

Republic of Palau

Comprehensive Cancer Control Plan

2018-2023



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Message

from the BPHS and the Palau Cancer Coalition

Cancer has touched the lives of the majority of our population and has for the past ten (10) years remained in the top leading causes of death in our island. Most of these cancers can be prevented and/or detected early, and good survivorship support and care can help individuals diagnosed with cancer live long and healthy lives.

The five (5) years, 2018-2023 Palau Comprehensive Cancer Control Strategic Plan with a vision “Cancer Free Me, Cancer Free Communities, Cancer Free Nation” is an action plan which builds upon activities from the last 10 years and addresses cancer in Palau. It is an annex to the Palau Non-Communicable Diseases Plan, but specifically focus on the three (3) strategic actions (Environmental approach, Community-clinical linkages, Health system changes) and with evidence-based strategies to prevent and control cancer in the Republic of Palau.

With commitment and concerted collaborative efforts from all stakeholders, we can really begin to move closer toward our vision. We request all members of our community to join us in implementing this strategic plan, to create a healthier community, for a cancer free nation!



A handwritten signature in blue ink, reading "Sherilynn Madraisau". The signature is written in a cursive style and is positioned above a horizontal line.

Sherilynn Madraisau
Director, Bureau of Public Health Services



A handwritten signature in black ink, reading "Ann B. Lund". The signature is written in a cursive style and is positioned above a horizontal line.

Ann B. Lund
Chairperson, Palau Cancer Coalition

Republic of PALAU

Comprehensive Cancer Control Plan for 2018-2023 Executive Summary

The goals of the Strategic Cancer Control Plan for Palau is to guide in planning and implementing activities to reduce cancer incidence, morbidity and mortality, and ensure quality of life for cancer survivors in Palau through prevention, screening, treatment and survivorship/quality of life, as well as addressing health disparity as it relates to cancer. The Plan was put together by the Ministry of Health's Comprehensive Cancer Control Program in collaboration with Omellemel Ma Ulekerreuil a Bedenged (OMUB, Palau Cancer Coalition), and other internal and external partners. It is supported by funding from Centers for Disease Control and Prevention (CDC). The Plan documents objectives, activities, and strategies to reduce cancer incidence and mortality under each respective sections of the plan.

The cancer strategic plan includes a vision and states the five (5) sub-visions. It highlights the high burden cancers by risk factors, evidence-based cancer screening tests, and survivorship. Cancers with the highest crude rates are Lung & Bronchus, Liver, Prostate, Tobacco related Oral, and Uterus cancers.

This is a dynamic plan that is an annex to the Palau Non-Communicable Diseases Plan ([Palau NCD Plan](#)) and will be regularly evaluated and updated as time progresses. The Palau Comprehensive Cancer Control Program (Palau CCC) and its community partners from the Cancer coalition and the National Coordinating Mechanism for NCDs are the responsible agencies for ensuring that this plan is carried out to maximize benefits for the People of Palau.



Backgrounds and Needs

Geographic Characteristics



The Republic of Palau is a small independent island nation located in the Western Pacific Ocean. Palau consists of 340 islands, though only eight of them are inhabited. The total population in 2015 was 17,661, with the majority of the population (79%) condensed on the two closely connected islands of Koror and Babeldaob.

The 2015 Census of Population, Housing, and Agriculture for the Republic of Palau shows a total population of 17,661. Palauans make up 73% of the total population. For the non-Palauans, Asians represent the biggest ethnic category with a total of 22% (Asians including Filipinos, Japanese, Koreans, Chinese, and others). These ethnic groups have access to the same health services as Palauans.

TABLE 1 POPULATION BY ETHNICITY & GENDER

Ethnic Group	Total	Male	Female
Palauan	12,889	6,516	6,373
Carolinian	361	196	165
Asian	3,825	2,296	1,529
Caucasian	219	121	98
Black	13	7	6
Other	354	297	57
Total	17,661	9,433	8,228

Source 2015 Census of Population, Housing, and Agriculture of the Republic of Palau



¹ [2015 Census of Population](#)

TABLE 2 STATES AND POPULATION

Place of Residence	Number of Residents
Koror	11,444
Airai	2,455
Peleliu	484
Ngaraard	413
Ngaremlengui	350
Aimeliik	334
Ngarchelong	316
Other	310
Ngchesar	291
Ngiwal	282
Ngatpang	282
Melekeok	277
Ngardmau	185
Angaur	119
Kayangel	54
Sonsorol	40
Hatohobei	25
Total	17,661

Source 2015 Census of Population, Housing, and Agriculture of the Republic of Palau

Table 2 shows the distribution of residents by states. Majority of Palau’s population (79%) are condensed in the states Airai and Koror². All of these states are accessible by cars and boats, except the states of Kayangel, Angaur, Sonsorol, and Hatohobei are only accessible by boats. There are five (5) community health centers strategically located in each regions of Palau (Northern, Western, Eastern, Southern, Airai, and Central Regions). Northern Community Health Center is located in the state of Ngarchelong and serves the residents of Kayangel, Ngarchelong, and Ngaraard states. Western Community Health Center is located in the State of Ngaremlengui and serves the residents of Ngaremlengui, Ngardmau, and Ngatpang States. Eastern Community Health Center is located in the state of Melekeok and serves the residents of Melekeok, Ngiwal, and Ngchesar States. Southern Community Health Center is located in the state of Peleliu and serves the residents of Peleliu and Angaur States. Airai Community Health Center is located in Airai state and serves the residents of Airai and Aimeliik states. Central Community Health Center is located in the state of Koror and serves the heavily populated state of Koror.

Health Disparity in Palau

Significant health disparities exist between the populations of U.S. mainland and the Republic of Palau due to multiple complex factors, including historical, social, cultural, environmental and economic. Health disparities also exist within the states in Palau, most notably between populations living in Koror or central island and those living in the ‘outer’ islands far from any ‘urban’ area. Rapid westernization has adversely affected many of the social, cultural, and environmental structures and practices that traditionally protected and supported good health in the Palau. One of the most significant areas of impact due to the westernization of the Palauan culture is the rapid adoption of unhealthy practices and behaviors such as tobacco and alcohol use, reduction in daily physical activity and an increase in the consumption of non-local foods with little nutritional value. As a result, the incidence and prevalence of all non-communicable diseases have risen exponentially in the Republic of Palau since the 80s. Cancer mortality is now the second most common cause of death in Palau and nearly all USAPI jurisdictions³. The disparity in monetary resources is not the only driver of generally poor rates of screening, limited diagnostic and treatment capability. Geography and cultural issues also play a tremendous role.

²[2015 Census of Population](#)

³[Cancer in the U.S. Affiliated Pacific Islands 2007-2015](#)

With limited health workforce capacity and limited health budgets, cancer patients fortunate enough to be diagnosed in earlier stages may be referred off-island for more definitive treatment (Philippines, Taiwan, & Hawaii). Too often, however, cancer is diagnosed late and because of limited resources, off island referrals are dependent on the individuals’ prognosis. There are some cases where others simply accept the “death sentence” and remain to spend their last days in Palau.

Health System Capacity

In Palau the preventive (public health) and curative (acute care/ hospital) services are organized under the Ministry of Health, but as separate departments. U.S. Federal funding comprises the bulk of dedicated funds for health services and although these are somewhat augmented by local funds, securing additional resources are always a priority. The per capita health expenditures in the Republic of Palau is \$1,310. In contrast, the U.S. per capita health expenditures exceeds \$10,348⁴.

Collaborative efforts through multiple partnerships within the public health, community, regional, U.S. Federal, and International have helped in the effort to strengthen Palau’s health system. CDC-funded Comprehensive Cancer Control programs—partnerships between community, health and other sectors—have been in existence since 2004. Though partnerships have resulted in noticeable improvements in community awareness and screening, much more work remains to close the tremendous cancer health disparities gaps in Palau’s communities and populations. Although cancer is one of the top leading causes of death, there is no cancer treatment available in Palau⁵. Diagnosed cancer cases are sent off-island for treatment through the country’s medical referral program, however; referral off-island is dependent on cancer stage and the progression of the disease.

TABLE 3 HEALTH SYSTEM SERVICES IN PALAU

PALAU PROGRAM OR SERVICE	
CANCER PREVENTION	
HPV Vaccination	X
HBV Vaccination	X
Public Education, targeting prevention	X
CANCER SCREENING	
BCCEDP	X
Mammography	X
Pap Smears	X
On-Island Processing of Pap Smears	n/a (samples sent to Philippines)
Cervical Cancer Screening, using VIA	n/a
Colorectal Cancer Screening (FOBT)	X
Fecal Immunochemical Test (FIT)	n/a

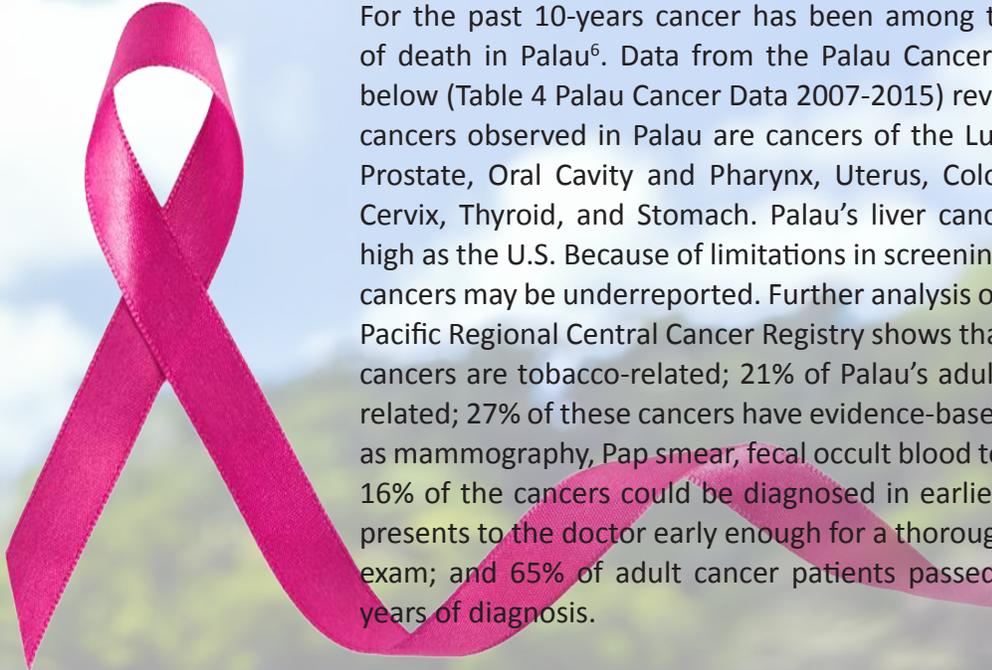
⁴[WHO World Health Statistics, 2015](#)

⁵[Office of Epidemiology, Public Health Palau, 2019](#)

TABLE 3 HEALTH SYSTEM SERVICES IN PALAU (CONTINUATION)

Prostate Cancer Screening	X
Colonoscopy	X
CANCER DIAGNOSIS AND TREATMENT	
Pathologist	n/a
On-Island Histopathology	n/a
General Radiologist	n/a
General Surgeon	X
OB-GYN	X
CANCER DIAGNOSIS AND TREATMENT	
On-Island Chemotherapy	n/a
On-Island Radiation Therapy	n/a
Off-Island Referral to Philippines for Diagnosis/Treatment	X
Off-Island Referral to Hawaii for Diagnosis/Treatment	X
Off-Island Referral to Taiwan for Diagnosis/Treatment	X
CANCER SURVIVORSHIP AND PALLIATIVE CARE	
Care Coordination	X
Survivorship Care Plans	n/a
Cancer Recurrence Surveillance and Screening	X
Nutrition Services	X
Physical Activity Services (including physical therapy)	X
Family and Caregiver Support	X
Psychosocial Assessment and Care	X
Social and Spiritual Support Group	X
Symptoms Management	X
Patient Navigation	X
Late Effects of Cancer and Treatment Education	n/a
Skills Training	n/a
Palliative Care Teams	X
Pain Specialist and Medications	X

Cancer Burden



For the past 10-years cancer has been among the top leading cause of death in Palau⁶. Data from the Palau Cancer Registry in the table below (Table 4 Palau Cancer Data 2007-2015) reveals that the common cancers observed in Palau are cancers of the Lung & Bronchus, Liver, Prostate, Oral Cavity and Pharynx, Uterus, Colon & Rectum, Breast, Cervix, Thyroid, and Stomach. Palau's liver cancer rates are twice as high as the U.S. Because of limitations in screening and diagnosis, other cancers may be underreported. Further analysis of data provided by the Pacific Regional Central Cancer Registry shows that 55% of Palau's adult cancers are tobacco-related; 21% of Palau's adult cancers are obesity-related; 27% of these cancers have evidence-based screening tests such as mammography, Pap smear, fecal occult blood testing or colonoscopy; 16% of the cancers could be diagnosed in earlier stages if the patient presents to the doctor early enough for a thorough history and physical exam; and 65% of adult cancer patients passed away within five (5) years of diagnosis.

Treatment options vary by cancer, but in general, are limited to early-stage cancers. A few surgeons and obstetrician-gynecologists are available on-island to manage most early cancers requiring resection. As there is a limited budget for off-island referral (for diagnostic confirmation, advanced staging techniques or advanced treatment), the clinicians must decide on how much treatment can be safely provided on island. The availability of maintenance chemotherapy is limited. No radiation therapy, brachytherapy or hormonal therapy options exist. Off-island referrals to the Philippines, Taiwan, and Hawaii is considered only for those patients diagnosed at early stages.

Provision of hospital-based and home-based palliative care services is in early stages of development. Efforts to train staff and family caregivers are ongoing, including a Family Caregiver Course developed by the University of Hawaii and now routinely offered through the Palau Community College. There have been increased efforts over the past four (4) years to increase provider awareness and education and improve the system's capacity to provide palliative care to those patients with advanced cancers.

The Palau Cancer Registry serves an important public health function. Data on cancers are collected so that the health system can make informed decisions about areas to focus precious resources. Certain types of cancers can be detected earlier than others (screened), so information on those types of cancers can be used to help improve resources to screening programs, guide outreach activities and policy change. The cancer registry responds to data requests from NCD Coalition members and partners, Cancer Coalition, Ministry of Health Quality Assurance officer, and local physicians. Cancer registry data is used by policymakers, public health programs, and community coalitions.

⁶[Office of Epidemiology, Public Health, Palau, 2019](#)

The cancer data has influenced decision-making in screening recommendations and awareness efforts, as well as in major transformations in the Ministry of Health over the past nine (9) years.

What is Cancer⁷?

Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death. Although the reason for many cancers, particularly those that occur during childhood, remains unknown, established cancer causes include lifestyle (external) factors, such as tobacco use and excess body weight, and nonmodifiable (internal) factors, such as inherited genetic mutations, hormones, and immune conditions. These risk factors may act simultaneously or in sequence to initiate and/or promote cancer growth. Ten or more years often pass between exposure to external factors and detectable cancer.

Certain types of cancer can be prevented by reducing exposure to tobacco and other factors that promote this process. Cervical cancer can be prevented through vaccination and screening. Other potential cancers can be detected before cells turn into full-blown cancer or at an early stage when the disease is most treatable. Cancer is treated by surgery, radiation, chemotherapy, hormones, and immunotherapy, but only if those resources are available to the patient.

Can Cancer Be Prevented⁸?

A large proportion of cancers could be prevented including all cancers caused by tobacco use and heavy alcohol consumption. The American Cancer Society estimates that in 2017, about 190,500 of the estimated 600,920 cancer deaths in the US will be caused by cigarette smoking. The World Cancer Research Fund estimates that about 20% of cancer cases diagnosed in the US are caused by a combination of excess body weight, physical inactivity, excess alcohol consumption, and poor nutrition, and thus could also be prevented. Focusing on diet alone, a recent study concludes, that suboptimal diet in the US can be associated with 5.2% of all new cancer cases.

Certain cancers caused by infectious agents, such as human papillomavirus (HPV), hepatitis B virus (HBV), hepatitis C virus (HCV), human immunodeficiency virus (HIV) and *Helicobacter pylori* (*H. pylori*), could be prevented through behavioral changes, vaccination, or treatment of the infection.

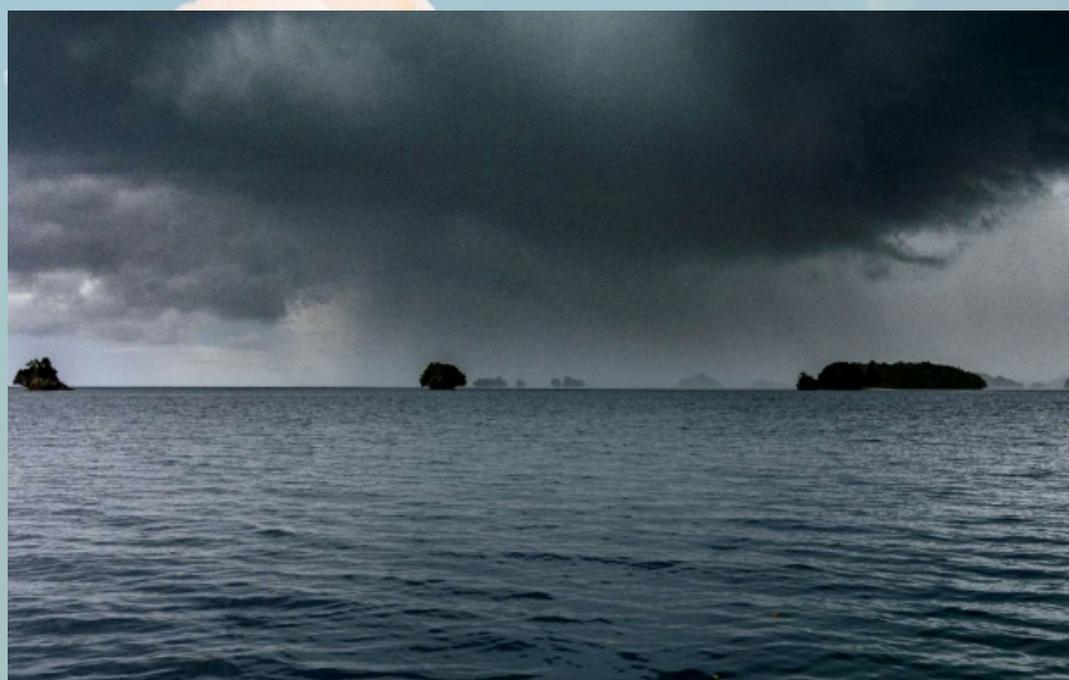
In addition to preventing cancer through the avoidance of risk factors, regular screening tests that allow the detection and removal of precancerous growths can prevent cancers of the breast, cervix, colon, and rectum (these cancers are among the top ten most prevalent cancers in Palau). A heightened awareness of changes in the breast or skin may also result in detection of these tumors at earlier stages. Cancer is quite common. In the U.S., it is estimated that half of men and one-third on women are at risk for developing cancer in their lifetimes. In resource limited settings, such as Palau, these risks may be higher and cancer is less likely to be detected early.

⁷[Adapted from: "Global Cancer Facts & Figures 2007 and 2013"](#)

⁸[Adapted from: "American Cancer Society, Cancer Facts & Figures 2017"](#)

TABLE 4 PALAU CANCER DATA 2007-2015

	Counts	Tobacco related	Obesity related	Screening Test Available	Early Physical Diagnosis	% Dead within 5 Years of Diagnosis	% Diagnosed Stage 1	% Diagnosed Stage 2	% Diagnosed Stage 3 or Higher
Adult Cancers (20 years and older)	250	55%	21%	27%	16%	65%	8%	5%	87%
65 Other Tobacco Related Cancers⁹	65	X				78%	8%	3%	89
Liver	34					100%	6%	3%	91%
Prostate	22			X	X	32%	9	9	82%
Uterus	19	X	X			26%	16%		84%
Colorectal	17	X	X	X		41%	12%	12%	76%
Breast Invasive	16	X	X	X		19%	6%		94%
Cervical Cancer, Invasive	13	X		X		62%	8%		92%
Thyroid	10					30%	10%	10%	80%
Stomach	10	X				80%	10%	10%	80%
Leukemia	8					88%			100%



⁹(38) lung; (20) tobacco-related oropharynx; (6) esophagus; (1) pharynx

Summary Information about Major Cancer Sites

adapted from Hawaii Cancer Facts & Figures 2010

CANCER SITES	NON-MODIFIABLE RISK FACTORS	MODIFIABLE RISK FACTORS	RISK REDUCTION	EARLY DETECTION	SYMPTOMS	TREATMENT
Breast	Age (risk increases as one gets older); Gender (risk is higher in women); Race (risk slightly higher in Whites); Genetic risk factors; Family history; Personal history of breast cancer; Previous breast biopsy; previous breast radiation; Early menstruation; Late menopause	First child born after age 30; Oral contraceptive use; Hormone replacement therapy use; Alcohol consumption; Obesity; Physical activity	Having first child before age 30; Breastfeeding child; Limit alcohol consumption; Maintain a healthy weight; Be physically active; Chemoprevention if women are considered high risk (tamoxifen and possibly raloxifene/raloxifene is not approved for risk reduction and should not be recommended outside of a clinical trial)	Mammograms; Clinical breast examinations; Breast self-examinations (optional)	New lump or mass; Swelling; Skin irritation or dimpling; Nipple pain or nipple turning inward; Redness or scaling of the nipple or breast skin; Breast discharge; Lump in the underarm area	Surgery (breast-conserving therapy with radiation, or mastectomy with or without radiation); Plus chemotherapy and/or hormone therapy, depending on tumor size, spread to lymph nodes, and/or prognostic features
Cervix	Age (average age at diagnosis is 50 to 55); Family history	Human papillomavirus (HPV) infection from intercourse at an early age, unprotected sex, and many sexual partners; Cigarette smoking; Human immunodeficiency virus (HIV) infection; Chlamydia infection	Avoid early onset of sexual activity; Limit the number of sexual partners; Avoid intercourse with individuals who have had multiple partners; Avoid cigarette smoking; Use condoms (to prevent HIV and chlamydia infection; condom use does not reliably prevent HPV infection)	Pap test (smear), visual inspection with acetic acid (VIA) or HPV DNA testing and pelvic examination	Unusual discharge from vagina other than a monthly menstrual period; Bleeding after intercourse; Pain during intercourse	Surgery and/or radiation therapy; Plus chemotherapy for later stages
Colon and Rectum	Age (risk increases as one gets older); Family history; Ethnicity, namely Ashkenazi Jews; Race (highest incidence in African Americans); Personal history of colon cancer, intestinal polyps, or chronic inflammatory bowel disease	Diet from animal sources; Physical inactivity; Obesity; Smoking; Alcohol consumption; Vegetable and fruit consumption; Type II Diabetes	Maintain ideal body weight; Multi-vitamin with folate intake; Calcium supplement intake; Nonsteroidal anti-inflammatory drugs, like aspirin; Hormone replacement therapy (but the side effect may outweigh benefit)	Fecal occult blood test (FOBT); Flexible sigmoidoscopy; Colonoscopy; Barium enema	Change in bowel habits; Feeling that bowel movement is necessary but no relief after doing so; Rectal bleeding or blood in stool; Cramping or abdominal pain; weakness or fatigue	Surgery; Plus, radiation therapy and/or chemotherapy for later stages

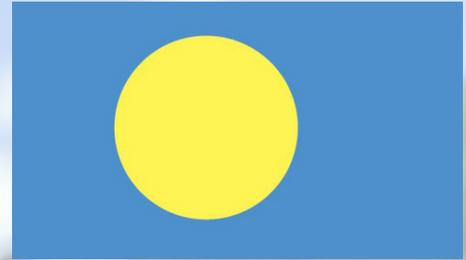
<p>Uterus (Corpus Uteri)</p>	<p>Age (risk increases as one gets older); Total length of menstrual span; History of infertility; Ovarian disease; Diabetes; Family history; Presence or personal history of breast or ovarian cancer; Early menstruation; Late menopause</p>	<p>History of having never given birth; Obesity; Tamoxifen use; Estrogen (but not combined hormone) replacement therapy; Diet high in animal fat</p>	<p>Having one or more children; Use of oral contraceptives; Maintain a healthy weight; Control diabetes</p>	<p>No screening examinations available for women without symptoms who are at average risk for endometrial cancer; Women should report warning signs to health care professional</p>	<p>Unusual bleeding, spotting, or abnormal discharge, especially if after menopause; Pelvic pain or mass; Unexplained weight loss</p>	<p>Surgery; Plus radiation therapy, chemotherapy or hormone therapy for later stages</p>
<p>Thyroid</p>	<p>Age (80% of newly diagnosed thyroid cancer patients are under 65 years of age); Gender (risk is higher in females); Having a history of goiter (enlarged thyroid) or thyroid nodules; Family history of thyroid cancer; Genetics (people who test positive for an abnormal gene that causes a hereditary form of thyroid</p>	<p>Radiation exposure related to medical treatment during childhood; Radiation exposure as a result of radioactive fallout from atomic weapons testing and nuclear power plant accidents</p>	<p>Avoid unnecessary exposure to ionizing radiation, for children; Ensure adequate iodine intake; Be aware of your family history; Choose a healthy diet to achieve and maintain a healthy weight; Eat more vegetables, fruits and whole grains and eat less red and processed (e.g., bacon, sausage, luncheon meats, hot dogs) meats; Exercise regularly; Avoid smoking cigarettes; Avoid exposure to secondhand smoke</p>	<p>No screening test for the early detection of thyroid cancer in people without symptoms. If signs and symptoms are present, tests used in the evaluation of thyroid nodules include: blood tests to determine levels of hormones related to normal functions of the thyroid gland; Medical imaging techniques to determine the size and characteristics of the nodule and nearby lymph nodes; Biopsy to determine if the cells in the nodule are benign or malignant</p>	<p>Lump in the neck; Tight or full feeling in the neck; Difficulty breathing or swallowing; Hoarseness or swollen lymph nodes; Pain in the throat or neck that does not go away</p>	<p>Surgical removal of the thyroid gland (for people who test positive of an abnormal gene that causes a hereditary form of thyroid cancer); Radiation; sometimes Hormone therapy, depending on the cell type, tumor size and/or extent of the disease</p>
<p>Oral</p>	<p>Age (risk increases as one gets older);</p>	<p>Cigarette smoking; Smokeless or chewing tobacco; Cigars; Chewing betel nut; Alcohol consumption; UV exposure for cancer on the lip; Vitamin A deficiency; Obesity; Human papilloma virus (HPV) Infection</p>	<p>Maintain ideal body weight; Multi-vitamin with folate intake; Calcium supplement intake; Nonsteroidal anti-inflammatory drugs, like aspirin; Hormone replace therapy (but the side effect may outweigh benefit)</p>	<p>Regular dental checkups that include an examination of the entire mouth; A cancer-related checkup where primary care physicians examine mouth and throat; Selfexaminations and report signs and symptoms of diseases to health care professional, if present</p>	<p>Sore in the mouth that does not heal; Pain in the mouth that doesn't go away; A persistent lump or thickening in the cheek; Persistent white or red patch on the gums, tongue, tonsil or lining of the mouth; Sore throat or feeling that something is caught in the throat; Difficulty chewing or swallowing; Difficulty moving the jaw or tongue; Numbness of the tongue; Swelling of the jaw; loosening of the teeth or pain around the teeth or jaw; Voice changes; A lump or mass in the neck; unexplained weight loss</p>	<p>Surgery and/or radiation therapy; Plus chemotherapy for later stages</p>

<p>Leukemia</p>	<p>Infection with HLTV-1 virus; Family history</p>	<p>Cigarette smoking; Exposure to benzene; High-dose radiation exposure; Inherited rare genetic diseases</p>	<p>Avoid cigarette smoking; Reduce exposure to benzene and radiation</p>	<p>No screening examinations available other than reporting signs and symptoms of disease to health care professional</p>	<p>Weakness; Fatigue; Reduced exercise tolerance; Weight loss; Fever; Bone pain; Sense of fullness in abdomen</p>	<p>Chemotherapy; Plus stem cell transplant depending on prognostic factors; Gleevec (imatinib mesylate) for treatment of chronic myeloid leukemia</p>
<p>Liver</p>	<p>People born between 1945-1965; Chronic infections with hepatitis B virus (HBV) and hepatitis C virus (HCV)</p>	<p>Obesity; Alcohol; Parasitic infections (schistosomiasis and liver flukes); Consumption of food contaminated with aflatoxin, a toxin produced by mold during the storage of agricultural products in a warm, humid environment</p>	<p>Screen high-risk persons (e.g., HCV-infected persons with cirrhosis) with ultrasound or blood tests; pregnant women are also recommended to be tested for HBV; Screening of donated blood, organs, and tissues; Adherence to infection control practices during medical, surgical, and dental procedures; Avoid Obesity; Limit alcohol consumption</p>	<p>No vaccine available against HCV, but treatments that can clear infection and halt liver disease progression is available; one-time HCV testing for all persons born from 1945 to 1965 in addition to routine testing for individuals at high risk (e.g., injection drug users); HBV vaccinations for all infants at birth, for all children under 18 years of age who were not vaccinated at birth and for adults in high-risk groups (e.g., health care workers and those younger than 60 years who have been diagnosed with diabetes)</p>	<p>Abdominal pain and/or swelling; Weight loss; Weakness; Loss of appetite; Jaundice (a yellowish discoloration of the skin and eyes); Fever; Enlargement of the liver</p>	<p>Surgery (for patients with sufficient healthy liver tissue); Liver transplantation; Patients whose tumors cannot be surgically removed may choose Ablation (tumor destruction) or embolization, a procedure that cuts off blood flow to the tumor; Drug therapy (i.e. Sorafenib or Nexavar) for patients who are not candidates for surgery</p>
<p>Lung and Bronchus</p>	<p>Personal and family history</p>	<p>Cigarette smoking; Secondhand smoke exposure; Asbestos exposure; Occupational exposure to some chemicals; Diet; Radon exposure</p>	<p>Avoid smoking; Avoid secondhand smoke; Avoid occupational exposure to asbestos and other chemicals by using workplace safety precautions; Eat five or more servings of fruits and vegetables per day; Get home checked for radon</p>	<p>No widespread screening recommendations for low-risk patients. Annual screening with low-dose CT (computed tomography) scanning is recommended for adults ages 55 to 80 years who have a 30 pack-year smoking history and currently smoke or quit within the past 15 years.</p>	<p>A cough that does not go away; Chest pain often aggravated by deep breathing; Hoarseness; Weight loss and loss of appetite; Bloody or rust-colored sputum; Shortness of breath; Recurring infections such as bronchitis and pneumonia; New onset of wheezing</p>	<p>Non-small cell: Surgery; Plus radiation therapy and/or chemotherapy for later stages; Small cell: Chemotherapy; Plus radiation therapy and sometimes surgery, depending on prognostic factors</p>

Frameworks

The Strategic Cancer Control Plan for Palau with a vision of:

***“Cancer Free me, Cancer Free Communités,
Cancer Free Nation”***



acknowledges and builds upon the Palau NCD Plan but specifically focuses on the three strategic actions (Environmental approach, Community-clinical linkages, Health System Changes) for evidence based interventions to prevent and control Cancer in the Republic of Palau.

Advocacy and community outreach will be continued across the continuum to engage community stakeholders; mobilize partnerships and generate champions and leaders. Data will be used to guide in interventions and to monitor progress.

Stakeholders have elected to concentrate on actions across the below five (5) areas of cancer prevention and control:

1. Prevention
2. Screening
3. Treatment
4. Survivorship & Quality of Life
5. Health Disparity



This document serves to reflect Republic of Palau’s strategic action plans for Cancer Control and Prevention in the next five (5) years 2018-2023.



The National Comprehensive Cancer Control Program and Palau Cancer Coalition

The National Comprehensive Cancer Control Program (NCCCP) is a collaborative process through which a community pools resources to reduce the burden of cancer that results in risk reduction, early detection, better treatment and enhanced survivorship and quality of life. CCC is based on the following principles:

- Scientific research guides decisions on which steps to take first.
- The full scope of cancer care is addressed from prevention to early detection & treatment to end-of-life issues.
- Many people involved include doctors, public health personnel, non-profit organizations, insurance companies, businesses, cancer survivors, government agencies, colleges & universities, and advocates.
- Experts working together from many areas including specialists in the administration, basic & applied research, evaluation, health education, program development, public policy, public health surveillance, clinical services, and health communication.

The Palau Cancer Coalition also known as Omellemel Ma Ulekerreuil a Bedenged (OMUB) is comprised of members who represent key public, private & non-profit stakeholders in the cancer network of Palau. These stakeholders including the Breast & Cervical Cancer Screening Program, Palau Cancer Registry, the Bureau of Public Health Services, cancer survivors, cancer patient caregivers, and various community organizations who are involved with the development of the Palau Plan and implementation of cancer prevention and control activities.

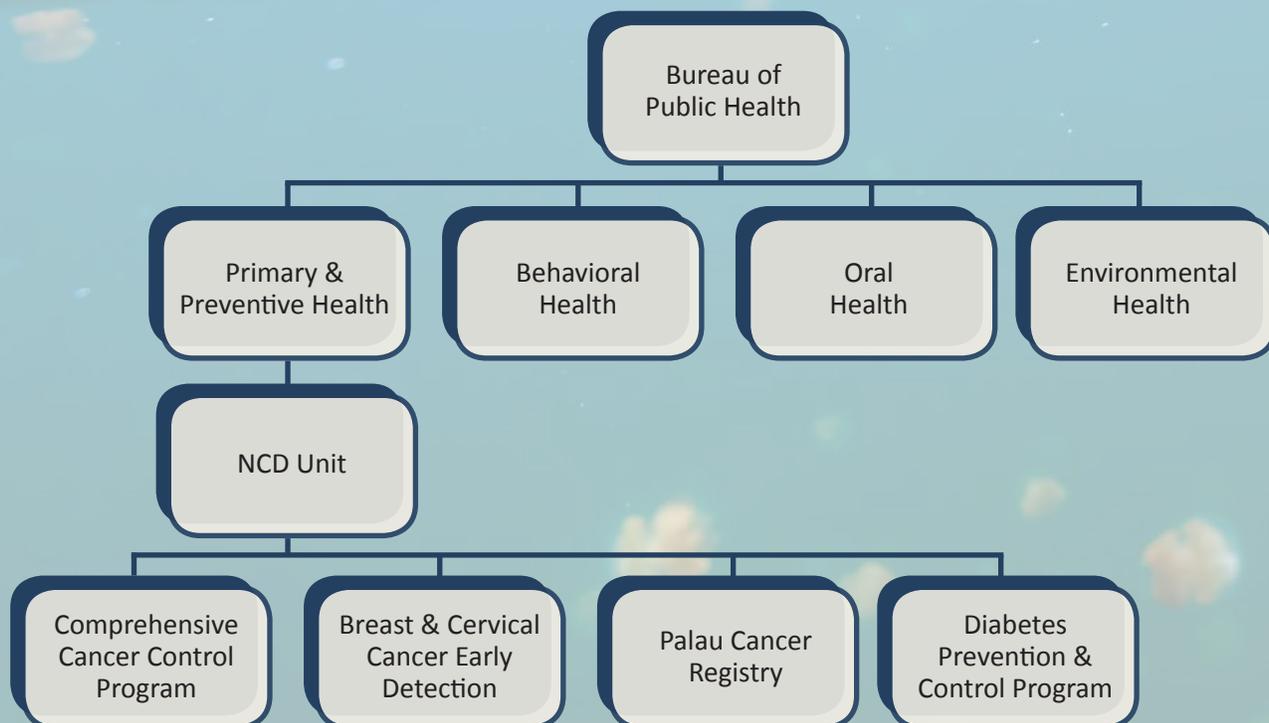


TABLE 5 PALAU CANCER COALITION AND PROGRAM PARTNERS

CANCER COALITION MEMBERS	ORGANIZATION
Ann R. Lund - Chairperson	NCD Coalition
Hadden Seklii - Vice Chairperson	Palau National Youth Congress
Obechou K. Mereb - Secretary	Youth
Jane Decherong - Treasurer	Community
Palau Leadership team (NBCCEDP, NPCR, NCCCP)	17-1701 CDC Requirement
Adelina Blailes	Survivor
Aholiba Albert	Governors Association
Alfred Pedro	Youth
Angeliza James	Community
Aripino M. David Aga	Filipino Association
Arlene Melimarang	Family Caregiver
Avus Otei	Survivor
Balkuu Sandario	Faith-Based
Belhaim Sakuma	NCD Coalition
Benita Decherong	Faith-Based
Beverly Chaareg	Youth/Senate, OEK
Brihida Sidoi	Family Caregiver
Chubby Mai	Community
Crystal Ongrung	Youth
Debbie Nagata	Ministry of Education
Dilsubed Polloi	Community
Eleos J. Tellei	Youth
Felicia Naruo	Community
Janet Ebil Orrukem	Survivor
Jasen Lee Pedro	KSG/Youth
Joel Miles, Dr.	Survivor
Keraskes Masaharu	EPFM Radio - Media
Kimberly Kngzio	Youth
Krislyn Termeteet	Youth
Lamp Minor	Community
Laura Ierago	Family Caregiver
Leilani Johnsrud	OEK/House of Delegates
Leonard Basilius	NCD Coalition
Lue Cee R. Kotaro	Tobacco Prevention Program

Mariko Jackson	Family Caregiver
Mark Remeliik	Family Caregiver
Merlyn Basilius	Immunization Program
Mitsko Ngirchomlei	Survivor
Nestralda Mechaet	Survivor
Patrick Moses	EPFM Radio - Media
Ray Isao	KSG/Youth
Rayger Roman	KSG/Youth
Rufina Takashi	Community Health Unit, MOH
Santy Asanuma	NCD Coalition
Sergio Ngiraingas	Tobacco Prevention Program
Sherman Sato	Community
Stafford Odaol	Community/KSG
Sylvia Osarch, Dr.	Geriatrics Health
Ty Merrengor	KSG/Youth

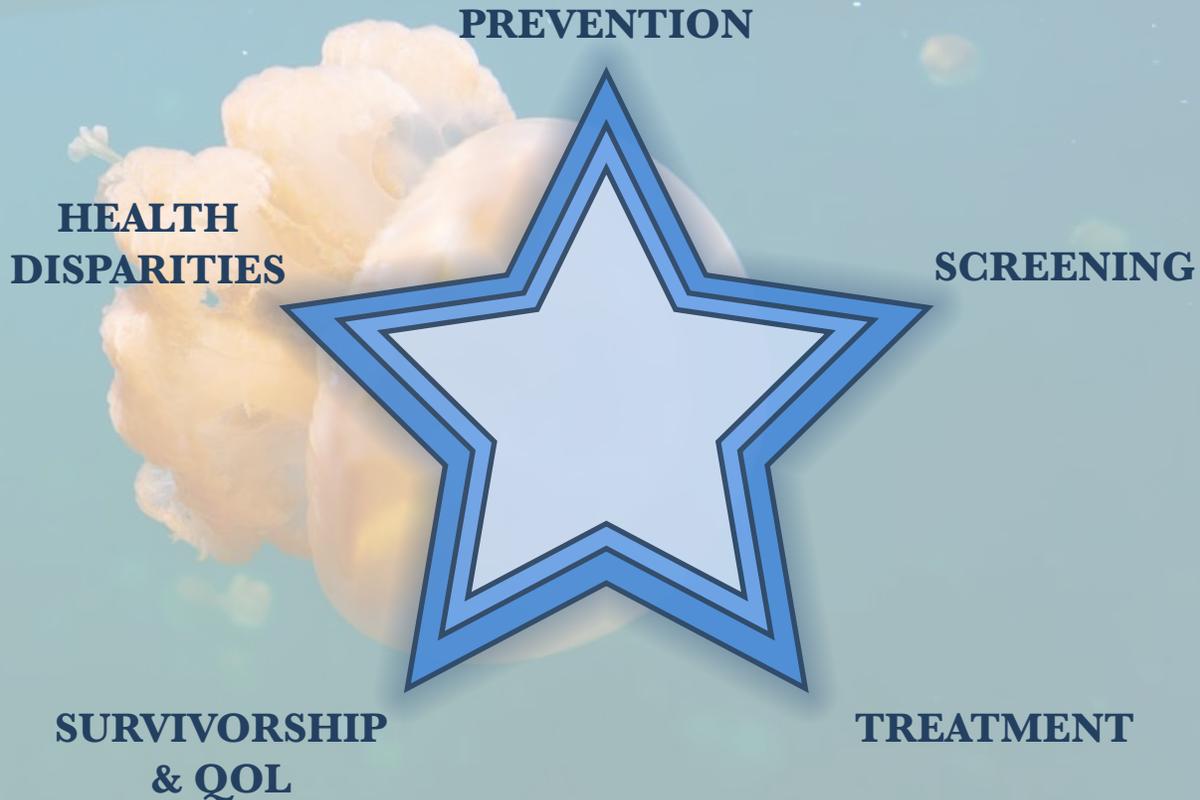


Strategic Plans of Action: Overall Vision & Subvisions

Vision

“Cancer Free Me, Cancer Free Communities, Cancer Free Nation”

To Guide the Way: 5 Sub-Visions



Area of Action: Prevention

Prevention of cancer is an integral part of overall reduction and management of the cancer burden in Palau. Prevention efforts will provide the basic groundwork encompassing effort of this plan.



Many cancers are preventable with sound health initiatives and awareness of the factors that contribute to the disease. The overall goal of this area is to reduce and prevent the incidence of cancer through education and behavioral change strategies to increase HPV vaccination, decreasing obesity, and preventing and decreasing tobacco use in Palau.

Sub-Vision: People Living Healthy Lifestyle

Short-Term Goal:

- Strengthen advocacy and health education of immunization to school health program parents and guardians.
- Strengthen collaboration and partnership within public health programs.
- Decrease the prevalence of obesity related diseases.
- Prevent all forms of tobacco use.

Long-Term Goal:

- Increase public knowledge and awareness of Cancer.
- Reduce the impact of physical inactivity on cancer incidence and mortality.
- Reduce the impact of all form of tobacco use on cancer incidence and mortality.
- Reduce the impact of HPV on cancer incidence and mortality.

Objectives	Activities	Responsible Stakeholders
1.1. By 2023, strengthen advocacy and health education on immunization to parents/guardians of 5 th grader students (both male and female).	1.1.1 Conduct assessment.	NCCCP
	1.1.2. Develop education materials.	OMUB
	1.1.3. Create and implement communicaton plan.	Immunization Program
1.2. By 2023, increase advocacy and health education on immunization topics to policymakers.	1.2.1. Conduct assessment of current of the topic.	NCCCP
	1.2.2. Develop culturally appropriate education materials.	OMUB
	1.2.3. Disseminate education materials & support champions.	Immunization Program Cancer Leadership Program
1.3. By the end of 2020, establish a consistent campaign and messaging on obesity within public health programs.	1.3.1. Conduct assessment of existing messages, resources, and messaging strategies.	NCCCP
	1.3.2. Create communication plan.	OMUB
	1.3.3. Disseminate information with support from decision-makers and policy champions.	Cancer Leadership Team

<p>1.4. By 2023, launch a smoking prevention campaign targeting young people.</p>	<p>1.4.1. Conduct a supplemental assessment to the Hybrid Survey targeting 12-18 year olds to map out smoking habits in young adults.</p> <p>1.4.2. Create a messaging tool centered around “Don’t start smoking at all” as the main message.</p> <p>1.4.3. Disseminate the tool using age appropriate media.</p> <p>1.4.4. Evaluate the efficiency of the messages (survey assessment).</p>	<p>NCCCP</p> <p>OMUB</p> <p>Tobacco Prevention Program</p>
<p>1.5. By 2020, introduce new skill development training on cancer prevention and control for public health and healthcare professionals utilizing (but not focusing solely on) Telehealth solutions.</p>	<p>1.5.1. Conduct MOH wide skill development training needs assessment.</p> <p>1.5.2. Locate and arrange telehealth training resources.</p> <p>1.5.3. Disseminate training calendar.</p>	<p>NCCCP</p> <p>Cancer Leadership Team</p> <p>Pacific Cancer ECHO</p>



Area of Action: Screening

Screening for cancer across the population will help detect the disease at its earliest stages when it is treatable and curable. Not all cancers are screenable, but in some cancers that are screenable, early detection and treatment may help save lives. The goal of this area is to detect all screenable cancer cases at the earliest possible time.



Sub-Vision: People Living Healthy Lifestyle

Short-Term Goal: ▶ Decrease incidence of screenable cancers from 27% to 26% by 2021.		
Long-Term Goal: ▶ By 2022 increase screening rates of screenable cancers.		
Objectives	Activities	Responsible Stakeholders
2.1. Increase screening of colorectal cancer from 5% to 10% by 2023 (per guideline).	2.1.1. Conduct assessment to identify screening capacity and barriers. 2.1.2. Propose pilot screening program. 2.1.3. Secure support (fiscal, political). 2.1.4. Implement and evaluate program.	NCCCP Cancer Leadership Team
2.2. Increase screening of cervical cancer from 60% to 80% by 2022 (per guideline).	2.2.1. Train health extenders to recruit women for screening. 2.2.2. Conduct in-person training on cervical cancer screening with extenders.	NCCCP BCCEDP Cancer Leadership Program
2.3. Increase screening of breast cancer from 30% to 50% by 2022 (per guideline).	2.3.1. Train health extenders to recruit women for screening. 2.3.2. Mammo: Extend Clinic Hours. 2.3.3. Conduct group education for breast cancer screening (Extenders conduct group meetings in the community to boost screening numbers?).	NCCCP BCCEDP Cancer Leadership Program
2.4. By 2020, introduce new skill development training on cancer prevention and control for public health and healthcare professionals utilizing (but not focusing solely on) Telehealth solutions.	2.4.1. Conduct screening providers' assessment (focusing on HR skills required in the field of cancer prevention). 2.4.2. Locate and arrange Telehealth training sessions. 2.4.3. Disseminate training calendars.	NCCCP Cancer Leadership Team Pacific Cancer ECHO

Area of Action: Treatment

Once cancer is diagnosed, prompt and thorough treatment is essential for prolonging the patient’s survival and improving the patient’s quality of life. Although as varied as the individuals and their illnesses, cancer treatments can entail surgery, radiation, chemotherapy, and any combination thereof. The choices of treatments are often dictated by the patient’s age, underlying disease, performance status, stage at diagnoses, available treatments and access to care.



Sub-Vision: Available, accessible, cost-effective and comprehensive treatment for all in need.

Short-Term Goal: ➤ Increase the number/percentage of people diagnosed with cancer receiving medically appropriate cancer treatment & services within ninety (90) days of diagnosis.		
Long-Term Goal: ➤ Improve the quality and availability of treatment options for cancer patients.		
Objectives	Activities	Responsible Stakeholders
3.1. By 2020, establish comprehensive case management services.	3.1.1. Conduct assessment to map out current services 3.1.2. Draft a protocol for case management 3.1.3. Recruit case manager(s) 3.1.4. Implement case management services	NCCCP Cancer Leadership Team
3.2. By 2023, establish a Service Center within the Ministry of Health for cancer patients & families augmenting case management services.	3.2.1. Conduct assessment 3.2.2. Identify and secure support for a dedicated physical space for the Service Center within the hospital. 3.2.3. Furnish the Service Center to accommodate local needs	NCCCP Cancer Leadership Program
3.3. By 2020, create one list of comprehensive social support services needed by cancer patients & families.	3.3.1. Map out all currently available services 3.3.2. Compile a list of services that is culturally appropriate for the target audience and is generally useful 3.3.3. Disseminate the list to target audience and stakeholders	NCCCP OMUB Cancer Leadership Program
3.4. By 2020, introduce new skill development training on cancer prevention & control for public health and healthcare professionals utilizing (but not focusing solely on) Telehealth solutions.	3.4.1. Conduct wide skill development training needs assessment 3.4.2. Locate and arrange Telehealth training resources 3.4.3. Disseminate training calendars	NCCCP Cancer Leadership Team Pacific Cancer ECHO

Area of Action: Survivorship and Quality of Life (QOL)

Survivorship/End of Life care is and will continue to play an important role in addressing the burden of cancer in Palau. Recovery and reintegration into family, society, and workplace are all issues a cancer patient must face, and just as critical, when the disease is terminal, palliative care including quality of the medical delivery, pain management, therapies, acceptance, and culturally sensitive and compassionate support are all important. The goal of this area is to provide physical, psychological, and spiritual care that would help a person have the best quality of life as his or her cancer progresses.



Sub-Vision: Cancer survivors living longer, happy and healthy lives.

Short-Term Goal: ▶ Increase the percentage of cancer patients who receive cancer survivorship support services.		
Long-Term Goal: ▶ Increase the percentage of cancer survivors living beyond five (5) years of their diagnosis.		
Objectives	Activities	Responsible Stakeholders
4.1. By 2021, establish a multi-disciplinary team.	4.1.1. Identify and convene potential members of the multi-disciplinary team. 4.1.2. Identify existing support services, gaps, and weaknesses in currently available services. 4.1.3. Develop guidelines and navigation process(es) for cancer survivors. 4.1.4. Implement and evaluate guidelines & the navigation process(es).	NCCCP Cancer Leadership Team
4.2. By 2023, increase the number of cancer survivors who receive a formal follow-up and treatment plan from 0-10.	4.2.1. Conduct assessment of the current process to identify gaps and areas of improvement. 4.2.2. Improve the process to ensure cancer survivors receive follow-up of their treatment plans.	NCCCP Cancer Leadership Program
4.3. By 2020, introduce new skill development training on cancer survivorship/QOL for public health and healthcare professionals utilizing (but not focusing solely on) Telehealth solutions.	4.3.1. Conduct MOH wide skill development training needs assessment. 4.3.2. Locate and arrange Telehealth training resources. 4.3.3. Disseminate training calendar.	NCCCP Cancer Leadership Team Pacific Cancer ECHO

Area of Action: Health Disparity

A burden of cancer exists in Palau because of factors such as age, sex, socio-economic, geography and other factors. These barriers mean that individuals are not getting screened early enough. A person diagnosed with cancer is unable to access treatment due to inability to pay for medical treatments, as well as transportation to off-island treatment sites and some cancer patients may not receive needed services due other co-morbid conditions. The goal of this area is to decrease health disparity as it relates to cancer.

Short-Term Goal:

- Increase public awareness and knowledge on health disparity as it relates to cancer.
- Increase cancer screening in disparate groups.
- Strengthen cancer support services in disparate groups.

Long-Term Goal:

- Prevent and control cancer in disparate groups.

Objectives	Activities	Responsible Stakeholders
5.1. By 2022, strengthen advocacy and health disparity education (as it relates to cancer) to key partners.	5.1.1 Develop education materials. 5.1.2. Implement education on health disparity.	NCCCP
5.2. By 2022, increase cancer screening in disparate groups.	5.2.1. Identify disparate groups. 5.2.2. Conduct education to disparate groups. 5.2.3. Recruit for screening.	
5.3. By 2022, strengthen and make available cancer support services to disparate groups.	5.3.1. Conduct assessment of existing support services. 5.3.2. Meet with partners to discuss plans. 5.3.3. Promote cancer support services to disparate groups.	



Cancer Burden

The Non-Communicable Disease Unit within the Bureau of Public Health Services, on behalf of the Ministry of Health gratefully acknowledges the following members of OMUB, Palau Cancer Coalition, and other partners for their invaluable contributions to the making of this strategic plan

CANCER COALITION MEMBERS	ORGANIZATION
Ann R. Lund - Chairperson	NCD Coalition
Hadden Seklii - Vice Chairperson	Palau National Youth Congress
Obechou K. Mereb - Secretary	Youth
Jane Decherong - Treasurer	Community
Palau Leadership team (NBCCEDP, NPCR, NCCCP)	17-1701 CDC Requirement
Adelina Blailes	Survivor
Aholiba Albert	Governors Association
Alfred Pedro	Youth
Angeliza James	Community
Aripino M. David Aga	Filipino Association
Arlene Melimarang	Family Caregiver
Avus Otei	Survivor
Balkuu Sandario	Faith-Based
Belhaim Sakuma	NCD Coalition
Benita Decherong	Faith-Based
Beverly Chaareg	Youth/Senate, OEK
Brihida Sidoi	Family Caregiver
Chubby Mai	Community
Crystal Ongrung	Youth
Debbie Nagata	Ministry of Education
Dilsubed Polloi	Community
Eleos J. Tellei	Youth
Felicia Naruo	Community
Janet Ebil Orrukem	Survivor
Jasen Lee Pedro	KSG/Youth
Joel Miles, Dr.	Survivor
Keraskes Masaharu	EPFM Radio - Media
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Rufina Takashi	Community Health Unit, MOH
Santy Asanuma	NCD Coalition
Sergio Ngiraingas	Prevention Unit
Sherman Sato	Community
Stafford Odaol	Community/KSG
Sylvia Osarch, Dr.	Geriatrics Health
Tye Merrengor	KSG/Youth
Other Partner Programs and Agencies:	
Immunization Program	Ministry of Education
Bureau of Nursing	Community
Bureau of Arts & Culture	Ministry of Community & Cultural Affairs
Breast & Cervical Cancer Early Detection Program	Ministry of Health
Cancer Registry	Ministry of Health
Cancer Council of the Pacific Islands	CCPI
Centers for Disease Control & Prevention	CDC, USA
Community Health Centers	Ministry of Health
Diabetes Prevention & Control Program	Ministry of Health
Pacific Islands Health Officers Association	PIHOA
University of Hawaii: Department of Family Medicine & Community Health	University of Hawaii (UH)
Tobacco Prevention & Control Program	Ministry of Health



Photos are courtesy of Mr. Janose Baksa - University of Hawaii

**“If everyone is moving forward together,
then success takes care of itself.”**

- Henry Ford

