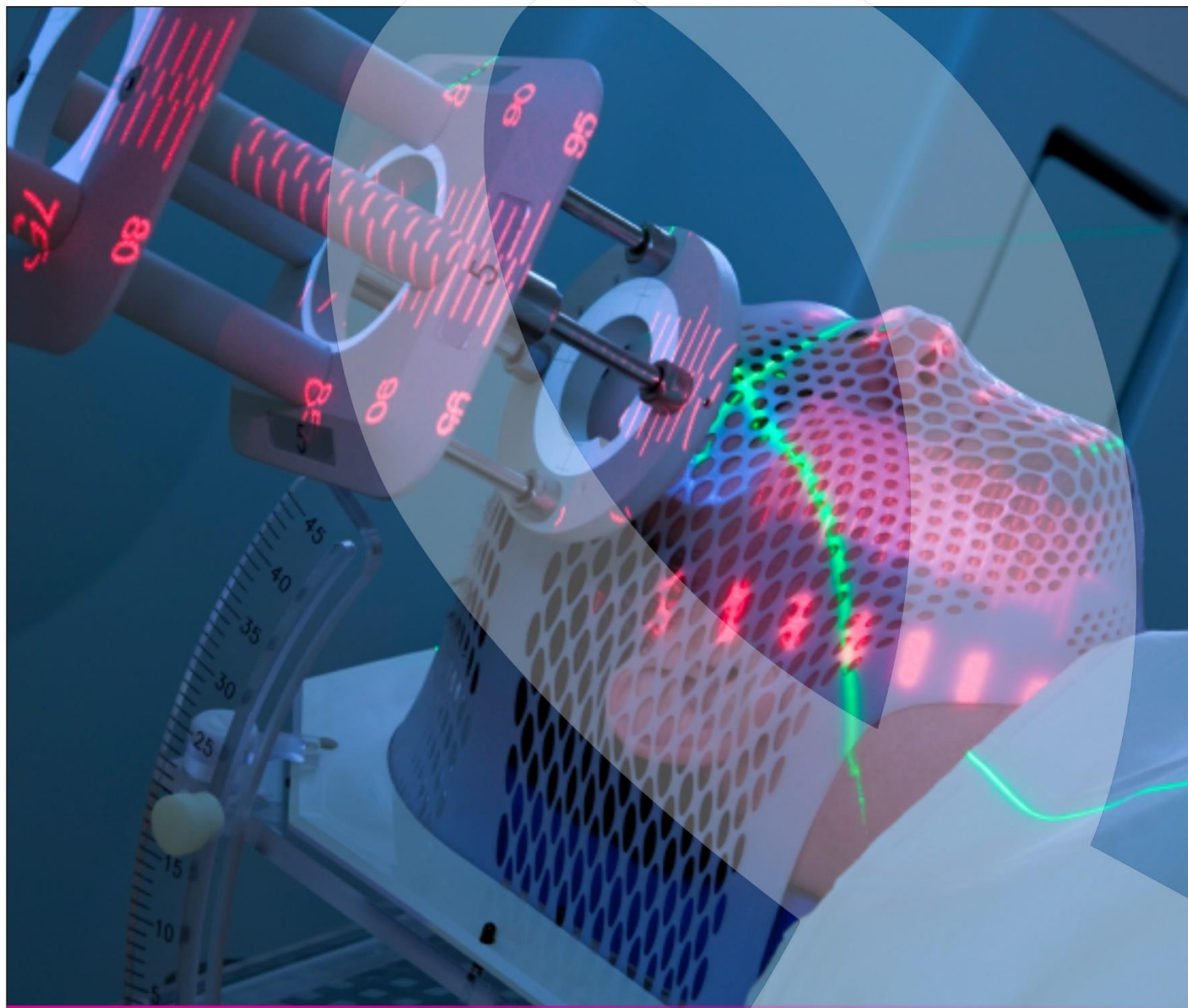
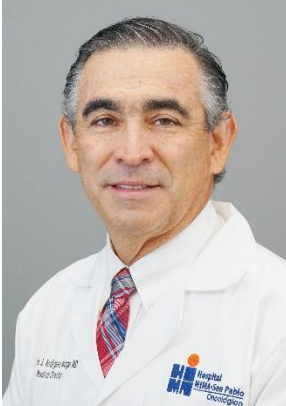




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Message from our Medical Director

Edgardo Rodríguez Monge, MD
Medical Director, HIMA•San Pablo Oncologic Hospital

At HIMA•San Pablo Oncologic Hospital, we continue to strive to provide the best possible cancer care for our community. This report provides an overview of the comprehensive oncology services provided by our multidisciplinary team of compassionate experts.

During 2018, we were still dealing with the remnants of the damages caused by Hurricane Maria's path over our Island in September of 2017. Many of our patients were still without electricity or water, causing their cancer treatment to be interrupted. In addition, certain radiotherapy centers in our neighboring islands, such as the U.S. Virgin Islands, were permanently closed, requiring our assistance.

This year, under the leadership of Dr. Jhon Guerra, we obtained the accreditation of the Children's Oncology Group, a recognition of the quality and commitment to the children population. This will give our pediatric population the opportunity to access important clinical research projects and the support of this important group.

In recent years, the increase in early diagnoses and more advanced treatments, as well as the evolution of immunotherapy, has caused patients to live longer, either as the result of the disease being cured or longer life expectancy living with the disease. It is for this reason that we have focused on helping the patient in this process of survivorship. Under the leadership of Maricarmen Ramírez Solá, the patients receive written recommendations for how to live well as a cancer survivor, including how to manage physical and emotional changes they may experience after cancer treatment.

This 2018 annual report is the product of the efforts of many professionals who have contributed their expertise and energy to the improvement of cancer care in our community. Please enjoy this report and feel free to contact us for more information on cancer services for you or your patients.

Calling for Radiation Therapists!

Carmen J. Meléndez Lavandero, RT, BSW
Radiation Therapy Supervisor



The Radiation Therapist is a Radiologic Technologist with special training to manage equipment for the administration of radiation treatments under the supervision of a Radiation Oncologist and a Medical Physicist. To obtain a Radiation Therapist license, one must obtain an academic degree no lower than an Associate Degree in Diagnostic Imaging and Treatment from a recognized University certified program or any recognized accrediting agency for the specialty of Radiotherapy, or a period of training of 4,160 hours or more under the supervision of a Radiation Oncologist or a Medical Physicist (Law 2008-74). Unfortunately, neither the specialized education nor the opportunities to train are readily available in Puerto Rico.

In the early sixties, the University of Puerto Rico, through the Nuclear Center (today Comprehensive Cancer Center), sponsored a program for Radiation Therapist, graduating about twenty Therapists. This program ended around 1973. In 1983, Hospital Oncológico's Dr. Isaac González Martínez, in consortium with the University College of the East, initiated a program of Technology in Radiotherapy. This was a graduate degree for Radiation Therapists. It consisted of twelve calendar months at the end of which a certificate was issued. This program was closed by the end of the eighties. Currently, there is no specialized training program in Puerto Rico.

In the alternative, Radiologic Technologist must work as a Radiation Therapist Assistant in an accredited facility and rely on the training and supervision of her work colleagues to complete the necessary hours of training before applying for the certificate exam. The aspiring Radiation Therapist must study and acquire experience in topics such as radiation physics, treatment equipment, daily quality measures, radiological protection, treatment of areas and tumors, location of treatment volume, prescriptions, dose calculations, and the diversity of treatments. After covering these topics and obtaining 4,160 contact hours under the necessary supervision, the Radiation Therapist Assistant may apply for the exam. However, the work-based opportunities to train are not easy to come by.

There are about 83 registered Radiation Therapists in Puerto Rico, according to the Office of Regulation and Certification of Health Professionals. According to the data collected from the applicable Centers, currently there are 60 active in their profession. Puerto Rico has 18 Radiotherapy centers, with 18 Radiation Oncologists. As for the equipment, there are 25 treatment units and 17 CT Scans. If two Radiation Therapist were required for each unit, a total of 50 would be needed. For each CT Scan, an additional Radiation Therapist is required, increasing the need to 67. Take into consideration a Supervisor per center and an additional one to cover leaves of absences, and that leads us to a present need for 103 Radiation Therapists to cover the existing radiotherapy centers. However, there are roughly 60 Licensed Radiation Therapists working in Puerto Rico, according to data collected from each Center, for a deficit of 43 Radiation Therapists. This reality has led to several Radiation Oncologists concerned about the future of the Radiotherapy in Puerto Rico, as the availability of the technology is tied to the availability of Licensed Radiation Therapists to guarantee the quality and service provided to cancer patients.

Those of us Radiation Therapists who love our profession, trust that there will be others who will be committed enough to provide treatment to cancer patients on the Island, conquering the hurdles of becoming a Radiation Therapist in Puerto Rico. I know I did, and my life is the better for it.

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PET/CT and the Cancer Diagnosis: Highly Specialized Road to Essential Information

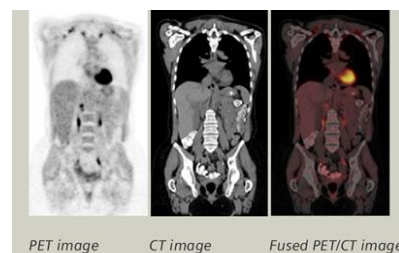
Aris Camacho, CNMT, TMNL
Nuclear Medicine Supervisor

A PET (positron emission tomography) provides information at the cellular level, such as blood flow, oxygen intake or the metabolism of the organs and tissues. A CT (computed tomography) uses special X-ray equipment to produce pictures of the inside of the body.

Together, a PET and a CT are combined into what is known as a PET/CT scan to find cancer and learn its stage. This is a nuclear medicine technique used as a diagnostic imaging technique because it allows identification of biochemical and physiologic alterations in tumors. By providing clear images of the metabolic changes found inside a patient, before anatomic changes are observed, a PET/CT scan allows an oncologist to establish the state of the patient before and after chemo or radiotherapy — whether the condition has diminished or remains the same.

The Nuclear Medicine Department at HIMA•San Pablo Oncologic Hospital houses the highly specialized equipment needed for this study in an area designed for patient comfort, with two technologists certified by the Nuclear Medicine Technology Certification Board to perform the PET. Performing the study requires many complex moving parts to come together. A patient must be ready for the study. This entails the patient following a strict protocol beginning 48 hours before the study leading to the day of the study, on which the patient must be fasting and maintain a blood sugar level no higher than 150mg/dl. To obtain the PET/CT images, a small amount of radiopharmaceutical 18 FDG (fluorodeoxyglucose) is used in the study. FDG is a form of radioactive sugar applied intravenously that binds to cells that convert glucose into energy, allowing the study to detect the cells that are using energy at a higher level. In cases of colon or gastric tumors, a type of oral contrast may be applied. After the application, a patient must rest for 45 to 60 minutes avoiding visual or audio stimuli to allow the FDG to spread throughout the body. The study may be conducted after the rest period, duration that will depend on the diagnosis and may be up to 30 minutes long.

In the end, you obtain identical images from the PET and CT, which are combined by a computer using an image fusion technique into a three-dimensional image that allows abnormal FDG metabolism areas to be located, leading to a more precise diagnosis. The uptake of the FDG is quantified and reported in the levels of SUV (Standardized Uptake Value). A SUV higher than 2.5 is associated with cancer. What is most important to understand is that the complexity of the PET/CT scan technology has a simple purpose — to inform the patient's multidisciplinary team where the cancer is, if it has spread, and if it is changing how the patient's organs work.





The Stress of Paying for Cancer Treatment

Maribel Delgado Colón, MSW
Social Worker

One of the elements that must be considered when evaluating a patient's emotional well-being is the cost of being sick. Upon first hearing a cancer diagnosis, a person immediately thinks on their chances for survival. When eventually taking on the actual challenges of the journey to survival, the patient's financial resources and the ability to pay for costly treatment and medicines become more relevant.

Most people tend to believe that a private health plan pays for cancer treatment. A vast majority of the population is unaware that cancer treatment may be very expensive and that co-payments ranging from 20 to 40 percent may end up costing the patient thousands of dollars. Newer treatments may offer more effective ways of treating cancer, but this newness may come with a higher price tag. The use of third-party administrators for the pharmacy coverage results in compounded costs on the patient.

The stress that these costs place on cancer patients often confounds them and makes them feel helpless. This may cause some patients to decide not to seek treatment, for lack of finding ways to cover their medical bills without burdening their families. The social worker and the patient navigator may offer the necessary support in identifying additional assistance that may allow a patient to complete his or her treatment. In their intervention, the social worker or patient navigator should:

- Assess the patient's financial resources;
- Assist a patient without healthcare benefits to enroll in a health plan;
- Counsel a patient with limited coverage to increase the scope of coverage;
- Provide awareness on available public and community assistance;
- Assist the patient to complete and submit the necessary application for financial assistance; and
- Provide guidance on financial management during the treatment.

Patients who receive financial assistance tend to feel grateful and supported by his or her community. Most available funds come from private donations and from fundraising activities in which the public manifests their commitment to persons living with cancer. That is why many patients who receive assistance may become advocates for other patients. A patient who is well informed and knows which organizations are available to provide economic assistance, may be a patient who can focus more easily on their recuperation.

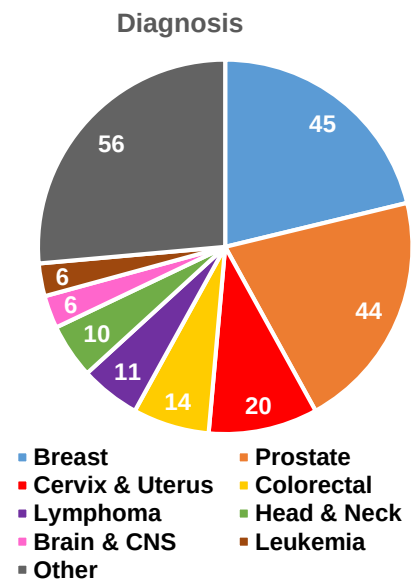
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As an example, the Cancer Center at HIMA•San Pablo has close ties to the HIMA•San Pablo Oncologic Foundation. During 2018, this foundation offered cancer patients the following assistance:

2018 Quarterly Stats HIMA San Pablo Oncological Foundation					
	1Q	2Q	3Q	4Q	TOTAL
Patients helped	27	44	50	91	212
Monies Donated	\$10,745.68	\$17,304.92	\$18,350.46	\$26,491.03	\$72,892.09

Information by Programs		
Direct Assistance Program	95	\$29,539.45
Funds Matched to American Cancer Society	75	\$35,504.00
Petty Cash at Cancer Center at HIMA San Pablo	35	\$7,498.64
Food Vouchers	7	\$350.00
Total	212	\$72,892.09

Type of Treatment paid	Patients	Contribution
Radiotherapy	87	\$37,783.45
Chemotherapy	33	\$11,072.79
Pet/CT & MRI/CT	22	\$8,805.00
Surgery	15	\$6,600.00
General Treatment	25	\$2,840.00
Med Port	5	\$1,949.00
Labs/ Pathology	6	\$1,669.50
Nutritional Supplements	3	\$644.72
Transportation	4	\$625.80
Other	2	\$380.30
Miscellaneous	7	\$350.00
Parking	2	\$94.98
Breast implant	1	\$76.55
TOTAL	212	\$72,892.09





The Role of the Oncology Nurse in the Work Environment

Irma Cruz Delgado, RN, BSN
Nursing Supervisor

“We are the team that spends the most time with the patients, we are capable of detecting needs that even the physician may miss and we also help educating the patient on their pathology, the treatments the patient is receiving and about the need to get actively involved in all of the oncologic process to alleviate the burden of the illness to the maximum”.

The role of the oncology nurse in the work environment in early or terminal stages is one of the most challenging in the profession. For that reason, separate from the performance or competency that must be displayed on a daily basis, an oncologic nurse must also possess strong ethical work values.

For a patient recently diagnosed with cancer, the diagnosis may be considered a stressful event that will affect not only the patient but also the patient's family and social circle. The loss of an individual's health may unleash losses of the emotional wellbeing and hope of life and others, causing sadness and depression. The care required by a cancer patient includes physical and psychological needs that must be treated adequately during the evolution of the disease.

The oncology nurse has the capability of communicating her understanding and experience. We are called upon to respond with sensibility to the suffering of the other becoming a relieve and a benefit to the patient with the empathy essential to any patient-nurse relationship. We are committed to the patient and their families, guiding them to the group of professionals that may address their needs, offering integrated support including social worker, psychologists, nutritionists, health educators, chaplaincy volunteers, etc.

The nurse's service in radiotherapy is based on the personalized and integral attention of the patient. The nurse's humanity expresses itself by speaking with and guiding the patient and the family. In addition, the nurse must adapt her language and make it appropriate for the patient's age. During the medical consult, the nurse's participation is vital, as the nurses clarify concepts that the patient may not have understood. The nurse also reaffirms her commitment to assisting in the understanding of the diagnosis, minimizing the levels of stress by recognizing the human being with a genuine interest in the patient's needs and emotions.

Continuous communication with the patient must be established to increase the patient's well-being and self-confidence. The nurse is very important in that aspect because there are many patients who are alone and see the nurse and their only emotional support. On many occasions, I have felt that need or the patients express it. They verbalize or demonstrate gratitude for the emotional support with demonstrations of love and appreciation when they complete their treatment.



Low Iodine Diet Guidelines: Preparing Patients to Receive Radioactive Iodine

Joselyn Pérez Reyes, LND, MNOCC
Oncology Dietitian

Many thyroid cancer patients with papillary or follicular thyroid cancer receive a dose of radioactive iodine (RAI) about two months after their surgery in an attempt to destroy any remaining thyroid cells in their bodies.

These thyroid cancer patients may also undergo whole-body radioiodine scans at periodic intervals, using a “tracer” dose of RAI. If their scan is not “clean,” they may then receive treatment with a larger dose of RAI in an attempt to eliminate remaining thyroid cells.

In preparation for a RAI scan or RAI treatment, patients are usually asked to go on a low-iodine diet (LID). The patient is either to follow the diet by temporarily stopping levothyroxine (withdrawal) or by receiving injections of Thyrogen® (recombinant TSH) while continuing on levothyroxine.



The purpose of a low-iodine diet is to deplete the body of its stored levels of iodine, to help increase the effectiveness of the radioactive iodine scan or treatment. By cutting down on iodine in your diet before your scan or treatment, your body levels of iodine will be low. Your thyroid gland will then be “hungry” for iodine. When you get the dose of radioactive iodine, your thyroid will take in more—right where you need it. This diet is for a short period of time, usually around two weeks (14 days) or slightly more. The diet usually begins around two weeks before testing and continues through the testing and treatment period. Recommendations for the period can vary, depending on the patient’s circumstances.

On the low-iodine diet, you should get less than 50 micrograms of iodine per day. You can do this by cutting down on foods that are high in iodine. Unfortunately, the amount of iodine in a food is not on the label. It is not in books or on most websites that list nutrients. One cannot easily track iodine like some people track calories or grams of fat. Instead, you need to know which foods and ingredients to avoid.

Foods or ingredients to  AVOID

- Iodized salt, sea salt, and any foods containing iodized salt and sea salt
- Seafood and sea products, including carrageenan, agar-agar, algin, alginate, and nori
- Dairy products
- Egg yolks or whole eggs or foods with whole eggs
- Bakery products with iodine/iodate dough conditioners or high-iodine ingredients; low-iodine items are fine
- Red Dye #3, erythrosine (or E127 in Europe), maraschino cherries
- Most chocolate (due to milk content); cocoa powder and some dark chocolates are allowed
- Soybeans and soybean products
- Iodine-containing vitamins and food supplements
- Medication containing iodine or red dye #3



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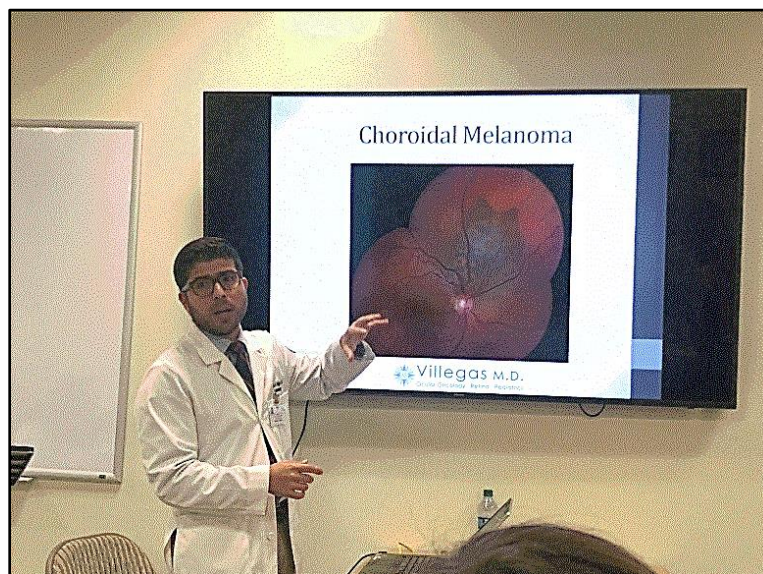
Ophthalmic Oncology

Maricarmen Ramírez-Solá, MPHE
Public Health Educator & Community Outreach Coordinator

The Medical Faculty at HIMA•San Pablo Oncologic Hospital proudly welcomed Dr. Víctor Villegas who is specialized in Ophthalmic Oncology. With his arrival to HIMA•San Pablo Oncologic Hospital in 2018, the institution became the first Cancer Center in Puerto Rico willing to provide brachytherapy for intraocular tumors.

Ophthalmic Brachytherapy is a novel radiation treatment for cancer in the eye. During the procedure, the specialist dilates the pupil to localize the tumor with transillumination. A radioactive plaque is then placed as an implant in the wall of the eye and near the tumor and left in place for several days before removing it. The procedure requires a highly specialized medical team.

The Ophthalmic Brachytherapy is offered at the Radiation Therapy and Robotic Radiation Surgery Unit at HIMA•San Pablo Oncologic Hospital located in Caguas, Puerto Rico. The innovative treatment is available for adult and pediatric patients with malignant and benign tumors in the eye such as choroidal hemangioma, melanoma, retinoblastoma, hemangioblastoma and medulloblastoma, among others. Additional information is available in Spanish in the following news report: https://www.wapa.tv/noticias/salud/braquiterapia-ofthalmica%E2%80%93la-salvacion-de-los-ojos_20131122438929.html



Dr. Víctor Villegas speaking about Ophthalmic Brachytherapy. Photograph retrieved from Spanish article at: <http://fundaciononcologica.org/tratamiento-para-cancer-ocular/>



Cancer Research and Children's Oncology Group at HIMA-San Pablo Oncologic Hospital: Advancing Cancer Treatment in Puerto Rico

Wilfredo E. De Jesus-Monge, MD, MSc
Chief of Clinical Research

Clinical research consists of medical research involving humans, with the objective of learning more about disease and improve health care for people in the future¹. Cancer is the leading cause of death in Puerto Rico since 2012². Therefore, cancer research is imperative for our community. For that reason, HIMA-San Pablo Oncologic Hospital provides its patients with the opportunity to participate in clinical research studies with the support of HIMA-San Pablo Hospitals' Office of Clinical Research.

HIMA-San Pablo Oncologic Hospital has been a member of The Children's Oncology Group (COG) since 2016, a National Institute of Health's National Cancer Institute (NCI)-supported clinical trial group known as the world's largest organization dedicated exclusively to childhood and adolescent cancer research. COG's research has contributed to achieving a childhood cancer 5-year survival rate at 80%. The COG's objectives are to cure all children and adolescents with cancer, reduce the short and long-term complications of cancer treatments, and determine the causes and find ways to prevent childhood cancer³. Highly experienced Pediatric Hematologists and Oncologists Dr. Jhon Guerra (Principal Investigator) and Dr. Maribel Torres (Sub-Investigator) lead our COG Program. They are supported by a dedicated team of clinical research professionals, physicians, clinical pharmacists, nurses, health information specialists, and clinical laboratory staff, among many others who work in an excellence-driven collaborative fashion.

The last 3 years have been of continuous and growing success for our COG Program, evidenced by:

1. Successful COG provisional audit in March-April 2019, leading to continued membership;
2. Funding award from the COG Foundation and St. Baldrick's Foundation as part of the 2017 St. Baldrick's Funded High-Impact Initiative to mitigate the financial risk of opening highly impactful studies for which there may be uncertainty in identifying eligible patients;
3. Forty (40) enrollments of patients in COG studies;
4. Membership at the NCI Central Institutional Review Board (NCI CIRB);
5. Twelve (12) NCI CIRB-approved clinical research studies for registry, germ cell tumor, leukemia, lymphoma, medulloblastoma, rhabdomyosarcoma, neuroblastoma, and ganglioneuroblastoma;
6. Quarterly data currency scores over 90%; and
7. Attendance to 2 Fall COG Meetings, including presentation of 1 poster at the Clinical Research Associate Poster Session.

HIMA-San Pablo Hospitals' Office of Clinical Research supported additional cancer clinical research studies in adult patients in 2018, including the effect of exercise on physical functioning among breast cancer survivors (Dr. Ana Mulero, University of Puerto Rico), adaptation and validation of a fatigue scale (Mr. Pablo J. Medina, Universidad Carlos Albizu), glioma cancer biology (Dr. Lilia Kucheryavykh, Universidad Central del Caribe), and decision making in breast cancer patients (Ms. Arisai Herrera-Vélez, Universidad Ana G. Méndez).

In summary, HIMA-San Pablo Oncologic Hospital provides cancer patients in Puerto Rico with a chance to receive innovative medical therapy under rigorous and close clinical care while contributing to advancing cancer knowledge, supported by a successful track record.

References:

1. [National Institutes of Health. Clinical Research Trials and You: The Basics. 2017.](https://www.nih.gov/health-information/nih-clinical-research-trials-you/basics) Available online at <https://www.nih.gov/health-information/nih-clinical-research-trials-you/basics> (accessed May 22, 2019).
2. [Estado Libre Asociado de Puerto Rico, Departamento de Salud \(2015\). Mortalidad en Puerto Rico: Análisis de Situación de la Salud en Puerto Rico. San Juan, PR.](#)
3. [The Children's Oncology Group. About Us. Available online at https://childrensoncologygroup.org/index.php/about-us](https://childrensoncologygroup.org/index.php/about-us) (accessed May 22, 2019).



Picture: part of COG Team (from left to right): Ms. Jennifer Ruiz-Rodríguez (Nurse), Ms. Miriam Báez (Nurse), Dr. Jhon Guerra (Principal Investigator), Dr. Maribel Torres (Sub-Investigator), Ms. Migdalia Arce (Clinical Research Associate [CRA]), Ms. Darleen González-Galarza (Nurse and CRA), Dr. Grolamis Burgos-Monserrate (Quality Reviewer), and Dr. Wilfredo E. De Jesús-Monge (Chief of Clinical Research and Lead CRA).



Impact of a Health Education Survivorship Care Plan Delivery Intervention on Female Breast Cancer Survivors' Adherence to Follow-Up Care: Preliminary Data from a Quality Study

Maricarmen Ramírez-Solá, MPHE
Health Education & Community Outreach Coordinator

Introduction

Over the past few decades, the number of people surviving cancer has increased due to advances in screening and treatment. An amount of 13.7 MM American survivors were alive in 2012, amount that may increase to 22 MM in 2022 (Siegel, et al, 2012). As a consequence, **Cancer Survivorship** is now an important concept in oncology. It outlines the stage within the cancer continuum in which patients end treatment and need guidance to address long-term health, the management of treatment side effects and the surveillance of recurrences or new malignancies (Mullan, 1985; Aziz, 2002; Fuerstein, 2007). In 2015, the Commission on Cancer of the American College of Surgeons (CoC) required Cancer Centers to disseminate survivorship care summary and follow-up plans to survivors who end treatment (SCP). The process was required under the presumption that delivering SCPs would improve health related outcomes.

As an accredited CoC Cancer Center, in 2013 HIMA-San Pablo Oncologic Hospital (HSPOH) developed and implemented the first phase of a protocol for the dissemination of SCPs. A health education intervention (HEI) was developed to discuss SCPs content with eligible survivors. The HEI intervention applies strategies from the **Motivational Interview Model** (Miller & Rollnick, 2013), which is a patient-centered intervention designed to trigger motivation and adherence to healthy lifestyles. To assess if the HEI intervention had positive outcomes over adherence to follow-up care when compared with standard medical discharge from treatment, a quality study was performed in 2017-18.

Methodology

To perform the study a convenience sample of 100 female breast cancer survivors was randomly selected from HSPOH's radiation therapy unit. Subjects were invited to participate in the quality study voluntarily and were classified in 2 groups: those who received the SCP-HEI identified as Group 1 (n=50), and those who did not received the intervention but standard medical discharge identified as Group 2 (n=50). All participants were identified with a code number. Inclusion criteria included: being a female breast cancer survivor in stage 0 to III, being ≥ 21 years of age and having ended treatment in 2016.

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Participants were interviewed by phone by a Public Health Educator or trained assistant. Interviews were performed using a structured custom-made questionnaire with 31 questions based in the **NCCN Clinical Practice Guidelines Version 2.2017 – Invasive Breast Cancer: Surveillance Follow-Up Care** (Graphic 1). Participants who could not be reached in the first attempt received a second telephone call. Due to time constraints, Group 1 was contacted 8 to 11 months after ending treatment while Group 2 was contacted after 17 to 20 months.

Graphic 1: Questionnaire



Unidad de Educación en Salud & Atención Comunitaria
Encuesta Piloto
Impacto de Planes de Seguimiento para Cáncer de Sero entregados en 2016
Referencia: NCCN Guidelines Versión 2.2017 – Invasive Breast Cancer: Surveillance/Follow-Up.

Hora comienzo llamada: _____ Hora terminación llamada: _____

Estudio: Evaluating the impact of a health education/educational interview based survivorship care plan intervention on female breast cancer survivor's adherence to hormonal therapy and cancer surveillance testing.

Número ID: _____ Teléfono: _____
Fecha terminó tratamiento: _____ Estado: _____ Edad: _____
Fecha 1ª llamada: _____ (Realizar 2ª llamada de no lograrse contacto en la primera).
Fecha 2ª llamada: _____

Historial y Físico
(History and physical exam 1-4 times per year as clinically appropriate for 5 y; then annually).

1. ¿Visitó a su oncólogo luego de finalizar su tratamiento?
____ (1) Sí ____ (3) No recuerdo (Pasar a pregunta 4)
____ (2) No (Si responde NO, pasar a pregunta 4) ____ (4) No contestó (Pasar a pregunta 4)

2. ¿Cuántas veces?
____ (1) 1 vez
____ (2) 2 veces
____ (3) Otra (Especifique): _____

3. ¿En qué mes y año fue su última visita al oncólogo? _____

4. ¿En qué mes y año es su próxima cita con oncólogo? _____

Mamografía
(Mammography every 12 mo. Patient should wait 6 to 12 months after completion of radiation therapy to begin their annual mammogram surveillance).

5. ¿Se realizó mamografía(s) luego de concluir su tratamiento para el cáncer?
____ (1) Sí ____ (3) No recuerdo (Pasar a pregunta 8)
____ (2) No (Si responde NO, pasar a pregunta 8) ____ (4) No contestó (Pasar a pregunta 8)

6. ¿Cuántas?
____ (1) 1
____ (2) 2
____ (3) Otra (Especifique): _____

7. ¿En qué mes y año fue su última mamografía? _____

8. ¿En qué mes y año tiene cita para su próxima mamografía? _____

1.



Unidad de Educación en Salud & Atención Comunitaria
Encuesta Piloto
Impacto de Planes de Seguimiento para Cáncer de Sero entregados en 2016
Referencia: NCCN Guidelines Versión 2.2017 – Invasive Breast Cancer: Surveillance/Follow-Up.

Tratamiento Adyuvante / Examen Ginecológico
(Women on Tamoxifen: annual gynecologic assessment every 12 mo. if uterus present. Women on an Aromatase Inhibitor or who experience ovarian failure secondary to Tx should have monitoring of bone health with a bone mineral density determination at baseline and periodically thereafter. Assess adherence to adjuvant endocrine therapy).

9. ¿Visitó a su ginecólogo luego de concluir su tratamiento para el cáncer?
____ (1) Sí ____ (3) No recuerdo (Pasar a pregunta 13)
____ (2) No (Pasar a pregunta 13) ____ (4) No contestó (Pasar a pregunta 13)

10. ¿Cuántas veces?
____ (1) 1 vez
____ (2) 2 veces
____ (3) Otra (Especifique): _____

11. ¿Qué exámenes se realizó?
____ (1) Examen pélvico manual ____ (4) No sé
____ (2) PAP ____ (5) No contestó
____ (3) PAP + HPV

12. ¿En qué mes y año fue su última visita al ginecólogo? _____

13. ¿En qué mes y año es su próxima cita con el ginecólogo? _____

14. ¿Toma o tomó Tamoxifen?
____ (1) Sí ____ (3) No sé (Pasar a pregunta 18)
____ (2) No (Pasar a pregunta 18) ____ (4) No contestó (Pasar a pregunta 18)

15. Especifique la dosis _____

16. ¿Ha tenido o tuvo dificultad para tomar Tamoxifen?
____ (1) Sí ____ (3) No sé (Pasar a pregunta 18)
____ (2) No (Pasar a pregunta 18) ____ (4) No contestó (Pasar a pregunta 18)

17. Si ha tenido o tuvo dificultad para tomar el medicamento ¿qué ha hecho para manejar la situación?

18. ¿Toma o tomó Inhibidor de Aromatasa?
____ (1) Sí ____ (3) No sé (Pasar a pregunta 23)
____ (2) No (Pasar a pregunta 23) ____ (4) No contestó (Pasar a pregunta 23)

2.



Unidad de Educación en Salud & Atención Comunitaria
Encuesta Piloto
Impacto de Planes de Seguimiento para Cáncer de Sero entregados en 2016
Referencia: NCCN Guidelines Versión 2.2017 – Invasive Breast Cancer: Surveillance/Follow-Up.

19. ¿Cuál?
____ (1) Anastrozole – genérico / Arimidex – comercial
____ (2) Exemestane – genérico / Aromasin – comercial
____ (3) Letrozole – genérico / Femara – comercial
____ (4) No sé
____ (5) No Contestó

20. Especifique la dosis _____

21. ¿Ha tenido o tuvo dificultad para tomar el medicamento?
____ (1) Sí ____ (3) No sé (Pasar a pregunta 23)
____ (2) No (Pasar a pregunta 23) ____ (4) No contestó (Pasar a pregunta 23)

22. Si ha tenido o tuvo dificultad para tomar el medicamento, ¿qué ha hecho para manejar la situación?

Densitometría Ósea

23. ¿Se ha hecho Densitometría Ósea después de finalizar tratamiento para el cáncer?
____ (1) Sí ____ (3) No recuerdo
____ (2) No ____ (4) No contestó

24. ¿En qué mes y año tiene cita para su próxima Densitometría Ósea? _____

Evaluación Colorrectal

25. ¿Se ha hecho Prueba de Sangre Oculta después del tratamiento para el cáncer?
____ (1) Sí ____ (3) No sé / No recuerdo
____ (2) No ____ (4) No contestó

26. ¿En qué mes y año tiene programada una Prueba de Sangre Oculta? _____

27. ¿Se ha hecho Colonoscopia?
____ (1) Sí ____ (3) No recuerdo (Pasar a pregunta 29)
____ (2) No (Pasar a pregunta 29) ____ (4) No contestó (Pasar a pregunta 29)

28. ¿En qué mes y año se hizo la Colonoscopia? _____

29. ¿Cuándo tiene cita para su próxima Colonoscopia? Especifique mes y año: _____

3.



Unidad de Educación en Salud & Atención Comunitaria
Encuesta Piloto
Impacto de Planes de Seguimiento para Cáncer de Sero entregados en 2016
Referencia: NCCN Guidelines Versión 2.2017 – Invasive Breast Cancer: Surveillance/Follow-Up.

Dudas / Preocupaciones

30. ¿Tiene dudas sobre su cuidado de seguimiento luego del cáncer?
____ (1) Sí (Pasar a pregunta 31) ____ (3) No sé (Fin de la encuesta)
____ (2) No (Fin de la encuesta) ____ (4) No contestó (Fin de la encuesta)

31. ¿Cuáles son sus dudas? _____

Muchas gracias por su cooperación.
M. Ramirez-Solis MPH
14 agosto 2017

4.

Both groups showed good response rate (62% vs. 52%). Group 2 may have showed a smaller response rate because subjects were reached later in time and could have changed their residences and telephone numbers (Table 1).

Table 1: Response Rate

Sample			Interview Period	Response Rate	
Group 1	Received SCP	50	August to November 2017 (8 to 11 months after Tx)	31	62%
Group 2	Did not received SCP	50	May to August 2018 (17 to 20 months after Tx)	26	52%

Mean age in both groups were almost similar (61 vs. 64 years). In addition, the majority of participants in both groups had a breast cancer diagnosis in stages 0, I or II (Tables 2 & 3).

Table 2: Age Group

Age Group	Group 1 (n=31)	Group 2 (n=26)
≤ 39	0	0
40 - 49	7 (23%)	3 (12%)
50 - 59	8 (26%)	5 (19%)
60 - 69	8 (26%)	9 (35%)
70 - 79	6 (19%)	7 (27%)
80 - 89	2 (6%)	2 (7%)
≥ 90	0	0
Total	31 (100%)	26 (100%)
Mean Age	61	64

Table 3: CA Staging

Staging	Group 1 (n=31)	Group 2 (n=26)
0	7 (23%)	4 (15%)
I	15 (48%)	9 (34%)
II	5 (16%)	3 (12%)
III	1 (3%)	2 (8%)
IV	0 (0%)	0 (0%)
Not determined	3 (10%)	8 (31%)
Total	31 (100%)	26 (100%)

In terms of adherence to medical follow-up visits and monitoring examinations, Group 2 showed slightly better results than Group 1. Subjects in Group 2 were contacted later in time so maybe they had additional time to comply with medical appointments and tests (Table 4). An aspect to be explored in future research is if survivors “obey (submissively)” their physician instructions while viewing and confiding in them as the experts.

Table 4: Adherence to Follow-Up Care

Group Number	Visited Oncologist		Had mammogram		Visited Gynecologist		Had Occult Blood Test		Had DEXA	
1	31	100%	26	84%	19	61%	16	52%	17	55%
2	24	92%	24	92%	17	65%	14	54%	16	62%

When dealing with hormone adjuvant therapy related side effects, both groups either talked to their physicians who changed or gave new instructions on taking medication, or kept using treatment recognizing its benefit. The amount of subjects reporting treatment side effects was almost the same in both groups (8 vs. 7). No one stopped treatment.

Discussion

This quality study was performed to assess if an HEI aims to discuss and deliver SCPs improve breast cancer survivors’ motivation and disposition to comply with follow-up care. From the previous results the HEI did not show any added benefit on behavioral outcomes when compared with standard medical care (e.g. receiving instructions from oncologist at discharge). This result was contrary to what we expected.

After several years performing the discussion of SCPs, strategies from the Motivational Interview Model were identified as useful for this kind of intervention. Strategies such as **engaging** cancer survivor in a collaborative relationship with the health educator, **focusing** with survivor in a common agenda of self-care, **evoking** survivor’s motivation to comply with follow-up care and **planning** future actions to accomplish such end, were inserted within the intervention. Health Educator felt that those strategies were providing survivors with an opportunity to reflect on the level of control they have over their future quality of life instead of accommodating themselves in a passive position of just following medical orders. It was hypothesized that the HEI was having impact on psychological variables (e.g. awareness, sense of self-efficacy and motivation) which may be determinants to improve adherence to follow-up care. Breast cancer survivors were responding positively to the HEI even qualifying it as *very important*, *very useful*, *much needed* and *stressful released*, and outperforming conversations they had with their oncology team.

The study had limitations. First it was based in NCCN clinical guidelines related to medical follow-up care. As far as the study was limited to assess behavioral variables specifically related to compliance with medical follow-up appointments and testing, important psychological variables with implications over adherence to follow-up care were missed and not assessed. Subjects in Group 2 may be adherent to follow-up care because they just follow their physician’s instructions. They do not necessarily understand the reasons to comply with such instructions.

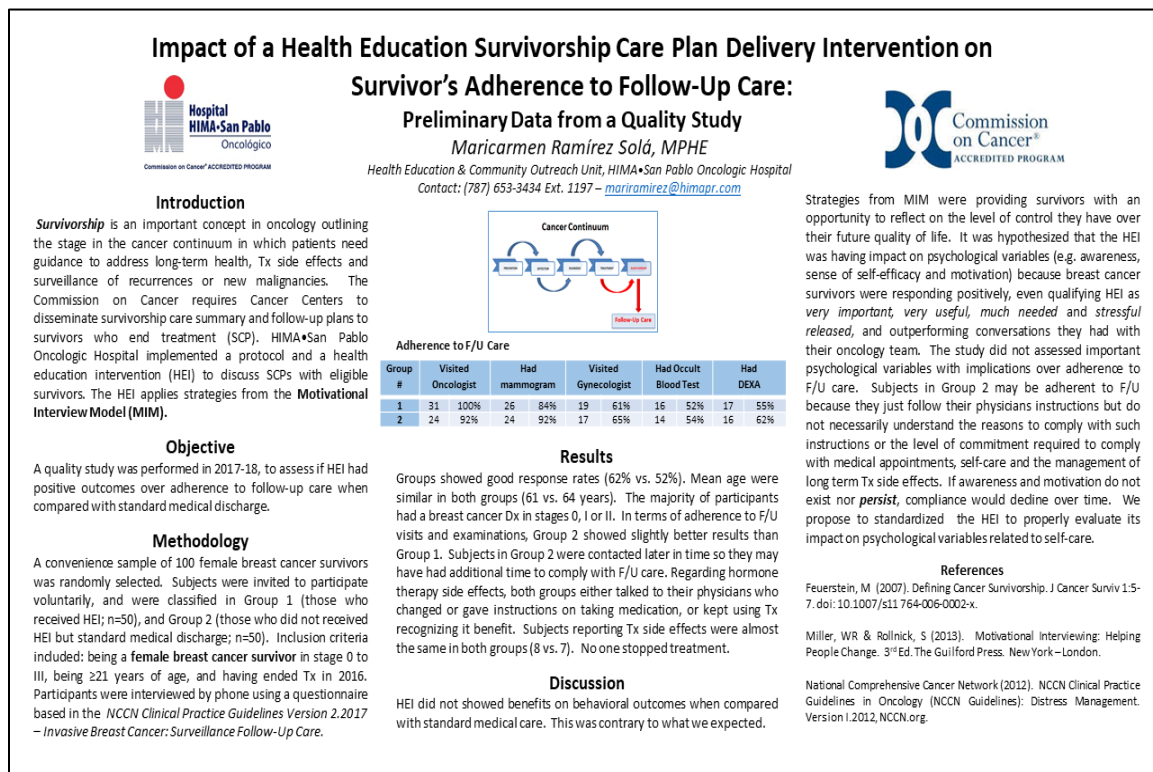
or the level of commitment required to comply with medical appointments, self-care and the management of long-term treatment side effects. If awareness and motivation do not exist nor ***persist***, compliance would decline over time.

Motivational Interview is a patient-centered approach with strategies to trigger ambivalence, self-motivation and change. It has showed positive health outcomes in the context of smoking, drug, and alcohol cessation. There is evidence showing that motivational interview outperforms the traditional clinical advise-giving intervention performed by physicians. If the HEI is standardized to properly evaluate its impact on maintaining or changing behavioral variables related to self-care, we may provide data on a novel intervention that trigger mental analysis and improve the level of self-efficacy required to comply with survivorship care recommendations over time.

Comment

A poster presentation with results from this study was accepted for the FLASCO – 8th Annual Puerto Rico Oncology Symposium to be held in February 1 & 2, 2019, in La Concha Renaissance Resort in San Juan, Puerto Rico (Graphic 2).

Graphic 2



References

- Aziz, N.M. & Roland, J.H. (2003). Trends and advances in cancer survivorship research: Challenge and opportunity. *Seminars in Radiation Oncology*. 13(3): 248-266, Jul.
- Feuerstein, M. (2007). Defining Cancer Survivorship. *J Cancer Surviv* 1:5-7. doi: 10.1007/s11764-006-0002-x.
- Howell, D. et.al. (2012). Models of care for post-treatment follow-up of adult cancer survivors: a systematic review and quality appraisal of the evidence. *J Cancer Surviv* 6: 359-371. doi: 10.1007/s1764-012-0232-z
- Miller, W.R. & Rollnick, S. (2013). *Motivational Interviewing: Helping People Change*. 3rd Ed. The Guilford Press. New York – London.
- Mullan, F. (1985). Seasons of survival: reflections of a physician with cancer. *New England J Med*. 313, 270-273, Jul.
- National Comprehensive Cancer Network (2012). *NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines): Distress Management*. Version 1.2012, NCCN.org.
- National Comprehensive Cancer Network (2014). *New Cancer Survivorship Guidelines Issued by NCCN*. <http://www.medscape.com/viewarticle/780943>

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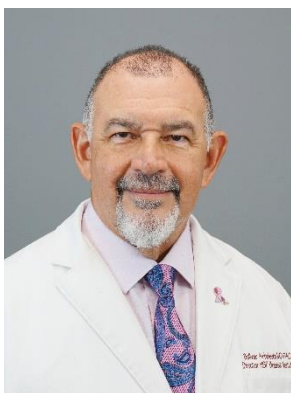
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Modern Surgery for Breast Cancer

Bolívar Arboleda-Osorio, MD FACS
Director, HIMA San Pablo Breast Institute

Diana Avilés-Castillo, MD
Plastic and Reconstructive Surgery



A total mastectomy with preservation of the nipple/areola complex, generally referred to as Nipple Sparing Mastectomy or “NSM”, has gained popularity among the surgical options for the treatment of breast cancer. The appropriate patients for this procedure must be carefully chosen. They are generally patients with small tumors limited to one quadrant of the breast without involving the skin or the nipple and little or no breast ptosis. Complications associated with this procedure are slightly more frequent than more conservative breast surgeries, but the level of necrosis of the nipple has decreased when using available advanced technology. In the appropriate cases, the level of local recurrence must be at an acceptable low.

Breast cancer is one of the most common oncologic conditions in women. Detected in early stages, this terrible disease may be treated with excellent results. The principal treatment for this tumor is based on the surgical removal of the tumor, together with other therapeutic options, such as hormone therapy, chemotherapy and radiotherapy in appropriate cases. Surgical alternatives available include the radical mastectomy and the modified radical, which have been available the longest, to partial mastectomy with biopsy of the sentinel nodes, total mastectomy with immediate reconstruction, and in some selected cases, NSM and immediate reconstruction. This last option has gained popularity and, in this article, we will discuss its history, technique, indications and expected outcome.

History: Radical mastectomy was performed as the standard for breast cancer surgery since Halstead formulated it at the end of the 19th Century and until mid-20th Century. Then, Patey described a modified radical mastectomy eventually demonstrating a local recurrence of 10% ten years later, similar to the radical mastectomy with less morbidity. Hinton first described the NSM in 1984. In 1979, Lagios et al described the incidence of the affection of the nipple/areola complex in their study, similar to the incidence of the impact of the mammary skin in any other area, which establishes the potential parameters for the success of this surgical procedure.

Oncologic Technique: Various techniques have been described to carry out this operation, with the most common being the peri areolar incision with lateral extension (omega incision), the incision through the nipple-areola with or without extensions, and the incision in the inframammary sulcus with lateral extension (Figure 1). Our preference is the omega incision, followed by the incision of the inframammary sulcus. These incisions allow the complete elimination of the mammary tissue, accompanied by the axillary incision to provide for the removal of sentinel nodes. During the peri surgical period, we prefer to use the technetium-99m technique for the detection of the sentinel

nodes and we avoid injecting blue ink in the breast during the surgery to facilitate the dissection of the mammary tissue. In some cases, we employ the reverse dissection of the axillary ganglia, injecting the ipsilateral arm instead of the breast, in order to avoid the ganglia which, turn blue. More recently, other techniques have been used to detect the sentinel nodes including the injection of fluorescent indocyanine green and iron oxide emulsion, but these techniques are not yet considered the industry standard. Once the incisions have been made, we dissect using the electrocautery in the inferior plane of the subcutaneous tissue, separating it from the glandular tissue. Once the nipple/areola complex is reached, we separate to a deeper plane for 3 to 4 millimeters. Then, we grab the retro areolar tissue left behind and it is removed to the subdermal level with tweezers. This tissue is isolated for pathology as the nipple margin. This margin may be analyzed by the pathologist through a frozen section to determine if the removal of the nipple is recommended or not. In some case, the circulation of the mammary flap may be examined using fluorescent indocyanine green and a specialized camera. The surgery then proceeds in conventional form in terms of dissecting the breast from the pectoral fascia and removing it. Then we turn to the reconstructive phase.

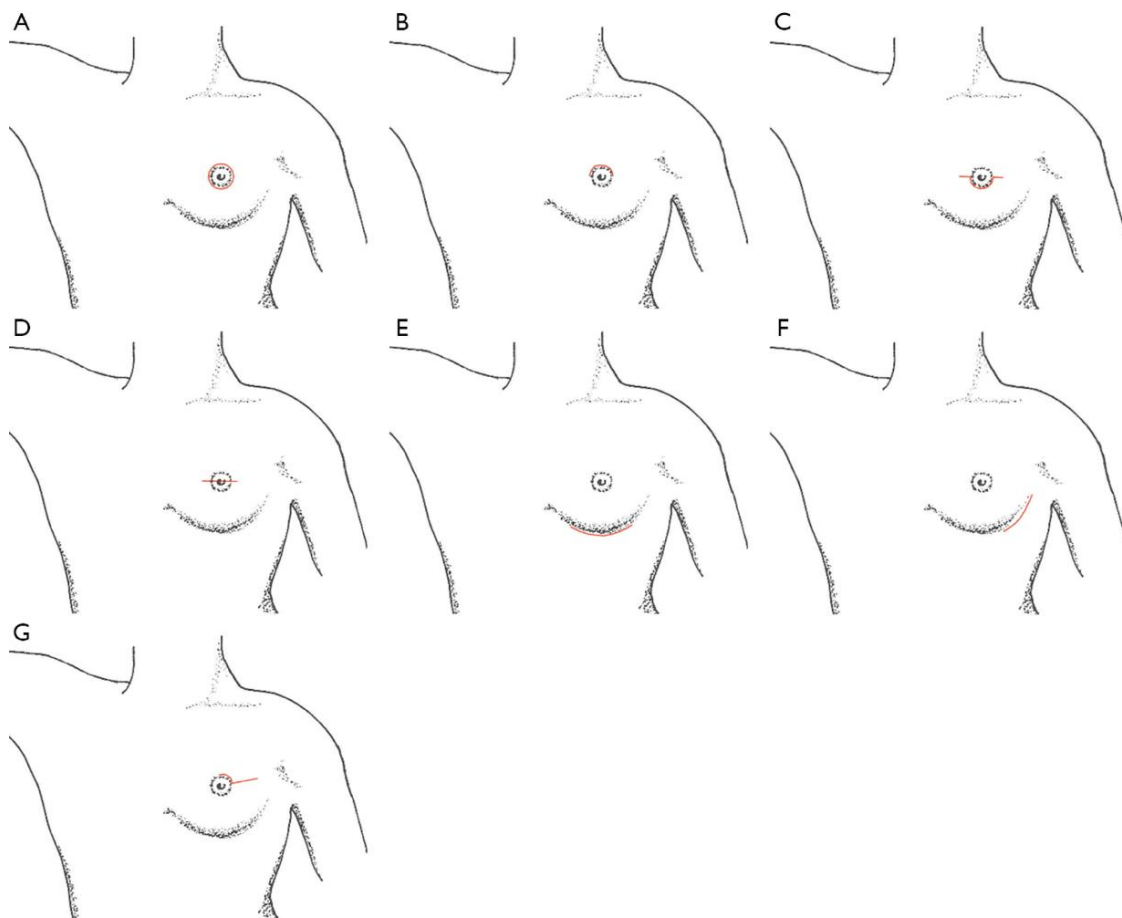


FIGURE 1 - Potential incisions for NSM.

Reconstruction: There are various methods for reconstructing the breast and the choice of the technique depends on the patient's characteristics and type of cancer. Among the available methods are the reconstruction with the use of an implant and the use of abdominal flaps (TRAM flaps) or back flaps (Latissimus flap). Today, the majority of the breast reconstructions in Puerto Rico and the United States are performed based on the use of implants because it is the simplest method, associated with less risks. In addition, because of the technological advances, the results obtained have a very natural appearance. The breast reconstruction with implants may be performed immediately beginning on the same day as the mastectomy or after the cancer treatment has concluded. Breast reconstruction may be performed in one or two phases depending on the tumor, the size of the breast, radiation history and the breast size goal. In the case of a surgery with nipple preservation, the reconstruction may be performed immediately because the skin has been preserved and it may even be performed all in one phase if the patient's characteristics are favorable to it.

Reconstructive Technique: Once the general surgeon removes the mammary tissue and the appropriate nodes from the armpit, the plastic surgeon proceeds with the breast reconstruction. In Puerto Rico, the reconstruction is most commonly performed in two phases, even though performing it in one phase has become more popular in the United States and Europe. The reconstruction in two phases requires placing a posterior tissue expander against the pectoral muscle and an acellular dermal matrix (ADM) net in the inferior part of the muscle to cover the inferior pole of the implant completely. This net stems from a bank of human cadaverous tissue that has been processed to remove its antigenic properties and which provides for a scaffold for the growth of new tissue. The ADM net allows us to fill the implant quicker, decreasing the risk of capsular contraction, resulting in a more natural appearance of the breast. Once the tissue expander is placed, it is slowly filled with saline water in the clinic until the desired size is reached. Then, the second surgery is performed to remove the tissue expander and to place a permanent silicone or saline implant.

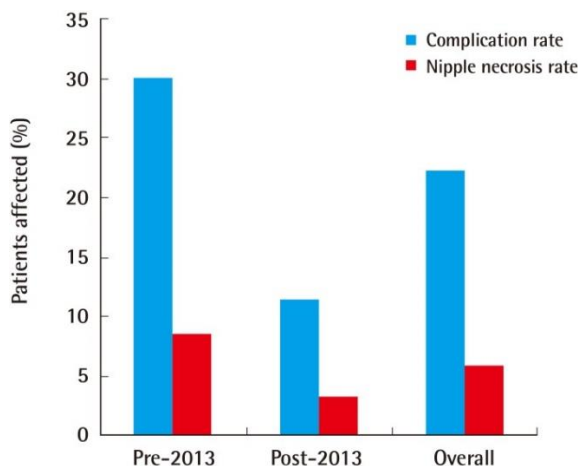
In the one-phase technique, the silicone implant is placed in the anterior or posterior muscle space at the time of the mastectomy. The use of the ADM net is very important in these cases because it decreases the risk of positioning the implant incorrectly, making it possible to place a higher volume of filler and allows for better coverage so that the implant is not placed immediately under the skin. In the reconstruction of the breast, the most favored implants are the ones made of silicone because they maintain their form better, they feel more natural and there is a lower occurrence of undulations visible through the skin. Silicone implants are composed of different types of silicone varying according to their cohesiveness. In the case of a patient with a small to moderate breast, with no or little drop, who wishes to keep the breast in the same size or smaller, the reconstruction may be performed in one phase placing the permanent implant and a net at the time of the mastectomy. The use of nets have allowed us to place the implant on top of the muscle, decreasing the length of the surgery, post-surgical pain and the risk of animation of the implant due to pectoral movement. The placement of the implant on top of the muscle requires the use of two nets, which increases the cost of the surgery. The increased cost has limited its use in Puerto Rico.

Indications: The indication for this type of surgery must follow the same code that any other oncologic intervention; that is, to not violate the security of the resection of the tumor in favor of

cosmesis. Being relatively new, this technique must be time tested in order to become the technique of choice for this type of surgery. Now there are no clear criteria as to which patient should receive a recommendation for this alternative. As a rule, mastectomy with nipple/areola complex preservation (NSM) should be reserved for cases in which the tumor is small in comparison to the breast volume, the tumor is not directly related to the nipple and the tumor is not directly involved with the mammary skin, and cases of prophylactic resection including BRCA positive patients. In this way, adequate surgical margin may be preserved. The use of the breast MRI allows us to select these cases due to the definition of the tumor extension in areas adjacent to the nipple even in cases of a negative clinical exam. Other counterindications for this procedure are Paget disease of the nipple, scleroderma and severe ptosis of the breast. In our practice, we have limited the nipple-sparing mastectomy to non-smoking patients in early stages. In addition, the tumor should be at a distance of 1.0 cm or more from the nipple and the disease must be limited to only one quadrant of the breast. We recognize that the indications and patient selection is increasing, but we have decided to be cautious while specific criteria are established for this procedure. The American Society of Breast Surgeons is keeping a registry of patients that have received nipple/areola sparing mastectomy and the enrollment is nearing 2,000 cases. This data will probably be ready for publication next year. The Puerto Rican Senology Society intends also to prepare a general guide on this topic soon.

Expected Outcome: Without a doubt, the foremost outcome expected is to maintain a recurrence rate similar to the one associated with established procedures — that is, the partial mastectomy with excision of sentinel node or the modified radical mastectomy with reconstruction. A study by Headon et al and De La Cruz sources show that this level of success is possible. This review included 73 studies that represent 12,358 procedures in 10,935 patients. The indications included invasive carcinomas, carcinoma in situ and prophylactic surgeries. The follow-up median was of 38.3 months. The joint analysis demonstrated a local recurrence rate of 2.38%. The general complications rate was 22% and the nipple necrosis rate was 5.9%. If we compare the same rates in the studies published before 2013 and the ones published after, we note that the rates for complication and for necrosis have decreased with time and with more experience gained (Figure 2). Through the years, we will see an increase in this type of procedure here in Puerto Rico.

FIGURE 2 - Rates of complications before and after 2013





TUMOR BOARDS

Priscilla González González
Cancer Conference Coordinator

HIMA•San Pablo Oncologic Hospital offers weekly Tumor Boards. During 2018, 45 Tumor Boards were held following National Treatment Guidelines and AJCC Staging. A total of 316 cases were presented, 97.46% of them prospectively, to a multidisciplinary panel of doctors and allied health professionals.

SITES DISCUSSED (316 CASES)

Digestive System	52	Skin	2
Stomach	3	Breast	103
Small intestine	2	Female Genital System	5
Colon	29	Ovary	5
Rectum	6	Prostate	2
Liver	2	Testis	5
Pancreas	1	Urinary System	5
Gallbladder	3	Kidney and Renal Pelvis	2
Appendix	2	Bladder	1
Peritoneal	1	Ureter	2
Esophagus	2	Brain & CNS	91
Oropharynxes	1	Thyroid	10
Lung and Bronchus	1	Lymphoma	18
Bones	12	Blood/Bone Marrow	7
Soft Tissue	3		

SPECIALIZED TUMOR BOARDS

Specialized Tumor Boards are held weekly from 11:30 am to 1:30 p.m., including:

- Breast Surgery – held bi-monthly (the first Thursday and the second Monday of each month);
- Surgery & Medical Oncology – the second Monday of each month;
- Neurosurgery and Head & Neck Surgery – the third Thursday of each month; and
- Pediatric Oncology – the last Thursday of each month.

Every meeting is attended by a multidisciplinary panel that includes hematologist-oncologists, surgeons, radio-oncologists, radiologists, pathologist, nutritionists, speech therapists, nurses, social workers, and psychosocial support.

CONTINUING MEDICAL EDUCATION

Starting November 2011, all of our Tumor Boards have been approved for 2-hour credits of Continuing Medical Education each, by the Accreditation Council for Continuing Medical Education (ACCME) and the Puerto Rico Board of Medical Examiners through the joint sponsorship of Universidad Central del Caribe School of Medicine (UCC) and HIMA•San Pablo Hospital Caguas. During 2018, a total of 94 hours credits were offered to our medical faculty physicians free of charge. A total of 53 doctors have benefited from this initiative. Our multidisciplinary attendance was 94.75% in 2018.

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- Cirujano de Cabeza y Cuello Oncólogo
- Urólogo
- Radiólogo Intervencional
- Patólogo
- Cirujano Plástico y Reconstructivo
- Psicólogo Clínico
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2018 Community Outreach Activity & Monitoring Summary Report

Maricarmen Ramírez-Solá, MPHE
Public Health Educator & Community Outreach Coordinator

Skin Cancer Prevention and Screening Program

Background

Between 1975 and 2015, the number of melanoma cases tripled in the U.S. (7.89 per 100,000 in 1975 to 25.77 per 100,000 in 2015). In Puerto Rico, the incidence of skin cancer has increased four-fold between 1974 and 2005, from 41.5 cases per 100,000 individuals to 167.9 per 100,000. Between 2008 and 2012, 551 new cases of melanoma were diagnosed locally (De La Torre-Lugo et al., 2010; PR Cancer Registry, 2012).

In 2005, an in-depth analysis of pathology reports showed that the most common type of skin cancer in Puerto Rico was *basal-cell carcinoma*. The analysis showed that skin cancer in general was more commonly diagnosed in males, except for melanoma, which was more common in females (De La Torre-Lugo et al., 2010; PR Cancer Registry, 2012).

In a telephone survey completed in 2009 via random digit dialing to 572 adults in Puerto Rico, sun protection behaviors were assessed. It was found that only 21.1% adults reported using sunscreen *often* or *always*, and 38.5% claimed staying in the shade *often* or *always*. Approximately half of respondents reported *never* using sunscreen and *never* wearing a hat when outside on a sunny day. Authors pointed out in their conclusions that *there was considerable room for improvement in sun protection behaviors among Puerto Rican adults* (Coups, et al., 2014).

Both the Commission of Cancer of the American College of Surgeons (CoC) and the Puerto Rico Comprehensive Cancer Control Program for the period of 2015-2020 recommend skin cancer prevention and screening programs for the community. A Cancer Education Event was developed for the community by HIMA•San Pablo Oncologic Hospital to educate the public about sun protection behaviors and about the prevention and early detection of skin cancer.

Program Overview

The **Skin Cancer Prevention and Screening Program** was planned and inserted in an educational event entitled **1st Educational Circuit for Cancer Early Detection**. The event aimed to educate the public about the prevention of skin cancer as the main topic. It was held in the lobby

of HIMA Plaza Medical Building on November 7, 2018, from 8:30 a.m. to 1:00 p.m. The educational presentation about skin cancer prevention was followed by a free skin examination clinic provided by Dr. Nicole M. Candelario, Dermatopathologist. Sun protection lotion and long-sleeved t-shirts were given to participants who were examined. The event was announced through social media and the distribution of posters and flyers. The event was also promoted in medical offices near to the hospital.

Poster / Event Announcement



Educación en Salud del **Hospital HIMA-San Pablo Oncológico**
y Secretaría Auxiliar para Promoción de la Salud del Departamento de Salud de PR
PRESENTAN

**1^{er} Circuito de Educación para
Detección Temprana del Cáncer**



DÓNDE: Vestíbulo Edificio HIMA Plaza 1
Ave. Muñoz Marín #100 Caguas, Puerto Rico
CUÁNDO: miércoles, 7 de noviembre de 2018
HORA: 8:30 a.m. a 12:00 m.

CONFERENCIAS Prevención Cáncer Piel Prevención Cáncer Pulmón Prevención Cáncer Oral HIMA-San Pablo Oncológico: ¿Quiénes somos?	PARTICIPAN Dra. Nicole M. Candelario Dermatóloga Dra. Elba Díaz-Toro Catedrática Escuela Medicina Dental UPR-RCM Presidenta Colegio Cirujanos Dentistas de PR
CLÍNICAS GRATUITAS Detección Cáncer de Piel Detección Cáncer Oral Presión Arterial Oxigenación	Omayra Encarnación-Nova Programa de Control de Cáncer Departamento de Salud
PARTICIPE · EDÚQUESE · EXAMÍNESE Ayude a Combatir el Cáncer	División de Control de Tabaco y Salud Oral Departamento de Salud Sociedad Americana Contra el Cáncer HIMA Ambulance



Dr. Nicole M. Candelario
Dermatopathologist / Main Speaker

Education about the prevention of lung cancer, cancer in the oral cavity and smoking cessation was also provided during the event, as well as free vaccination for pneumonia. Event collaborators included:

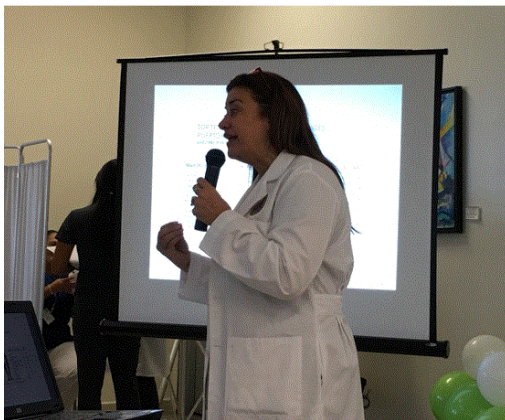
- Dr. Nicole M. Candelario, Dermatopathologist, as main speaker;
- Puerto Rico Department of Health Cancer Control Program, whose staff provided educational material about skin cancer prevention and educated participants on lung cancer and smoking cessation;
- Puerto Rico Health Promotion Program, whose staff weighted participants and educated them on the body mass index (BMI) and its relationship with cancer risk reduction;
- American Cancer Society, whose staff supported with one-on-one education about skin cancer prevention;
- Puerto Rico Association of Dental Surgeons, represented by Dr. Elba Díaz, Oncology Dentist, who provided education about cancer in the oral cavity;
- HIMA•San Pablo Nutrition Department, offering one-on-one counseling about healthy nutrition;
- HIMA Ambulance, providing free blood pressure and oxygenation measure services; and
- Puerto Rico Vaccination Coalition (VOCES), donating free pneumonia vaccines for adults 65 years old or older.

Results

Over 300 people attended the event. 45 adults were examined for skin cancer (85% females, 15% males; mean age: 59.5). All of them received educational material, a free long-sleeve t-shirt and sun block lotion. Two participants (4%) were referred for a biopsy due to suspicious basal cell carcinoma findings.

Other results included:

- 160 participants received written information about skin cancer early detection
- 63 participants were counseled at the American Cancer Society educational booth
- 68 participants were weighted and counseled about a healthy BMI
- 75 participants received one on one nutritional counseling from a dietitian
- 35 participants got blood pressure and oxygenation measures
- 23 adults ≥ 65 years old were vaccinated for pneumonia
- 1 person was referred for a smoking cessation program



Dr. Elba Díaz, Oncology Dentist
Invited Speaker



Dr. Elba Díaz
Educating participant to do oral examination



Ms. Ana Pedraza, Nurse
Providing pneumonia vaccination

Evaluation

All collaborators found that event objectives were met 100%. Thirty participants who were interviewed commented: *events like this one are much needed.*

ANNUAL REPORT 2019

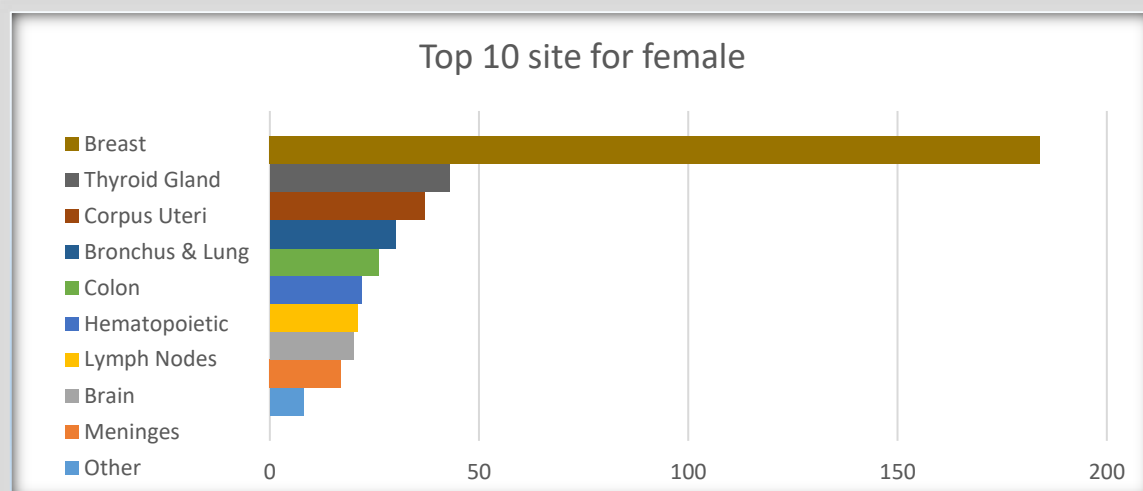
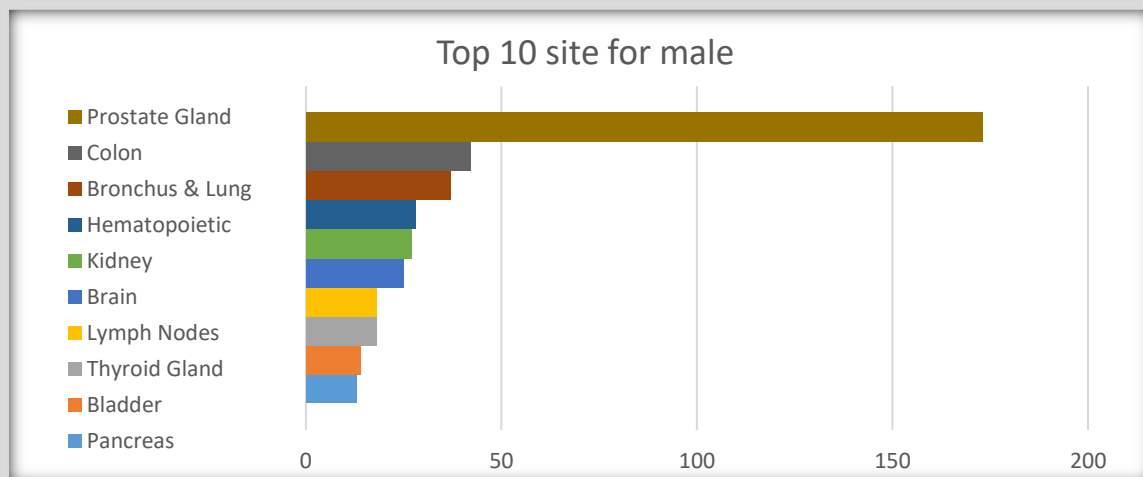


Cancer Registry overview

Besaida Ruiz Conde, MBA, BPH, CTR
Cancer Registry Supervisor

The Cancer Registry at HIMA•San Pablo Oncologic Hospital gathers information on all tumors diagnosed or treated at the Institution. During 2018, 898 analytic cases and 116 non-analytic cases were added to our registry database. This data is transmitted to the National Cancer Data Base (NCDB) and to the Central Cancer Registry. The NCDB is maintained by the Commission on Cancer. We give active follow-up to more than 7,441 patients annually, maintaining a 90.17% follow-up rate.

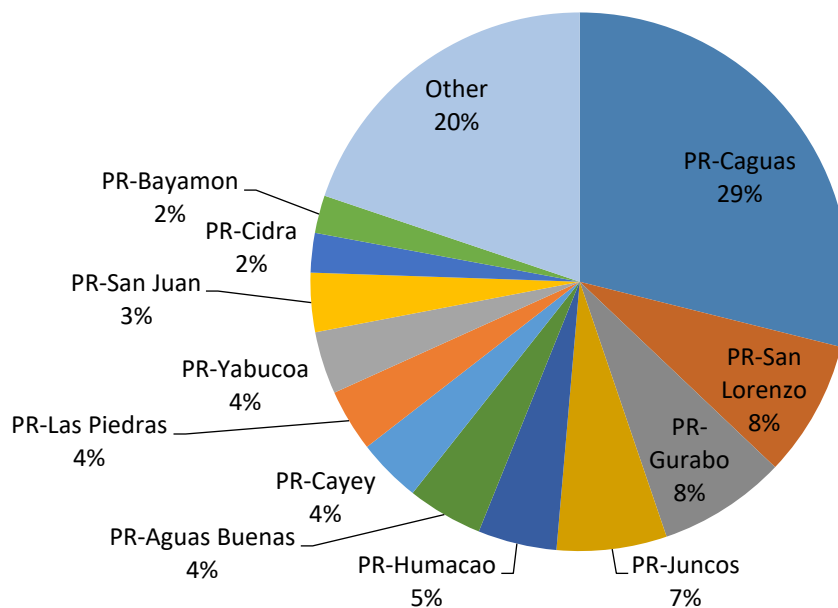
Top Ten Sites 2018 by Gender at HIMA•San Pablo Oncologic Hospital



The distribution by gender in 2018 is 486 cases (48.0 percent) were females, and 528 cases (52.0 percent) were males. The female top 10 sites added to our database in order of decreasing frequency were: breast (184), thyroid gland (43), uterus (37), bronchus and lung (30), colon (26), Hematopoietic (22), lymph nodes (21), brain (20), meninges (17) and other (8). There were 408 female cases that represent all other primary sites. The male top 10 sites in order of decreasing frequency were prostate (173), colon (42), lung/bronchus (37), hematopoietic (28), kidney (27), brain (25), lymph nodes (18), thyroid gland (18), bladder (14) and pancreas (13). 395 male cases represents all other primary sites. Together, these cases made the top 5 sites of HIMA San Pablo Oncological Hospital in order of decreasing frequency as follow: breast (184, 18.5 percent), prostate (173, 17.4 percent), colon (68, 6.8 percent), bronchus (67, 6.7 percent) and Thyroid Gland (61, 6.1 percent). All other primary sites in addition of this top 5 represents 46.5 percent.

County at Diagnosis 2018

County at Diagnosis 2018



The geographical distribution for cases diagnosed or treated in 2018 was variable. The county with the most cases registered in the institution was Caguas, with 293 cases (29%). Other neighboring counties had a significant percentage of patients, such as San Lorenzo (8%), Gurabo (8%), Juncos (7%), Humacao (5%). Other counties contributed to a range from 4% to 2%.

2018 CANCER SITE REPORT

		Sex		Class of Case		Status***		Stage Distribution - Analytic Cases Only							
Primary Site	Total (%)	M	F	Analy	NA	Alive	Exp	Stg 0	Stg I	Stg II	Stg III	Stg IV	88	Ukn	
ORAL CAVITY & PHARYNX	25 (2.5%)	20	5	22	3	20	5	0	4	1	13	1	1	1	
Tongue	5 (0.5%)	3	2	3	2	3	2	0	0	1	0	1	1	0	
Salivary Glands	2 (0.2%)	2	0	2	0	2	0	0	0	0	1	1	0	0	
Gum & Other Mouth	6 (0.6%)	4	2	6	0	6	0	0	0	0	0	4	0	1	
Nasopharynx	3 (0.3%)	3	0	3	0	2	1	0	1	0	0	2	0	0	
Tonsil	2 (0.2%)	2	0	2	0	2	0	0	1	0	0	1	0	0	
Oropharynx	4 (0.4%)	3	1	4	0	3	1	0	2	0	0	2	0	0	
Hypopharynx	2 (0.2%)	2	0	2	0	2	0	0	0	0	0	2	0	0	
Other Oral Cavity & Pharynx	1 (0.1%)	1	0	0	1	0	1	0	0	0	0	0	0	0	
DIGESTIVE SYSTEM	163 (16.1%)	109	54	142	21	137	26	3	19	24	31	25	21	20	
Esophagus	2 (0.2%)	2	0	2	0	2	0	0	0	0	0	0	0	2	
Stomach	11 (1.1%)	7	4	9	2	6	5	1	0	2	1	3	0	2	
Small Intestine	6 (0.6%)	4	2	6	0	6	0	0	0	0	0	1	2	2	
Colon Excluding Rectum	69 (6.8%)	43	26	55	14	61	8	2	12	9	19	7	2	4	
Cecum	8	6	2	7	1	8	0	0	3	2	2	0	0	0	
Appendix	3	0	3	2	1	3	0	0	0	0	0	0	2	0	
Ascending Colon	12	5	7	12	0	12	0	0	3	2	6	0	0	1	
Hepatic Flexure	3	2	1	3	0	2	1	1	0	0	2	0	0	0	
Transverse Colon	7	6	1	6	1	5	2	0	1	2	0	2	0	1	
Splenic Flexure	5	2	3	4	1	3	2	0	1	1	1	1	0	0	
Descending Colon	5	3	2	5	0	5	0	0	1	0	2	1	0	1	
Sigmoid Colon	14	9	5	13	1	14	0	1	3	2	5	1	0	1	
Large Intestine, NOS	12	10	2	3	8	8	3	0	0	0	1	2	0	0	
Rectum & Rectosigmoid	21 (2.1%)	12	9	20	0	18	2	0	2	4	4	4	1	5	
Rectosigmoid Junction	6	4	2	6	0	6	0	0	0	3	0	3	0	0	
Rectum	15	8	7	15	0	13	2	0	2	2	4	1	1	5	
Anus, Anal Canal & Anorectum	4 (0.4%)	2	2	3	1	4	0	0	0	0	0	1	0	2	
Liver & Intrahepatic Bile Duct	11 (1.1%)	10	1	9	1	8	2	0	3	1	3	1	1	0	
Liver	9	9	0	8	0	6	2	0	3	1	2	1	1	0	
Intrahepatic Bile Duct	2	1	1	1	1	2	0	0	0	0	1	0	0	0	
Gallbladder	2 (0.2%)	0	2	2	0	2	0	0	0	0	1	0	0	1	
Other Biliary	5 (0.5%)	4	1	5	0	5	0	0	0	2	2	0	0	1	
Pancreas	17 (1.7%)	13	4	14	2	13	3	0	0	5	1	7	0	1	
Retroperitoneum	1 (0.1%)	1	0	1	0	1	0	0	1	0	0	0	0	0	
Other Digestive Organs	14 (1.4%)	11	3	14	0	10	4	0	0	0	0	0	14	0	
RESPIRATORY SYSTEM	76 (7.5%)	44	31	71	4	66	9	0	21	5	17	21	2	2	
Nose, Nasal Cavity & Middle Ear	2 (0.2%)	1	1	2	0	2	0	0	0	0	0	2	0	0	
Larynx	6 (0.6%)	6	0	6	0	6	0	0	3	1	0	0	0	2	
Lung & Bronchus	67 (6.6%)	36	30	62	4	58	8	0	18	4	17	19	1	0	
Trachea, Mediastinum & Other Respir	1 (0.1%)	1	0	1	0	0	1	0	0	0	0	0	1	0	
BONES & JOINTS	2 (0.2%)	1	1	1	1	2	0	0	0	0	0	0	1	0	
Bones & Joints	2 (0.2%)	1	1	1	1	2	0	0	0	0	0	0	1	0	
SOFT TISSUE	6 (0.6%)	2	4	4	2	6	0	0	1	0	2	0	0	1	
Soft Tissue (including Heart)	6 (0.6%)	2	4	4	2	6	0	0	1	0	2	0	0	1	
SKIN EXCLUDING BASAL & SQUAMOUS	2 (0.2%)	2	0	2	0	1	1	0	0	0	0	1	1	0	
Melanoma -- Skin	1 (0.1%)	1	0	1	0	0	1	0	0	0	0	1	0	0	
Other Non-Epithelial Skin	1 (0.1%)	1	0	1	0	1	0	0	0	0	0	0	1	0	
BREAST	189 (18.6%)	3	184	173	14	184	3	25	74	35	9	2	1	27	
Breast	189 (18.6%)	3	184	173	14	184	3	25	74	35	9	2	1	27	
FEMALE GENITAL SYSTEM	54 (5.3%)	0	54	39	15	48	6	0	19	3	2	6	0	9	
Cervix Uteri	5 (0.5%)	0	5	4	1	5	0	0	1	2	1	0	0	0	
Corpus & Uterus, NOS	38 (3.7%)	0	38	30	8	33	5	0	18	0	1	5	0	6	
Corpus Uteri	37	0	37	30	7	33	4	0	18	0	1	5	0	6	
Uterus, NOS	1	0	1	0	1	0	1	0	0	0	0	0	0	0	
Ovary	8 (0.8%)	0	8	5	3	7	1	0	0	1	0	1	0	3	
Vagina	2 (0.2%)	0	2	0	2	2	0	0	0	0	0	0	0	0	
Vulva	1 (0.1%)	0	1	0	1	1	0	0	0	0	0	0	0	0	
MALE GENITAL SYSTEM	188 (18.5%)	181	0	163	18	175	6	0	40	95	19	2	1	6	
Prostate	179 (17.7%)	173	0	159	14	170	3	0	39	95	19	2	0	4	
Testis	4 (0.4%)	4	0	3	1	3	1	0	1	0	0	0	0	2	
Penis	3 (0.3%)	2	0	0	2	0	2	0	0	0	0	0	0	0	
Other Male Genital Organs	2 (0.2%)	2	0	1	1	2	0	0	0	0	0	0	1	0	
URINARY SYSTEM	55 (5.4%)	45	9	47	7	48	6	2	18	3	5	2	2	4	
Urinary Bladder	18 (1.8%)	14	3	14	3	17	0	2	1	1	0	0	1	1	
Kidney & Renal Pelvis	32 (3.2%)	27	5	28	4	29	3	0	17	2	4	1	0	3	
Ureter	2 (0.2%)	2	0	2	0	0	2	0	0	0	1	1	0	0	
Other Urinary Organs	3 (0.3%)	2	1	3	0	2	1	0	0	0	0	0	1	0	
BRAIN & OTHER NERVOUS SYSTEM	70 (6.9%)	33	36	62	7	60	9	0	0	0	0	0	62	0	
Brain	42 (4.1%)	23	18	38	3	32	9	0	0	0	0	0	38	0	
Cranial Nerves Other Nervous System	28 (2.8%)	10	18	24	4	28	0	0	0	0	0	0	24	0	
ENDOCRINE SYSTEM	66 (6.6%)	22	44	64	2	64	2	0	49	4	0	2	6	3	
Thyroid	62 (6.1%)	18	43	59	2	60	1	0	49	4	0	2	1	3	
Other Endocrine including Thymus	5 (0.5%)	4	1	5	0	4	1	0	0	0	0	0	5	0	
LYMPHOMA	50 (5.0%)	22	28	45	5	47	3	0	13	12	4	9	6	1	
Hodgkin Lymphoma	12 (1.2%)	4	8	9	3	12	0	0	2	4	1	1	1	0	
Non-Hodgkin Lymphoma	38 (3.8%)	18	20	36	2	35	3	0	11	8	3	8	5	1	
NHL - Nodal	28	15	13	26	2	25	3	0	8	5	3	7	2	1	
NHL - Extranodal	10	3	7	10	0	10	0	0	3	3	0	1	3	0	
MYELOMA	36 (3.6%)	16	20	25	11	36	0	0	0	0	0	0	25	0	
Myeloma	36 (3.6%)	16	20	25	11	36	0	0	0	0	0	0	25	0	
LEUKEMIA	11 (1.1%)	10	1	8	3	10	1	0	0	0	0	0	8	0	
Lymphocytic Leukemia	4 (0.4%)	4	0	2	2	4	0	0	0	0	0	0	2	0	
Acute Lymphocytic Leukemia	2	2	0	1	1	2	0	0	0	0	0	0	1	0	
Chronic Lymphocytic Leukemia	1	1	0	0	1	1	0	0	0	0	0	0	0	0	
Other Lymphocytic Leukemia	1	1	0	1	0	1	0	0	0	0	0	0	1	0	
Myeloid & Monocytic Leukemia	6 (0.6%)	6	0	5	1	5	1	0	0	0	0	0	5	0	
Acute Myeloid Leukemia	1	1	0	1	0	1	0	0	0	0	0	0	1	0	
Chronic Myeloid Leukemia	5	5	0	4	1	4	1	0	0	0	0	0	4	0	
Other Leukemia	1 (0.1%)	0	1	1	0	1	0	0	0	0	0	0	1	0	
MESOTHELIOMA	2 (0.2%)	1	1	2	0	0	2	0	0	0	1	1	0	0	
Mesothelioma	2 (0.2%)	1	1	2	0	0	2	0	0	0	1	1	0	0	
KAPOSI SARCOMA	1 (0.1%)	1	0	1	0	0	1	0	0	0	0	0	1	0	
Kaposi Sarcoma	1 (0.1%)	1	0	1	0	0	1	0	0	0	0	0	1	0	
MISCELLANEOUS	14 (1.4%)	8	6	12	2	11	3	0	0	0	0	1	11	0	
Miscellaneous	14 (1.4%)	8	6	12	2	11	3	0	0	0	0	1	11	0	
Total	1,041	516	486	898	116	930	84	30	258	188	90	82	159	74	

Data based on Hima San Pablo Oncologic Hospital 1st contact year 2018.

*analytic (A): diagnosed and received first course of treatment at HIMA San Pablo Oncologic Hospital.

**Non Analytic (NA): All cases for which the original diagnosis and/or first of treatment was performed elsewhere.(E.g. treatment was for persistent disease: recurrence, palliative).

***Status: data obtained from patients alive or expired from follow-up information.

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