



STATE OF HAWAII
DEPARTMENT OF HEALTH
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**Written Testimony Only in SUPPORT of H.B. 654, HD1, SD1
RELATING TO HEALTH**

SENATOR DONOVAN M. DELA CRUZ, CHAIR
SENATE COMMITTEE ON WAYS AND MEANS

Hearing Date: March 28, 2019

Room Number: 211

1 **Fiscal Implications:** The bill appropriates out of the general revenues an unspecified amount
2 for fiscal year (FY) 2019-2020 and an unspecified amount for FY 2020-2021 to the University of
3 Hawaii. The Department of Health (DOH) defers to the University of Hawaii for
4 implementation and fiscal implications, and to the priorities set forth in the Governor's Executive
5 Biennium Budget request.

6 **Department Testimony:** The DOH is in support of House Bill 654, House Draft 1, Senate Draft
7 1 (H.B. 654, HD1, SD1) which appropriates funds to the University of Hawaii Cancer Center
8 (UHCC) to better understand why Hawaii has the one of the highest incidence of liver and bile
9 duct cancer in the country. Findings from the research is intended to also inform public health
10 interventions for liver and bile duct cancer prevention.

11 According to the Centers for Disease Control and Prevention and the UHCC, Hawaii has
12 had the highest or second highest rate of liver cancer in the country in recent years. Every year
13 in Hawaii there are one hundred eighty-four newly diagnosed cases of liver cancer, including
14 bile duct cancer. From 2004 to 2013, available data on liver cancer indicates an annual increase
15 in Hawaii of 2.1 percent in males and 1.3 percent in females. There are currently about one
16 thousand patients diagnosed with liver and bile duct cancer.¹

¹ Hawaii Tumor Registry

1 Approximately 70 percent of liver cases in the United States could potentially be
2 prevented through the elimination of exposure to risk factors, the most important of which are
3 excess body weight, chronic infection with hepatitis B virus (HBV) and/or hepatitis C virus
4 (HCV), type 2 diabetes, heavy alcohol consumption, and tobacco smoking.² Liver cancer is one
5 of the 13 cancers associated with overweight and obesity, and incidence rates for most of these
6 cancers increased from 2005-2014 cancer.³

7 The DOH has been involved in statewide collaborative efforts to prevent liver cancer.
8 The Hawaii Comprehensive Cancer Control Program convenes and facilitates the Hawaii
9 Comprehensive Cancer Coalition (HCCC), a network of individuals and organizations that
10 provide leadership and coordination for cancer prevention and control activities throughout the
11 state. The Hawaii State Cancer Plan 2016 – 2020 was created by the HCCC to guide the state’s
12 cancer control and prevention efforts and to enhance collaboration between public and private
13 agencies and organizations. One objective in the state cancer plan is to increase HBV
14 vaccination of susceptible at-risk adults. The DOH’s Harm Reduction Services Branch offers
15 viral hepatitis services in collaboration with local community partners such as Hep Free Hawaii
16 to promote liver health and increase awareness of and access to viral hepatitis services. The
17 DOH will continue to collaborate with the UHCC on improving cancer screening rates and
18 increasing HBV and HCV vaccination rates to reduce the burden of liver cancer in the state.

19 Thank you for the opportunity to testify.

² American Cancer Society Cancer Facts & Figures 2019. <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2019/cancer-facts-and-figures-2019.pdf>

³ CDC Vital Signs, Cancer and obesity, October 2017. <https://www.cdc.gov/vitalsigns/pdf/2017-10-vitalsigns.pdf>.



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Testimony Presented Before the
Senate Committee on Ways and Means
Thursday, March 28, 2019 at 10:15 a.m.

By

Randall F. Holcombe, MD, MBA
Director, University of Cancer Center

And

Michael Bruno, PhD
Vice Chancellor for Research
University of Hawai'i at Mānoa

HB 654 HD1 SD1 – RELATING TO HEALTH

Chair Dela Cruz, Vice Chair Keith-Agaran and members of the Committee:

The University of Hawai'i Cancer Center strongly supports HB 654 HD1 SD1, as long as it is in addition to the University's Biennium Budget request. This measure appropriates funds to the University of Hawai'i Cancer Center to determine the etiologies for the high incidence of liver and bile duct cancer in Hawai'i and to investigate the role of liver fat, liver fluke infection, aflatoxin ingestion, and other potential causes, to identify biomarkers that can be utilized for public health interventions and to develop cancer prevention and other public health measures to reduce the burden of this disease.

The UH Cancer Center is one of only 70 institutions in the U.S. that hold the prestigious National Cancer Institute (NCI) designation, and is the only NCI-designated center in the Pacific. The NCI designation provides greater access to federal funding and research opportunities. More importantly, it gives the people of Hawai'i and the Pacific region access to innovative and potentially life-saving clinical trials without the necessity of traveling to the mainland.

The UH Cancer Center is a leader nationally in research focused on liver cancer. The State of Hawai'i ranks second in the nation in the incidence of liver cancer. While some of these cases are related to hepatitis, a known cause of this disease, the majority are not, and are related to abnormal accumulation of fat in the liver, other infectious organisms such as liver flukes, and environmental toxins. Faculty at the UH Cancer Center have been recognized as international leaders in research into the causes of liver and bile duct cancer and have been selected as members of National commissions engaged in Federal policy recommendations. Additionally, faculty affiliated with UH Cancer Center and its National Community Oncology Research Program direct several novel clinical trials for patients with liver and bile duct cancers.

Because liver cancer is not a major health problem in most areas of the US, this disease has received less attention and funding from the NIH for research. Funds

allocated under this measure will greatly advance our knowledge of the etiologies of this disease to the benefit of the people of Hawai'i.

The UH Cancer Center supports HB 654 HD1 SD1. Funds allocated under this proposal will be specifically allocated to advance liver cancer research. Annual progress reports will be submitted to the legislature. *Only the UH Cancer Center is positioned to perform this critically important research in the State of Hawai'i.*

Thank you for the opportunity to provide testimony on this bill.

HB-654-SD-1

Submitted on: 3/24/2019 6:26:02 PM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Lucien Wong	Individual	Support	No

Comments:

Comments: The American Cancer Society, Dept of Health and the UHCC have all testified in support. of HB654. Why does Hawaii have highest rate of liver cancer in the country? Dr. Wei Jia at the UHCC said "According to The U.S. Center for Disease Control (CDC) and the University of Hawai'i Cancer Center, in recent years Hawai'i has had the highest or second highest rate of liver cancer in the country. Every year in Hawaii there are 184 newly diagnosed cases of liver including bile duct cancer diagnosed according to the Hawaii Tumor Registry. And from 2004 to 2013, for which the data is available, this cancer increased 2.1% for males and 1.3% for females each year while the incidence for many other cancers such as colon, lung, stomach and prostate declined. There are currently about 1,000 patients in Hawaii fighting liver/bile duct cancer which are almost always fatal." The causes of this high incidence of cancer are not yet known. Are Liver Flukes one of the reasons? Liver flukes are one of the main causes of liver/bile duct cancer in various parts of tropical Far East. This has been well researched and widely reported (e.g. <https://www.smithsonianmag.com/science-nature/how-a-liver-fluke-causes-cancer18173277/>). Research shows that the most common way to get a liver fluke infection is by eating uncooked fresh water fish or watercress. "A liver fluke is a parasitic worm. Infections in humans usually occur after eating contaminated raw or undercooked freshwater fish or watercress. After liver flukes have been ingested, they travel from your intestines to your bile ducts in your liver where they then live and grow." <https://www.healthline.com/health/liver-fluke> Are There Liver Flukes in Hawaii? A UH research study entitled Parasite Infections of Man and Animals in Hawaii by Joseph E. Alicata a professor at the Hawaii Agricultural Experiment Station, College of Tropical Agriculture, University of Hawaii, November 1964, clearly shows that liver flukes are relatively common in Hawaii found in various animals and snails in and near fresh water habitats such as streams, ponds and wet soil. <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/tb-61.pdf> According to one report: "There are twelve watercress farms in Oahu, each growing a different variety of watercress, but all twelve are in the vicinity of the Pearl Harbor Spring (the rest around Pearl City and Waipahu)." <http://hawaiiindependent.net/story/sumida-farms-embraces-the-past-and-future-of-agriculture-in-hawaii> Research should be done at the UH Cancer Center immediately to determine whether residents of Hawaii are at risk of liver/bile duct cancer by eating uncooked watercress which may be infected with liver flukes. There are other possible causes such as eating foods with aflatoxins, produced by a fungus abundant in warm and humid regions, that can grow on foods such as grains e.g. rice and nuts that have been stored improperly. This too should be researched by UHCC.

Hawaii has a 33% higher incidence of liver/bile duct cancer than the national norm. Currently over 1,000 people in Hawaii suffer from this almost always terminal cancer and sadly every year 184 new cases are diagnosed and it's increasing while other cancers are not. Please take a moment to understand how serious a problem it is for Hawaii by listening to Dr. Kozak's Hawaii Public Radio Body Show on the dire need to fund research at UHCC to answer this:

https://cpa.ds.npr.org/khpr/audio/2018/03/BodyShow_031218.mp3

HB-654-SD-1

Submitted on: 3/24/2019 7:57:29 PM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Lidiya Peralta	Individual	Support	No

Comments:

Why Hawaii has highest rate of liver cancer in the country?

Dr. Wei Jia at the UHCC said "According to The U.S. Center for Disease Control (CDC) and the University of Hawai'i Cancer Center, in recent years Hawai'i has had the *highest or second highest rate of liver cancer in the country.*

Every year in Hawaii there are 184 newly diagnosed cases of liver including bile duct cancer diagnosed according to the Hawaii Tumor Registry. And from 2004 to 2013, for which the data is available, this cancer increased 2.1% for males and 1.3% for females each year while the incidence for many other cancers such as colon, lung, stomach and prostate declined. There are currently about 1,000 patients in Hawaii fighting liver/bile duct cancer which are almost always fatal." The causes of this high incidence of cancer are not yet known.

Are Liver Flukes one of the reasons?

Liver flukes are one of the main causes of liver/bile duct cancer in various parts of tropical Far East. This has been well researched and widely reported (e.g. <https://www.smithsonianmag.com/science-nature/how-a-liver-fluke-causes-cancer-18173277/>).

Research shows that the most common way to get a liver fluke infection is by eating uncooked fresh water fish or watercress. "A liver fluke is a parasitic worm. Infections in humans usually occur after eating contaminated raw or undercooked freshwater fish or watercress. After liver flukes have been ingested, they travel from your intestines to your bile ducts in your liver where they then live and grow." <https://www.healthline.com/health/liver-fluke>

Are There Liver Flukes in Hawaii?

A UH research study entitled *Parasite Infections of Man and Animals in Hawaii* by Joseph E. Alicata a professor at the Hawaii Agricultural Experiment Station, College of Tropical Agriculture, University of Hawaii, November 1964, clearly shows that liver flukes are relatively common in Hawaii found in various animals and snails in and near

fresh water habitats such as streams, ponds and wet soil. <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/tb-61.pdf>

According to one report: "*There are twelve watercress farms in Oahu, each growing a different variety of watercress, but all twelve are in the vicinity of the Pearl Harbor Spring (the rest around Pearl City and Waipahu).*" <http://hawaiiindependent.net/story/sumida-farms-embraces-the-past-and-future-of-agriculture-in-hawaii>

Research should be done at the UH Cancer Center immediately to determine whether residents of Hawaii are at risk of liver/bile duct cancer by eating uncooked watercress which may be infected with liver flukes. There are other possible causes such as eating foods with aflatoxins, produced by a fungus abundant in warm and humid regions, that can grow on foods such as grains e.g. rice and nuts that have been stored improperly. This too should be researched by UHCC.

Hawaii has a 33% higher incidence of liver/bile duct cancer than the national norm. Currently over 1,000 people in Hawaii suffer from this almost always terminal cancer and sadly every year 184 new cases are diagnosed and it's increasing while other cancers are not. Please take a moment to understand how serious a problem it is for Hawaii by listening to Dr. Kozak's Hawaii Public Radio Body Show on the dire need to fund research at UHCC to answer this: https://cpa.ds.npr.org/khpr/audio/2018/03/BodyShow_031218.mp3

HB-654-SD-1

Submitted on: 3/25/2019 10:13:37 AM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Nani Medeiros	Individual	Support	Yes

Comments:

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran and members of the committee.

If you've ever visited the KCC farmers market on Saturdays, you may have seen a large local part-Hawaiian guy popping kettle corn at his booth, "Paniolo Popcorn." That man was my father, Albert P. Medeiros Jr. On August 14, 2018, my father was diagnosed with stage 4 cholangiocarcinoma, also known as bile duct cancer. A short five months later, on January 14, 2019, this cancer killed him. The measure before you appropriates an unspecified amount of funding, for the University of Hawaii Cancer Center to research the incidence and causes of bile duct and liver cancer in Hawaii. Please pass this measure.

Hawaii has the highest mortality rate of bile duct cancer of all 50 states. Asian and pacific islanders have a higher death rate eith bile duct cancer and they have the highest risk for bile duct cancer compared with other ethnicities.

Have you ever heard of bile duct cancer? Before August 14 of last year I hadn't either. Have you ever heard of a liver fluke? Did you know that eating undercooked fish could cause cancer 20 to 30 years later? Did you know that eating raw watercress could have the same effect? Did you know that eating rice, nuts, or other grains that haven't been stored properly, or have been stored for too long, can cause cancer? I didn't even know there was a "proper" way to store rice.

A study by the University of Hawaii in the 1960s found liver flukes in our freshwater supply; at the time liver flukes were found in our fish, watercress, and cattle. Shouldn't the public be made aware of the risk factors in consuming fish or vegetables that can carry cancer causing liver flukes or aflotoxins? We can't risk anymore lives in Hawaii, we have to protect our communities, keiki, kupuna...friends and families. Funding the research provided by this bill will help to answer the question of what is causing Hawaii's high rate of liver and bile duct cancer. And, with that information, education, and awareness, lives could be saved; real people, real families; preventive measures and screening options could be explored; and perhaps advances in treatment could be discovered.

Hawaii spent \$1 million on research for rat lung worm when only 20 people contracted it (and it's not a lethal cancer.) We must be able to make an equal, if not greater

investment, in protecting our people from a cancer that is deadliest in the State of Hawaii.

Please pass this measure, and help save lives every year.

HB-654-SD-1

Submitted on: 3/25/2019 11:22:43 AM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Carolann Biederman	Individual	Support	No

Comments:

I am writing in support of HB654 because I believe that the people of Hawai'i, who have the highest diagnosis rate of liver fluke cancer in the nation, can lead healthier lives through meaningful research into this cancer.

The bill would provide funding for research at University of Hawai'i Cancer Center to study the probable causes: liver flukes parasites and aflatoxins.

Every year 184 new cases of this cancer are diagnosed here and it's nearly always terminal. Hawaii's rate is 33% higher than the national norm and no one knows why.

HB654 gives Hawai'i researchers at the UHCC the chance to discover the causes, and then spotlight Hawai'i when they share the findings of their important research that impacts residents right here – as well as in the rest of the world.

HB654 could save the lives of people at risk or or affected by these cancers, here and elsewhere, and it's a worthy investment from my point of view (a cancer survivor).

Thank you very much for your consideration.

Mahalo,

Carolann Biederman, 44-391 Nilu Street #4, Kaneohe, HI 96744

HB-654-SD-1

Submitted on: 3/25/2019 10:34:27 PM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Francis Nakamoto	Individual	Support	No

Comments:

Chair Donovan Dela Cruz and members of the Committee on Ways and Means,

I support HB654 HD1 SD1 which would fund important research on the causes of liver/bile duct cancer in Hawaii. Given the high incidence of liver/bile duct cancer in Hawaii which is suspected to be caused by flukes introduced into our food system from commonly eaten water-grown produce, it is incumbent on the State to lead the way to discover how our high cancer rate is caused by this source. There is much to be learned with this research by the University of Hawaii and how that knowledge can be applied to prevent this vicious form of cancer in Hawai'i and throughout the world where similar natural conditions and food practices exists.

Please support this important legislation which may help many Hawai'i residence avoid suffering from this deadly disease.

HB-654-SD-1

Submitted on: 3/26/2019 1:33:15 PM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Dan Elies	Individual	Support	No

Comments:

It is very important that we research what is causing the high incidence of liver and bile duct cancer in Hawaii. We are not a third world country, and should not allow this to continue. Funding this research is exactly where our tax dollars should be spent. I whole-heartedly support this measure.

HB-654-SD-1

Submitted on: 3/26/2019 3:33:58 PM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Shannon Elies	Individual	Support	No

Comments:

Aloha,

I don't know a single person whose life has not been affected by cancer. Whether young or old, rich or poor, weak or strong, this disease strikes and kills without discernment. Within the vast majority of these cancer cases, there are no plausible causes or identifiable catalysts. With the scientific groundwork that has already been laid out, researchers have found possible causes of this relatively rare but often deadly form of cancer.

This funding will be instrumental in the fight against cancer in general, and it will be **groundbreaking** in the fight against and possible eradication of Bile Duct Cancer altogether. It will enable cancer researchers to investigate and empirically prove scientific hypotheses, which will allow them to publish their findings and PREVENT this specific cancer from killing any more of our Kama'aina. It is indeed rare for the scientific community to have an upper hand on cancer prevention, and we therefore cannot let this initiative fall by the wayside, especially when so many lives can be saved.

Mahalo.

HB-654-SD-1

Submitted on: 3/26/2019 4:49:25 PM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Kay Suzuki	Individual	Support	No

Comments:

TESTIMONY IN SUPPORT OF HB654
RELATING TO HEALTH

I am writing in support of HB654, which would appropriate funds for the University of Hawai'i Cancer Center to determine the reasons that Hawaii has the highest incidence of liver and bile duct cancer in the country.

According to the American Cancer Society's Cancer Facts and Figures 2018, an estimated 180 Hawaii residents will die from liver cancer this year. This bill would specifically allow the Hawaii Cancer Center to examine risk factors tied to liver cancer, including liver fluke infection, aflatoxin ingestion, and intrahepatic bile duct dilation in the general population and liver cancer patients in Hawaii, and examine any associations with participant characteristics, such as ethnicity. This research will allow further clarity on whether the state's high rates of liver cancer are due to hepatitis B virus, hepatitis C virus, and heavy alcohol consumption or the other risk factors listed above.

I humbly ask for your support of HB654 as it would appropriate funding scientific research on liver cancer and help to provide further information as to the reasons why Hawai'i has the highest incidence of liver and bile duct cancer in the country

Bernadette Sakoda
Lihue, Hawaii 96766

TESTIMONY IN SUPPORT OF HB654 RELATING TO HEALTH

As a cancer survivor, I am writing in support of HB654 because I was alarmed to learn that our state leads the nation in having the highest rate of liver cancer. At the same time I am also encouraged by the work being done at the University of Hawaii Cancer Center.

While I was diagnosed with breast cancer, in my “all-cancers” support group, we lost a 46-year-old husband and father of two in less than 6 months of diagnosis; we have a widower who not only lost his wife to liver cancer but is facing the disease for the second time himself; have a Harley Davidson mechanic who was given just a year to live; a 16-year-old boy who is supporting his mom through her own cancer battle when was he given his diagnosis; and at our most recent meeting last Thursday, met a tearful caregiver whose just-diagnosed husband was still in recovering from surgery in the hospital next door.

If it’s true that liver flukes and aflatoxins, known carcinogens, are present in our fresh water systems and are contributors to Hawaii’s high rates of liver and bile duct cancer as UHCC researchers suspect, then we can take action and treat our water systems or at the very least allow residents to make informed choices—i.e. whether they should be having that (raw) watercress salad or fresh water prawns for dinner.

As someone who was born and raised in Hawaii, I ask on behalf of friends and family that you take the lead in preventing so many from the unnecessary pain and suffering of cancer.

Mahalo,

Chandra Quinlan

TESTIMONY IN SUPPORT OF HB654
RELATING TO HEALTH

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As a recent cancer survivor, I urge you to support HB654 as it would appropriate funding to support scientific research on liver cancer and help to provide further information as to the reasons why Hawai'i has the highest incidence of liver and bile duct cancer in the country. The sooner we can find out why this is happening, we can start to explore ways for better prevention. Then hopefully, our family and friends will not have to suffer through liver cancer.

Mahalo,

Uri Lyne Martos
Lawai, Hawaii 96765

TESTIMONY IN SUPPORT OF HB654 RELATING TO HEALTH

I am writing in support of HB654, which would appropriate funds for the University of Hawai'i Cancer Center to determine the reasons that Hawaii has the highest incidence of liver and bile duct cancer in the country.

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I humbly ask for your support of HB654 as it would appropriate funding scientific research on liver cancer and help to provide further information as to the reasons why Hawai'i has the highest incidence of liver and bile duct cancer in the country

**Sincerely,
Patrick Tran**

TESTIMONY IN SUPPORT OF HB654
RELATING TO HEALTH

I am writing in support of HB654, which would appropriate funds for the University of Hawai'i Cancer Center to determine the reasons that Hawaii has the highest incidence of liver and bile duct cancer in the country.

According to the American Cancer Society's Cancer Facts and Figures 2018, an estimated 180 Hawaii residents will die from liver cancer this year. This bill would specifically allow the Hawaii Cancer Center to examine risk factors tied to liver cancer, including liver fluke infection, aflatoxin ingestion, and intrahepatic bile duct dilation in the general population and liver cancer patients in Hawaii, and examine any associations with participant characteristics, such as ethnicity. This research will allow further clarity on whether the state's high rates of liver cancer are due to hepatitis B virus, hepatitis C virus, and heavy alcohol consumption or the other risk factors listed above.

I humbly ask for your support of HB654 as it would appropriate funding scientific research on liver cancer and help to provide further information as to the reasons why Hawai'i has the highest incidence of liver and bile duct cancer in the country

Sincerely,
Stella Lee

TESTIMONY IN SUPPORT OF HB654
RELATING TO HEALTH

I am writing in support of HB654, which would appropriate funds for the University of Hawai'i Cancer Center to determine the reasons that Hawaii has the highest incidence of liver and bile duct cancer in the country.

According to the American Cancer Society's Cancer Facts and Figures 2018, an estimated 180 Hawaii residents will die from liver cancer this year. This bill would specifically allow the Hawaii Cancer Center to examine risk factors tied to liver cancer, including liver fluke infection, aflatoxin ingestion, and intrahepatic bile duct dilation in the general population and liver cancer patients in Hawaii, and examine any associations with participant characteristics, such as ethnicity. This research will allow further clarity on whether the state's high rates of liver cancer are due to hepatitis B virus, hepatitis C virus, and heavy alcohol consumption or the other risk factors listed above.

I humbly ask for your support of HB654 as it would appropriate funding scientific research on liver cancer and help to provide further information as to the reasons why Hawai'i has the highest incidence of liver and bile duct cancer in the country

Sincerely,
Gary Tanimitsu

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and other members,

My name is Sara Teixeira, and I am writing in support of HB654, which would appropriate funds for the University of Hawai'i Cancer Center to determine the reasons that Hawaii has the highest incidence of liver and bile duct cancer in the country.

According to the American Cancer Society's Cancer Facts and Figures 2018, an estimated 180 Hawaii residents will die from liver cancer this year. This bill would specifically allow the Hawaii Cancer Center to examine risk factors tied to liver cancer, including liver fluke infection, aflatoxin ingestion, and intrahepatic bile duct dilation in the general population and liver cancer patients in Hawaii, and examine any associations with participant characteristics, such as ethnicity. This research will allow further clarity on whether the state's high rates of liver cancer are due to hepatitis B virus, hepatitis C virus, and heavy alcohol consumption or the other risk factors listed above.

I humbly ask for your support of HB654 as it would appropriate funding scientific research on liver cancer and help to provide further information as to the reasons why Hawai'i has the highest incidence of liver and bile duct cancer in the country

**Sincerely,
Sara Teixeira**

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and other members,

My name is Lani Almanza and I am writing in support of HB654, which would appropriate funds for the University of Hawai'i Cancer Center to determine the reasons that Hawaii has the highest incidence of liver and bile duct cancer in the country.

According to the recently released American Cancer Society's Cancer Facts and Figures 2019, an estimated 190 Hawaii residents will die from liver cancer this year, an increase from the estimated 180 Hawaii residents reported in the 2018 facts and figures.

This bill would specifically allow the Hawaii Cancer Center to examine risk factors tied to liver cancer, including liver fluke infection, aflatoxin ingestion, and intrahepatic bile duct dilation in the general population and liver cancer patients in Hawaii, and examine any associations with participant characteristics, such as ethnicity. This research will allow further clarity on whether the state's high rates of liver cancer are due to hepatitis B virus, hepatitis C virus, and heavy alcohol consumption or the other risk factors listed above.

I humbly ask for your support of HB654 as it would appropriate funding scientific research on liver cancer and help to provide further information as to the reasons why Hawai'i has the highest incidence of liver and bile duct cancer in the country

Sincerely,
Lani Almanza

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and other members,

My name is Chelseajane Gonzales, and I am writing in support of HB654, which would appropriate funds for the University of Hawai'i Cancer Center to determine the reasons that Hawaii has the highest incidence of liver and bile duct cancer in the country.

According to the American Cancer Society's Cancer Facts and Figures 2018, an estimated 180 Hawaii residents will die from liver cancer this year. This bill would specifically allow the Hawaii Cancer Center to examine risk factors tied to liver cancer, including liver fluke infection, aflatoxin ingestion, and intrahepatic bile duct dilation in the general population and liver cancer patients in Hawaii, and examine any associations with participant characteristics, such as ethnicity. This research will allow further clarity on whether the state's high rates of liver cancer are due to hepatitis B virus, hepatitis C virus, and heavy alcohol consumption or the other risk factors listed above.

I humbly ask for your support of HB654 as it would appropriate funding scientific research on liver cancer and help to provide further information as to the reasons why Hawai'i has the highest incidence of liver and bile duct cancer in the country

Sincerely,
Chelseajane Gonzales



American Cancer Society
Cancer Action Network
2370 Nu`uanu Avenue
Honolulu, Hawai`i 96817
808.432.9149
www.acscan.org

Senate Committee on Ways and Means
Senator Donovan Dela Cruz, Chair
Senator Gilbert Keith-Agaran, Vice Chair

LATE

HB 654, HD1, SD1 – RELATING TO HEALTH

Cory Chun, Government Relations Director – Hawaii Pacific
American Cancer Society Cancer Action Network

Thank you for the opportunity to written comments in support of HB 654, HD1, SD1, which appropriates an unspecified amount to the University of Hawaii Cancer Center to determine the cause of Hawaii’s high incidence rate of liver cancer including live fluke infection, aflatoxin ingestion, and intrahepatic bile duct dilation. Effective 7/1/50.

The American Cancer Society Cancer Action Network (ACS CAN) is the nation's leading cancer advocacy organization. ACS CAN works with federal, state, and local government bodies to support evidence-based policy and legislative solutions designed to eliminate cancer as a major health problem.

We recognize that cancer research is the engine behind our ongoing progress in the fight against cancer. Research offers hope to people who face cancer – for better treatments, for more opportunities to prevent and detect the disease early on, and for improved quality of life for those already diagnosed.

Thank you for the opportunity to provide testimony on this important issue.

HB-654-SD-1

Submitted on: 3/27/2019 12:15:21 AM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Michael Higgins	Individual	Support	No

Comments:

Aloha,

My name is Michael Higgins and I had never heard of bile duct cancer until it came out of my doctors mouth in October 2018. Life expectancy charts scaredme because they all went down very rapidly with only a 5 or 6 yearprognosis. Dr. "Google" was full of depressing stories and I had to stop digging for answers because I only found despair. Although the news was grim, at least I hada chance to fight back. Many patients could not handle a whipple procedure due totheir age, or because the cancer had spread to nearby organs where surgery would not extend life. Being 55 my surgeon said I was strong enough to handle it, but a week before the surgery, I still went septic and then had a mild heart attack due to the stress on my body. Despite that setback, my doctors performed a pancreaticduodonectomy which removed a lot of digestive parts and then they put me back together so I can continue this fight. Being in the hospital for 44 days brought my family closer together,and it was the best Thanksgiving ever. When asked why I need chemotherapy, my oncologist said that "this cancer is notorious for coming back and we need to try kill any remaining cells in you". If there was a way to avoid this altogether,I would have chosen that path, but that was not the card I was dealt. Being a non-smoker and a pretty healthy 55 year old, I was so confused as to what caused this. I read and was told that this is a very rare cancer, but why does Hawai'i have the highest number of cases in the country? I rarely drank alcoholand I didn't have hepatitis b or c. My liver showed no sign of cirrhosis and I did not eat a lot of fish. I've questioned everything I've eaten in the last 50 years. I've read about liver flukes and watercress and parasites, but nothing is conclusive. What IS conclusive is that Hawai'i leads the country in people contracting this disease. Despite all that I've been through, I'm so grateful to have been given a second chance at living, but for the sake of others out there, please allow funding for researchon why Hawai'i residents lead the nation in bile duct cancer. I am in support of allowing funding for HB654 HD1 SD1.

Respectfully submitted,

Michael Higgins

3.26.19

LATE

HB-654-SD-1

Submitted on: 3/27/2019 8:31:19 PM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	Testifying for O`ahu County Democrats Legislative Priorities Committee	Support	No

Comments:

LATE

HB-654-SD-1

Submitted on: 3/27/2019 6:21:47 PM

Testimony for WAM on 3/28/2019 10:15:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
JOHN KNOX	Individual	Support	No

Comments:

March 28, 2019

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran and members of the Senate Committee on Ways and Means.

My name is John Knox, and I am a Waimānalo resident testifying as a private individual in support of HB 654, HD1, to begin systematic research into why Hawai'i leads the nation in liver bile/duct cancer incidence.

It does not greatly affect our economy that an average 184 Hawai'i residents per year die, often painfully, of this cancer. It should, however, affect our consciences that we have not yet carefully researched why we're number one in the nation for our population.

Your committee must make difficult decisions about what to fund among many competing priorities, but I urge you to consider the potential benefits of this activity versus the relatively small cost.

Thank you for consideration of this testimony!