

# Guam Cancer Registry

FY 2022 Annual Report



UNIVERSITY OF GUAM  
CANCER RESEARCH CENTER

*Research for Healthier Tomorrows*



# Guam Cancer Registry

A Joint Project of the University of Guam  
Cancer Research Center and the Guam Department  
of Public Health & Social Services

This document provides information at the end of each fiscal year on how the funds provided by PL 30-80 to the Guam Cancer Registry have been used and the progress made in collecting cases and supporting cancer research, education, and outreach on Guam.





## BACKGROUND

The Guam Cancer Registry (GCR) is a population-based registry that is tasked with recording all cancer cases occurring among residents of Guam. The Registry had a very humble beginning in 1998 as just one of many collateral duties of the Territorial Epidemiologist. At that time, the main sources of data were death certificates on file at the Office of Vital Statistics, Department of Public Health and Social Services (DPHSS), and records provided by the American Cancer Society-Guam Chapter (ACS-Guam).

The GCR became a unit of the Cancer Research Center of Guam (CRCG) in 2004, a joint venture of the University of Guam (UOG), the Guam DPHSS, and the University of Hawai'i Cancer Center (UHCC). With funding provided by the National Cancer Institute (NCI), the GCR was able to hire a full-time data collection specialist. This greatly improved the ability of the GCR to collect more accurate and complete information regarding Guam cancer cases. In recognition of its progress, in 2006 the GCR was awarded full-member status in the North American Association of Central Cancer Registries (NAACCR), of which it remains a member. A second data collection specialist was hired in February 2007. In 2022, the GCR is comprised of six staff: five full-time research associates trained in cancer case abstraction and case collection (three are Certified Tumor Registrars), and one grant assistant who provides administrative support. Through mentoring by the Hawai'i Tumor Registry (HTR) and the Pacific Regional Central Cancer Registry (PRCCR), the GCR continues to seek improvement of the accuracy, completeness, and timeliness of its cancer data to meet the exacting standards set by the NAACCR and the National Cancer Institute/Surveillance & Epidemiological End Results (NCI/SEER) research programs. Achievement of these objectives is important because the GCR is a resource cornerstone for health planners and the ongoing effort of the University of Guam to develop excellence in the fields of health education and research.

# LEGISLATIVE APPROPRIATIONS TO GCR

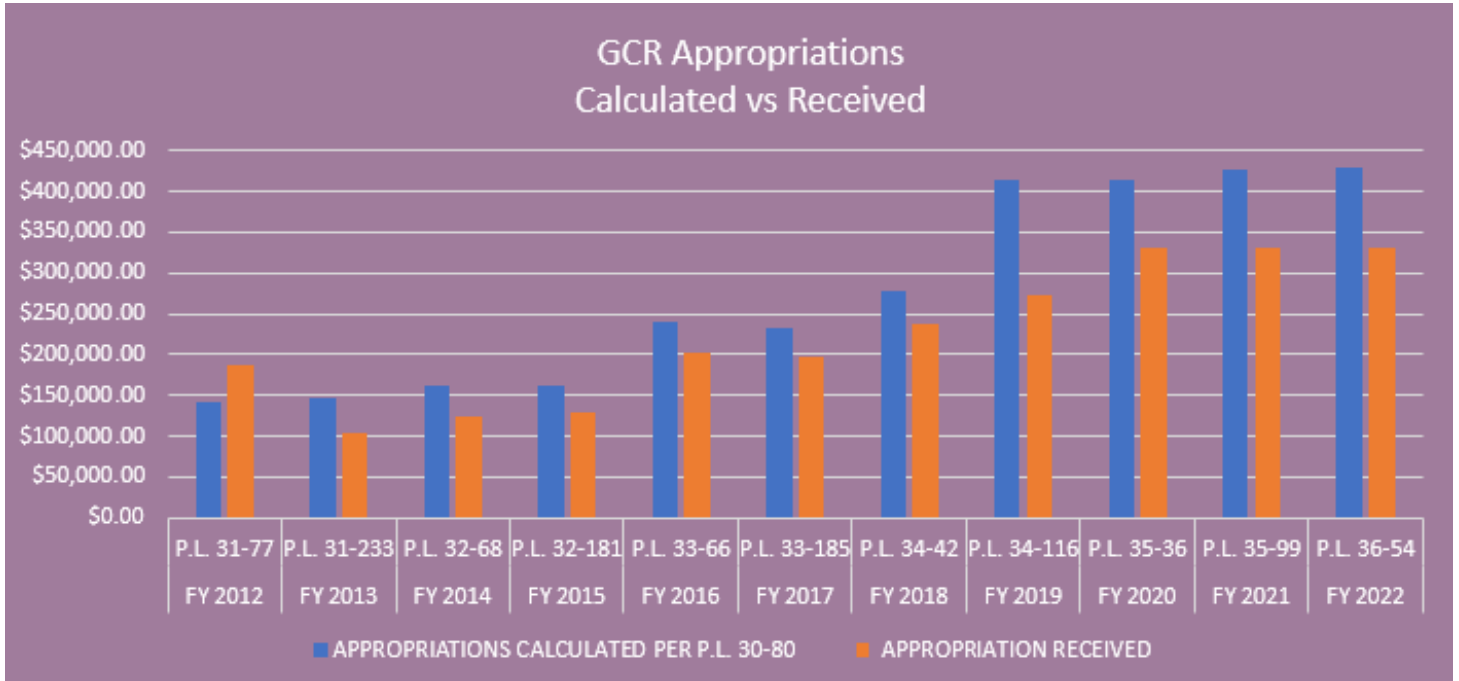


Figure 1. Appropriations to GCR from the Guam Legislature from FY2012 to FY2022.

Table 1. Funding History of Guam Cancer Registry

A condition of continued financial support of the GCR by the NCI is evidence of local support by the Guam community. Passage of Public Law 30-80 in 2010 by the Guam Legislature which stipulates that GCR will receive 1% of tobacco tax revenues annually provides evidence of that support. This local support is critical to the sustainability of GCR.



## DATA COLLECTION, OUTREACH AND COMMUNITY WORK

GCR continues to seek improved data collection by developing community-based partnerships and data sharing agreements with local and regional area hospitals, physicians, medical clinics, and outpatient treatment centers. Outreach to “mandated reporters” is a continuous challenge as the number of medical and non-medical service providers to cancer patients increase. The inclusion of non-medical service providers - such as non-profits and insurance companies - since DPHSS updated its regulations for GCR in October 2010 (under authority of Public Law 24-198) has increased GCR’s ability to collect more complete incident cases of cancers diagnosed among Guam residents.

Tools such as GCR’s Outreach Poster, Mandated Reporters Policy & Procedure Manual, confidential online WebPlus reporting capability, and the Cancer Research Center website continue to educate service providers and the general public about the importance and outcomes of reporting to the registry.

GCR regularly participates in the Data & Research, Policy & Advocacy, and Survivorship & Quality of Life Action Teams of the Guam Comprehensive Cancer Control Coalition (GCCCC), as well as the Non-Communicable Disease (NCD) forums hosted by DPHSS. It strives to be of use to our island community by disseminating information collected about cancer on Guam and other parts of Micronesia (as well as other US-affiliated Pacific Island jurisdictions).

GCR continues to partner with and support community organizations involved in data and surveillance activities in Guam and the Pacific Region as well as concerned citizens such as cancer survivors and their families. In addition to GCCCP, NCD, and Guam Breast and Cervical Cancer Early Detection Program (GBCCEDP) – all organizations under DPHSS’s umbrella, GCR works with Pacific Island Health Officers Association (PIHOA), Cancer Council of the Pacific Islands (CCPI), UH-UOG Pacific Island Partnership for Cancer Health Equity (PIPCHU/U54), and PRCCR. GCR has participated in Governor's Proclamations and provided data for Breast Cancer and Cervical Cancer Awareness Months.

Registry staff fielded at least 12 research inquiries during Fiscal Year 2022 and provided cancer data to a medical doctor from UC Davis, three PIPCHE researchers, one Guam senator, two DPHSS personnel, two HTR personnel, one Doctor of Nursing Practice student, GHMA personnel, and Office of the Attorney General staff.

**GCR staff also provided mortality data, Guam incidence data from PRCCR, and participated in the writing and production of Guam Cancer Facts and Figures 2013-2017. By the end of FY 2022, the Facts and Figures was in its final phase of production.**

## ACTIVITIES

The following is a Summary Report of GCR activities funded by Guam's tobacco tax during the recent budget cycle – Fiscal Year 2022. This report covers the time period from October 1, 2021 thru September 30, 2022.



## **PERSONNEL AND TRAINING**

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- Hired new employee, A. Tabalanza, June 2022 as Grant Assistant III for administrative and case collection support.
- GCR staff attended training with Hawai'i Tumor Registry (HTR) staff and all Pacific Island Jurisdiction (PIJ) registrars focusing on common abstracting errors and upcoming updates for cases diagnosed in 2021.
- Employees attended the National Cancer Registrars' Association (NCRA) Education Conference from April 4-6 and the Annual NAACCR conference from June 14-16. These conferences provided educational sessions to showcase critical cancer registry topics and help registrars stay current.
- GCR Team assisted the PRCCR Team to provide onsite training and abstracting to our Palau Jurisdiction's Cancer Registry.
- N. del Mundo became PRCCR Education and Training Coordinator (ETC)
- N. del Mundo and S. Nagata attended the: NCRA's SEER Advanced Topics Workshop and CDC-NPCR (National Program of Cancer Registries) ETC Virtual Workshop. The SEER Advanced Topics workshop focused on expanding registrars' knowledge of histology coding rules, new data items, advanced pathology concepts, etc. The ETC workshop focused on challenges and solutions with data quality and quality control & education.
- M. Snively and S. Nagata started Anatomy and Physiology courses as a prerequisite for the Certified Tumor Registry (CTR) exam.
- Cancer registry training is frequent and ongoing due to annual changes in coding and abstracting principles set by national registry standard setters. They prepare registry staff to become CTRs and offer educational credits to maintain CTR status.



## **ABSTRACTING, ACTIVE & PASSIVE CASE COLLECTION**

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Active Case Collection is the active pursuit of cancer case documents located in hospitals, laboratories, and surgical/medical clinics for purposes of abstracting. Passive case collection occurs when mandated cancer case reporters submit cancer case documents or cancer patient listings for a specific time-period. GCR acts as both a hospital registry (abstracting cases they diagnose and treat) and a central registry (collecting, consolidating, and editing already abstracted cancer cases).

- GCR staff continued to receive monthly death certificates from DPHSS-Office of Vital Statistics and complete "death clearance" (resolve vital status) for abstracts.
- For this Fiscal Year, GCR received Patient Listings from the following organizations: Guam Regional Medical City (GRMC) Health Information Management (HIM) office, MDX Imaging Center, Guam Surgicenter LLC, EM Calvo Cancer Foundation, GRMC Lab, Guam Memorial Hospital Authority (GMHA) Records Dept, Island Cancer Center (ICC), Cancer Center of Guam (CCG), GRMC Pathology Lab, Guam Seventh Day Adventist Clinic (GSDA).

- For this Fiscal Year, GCR received cancer cases from the following organizations: GRMC HIM, MDX Imaging Center, Guam Surgicenter LLC, GRMC Pathology Lab, Texas Central Registry, GMHA Records Dept, CCG, ICC, and Hawai'i Tumor Registry (HTR).
- For this Fiscal Year, GCR conducted active case collection at the following organizations: CCG, ICC, GRMC.

**For Fiscal Year 2022, GCR exceeded their annual average submission number of 350 cases and submitted 422 cases (or 121%) to the Centers for Disease Control and Prevention (CDC).**



## **NEW AND UPDATED EQUIPMENT**

In the past year, we purchased new equipment for our expanding workplace such as:

- Desktop for the new employee.
- Laptop for the new employee when active off-site case collection is needed.
- New encrypted hard drive and thumb drive for new employee.
- New UPS battery backup for all employee desktops.



## **ASSISTANCE TO PACIFIC ISLAND JURISDICTION (PIJ) REGISTRY PARTNERS**

GCR staff continue to work with PIJ registrars on case collection, identifying abstracts that belong to their jurisdictions, and collaborative training. Partially abstracted PIJ cases (non-Guam residents) with Date of Diagnoses 2007 to 2020 were identified, completed, and exported to PRCCR. Majority of cases were for the Commonwealth of the Northern Marianas Islands (CNMI) cases.

During regular case collection, GCR has collected cases identified for other PIJs, in addition to cases requested by PIJs. Cases are transmitted to the proper registries using WebPlus secure online transmission. With the assistance of HTR, GCR staff was able to additionally provide ePath reports to Majuro and the CNMI.



## **DIFFICULTIES DUE TO COVID-19**

Although COVID-19 did not affect the ability of GCR's staff to complete abstracts, it hindered in case collection. We continue to work diligently with our partners in creating a safe process for case collection using WebPlus (secure online transmission), communication through Zoom and virtual platforms, and following COVID safety procedures when visiting facilities, if needed.



## OPPORTUNITIES

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GCR welcomes organizations that do not currently report cancer data to contact the staff for training and the coordination of data collection to ensure Guam continues to build a robust cancer database for the jurisdiction.

**QUALITY CANCER DATA SAVES LIVES.**

## CONCLUSION

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It is a goal of the University of Guam to become a center of outreach, learning, and research about cancer and cancer health disparities in our region. The continued support of the Governor of Guam and the Guam Legislature in achieving this goal is greatly appreciated by the University and will undoubtedly be of great future benefit to the people of our island as well as our island neighbors.

Please access our website – <https://www.uog.edu/research/guam-cancer-registry>– for more detailed information about cancer health disparities research and research findings, as well as our publications. Also please see **Addendum A** for Guam cancer data tables from our recently published 2013-2017 Guam Facts and Figures.

With appreciation and thanks to Dr. Rachael Leon Guerrero and Dr. Pamela Peralta-Taitano from the Office of Research and Sponsored Programs as well as the GCR team.



## GUAM CANCER REGISTRY STAFF



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## ADDENDUM A – RECENT GUAM CANCER DATA

TOP 10 SITES OF NEW CANCER CASES BY SEX FOR GUAM 2013–2017

Males			Females		
Cancer Sites	Incidence Counts (New Cases)	Percent of Male Cancer Incidence	Cancer Sites	Incidence Counts (New Cases)	Percent of Female Cancer Incidence
1 Prostate	175	21.8	1 Breast	265	33.8
2 Lung & Bronchus	161	20.1	2 Lung & Bronchus	100	12.8
3 Colon-Rectum-Anus	106	13.2	3 Uterus	76	9.7
4 Liver	61	7.6	4 Colon-Rectum-Anus	71	9.1
5 Mouth & Pharynx	42	5.2	5 Cervix	35	4.5
6 Skin	28	3.5	6 Thyroid	34	4.3
7 Non-Hodgkin Lymphoma	23	2.9	7 Ovary	21	2.7
8 Kidney and Ureter	19	2.4	8 Pancreas	18	2.3
9 Leukemia	19	2.4	9 Liver	17	2.2
10 Pancreas	16	2.0	10 Kidney and Ureter	16	2.0
Other Cancer Sites	154	19.2	Other Cancer Sites	130	16.6
<b>All Male Cancer Cases</b>	<b>804</b>	<b>100</b>	<b>All Female Cancer Cases</b>	<b>783</b>	<b>100</b>

Source: Guam Cancer Facts & Figures 2013-2017. Published in November 2022.

TOP 10 CAUSES OF CANCER DEATHS BY SEX FOR GUAM 2013–2017

Males			Females		
Cancer Sites	Mortality Counts (Death)	Percent of Total Cancer Mortality	Cancer Sites	Mortality Counts (Death)	Percent of Total Cancer Mortality
1 Lung & Bronchus	142	31.2	1 Lung & Bronchus	80	22.8
2 Liver	62	13.6	2 Breast	69	19.7
3 Prostate	49	10.8	3 Colon-Rectum-Anus	35	10.0
4 Colon-Rectum-Anus	47	10.3	4 Ovary	24	6.8
5 Mouth & Pharynx	18	4.0	5 Cervix	20	5.7
6 Pancreas	15	3.3	6 Liver	17	4.8
7 Leukemia	15	3.3	7 Pancreas	15	4.3
8 Kidney and Ureter	14	3.1	8 Stomach	12	3.4
9 Non-Hodgkin Lymphoma	12	2.6	9 Uterus	11	3.1
10 Nasopharynx	11	2.4	10 Leukemia	8	2.3
Other Cancer Sites	70	15.4	Other Cancer Sites	60	17.1
<b>All Cancer Deaths</b>	<b>455</b>	<b>100</b>	<b>All Cancer Deaths</b>	<b>351</b>	<b>100</b>

Source: Guam Cancer Facts & Figures 2013-2017. Published in November 2022.

## TOP 10 CANCERS FOR GUAM 2007-2020

Top 10 Cancers for Guam 2007-2020	CASES	CRUDE	US STD	WORLD STD	INCIDENCE RATE US
<b>All Sites</b>	<b>4669</b>	<b>328.1</b>	<b>299.5</b>	<b>222.8</b>	<b>449</b>
<b>Lung &amp; Bronchus</b>	783	55	54	38.6	56
<b>Breast</b>	749	106.3	87.1	67.6	128
<b>Prostate</b>	546	75.3	84.5	58	110
<b>Colon &amp; Rectum</b>	524	36.8	33.8	25	38
<b>Liver</b>	230	16.2	13.4	10.6	9
<b>Uterus</b>	220	31.5	24.6	19.9	28
<b>Thyroid</b>	164	11.5	8.5	7.3	14
<b>Leukemia</b>	156	11	11.2	7.8	14
<b>Tobacco-related Oral Cavity &amp; Pharynx</b>	102	7.2	5.9	4.7	12
<b>Stomach</b>	101	7.1	7	4.9	6
<b>Cervical Cancer, invasive</b>	99	14.2	10.2	8.8	7.8

Source: Incidence Data reported from Guam to Pacific Regional Central Cancer Registry, 2007-2020. Published December 2022.

### 4669 total cancer cases which include:

- Individuals over the age of 20
- Child cases
  - 15 childhood leukemia
  - 2 child Brain (1y,4 y)
  - 2 Bones & Joints
  - 1 child breast (14y)
  - 2 child colon & rectum (17y)
  - 1 eye & orbit (2 yr)
  - 1 Hodgkin disease(7 yr)
  - 1 child ill defined
  - 3 Kidney & Renal Pelvis
  - 2 child non-Hodgkin lymphoma
  - 2 child other digestive
  - 1 liver(1yr)
  - 1 Other Endocrine(17y)
  - 1 other male genitals
  - 1 other respiratory
  - 1 ovary
  - 1 peripheral nerve
  - 1 small intestine
  - 1 Soft Tissue
  - 2 testes
  - 1 thyroid
  - 1 urinary bladder

Breast cancer rate is based on female population only

- 5 Male breast cancer case(s) reported

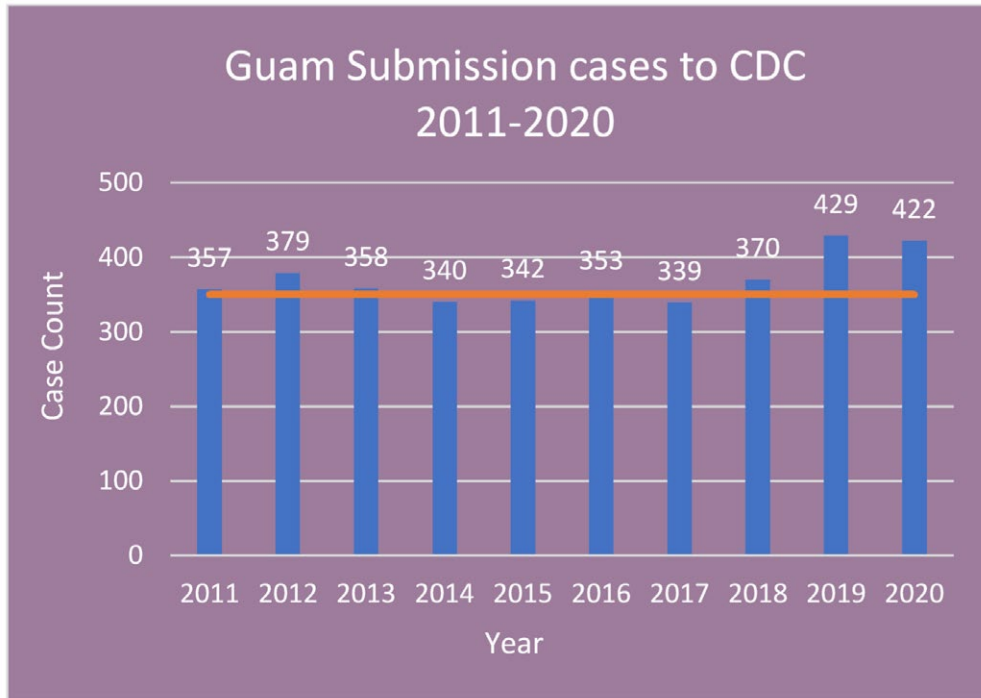


Figure 2. Number of cases submitted via PRCCR to CDC from 2011-2020. Yearly case goal is 350.

## PARTNER ACKNOWLEDGEMENT

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The UOG Guam Cancer Registry would like to acknowledge the following partners who contributed cancer data to make the FY 2022 report possible:

- Cancer Center of Guam
- Edward M. Calvo Cancer Foundation
- Guam DPHSS Office of Vital Statistic
- Guam Memorial Hospital Authority Pathology Lab
- GMH Medical Records Department
- Guam Regional Medical City Health Information Management office
- Guam Regional Medical City Pathology Lab Department
- Guam Seventh Day Adventist Clinic
- Guam Surgicenter LLC
- Hawai'i Tumor Registry
- Island Cancer Center
- MDX Imaging Center
- Pacific Daily News Obituary
- Texas Central Registry
- The Guam Daily Post Obituary





A tropical beach scene at sunset. The sky is filled with large, dark clouds illuminated from below by the setting sun, creating a vibrant orange and pink glow. The ocean is calm, reflecting the colors of the sky. In the foreground, a sandy beach is visible, with dark rocks scattered along the shoreline. On the right side, a cluster of palm trees and other tropical vegetation stands on a slight rise. The overall atmosphere is serene and beautiful.

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