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February 6, 2009

Representative John Mizuno, Chair
Members, Human Services Committee
Representative Ryan Yamane, Chair
Members of the House Health Committee
Hawaii State Capitol
Honolulu, HI 96813

Re: HB1527 Relating to Tobacco taxation

Dear Representatives Mizuno and Yamane:

I am Gail Breakey, Executive Director of the Hawaii Family Support Institute testifying in support of HB1527. In the current economic downturn, human services and especially prevention services have been and will be cut from the state budget. This is at a time when safety net services are most needed. State leadership is challenged to identify sources of revenue to maintain needed services.

HB1527 proposes an increase in the tax on tobacco, with proceeds benefiting both breast cancer screening and prevention of child abuse through the Healthy Start program. Both cancer and child abuse are relevant to tobacco use, and therefore appropriate beneficiaries of revenues from this tax.

The landmark Adverse Childhood Experiences study conducted by the CDC and Dr. Vincent Felitti at Kaiser Permanente in San Diego revealed strong correlations between adverse experiences in early childhood, particularly child abuse, with addiction to tobacco, as well as iv drug use and alcohol addiction.

The Hawaii Family Support Institute supports the intent to increase funding for cancer research and the Healthy Start program to prevent child abuse through this mechanism.

Sincerely,

Gail Breakey, Director
The Hawaii Family Support Institute

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American Heart Association | American Stroke Association

Learn and Live.

Serving Hawaii

Testimony for HB 1527 "Relating To Tobacco"

The American Heart Association supports the intent of HB 1527, but recommends several amendments.

A portion of new funds realized from any tobacco tax increase should be directed toward further tobacco prevention and education. Hawaii current investment remains well below the Centers for Disease Control's recommended spending in tobacco and prevention. The CDC recommends that Hawaii invest \$15.2 million per year on tobacco prevention, education and cessation programs to fully achieve success in reducing tobacco dependence. Hawaii currently receives \$11.3 million a year for tobacco prevention and cessation, which includes both state and federal funds. It is not clear how much the state actually invests annually in tobacco prevention and cessation, but it is likely below \$10 million per year.

In addition, the AHA recommends that the state attempt to set the tax on "other tobacco" products at a level comparable to what its cigarette tax will be when the current cigarette tax increase is fully implemented in 2011. In the future, any cigarette tax increases should be accompanied by a comparable increase in the tax on other tobacco products to insure that hikes in cost for one type of tobacco product don't drive potential young customers toward the cheaper type of tobacco. The goal of any tobacco tax increase should be primarily to achieve a reduction in use of tobacco products, especially by price-sensitive young people. The costs to the state for medical care alone related to tobacco use far outweigh the benefits in taxes collected on tobacco sales.

What do nicotine and tobacco smoke do to the body?

Nicotine causes a short-term increase in blood pressure, heart rate and the flow of blood from the heart. It also causes the arteries to narrow. Users of smokeless tobacco are exposed to levels of nicotine that are comparable to cigarette smokers. In addition, smoke from other tobacco products like cigars include carbon monoxide, which reduces the amount of oxygen the blood can carry. This, combined with the nicotine effects, creates an imbalance between the demand for oxygen by the cells and the amount of oxygen the blood can supply. Tobacco smoke also increases the risk of developing hardening of the arteries and heart attacks in several ways. First, carbon monoxide damages the inner walls of the arteries, encouraging fatty buildups in them. Over time, this causes the vessels to narrow and harden. Nicotine may also contribute to this process. Smoking also causes several changes in the blood that make clots—and heart attack—more likely. Cigar and pipe smoking increases the risk of abdominal aortic aneurysm by as much as six times compared to never-smokers. Smoking cigars or pipes doubles the risk of fatal stroke compared to never-smokers. Smoking cigars or pipes and cigarettes increases the risk for fatal stroke by six times compared to never-smokers. Pipe smoking has been found to increase coronary heart disease risk by almost as much as cigarette smoking. Some studies have shown that smokeless tobacco results in as much as a 40 percent increased risk of dying from cardiovascular disease.

Caution About Switching to a Weight-Based Tobacco Tax System

Legislators should be cautioned about falling into the tobacco companies' trap of switching to a weight-based formula for calculating the tax on "other tobacco" products rather than through a percentage of the wholesale or retail price. Over time, such shifts to a weight-based tax dramatically reduce the portion of state revenues gained from their smokeless tax, reducing the effective tax on the kinds of higher-priced premium products that the larger companies sell and increasing the effective tax on lower-priced brands, predominantly sold by smaller competitors.

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For information on the AHA's educational or research programs, contact your nearest AHA office, or visit our web site at www.americanheart.org or e-mail us at hawaii@heart.org

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Kauai:
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Phone: 808-538-7021
Fax: 808-538-3443

*"Building healthier lives,
free of cardiovascular
diseases and stroke."*

In contrast, a percentage-of-price tax levies a fixed percentage tax on all smokeless products, ensuring that those products that bring in higher amounts of revenue and profits also pay higher amounts per can or dose while still paying the exact same percentage tax as less profitable brands. Taxing by weight also provides a massive tax break to the new generation of smokeless tobacco products (e.g. Ariva, Stonewall, Snus products) that can weigh as little as one-tenth as much as standard smokeless products. Accordingly, states with weight-based smokeless or moist snuff taxes will see their revenues shrink as this new wave of super-low-weight products takes over more and more of the total smokeless market. To ensure that smokeless tobacco brands that engage in unfair competition or predatory pricing still pay reasonable amounts of tax, the state could simply add a minimum tax onto its existing percentage-of-price tax system.

But it is not just an issue of premium versus lower-price brands. The vast majority of kids who use smokeless tobacco use the higher-priced premium brands, such as Copenhagen. By ultimately lowering the price on the smokeless tobacco products most popular with kids, shifting to a weight-based tax would increase smokeless tobacco use among youths.

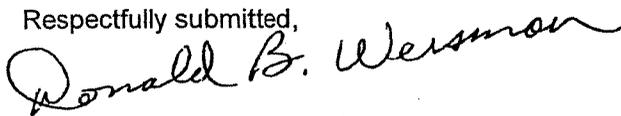
Setting Smokeless Tobacco Tax Rates Effectively

Simply raising all state tobacco taxes will produce enormous benefits by reducing overall tobacco use, with an especially powerful negative effect on tobacco use by kids. At the same time, it is important to make sure that the tax rates on all tobacco products are roughly comparable, to minimize shifts from one tobacco product to another cheaper one and to maximize the overall reduction in tobacco use.

One way to create comparable rates is to make sure that the cigarette, smokeless, and other tobacco product tax rates – or the proposed increased rates – all roughly equal to the same percentage of the underlying prices for the products (either those charged to consumers or those charged by the manufacturers to wholesalers). While Hawaii's cigarette taxes are set as certain amounts per cigarette, it is possible to translate those amounts into percentages of the prices charged by manufacturers through the manufacturer price data available from the U.S. Department of Agriculture's Economic Research Service and from other sources. Another option is to compare the state cigarette tax per pack amount to the average retail price of cigarettes in the state, while also translating the other tobacco product taxes into retail price percentages.

In conclusion, it is important to both maintain a balance between the taxes on cigarettes and the tax on "other tobacco" products in order to continue to drive down Hawaii's youth smoking rates. It is just as important to maintain the level of investment in tobacco prevention, education and cessation programs at or near the CDC's minimum recommended amounts. The AHA strongly recommends that a portion of any new tobacco tax revenue be earmarked to support those life-saving programs.

Respectfully submitted,



Donald B. Weisman
Hawaii Communications and Marketing/Government Affairs Director



COALITION FOR A TOBACCO-FREE HAWAII

LAPE

To: Representative Ryan I. Yamane, Chair, House Health Committee
Representative Scott Y. Nishimoto, Vice Chair, House Health Committee
Representative John M. Mizuno, Chair, Human Services Committee
Representative Tom Brower, Vice Chair, Human Services Committee
Members, House Joint Committee on Health and Human Services

From: Trisha Y. Nakamura, Policy and Advocacy Director

Date: February 4, 2009

Hrg: House Joint Committee on Health and Human Services; February 6, 2009 at 9:00 a.m.

Re: Strong Support to Increase the Tax on Other Tobacco Products, HB 1527

Thank you for this opportunity to testify in support of an increase on the tax on tobacco products other than cigarettes. The Coalition for a Tobacco-Free Hawaii (Coalition) is the only independent organization in Hawaii whose sole mission is to reduce tobacco use through education, policy and advocacy. The Coalition has long supported increasing taxes on tobacco products as a means to reduce youth consumption of tobacco. We thank the Joint Committee on Health and Human Services for hearing this matter.

Raising the tax on tobacco products is a win-win for our State. A tax increase will not only bring revenue into our State but it will reduce youth tobacco use. HB 1527 also presents an opportunity for lawmakers to dedicate funds to tobacco prevention and control efforts.

Health is Promoted By Increasing the Tax on Tobacco Products Other Than Cigarettes

By increasing the percent of the wholesale price of each tobacco product sold, use of smokeless tobacco by adults and young people will decrease. This will result in a decline in the serious health conditions that arise from use of smokeless tobacco including cancer of the esophagus pharynx, larynx, stomach, and pancreas, gum disease, and the risk of cardiovascular disease. Adolescents and young adults are two to three times more sensitive to tobacco price changes than adults—less youth will begin to start using smokeless tobacco and more will reduce their consumption. Hawaii has seen an increase in youth use of smokeless tobacco despite our decreasing smoking rates. This is a concern because children and adolescents who use smokeless tobacco, especially if they are male, are at an increased risk to become cigarette smokers.

Rates of Smokeless Tobacco Use in 2003 and 2007

	2003	2007
High School students	2.8%	3.7%
Middle School students	1.7%	2.8%

(Hawaii State Department of Health, Data Highlights from the 2007 Hawaii Youth Tobacco Survey (YTS) and Comparisons with Prior Years. September 2008)

Significant Revenues Can Be Generated from an Increase in the Tax on Other Tobacco Products

The chart on the next page shows rough estimates of how much revenue our State may see if the tax on other tobacco products is increased. The figures are based on two averages: the five-year and the ten-year averages of taxes on other tobacco products as viewed at the Department of Taxation's website.

Revenue Projections for Tax on Other Tobacco Products

Revenue Projections	Based on 5-Year Average	Based on 10-Year Average
60% of purchase price (20% increase fr current rate)	\$3,826,354.45	\$3,322,278.00
70% of purchase price (30% increase fr current rate)	\$4,145,217.32	\$3,599,134.50
80% of purchase price (40% increase fr current rate)	\$4,464,080.19	\$3,875,991.00
90% of purchase price (50% increase fr current rate)	\$4,782,943.06	\$4,152,847.50
100% of purchase price (60% increase fr current rate)	\$5,101,805.93	\$4,429,704.00

Revenues Should Be Directed to Fund Tobacco Prevention and Control

At a time when there are threats to fund tobacco prevention and control, the Coalition would like to see all, if not a portion of the revenues from the increase in the tax on other tobacco products dedicated to tobacco prevention and control. This will ensure that the comprehensive tobacco prevention and control work in Hawaii continues. Those who want help in quitting tobacco should have the services to help them. 88% of smokers want to quit someday; 61% have tried to quit in the past year. The revenues collected from tobacco should support services for them. The significant gains are at risk if tobacco prevention and control efforts are not funded and maintained.

Thank you for the opportunity to testify. The Coalition strongly encourages you to pass this measure out of Committee.



PACT

PARENTS AND CHILDREN TOGETHER

A Family Service Agency

1485 Linapuni Street, Suite 105
Honolulu, Hawai'i 96819
Tel. (808) 847-3285
Fax (808) 841-1485

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OAHU PROGRAMS

- COMMUNITY TEEN CENTER
- CPS VISITATION CENTERS
- EARLY HEAD START/
HEAD START
- ECONOMIC DEVELOPMENT
CENTER
- FAMILY PEACE CENTER
- FAMILY VISITATION CENTER
- HANA LIKE HOME
VISITOR PROGRAM
- HAWAII FAMILY SUPPORT
CENTER
- INTENSIVE SUPPORT SERVICES
- KANEOHE COMMUNITY
FAMILY CENTER
- KPT FAMILY CENTER
- OHIA - DOMESTIC VIOLENCE
SHELTER
- PU'UHONUA DOMESTIC
VIOLENCE CENTER
- RESPIRE CARE

MAUI COUNTY PROGRAMS

- FAMILY PEACE CENTER
- INTENSIVE SUPPORT SERVICES
- LANAI INTEGRATED SERVICES
- FAMILY VISITATION CENTER

KAUAI COUNTY PROGRAMS

- FAMILY VISITATION CENTER
- INTENSIVE SUPPORT SERVICES

MEMBER:

- CWLA
- ALOHA UNITED WAY
- COA

TO: Rep. Ryan Yamane, Chair
Committee on Health
Rep. John Mizuno, Chair
Committee on Human Services

FROM: Julie Falicki, Program Director
Parents And Children Together
Hana Like Home Visitor Program

DATE: February 5, 2009

RE: HB 1527
In Support of Increasing the General Excise Tax on Tobacco Products (other than cigarettes)

My name is Julie Falicki. I am the Program Director for PACT's Hana Like Home Visitor Program. Hana Like is a member of the statewide Healthy Start Network. I have worked in the Healthy Start program in a variety of roles since 1993. PACT is one of Hawaii's leading not-for-profit human services providers, with 12 programs statewide serving over 9,000 clients annually. I am submitting testimony **in support of increasing the general excise tax on tobacco products (other than cigarettes).**

The taxes on tobacco products other than cigarettes have not been increased in 43 years. Use of tobacco products increases the risk for cancer. A tax increase may discourage use of these products, thereby reducing the human and economic costs of this often devastating disease. In addition, a portion of the increased tax revenue will be designated for two very worthy efforts: breast and cervical cancer screening and the Healthy Start program.

The Healthy Start program works with families with children birth to three years old. The importance of the first three years of life has been well established. These years lay the foundation for each child's cognitive and emotional development. The quality of the child's early environment, including their relationship with their parents and the provision of early learning experiences, is predictive of that child's later success in areas such as school performance and social adjustment.

It is the mission of the Healthy Start program to optimize each child's development during these critical years by providing at-risk families with the skills and support needed to nurture their child's development and to avoid setting patterns of parenting which may lead to child abuse and neglect and poor developmental outcomes. This is done through



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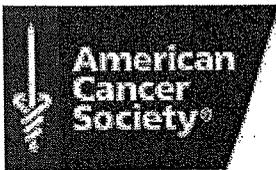
regular home visitation by a Home Visitor, developmental screening to identify and address developmental concerns, the provision of information on effective parenting techniques and child development, and referral to community resources to reduce family stress. The services provided by the paraprofessional Home Visitor are supported by professional Child Development Specialists, who address developmental concerns, and Family Specialists, who address risk factors such as mental health issues and substance abuse.

During these tough economic times, it is tempting to eliminate programs that may be viewed by some as non-essential. Families referred to Healthy Start are those determined to be at risk for child abuse and neglect, as measured by a validated tool. The Healthy Start program has proven to be effective in ameliorating those factors associated with child abuse and neglect, such as unrealistic expectations of children, lack of knowledge of child development, history of abuse and neglect in the parents' own childhood, substance abuse, domestic violence, mental health issues, social isolation, and limited resources. This is accomplished through direct services by the Healthy Start team, as well as referrals to community resources. The program aims to build supports and reduce stressors, thereby promoting each family's capacity to foster their child's development as well as the family's self-reliance and resilience. The program also promotes the use of a medical home, immunizations, family planning and prenatal care to avoid costs associated with crisis care.

Elimination of Healthy Start will take away this safety net for vulnerable families, which will result in increased costs elsewhere, such as Child Welfare Services and foster care, and costs associated with developmental delays such as special education. Additional short-term costs include unemployment insurance for over 200 Healthy Start employees statewide. The state will lose income from Medicaid reimbursements drawn down by the program at a rate of around 1.5 million a year, as well as a federal Administration for Children and Families grant of 2.5 million recently awarded to the Department of Health, Maternal and Child Health Branch to continue to improve the program over the next 5 years.

Long-term costs associated with child abuse and neglect include school failure, substance abuse, an unprepared work force, mental health treatment, crime, as well as illnesses now known to be associated with early trauma and neglect. Healthy Start has been a national leader in prevention services for over 20 years, and has been a model for similar programs in over 35 states.

We applaud the efforts of the legislature to develop creative ways to provide funding to these critically important programs, such as this bill to increase the general excise tax on tobacco products.



LATE

February 6, 2009

Committee on Health
Representative Ryan Yamane, Chair
Representative Scott Nishimoto, Vice Chair

Committee on Human Services
Representative John Mizuno, Chair
Representative Tom Brower, Vice Chair

Hearing:
9:00 A.M., Friday, February 6, 2009
Hawaii State Capitol, Room 329

RE: HB1527, Relating to Tobacco

Testimony in Support

Chair's Yamane and Mizuno, and members of the Committee on Health, and the Committee on Human Services. My name is George Massengale and I am the Director of Government Relations for the American Cancer Society Hawaii Pacific Inc. Thank you for the opportunity to testify in strong support of HB1527, which increases the excise tax on tobacco products other than cigarettes; and designates a percentage of this increase to cervical and breast cancer screening and the Healthy Start program

The American Cancer Society Hawaii Pacific Inc., was founded in 1948, and is a community-based, voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives, and diminishing suffering from cancer, through research, education, advocacy, and service. This mission is consistent with the Society's ambitious 2015 goals of slashing the cancer mortality rate by 50%, reducing the incidence of cancer by 25%, and improving the quality of life of cancer patients and survivors by reducing the pain and suffering that cancer causes.

Oral and pharyngeal cancer continues to be a significant health problem in the United States and in Hawaii. Approximately 30,000 new cases of oral cancer are diagnosed each year. In Hawaii the oral/pharyngeal cancer rate is 9.2% per 100,000 of population. Currently, one-third of those patients who receive a diagnosis of oral cancer will eventually die of their disease. The long term survival of oral cancer patients is, as in most cancers, directly proportional to early detection, diagnoses, and treatment.

The use of tobacco products, cigarettes, cigar, pipes, and smokeless tobacco products (spit, snuff, and chewing tobacco) has emerged as a major preventable risk factor for a number of oral diseases and disorders. Unfortunately shameless marketing of tobacco products to our children and young adults

is having a negative impact in Hawaii as the use rates for smokeless tobacco products is trending upwards, as indicated by the increase in tax revenues on these products.

Raising the tax on other tobacco products—making the case. Although, there is a provision in this bill that would put additional monies into a special fund for cervical and breast cancer screening, we believe that there are other equally important reasons to increase this tax:

1. The current tax rate of 40% of the wholesale prices was established in 1965 and has never been increased. Massachusetts has a 90% rate, Maine 78%, Washington 75%, Minnesota 70%, and Oregon 65%.
2. It is well established by scientific research and the experiences of numerous states that increasing the state tax rates on non-cigarette tobacco products not only raises new revenues but also helps to reduce tobacco use levels, especially among youth.
3. With Hawaii's economy in dire straights, substantially raising the tax rate and dedicating portions of the increase to tobacco control and other safety net health programs, such as community health centers, will ensure the sustainability of those programs as additional demands are placed on them by laid off workers, the underinsured and uninsured.

The Society believes that a tax increase should be substantial and would recommend quadrupling the rate. In 2008, the Department of Taxation reported \$3.47 million in tax collections on other tobacco products. Quadrupling the rate could produce \$13.88 million in revenues.

With regards to the creation of the cervical and breast cancer screening fund, we would recommend that two per cent of the new tax revenue be allocated for the cervical and breast cancer screening fund. We estimate that this would generate approximately \$200,000.00 into the fund for additional cervical and breast cancer screenings. We would note for the committee, that last year the legislature passed SB3185, which subsequently became Act 52, which provides funds for additional cervical and breast cancer screenings, education, and outreach by DOH. \$150,000 was allocated for this purpose; however the governor refused to allocate those monies.

In closing we would note that we believe that this is a good bill. It accomplishes several purposes. It is a sin tax that will generate substantial revenues thus helping our state's fiscal crisis. It will provide ongoing funding for cervical and breast cancer screenings. It will deter adult and youth tobacco use, which will in turn drive down not only oral cancer rates but the rates of other cancers related to tobacco use.

We have for the committee attached a copy of the administration's memorandum not to fund Act 52. We have also attached the National Cancer Institute's information guide to oral cancer.

Finally, we would respectfully request that the committee look favorably on our recommendations to quadruple the tax, and allocate 2% of the new revenues to the cervical and breast cancer fund.

Mahalo for the opportunity to provide testimony in support of this measure.

Very truly yours,



George S. Massengale, JD
Director of Government Relations

attachments

08 0896

LINDA LINGLE
GOVERNOR



GEORGINA K. KAWAMURA
DIRECTOR

ROBERT N. E. PIPER
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
P. O. BOX 150
HONOLULU, HAWAII 96810-0150

EMPLOYEES' RETIREMENT SYSTEM
HAWAII EMPLOYER UNION HEALTH BENEFITS TRUST FUND
OFFICE OF THE PUBLIC DEFENDER
PUBLIC UTILITIES COMMISSION

ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND
MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION

October 30, 2008

TO: The Honorable Lillian B. Koller, Director
Department of Human Services

FROM: Georgina K. Kawamura
Director of Finance *Georgina K. Kawamura*

SUBJECT: Request to Allot and Transfer \$150,000 in Appropriated General Funds
to the Department of Health Pursuant to Act 52, SLH 2008

I have received your memorandum of September 3, 2008, requesting approval to allot and transfer \$150,000 in general funds to the Department of Health (DOH) to expand their early detection screening program for breast and cervical cancer. Act 52, SLH 2008, authorizes your department to transfer \$150,000 in general funds to DOH to augment the screening program. DOH currently utilizes a \$1.1 million federal grant for the program.

As you may be aware, the State continues to experience declining revenue projections that have adversely impacted the general fund financial plan for FY 09, as well as future fiscal years. Due to the State's fiscal condition and the current availability of federal funds for the early detection program, your request is being returned without action.

Thank you for your understanding in this matter.

Attachment.

c: Honorable Linda Lingle
Honorable Chiyoame L. Fukino

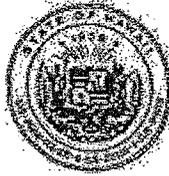
DEPT. OF HUMAN SVCS
MED-QUEST DIV

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1001 1001 - 2 17 0 30

PAID

LINDA LINGLE
GOVERNOR



LILLIAN B. KOLLER, ESQ.
DIRECTOR

HENRY OLIVA
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF HUMAN SERVICES
Med-QUEST Division
Finance Office
P. O. Box 700190
Kapolei, Hawaii 96709-0190

September 3, 2008

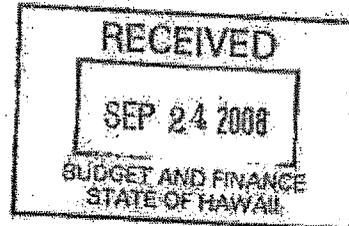
MEMORANDUM

TO: The Honorable Linda Lingle
Governor of Hawaii

THROUGH: The Honorable Georgina K. Kawamura
Director of Finance

FROM: Lillian B. Koller
Director of Human Services

SUBJECT: REQUEST TO ALLOT AND TRANSFER APPROPRIATED GENERAL
FUNDS IN ACT 52, SLH 2008 (SB 3185, SD 2, HD 1)



Pursuant to Executive Memo No. 08-03, Attachment A, the Department of Human Services (DHS) requests your approval to allot and transfer \$150,000 in general funds appropriated in Act 52, SLH 2008 to the Department of Health (DOH). The funds will be expended as follows:

1. Program I. D. and Title: HMS 401 - Health Care Payments
2. Amount of General Funds: \$150,000 for SFY 2009
3. Purpose of Funding:

The purposes of the funds are for cervical and breast cancer screening, education, and outreach services to be provided by the DOH to collaboratively support the DHS' Comprehensive Breast and Cervical Cancer Control Program.

4. Period of Funding: July 1, 2008 to June 30, 2009

5. Intended Program Use of Funds:

The Hawaii Breast and Cervical Cancer Control Program was established in 1997, administered by the DOH to provide breast and cervical cancer screening. This program was amended in 2001 to provide for a Breast and Cervical Cancer Treatment Program, administered by the DHS for women who are not eligible for federally-funded Medicaid coverage as provided by the Breast and Cervical Cancer Prevention and Treatment Act of 2000.

In SFY 2003, the Legislature appropriated \$243,000 for the Breast and Cervical Cancer Treatment Program to the DHS. The purpose of Act 52, SLH 2008 is to transfer \$150,000 of these funds to the DOH to assist with breast and cervical cancer screening, education and outreach to reach more women who are at risk for breast and cervical cancer.

This Act also consolidates the two programs into a Comprehensive Breast and Cervical Cancer Control Program, administered by the DHS with DOH collaboration to provide the program's screening, education and outreach services.

6. Will program be continued after this funding? If yes, how will it be funded?

This Act transfers \$150,000 for SFY 2009 only. It is unknown if the Legislature will appropriate and transfer DHS funds to the DOH for these purposes in the future.

Should there be any questions, please call Dr. Kenneth Fink, Med-QUEST Division Administrator, at 692-8050. Thank you for your consideration of this request.

RECOMMEND:

APPROVAL

DISAPPROVAL

Director of Finance

Date

APPROVED

DISAPPROVED

Governor of Hawaii

Date



What
You
Need
To
Know
About
Oral
Cancer

U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES
National Institutes of Health
National Cancer Institute
National Institute of Dental
and Craniofacial Research



This booklet is about oral cancer. The Cancer Information Service can help you learn more about this disease. The staff can talk with you in English or Spanish.

The number is 1-800-4-CANCER (1-800-422-6237). The number for deaf and hard of hearing callers with TTY equipment is 1-800-332-8615. The call is free.

Este folleto es acerca del cáncer de la boca. Llame al Servicio de Información sobre el Cáncer para saber más sobre esta enfermedad. Este servicio tiene personal que habla español.

El número a llamar es el 1-800-4-CANCER (1-800-422-6237). Personas con problemas de audición y que cuentan con equipo TTY pueden llamar al 1-800-332-8615. La llamada es gratis.



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U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES
National Institutes of Health
National Cancer Institute
National Institute of Dental
and Craniofacial Research



What You Need To Know About™ Oral Cancer

Each year in the United States, about 29,000 people learn they have *cancer** of the oral cavity (the mouth and lips) or the oropharynx (the part of the throat at the back of the mouth).

This National Cancer Institute (NCI) booklet has important information to help people with oral cancer and their family and friends better understand this disease. It discusses possible causes, symptoms, diagnosis, and treatment of the disease. It also has information about rehabilitation and about sources of support to help patients cope with oral cancer.

Scientists are studying oral cancer to learn more about this disease, and doctors are exploring new ways to treat it. This research keeps increasing our knowledge about oral cancer. The NCI provides the most up-to-date information by telephone and on the Internet:

- **Telephone (1-800-4-CANCER):** Information Specialists at NCI's Cancer Information Service can answer questions about cancer and can send materials published by NCI.
- **Internet (<http://cancer.gov>):** Cancer.gov is NCI's Web site. It has a wide range of information that is updated regularly. People can ask questions online and get immediate help through *LiveHelp*. Many NCI booklets and fact sheets can be viewed at <http://cancer.gov/publications>. People in the United

*Words that may be new to readers appear in *italics*. The "Dictionary" section explains these terms. Some words in the "Dictionary" have a "sounds-like" spelling to show how to pronounce them.

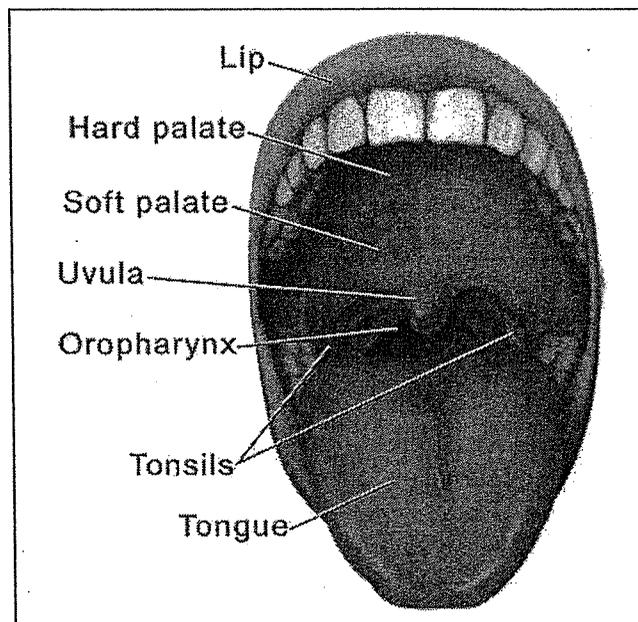


States and its territories may use this Web site to order publications. This Web site also explains how people outside the United States can mail or fax their requests for NCI publications.

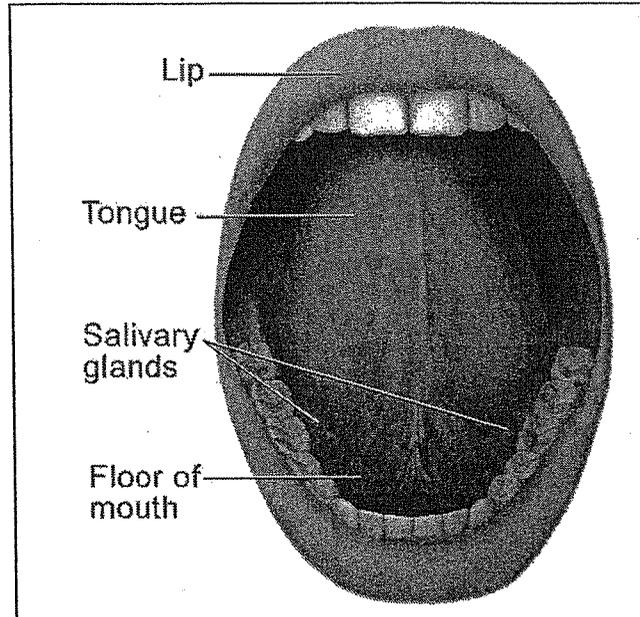
The Mouth and Throat

This booklet is about cancers that occur in the mouth (*oral cavity*) and the part of the throat at the back of the mouth (*oropharynx*). The oral cavity and oropharynx have many parts:

- Lips
- Lining of your cheeks
- *Salivary glands* (*glands that make saliva*)
- Roof of your mouth (*hard palate*)



This picture shows the parts of the mouth and throat.



This picture shows area under the tongue.

- Back of your mouth (*soft palate and uvula*)
- Floor of your mouth (area under the tongue)
- Gums and teeth
- Tongue
- *Tonsils*

Understanding Cancer

Cancer begins in *cells*, the building blocks that make up *tissues*. Tissues make up the *organs* of the body.

Normally, cells grow and divide to form new cells as the body needs them. When cells grow old, they die, and new cells take their place.



Sometimes this orderly process goes wrong. New cells form when the body does not need them, and old cells do not die when they should. These extra cells can form a mass of tissue called a growth or *tumor*.

Tumors can be *benign* or *malignant*:

- **Benign tumors** are not cancer:
 - Benign tumors are rarely life-threatening.
 - Generally, benign tumors can be removed, and they usually do not grow back.
 - Cells from benign tumors do not invade the tissues around them.
 - Cells from benign tumors do not spread to other parts of the body.
- **Malignant tumors** are cancer:
 - Malignant tumors are generally more serious than benign tumors. They may be life-threatening.
 - Malignant tumors often can be removed, but sometimes they grow back.
 - Cells from malignant tumors can invade and damage nearby tissues and organs.
 - Cells from malignant tumors can spread to other parts of the body. The cells spread by breaking away from the original cancer (*primary tumor*) and entering the bloodstream or *lymphatic system*. They invade other organs, forming new tumors and damaging these organs. The spread of cancer is called *metastasis*.

Oral Cancer

Oral cancer is part of a group of cancers called *head and neck cancers*. Oral cancer can develop in any part of the oral cavity or oropharynx. Most oral cancers begin in the tongue and in the floor of the mouth.



Almost all oral cancers begin in the flat cells (*squamous cells*) that cover the surfaces of the mouth, tongue, and lips. These cancers are called *squamous cell carcinomas*.

When oral cancer spreads (metastasizes), it usually travels through the lymphatic system. Cancer cells that enter the lymphatic system are carried along by *lymph*, a clear, watery fluid. The cancer cells often appear first in nearby *lymph nodes* in the neck.

Cancer cells can also spread to other parts of the neck, the lungs, and other parts of the body. When this happens, the new tumor has the same kind of abnormal cells as the primary tumor. For example, if oral cancer spreads to the lungs, the cancer cells in the lungs are actually oral cancer cells. The disease is metastatic oral cancer, not lung cancer. It is treated as oral cancer, not lung cancer. Doctors sometimes call the new tumor “distant” or metastatic disease.

Oral Cancer: Who's at Risk?

Doctors cannot always explain why one person develops oral cancer and another does not. However, we do know that this disease is not contagious. You cannot “catch” oral cancer from another person.

Research has shown that people with certain *risk factors* are more likely than others to develop oral cancer. A risk factor is anything that increases your chance of developing a disease.



The following are risk factors for oral cancer:

- **Tobacco:** Tobacco use accounts for most oral cancers. Smoking cigarettes, cigars, or pipes; using chewing tobacco; and dipping snuff are all linked to oral cancer. The use of other tobacco products (such as *bidis* and *kreteks*) may also increase the risk of oral cancer. Heavy smokers who use tobacco for a long time are most at risk. The risk is even higher for tobacco users who drink alcohol heavily. In fact, three out of four oral cancers occur in people who use alcohol, tobacco, or both alcohol and tobacco.
- **Alcohol:** People who drink alcohol are more likely to develop oral cancer than people who don't drink. The risk increases with the amount of alcohol that a person consumes. The risk increases even more if the person both drinks alcohol and uses tobacco.
- **Sun:** Cancer of the lip can be caused by exposure to the sun. Using a lotion or lip balm that has a *sunscreen* can reduce the risk. Wearing a hat with a brim can also block the sun's harmful rays. The risk of cancer of the lip increases if the person also smokes.
- **A personal history of head and neck cancer:** People who have had head and neck cancer are at increased risk of developing another primary head and neck cancer. Smoking increases this risk.

Some studies suggest that not eating enough fruits and vegetables may increase the chance of getting oral cancer. Scientists also are studying whether infections with certain *viruses* (such as the *human papilloma-virus*) are linked to oral cancer.



Quitting tobacco reduces the risk of oral cancer. Also, quitting reduces the chance that a person with oral cancer will get a second cancer in the head and neck region. People who stop smoking can also reduce their risk of cancer of the lung, larynx, mouth, pancreas, bladder, and esophagus. There are many resources to help smokers quit:

- The Cancer Information Service at 1-800-4-CANCER can talk with callers about ways to quit smoking and about groups that offer help to smokers who want to quit. Groups offer counseling in person or by telephone.
- Also, your doctor or dentist can help you find a local smoking cessation program.
- Your doctor can tell you about medicine (*bupropion*) or about nicotine replacement therapy, which comes as a patch, gum, lozenges, nasal spray, or inhaler.
- The "National Cancer Institute Information Resources" section on page 43 has information about the Federal Government's smoking cessation Web site, <http://www.smokefree.gov>.

If you think you may be at risk, you should discuss this concern with your doctor or dentist. You may want to ask about an appropriate schedule for checkups. Your health care team will probably tell you that not using tobacco and limiting your use of alcohol are the most important things you can do to prevent oral cancers. Also, if you spend a lot of time in the sun, using a lip balm that contains sunscreen and wearing a hat with a brim will help protect your lips.

Early Detection

Your regular checkup is a good time for your dentist or doctor to check your entire mouth for signs of cancer. Regular checkups can detect the early stages of oral cancer or conditions that may lead to oral cancer. Ask your doctor or dentist about checking the tissues in your mouth as part of your routine exam.

Symptoms

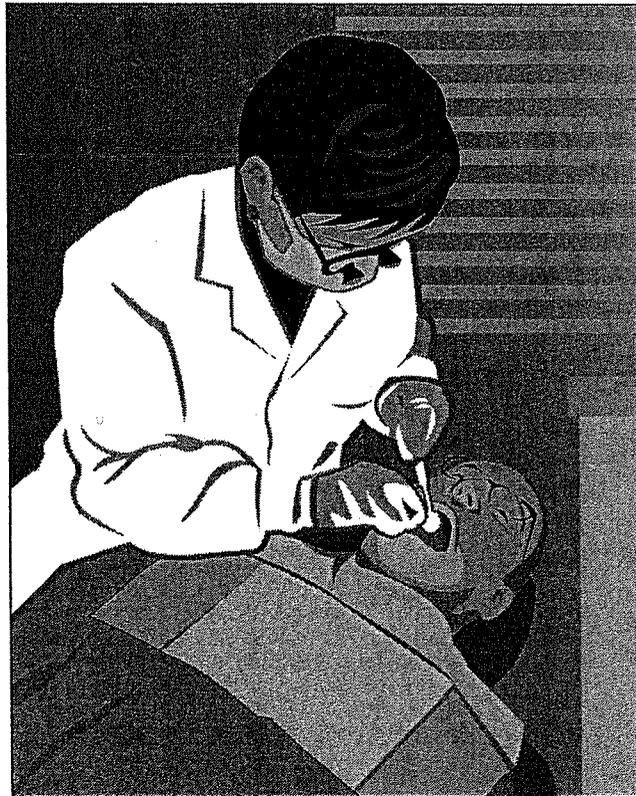
Common symptoms of oral cancer include:

- Patches inside your mouth or on your lips that are white, a mixture of red and white, or red
 - White patches (*leukoplakia*) are the most common. White patches sometimes become malignant.
 - Mixed red and white patches (*erythroleukoplakia*) are more likely than white patches to become malignant.
 - Red patches (*erythroplakia*) are brightly colored, smooth areas that often become malignant.
- A sore on your lip or in your mouth that won't heal
- Bleeding in your mouth
- Loose teeth
- Difficulty or pain when swallowing
- Difficulty wearing dentures
- A lump in your neck
- An earache

Anyone with these symptoms should see a doctor or dentist so that any problem can be diagnosed and treated as early as possible. Most often, these symptoms do not mean cancer. An infection or another problem can cause the same symptoms.

Diagnosis

If you have symptoms that suggest oral cancer, the doctor or dentist checks your mouth and throat for red or white patches, lumps, swelling, or other problems. This exam includes looking carefully at the





roof of the mouth, back of the throat, and insides of the cheeks and lips. The doctor or dentist also gently pulls out your tongue so it can be checked on the sides and underneath. The floor of your mouth and lymph nodes in your neck also are checked.

If an exam shows an abnormal area, a small sample of tissue may be removed. Removing tissue to look for cancer cells is called a *biopsy*. Usually, a biopsy is done with *local anesthesia*. Sometimes, it is done under *general anesthesia*. A *pathologist* then looks at the tissue under a microscope to check for cancer cells. A biopsy is the only sure way to know if the abnormal area is cancerous.

If you need a biopsy, you may want to ask the doctor or dentist some of the following questions:

- Why do I need a biopsy?
- How much tissue do you expect to remove?
- How long will it take? Will I be awake? Will it hurt?
- How soon will I know the results?
- Are there any risks? What are the chances of infection or bleeding after the biopsy?
- How should I care for the biopsy site afterward? How long will it take to heal?
- Will I be able to eat and drink normally after the biopsy?
- If I do have cancer, who will talk with me about treatment? When?

Staging

If the biopsy shows that cancer is present, your doctor needs to know the *stage* (extent) of your disease to plan the best treatment. The stage is based on the size of the tumor, whether the cancer has spread and, if so, to what parts of the body.

Staging may require lab tests. It also may involve *endoscopy*. The doctor uses a thin, lighted tube (*endoscope*) to check your throat, windpipe, and lungs. The doctor inserts the endoscope through your nose or mouth. Local anesthesia is used to ease your discomfort and prevent you from gagging. Some people also may have a mild sedative. Sometimes the doctor uses general anesthesia to put a person to sleep. This exam may be done in a doctor's office, an outpatient clinic, or a hospital.

The doctor may order one or more *imaging* tests to learn whether the cancer has spread:

- **Dental x-rays:** An x-ray of your entire mouth can show whether cancer has spread to the jaw.
- **Chest x-rays:** Images of your chest and lungs can show whether cancer has spread to these areas.
- **CT scan:** An x-ray machine linked to a computer takes a series of detailed pictures of your body. You may receive an injection of dye. Tumors in the mouth, throat, neck, or elsewhere in the body show up on the CT scan.
- **MRI:** A powerful magnet linked to a computer is used to make detailed pictures of your body. The doctor can view these pictures on a monitor and can print them on film. An MRI can show whether oral cancer has spread.

Treatment

Many people with oral cancer want to take an active part in making decisions about their medical care. It is natural to want to learn all you can about your disease and your treatment choices. However, shock and stress after the diagnosis can make it hard to think of everything you want to ask the doctor. It often helps to make a list of questions before an appointment. To help remember what the doctor says, you may take notes or ask whether you may use a tape recorder. You may also want to have a family member or friend with you when you talk to the doctor—to take part in the discussion, to take notes, or just to listen.

Your doctor may refer you to a specialist, or you may ask for a referral. Specialists who treat oral cancer include *oral and maxillofacial surgeons*, *otolaryngologists* (ear, nose, and throat doctors), *medical oncologists*, *radiation oncologists*, and *plastic surgeons*. You may be referred to a team that includes specialists in *surgery*, *radiation therapy*, or *chemotherapy*. Other health care professionals who may work with the specialists as a team include a *dentist*, *speech pathologist*, *nutritionist*, and *mental health counselor*.

Getting a Second Opinion

Before starting treatment, you might want a second opinion about the diagnosis and the treatment plan. Some insurance companies require a second opinion; others may cover a second opinion if you or your doctor requests it.



There are a number of ways to find a doctor for a second opinion:

- Your doctor may refer you to one or more specialists. At cancer centers, several specialists often work together as a team.
- The Cancer Information Service, at 1-800-4-CANCER, can tell you about nearby treatment centers.
- A local or state medical or dental society, a nearby hospital, or a medical or dental school can usually provide the names of specialists in your area.
- The American Board of Medical Specialties (ABMS) has a list of doctors who have had training and exams in their specialty. You can find this list in the *Official ABMS Directory of Board Certified Medical Specialists*. The directory is available in most public libraries. Or you can look up doctors at <http://www.abms.org>. (Click on Who's Certified.)
- The American Dental Association (ADA) Web site provides a list of dentists by specialty and location. The ADA Member Directory is available at <http://www.ada.org/public/directory/index.html>.
- The NCI provides a helpful fact sheet called "How To Find a Doctor or Treatment Facility If You Have Cancer." It is available on the Internet at <http://cancer.gov/publications>.

Preparing for Treatment

The choice of treatment depends mainly on your general health, where in your mouth or oropharynx the cancer began, the size of the tumor, and whether the cancer has spread. Your doctor can describe your treatment choices and the expected results. You will want to consider how treatment may affect normal activities such as swallowing and talking, or whether it will change the way you look. You and your doctor can



work together to develop a treatment plan that meets your needs and personal values.

You do not need to ask all your questions or understand all the answers at once. You will have other chances to ask your doctor to explain things that are not clear and to ask for more information.

Methods of Treatment

Oral cancer treatment may include surgery, radiation therapy, or chemotherapy. Some patients have a combination of treatments.

At any stage of disease, people with oral cancer may have treatment to control pain and other symptoms, to relieve the side effects of therapy, and to ease emotional and practical problems. This kind of

You may want to ask the doctor these questions before treatment begins:

- What is the stage of the disease? Has the cancer spread? If so, where?
- What are my treatment choices? Which do you recommend for me? Will I have more than one kind of treatment?
- What are the expected benefits of each kind of treatment?
- What are the risks and possible *side effects* of each treatment? How will treatment affect my normal activities? Will I be given anything to control side effects?
- How long will treatment last?
- Will I have to stay in the hospital?
- What is the treatment likely to cost? Is this treatment covered by my insurance plan?
- Would a *clinical trial* (research study) be appropriate for me? (See pages 30 and 31 for more information about clinical trials.)
- Should I try to quit smoking?

treatment is called *supportive care*, *symptom management*, or *palliative care*. Information about supportive care is available on NCI's Web site at <http://cancer.gov> and from NCI's Cancer Information Service at 1-800-4-CANCER.

You may want to talk to the doctor about taking part in a clinical trial, a research study of new treatment methods. The section on "The Promise of Cancer Research" on page 30 has more information about clinical trials.

Surgery

Surgery to remove the tumor in the mouth or throat is a common treatment for oral cancer. Sometimes the *surgeon* also removes lymph nodes in the neck. Other tissues in the mouth and neck may be removed as well. Patients may have surgery alone or in combination with radiation therapy.

You may want to ask the doctor these questions before having surgery:

- What kind of operation do you recommend for me?
- Do I need any lymph nodes removed? Why?
- How will I feel after the operation? How long will I be in the hospital?
- What are the risks of surgery?
- Will I have trouble speaking, swallowing, or eating?
- Where will the scars be? What will they look like?
- Will I have any long-term effects?
- Will I look different?
- Will I need *reconstructive* or *plastic surgery*? When can that be done?
- Will I lose my teeth? Can they be replaced? How soon?
- Will I need to see a specialist for help with my speech?
- When can I get back to my normal activities?
- How often will I need checkups?
- Would a clinical trial be appropriate for me?



Radiation Therapy

Radiation therapy (also called *radiotherapy*) is a type of *local therapy*. It affects cells only in the treated area. Radiation therapy is used alone for small tumors or for patients who cannot have surgery. It may be used before surgery to kill cancer cells and shrink the tumor. It also may be used after surgery to destroy cancer cells that may remain in the area.

Radiation therapy uses high-energy rays to kill cancer cells. Doctors use two types of radiation therapy to treat oral cancer:

- ***External radiation:*** The radiation comes from a machine. Patients go to the hospital or clinic once or twice a day, generally 5 days a week for several weeks.
- ***Internal radiation (implant radiation):*** The radiation comes from *radioactive* material placed in seeds, needles, or thin plastic tubes put directly in the tissue. The patient stays in the hospital. The implants remain in place for several days. Usually they are removed before the patient goes home.

Some people with oral cancer have both kinds of radiation therapy.

You may want to ask the doctor these questions before having radiation therapy:

- Which type of radiation therapy do you recommend for me? Why do I need this treatment?
- When will the treatments begin? When will they end?
- Should I see my dentist before I start treatment? If I need dental treatment, how much time does my mouth need to heal before radiation therapy starts?
- What are the risks and side effects of this treatment? What can I do about them?
- How will I feel during therapy?
- What can I do to take care of myself during therapy?
- How will my mouth and face look afterward?
- Are there any long-term effects?
- Can I continue my normal activities?
- Will I need a special diet? For how long?
- How often will I need checkups?
- Would a clinical trial be appropriate for me?

Chemotherapy

Chemotherapy uses anticancer drugs to kill cancer cells. It is called *systemic therapy* because it enters the bloodstream and can affect cancer cells throughout the body.



Chemotherapy is usually given by injection. It may be given in an outpatient part of the hospital, at the doctor's office, or at home. Rarely, a hospital stay may be needed.

You may want to ask the doctor these questions before having chemotherapy:

- Why do I need this treatment?
- Which drug or drugs will I have?
- How do the drugs work?
- Should I see my dentist before I start chemotherapy? If I need dental treatment, how much time does my mouth need to heal before the chemotherapy begins?
- What are the expected benefits of the treatment?
- What are the risks and possible side effects of treatment? What can I do about them?
- When will treatment start? When will it end?
- Will I need to stay in the hospital? How long?
- How will treatment affect my normal activities?
- Would a clinical trial be appropriate for me?



Side Effects of Cancer Treatment

Because treatment often damages healthy cells and tissues, unwanted side effects are common. These side effects depend mainly on the location of the tumor and the type and extent of the treatment. Side effects may not be the same for each person, and they may even change from one treatment session to the next. Before treatment starts, your health care team will explain possible side effects and suggest ways to help you manage them.

The NCI provides helpful booklets about cancer treatments and coping with side effects. Booklets such as *Radiation Therapy and You*, *Chemotherapy and You*, and *Eating Hints for Cancer Patients* may be viewed, downloaded, and ordered from <http://cancer.gov/publications>. These materials also may be ordered by calling the Cancer Information Service at 1-800-4-CANCER.

The National Institute of Dental and Craniofacial Research (NIDCR) also provides helpful materials. *Head and Neck Radiation Treatment and Your Mouth*, *Chemotherapy and Your Mouth*, and other booklets are available from NIDCR. See "National Institute of Dental and Craniofacial Research Information Resources" on page 47 for a list of publications.

Surgery

It takes time to heal after surgery, and the time needed to recover is different for each person. You may be uncomfortable for the first few days after surgery. However, medicine can usually control the pain. Before surgery, you should discuss the plan for pain relief with your doctor or nurse. After surgery, your doctor can adjust the plan if you need more pain relief.



It is common to feel tired or weak for a while. Also, surgery may cause tissues in your face to swell. This swelling usually goes away within a few weeks. However, removing lymph nodes can result in swelling that lasts a long time.

Surgery to remove a small tumor in the mouth may not cause any lasting problems. For a larger tumor, however, the surgeon may remove part of the palate, tongue, or jaw. This surgery may change your ability to chew, swallow, or talk. Also, your face may look different after surgery. Reconstructive or plastic surgery may be done to rebuild the bones or tissues of the mouth. (See "Reconstruction" on page 27.)

Radiation Therapy

Almost all patients who have radiation therapy to the head and neck area develop oral side effects. That is why it is important to get the mouth in good condition before cancer treatment begins. Seeing a dentist two weeks before cancer treatment begins gives the mouth time to heal after dental work.

The side effects of radiation therapy depend mainly on the amount of radiation given. Some side effects in the mouth go away after radiation treatment ends, while others last a long time. A few side effects (such as dry mouth) may never go away.

Radiation therapy may cause some or all of these side effects:

- **Dry mouth:** Dry mouth can make it hard for you to eat, talk, and swallow. It can also lead to tooth decay. You may find it helpful to drink lots of water, suck ice chips or sugar-free hard candy, and use a saliva substitute to moisten your mouth.



- **Tooth decay:** Radiation can cause major tooth decay problems. Good mouth care can help you keep your teeth and gums healthy and can help you feel better.
 - Doctors usually suggest that people gently brush their teeth, gums, and tongue with an extra-soft toothbrush and *fluoride* toothpaste after every meal and before bed. If brushing hurts, you can soften the bristles in warm water.
 - Your dentist may suggest that you use fluoride gel before, during, and after radiation treatment.
 - It also helps to rinse your mouth several times a day with a solution made from 1/4 teaspoon baking soda and 1/8 teaspoon salt in one cup of warm water. After you rinse with this solution, follow with a plain water rinse.
- **Sore throat or mouth:** Radiation therapy can cause painful ulcers and inflammation. Your doctor can suggest medicines to help control the pain. Your doctor also may suggest special rinses to numb the throat and mouth to help relieve the soreness. If your pain continues, you can ask your doctor about stronger medicines.
- **Sore or bleeding gums:** It is important to brush and floss teeth gently. You may want to avoid areas that are sore or bleeding. To protect your gums from damage, it is a good idea to avoid the use of toothpicks.
- **Infection:** Dry mouth and damage to the lining of the mouth from radiation therapy can cause infection to develop. It helps to check your mouth every day for sores or other changes and to tell your doctor or nurse about any mouth problems.

- **Delayed healing after dental care:** Radiation treatment may make it hard for tissues in the mouth to heal. It helps to have a thorough dental exam and complete all needed dental treatment well before radiation therapy begins.
- **Jaw stiffness:** Radiation can affect the chewing muscles and make it difficult for you to open your mouth. You can prevent or reduce jaw stiffness by exercising your jaw muscles. Health care providers often suggest opening and closing the mouth as far as possible (without causing pain) 20 times in a row, 3 times a day.
- **Denture problems:** Radiation therapy can change the tissues in your mouth so that dentures do not fit anymore. Because of soreness and dry mouth, some people may not be able to wear dentures for as long as one year after radiation therapy. After the tissues heal completely and your mouth is no longer sore, your dentist may need to refit or replace your dentures.
- **Changes in the sense of taste and smell:** During radiation therapy, food may taste or smell different.
- **Changes in voice quality:** Your voice may be weak at the end of the day. It may also be affected by changes in the weather. Radiation directed at the neck may cause your larynx to swell, causing voice changes and the feeling of a lump in your throat. Your doctor may suggest medicine to reduce this swelling.
- **Changes in the *thyroid*:** Radiation treatment can affect your thyroid (an organ in your neck beneath the voice box). If your thyroid does not make enough *thyroid hormone*, you may feel tired, gain weight, feel cold, and have dry skin and hair. Your doctor can check the level of thyroid hormone with a blood test. If the level is low, you may need to take thyroid hormone pills.



- **Skin changes in the treated area:** The skin in the treated area may become red or dry. Good skin care is important at this time. It is helpful to expose this area to the air while protecting it from the sun. Also, avoid wearing clothes that rub the treated area, and do not shave the treated area. You should not use lotions or creams in the treated area without your doctor's advice.
- **Fatigue:** You may become very tired, especially in the later weeks of radiation therapy. Resting is important, but doctors usually advise their patients to stay as active as they can.

Although the side effects of radiation therapy can be distressing, your doctor can usually treat or control them. It helps to report any problems that you are having so that your doctor can work with you to relieve them.

Chemotherapy

Chemotherapy and radiation therapy can cause some of the same side effects, including painful mouth and gums, dry mouth, infection, and changes in taste. Some anticancer drugs can also cause bleeding in the mouth and a deep pain that feels like a toothache. The problems you have depend on the type and amount of anticancer drugs you receive, and how your body reacts to them. You may have these problems only during treatment or for a short time after treatment ends.

Generally, anticancer drugs affect cells that divide rapidly. In addition to cancer cells, these rapidly dividing cells include the following:

- **Blood cells:** These cells fight infection, help your blood to clot, and carry oxygen to all parts of the body. When drugs affect your blood cells, you are more likely to get infections, bruise or bleed easily, and feel very weak and tired.



- **Cells in hair roots:** Chemotherapy can lead to hair loss. The hair grows back, but sometimes the new hair is somewhat different in color and texture.
- **Cells that line the digestive tract:** Chemotherapy can cause poor appetite, nausea and vomiting, diarrhea, or mouth and lip sores. Many of these side effects can be controlled with drugs.

Nutrition

Eating well during cancer treatment means getting enough calories and protein to prevent weight loss, regain strength, and rebuild healthy tissues. But eating well may be difficult after treatment for oral cancer. Some people with cancer find it hard to eat because they lose their appetite. They may not feel like eating because they are uncomfortable or tired. A dry or sore mouth or changes in smell and taste also may make eating difficult.

If your mouth is dry, you may find that soft foods moistened with sauces or gravies are easier to eat. Thick soups, puddings, and milkshakes often are easier to swallow. Nurses and dietitians can help you choose the right foods. Also, the National Cancer Institute booklet *Eating Hints for Cancer Patients* contains many useful ideas and recipes. The “National Cancer Institute Information Resources” section on page 43 tells how to get this publication.

After surgery or radiation therapy for oral cancer, some people need a feeding tube. A feeding tube is a flexible plastic tube that is passed into the stomach through an incision in the abdomen. In almost all cases, the tube is temporary. Most people gradually return to a regular diet.



To protect your mouth during cancer treatment, it helps to avoid:

- Sharp, crunchy foods like taco chips
- Foods that are hot, spicy, or high in acid like citrus fruits and juices
- Sugary foods that can cause cavities
- Alcoholic drinks

Reconstruction

Some people with oral cancer may need to have plastic or reconstructive surgery to rebuild the bones or tissues of the mouth. Research has led to many advances in the way bones and tissues can be replaced.

Some people may need *dental implants*. Or they may need to have *grafts* (tissue moved from another part of the body). Skin, muscle, and bone can be moved to the oral cavity from the chest, arm, or leg. The plastic surgeon uses this tissue for repair.

If you are thinking about reconstruction, you may wish to consult with a plastic or *reconstructive surgeon* before your treatment begins. You can have reconstructive surgery at the same time as you have the cancer removed, or you can have it later on. Talk with your doctor about which approach is right for you.

Rehabilitation

The health care team will help you return to normal activities as soon as possible. The goals of rehabilitation depend on the extent of the disease and type of treatment. Rehabilitation may include being fitted with a dental *prosthesis* (an artificial dental device) and having dental implants. It also may involve speech therapy, dietary counseling, or other services.

Sometimes surgery to rebuild the bones or tissues of the mouth is not possible. A dentist with special training (a *prosthodontist*) may be able to make you a prosthesis to help you eat and talk normally. You may need special training to learn to use it.



If oral cancer or its treatment leads to problems with talking, speech therapy will generally begin as soon as possible. A speech therapist may see you in the hospital to plan therapy and teach speech exercises. Often speech therapy continues after you return home.

Follow-up Care

Follow-up care after treatment for oral cancer is important. Even when the cancer seems to have been completely removed or destroyed, the disease sometimes returns because undetected cancer cells remained in the body after treatment. The doctor monitors your recovery and checks for recurrence of cancer. Checkups help ensure that any changes in your health are noted. Your doctor will probably encourage you to inspect your mouth regularly and continue to visit your dentist. It is important to report any changes in your mouth right away.

Checkups include exams of the mouth, throat, and neck. From time to time, your doctor may do a complete physical exam, order blood tests, and take x-rays.

People who have had oral cancer have a chance of developing a new cancer in the mouth, throat, or other areas of the head and neck. This is especially true for those who use tobacco or who drink alcohol heavily. Doctors strongly urge their patients to stop using tobacco and alcohol to cut down the risk of a new cancer and other health problems.

The NCI has prepared a booklet for people who have completed their treatment to help answer questions about follow-up care and other concerns.



Facing Forward Series: Life After Cancer Treatment provides tips for making the best use of medical visits. It describes how to talk to your health care team about creating a plan of action for recovery and future health.

Support for People with Oral Cancer

Living with a serious disease such as oral cancer is not easy. You may worry about caring for your family, keeping your job, or continuing daily activities. You may have concerns about treatments and managing side effects, hospital stays, and medical bills. Doctors, nurses, and other members of the health care team can answer your questions about treatment, working, or other activities. Meeting with a social worker, counselor, or member of the clergy can be helpful if you want to talk about your feelings or discuss your concerns. Often, a social worker can suggest resources for financial aid, transportation, home care, or emotional support.

Support groups also can help. In these groups, patients or their family members meet with other patients or their families to share what they have learned about coping with the disease and the effects of treatment. Groups may offer support in person, over the telephone, or on the Internet. You may want to talk with a member of your health care team about finding a support group. The NCI's fact sheets "Cancer Support Groups: Questions and Answers" and "National Organizations That Offer Services to People With Cancer and Their Families" tell how to find a support group. See "National Cancer Institute Information Resources" on page 43 for ordering information.



The Cancer Information Service can provide information to help patients and their families locate programs, services, and publications.

The Promise of Cancer Research

Doctors all over the country are conducting many types of clinical trials. These are research studies in which people volunteer to take part. In clinical trials, doctors are testing new ways to treat oral cancer. Research has already led to advances, and researchers continue to search for more effective approaches.

People who join clinical trials may be among the first to benefit if a new approach is shown to be effective. And if participants do not benefit directly, they still make an important contribution to medical science by helping doctors learn more about the disease and how to control it. Although clinical trials may pose some risks, researchers do all they can to protect their patients.

Researchers are testing anticancer drugs and combinations of drugs. They are studying radiation therapy combined with drugs and other treatments. They also are testing drugs that prevent or reduce the side effects of radiation therapy.

If you are interested in learning more about joining a clinical trial, you may want to talk with your doctor. You may want to read *Taking Part in Clinical Trials: What Cancer Patients Need To Know*. The NCI also offers an easy-to-read brochure called *If You Have Cancer...What You Should Know About Clinical Trials*.



These NCI publications describe how research studies are carried out and explain their possible benefits and risks. NCI's Web site includes a section on clinical trials at http://cancer.gov/clinical_trials with general information about clinical trials and detailed information about specific studies. The Cancer Information Service at 1-800-4-CANCER or at *LiveHelp* at <http://cancer.gov> can answer questions and provide information about clinical trials. Another source of information about clinical trials is <http://clinicaltrials.gov>.

Dictionary

Benign (beh-NINE): Not cancerous. Benign tumors do not spread to tissues around them or to other parts of the body.

Bidi: A cigarette made by rolling tobacco by hand into a dried leaf. Most bidis come from India in a variety of flavors.

Biopsy (BY-op-see): The removal of cells or tissues for examination under a microscope. When only a sample of tissue is removed, the procedure is called an incisional biopsy or core biopsy. When an entire lump or suspicious area is removed, the procedure is called an excisional biopsy. When a sample of tissue or fluid is removed with a needle, the procedure is called a needle biopsy or fine-needle aspiration.

Bupropion (byoo-PROE-pee-ON): A substance that is used to treat depression, and to help people quit smoking. It belongs to the family of drugs called antidepressants.

Cancer: A term for diseases in which abnormal cells divide without control. Cancer cells can invade nearby tissues and can spread through the bloodstream and lymphatic system to other parts of the body.

Cell: The individual unit that makes up all of the tissues of the body. All living things are made up of one or more cells.

Chemotherapy (kee-mo-THER-a-pee): Treatment with anticancer drugs.

Clinical trial: A type of research study that uses volunteers to test new methods of screening, prevention, diagnosis, or treatment of a disease. The study may be carried out in a clinic or other medical facility. Also called a clinical study.



CT scan: Computed tomography scan. A series of detailed pictures of areas inside the body taken from different angles; the pictures are created by a computer linked to an x-ray machine. Also called computerized tomography and computerized axial tomography (CAT) scan.

Dental implant: A small metal pin placed inside the jawbone or oral tissue. Dental implants can be used to help anchor a false tooth or teeth, or a crown or bridge.

Dentist: A health professional who specializes in caring for the teeth, gums, and oral tissues.

Endoscope (EN-dah-skope): A thin, lighted tube used to look at tissues inside the body.

Endoscopy (en-DAHS-ko-pee): The use of a thin, lighted tube (called an endoscope) to examine the inside of the body.

Erythroleukoplakia (eh-RITH-ro-LOO-ko-PLAY-kee-a): A patch found in the mouth that is a mixture of red and white. It can develop into cancer.

Erythroplakia (eh-RITH-ro-PLAY-kee-a): A reddened patch with a velvety surface found in the mouth. It can develop into cancer.

External radiation (ray-dee-AY-shun): Radiation therapy that uses a machine to aim high-energy rays at the cancer. Also called external-beam radiation.

Fluoride: A mineral that helps prevent tooth decay. Fluoride may be present in drinking water. It may be applied to the teeth as a gel, in toothpaste, or as a rinse.

General anesthesia (an-es-THEE-zha): Drugs that cause loss of feeling or awareness and put the person to sleep.

Gland: An organ that makes one or more substances, such as hormones, digestive juices, sweat, tears, saliva, or milk. Endocrine glands release the substances directly into the bloodstream. Exocrine glands release the substances into a duct or opening to the inside or outside of the body.

Graft: Healthy skin, bone, or other tissue taken from one part of the body and used to replace diseased or injured tissue removed from another part of the body.

Hard palate (PAL-et): The front, bony portion of the roof of the mouth.

Head and neck cancer: Cancer that arises in the head or neck region (in the nasal cavity, sinuses, lip, mouth, salivary glands, throat, or larynx [voice box]).

Human papillomaviruses (pap-ih-LO-ma-VYE-rus-is): HPVs. Viruses that cause abnormal tissue growth (warts). Some types of HPV are associated with cervical and certain other cancers.

Imaging: Tests that produce pictures of areas inside the body.

Implant radiation (ray-dee-AY-shun): A procedure in which radioactive material sealed in needles, seeds, wires, or catheters is placed directly into or near a tumor. Also called brachytherapy, internal radiation, or interstitial radiation therapy.

Internal radiation (ray-dee-AY-shun): A procedure in which radioactive material sealed in needles, seeds, wires, or catheters is placed directly into or near a tumor. Also called brachytherapy, implant radiation, or interstitial radiation therapy.

Kretek: A cigarette made of a mixture of tobacco and clove spices.



Leukoplakia (loo-ko-PLAY-kee-a): A white patch that may develop on mucous membranes such as the gums, the tongue, or the inside of the cheeks, and may become cancerous.

Local anesthesia (an-es-THEE-zha): Drugs that cause a temporary loss of feeling in one part of the body. The patient remains awake but has no feeling in the part of the body treated with the anesthetic.

Local therapy: Treatment that affects cells in the tumor and the area close to it.

Lymph (limf): The clear fluid that travels through the lymphatic system and carries cells that help fight infections and other diseases. Also called lymphatic fluid.

Lymph node (limf node): A rounded mass of lymphatic tissue that is surrounded by a capsule of connective tissue. Lymph nodes filter lymph (lymphatic fluid), and they store lymphocytes (white blood cells). They are located along lymphatic vessels. Also called a lymph gland.

Lymphatic system (lim-FAT-ik SIS-tem): The tissues and organs that produce, store, and carry white blood cells that fight infections and other diseases. This system includes the bone marrow, spleen, thymus, lymph nodes, and lymphatic vessels (a network of thin tubes that carry lymph and white blood cells). Lymphatic vessels branch, like blood vessels, into all the tissues of the body.

Malignant (ma-LIG-nant): Cancerous. Malignant tumors can invade and destroy nearby tissue and spread to other parts of the body.

Medical oncologist (MED-i-kul on-KOL-o-jist): A doctor who specializes in diagnosing and treating cancer using chemotherapy, hormonal therapy, and biological therapy. A medical oncologist often is the main health care provider for a person who has cancer. A medical oncologist also may coordinate treatment provided by other specialists.

Mental health counselor: A specialist who can talk with patients and their families about emotional and personal matters, and can help them make decisions.

Metastasis (meh-TAS-ta-sis): The spread of cancer from one part of the body to another. A tumor formed from cells that have spread is called a “metastatic tumor” or a “metastasis.” The metastatic tumor contains cells that are like those in the original (primary) tumor. The plural form of metastasis is metastases (meh-TAS-ta-seez).

MRI: Magnetic resonance imaging (mag-NET-ik REZ-o-nans IM-a-jing). A procedure in which radio waves and a powerful magnet linked to a computer are used to create detailed pictures of areas inside the body. These pictures can show the difference between normal and diseased tissue. MRI makes better images of organs and soft tissue than other scanning techniques, such as CT or X-ray. MRI is especially useful for imaging the brain, spine, the soft tissue of joints, and the inside of bones. Also called nuclear magnetic resonance imaging.

Nutritionist: A health professional with special training in nutrition who can offer help with the choice of foods a person eats and drinks. Sometimes called a dietitian.

Oral cavity: The mouth.

Oral and maxillofacial surgeon: A dentist who specializes in surgery of the mouth, face, and jaw.

Organ: A part of the body that performs a specific function. For example, the heart is an organ.



Oropharynx (or-oh-FAIR-inks): The part of the throat at the back of the mouth. It includes the soft palate, the base of the tongue, and the tonsils.

Otolaryngologist (OAT-oh-LAR-in-GOL-uh-jist): A doctor who specializes in treating diseases of the ear, nose, and throat. Also called an ENT (ear, nose, and throat) doctor.

Palliative care (PAL-ee-yuh-tiv): Care that prevents or relieves the symptoms of disease or the side effects of treatment. Palliative care is not given to cure a disease but to improve a patient's quality of life. It attempts to meet the patient's physical, emotional, spiritual, and practical needs by helping to relieve pain, depression, or other problems. Also known as comfort care, supportive care, and symptom management.

Pathologist (pa-THOL-o-jist): A doctor who identifies diseases by studying cells and tissues under a microscope.

Plastic surgeon: A surgeon who specializes in reducing scarring or disfigurement that may occur as a result of accidents, birth defects, or treatment for diseases.

Plastic surgery: An operation that restores or improves the appearance of body structures.

Primary tumor: The original tumor.

Prosthesis (pros-THEE-sis): A device that replaces part of the body.

Prosthodontist (pros-tho-DON-tist): A dentist who specializes in replacing missing teeth or other structures of the oral cavity to restore an individual's appearance, comfort, or health.

Radiation oncologist (ray-dee-AY-shun on-KOL-o-jist): A doctor who specializes in using radiation to treat cancer.



Radiation therapy (ray-dee-AY-shun): The use of high-energy radiation from x-rays, gamma rays, neutrons, and other sources to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external-beam radiation therapy), or from materials called radioisotopes. Radioisotopes produce radiation and can be placed in or near the tumor or in the area near cancer cells. This type of radiation treatment is called internal radiation therapy, implant radiation, interstitial radiation, or brachytherapy. Systemic radiation therapy uses a radioactive substance, such as a radiolabeled monoclonal antibody, that circulates throughout the body. Also called radiotherapy, irradiation, and x-ray therapy.

Radioactive (RAY-dee-o-AK-tiv): Giving off radiation.

Radiotherapy (RAY-dee-o-THER-a-pee): The use of high-energy radiation from x-rays, gamma rays, neutrons, and other sources to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external-beam radiation therapy), or it may come from radioactive material placed in the body near cancer cells (internal radiation therapy, implant radiation, or brachytherapy). Systemic radiation therapy uses a radioactive substance, such as a radiolabeled monoclonal antibody, that circulates throughout the body. Also called radiation therapy, irradiation, and x-ray therapy.

Reconstructive surgeon: A doctor who can surgically reshape or rebuild (reconstruct) a part of the body, such as a woman's breast after surgery for breast cancer.

Reconstructive surgery: Surgery that is done to reshape or rebuild (reconstruct) a part of the body changed by previous surgery.



Risk factor: Anything that increases a person's chance of developing a disease. Some examples of risk factors for cancer include a family history of cancer, use of tobacco products, certain foods, being exposed to radiation or other cancer-causing agents, and certain genetic changes.

Saliva (suh-LIE-vuh): The watery fluid in the mouth made by the salivary glands. Saliva moistens food to aid in digestion and protects the mouth against infections.

Salivary glands (SAL-ih-vair-ee): Glands in the mouth that produce saliva.

Side effects: Problems that occur when treatment affects tissues or organs other than the ones meant to be affected by the treatment. Some common side effects of cancer treatment are fatigue, pain, nausea, vomiting, decreased blood cell counts, hair loss, and mouth sores.

Soft palate (PAL-et): The muscular (not bony) part at the back of the roof of the mouth.

Speech pathologist (pa-THOL-o-jist): A specialist who evaluates and treats people with communication and swallowing problems. Also called a speech therapist.

Squamous cell carcinoma (SKWAY-mus sel kar-sin-O-ma): Cancer that begins in squamous cells, which are thin, flat cells that look like fish scales. Squamous cells are found in the tissue that forms the surface of the skin, the lining of the hollow organs of the body, and the passages of the respiratory and digestive tracts. Also called epidermoid carcinoma.



Squamous cells (SKWAY-mus): Flat cells that look like fish scales under a microscope. These cells cover internal and external surfaces of the body. They are found in the tissue that forms the surface of the skin, the lining of the hollow organs of the body, and the passages of the respiratory and digestive tracts.

Stage: The extent of a cancer within the body. If the cancer has spread, the stage describes how far it has spread from the original site to other parts of the body.

Staging (STAY-jing): Performing exams and tests to learn the extent of the cancer within the body, especially whether the disease has spread from the original site to other parts of the body. It is important to know the stage of the disease in order to plan the best treatment.

Sunscreen: A substance that helps protect the skin from the sun's harmful rays. Sunscreens reflect, absorb, and scatter both ultraviolet A and B radiation to provide protection against both types of radiation. Using lotions, creams, or gels that contain sunscreens can help protect the skin from premature aging and damage that may lead to skin cancer.

Supportive care: Care that prevents or relieves the symptoms of disease or the side effects of treatment. Supportive care is not given to cure a disease but to improve a patient's quality of life. It attempts to meet the patient's physical, emotional, spiritual, and practical needs by helping to relieve pain, depression, or other problems. Also known as comfort care, palliative care, and symptom management.

Surgeon: A doctor who removes or repairs a part of the body by operating on the patient.

Surgery (SER-juh-ree): A procedure to remove or repair a part of the body or to find out whether disease is present. An operation.

Symptom: An indication that a person has a condition



or disease. Some examples of symptoms are headache, fever, fatigue, nausea, vomiting, and pain.

Symptom management: Care that prevents or relieves the symptoms of disease or the side effects of treatment. Symptom management is not given to cure a disease but to improve a patient's quality of life. It attempts to meet the patient's physical, emotional, spiritual, and practical needs by helping to relieve pain, depression, or other problems. Also known as palliative care, comfort care, and supportive care.

Systemic therapy (sis-TEM-ik THER-a-pee): Treatment using substances that travel through the bloodstream, reaching and affecting cells all over the body.

Thyroid (THIGH-royd): A gland located beneath the voice box (larynx) that produces thyroid hormone. The thyroid helps regulate growth and metabolism.

Thyroid hormone: A hormone made by the thyroid gland that affects heart rate, blood pressure, body temperature, and weight. It can also be made in the laboratory.

Tissue (TISH-oo): A group or layer of cells that are alike and that work together to perform a specific function.

Tonsils: Small masses of lymphoid tissue on either side of the throat.

Tumor (TOO-mer): A new mass of excess tissue that results from abnormal cell division. Tumors perform no useful body function. They may be benign (not cancerous) or malignant (cancerous).

Uvula (YOOV-yuh-la): The soft flap of tissue that hangs down at the back of the mouth (at the edge of the soft palate).



Virus (VYE-rus): A microorganism that can infect cells and cause disease.

X-ray: A type of high-energy radiation. In low doses, x-rays are used to diagnose diseases by making pictures of the inside of the body. In high doses, x-rays are used to treat cancer.



National Cancer Institute Information Resources

You may want more information for yourself, your family, and your doctor. The following National Cancer Institute (NCI) services are available to help you.

Telephone

Cancer Information Service (CIS)

Provides accurate, up-to-date information on cancer to patients and their families, health professionals, and the general public. Information Specialists translate the latest scientific information into understandable language and respond in English, Spanish, or on TTY equipment.

Telephone: 1-800-4-CANCER (1-800-422-6237)

TTY: 1-800-332-8615

Internet

<http://cancer.gov>

The NCI's Cancer.gov™ Web site provides information from numerous NCI sources. It offers current information on cancer prevention, screening, diagnosis, treatment, genetics, supportive care, and ongoing clinical trials. It also provides information about NCI's research programs and funding opportunities, cancer statistics, and the Institute itself. Cancer.gov provides live, online assistance through *LiveHelp*. Cancer.gov is at <http://cancer.gov> on the Internet.



<http://www.smokefree.gov>

The Tobacco Control Research Branch of NCI, in collaboration with the Centers for Disease Control and Prevention and the American Cancer Society, created a smoking cessation Web site. It offers online quitting advice through NCI's *LiveHelp* service. It also provides national and state telephone quitline numbers and access to printed materials about quitting tobacco. It is located on the Internet at <http://www.smokefree.gov>.

Print Materials

You can order National Cancer Institute (NCI) publications by writing to the address below:

Publications Ordering Service
National Cancer Institute
Suite 3035A
6116 Executive Boulevard, MSC 8322
Bethesda, MD 20892-8322

Some NCI publications can be viewed, downloaded, and ordered from <http://cancer.gov/publications> on the Internet. If you are in the United States or one of its territories, you may order these and other NCI booklets by calling the Cancer Information Service at 1-800-4-CANCER.

Booklets About Cancer Treatment

- *Radiation Therapy and You: A Guide to Self-Help During Treatment*
- *Chemotherapy and You: A Guide to Self-Help During Treatment*
- *Helping Yourself During Chemotherapy: 4 Steps for Patients*
- *Eating Hints for Cancer Patients*



- *Understanding Cancer Pain*
- *Pain Control: A Guide for People with Cancer and Their Families*
- *Get Relief From Cancer Pain*
- *Taking Part in Clinical Trials: What Cancer Patients Need To Know*
- *La quimioterapia y usted: una guía de autoayuda durante el tratamiento del cáncer (Chemotherapy and You: A Guide to Self-Help During Treatment for Cancer)*
- *El dolor relacionado con el cáncer (Understanding Cancer Pain)*
- *La radioterapia y usted: una guía de autoayuda durante el tratamiento del cáncer (Radiation Therapy and You: A Guide to Self-Help During Treatment for Cancer)*
- *La participación en los estudios clínicos: lo que los pacientes de cáncer deben saber (Taking Part in Clinical Trials: What Cancer Patients Need to Know)*
- *Si tiene cáncer...lo que debería saber sobre estudios clínicos (If You Have Cancer...What You Should Know About Clinical Trials)*

Booklets About Living With Cancer

- *Advanced Cancer: Living Each Day*
- *Facing Forward Series: Life After Cancer Treatment*
- *Facing Forward Series: Ways You Can Make a Difference in Cancer*
- *Taking Time: Support for People With Cancer and the People Who Care About Them*
- *When Cancer Recurs: Meeting the Challenge*



- *Siga adelante: la vida después del tratamiento del cáncer (Facing Forward Series: Life After Cancer Treatment)*

Booklets About Quitting Smoking and Spit Tobacco

- *Clearing the Air: Quit Smoking Today*
- *You Can Quit Smoking: A 5-Day Plan To Get Ready*
- *You Can Quit Smoking: Consumer Guide*
- *Smoking Facts and Tips for Quitting*
- *Smoking Facts and Quitting Tips for African Americans*
- *Spit Tobacco: A Guide for Quitting*
- *Datos y consejos para dejar de fumar (Smoking Facts and Tips for Quitting)*
- *Usted puede dejar de fumar (You Can Quit Smoking)*
- *Guía para dejar de fumar: no lo deje para mañana, deje de fumar hoy (Guide for Quitting Smoking: Don't Leave It for Tomorrow, Quit Today)*

Fact Sheets

- "Questions and Answers About Smoking Cessation"
- "How To Find a Doctor or Treatment Facility If You Have Cancer"
- "Cancer Support Groups: Questions and Answers"
- "National Organizations That Offer Services to People With Cancer and Their Families"



National Institute of Dental and Craniofacial
Research Information Resources

The National Oral Health Information Clearinghouse

This Clearinghouse is a service of the Federal Government's National Institute of Dental and Craniofacial Research (NIDCR). NIDCR's mission is to promote the general health of the American people by improving their oral, dental, and craniofacial health. Through the conduct and support of research and the training of researchers, the NIDCR aims to promote health, prevent diseases and conditions, and develop new diagnostics and therapies.

NIDCR directs the health awareness campaign, *Oral Health, Cancer Care, and You: Fitting the Pieces Together*. The campaign addresses the importance of preventing and managing the oral side effects of cancer treatments. It is a partnership among NIDCR, NCI, National Institute of Nursing Research, and Centers for Disease Control and Prevention.

NIDCR can supply free information about oral cancer and taking care of your mouth during cancer treatment. Booklets are available in English and Spanish:

- *Chemotherapy and Your Mouth*
- *Head and Neck Radiation Treatment and Your Mouth*
- *Quimioterapia y la Boca (Chemotherapy and Your Mouth)*
- *Su Boca y el Tratamiento de Radiación en la Cabeza y el Cuello (Head and Neck Radiation Treatment and Your Mouth)*



Materials may be obtained by contacting the
Clearinghouse:

National Institute of Dental and Craniofacial
Research
National Oral Health Information Clearinghouse
Attn: OCCT
1 NOHIC Way
Bethesda, MD 20892-3500
Tel: 301-402-7364

Materials are also available on the Internet at
<http://www.nidcr.nih.gov> under "health information."



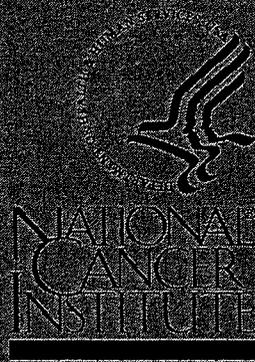
This booklet was written and published by the National Cancer Institute (NCI). The NCI acknowledges and appreciates the collaboration of the National Institute of Dental and Craniofacial Research (NIDCR) in the creation and production of this booklet. NCI and NIDCR are components of the National Institutes of Health, which is the Federal Government's agency for biomedical research.

NCI conducts its own cancer research in laboratories and clinics in Bethesda, Maryland, and also supports and coordinates cancer research conducted by universities, hospitals, research foundations, and private laboratories throughout the United States and abroad. NCI conducts and supports research into better ways to prevent, diagnose, and treat cancer, as well as research on the unique needs of cancer survivors. NCI is responsible for communicating its research findings to the medical community and the public.

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Genomewide
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CATE

Testimony in Favor of HB1527

From: Linda Coble, Advisory Board of Hawaii Family Support
Institute and child abuse prevention volunteer.
284-2000

Dear Representative Mizuno,

As a volunteer and citizen of my adopted state...as a former reporter who has covered the ugly end of abuse and neglect...as someone who understands the front-end prevention, I applaud your effort to keep Healthy Start intact for these difficult times to come. Healthy Start is not duplicative of other services, and it's outcomes and effectiveness have been measured and evaluated more than any State funded program I know. Hawaii's Healthy Start has been the model for early identification of risk factors and home visitation for the nationwide Healthy Families America Child Abuse Prevention programs across the country.

There is a powerful relationship between our emotional experiences as children and our adult emotional health, physical health and major causes of mortality in the United States. Just read the Adverse Childhood Experiences (ACE) study. Smoking has a high degree of association with what happened decades ago in childhood. Prevention is the key. How inspired is this measure to direct funds from the tobacco industry to a program that will prevent early adverse childhood experiences!

We cannot let the Healthy Start be drop kicked into oblivion. There is a well documented correlation between early childhood adverse experiences and diseases such as diabetes, obesity, heart, lung and liver disease...cancer....and smoking.

We pay now for prevention, or we pay many times over in the years to come, to repair the damage.

Mahalo for your support of Healthy Start, and this innovative, fair way to ensure that our keiki are provided the safety net they deserve.

Aloha,
Linda Coble

DATE

Testimony on HB 1527, RELATING TO TOBACCO
By Howard S. Garval, President & CEO, Child & Family Service
House Committee on Health
Public Hearing
February 6, 2009

I am writing in support of HB 1527 that increases taxation on "other tobacco products (OTPs)" and establishes two funds: 1) To provide for cervical and breast cancer screening; and 2) To establish a special fund for Healthy Start.

Certainly the relationship between tobacco and cancer is well documented. It is appropriate to raise the tax level to reduce tobacco use since this will reduce overall medical costs and improve the health of our citizens. To then direct the new revenue to cervical and breast cancer screening is a good use of these new tax generated dollars. This could very well detect cancer sooner in patients and lead to less expensive treatment and a better health outcome for many women.

The ACE (Adverse Childhood Experiences) study proved that adverse childhood experiences like child abuse lead to long-term higher incidence for such children as adults of the most costly medical conditions such as diabetes, heart disease, cancer, smoking, lung and liver disease, and obesity. That is why Healthy Start, the model child abuse prevention program that Hawaii invented, is a good choice for some of the funds raised from the increased taxation on tobacco products.

Hawaii can also take the lead from Washington because President Obama just signed the SCHIP bill for children's health insurance that will insure a large number of children who otherwise would not be covered under any healthy insurance. This new bill will be paid for by increasing the national tax on a pack of cigarettes. This is the same type of approach of trying to reduce smoking and prevent all of the health conditions that smoking can lead to while at the same time providing much needed services that improve the health of children and others.

Healthy Start is a child abuse prevention program that works. It has been replicated in over 35 states under the name Healthy Families America because all of these states recognize that Healthy Start works. The long-term costs of child abuse will be far greater than the investment we make now to prevent child

abuse. More importantly the safety and well being of our keiki will be assured if we invest enough up front dollars in preventing the problem of child abuse before it ever happens.

For all of the reasons above, Child & Family Service strongly supports HB 1527 and we urge its passage.

Mahalo for the opportunity to provide testimony

Howard S. Garval, MSW