

# SB2049

Measure Title: RELATING TO CANCER RESEARCH.

Report Title: Cancer Research; Liver Cancer; UH Cancer Center;  
Appropriation (\$)

Description: Appropriates funds to the UH Cancer Center to determine the reasons that Hawai'i has the highest incidence of liver and bile duct cancer in the country.

Companion:

Package: None

Current Referral: CPH/HRE, WAM

Introducer(s): K. RHOADS, BAKER, HARIMOTO

**SB-2049**

Submitted on: 2/7/2018 1:03:09 PM

Testimony for CPH on 2/8/2018 1:20:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Melodie Aduja	OCC Legislative Priorities	Support	No

Comments:



**American Cancer Society  
Cancer Action Network**  
2370 Nu`uanu Avenue  
Honolulu, Hawai`i 96817  
808.432.9149  
[www.acscan.org](http://www.acscan.org)

Senate Committee on Commerce, Consumer Protection and Health  
Senator Rosalyn Baker, Chair  
Senator Jill Tokuda, Vice Chair

Senate Committee on Higher Education  
Senator Kaiali`i Kahele, Chair  
Senator Donna Mercado Kim, Vice Chair

**SB 2049 – RELATING TO CANCER RESEARCH**

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

Thank you for the opportunity to provide testimony in support of SB 2049, 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.

**TESTIMONY IN SUPPORT OF SB2049  
RELATING TO CANCER RESEARCH**

I am writing in support of SB2049, which would appropriate \$340,000 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 Hawaii 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.

I urge you to support SB2049 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.

Alberto Rodriguez Cruz  
Print Name

Ewa Beach, Hawaii      96706  
City    Zip Code

alberto.rodriguez74@gmail.com  
Email Address

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Justina Clanton  
Print Name

Mililani, Hawaii      96789  
City                                      Zip Code

justinak@hawaii.edu  
Email Address

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Chelsea Gonzales

Print Name

Honolulu, Hawaii 96822

City

Zip Code

cjeg@hawaii.edu

Email Address

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Meidrick Ravidia

Print Name

Honolulu, Hawaii 96819

City

Zip Code

meidrick@hawaii.edu

Email Address

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Albert To  
Print Name

Honolulu, Hawaii      96822-13  
City    Zip Code

albertto@hawaii.edu  
Email Address



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Lauren L. Ching  
\_\_\_\_\_  
Print Name

Honolulu, Hawaii      96817  
\_\_\_\_\_  
City      Zip Code

\_\_\_\_\_  
lauren/c@hawaii.edu  
\_\_\_\_\_  
Email Address

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Bradley Thomas  
Print Name

Honolulu, Hawaii      96822  
City    Zip Code

thomas.br@hawaii.edu  
Email Address

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Brien Hawn  
Print Name

Honolulu, Hawaii 96822  
City Zip Code

bhawn@hawaii.edu  
Email Address

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Thomas A. Premeaux  
Print Name

Honolulu, Hawaii 96816  
City Zip Code

Premeaux@hawaii.edu  
Email Address

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Gwen Navarrete Klapperich

Print Name

Ewa Beach, Hawaii      96706

City

Zip Code

gnklapp@outlook.com

Email Address

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Eleanore Chuang  
Print Name

Honolulu, Hawaii      96848  
City                                      Zip Code

ejcmarathon@yahoo.com  
Email Address

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James Gayer

Print Name

Honolulu

City

, Hawaii

96818

Zip Code

jg32@hawaii.edu

Email Address

**SB-2049**

Submitted on: 2/3/2018 1:42:58 AM

Testimony for CPH on 2/8/2018 1:20:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Lidiya Peralta		Support	No

Comments:

This bill will have a great benefit for the people of Hawaii



**SB-2049**

Submitted on: 2/5/2018 5:20:55 PM

Testimony for CPH on 2/8/2018 1:20:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
JOHN KNOX		Support	No

Comments:

I am unable to attend because of a conflict, but this bill just seems to make obvious sense. This type of cancer is statistically a far greater threat to Hawaii residents than rat lungworm disease. Please do something about it! -- John Knox

**SB-2049**

Submitted on: 2/6/2018 11:21:32 AM

Testimony for CPH on 2/8/2018 1:20:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Guoxiang Xie		Support	No

## Comments:

Liver cancer is now the fastest-rising cause of US cancer deaths, even as other cancer fatalities such as breast cancer and lung cancer continue to drop. In 2018, an estimated 42,220 new cases will be diagnosed with primary liver cancer in the US. Notably, Hawaii is the state in the US with the highest incidence of liver cancer at 11.3 per 100,000 and the second highest death rate at 8.3 per 100,000 (NCI State Cancer Profile in 2017). The incidence rates have been increasing in Hawaii for decades, and every year about 184 people in the state are diagnosed with liver cancer. There are several risk factors for developing liver cancer, the most important being chronic infection with hepatitis B or C virus, heavy alcohol consumption, nonalcoholic steatohepatitis (NASH), diabetes and obesity, and exposure to environmental toxins such as aflatoxins. Although major advances have been made in the treatment of HBV and HCV infection as well as the efforts have been made on the avoidance of heavy alcohol use and prevention of diabetes, the continuing increased incidence rate suggesting that some important factors that contribute to liver carcinogenesis are yet to be identified. Thus, in-depth studies are needed to find out what other risk factors in the process of liver injury and carcinogenesis that contribute to the high incidence of liver cancer particular in Hawaii.

Based on the most recent national statistics, Hawaii has the second highest liver cancer incidence in the US, which is 33% higher than the national average. Over the past 30 years, liver cancer incidence has been continuously rising in Hawaii as well as in the US, and the rate has been tripled since 1980. For most of liver cancer patients, the disease outcome is pretty bad and devastating. More than 80% of the patients die from the disease within 5 years of their diagnosis. On average, the 5-year survival rate of liver cancer is only 17%. Thus, before we find a cure for the cancer, it is critical for us to find ways to prevent or at least to lower the risk of the disease. Based on our current understanding of the disease process, we know this is possible because liver cancer takes at least 10 to 15 years to develop, and during that time many pre-cancer lesions can be fixed or are reversible if we can remove the risk factors that cause the tissue damage. Several factors have been identified to cause liver cancer, including chronic infection of hepatitis B or hepatitis C virus, heavy alcohol drinking, and obesity. These risk factors in Hawaii, however, are close to the national average, which makes it difficult to explain why Hawaii has the exceptionally high incidence of liver cancer. Thus, a state-wide study is needed to find out what other risk factors do we have here that contribute to the high incidence of liver cancer in Hawaii.

**SB-2049**

Submitted on: 2/7/2018 7:25:21 PM

Testimony for CPH on 2/8/2018 1:20:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Lucien Wong		Support	Yes

Comments:

**Why the 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>