



**Hospital**  
**HIMA•San Pablo**  

---

**Oncológico**

**ANNUAL REPORT 2011-2012**

## TABLE OF CONTENT

<b>TOPIC</b>	<b>PAGE</b>
INTRODUCTION, MISSION & VISION	3
MESSAGE FROM THE MEDICAL DIRECTOR	4
MESSAGE FROM THE CLP	6
OVERVIEW OF THE CANCER REGISTRY	8
TUMOR BOARDS	10
COMMUNITY OUTREACH	11
QUALITY	15
ONCOLOGY NURSING AND PATIENT SERVICES	17
CLINICAL REASERCH ABSTRACTS	18
SPECIAL STUDIES	22
CANCER COMMITEE MEMBERS	29
MEDICAL FACULTY	30

## INTRODUCTION, MISSION & VISION



Cancer is a major public health problem in Puerto Rico, ranking second among the causes of death. It is anticipated that the next decade will become the leading cause of death in Puerto Rico. The HIMA • San Pablo Oncologic Hospital arises principally as a response to the large amount of cancer patients that we received at our facility and as a strategy to meet the anticipated growth that is expected in the future.

HIMA•San Pablo Oncologic Hospital is a 40 beds cancer specialty “Hospital within a hospital concept” located within the structure of the HIMA•San Pablo *Caguas*, a 440 beds general Hospital located in Caguas, Puerto Rico and part of Grupo HIMA•San Pablo. We understand that this concept allows us to focus on our cancer patients and better serve all their needs.

In 2010 we obtained a license for an Oncologic Hospital and in the very same year a total of 1,195 cases were diagnosed with cancer in our Institution. The license includes 40 Oncologic beds of which 27 beds are for Adult Oncology and 13 beds for Pediatric Oncology. A Bone Marrow Transplant Unit that opened in the fourth quarter of 2010, in which 30 patients were transplanted in 2012, all with successful results.

In addition to the in-patient services we also have: a Nuclear Medicine department that includes a PET CT and in which we offer Thyroid Cancer Diagnosis and Radioactive Iodine Therapy among other services. A Radiotherapy Department that has two linear accelerators with Combing CT and Rapid Arc Technology, a Cyber Knife for Radio-

Surgery (unique in the Caribbean), and a Brachytherapy room within the Department.

The Pathology Department offers a wide range of tests that are performed in house with a turnaround time of less than 24 hours. Within the series of tests performed are the following: Neuropathology, Molecular Pathology, Transplant Pathology, Immunohistochemistry, Immunofluorescence, Flow Cytometry and Muscle biopsy.

Weekly Cancer Conferences are performed in Surgical Oncology, Head and Neck, Breast, Oncologic Neurosurgery, Pediatric Oncology and Bone Marrow Transplant.

Our team at HIMA•San Pablo Oncologic Hospital, composed of experienced physicians specialized in cancer (some of them unique in Puerto Rico), certified oncology nurses (OCN) and allied health professionals with an extensive experience in oncology (Nutritionist, Patient Navigator, Health Educator, Social Worker, Research Coordinator, Certified Tumor Registrars, Psychosocial Coordinator, among others), is committed to provide comprehensive cancer care to all our patients and contribute to make HIMA•San Pablo Oncologic Hospital the best alternative for oncologic care in Puerto Rico.

**Our mission** is to improve survival and quality life for cancer patients through prevention, patient care, education and the monitoring of comprehensive quality care.

**Our vision** is to be the premier Oncologic Hospital in Puerto Rico based on the excellence of our people, the highest technology and ensuring that the care we provide is based on evidence and the best practice of medicine.

Claudia V. Guzmán Rivera, JD, MHSA  
Executive Director,  
HIMA•San Pablo Oncologic Hospital

## MESSAGE FROM THE MEDICAL DIRECTOR



HIMA•San Pablo Oncologic Hospital has experienced an evolutionary process since it was planned more than ten years ago. The progress has been significant and it allows us to be positioned as one of the leading cancer care institutions in

Puerto Rico. Our goal of stressing quality of cancer care and excellent patient service, continued to guide our efforts and yield positive results in 2012.

The Cancer Committee and the entire medical staff are committed to provide comprehensive care that parallels or exceeds the care provided at our nation's best cancer centers. It is for this reason that one of our goals is to achieve accreditation from the Commission of Cancer and is an example of our commitment to excellence in patient care.

These are exciting times in the management of care for patients with cancer. Recent genomics discoveries have revealed that each cancer patient is unique and treatments should be tailored specifically as such. This is one of our strengths; to have a multidisciplinary team approach for each patient's unique needs.

Our Surgical Oncology Service has continued to grow and we are very proud of the staff and their involvement in the cancer center. We strengthened our Neurosurgery Oncology service by developing a multidisciplinary team that utilizes the only Cyber Knife in Puerto Rico and the Caribbean. The Head and Neck Service has continued to grow via the use of the DaVinci and the TORS

procedures that greatly reduced the morbidity of surgery in this patient group.

Unique to our center is our onsite radiation facility that includes an operating suite so brachytherapy implants can be made by the direct supervision of our radiation staff. Our Radiation Department has two state of the art linear accelerators and also houses our Cyberknife that is also used to treat other oncology diseases. Last year new software was added to expedite the treatment of patients so the time spent in the radiation suite is reduced.

Recently, we formalized research partnership agreements for our cancer patients. The first agreement, made with the Medical Sciences Campus of the University of Puerto Rico and the MD Anderson Cancer Center, has the main objective of gaining more insight regarding the etiology of oropharyngeal cancer types. This allows us to consider better prevention and personalized treatment approaches for the disease. The second agreement, signed with the Ponce Medical School and the Moffitt Cancer Center, is for developing a Cancer Tissue Biobank area and focuses on acquiring and storing pathological biospecimens to support cancer research in minority populations. An area at the hospital Pathology Laboratory has already been prepared for that purpose and we will start collecting specimens in the next few months. Our goal is to continually build a research department that allows us to participate in a greater number of protocols in the future.

Through the guidance of Dr. Norma Salgado, we have solidified our Bone Marrow Transplant Service. With six dedicated inpatient beds, and a specialized nursing staff, this service has experienced steady growth and we have plans of extending it to

include allogenic bone marrow and stem cell transplants.

Recently we increased the number of beds in the inpatient Pediatric Oncology ward. Its increased patient volume has resulted in this department moving to a new and more comfortable clinic area. Under the leadership of Dr. John Guerra all cases are discussed at Pediatric Tumor Board Meetings with the support of a specialized multidisciplinary panel.

The Pathology staff continues to support our growth in cancer care and last year acquired Flow Cytometry equipment that helps achieve diagnosis in several hours. Before all Flow Cytometry was sent to mainland USA and results took at least 24 hours. With new Immunohistochemistry Panel Markers available in house, our clinicians are able to better customize treatments for their patients.

Additionally, a dedicated inpatient ward was assigned exclusively for oncology patients over the past 24 months. This has allowed specialization and training of the nursing staff.

Radiology Services have been developed over the last year by adding new staff with specialized training in neuroradiology that strengthens our Neurosurgery and Head and Neck oncology service. Our Interventional Radiology Group continues to be an important part of our diagnostic team and a part of our treating armamentarium. New protocols were in place this year for chemoembolizations in liver neoplasm and new technology continued to be added.

Our Tumor Board continues to increase in size and more physicians are involved in the presentation of cases. We now have Surgical/Medical Oncology, Neurosurgery, Head and Neck and Pediatrics Oncology Tumor Boards. Recently, a Breast Oncology Tumor Board was started.

This year the administration of HIMA•San Pablo approved two new staff position to our Tumor Registry that have improved follow up and data gathering for our patients. The Tumor Registry office was moved to a new larger area and is able to accommodate the additional new personnel.



Over the last year Ms. Maricarmen Ramirez joined us as a Health Educator and has established a series of programs geared to assist patients to navigate thru their treatment process. Education sessions are in place for ostomized and radiotherapy patients. Our center has also organized an educational session in conjunction with the American Cancer Society to help patients and their relatives undergoing treatment.

Given our strong commitment to excellence, we will continue to provide state of the art care for patients with cancer and those at risk for developing cancer in Puerto Rico.

Edgardo J. Rodríguez Monge, MD  
Medical Director,  
HIMA•San Pablo Oncologic Hospital  
& Chairman Cancer Committee

## ONCOLOGIC SURGERY AT HIMA•SAN PABLO ONCOLOGIC HOSPITAL: A MESSAGE FROM THE CLP



The year 2012 was one of innovation and growth for the surgery department at HIMA•San Pablo Oncologic Hospital. Addition of new surgeons from various specialties

and addition of state of the art techniques contributed to a strong department. A spirit of collaboration and integration among departments such as pathology, nuclear medicine, radiology and surgery have made the department of surgery as a whole into a leader in oncologic surgery in Puerto Rico. I will briefly highlight what I believe are the most important developments over the past year.

In general surgical oncology, the development of minimally invasive surgery has been one of the great advances of the last 10 years. I am pleased to have participated in this exciting change in the way we approach cancer surgery. Since 2006, we have been developing laparoscopic surgery for colon and rectal cancer. This has been done in an organized and responsible fashion in order to maintain the highest standards in surgery. More than 300 oncologic laparoscopic resections have been performed at our hospital with the known benefits of decreased pain and faster recovery, making these surgical procedures very attractive and effective for our cancer patient population. Great care has been taken to safeguard the adequacy of laparoscopic resections for cancer, with close collaboration and communication with our pathology department and we have been able to document this in two peer reviewed publications in local journals. We expect that minimally invasive gastrointestinal surgery

will continue to grow with the present staff and with the addition of several new fellowships trained surgeons.

Another important area is breast oncologic surgery. All diagnostic biopsy procedures are performed by the surgeons using minimally invasive image guided techniques, using the operating room for therapeutic procedures and definitive treatment. Stereotactic vacuum assisted biopsy and ultrasound guided vacuum assisted biopsies are the norm at our institution. Under strict collaboration with pathology, nuclear medicine and surgery, we have developed a sentinel node biopsy protocol for our breast cancer patients, and all of our surgeons taking care of breast patients now perform sentinel node biopsy during breast conserving surgery for early breast cancers.

In the past, access to reconstruction after mastectomy has been somewhat limited. Efforts have been made to make breast reconstruction more available and we expect that this will improve significantly with the addition of a full time reconstructive plastic surgeon to our staff in the September of this year.

Oncologic neurosurgical cases have seen a significant increase in the past few years with the addition of three neurosurgeons to our staff. Craniotomies and stereotactic biopsies are done routinely using state of the art equipment for primary and metastatic brain lesions. The neurosurgery service at the present time is very busy receiving patients from all over Puerto Rico and the United States and British Virgin Islands. A dedicated intensive care unit for neurosurgery patients and excellent critical care specialist support has added strength to the neurosurgery

service and we expect it will continue to do so.

Resections for head and neck cancer have also increased during the past year. Integration to the surgery department of a full time head and neck surgical oncologist has increased patient referrals from all over the island. Comprehensive treatment of head and neck cancer, with speech and swallowing rehabilitation in addition to oncologic care is now routinely done. Also, this is the only facility outside the continental US where robotic assisted resections can be done for selected floor of mouth and pharyngeal cancers. Again, we expect this area to grow significantly in the coming years.



The discussion and treatment planning of oncologic cases is encouraged at the tumor board meetings which are held weekly with medical oncology, radiotherapy, pathology and surgery departments. This provides full integration for comprehensive care for our cancer patients. Tumor boards in general surgery will now be available twice monthly, with head and neck, neurosurgery, and pediatric oncology holding discussions once a month. Attendance to these multidisciplinary conferences has been excellent and instructive as there is excellent participation of ancillary staff such as

nutritional service, rehabilitation and the tumor registry staff.

All of the aforementioned achievements contribute to one of our goals, which is to seek and obtain the accreditation of the Commission on Cancer of the American College of Surgeons. This project was started 6 years ago, and I am proud to have witnessed how the surgical service has contributed to seeking this goal. Integration in the cancer committee, collaboration with staging and assisting the tumor registry have helped bring us closer to this goal. At the present time, only two hospitals in Puerto Rico are Commission on Cancer accredited. Once the accreditation is obtained, HIMA•San Pablo Caguas, will be the first privately owned facility on the island to have CoC accreditation. We hope and expect that this will set a standard for other hospitals to follow.

The surgical service at HIMA•San Pablo Caguas will continue to grow, innovate and mature over the next few years. Its main strength lies not only in the academic preparation of its members but also in their solid commitment to the care of cancer patients and to the medicine better for our community. My congratulations and thanks to the surgical staff at HIMA•San Pablo for their excellent work and wish them the best for the future.

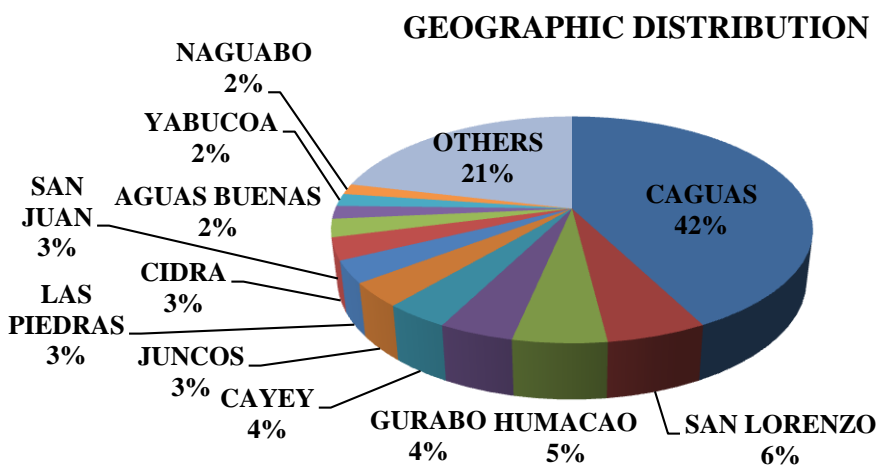
Ramón K. Sotomayor, MD, FACS  
Cancer Liaison Physician  
Chief, Oncologic Surgery Service

# OVERVIEW OF THE CANCER REGISTRY 2012 DATA REPORT

Mayra M. Collazo Castro, MD, CTR

The Cancer Registry at HIMA•San Pablo Oncologic Hospital gathers information on all tumors diagnosed or treated at the Institution. In 2012 there were added 1,292 analytic cases and 103 non-analytic cases to the registry database. We give active follow-up to more than 3,000 patients annually, maintaining a 96% follow-up rate.

In the geographic distribution 42% (591) of our cancer patients are residents of the city of Caguas, 57% (785) come from neighboring cities and 1% (19) of our cancer patients traveled from the Virgin Islands to be treated at the Institution.

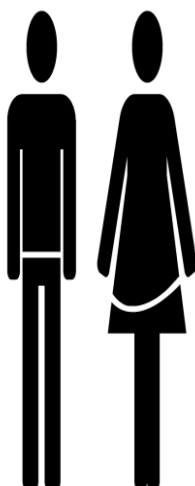


\* In others includes the sum all cities of Puerto Rico with less than 2%, Virgin Islands (1.36%) and United States (0.07%).

## TOP 10 CANCER SITES BY GENDER

### MALE (737 cases)

CANCER	CASES	%
1. Prostate	296	40.2%
2. Colorectal	76	10.3%
3. Lung & Bronchus	48	6.5%
4. Brain & CNS	46	6.2%
5. Oral Cavity & Pharynx	44	6.0%
6. Lymphoma	31	4.2%
7. Liver & Bile Duct	26	3.5%
8. Kidney & Pelvis	22	3.0%
9. Thyroid	15	2.0%
10. Myeloma	15	2.0%
11. Others	118	16.1%



### FEMALE (658 cases)

CANCER	CASES	%
1. Breast	214	32.5%
2. Brain & CNS	63	9.6%
3. Lung & Bronchus	47	7.1%
4. Colorectal	46	7.0%
5. Thyroid	45	6.8%
6. Corpus & Uterus	44	6.7%
7. Lymphoma	41	6.2%
8. Kidney & Pelvis	22	3.3%
9. Myeloma	17	2.6%
10. Cervix Uteri	15	2.3%
11. Others	104	15.9%



The Cancer Registry at HIMA•San Pablo Oncologic Hospital is a detailed database of each tumor type diagnosed or treated at the Institution and it's a vital component of the Cancer Program. Continuous monitoring of the survivors and recurrence statistics of the conditions raises the standards of treatment and care for the cancer patients, as well as gathers data to launch new research and clinical trials.

## 2012 CANCER SITE REPORT

SITE	SEX		CLASS OF CASE		STATUS***		AJCC STAGE AT DIAGNOSIS (ONLY ANALYTIC CASES)						
	M	F	A*	NA**	ALIVE	EXP	0	I	II	III	IV	N/A ****	Unkn
<b>Total (1,395)</b>	737	658	1,292	103	1,301	94	50	267	138	103	111	214	409
<b>Oral Cavity &amp; Pharynx (55)</b>	44	11	46	9	52	3	0	1	2	6	23	1	13
<b>Digestive System (203)</b>	131	72	187	16	177	26	14	25	32	40	20	16	40
Esophagus (9)	7	2	7	2	7	2	1	1	2	2	1	0	0
Stomach (12)	7	5	10	2	11	1	2	2	1	3	0	0	2
Small Intestine (2)	1	1	2	0	2	0	0	0	0	1	0	0	1
Colon (83)	52	31	75	8	72	11	5	8	18	21	15	2	6
Rectum (39)	24	15	38	1	36	3	5	10	5	12	1	0	5
Liver (32)	26	6	29	3	25	7	0	3	0	0	3	5	18
Pancreas (7)	2	5	7	0	7	0	0	0	4	0	0	0	3
Other Digestive (19)	12	7	19	0	17	2	1	1	2	1	0	9	5
<b>Respiratory System(116)</b>	65	51	109	7	101	15	1	3	3	19	26	3	54
Lungs & Bronchus (95)	48	47	91	4	83	12	1	3	3	16	20	2	46
Larynx (13)	11	2	12	1	10	3	0	0	0	2	3	0	7
Other Respiratory (8)	6	2	6	2	8	0	0	0	0	1	3	1	1
<b>Soft Tissue (6)</b>	4	2	6	0	5	1	0	1	0	2	0	1	2
<b>Melanoma (9)</b>	8	1	7	2	7	2	0	3	1	0	1	0	2
<b>Breast (219)</b>	5	214	200	19	214	5	22	61	34	16	11	0	56
<b>Female Genital System (74)</b>	0	74	68	6	66	8	0	20	2	7	7	0	32
Cervix Uteri (15)	0	15	14	1	14	1	0	3	0	2	2	0	7
Corpus & Uterus (44)	0	44	42	2	41	3	0	14	2	3	1	0	22
Ovary (12)	0	12	9	3	9	3	0	2	0	2	3	0	2
Vagina (1)	0	1	1	0	1	0	0	0	0	0	0	0	1
Vulva (1)	0	1	1	0	1	0	0	1	0	0	0	0	0
Other (1)	0	1	1	0	0	1	0	0	0	0	1	0	0
<b>Male Genital System (304)</b>	304	0	290	14	300	4	0	63	54	6	6	0	161
Prostate(296)	296	0	282	14	293	3	0	61	54	4	6	0	157
Other (8)	8	0	8	0	7	1	0	2	0	2	0	0	4
<b>Urinary System (66)</b>	37	29	63	3	62	4	13	11	5	3	5	4	22
Bladder (20)	14	6	20	0	18	2	13	2	3	0	1	0	1
Kidney (44)	22	22	41	3	43	1	0	9	2	3	4	4	19
Other Urinary (2)	1	1	2	0	1	1	0	0	0	0	0	0	2
<b>Brain &amp; CNS (109)</b>	46	63	101	8	102	7	0	0	0	0	0	101	0
<b>Thyroid (60)</b>	15	45	55	5	60	0	0	42	0	3	1	0	9
<b>Lymphoma (72)</b>	31	41	69	3	62	10	0	37	5	1	10	2	14
Hodgkin (16)	6	10	15	1	15	1	0	5	3	0	0	1	6
Non-Hodgkin (56)	25	31	54	2	47	9	0	32	2	1	10	1	8
<b>Myeloma (32)</b>	15	17	23	9	31	1	0	0	0	0	0	23	0
<b>Leukemia (20)</b>	15	5	19	1	19	1	0	0	0	0	0	19	0
<b>Other (50)</b>	17	33	49	1	43	7	0	0	0	0	1	44	4

\*Analytic (A): diagnosed or received first course treatment at HIMA•San Pablo Oncologic Hospital.

\*\*Non-Analytic (NA): was not diagnosed or received first course treatment at HIMA•San Pablo Oncologic Hospital. (E.g. consults, recurrence, no treatment)

\*\*\* Status: data obtained from patients alive or expired from follow-up done till 6/27/13.

\*\*\*\* N/A: Not applicable

## TUMOR BOARDS

Mayra M. Collazo Castro, MD, CTR

HIMA•San Pablo Oncologic Hospital offers weekly *Tumor Boards*. During 2012, 41 *Tumor Boards* were given following National Treatment Guidelines and AJCC *Staging*. A total of 208 cases were presented, 87% of them prospectively, to a multidisciplinary panel of doctors and allied health professionals.

### SITES DISCUSSED (208 CASES)

<b>Oral Cavity &amp; Pharynx</b>	<b>10</b>	<b>Brain &amp; CNS</b>	<b>49</b>
<b>Digestive System</b>	<b>34</b>	<b>Female Genital System</b>	<b>8</b>
Esophagus	4	Cervix Uteri	1
Stomach	3	Corpus Uteri	2
Small Intestine	0	Other	5
Colon	15	<b>Male Genital System</b>	<b>2</b>
Rectum	8	Prostate	2
Liver	1	Other	0
Pancreas	1	<b>Urinary System</b>	<b>6</b>
Other	2	Bladder	0
<b>Respiratory System</b>	<b>8</b>	Kidney	5
Lung	8	Others	1
Larynx/ Others	0	<b>Thyroid</b>	<b>3</b>
<b>Soft Tissue</b>	<b>0</b>	<b>Lymphatic System</b>	<b>10</b>
<b>Skin-Melanoma</b>	<b>2</b>	<b>Hematological/Bone Marrow</b>	<b>20</b>
<b>Breast</b>	<b>56</b>		

### SPECIALIZED TUMOR BOARDS

The Specialized Tumor Boards are given weekly from 11:30 am to 1:30 pm.

- Breast Surgery – the first Thursday of each month
- Surgery & Medical Oncology – the first Monday of each month
- Neurosurgery and Head & Neck Surgery – the third Thursday of each month
- Pediatric Oncology – the last Thursday of each month
- Bone Marrow Transplant – every three months as announced

Every meeting is composed by a multidisciplinary panel that includes hematologist-oncologist, surgeons, radio-oncologist, radiologist, pathologist, nutritionist, speech therapist, nursing, social worker and psychosocial support.

### CONTINUING MEDICAL EDUCATION

Since November 2011, the Tumor Boards are accredited by *Accreditation Council for Continuing Medical Education (ACCME)* and *Junta de Licenciamiento y Disciplina Médica de Puerto Rico (JLDMPR)* with an a joined sponsorship of Universidad Central del Caribe School of Medicine (UCC) and the HIMA•San Pablo Oncologic Hospital. The Tumor Board was approved for 2 hours credit of Continuing Medical Education. During 2012, a total of 82 hours credits were offered to all our medical faculty physicians free of charge. A total of 47 doctors have benefited from this initiative increasing our required multidisciplinary attendance 96% on our last trimester.

# COMMUNITY OUTREACH

Maricarmen Ramirez Solá, MPHE

## HEALTH EDUCATION AND COMMUNITY OUTREACH DIVISION

The Health Education and Community Outreach Division of HIMA•San Pablo Oncologic Hospital was created in July 2011, with the recruitment of one Health Educator with a Master's Degree in Public Health Education.

## PREVENTION AND EARLY DETECTION INITIATIVES

### Breast Cancer Early Detection

An early detection clinic for breast cancer was conducted in October 2011. Mammograms and Sonomammograms were offered without medical insurance deductible. A total of 804 women were examined. Five of them (1%) were referred for follow up due to suspicious abnormalities. A 25% increase was observed in the amount of tests performed in October when compared with previous year.

### Lung Cancer Early Detection

Two clinics for lung cancer early detection were offered in November 2011 in collaboration with the Puerto Rico Lung Association. Free of charge Carbon Monoxide and Spirometry tests were offered to 45 people. One on one education and written material regarding lung cancer prevention and the risks of tobacco use were provided with test results. Two individuals (5%) were referred for follow up due to test results.

### Smoking Cessation Workshop and Early Screening Clinic for Oral Cavity Cancer

In collaboration with the PR Lung Association, on June, 2012 a smoking cessation workshop was offered to a total of 44 individuals. This workshop was followed

by a clinic for the early detection of cancer in the oral cavity. A group of 30 participants were examined. Forty percent of them (12) were smokers and 28% (8) were referred for follow up medical consultation.

### PSA Clinics

Three free of charge PSA (Prostate Specific Antigen Test) clinics were offered to males 40 years old or older during 2012. A total of 107 males were tested and due to high PSA blood levels, 4% (4) of them were referred for urologic follow-up testing. Counseling was offered to all participants regarding the purpose of the PSA blood test and the importance of the digital rectal examination (DRE) for the prevention of prostate cancer. Educational material in Spanish was provided to all participants.

## INITIATIVES FOR AWARENESS

### American Cancer Society Relay for Life



In March 2011, HIMA•San Pablo Caguas was represented for the first time in the American Cancer Society (ACS), Puerto Rico Chapter Annual Event: *Relay for Life*. A 24 hours walking event took place while education and counseling services were offered to cancer survivors, their relatives and the general public. HIMA•San Pablo Caguas was in charge of the Leukemia

Educational Program. Accordingly, HIMA•San Pablo medical staff offered talks presentations regarding leukemia in adults and children, nutrition and bone marrow transplants. During the main event, the Institution was recognized as First Place Corporate Fundraiser, winner of Best Patient Message & Tent Décor and Walking Consistency. The Institution employees raised a total **\$36,693.10** to the ACS.



In February 2012, the Institution participated for the second time in the ACS Relay for Life Event. A total of **\$41,288.64** was raised by the Hospital personnel and donated to the ACS. HIMA•San Pablo Caguas received three important recognitions during the event: First Place as Corporate Fundraiser, First Place for Best Patient Educational Tent and Walking Consistency.

### **My Wish: Art Exhibition**



In October 2011, a major art event took place at the hospital with an exhibition from the Puerto Rican Plastic Artist Maribel Pérez. A total of 15 art pieces, including oil paintings, acrylics and collages were included in “*My Wish*” exhibition. All pieces represented the artist point of view regarding the breast cancer experience and the female stereotyping in the contemporary world. The exhibition was announced and reviewed in local newspapers.

### **Breast Cancer Awareness**



“*My Wish*” served as an introduction to more than 12 educational activities performed both at the hospital and in the community in October 2011. Among them were conferences for health professionals, patients and their relatives as well as the general public regarding “Early Detection Strategies for Breast Cancer”, “Breast Cancer Surgery”, and “Nutrition Before, During and After Cancer Treatment”. A massive distribution of educational material was conducted in addition to survivorships meetings, and programs at local radio stations. Breast cancer educational messages were offered every Saturday at the institution radio program “*Salud Hoy*”, transmitted by WKAQ Radio Station. Activities were conducted in collaboration with Pink Power and Susan G. Komen of Puerto Rico, the PR Hematology and Medical Oncology Association, the American Cancer Society, the PR Hospital Association, Merck Pharmaceutical and Abbott Nutrition.

## **Pink for the Cure**



HIMA•San Pablo Oncologic Hospital was part of the breast awareness local event “Oncologists and Hospitals with Pink for the Cure”. During the main gala of the PR Hematology and Medical Oncology Association dated October 7, 2011 at the Sheraton Convention Center in Miramar, Puerto Rico, a simultaneous illumination of all participant hospitals was transmitted via satellite as an act of solidarity and support to all breast cancer prevention and awareness efforts made in the Island.

## **Lung Cancer Awareness**

In November 2011, an educational program for Lung Cancer Awareness was developed to provide training for the hospital’s nursing staff. Educational meetings for patients and relatives and the general public were also offered. Six main activities were offered including conferences and exhibitions of educational posters regarding cancer in the Head and Neck. Also, Lung Cancer Awareness messages were transmitted at the institution radio program “*Salud Hoy*”.

## **Exhibition of Educational Posters**

Following The ACS Cancer Awareness Monthly Schedule, poster exhibitions about Prostate and Ovarian Cancer, and Leukemia were offered at three main areas of the hospital. Educational Table Tops were offered with snacks and written educational material available to participants. One on one counseling was provided to 93 individuals.

## **The Health Hints Project**

An educational project was initiated in September 2011 through the HIMA•San Pablo web pages in Facebook and Twitter. The project started with short cancer awareness and prevention messages related to breast and lung cancer, diet and nutrition and exercise. Statistics for September 2011 showed that 1,842 people read the messages and 70% of them responded with positive comments. Data from 2011 fourth quarter showed that a total of 4,961 people contacted HIMA•San Pablo web pages. The project was established on a permanent basis.

## **First Colorectal Cancer & Ostomy Educational Fair**

The First Colorectal Cancer & Ostomy Educational Fair was held at the hospital in October, 2012 with the collaboration of more than twelve organizations: the PR American Cancer Society, the PR Coalition for Cancer Control, the PR Gastroenterology Association, the PR Cancer Control Program, LifeLink and ConvaTec, Sanofi PR, Smith & Nephew and Abbott Nutrition, within others. Educational talks were offered every hour to more than 350 individuals. Educational tours were offered to participants through the Caribe Colon exhibit. Educational material was distributed and clinics for nutritional evaluation and blood pressure and glucose level tests were offered free of charge.

## **SURVIVORSHIP AND SUPPORT**

### **Support Groups**



On September 2011, HIMA•San Pablo Oncologic Hospital started a Survivorship Meeting Program. Nine (9) meetings were conducted for 51 adults' cancer patients and caretakers. Meetings were offered twice a month (the first and third Tuesday every month). Cancer survivors with leadership's skills were invited to speak to other patients.

### **Radiotherapy Education Program**



Also in September 2011, a Radiotherapy Education Program was established permanently for patients and relatives at the Robotic Radio Surgery Area. Meetings were conducted once a week every Wednesday. During meetings, the following areas were discussed: The Radiotherapy Treatment and its Clinical Uses; Five Stages of Treatment, Possible Side Effects, Positive Way to Deal with Side Effects, and Tips for a Healthy Diet. Fifteen meetings with a total of 110 participants were completed. At the end of every meeting written material about cancer and the radiotherapy treatment was provided to participants according to their diagnosis and specific needs.

### **Education and Individual Counseling**

A Health Education Program was established to provide health counseling to individuals, family members, spouses, caretakers and significant others in private. Education and counseling services regarding the cancer treatments, side effects, nutrition, emotional distress, changes in family routines, coping skills, among others, are discussed. Referrals for further psychological and practical support services were provided through the ACS, the PR Ostomized Association and other community organizations. Coordination for breast and hair prosthesis, economic support for transportation, medical expenses and home care services were completed. A total of 31 people were individually assisted.

### **Hope Panel**



In July 2012 a special panel was held with adolescent cancer survivors from Hogar de Niños que Quieren Sonreir. Panelists shared their personal experience with a total of 35 individuals with whom they discussed how they coped and overcame a cancer diagnosis.

## QUALITY IMPROVEMENT MEASURES 2011

### **Management, preparation, storage and safe administration of chemotherapy and prevention of spills**

The personnel's compliance with the management, preparation, storage and safe administration of the chemotherapy and the prevention of spills has been supervised and evaluated as well as the personnel's compliance with the protocol for the safe disposal of chemotherapy waste.

The personnel complied 100% with the criteria of evaluation and the indicators selected.

A Seminar about the Safe Administration of Chemotherapy was held for the nursing personnel.

A *Fishbone Method* was used to identify the possible causes or factors that could affect the management, preparation, storage and safe administration of chemotherapy.

### **Management and Care of Patients with Tracheotomy**

The nursing personnel of the oncology units attended a seminar about the "*Management and Care of Patients with Tracheotomy*". In coordination with Respiratory Therapy a seminar was offered on how to manage and suction the cancer patient with tracheotomy during studies and treatments.

The competencies and the practice standards of the oncology nurses have been defined.

## QUALITY IMPROVEMENT MEASURES 2012

### **Patient Satisfaction**

A questionnaire was designed and administered to assess the level of oncology patient satisfaction with clinical and supportive services at HIMA•San Pablo Oncology Hospital. From June to November, 2012 a total of 350 patients were surveyed to comply with the following objectives:

1. To measure patient level satisfaction with services provided;
2. To identify obstacles in services and areas of improvement;
3. To develop corrective measures and action plans accordingly, and
4. To monitor on a permanent basis quality standards of care.

According to the data gathered 97% of patients surveyed reported a high level of satisfaction.

### **Follow up Plan for Patient Who Did Not Completed Radiotherapy**

From May to November 2012 a total of 45 cancer patients who did not completed treatment plans were contacted by the Quality Service Coordinator. They were interviewed and encouraged to return for treatment. Results after follow up interventions showed that 44% of patients returned for treatment.

### **The Clinical Goal of Certification of the Oncology Nursing was established and accomplished.**

Three professional nurses of the oncology units finished the courses for the Certification

of Oncology Nursing (CON). Our objective is to continue with the plan of certification of all the oncology nurses.

**The Programmatic Goal of the Oncology Seminar was established and accomplished.**



An Oncology Seminar was developed and offered regarding the Clinical Interventions in the care and management of cancer patients in which 20 employees from different work units participated. It was a five day course that offered about 35 conferences, workshops, and activities related with the cancer practice.

As our goal we have established to continue offering these seminars to increase the amount of employees in our Institution with this specialized knowledge.



# ONCOLOGY NURSING AND PATIENT SERVICES

*Marie Claudio Rivera, RN, BSN, CON*

## **Oncology Nursing**

The HIMA•San Pablo Oncologic Hospital has appointed Mrs. Marie Claudio Rivera, Professional Nurse specialized in Oncology, as Manager of the Oncology Services and Mrs. Raquel Carbonell, Professional Nurse specialized in Oncology, as the Adult Oncology Unit and Bone Marrow Transplant Supervisor.

The nursing personnel that offer services in the oncology units have been trained in the administration of chemotherapy and annually attend an internal oncology course. The oncology personnel require special skills which include experience in management of intensive care, counseling and family education.

With training and experience we have accomplished that our oncology nurses acquire a wider knowledge of the challenges that families endure when a close relative is diagnosed with cancer.

These specialized services not only help treat the patients, but also help identify the necessities for the individualized care and support through the treatment process for the patient and the family as one unit. This culture of centralized care of patient-family promotes the inclusion of the primary caregivers in decision making related to the patient's interventions when required.

## **Patient Navigator**

Mrs. Jaluxmi Villegas, Professional Nurse and Case Manager is available to provide quality care for hospitalized and ambulatory patients from the moment in which they are referred to receive services. This nurse assists the patient in the following:

- Access services of oncology care
- Management and solution of appointment related issues
- Orientation and education to patients and caregivers
- Referrals to community resources
- Appointments for studies and laboratories for diagnosis
- Authorizations from health insurance and catastrophic funds
- Assists patients who come to appointments, laboratories or studies if they need any help.

## **Program for Palliative Care and Psychosocial Services**

Oncology patients of any age and in all stages of diagnosis and treatment can have access to palliative care and psychosocial services support. The Oncology Social Worker is available to assist patients with psychosocial necessities related to the diagnosis, treatment or survivorship issues. The Social worker makes an initial assessment and establishes a plan of care.

## **Resources and Support Services for Cancer Patients**

- A Program for Palliative Care and Psychosocial Services was developed.
- An instrument for initial assessment of the psychosocial necessities and measure the levels of tension in the patients was developed.
- A Multidisciplinary Committee for oncology patients was constituted.
- A program that offers educational orientations for patients and relatives by Oncology nurses was established.
- Support Groups for adult and pediatric patients were established.



**Hospital**  
**HIMA•San Pablo**  

---

**Oncológico**

**CLINICAL REASERCH ABSTRACTS**

## Validation of Patient Health Questionnaire (PHQ-9) for Depression in Puerto Rican Cancer Patients

**Authors:** Maricarmen Ramírez-Solá<sup>1</sup>, Marian Núñez-Sierra<sup>2</sup>, Juan Carlos Zevallos<sup>3</sup>

**Affiliations:** <sup>1</sup>Health Education & Community Outreach Division, HIMA•San Pablo Oncologic Hospital, Caguas, Puerto Rico; <sup>2</sup>Clinical Research Division, HIMA•San Pablo Oncologic Hospital, Caguas, Puerto Rico, <sup>3</sup>Division of Medical Research.

### Abstract

**Introduction:** The National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines emphasize the importance of screening and early detection of emotional distress in cancer patients. Patient emotional assessment is an essential step in the comprehensive clinical approach to the disease.

**Objective:** To conduct a pilot study to validate the PHQ-9 as a brief and comprehensive tool to estimate depression levels in Puerto Rican cancer patients.

**Methodology:** A sample of 41 Puerto Rican adults with a primary cancer diagnosis were recruited at the ambulatory care center of the HIMA•San Pablo Oncologic Hospital. All patients were interviewed using Spanish versions of the PHQ-9 and the Beck Depression Inventory (IDB-R), which was used as gold standard measure. Data analyses were performed with STATA™ v.12 statistical package and descriptive statistics were performed on demographics. The Cronbach's alpha reliability coefficient was calculated to determine internal consistency between PHQ-9 and IDR-R.

**Demographics:** All participants were Puerto Rican Spanish speakers with an overall median age of 61 years. Approximately half (53%) were males. Thirty percent had Reforma Health Insurance, 35% had less than high school, and 10% were unemployed. All were incident cancer cases; five out of ten women and six out of ten men had breast or prostate cancer, respectively. Prostate 37% (15), Breast 22% (9), Head & Neck 15% (6), Cervix 7% (3), Colorectal 7% (3) and Others 12% (5).

### Results

**Instrument Validation:** PHQ-9 internal consistency was high (Cronbach's  $\alpha = 0.83$ ). The scale reliability coefficient between the PHQ-9 and the IDB-R was 95.5%, suggesting an excellent internal consistency.

**Implications and Impact:** Educational and psychological interventions are essential to improve quality patient care. As suggested by the Cronbach's alpha and the scale reliability coefficient results, the PHQ-9 will help assess levels of emotional distress for the development of accurate action plans for Puerto Rican cancer patients.

**References:** Grant, M.M. (In press). Beck Anxiety Inventory. In Goldstein, S. & Naglieri, J., Eds., Encyclopedia of Child Behavior and Development. Springer, New York.

## Title: Gene expression profiles of HPV-positive and HPV-negative oropharyngeal cancer patients in Puerto Rico

**Authors:** Erick Suarez, Lorena Gonzalez, Carlos Perez-Mitchell, Maricarmen Ramirez-Sola, Jaime Acosta, Mercedes Y. Lacourt, Raul Bernabe-Dones, Carmen Cadilla, Luis E. Ferrer and Ana P. Ortiz

**Affiliations:** Department of Biostatistics and Epidemiology, Graduate School of Public Health, Medical Sciences Campus, University of Puerto Rico, San Juan, PR; UPR/MDACC Partnership in Excellence in Cancer Research Program, School of Medicine, Medical Sciences Campus, University of Puerto Rico, San Juan, PR; Center for Cranial Base, Head and Neck Surgery, HIMA•San Pablo Oncologic Hospital, Caguas, PR; Department of Otolaryngology, School of Medicine, Medical Sciences Campus, University of Puerto Rico, San Juan, PR; Cancer Control and Population Sciences Program, University of Puerto Rico Comprehensive Cancer Center, San Juan, PR; Department of Biochemistry, School of Medicine, Medical Sciences Campus, University of Puerto Rico, San Juan, PR; Hato Rey Pathology Associates, Inc, HIMA•San Pablo Caguas, PR.

### Abstract

**Objective:** Molecular and epidemiological profiles suggest that HPV-positive oropharyngeal cancer is a distinctive disease entity that differs from HPV-negative oropharyngeal cancer, with different genome-wide expression profiles and clinical outcomes. We aimed to assess the difference in gene expression between HPV-positive and HPV-negative oropharyngeal cancer patients in Puerto Rico.

**Method:** A total of 10 oropharyngeal cancer cases will be recruited in this case-comparison pilot study. High-risk HPV infection (hr-HPV-16) status will be determined using a Nested PCR to classify cases as hr-HPV-positive or hr-HPV-negative. Also, an immunohistochemical analysis of p16INK4a expression will be performed. Microarrays data analysis will be performed to assess differential gene expression using the permutation method. To validate the top differential gene expression identified by microarrays analysis, we will use qRT-PCR. The q-value will be estimated to control the false discovery rate. A candidate gene list will be prepared to perform pathway analyses to assess which biological functions were affected.

**Results:** Our preliminary results showed that cases had a median age of 51.5 among those positive to p-16INK4a and 65 among those negative to p-16INK4a. As of yet, all the recruited cases are squamous cell carcinomas from the base of the tongue (57.1%), tonsils (28.6%), and oropharynx (14.3%). Among the cases that have been analyzed for p-16INK4a 57.1% showed to be positive. Since batch effects could affect our results, gene expression analysis outcomes are not shown for preliminary data.

**Implications and Impact:** Different pathways will be presented in this study to determine the differences between HPV-positive and HPV-negative oropharyngeal cancer in Puerto Rico for better understand the etiology of this disease. Our results may have potential translational implications for the prevention and treatment. Future studies are warranted to investigate the possibility of using HPV as a guide for the management of oropharyngeal cancer.

## Title: Incidence rates of HPV -related and -unrelated oral squamous cell carcinoma in Puerto Rico and the United States, 1992-2005

**Authors:** Lorena González, Ana P. Ortiz, Marievelisse Soto-Salgado, Karen Ortiz-Ortiz, Carlos Pérez-Mitchell and Erick Suárez

**Affiliations:** UPR/MDACC Partnership in Excellence in Cancer Research Program, School of Medicine, Medical Sciences Campus, University of Puerto Rico, San Juan, PR; Cancer Control and Population Sciences Program, University of Puerto Rico Comprehensive Cancer Center, San Juan, PR; Department of Biostatistics and Epidemiology, Graduate School of Public Health, Medical Sciences Campus, University of Puerto Rico, San Juan, PR; Puerto Rico Central Cancer Registry, Cancer Control and Population Sciences Program, University of Puerto Rico Comprehensive Cancer Center, San Juan, PR; Department of Otolaryngology, School of Medicine, Medical Sciences Campus, University of Puerto Rico, San Juan, PR; Center for Cranial Base, Head and Neck Surgery, HIMA•San Pablo Oncologic Hospital, Caguas, PR.

### Abstract:

**Objective:** Recent studies suggest a higher burden of oral and pharyngeal cancers in Puerto Rico as compared to the United States, but data on the specific burden of human papilloma virus (HPV)–related oral squamous cell carcinoma (OSCC) is inexistent for Puerto Rico. We aimed to compare the incidence of HPV–related and –unrelated OSCC in Puerto Rico with that for Hispanics (USH), non-Hispanic Whites (NHW), and non-Hispanic Blacks (NHB) in the United States for the 1992–2005 period.

**Methods:** Data from the Puerto Rico Central Cancer Registry and the United States Surveillance, Epidemiology and End Results (SEER) program was analyzed. We applied the direct method to compute the age-standardized incidence rates (ASR) (World Standard Population) for HPV–related and –unrelated OSCC sites for 1992–1996, 1997–2000, and 2001–2005 periods. ASR annual percent changes were computed, from 1992 to 2005, using the SEER join point regression program 3.5.2. The standardized rate ratios (SRR) were estimated with 95% confidence intervals (CI) using the Poisson regression model.

**Results:** In PR, the ASR among men ranged from 9 to 13 (per 100,000) and among women ranged from 1.2 to 1.7 (per 100,000) between periods for HPV–related OSCC. The incidence of HPV–related and –unrelated OSCC decreased significantly for all racial/ethnic groups, except for HPV–related OSCC among NHW men (APC=3.73;  $P<0.05$ ). From 2001–2005, higher incidence rates of HPV–related and –unrelated OSCC were observed for men as compared to women ( $P<0.05$ ); PR showed the major difference among HPV–related (SRR<sub>men vs women</sub>: 6.57, 95%CI: 5.05, 8.75) and HPV–unrelated (SRR<sub>men vs women</sub>: 6.23; 95%CI: 5.19, 7.58) disease. For the same period, PR men showed higher incidence of HPV–related OSCC than USH men (SRR<sub>PR vs USH</sub>: 1.51, 95%CI: 1.28, 1.78), but lower than NHW and NHB men, respectively ( $P<0.05$ ). Also, PR men had higher incidence of HPV–unrelated OSCC than NHW and USH men ( $P<0.05$ ). Among women, PR consistently showed incidence than any other US racial/ethnic group.

**Implications and Impact:** HPV–related and –unrelated OSCC incidence rates differed by sex and racial/ethnic groups studied. Results suggest differences in HPV infection and in lifestyles, such sexual behaviors, smoking, and alcohol consumption across these groups. Future studies should evaluate the reasons for these differing patterns of disease burden, as well as the impact of HPV vaccination in OSCC incidence trends. This study provides the baseline data for future studies focused on OSCC prevention and control in PR.



**Hospital**  
**HIMA•San Pablo**  

---

**Oncológico**

**SPECIAL STUDIES**

# DEMOGRAPHIC PROFILE OF PATIENTS IN RADIOTHERAPY

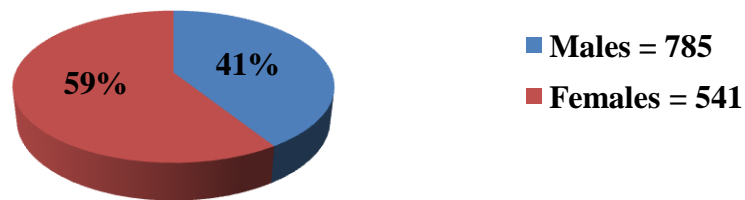
*Maricarmen Ramírez Solá, MPHE*

An analysis of demographic data of all individuals receiving services at the Radiotherapy Area from January 1 to December 31, 2010 was completed to develop a profile of the oncology population assisted in this area. Demographic data of all patients in consultation, neoadjuvant and adjuvant treatments or follow up was reviewed. Four variables were analyzed: gender, age, city of residence and diagnosis.

## GENDER DISTRIBUTION

Regarding gender distribution, from a total of 1,326 patients 59% (785) of individuals receiving services were males while 41% (541) were females. This tendency was similar to the gender distribution observed in statistics from the PR Central Cancer Registry. According to the Cancer Report for years 2004-2009, a total of 12,906 new cancer cases were reported in PR in 2009. Of them, men represented 53.4% (6,898) while females represented 46.6% (6,008).

**Gender Distribution  
Patients Receiving Services  
Radiotherapy Area - 2010  
N = 1,326**



## AGE DISTRIBUTION

In terms of age distribution it was found that 98% of all patients (833) were adults over 20 years old and 2% (13) were pediatric patients 19 years old or younger. Patients between 60 and 69 years old represented 35% (293), patients between 70 and 79 years old represented 26% (222), while a 17% (147) of them represented patients between 50 and 59 years old.

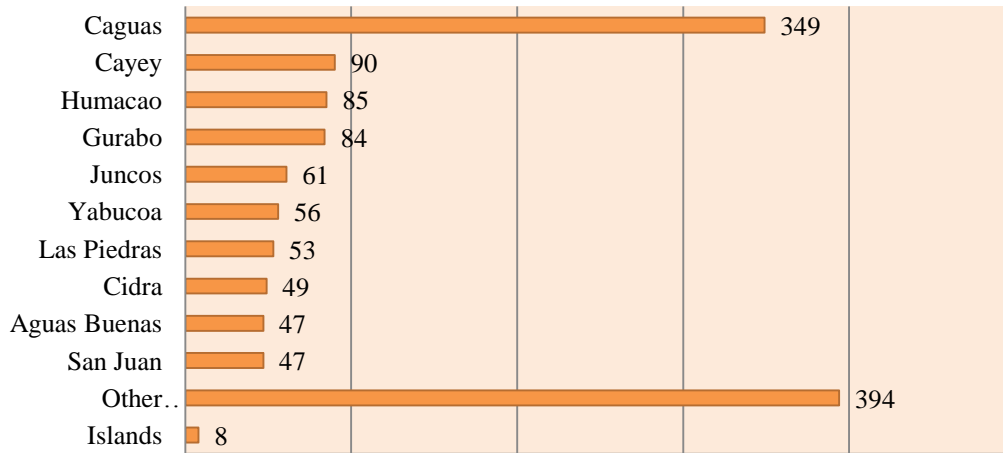
**Distribution by Age  
Patients Receiving Services  
Radiotherapy Area - 2010  
N = 846**

<u>Age Group</u>	<u>Total Patients</u>	<u>Percent</u>
0-9	5	0.6%
10-19	8	0.9%
20-29	8	0.9%
30-39	27	3.2%
40-49	62	7.3%
50-59	147	17.4%
60-69	293	34.6%
70-79	222	26.2%
80-89	69	8.2%
90+	5	0.6%
<b>Total:</b>	<b>846</b>	<b>100.0%</b>

**DISTRIBUTION BY PLACE OF RESIDENCE**

Twenty six percent of all patients (349) reported Caguas municipality as their place of residence while 40% (525) reported coming from bordering municipalities such as: Cayey, Humacao, Gurabo, Yabucoa, Juncos, Las Piedras, Cidra y Aguas Buenas. Of all patients, 4% (47) were living in the San Juan Metropolitan area including Hato Rey, Río Piedras and Santurce. Finally, eight patients (1%) reported coming from Dominican Republic, St. Croix, St. Thomas, Tortola and Nevis Island.

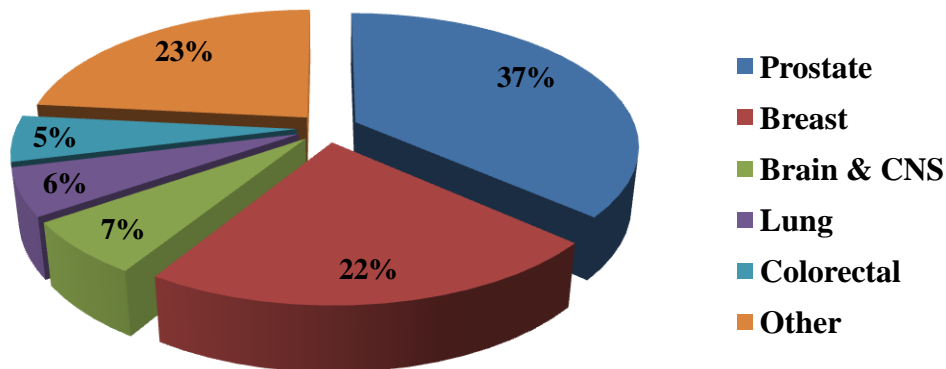
**Distribution by Place of Residence  
Patients Receiving Services  
Radiotherapy Area – 2010  
N = 1,323**



**DISTRIBUTION BY PRIMARY DIAGNOSIS**

Thirty seven percent (485) of all patients receiving services at the Radiotherapy area of HIMA•San Pablo Oncologic Hospital in 2010, reported a prostate cancer diagnosis. Also 22% reported breast cancer diagnosis (297), 7% Brain and CNS cancer diagnosis (86), 6% lung cancer (76) as well as 5% colorectal cancer diagnosis.

**Distribution by Primary Diagnosis  
Patients Receiving Services  
Radiotherapy Area – 2010  
N = 1,323**



\* *Others: Refers to the sum of all other cancer diagnosis.*



# NEED ASSESSMENT STUDY

*Maricarmen Ramírez Solá, MPHE*

A survey was completed at the HIMA•San Pablo Oncologic Hospital in November 2011. A sample of 75 individuals were recruited in six major areas: Radiotherapy 45% (34), Chemotherapy 25% (19), Nuclear Medicine 13% (10), Pediatric Oncology – Ambulatory Service 8% (6), Adult Oncology – Hospitalization Service 5% (4), Bone Marrow Transplant 1% (1). All of them were interviewed with open-ended questions using two questionnaires, one for patients and one for relatives and caretakers.

Questions related to demographics, cancer medical history, feelings toward diagnosis and treatments were included. The level of personal disposition toward receiving emotional support services if available was also assessed. Likewise, questions regarding the level of knowledge related to cancer and its treatment and related to sources of information were asked.

The assessment study had two main objectives: 1) to develop a better profile of the population served at HIMA•San Pablo Oncologic Hospital, and 2) to identify priorities for which educational and emotional support services needed to be provided.

## Results

From a total of 75 participants, 69% (52) were patients either hospitalized or in ambulatory care. Thirty one percent (23) of those interviewed were relatives or caretakers.

**Table 1: Patients Distribution, Need Assessment Study – 2011**

INFORMANT	SUB TOTAL	PERCENT
Patient	52	69 %
Spouse	4	5 %
Relative	19	25 %
<b>Total:</b>	<b>75</b>	<b>100 %</b>

In terms of gender distribution, twenty eight percent (21) were males and 72% (54) were women. Participants were recruited by availability. It was noticed that women were easier for recruitment.

**Table 2: Gender Distribution, Need Assessment Study – 2011**

GENDER	SUB TOTAL	PERCENT
Male	21	28 %
Female	54	72 %
<b>TOTAL:</b>	<b>75</b>	<b>100 %</b>

In terms of age distribution it was found that 24% of participants (18) were between the ages of 41 and 50, 22% (17) reported being between 61 and 70, and 16% or 12 people reported ages between 51 and 60 years old or older than 71. Participants' median age was 54 years old.

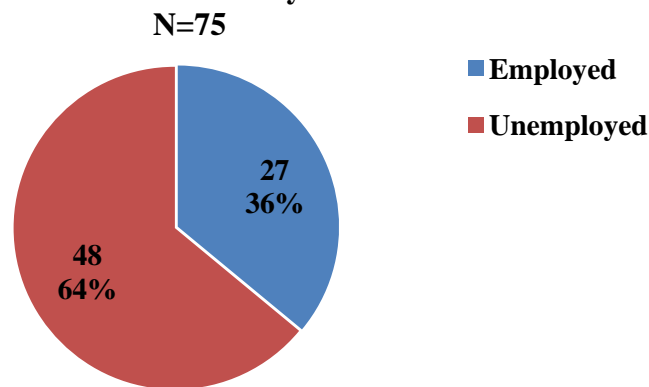
**Table 3: Age Distribution, Need Assessment Study – 2011**

AGE	SUB TOTAL	PERCENT
< 10	0	0
11 – 20	2	3 %
21 – 30	5	7 %
31 – 40	9	12%
41 – 50	18	24 %
51 – 60	12	16 %
61 – 70	17	22 %
> 71	12	16 %
<b>TOTAL:</b>	<b>75</b>	<b>100 %</b>

Sixty two percent of all participants (46) lived in rural areas while 38% (28) were living in urban sectors. All participants were Puerto Ricans.

In terms of employment status, only 36% (27) of participants were employed. Sixty four percent of them (46) were unemployed under the following categories: housekeeper (21%), laid off (1%), retiree (32%), pensioner (7%) or college student (3%).

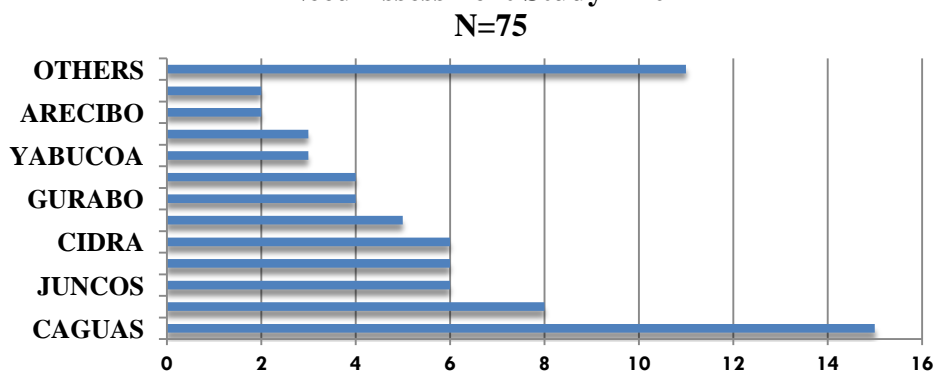
**Graphic 1: Distribution by Status of Employment  
Need Assessment Study – 2011**



Type of employment between people who reported having a job or being unemployed but with previous job experience (N = 57), was analyzed. It was found that 52% (29) reported to be enrolled in professional positions which required a college degree while forty eight percent or 27 people reported clerical or vocational job experiences. This information may be considered as an indication of the level of education of informants. Further information is needed to validate this presumption.

When asking about place of city of residence it was found that 20% (15) of all participants were living in the municipality of Caguas and 80% (60) were living in bordering cities.

**Graphic 2: Distribution by City of Residence  
Need Assessment Study – 2011**



*Caguas (15), Las Piedras (8), Juncos (6), Cayey (6), Cidra (6), San Lorenzo (5), Gurabo (4), Humacao (4), Yabucoa (3), Ponce (3), Arecibo (2), Carolina (2). 'Otros' se refiere a: Sábana Grande (1), San Germán (1), Mayagüez (1), Aguas Buenas (1), Comerío (1), Fajardo (1), Naguabo (1), Bayamón (1), Canóvanas (1), Río Piedras (1) y Santurce (1).*

Participants were asked about primary cancer diagnosis either if they were struggling with the condition as patients or as relatives or caretakers. In this respect it was found that 28% (21) were struggling with breast cancer, 13% (10) with prostate cancer and 12% (9) were dealing with colorectal cancer.

**Table 4: Distribution by Cancer Diagnosis, Need Assessment Study – 2011**

PRIMARY DIAGNOSIS	SUB TOTAL	PERCENT
Brain & CNS	4	5%
Cervical	5	7 %
Colorectal	9	12 %
Esophagus	3	4 %
Hodgkin Lymphoma	3	4 %
Prostate	10	13 %
Lung	3	4 %
Thyroid	6	8 %
Breast	21	28 %
Diagnosis to be determined	2	3 %
Others*	9*	12 % *
<b>Total:</b>	<b>75</b>	<b>100 %</b>

\* *Others include: Bone, Leukemia, Non-Hodgkin Lymphoma & Pelvic.*

When participants were asked how they were feeling emotionally, 76% (57) reported being feeling “well”, 20% (15) reported feeling “soso” and 4% (3) were feeling “bad” or not available

to speak about the matter. In certain cases contradiction was observed between verbal answers and non-verbal messages which may be an indication of certain levels of distress.

An ordinal scale was used to assess levels of knowledge about cancer and treatments (i.e. complete, partial, or none). In this regard it was found that most participants showed “partial knowledge” about both matters, 53% and 40% respectively. A bigger percent of them showed more knowledge regarding the disease.

**Table 5: Level of Knowledge, Need Assessment Study – 2011**

	COMPLETE	PARTIAL	NONE	NO ANSWER	N/A	TOTAL
<b>Knowledge About cancer</b>	29 (39%)	40 (53%)	5 (7%)	1 (1%)	---	75 (100%)
<b>Knowledge about treatment</b>	17 (23%)	30 (40%)	16 (21%)	6 (8%)	6 (8%)	75 (100%)

When asked about sources of information, 71% of informants (53) reported they got their knowledge from physicians or nurses. That means that health professionals in direct contact with patients, relatives and caretakers were having an important role as health educators. Seventeen percent (13) reported having other sources of information such as the internet, written material, television or friends who were cancer survivors.

On the other hand, 69% or 52 informants reported knowing what a support group was and its purpose. Sixty percent of them (45) expressed interest to participate in support group meetings but none of them were active in a group.

As a final question, participants were asked their level of satisfaction with services provided at HIMA•San Pablo Oncologic Hospital. Of all participants, ninety seven percent (73) were “very satisfied”. Two people or 3% of informants did not comment of their level of satisfaction.

## **Discussion**

In summary, participants can be described as Puerto Rican adults in productive or retirement ages who were struggling with a breast or prostate cancer diagnosis, unemployed, and living in a rural area of Caguas or a bordering city.

The majority of them reported a “good” emotional state of mind. They showed basic knowledge regarding cancer and its treatment when providing answers that reflected “complete” or “partial” level of knowledge. The majority of them counted with family support and expressed being receptive to emotional support services. Although the group surveyed was composed primarily of adults, a future survey of the pediatric population is not discarded.

## CANCER COMMITTEE MEMBERSHIP

### **Chairman**

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

### **Administration**

Claudia V. Guzmán Rivera, JD, MHSA  
Executive Director, HIMA•San Pablo  
Oncologic Hospital

### **Cancer Liaison Physician**

Ramón K. Sotomayor, MD, FACS  
Chief, Surgical Oncology

### **Cancer Registry Quality Coordinator**

Mayra M. Collazo Castro, MD, CTR  
Cancer Tumor Registrar

### **Community Outreach Coordinator**

Maricarmen Ramírez Solá, MPHE  
Health Educator

### **Psychosocial Services Coordinator**

Maribel Delgado Colón, MSW  
Social Worker

### **Quality Improvement Coordinator**

Carlos A. Díaz Alicea, BBA, RT

### **Clinical Research Coordinator**

Marian De L. Núñez Sierra, MPHE

### **Cancer Conference Coordinator**

Norma R. Salgado Vila, MD  
Director, Bone Marrow Transplant Unit

### **Patient Navigator**

Jaluxmi Villegas Meléndez, RN, BSN  
Case Manager

Marie Claudio Rivera, RN, BSN, CON  
Oncology Services Nurse Manager

Raquel Carbonell Morales, RN, BSN, CON  
Pediatric Oncology Services Nurse Supervisor

Daisy González, RN, BSN  
Adult Oncology Services Nurse Supervisor

Jesús M. Vidal Palau, MD  
Director, Nuclear Medicine

Mario J. Polo Asenjo, MD  
Neuroradiology & Neurointerventional  
Surgery

José R. Santana Rabell, MD, CTR  
Radiation Medicine

Carlos E. Pérez Mitchell, MD  
Head & Neck Surgery and TORS

Luis E. Ferrer Torres, MD, FACP  
Director, Anatomic & Clinical Pathology

Víctor F. Rodríguez Maderas, MD  
Anesthesiology & Pain Management

Juan Carlos Zevallos, MD  
Director, Medical Clinical Research

Maribel Torres Serrant, MD  
Pediatric Hematology & Oncology

Iris Rodríguez Camacho, MHSN, LND, RD  
Nutritionist

## MEDICAL FACULTY

### ONCOLOGY

Carlos E. Méndez Serrano, MD  
American Board of Internal Medicine  
American Board of Medical Oncology  
American Board of Hematology  
(787) 744-8686

David E. Blás Boria, MD  
Neuro-oncologist  
American Board of Neurology  
(787) 653-1300

Edgardo J. Rodríguez Monge, MD  
Medical Director, HIMA•San Pablo  
Oncologic Hospital & Chairman of Cancer  
Committee  
(787) 744-8686

Evelyn M. Fonseca Rivera, MD  
Hematology & Oncology  
(787) 258-5858

José Fernández Chávez, MD  
American Board of Internal Medicine  
American Board of Medical Oncology  
American Board of Hematology  
(787) 961-4888

Juan Cintrón López, MD  
(787) 743-3437

Karen J. Santiago Ríos, MD  
American Board of Internal Medicine  
American Board of Medical Oncology  
American Board of Hematology  
(787) 739-9922

Liza Paulo Malave, MD  
American Board of Internal Medicine  
American Board of Oncology  
(787) 744-8686

María V. García Pallas, MD  
American Board of Internal Medicine  
American Board of Medical Oncology  
American Board of Hematology  
(787) 961-4888

Norma R. Salgado Vila, MD  
Director, Bone Marrow Transplant Unit  
American Board of Internal Medicine  
American Board of Hematology  
(787) 653-1300

Omayra L. González Rodríguez, MD  
American Board of Internal Medicine  
American Board of Hematology  
(787) 961-4888

Vivian B. Díaz Meléndez, MD  
American Board of Internal Medicine  
(787) 739-9922

Yazmín Corujo Sánchez, MD  
Hematology & Oncology  
(787) 744-8686

### PEDIATRIC ONCOLOGY

Dennis A. Borrero Ramos, MD  
Pediatric Hematology & Oncology  
American Board of Pediatrics  
(787) 653-3434 Ext. 7725

Jhon A. Guerra Moreno, MD, FAAP  
Director, Pediatric Hematology & Oncology  
Bone Marrow Transplant  
American Board of Pediatrics  
American Board of Hematology & Oncology  
(787) 653-3434 Ext. 7725

María E. Echevarría Escudero, MD  
Pediatric Neuro-Oncology  
American Board of Pediatrics  
American Board of Hematology & Oncology  
(787) 653-3434 Ext. 7725

Maribel Torres Serrant, MD  
Pediatric Hematology & Oncology  
American Board of Pediatrics  
(787) 653-3434 Ext. 7725

### **RADIATION MEDICINE**

Carlos M. Chévere Mouriño, MD  
Medical Director, Radiation Medicine  
(787) 653-1300

José R. Santana Rabell, MD, CTR  
American Board of Radiology  
(787) 653-1300

Julio J. Díaz Padilla, MD  
Radiation Medicine  
(787) 653-1300

Ricardo López Mujica, MD  
American Board of Radiology  
(787) 653-1300

### **NUCLEAR MEDICINE**

Jesús M. Vidal Palau, MD  
Director, Nuclear Medicine  
(787) 653-3434 Ext. 1310

### **RADIOLOGY**

Darian Matissen  
Interventional Radiology  
(787) 653-3434 Ext. 2509

Jesús Buonomo Dávila  
Interventional Radiology  
(787) 653-3434 Ext. 2509

José L. Valderrabanos Marina, MD  
Director, Radiology Service  
American Board of Radiology  
(787) 653-3434 Ext. 1440

María A. Muns García, MD  
American Board of Radiology  
(787) 653-3434 Ext. 1440

Mario J. Polo Asenjo, MD  
Neuroradiology &  
Neurointerventional Surgery  
American Board of Radiology  
(787) 653-3434 Ext. 2132/2133

Ricardo Cruzado Ceballos  
Interventional Radiology  
American Board of Radiology  
(787) 653-3434 Ext. 1690

### **PATHOLOGY**

Juan L. Pérez Berenguer, MD  
Neuropathology  
American Board of Pathology  
(787) 653-3434 Ext. 1291

Luis E. Ferrer Torres, MD, FACP  
Director, Anatomic & Clinical Pathology  
American Board of Pathology  
(787) 653-3434 Ext. 1291

### **SURGERY**

Andrés Guerrero Rodríguez, MD, FACS  
Chief, Surgery Department  
American Board of Surgery  
American Board of Surgical Critical Care  
(787) 961-4211

Bolívar Arboleda Osorio, MD, FACS  
Breast Surgery  
American Board of Surgery  
(787) 961-4211

Carlos E. Pérez Mitchell, MD  
Head & Neck Surgery and TORS  
American Board of Otolaryngology  
(787) 653-1300

Diana Avilés Castillo, MD  
Plastic & Reconstructive Surgery  
(787) 653-3439

Juan Carlos López de Victoria, MD  
American Board of Surgery  
(787) 653-3126

Juan José Díaz Hernández, MD  
American Board of Surgery  
(787) 745-2730

Luis A. Aponte López, MD  
Vascular Surgery  
American Board of Surgery  
(787) 745-2730

Luis J. Almodóvar Fábregas, MD  
Oncologic Neurosurgery  
(787) 653-1300

Manuel R. Gracia Ramis, MD  
American Board of Surgery  
(787) 653-3126

Michelangelo Santiago Sánchez, MD  
American Board of Surgery  
(787) 653-3126

Ramón K. Sotomayor, MD, FACS  
Chief, Surgical Oncology  
Cancer Liaison Physician  
American Board of Surgery  
(787) 961-4211

Víctor B. Malave Rolón, MD  
American Board of Surgery  
(787) 600-4404

## **UROLOGY**

Alvin López Pujals, MD  
American Board of Urology  
(787) 744-0509

Antonio Yulian Valentín, MD  
American Board of Urology  
(787) 744-0670

Jorge L. Rivera Jiménez, MD  
American Board of Urology  
(787) 744-3135

Marcial A. Walker Ballester, MD  
American Board of Urology  
(787) 704-4141

Ramón G. Ramos Cartagena, MD  
American Board of Urology  
(787) 744-0509

Timoteo Torres Santiago, MD  
American Board of Urology  
(787) 743-5474

## **GYNECOLOGY**

Jesus M. Salgueiro Bravo, MD  
American Board of Obstetrics & Gynecology  
(787) 746-5454

Pedro F. Escobar, MD  
Gynecologic Oncology  
Laparoscopy and Robotic Surgery  
American Board of Obstetrics & Gynecology  
American Board of Gynecologic Oncology  
(787) 653-3434

## **ANESTHESIOLOGY**

Víctor F. Rodríguez Madera, MD  
Anesthesiology & Pain Management  
(787) 200-0350