HB 654 – RELATING TO HEALTH

Chairs Woodson and Mizuno, Vice Chairs Hashem, Perruso and Kobayashi, and members of the Committees:

The University of Hawai‘i Cancer Center strongly supports HB 654, 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 whether Hawai‘i has the highest incidence in the country of liver and bile duct cancer due to liver fluke infection, aflatoxin ingestion, or intrahepatic bile duct dilation in Hawai‘i.

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.

The UH Cancer Center supports HB 654. Funds allocated under this proposal will be specifically allocated to advance liver cancer research. 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 – RELATING TO HEALTH
Cory Chun, Government Relations Director – Hawaii Pacific
American Cancer Society Cancer Action Network

Thank you for the opportunity to provide testimony in support of HB 654, which appropriates funds to the University of Hawaii Cancer Center to determine the cause of Hawaii’s high incidence rate of liver cancer.

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.
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 Hawaii has the highest incidence of liver and bile duct cancer in the country

Bernadette Sakoda
Lihue, Hawaii 96766
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,
Chandra Quinlan
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 Hawai‘i 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 Hawai‘i residents will die from liver cancer this year. This bill would specifically allow the Hawai‘i 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 Hawai‘i, 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.

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, Hawai‘i 96765
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,
Patrick Tran
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 Hawaii has the highest incidence of liver and bile duct cancer in the country.

Sincerely,
Stella Lee
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
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<tr>
<td>Melodie Aduja</td>
<td>O‘ahu County Committee on Legislative Priorities of the Democratic Party of Hawaiʻi</td>
<td>Support</td>
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Comments:
Good afternoon Chair Woodson, Chair Mizuno, and Vice-Chairs. My name is Nani Medeiros and I am here to testify in support of House Bill 654, Relating to Health. On August 14, 2018, my father, Albert P. Medeiros Jr., was diagnosed with stage 4 cholangiocarcinoma. Five months later, on January 14, 2019, he lost his battle.

The measure before you will provide a step toward researching the causes and frequency of liver and bile duct (cholangiocarcinoma) cancer in Hawaii. I urge you to pass this measure. When we learned of my dad’s diagnosis, I was relentless in my research of the cancer. I learned quickly a few things: it is extremely rare, it is lethal, there isn’t much research on the cancer itself because it is so rare and therefore doesn’t get the attention or dollars that more common cancers do.

My father beat prostate cancer three years ago. To say this cancer was “unexpected” is more of a misquote than to tell me, “Your mom won’t be killed by a drunk driver.” Yes, both of my parents are dead. Yes, I’m a little mad but a lot more lost about it. If the research available that is cited in this bill provides credible reason to believe that there are predictors for exposure, or risk factors, to these cancer-causing agents (bacteria/virus) then why shouldn’t the public of Hawaii be made aware? The common causes for cholangiocarcinoma (hepatitis and alcoholism included) were asked of my dad and ruled out after the initial diagnosis, so why did he get this? Why is he dead a mere five months later? Why are the numbers in HI greater than the national average and WHY are they on the uptick? The research in this measure identifies liver fluke and the sources as raw or undercooked fish and other food items grown in a tropical environment...like Hawaii. We as a family had a diet all my life that included raw fish and watercress. You all know how prevalent fish (raw, undercooked etc) and watercress is to the local diet, and menus of numerous restaurants that are popular with, and important to, both locals and our tourism economy. If you can spend $1 million on research for rat lung worm when only 20 people had it can’t you at least make an equal if not greater investment in your local people contracting a cancer than may be preventable and treatable if the liver fluke ends up being the cause? Not to mention how any people regularly visit Hawaii and eat our local food may also be affected and getting sick from eating our food.

My understanding, after learning of this measure and doing additional research is that there is medication available to treat liver flukes BEFORE they cause the cancer. At the very least, this should be a message to everyone...it is preventable...there are steps you can take to reduce the risk. Like sunscreen. Not proven, but hey we all use it right? And the legislature took that specific preventive measure a lot further last year; for something that “may” reduce the risk of skin cancer. Please take a step toward understanding more, and possibly reducing the risk of, a lethal cancer for which there is NO cure.

Please pass House Bill 654, in my father’s name, Al. Love you dad.
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 prostrate 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 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/](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](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.

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)."

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
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<td>Augusto Decastro</td>
<td>Individual</td>
<td>Support</td>
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Comments:
I support HB 654, relating to Health.

HB 654 will enable the University of Hawaii to conduct important research into the phenomenon of the high incident of liver and bile cancer among Hawaii residents and the likely cause attributed to the prevalence of liver flukes in foods popular with our residents.

Liver fluke infection is a common cause of liver and bile cancer in Southeast Asian countries, which share climate conditions, environment and food preferences similar to Hawaii. It is imperative that research to find the likely causes of liver and bile cancer, which is often fatal, be conducted to find the connection with liver flukes found in Hawaii and the means to prevent transmission to humans.

Please support this potentially life-saving research and save lives in Hawaii.
HB-654
Submitted on: 2/6/2019 4:15:16 PM
Testimony for LHE on 2/8/2019 2:16:00 PM

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<tr>
<td>Mary Steiner</td>
<td>Individual</td>
<td>Support</td>
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Comments:

HB654 calls for money to go to the University of Hawaii Cancer Center to study liver and bile duct cancer. The incidences of this type of cancer is increasing in our state and it is important to understand why. If there is a chance the increase is a result of diet then people need to make a choice as to whether they should consume something (raw fish for example) or not.

I ask you to be proactive and pass this bill before more people die from a possibly preventable disease.

Mahalo.

Mary Steiner
HB-654
Submitted on: 2/6/2019 5:22:00 PM
Testimony for LHE on 2/8/2019 2:16:00 PM

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<tr>
<td>Joy Marshall</td>
<td>Individual</td>
<td>Support</td>
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Comments:
Margaret was a loving mother-in-law who had just met her newest Grandson when she was taken by bile duct cancer just 6 months later. She suffered a great deal from this disease and our loss still hurts even today. Bile duct cancer is unfairly incurable and more needs to be done to prevent this horrible disease and screen high risk individuals. We urge you to support funding for this bill.

Thank you.

Sincerely,

Edward R Utz, MD and family.
Testimony in Support of HB 654

To: Representative Justin H. Woodson, Chair Committee on Lower & Higher Education
   Representative Mark J. Hashem, Vice-Chair Committee on Lower & Higher Education
   Representative Amy A. Perruso, Vice-Chair Committee on Lower & Higher Education

   Representative John M. Mizuno, Chair Committee on Health
   Representative Bertrand Kobayashi, Vice-Chair Committee on Health

From: Dyan M. Medeiros

Re: In support of HB 654

Hearing Date: February 8, 2019
Hearing Time: 2:15 p.m.
Hearing Place: Conference Room 309

Representative Woodson, Representative Hashem, Representative Perruso, Representative Mizuno, Representative Kobayashi, and Members of the Committees,

I submit this testimony as a private citizen in strong support of HB 654.

My father, Albert P. Medeiros, Jr., was diagnosed on August 14, 2018 with bile duct cancer (cholangiocarcinoma). He passed away 5 months later at the age of 71. His loss has been devastating to our family. He was a single father and the only parent I and my sister had ever known. But for this cancer, my father was in good health. His parents lived to be far older than 71 and one of his siblings is 80. But for this cancer, he would still be with us today and for a long time to come.

My father suffered from none of the “common causes” of bile duct cancer (hepatitis, heavy alcohol consumption, or liver disease). He was born and raised in Hawai‘i. He was an avid waterman and fisherman and loved to eat fish.

If the people of Hawai‘i are suffering from this horrible form of cancer (incurable and fatal usually within one year) due to one or more of the conditions that the University of Hawai‘i Cancer Center wishes to study, we deserve to know that. We deserve to know so our people can protect themselves and their loved ones and to prevent future losses of those we hold dear.

I urge to pass HB 654 in the strongest possible terms. Thank you.
Testimony in SUPPORT of HB0654
RELATING TO HEALTH

REPRESENTATIVE JUSTIN H. WOODSON, CHAIR
HOUSE COMMITTEE ON LOWER & HIGHER EDUCATION
REPRESENTATIVE JOHN M. MIZUNO, CHAIR
HOUSE COMMITTEE ON HEALTH

Hearing Date:  February 8, 2019           Room Number:  309

Fiscal Implications: The bill appropriates out of the general revenues $340,000 for fiscal year
(FY) 2019 – 2020 and the sum of $380,000 or so much thereof as may be necessary for FY 2020 – 2021 to the University of Hawaii. The Department defers to the University of Hawaii for implementation and fiscal implications, and to the priorities set forth in the Governor’s Executive Biennium Budget request.

Department Testimony: The DOH is in support of HB0654 which appropriates funds to the University of Hawaii Cancer Center (UHCC) to determine whether Hawaii has the highest incidence of liver and bile duct cancer in the country due to liver fluke infection, aflatoxin ingestion, or intrahepatic bile duct dilation.

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

Approximately 70 percent of liver cases in the United States could potentially be prevented through the elimination of exposure to risk factors, the most important of which are

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\(^1\) Hawaii Tumor Registry
excess body weight, chronic infection with hepatitis B virus (HBV) and/or hepatitis C virus (HCV), type 2 diabetes, heavy alcohol consumption, and tobacco smoking.\(^2\)

The DOH has been involved in statewide collaborative efforts to prevent liver cancer. The Hawaii Comprehensive Cancer Control Program convenes and facilitates the Hawaii Comprehensive Cancer Coalition (HCCC), a network of individuals and organizations that provide leadership and coordination for cancer prevention and control activities throughout the state. The Hawaii State Cancer Plan 2016 – 2020 was created by the HCCC to guide the state’s cancer control and prevention efforts and to enhance collaboration between public and private agencies and organizations. One objective in the state cancer plan is to increase HBV vaccination of susceptible at-risk adults. The DOH’s Harm Reduction Services Branch offers viral hepatitis services in collaboration with local community partners such as Hep Free Hawaii to promote liver health and increase awareness of and access to viral hepatitis services. The DOH will continue to collaborate with the UHCC on improving cancer screening rates and increasing HBV and HCV vaccination rates to reduce the burden of liver cancer in the state. Cessation programs are also available statewide to help smokers quit, and there are 19 CDC recognized Diabetes Prevention Programs with satellite locations in Hawaii.

Thank you for the opportunity to testify.

Comments:

I find it not only surprising, but OUTRAGEOUS, that nothing has been done to research this issue, when Hawaii has the highest incidence of this particular cancer, which otherwise is rare in most parts of the world. Cancer is an insidious disease that kills without discretion. This imperically proven connection between this type of cancer and its likely cause NEEDS to be studied in-depth, so that we can possibly prevent many more lives from being lost. Here, we have a type of terminal cancer that can most likely be prevented in Hawaii. We truly MUST take action NOW. The groundwork research has already been initiated, and now it is our duty and responsibility to follow though for the wellbeing and longevity our entire state, especially our keiki.

Mahalo,

Shannon Elies
I support this bill and it is because we as the state of Hawaii have one of the highest occurrences of liver cancer in the whole of the Nation. I feel it is important to put more research on the problem and see if there are other things that are causing liver cancer. I am here to put my support behind House Bill 654 because they propose that there is a correlation between liver fluke infection, aflatoxin ingestion, and intrahepatic bile duct dilation with Liver Cancer.