%, which was higher than the percentage among single-race Asian adults (9.2%) and all U.S. adults (12.0%).
- The percentage of all NHPI adults (4.1%) who had experienced serious psychological distress in the past 30 days was higher than the percentage among single-race Asian adults (1.6%) and higher than, but not significantly different from, the percentage of all U.S. adults (3.1%).

NHPI compared to Asians

- Lung cancer was the most common cancer among Chamorro, Micronesian race not otherwise specified (NOS), and Vietnamese people
- Colorectal cancer was the most common cancer among Cambodian, Hmong, Laotian, and Papua New Guinean people
- The frequency of late-stage cancer diagnoses among all subgroups ranged from 25.7% to 40.3% (breast), 38.1% to 61.1% (cervical), 52.4% to 64.7% (colorectal), and 70.0% to 78.5% (lung).

Pacific Islander Resource Disparities

Cancer Surveillance in USAPI

	CDC Breast and Cervical Early Detection Program	Mammography	Pap Smears	Prostate Cancer Screening (PSA)	CT On-Island	Colonoscopy	Transrectal Ultrasound
Guam	Available	Available	Available	Available	Available	Available	Available
Commonwealth of the Northern Mariana Islands	Available	Available	Available	Available	Available	Available	Unavailable
Republic of Marshall Islands	Available	Available	Available	Available	Unavailable	Available	Available
Republic of Palau	Available	Available	Available	Available	Available	Available	Unavailable
Federated States of Micronesia (FSM)							
Chuuk, FSM	Unavailable	Unavailable	Available	Unavailable	Unavailable	Unavailable	Unavailable
Kosrae, FSM	Unavailable	Unavailable	Available	Unavailable	Unavailable	Unavailable	Unavailable
Pohnpei, FSM	Unavailable	Private Provider	Available	Available	Private Provider	Unavailable	Unavailable
Yap, FSM	Unavailable	Unavailable	Available	Available	Unavailable	Available	Unavailable

Pacific Islander Resource Disparities

Cancer Diagnosis and Treatment								
	Pathologist	Radiologist	FNA	MRI/ PET Scan	Surgical Specialist	Chemotherapy	Radiation Therapy	Off-Island Referral System
Guam	Available	Available	Available	Available	Gen. Surg., Urologist, OB-Gyn, Oncologist, Surg. Subspecialist	Available	Available	Available
Commonwealth of the Northern Mariana Islands	Available	Available	Available	Unavailable	Gen. Surg., OB-Gyn, Oncologist, Surg. Subspecialist	Available	Unavailable	Available
Republic of Marshall Islands	Unavailable	Available	Available	Unavailable	Gen. Surg., OB-Gyn, ENT	Unavailable	Unavailable	Available
Republic of Palau	Unavailable	Unavailable	Available	Unavailable	Gen. Surg., OB-Gyn	Unavailable	Unavailable	Available
Federated States of Micronesia (FSM)								
Chuuk, FSM	Unavailable	Unavailable	Unavailable	Unavailable	Gen. Surg., OB-Gyn, Surg. Subspecialist	Unavailable	Unavailable	Available
Korae, FSM	Unavailable	Unavailable	Unavailable	Unavailable	Gen. Surg., OB-Gyn	Unavailable	Unavailable	Available
Pohnpei, FSM	Unavailable	Unavailable	Available	Unavailable	Gen. Surg., OB-Gyn, Ortho	Available	Unavailable	Available
Yap, FSM	Unavailable	Unavailable	Available	Unavailable	Gen. Surg., OB-Gyn	Available	Unavailable	Available

Original Investigation | Diversity, Equity, and Inclusion

August 12, 2022

Disparities in Survival and Comorbidity Burden Between Asian and Native Hawaiian and Other Pacific Islander Patients With Cancer

Kekoa Taparra, MD, PhD¹; Vera Qu, BS¹; Erqi Pollom, MD, MS^{1,2}

» [Author Affiliations](#) | [Article Information](#)

JAMA Netw Open. 2022;5(8):e2226327. doi:10.1001/jamanetworkopen.2022.26327

- Retrospective cohort study using a national hospital-based oncology database and included 5.95 million patients NHPI, Asian and White individuals diagnosed with the most common cancers from January 1, 2004 through December 31, 2017.
- Results showed that Asian patients had superior survival outcomes while Native Hawaiian and other Pacific Islander patients had inferior survival outcomes.
- Native Hawaiian and other Pacific Islander patients had significantly greater comorbidity burden compared with Asian and White patients, but this alone did not explain the poor survival outcomes.
- **BOTTOM Line: NHPI patients should not be aggregated with Asian patients. This may mask NHPI disparities and cause significant implications for health policy**

August 12, 2022

Disparities in Survival and Comorbidity Burden Between Asian and Native Hawaiian and Other Pacific Islander Patients With Cancer

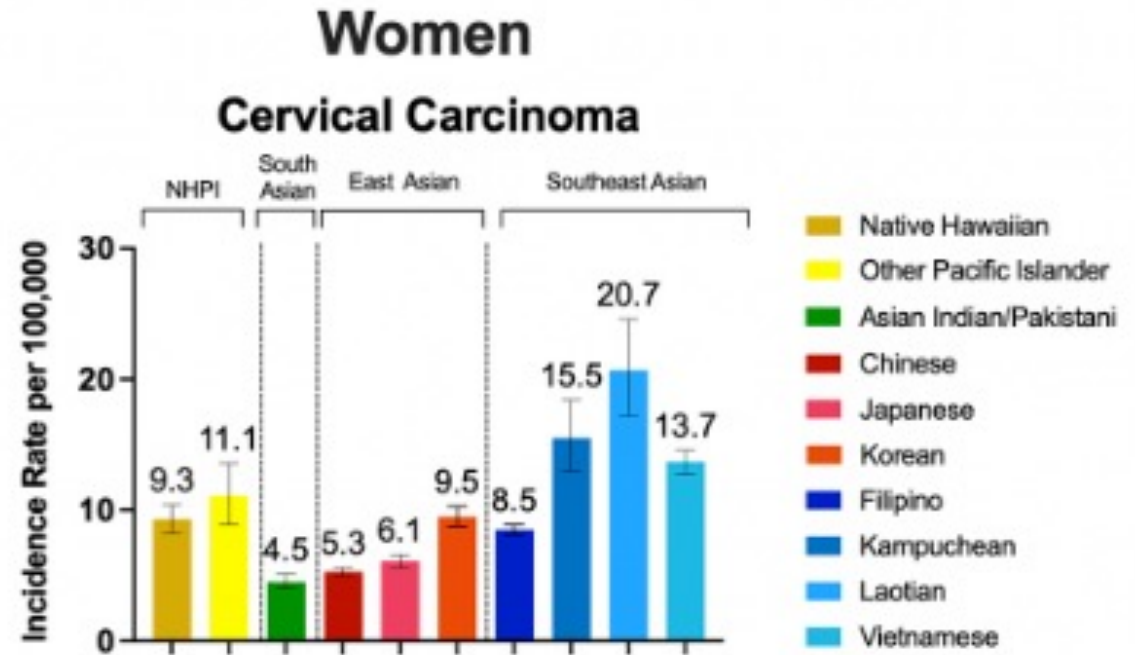
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- East Asian patients, when compared with White patients, were the least likely group to have multiple comorbidities
- Mortality rates were the highest (22%) for NHPI patients, followed by East Asian (20%) patients, Southeast Asian (19%) patients then South Asian (13%) patients
- All East, South and Southeast Asian populations had significantly superior or similar overall survival rates when compared with White patients with cancer
- In contrast, all NHPI had inferior overall survival rates across most cancers
- NHPI patients have higher comorbidities which may impact critical treatment decisions such as surgical candidacy or consideration for clinical trial enrollment

Disaggregated Data



A bar graph shows the incidence rate of cervical carcinoma per 100,000 Asian American and Native Hawaiian and other Pacific Islander women disaggregated by ethnicity.

How can you help?

How can you help?

- **Have cultural humility about the generational trauma experienced by these communities**
- **Know your audience**
 - Target interventions for specific disparities unique to that subpopulation
 - Asian Americans: Liver/stomach cancers, vaccinate against HBV and HPV, smoking cessation
- **Provide interpreter services**
 - Patient education materials on cancer screenings
 - Interpreter services during doctor visits
- **Provide care navigation**



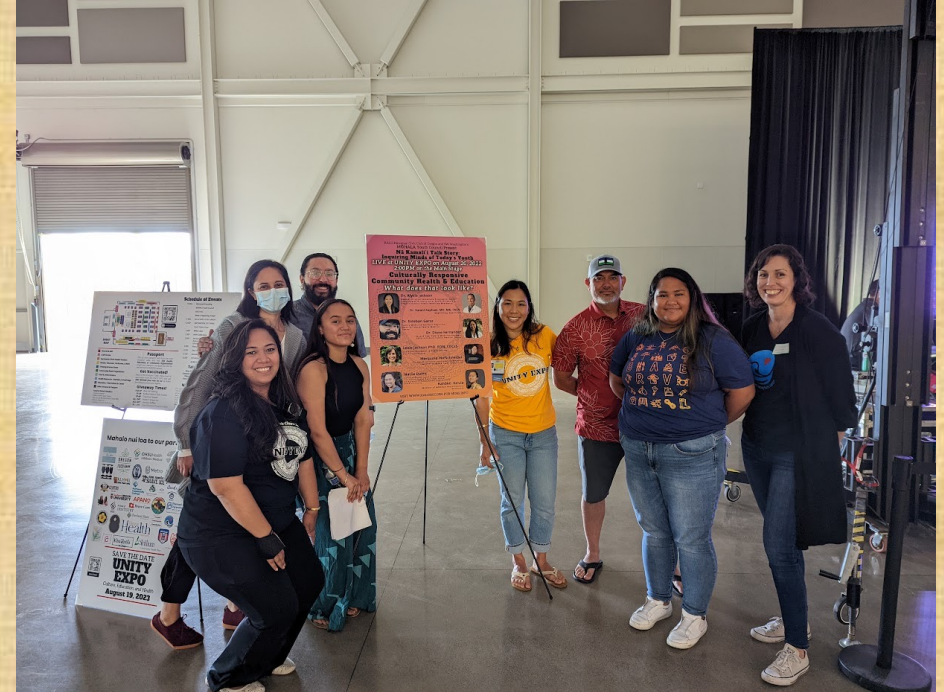
Care Navigation



- Randomized control trial on the island of Moloka'i
- Goal: To address knowledge gaps about cancer, educate on the benefits of screening, secure insurance facilitate health care management, provide transportation to appointments and encourage self-advocacy
- Patient population: 45% NH, 35% Filipino, 11% Japanese, 8% other
- Control group (N = 246) vs. Intervention group (N = 242)
- Outcome: Intervention group had significantly increased cancer screening rates
 - Cervical Cancer Screening: **Intervention (57%)** vs. Control (26.4%)
 - Breast Cancer Screening: **Intervention (61.7%)** vs. Control (42.4%)
 - Prostate Cancer Screening: **Intervention (54.5%)** vs. Control (36%)
 - Colorectal Cancer Screening: **Intervention (43%)** vs. Control (27.2%)

How can you help?

- **Conduct educational campaigns WITHIN the community** (grocery stores, places of worship, community centers, print media, direct mail, internet)
- **Engage English-proficient community members (e.g. youth)** to help steer their elders to advocate for cancer screenings
- **Encourage self-advocacy**



Disaggregate!

- The Clinton administration revised Asian Americans and PI groups, legally separating NHPIs.
- Despite this, NHPIs and Asian American sub-populations are rarely disaggregated, concealing the true health disparities that exist
- Census data underestimates NHPIs which directly affects research funding



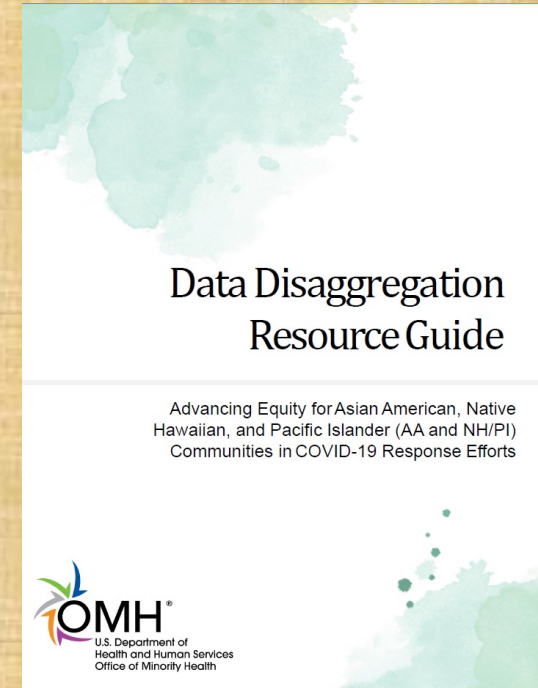
— A Sacramento rally in support of AB-1726, including members of the Asian & Pacific Islander American Health Forum, Asian Health Services, Empowering Pacific Islander Communities, Southeast Asia Resource Action Center. The supporters included many members of the Hmong, Lao, and Mien-American communities, according to SEARAC. Courtesy of the Southeast Asia Resource Action Center

The Importance of Disaggregated Asian American, Native Hawaiian, and Pacific Islander Race/Ethnicity Data



Disaggregate!

- March 2017: CDC launched the first large-scale federal survey designed to provide detailed health information about the NHPI population in the U.S. The project, the [Native Hawaiian and Pacific Islander \(NHPI\) National Health Interview Survey \(NHIS\)](#), was conducted in 2014 through a partnership with the U.S. Department of Health and Human Services Office of Minority Health (OMH) and the CDC.
 - **The survey results can be used by policymakers, researchers, health professionals, community leaders, and others to help inform their programs and policies and to plan future interventions to help achieve health equity for this population.**
- The CDC's National Center for Health Statistics (NCHS) developed a data brief that highlights differences in the prevalence of selected health conditions between the NHPI population and the Asian population with whom they have been historically combined. The historic survey provides a detailed look at the health status of the NHPI community.
 - Data from the survey provide information on factors such as access to and use of health services, health insurance coverage, immunizations, risk factors, health-related behaviors



Representation matters

- NHPI people have poor representation in clinical and translational cancer research
- Under-representation is due to low participant interest AND lack of inclusion
- In bench science research, NHPIs are rarely included in genetic and genomic level analyses
- There is distrust from the NHPI community that any research will benefit their communities
- There is a lack of representation of NHPIs in the oncology workforce and “pipeline”
 - NHPIs are the rarest ethnic group in US medical schools, comprising only 0.06% of applicants and 0.05% of matriculants each year
 - Without representation, there is less advocacy for NHPI cancer research
 - Without representation, there are effects on health outcomes and patient related quality of care when treated by a non-NHPI oncologist

Culturally Sensitive Solutions

Key Concept	Risk Factor	Possible Solutions
Diet and Nutrition	<ul style="list-style-type: none"> • Increased reliance on imported canned foods • Traditional fibrous starches replaced with imported and refined grains • Low fruit and vegetable diets • Stigmatization of cultural farming • Loss of traditional fishing and agricultural practices 	<ul style="list-style-type: none"> • Create culturally informed interventions to promote sustainable local food production • Government subsidized programs to promote and access traditional fishing and agricultural practices
Exercise and Obesity	<ul style="list-style-type: none"> • High rates of child and adult obesity • Sedentary lifestyle • Lack of facilities and programs to promote routine exercise 	<ul style="list-style-type: none"> • Provide incentives to engage in physical exercise programs • Develop resources such as gyms and health centers
Economy and Infrastructure	<ul style="list-style-type: none"> • Lack of economic diversity contributing to stunted economic growth • Low household incomes • Lack of transport infrastructure • Aged and underfunded clinical facilities 	<ul style="list-style-type: none"> • Diversify economy and workforce opportunities and stimulate economic growth • Invest in national transportation system • Modernize clinical facilities
Educational Attainment	<ul style="list-style-type: none"> • Low educational attainment • Limited English while living in the US • Low health literacy 	<ul style="list-style-type: none"> • Invest in and encourage educational equity for Micronesians through leadership

Culturally Sensitive Solutions

Key Concept	Risk Factor	Possible Solution
Radiation Exposure	<ul style="list-style-type: none">• Exposure to radioactive air particles• Radiation contaminated food supply• Radiation-related trauma	<ul style="list-style-type: none">• Expand publicly available research on radiation levels in Micronesia to inform public policy• Create culturally competent interventions addressing radiation-exposure trauma
Betel Nut and Substance Use	<ul style="list-style-type: none">• Chewing betel nut with or without tobacco• Adolescents chewing betel nut• Smoking tobacco• Adolescent smoking and secondhand smoke exposure• Heavy alcohol consumption (>6 drinks/day)	<ul style="list-style-type: none">• Develop clinical trials that focus on improving the cancer outcomes for patients with betel nut related oral cavity cancers• Improve health literacy around betel nut and substance use in relation to cancer

Culturally Sensitive Solutions

Key Concept	Risk Factor	Possible Solutions
Healthcare Access	<ul style="list-style-type: none"> • Extremely remote, water-bound island locations with limited healthcare resources • Inaccessible intra- and inter-island transportation for goods, patients, and healthcare workers • Scarcity or complete lack of physician specialists 	<ul style="list-style-type: none"> • Strengthen transportation access, particularly around healthcare systems • Increase recruitment of and accessibility to physician specialists, particularly oncologists through telehealth technologies
Health Insurance	<ul style="list-style-type: none"> • Underinsurance and lapses in insurance coverage with COFA • Prior exemption of Micronesian migrants from Medicaid expansion 	<ul style="list-style-type: none"> • Expand research on current Micronesian COFA migrant insurance coverage
Perceptions of Cancer Care	<ul style="list-style-type: none"> • Low cancer screening rates • Trust in physicians lower than spiritual leaders • Lack of cancer screening access in populations that highly desire screening 	<ul style="list-style-type: none"> • Improve trust in physicians with community engagement programs • Increase access to cancer screening • Strengthen the local physician workforce pipeline

Culturally Sensitive Solutions

Key Concept	Risk Factor	Possible Solutions
Climate Change	<ul style="list-style-type: none"> • Sea level rise impacting low-lying islands and atolls • Wetland erosion with severe weather events threaten critical facilities • Food source disruptions • Potential increase in atmospheric carcinogen exposure 	<ul style="list-style-type: none"> • Develop data systems to monitor changes in Micronesian climate correlated with health status • Create effective health-protective interventions for high-risk islands • Develop protocols for climate resilient healthcare systems within hospitals throughout Micronesia
Physician Workforce Diversity	<ul style="list-style-type: none"> • Underrepresentation of indigenous Pacific Islander physicians • “Brain-drain” causing lapses in continuity of care • Lack of specialty care, including oncology services, throughout Micronesia 	<ul style="list-style-type: none"> • Improve Pacific Islander physician representation to maintain local talent with a vested interest in the care of Micronesian communities • Create lasting pipeline programs for aspiring prospective physicians with strong Micronesian community ties

What Not To Do

- **Cultural Appropriation:** the unacknowledged or inappropriate adoption of the customs, practices, ideas, etc. of one people or society by members of another and typically more dominant people or society



Take Home Points

- Disaggregate Asian communities from Pacific Islander communities as they are vastly different in their healthcare disparities and needs.
- Address social determinants of health of the different Asian American and Pacific Islander sub-populations to improve healthcare disparities
- Respect and acknowledge the generational trauma that Pacific Islander and Asian people have suffered at the hands of the United States. This trauma shapes how these communities may interact with your organization.
- Increase NHPI representation in cancer clinical trials through community education and engagement
- Foster NHPI members in entering the field of medicine and oncology by providing mentorship and opportunities to advance their education. This is critical to address the stark cancer health disparities in this community.

Take Home Points

- Educate patients in a culturally sensitive manner regarding lifestyle changes to reduce rates of obesity that can lead to cancers like colorectal, prostate, breast and endometrial cancer)
- Provide interpreter services and care navigation
- Provide educational campaigns within the community you are serving
- Engage English-proficient community members
- Screen Asian Americans and the NHPI community for infectious agents such as H. pylori, HPV and hepatitis B to prevent infectious-related cancers
- Avoid cultural appropriation

Mahalo nui loa

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