

C A N C E R
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On behalf of the PIH Health Hospital – Whittier Cancer Committee and the members of the Cancer Treatment team, it is my pleasure to present the 2017 Annual Cancer Report. This year saw continued growth and advancement in the treatment of cancer in our community. From utilizing state-of-the-art immunotherapies in our outpatient infusion center to performing minimally invasive cancer surgeries and precise stereotactic radiation therapy, we truly provide a personalized approach to cancer care.



However, it takes more than technology, treatment and expertise to maintain an outstanding program – it also requires outstanding people. I am continually impressed with the passion and empathy of our staff when treating individuals afflicted with cancer. We all live the vision of “Patients First”. Our excellent nurses, navigators, office staff, technicians, oncology pharmacists, cancer registrars, physicians and administrators exemplify a personalized, holistic approach to cancer care.

Some of our 2017 accomplishments:

- Achieved 3-year re-accreditation by the National Accreditation of Breast Centers (NAPBC)
- Enrolled 44 patients in the biorepository study
- Opened six clinical trials through Southwestern Oncology Group (SWOG) and the National Cancer Institute (NCI), bringing the total number of open clinical trials to 13
- Provided Survivorship Plans and Treatment Summaries to more than 350 patients
- Reduced oncology patient Emergency Room visits by 44 percent

In this report, you will find statistics and data from our Cancer Registry. In addition, we review the use of chemotherapy prior to surgery (neoadjuvant chemotherapy) for the treatment of breast cancer and provide a summary of the results yielded from this approach.



Respectfully,

DUSTIN E. STEVENSON DO
Cancer Committee Chairman
Infusion Center Medical Director

Cancer Committee 2017

The PIH Health Hospital - Whittier Cancer Committee is a multi-disciplinary team composed of medical staff members from diagnostic and therapeutic specialties, administrative staff and allied health professionals involved in the care of cancer patients. The committee members work together to provide the highest quality of care to cancer patients and play a key role in the success of PIH Health.

PHYSICIAN MEMBERS

Anthony Britto MD

PLASTIC SURGEON

Armen Gregorian MD

COLORECTAL SURGEON

Brent Gray MD

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HEMATOLOGIST/MEDICAL ONCOLOGIST

Jack Freimann MD

HEMATOLOGIST/MEDICAL ONCOLOGIST

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RADIATION ONCOLOGIST

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CLINICAL NURSE SPECIALIST, QUALITY MANAGEMENT

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CHIEF NURSING OFFICER, CHIEF OPERATING OFFICER/CANCER PROGRAM ADMINISTRATOR

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Sarah Merkle RN MSN AOCNS

CLINICAL DIRECTOR, CANCER PROGRAM AND CLINICAL TRIALS/ PERFORMANCE IMPROVEMENT COORDINATOR

Shelly Hart PTA-CLT

PHYSICAL THERAPIST, LYMPHEDEMA PROGRAM

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PAIN MANAGEMENT EDUCATOR

Tammy Neu RN

CLINICAL DIRECTOR, HOSPICE

Vanessa Ivie

DIRECTOR, COMMUNITY BENEFIT AND COMMUNITY HEALTH EDUCATION/COMMUNITY OUTREACH COORDINATOR

2017 Cancer Program Highlights

This year, enhancements to cancer services were focused on improving the patient experience throughout the continuum of care:

- The PIH Health Cancer Program was surveyed by the Commission on Cancer (American College of Surgeons) in November 2017 and received a full 3-year accreditation as a Breast Cancer Center.
- The PIH Health Cancer Program held a 4-week Spiritual Workshop Series. The workshop helps connect patients with their spirituality to move through life's challenges with greater peace and awareness.
- A Survivorship Workshop held in September 2017 included a panel of three physicians who spoke on the current recommendations for cancer screening and early detection.



- The National Comprehensive Cancer Network (NCCN) distress tool was given to all appropriate patients at PIH Health undergoing cancer treatment in the infusion center and radiation oncology.
- The Cancer Program offered several screening and prevention programs which included screening lectures and outreach activities to increase screening for breast, colon and lung cancer.
- In 2017, more than 350 patients received a Survivorship Care Plan which summarized their diagnosis, treatment plan and provided follow-up



information. The Survivorship Care Plan is essential for the continued journey into survivorship for cancer patients.

- On June 5, 2017, PIH Health honored all cancer survivors by celebrating National Cancer Survivors day. Gifts and information targeted for survivors were distributed throughout the day.



PICTURED (LEFT TO RIGHT)

Sarah Merkle, Sharon Cloud, Kathy Seymour, Ivonne Munoz, Kristine Cooper, Christina Gonzales and Gayle Madden-Mathes on National Cancer Survivors Day at PIH Health Hospital - Whittier

- Yoga classes continue to be provided to our cancer survivors. These classes help patients reconnect with their body through gentle yoga designed for those facing or recovering from the challenges of cancer or other illnesses.
- On October 12, 2017, PIH Health Hospital - Whittier hosted a bone marrow drive. Each year, more than 30,000 adults and children in the United States are diagnosed with a life-threatening blood diseases, such as leukemia. Many of these patients will need a bone marrow transplant from a matched donor and only 30 percent will find a donor within their families. The bone marrow drive hosted at PIH Health Hospital - Whittier enabled 34 people to be registered into the National Marrow Donor Program.



PICTURED (LEFT TO RIGHT)

Julie Borba MD and Chris Chen with *Be the Match* at a Bone Marrow Drive at PIH Health Hospital - Whittier

CLINICAL TRIALS

PIH Health's participation in clinical trials allows us to provide new approaches to treating and managing cancer. PIH Health is affiliated with Southwestern Oncology Group (SWOG), a global cancer research community that designs and conducts publicly funded clinical trials. Through this affiliation we opened twelve clinical trials for various stages of breast, lung and rectal cancers. PIH Health also participates in a Biorepository Study that recruits newly diagnosed cancer patients and has participated in other sponsored studies. In 2017, 52 patients took part in a total of 15 clinical trials. In 2017, PIH Health became part of the Central Institutional Review Board (CIRB) for the National Cancer Institute. Through CIRB, we are able to participate in clinical trials with a streamlined approval process. We also have a Research Oversight Committee, which is a group that is responsible for the approval and oversight of all clinical trials conducted through PIH Health. The committee ensures that the mission and values of PIH Health are adhered to, that research subjects are protected and that no financial burden is placed on the institution.

MARIPOSA BOUTIQUE

The Mariposa is a unique wellness boutique that helps patients return to a full and active life after surgery by introducing them to a wide range of products and services. Staff members include Certified Mastectomy Fitters who provide consultations on special breast prostheses and bras, and specialize in fitting lymphedema sleeves and compression medical wear. Women may obtain information on lymphedema, hospital and local support groups, and internet-based resources. Other items available for purchase include scarves, hats, wigs and jewelry. The services at Mariposa enable cancer patients and survivors to walk away feeling confident and beautiful.

COMMUNITY OUTREACH AND EDUCATION

The Cancer Committee worked with multiple internal departments and outside organizations to provide quality cancer care within our organization and throughout the community. PIH Health offered numerous community outreach and educational activities during 2017, including:

- Low-cost mammography
- Colorectal cancer lecture series
- Lung cancer screening
- Cancer survivorship workshops
- Better Choices, Better Health (Chronic Disease Self-Management Program)
- Health fairs
- Smoking cessation workshop

PIH HEALTH AND AMERICAN CANCER SOCIETY (ACS) SUPPORT GROUPS

- Woman's Cancer Support Group
- Journey Through Cancer Support Group
- Life After Cancer
- Grief Recovery
- Look Good, Feel Better
- Healing After Loss
- I Count Too
- I Can Cope

ONCOLOGY RESOURCE CENTER

The Oncology Resource Center and Wig Bank are available for patients and their family members to access educational material and resources. Wigs and head coverings gifted to these women provide them dignity and compassion during their journey. In 2017, over 100 wigs and head coverings were provided. The resources of the wig bank are made possible by the generosity and support of donors in our community.



PICTURED

A volunteer (right) fitting Brenda Oros for a wig at PIH Health Oncology Resource Center at PIH Health Hospital - Whittier



PICTURED

Soroptimist Club of Downey making a donation to the PIH Health Wig Bank at the Breast Health Center at PIH Health Hospital - Whittier

Performance Improvement Initiatives Established in 2017

IMPLEMENTATION OF A MOBILITY PROGRAM

The Cancer Program established a mobility program to promote patient health and safety for acutely hospitalized cancer patients. Physical inactivity and prolonged bed rest are associated with unfavorable patient outcomes. A nurse driven mobility assessment was implemented which resulted in an increase in the number of times patients are mobilized every day. Through this initiative there was also a seven percent decrease in patients who are not mobilized and an eight percent decrease in bedrest orders in acutely hospitalized oncology patients.

IMPLEMENTATION OF A VENOUS THROMBOEMBOLISM SCREENING TOOL

It is estimated that there are 350,000 to 650,000 cases of venous thromboembolism annually in the United States resulting in 100,000 deaths per year. The implementation of an evidenced-based venous thromboembolism screening tool resulted in a 60 percent increase in appropriate venous thromboembolism prophylaxis ordered by physicians.

Program Goals

Established in 2017

REDUCING EMERGENCY ROOM VISITS

Cancer treatments can result in symptoms that require additional care, such as IV hydration and antibiotic infusions. To provide timely care while avoiding unnecessary trips to the emergency room, the PIH Health Physicians (PHP) Hematology Oncology Office and Infusion Center collaborated to reduce hospital admissions of patients actively receiving chemotherapy by 53 percent and decrease emergency room visits during office hours by 44 percent.

Clinical Goals

Established in 2017

The U.S. Preventive Services Task Force (USPSTF) recommends primary providers screen women with one of several screening tools to identify those women who may be at risk for BRCA 1 and 2 mutations. Last year, fewer than 2 percent of women who would be candidates for genetic testing were tested. Additionally, 91 percent of women surveyed were interested in learning about lifetime risk but only eight percent have undergone formal risk assessment.

Clinical Goal #1 for 2017: All patients undergoing screening mammography will have a screening for elevated breast cancer risk by the end of 2017.

Clinical Goal #2 for 2017: By the end of this calendar year, all patients found to have an elevated risk for breast cancer screening will have appropriate notification provided to their referring physician. Referring physicians in our community will be educated on the current best practice for management of their patients.

The Primary Site Distribution Table details PIH Health Hospital - Whittier's 2016 cancer experiences by site, age, gender and stage of disease at diagnosis (Table 2).

Table 2

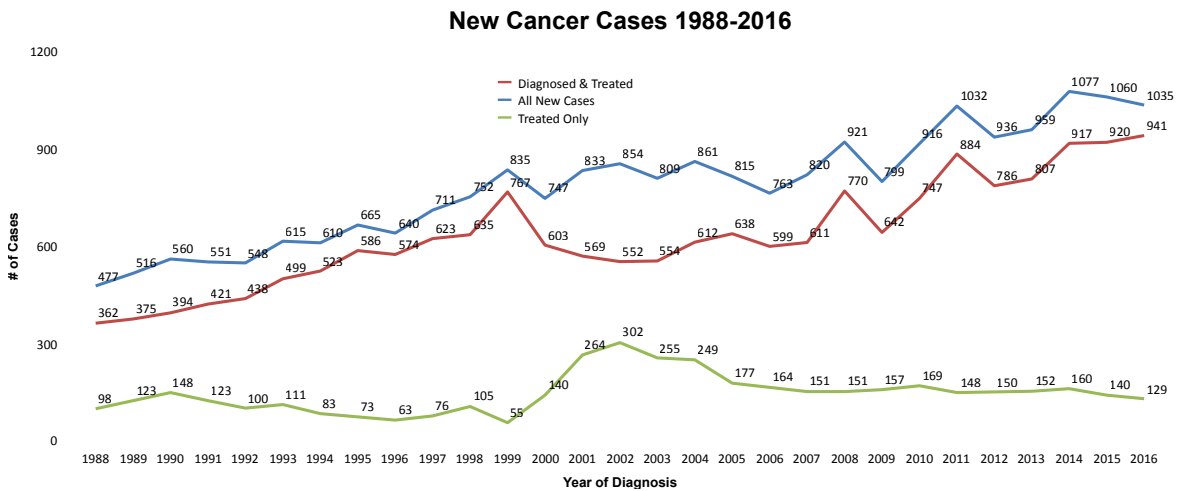
Primary Site	CLASS OF CASE			SEX*		STAGE AT DIAGNOSIS*						
	Cases	A	N/A	M	F	0	I	II	III	IV	UNK	NA
All Sites	1232	1035	196	517	715	108	286	162	116	195	67	101
Oral Cavity/Pharynx	8	6	2	5	3	0	0	0	0	6	2	0
Tongue	3	2	1	2	1	0	0	0	0	2	1	0
Gum/ Mouth/Nose	2	1	1	0	2	0	0	0	0	1	1	0
Salivary Glands, Major	1	1	0	1	0	0	0	0	0	1	0	0
Tonsil	1	1	0	1	0	0	0	0	0	1	0	0
Hypopharynx	1	1	0	1	0	0	0	0	0	1	0	0
Digestive System	248	210	38	145	103	12	32	39	37	57	63	8
Esophagus	8	7	1	8	0	0	0	3	1	2	2	0
Stomach	29	20	9	15	14	0	4	2	1	10	12	0
Small Intestine/Lg Intestine	25	13	11	10	15	0	3	1	3	6	12	0
Colon/Rectum/Rectosigmoid	100	97	3	59	41	10	18	23	24	10	15	0
Anus/Anal Canal/Anorectum	4	3	1	0	4	2	0	0	0	0	2	0
Liver	31	25	6	23	8	0	4	4	3	5	7	8
Gallbladder/Extrahepatic Bile Ducts/ other Biliary	12	10	2	8	4	0	1	1	1	6	3	0
Other Digestive/Retroperitonum/ Omentum	8	8	0	1	7	0	0	1	3	1	3	0
Pancreas	31	27	4	21	10	0	2	4	1	17	7	0
Respiratory/ Intrathoracic	158	138	20	77	81	10	33	15	16	54	28	2
Nasal Cavity/Sinus/Larynx/Nasopharynx	3	2	1	3	0	0	1	0	0	1	1	0
Larynx, Trachea, other respiratory	6	6	0	6	0	1	1	1	1	1	0	1
Mesothelioma	4	3	1	2	2	0	0	0	0	1	2	1
Lung/Bronchus	145	127	18	66	79	9	31	14	15	51	25	0
Blood & Bone Marrow**	39	24	15	24	15	0	0	0	0	0	0	39
Leukemia	19	10	9	13	6	0	0	0	0	0	0	19
Multiple Myeloma	18	14	4	10	8	0	0	0	0	0	0	18
Other Bone Marrow Disorders	2	0	2	1	1	0	0	0	0	0	0	2
Soft Tissue/Bone	12	7	5	6	6	0	0	2	0	2	2	0
Skin	16	13	3	10	6	2	3	3	0	2	3	3
Melanoma Of Skin	15	12	3	9	6	2	3	3	0	2	2	3
Other Skin/Kaposi Sarcoma	1	1	0	1	0	0	0	0	0	0	1	0
Breast	241	221	21	0	241	54	87	54	15	8	23	0
Female Genital	105	88	17	0	105	0	48	10	14	10	23	0
Cervix Uteri/Cervix Insitu	12	8	4	0	12	0	3	1	1	2	5	0
Corpus Uteri/Uterus Nos	48	43	5	0	48	0	35	4	2	2	5	0
Ovary	40	33	7	0	40	0	6	5	11	6	12	0
Vulva/Vagina/Other	5	4	1	0	5	0	4	0	0	0	1	0
Male Genital	89	59	30	89	0	0	13	24	8	12	32	0
Prostate	79	52	27	79	0	0	7	24	7	12	29	0
Testis/Penis	10	7	3	10	0	0	6	0	1	0	3	0
Urinary	127	111	16	94	33	30	38	9	9	15	24	2
Bladder	57	51	6	49	8	29	8	5	1	5	9	0
Kidney And Renal Pelvis	65	56	9	41	24	1	29	4	8	9	14	0
Ureter/Other Urinary	5	4	1	4	1	0	1	0	0	1	1	2
Brain/Eye/Cns**	27	24	3	5	22	0	0	0	0	0	0	27
Endocrine/Thyroid	38	34	4	11	27	0	20	0	3	5	5	5
Lymphatic System	76	63	13	31	45	0	12	6	14	26	18	0
Hodgkin's Disease	8	8	0	4	4	0	1	2	0	4	1	0
Non-Hodgkin's Lymphoma	68	55	13	27	41	0	11	4	14	22	17	0
Unknown**	48	38	10	20	28	0	0	0	0	0	0	48

*Stage reflects analytic cases **AJCC Stage not applicable NA = Non-applicable UNK = Unknown Stage

NUMBER OF NEW CANCER CASES 1987-2016

Figure 2 depicts the number of newly diagnosed cancer cases added to the Oncology Registry since 1987. These cases are categorized into three groups: new cancer cases for the year 2016; cases diagnosed and treatment given; and those diagnosed elsewhere, but received their initial treatment at PIH Health.

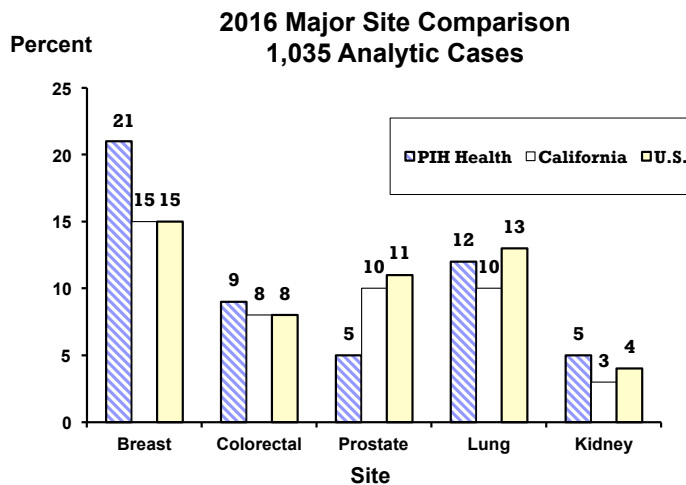
Figure 2



2016 MAJOR SITE COMPARISON

The five most common sites diagnosed at PIH Health for total cancer in 2016 were breast (21 percent), lung (12 percent), kidney (5 percent) colorectal (9 percent) and prostate (5 percent). By comparison, the incidence of breast cancer and colorectal cancer was higher at PIH Health than in California and the United States (Figure 3).

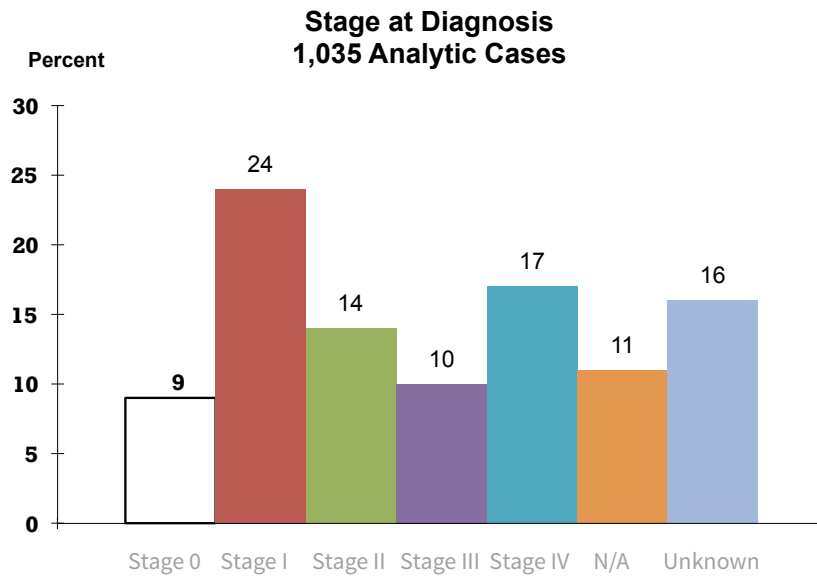
Figure 3



STAGE AT DIAGNOSIS

The stage of disease at the time of diagnosis plays a vital role in the prognosis and treatment of a cancer patient. In 2016, 33 percent of all newly diagnosed patients were in early stage at diagnosis (in-situ or Stage I), 14 percent were Stage II, 10 percent were Stage III, 17 percent were Stage IV, 11 percent were not applicable for staging (NA) and 3 percent were classified as unknown stage at time of diagnosis (Figure 4).

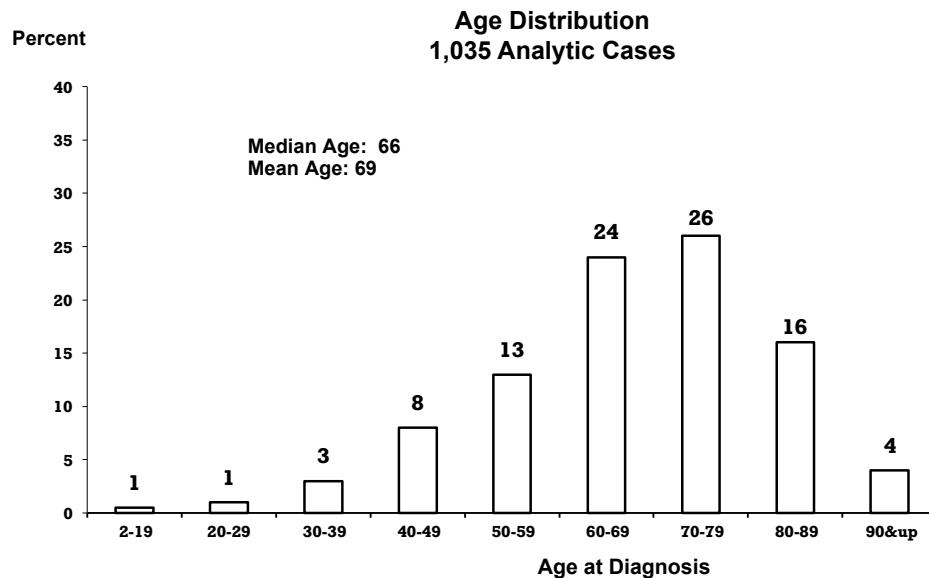
Figure 4



AGE DISTRIBUTION AT DIAGNOSIS

Sixty-six percent of patients were between the ages of 60 and 90 at diagnosis. The median age was 66 years.

Figure 5



PHYSICIANS WHO PRESENTED AND PARTICIPATED IN CASE PRESENTATIONS AT CANCER CONFERENCES IN 2017

Daniel Akhavan MD
Alok B. Bhatt MD
Kimberly Bickell MD
John Britto MD
Alfred Castellanos MD
Nadeem Chishti MD
Dhand Sabeen MD
Jacques Dorce MD
Armen Gregorian MD
Jack Freimann MD
Nathan Honda MD
Rodger C. Hughes MD
Nassr Hussein MD
Samuel Im M.D
Maureen Jensen MD
Neil Klein MD
Robert Kleinman MD
Thomas Kleisli MD
Nanette Kovash DO
James Kuo MD
William Kurohara MD
Jason Lai MD
Edwin Lin MD

Shao-Pow Lin MD
William MacDonald MD
Mukesh Shah MD
Mark Odou MD
Christie Pang MD
Joseph Park MD
Daniel Saket MD
Kiumars Saketkhoo MD
Dennis Sargent MD
Merrill Shum MD
Joomee Shim MD
Dustin Stevenson DO
Eddie Thara DO
Kennith Thompson MD
Eduardo Tovar MD
Miguel Velez MD
Lilly Wang MD
Lisa Wang MD
G. Yoon MD
Brian Yue MD
Jeffrey Yuen MD
Scott Yun MD

2017 BREAST, LUNG & MULTIDISCIPLINARY CANCER CONFERENCES AND LECTURES

Cancer conferences provide a multidisciplinary, patient specific, treatment-planning, consultative service for patients and their managing physicians. The conferences offer a forum for discussing various treatment options and assist in determining the most appropriate patient management plan. In 2017, PIH Health held a total of 47 multi-disciplinary cancer conferences and 158 cases were presented, representing 24 sites. Additionally, 47 breast conferences were held with 173 breast cancer cases presented and 47 lung cancer conferences were held with 144 nodule and malignant lung cases presented.

Breast	175
Lung/Pleura	147
Colorectal/Anus	23
Stomach	12
Skin/Melanoma	12
Pancreas/Bile Duct	10
Ovary/Fallopian Tube	10
Corpus Uteri/Vulva/Endocervical/Vagina	10
Lymphoma	10
Unknown Primary	9
Gall Bladder	7
Head & Neck	7
Soft Tissue	6
Thyroid	5
Leukemia/Myeloma	5
Liver	4
Kidney	4
Brain	4
Esophagus	3
Prostate	3
Spine	2
Small Intestine	2
Testis	2
Appendix	2
Bladder	1
Total # cases presented	475

In Addition, three Lectures were offered:

- “USC Clinical Research Presentation” Darcy Spicer MD (Keck Medicine of USC)
- “Fertility Preservation Options Before Cancer Care” Karine Chung MD, Fertility Specialist (Keck Medicine of USC)
- “Genetic Risk Assessment Strategies for Breast Cancer” Richard P. Frieder MD (City of Hope National Medical Center)

Focus Report on Breast Cancer

By Dustin E. Stevenson DO

INTRODUCTION

According to the American Cancer Society, in 2018 there will be 268,670 new cases of breast cancer and 41,400 deaths due to the disease in the United States. Breast cancer is the third leading cause of cancer deaths in women. Despite this, significant progress has been made over the past few decades in the treatment of breast cancer leading to improvements in survival. PIH Health had 221 analytic breast cancer cases in 2016 (Figure 1, 2, and 3).

Figure 1

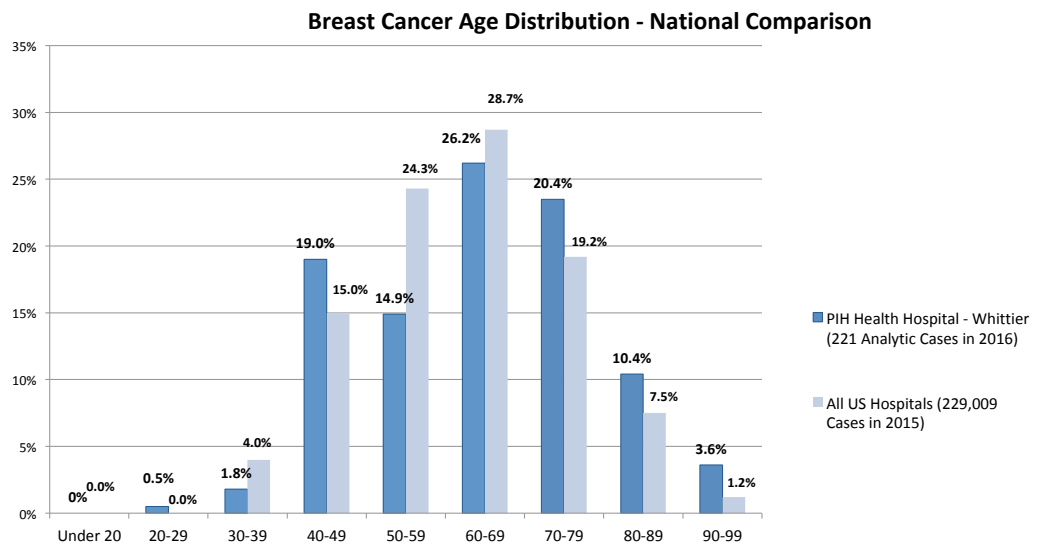


Figure 2

Number of Breast Cancers Diagnosed at PIH Health Hospital - Whittier
from 2006-2016
2,250 Analytic Cases

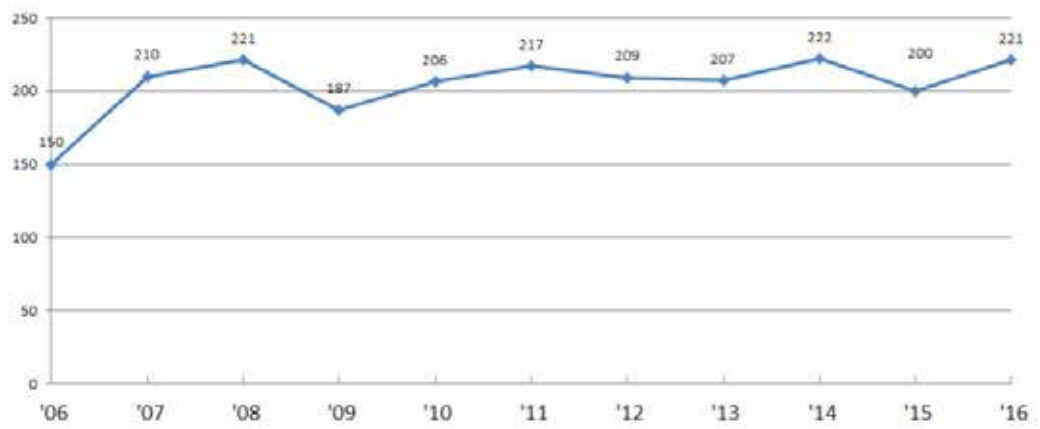
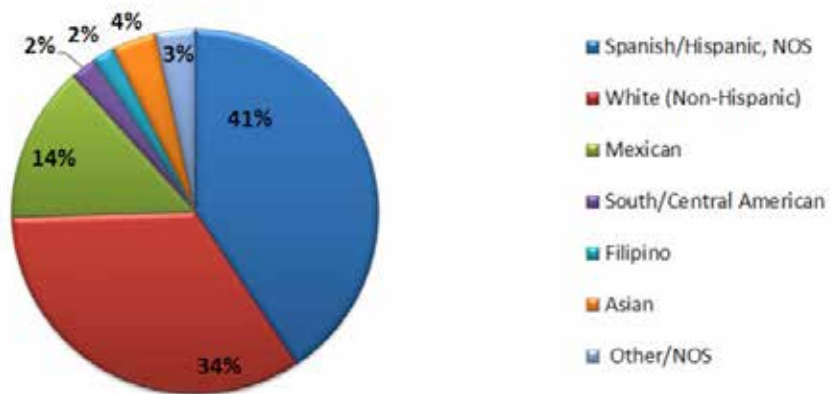


Figure 3

Breast Cancer Diagnosed 2016 by Race (221 Analytic Cases)



RISK FACTORS

There are a number of known risk factors for developing breast cancer. These include being overweight or obese, family history of breast cancer, consuming more than one alcoholic beverage per night, use of hormone replacement therapy and lack of regular exercise. In addition, earlier onset of menstruation, later age of menopause and having zero to a few pregnancies also increase the risk. Approximately 10 percent of breast cancers are thought to be caused by abnormal genes. The most common genes for breast cancer are the BRCA1 and BRCA2 gene. These genes significantly increase a woman's chance of developing breast cancer as well as ovarian cancer over her lifetime.

Regular exercise, maintaining a healthy weight, limiting exposure to alcohol and tobacco, breast feeding and limiting the use of hormone replacement therapy are protective. In women who have an abnormal BRCA1 or BRCA2 gene, preventative surgeries can significantly reduce the risk of developing both breast and ovarian cancer.

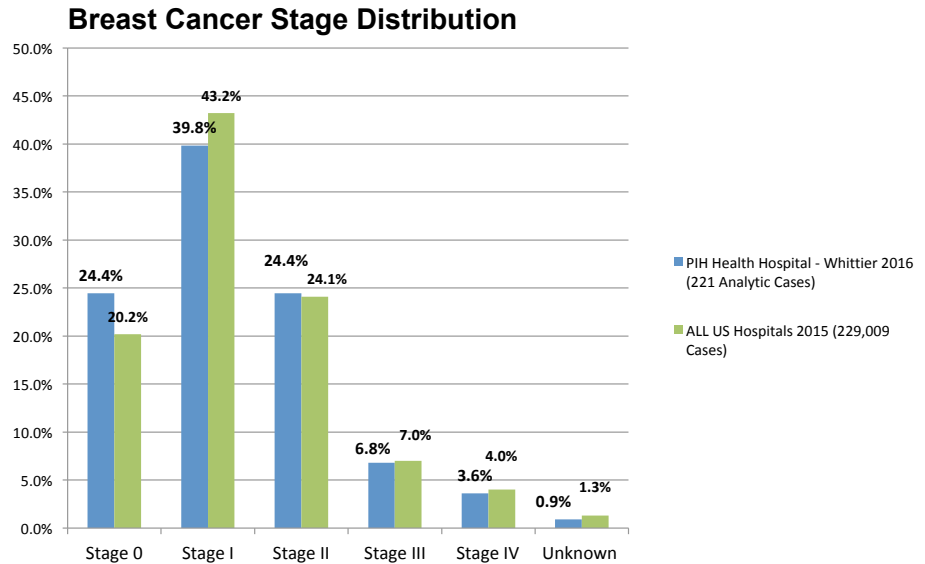
SCREENING

Over the past few decades, the death rate from breast cancer has decreased by approximately one third. Some of this is due to better treatments. Certainly, improved breast cancer screening contributed to improved survivability of breast cancer. The goal of screening is to detect a cancer at an early stage when it is curable. A number of national societies have conflicting recommendations for when to start screening. The United States Preventative Task Force (UPTSF) recommends that women at average risk of developing breast cancer start screening at age 50. However, PIH Health along with other medical societies recommend initiating screening at age 40 with annual mammograms. The decision of when to start screening should be a shared decision between the patient and her healthcare provider. The use of 3-D mammography known as tomosynthesis, significantly improves the accuracy of cancer detection and is a widely used technology at PIH Health Hospital - Whittier. For some high-risk women, breast MRI, in addition to mammography, may significantly increase the detection of early stage breast cancers.

STAGING

Once a cancer is diagnosed, it is then staged. Over half of the breast cancers diagnosed and or treated at PIH Health Hospital - Whittier in 2016 were stage 0-1 (Figure 4). Stage 0, known as ductal carcinoma in situ (DCIS), means that the tumor cells remain in the milk ducts and do not invade into the breast tissue. Stage I refers to a tumor that is less than 2 cm and does not involve the lymph nodes under the arm. Stage II refers to a tumor greater than 2 cm or a tumor that has spread to the lymph nodes under the arm. Stage III refers to either a very large tumor in the breast or extensive involvement of the lymph nodes under the arm. Stage IV is when the cancer spreads beyond the breast and the lymph nodes to other organs in the body. Although stage IV is generally not curable, it is treatable and some women can live many years with the disease.

Figure 4



TREATMENT

Once a patient is diagnosed with breast cancer, surgery is needed to remove the tumor. There are two surgical approaches. One is called “mastectomy,” where the entire breast is removed. The second approach is called “breast conserving therapy” or “partial mastectomy.” In this surgical procedure, all of the tumor and surrounding healthy breast tissue are removed. If the patient elects for a breast conserving therapy, follow-up radiation therapy is necessary to reduce the risk of the cancer returning in that area. Based on decades of research, there is no difference in survival and cure rates between mastectomy and breast conserving therapy.

For some patients, chemotherapy after surgery is necessary to reduce the risk of the cancer spreading or metastasizing to other organs in the body. This is called “adjuvant chemotherapy.” The decision to use adjuvant chemotherapy depends on the size of the tumor, if the tumor has spread into the lymph nodes, if the tumor is HER-2 positive or if the tumor is negative for estrogen receptors, progesterone receptors and HER-2/neu (triple negative breast cancer). Additional genomic tests such as an Oncotype DX can help determine the risk of the cancer returning and assist with the decision to move forward with adjuvant chemotherapy.

Neoadjuvant chemotherapy is chemotherapy administered prior to any surgical procedure. Advantages of neoadjuvant chemotherapy include reducing the size of the tumor to allow for breast conserving therapy, determining the responsiveness of the tumor to therapy and allowing the patient additional time to decide on surgery. It is hypothesized that outcomes would improve with the use of neoadjuvant chemotherapy. However, research suggests similar survival rates regardless of whether the patient received neoadjuvant chemotherapy or adjuvant chemotherapy.

There are certain circumstances where neoadjuvant chemotherapy is recommended. In patients with locally advanced breast cancer where the tumor is too large to surgically remove, neoadjuvant chemotherapy may significantly reduce the size of the tumor leading to a successful surgical procedure. In patients who are not candidates for breast conserving therapy, neoadjuvant chemotherapy may reduce the tumor to a size to allow for breast conserving therapy. For patients with high-risk disease, such as tumors that are HER-2/neu positive or that are triple negative, neoadjuvant chemotherapy can potentially completely eradicate the tumor resulting in a pathological complete response. Patients with a complete pathologic response to neoadjuvant chemotherapy are more likely to experience a better long-term prognosis. In many of the studies the complete response rates in triple negative and HER-2 positive breast cancers are approximately 41-75 percent.

Multiple clinical trials have been performed that compare neoadjuvant chemotherapy to adjuvant chemotherapy in women with early stage breast cancer who are candidates for surgery. In a meta-analysis by the Early Breast Cancer Trialists' Collaborative Group, the use of neoadjuvant chemotherapy improved the frequency of breast conserving therapy by 16 percent. There was no increased risk of recurrence or death from breast cancer compared to adjuvant chemotherapy. Researchers did identify an increased risk of local recurrence in those patients that had breast conserving therapy. However, another meta-analysis showed no significant difference in local recurrence between patients receiving breast conservative therapy after neoadjuvant chemotherapy compared to patients who had breast conserving therapy and adjuvant chemotherapy.

Nathan Honda MD performed a study for accreditation standard 4.6 evaluating the use of neoadjuvant chemotherapy at PIH Health Hospital - Whittier. From 2014-2016, 37 patients received neoadjuvant chemotherapy for breast cancer. Three of these patients were not candidates for upfront surgery and all were able to have surgery after receiving neoadjuvant chemotherapy. Of all patients, 91 percent had a reduction in the size of the tumor. 79 percent had a reduction in the stage of the tumor and 44 percent had a pathologic complete response. Patients at the highest risk had the best responses. For patients with "triple negative" breast cancer, 73 percent achieved a complete pathologic response whereas those with HER2 positive cancer had a 71 percent pathologic complete response. Of the 37 patients, 24 percent went onto have breast conserving therapy.

CONCLUSION

In summary, neoadjuvant chemotherapy can be an effective tool to shrink high-risk breast cancers, allow for breast conserving therapy and potentially identify patients who may have a decreased risk of recurrence. Current research seeks to maximize the benefit of neoadjuvant chemotherapy by adding newer therapeutics into regimens and using hormonal manipulations. The PIH Health Hospital - Whittier experience with neoadjuvant therapy compares favorably to national guidelines and outcomes.

Acknowledgments

The 2016-2017 PIH Health Cancer Program Annual Report was prepared by Sarah Merkle RN MSN AOCNS, April Hopper CTR and Kristine Cooper BS CTR under the purview of the Cancer Committee.

Thank you, Dr. Stevenson, for preparing the special report on Breast Cancer.

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- Cancer Facts & Figures, 2017, American Cancer Society Inc., New York, New York
- California Facts & Figures, 2017, American Cancer Society, California Division, Inc., Oakland, California
- PIH Health Cancer Registry Statistical Database

For more information about the PIH Health Comprehensive Community Cancer Program, call 562.698.0811 Ext. 12896 or visit PIHHealth.org/CancerCare.

Directory of Services

Main Hospital Number	562.698.0811
Breast Oncology Nurse Navigator	562.907.0667 Ext. 15326
Cancer Program Education/Support Groups	562.698.0811 Ext. 12570
Cancer Information Hotline	562.945.8326
Cancer Registry	562.698.0811 Ext. 12896
Clinical Trials Department	526.698.0811 Ext. 12930
Colorectal Oncology Nurse Navigator	562.698.0811 Ext. 12580
Community Health Education	562.967.2890
Hospice	562.947.3668
Home Health	562.902.7763
Infusion Services	562.698.0811 Ext. 12641
Lung Cancer Screening Program	562.967.2892
Lung Nurse Navigator	562.698.0811 Ext. 11271
Lymphedema Program	562.698.0811 Ext. 12594
Nutrition Services	562.698.0811 Ext. 11320
Oncology Resource Center	562.698.0811 Ext. 12820
Patricia L. Scheifly Breast Health Center	562.907.0667
PIH Health Hematology/Oncology Clinic	562.789.5480
Radiation Oncology	562.696.5964
Website Address	PIHHealth.org

Glossary Of Terms

A = Analytic

Cases which are first diagnosed and/or received all or part of their first course of treatment at PIH Health Hospital - Whittier.

N/A = Non-Analytic

Cases which were first diagnosed and treated elsewhere, later admitted to PIH Health with disease.

Stage at Diagnosis

The extent of disease based on all diagnostic and therapeutic evidence available by the end of the first course of therapy or within four months after beginning treatment.

NA

Not Applicable. Some types of cancer do not have staging schemes.

TNM Staging System

The TNM system is an expression of the anatomic extent of disease and is based on the assessment of three components:

- **T** The extent of the primary tumor
- **N** The absence or presence and extent of regional lymph node metastasis
- **M** The absence or presence of distant metastasis

TNM Stage Groupings

After the T, N and M has been assigned, they are grouped into stages. The grouping ensures, as far as possible, that each stage group is relatively homogeneous with respect to survival and that the survival rates of these stage groupings for each cancer site are distinct. Carcinoma in situ is categorized Stage 0; for most sites, a case with distant metastasis is categorized Stage IV. Stages I, II, and III indicate relatively greater anatomic extent of cancer within the range from Stage 0 to Stage IV.

Survival Rate

A statistical index that summarizes the probable frequency of specific outcomes for a group of patients at a particular point in time.

Life Table Method

The life table method involves dividing the total period over which a group is observed into fixed intervals, usually months or years.

Relative Survival

The ratio of the observed survival rate to the expected rate for a group of people in the general population similar to the patient group with respect to race, sex and age. The relative survival rate represents the likelihood that a patient will not die from causes associated specifically with their cancer at some specified time after diagnosis.

