POMONA VALLEY HOSPITAL MEDICAL CENTER

CANCER PROGRAM
ANNUAL REPORT
FOR 2017

POMONA VALLEY HOSPITAL
MEDICAL CENTER
THE ROBERT & BEVERLY LEWIS FAMILY CANCER CARE CENTER

Expert care with a personal touch

2017 CANCER COMMITTEE

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TABLE OF CONTENTS

CANCER COMMITTEE REPORT

by Sri G. Gorty MD, *Chair*

The Cancer Program at Pomona Valley Hospital Medical Center (PVHMC) offers an integrated approach to all aspects of patient care. The unique opportunity to provide Radiation Oncology, Medical Oncology, Gynecology Oncology, Psychosocial Support and Breast Health Center (breast cancer imaging) under one roof at The Robert & Beverly Lewis Family Cancer Care Center allows patients to find support, quality care and multidisciplinary excellence in a positive and caring environment.

Medical Oncology

Medical Oncology

Many of our oncologists integrated their practices with the Hospital; the Hospital performs the business functions and the physicians continue to provide the highest quality, personalized medical care for their patients. The results are an even higher level of collaboration, shared decision-making and care that is based on evidence based guidelines. Medical oncologists are now linked to each other through an electronic medical record system. The oncology specific, state of the art system ensures the highest standard of care through access to National Comprehensive Cancer Network regimens (NCCN) and protocols which are being used by leading cancer institutes around the world.

Our medical oncologists continue to collaborate weekly by presenting new cancer cases at the Cancer Care Center pre-treatment conference. These conferences enable patients to have multiple opinions to develop the best treatment plan available based on NCCN Guidelines for that patient. Surgeons, pathologists and radiologists, along with medical and radiation oncologists, nurses, clinical trials coordinator and therapists offer their knowledge and expertise to each individual's case.

Weekly Tumor Board conferences provide physicians an opportunity to present challenging cases to a multidisciplinary forum for review and recommendations. This team, in addition to the members stated above, also includes physicians from many different specialties and other health care professionals.

Breast Health Center

The primary goal of the Breast Health Program at PVHMC is to deliver the highest quality care to our patients. We exclusively offer digital breast tomosynthesis mammography at our Pomona, Claremont, and Chino Hills sites. Digital breast tomosynthesis is a 3-dimensional mammogram, which allows the radiologist to examine the breast tissue in fine detail, 1 mm at a time. The technology has been shown in multiple studies to significantly increase the cancer detection rate and reduce recall rates relative to standard digital mammography. In 2016, an upgrade was implemented that now allows us to obtain a 2D plus 3D mammogram at half the previous radiation dosage.

The Breast Health Program at PVHMC has full American College of Radiology accreditation in mammography and stereotactic breast biopsy, demonstrating that our facility has achieved high practice standards in image quality, personnel

qualifications, facility equipment, quality control procedures, and quality assurance programs.

We are a major partner with local community health clinics to provide screening and diagnostic mammography services for medically underserved patients over age 40, in conjunction with the state funded "Every Woman Counts" program. For women in our communities who do not have a primary Doctor, we allow them to "self-refer" for a screening mammogram and offer low cost screening mammograms in the month of October.

The Breast Health Program at PVHMC also provides diagnostic breast imaging services to underinsured and uninsured women and men, made possible through our affiliation with the Los Angeles County Affiliate of Susan G. Komen

We are dedicated to ensure that every woman in our community has timely access to our high quality breast care, helping women overcome barriers such as access to care, a lack of understanding or fear of the care process, fear of a positive diagnosis, financial barriers to treatment, and a myriad of additional psychosocial, emotional, and family concerns in the event of a positive diagnosis.

Radiation Oncology

2017 was a busy and productive year providing more than 8,000 high quality radiation treatments to over 500 patients diagnosed with cancer and several benign conditions such as but not limited to adenomas, meningiomas and keloids. The top 4 diagnoses for this patient population is as follows:

- Breast Cancer
- Prostate Cancer
- GYN (cervical & uterine) Cancer
- Colo-Rectal Cancer

The two modes of radiation medicine that we offer by our department are as follows:

- Teletherapy - Linear accelerator based treatments
  - Accuray TomoTherapy HiArt Unit
  - Varian Trilogy with Rapid Arc & Cone Beam CT Unit
  - External Beam Treatment Options
    - Photons (x-rays)
    - Electrons
    - Intra-fraction tracking
    - 3D Conformal
    - Intensity Modulated Radiation Therapy (IMRT) with Image Guided Radiation Therapy (IGRT)
    - Stereotactic Body Radiotherapy (SBRT) with IGRT
    - Respiratory Gating & Deep Breath Hold
- Brachytherapy – Radioactive material based treatments
  - High Dose Radiation (HDR)
    - Accelerated Partial Breast Irradiation (APBI) for Select Early Stage Breast Cancer
    - Interstitial Implants for GYN Cancers
    - Intracavitary implants for GYN Cancers
  - Permanent Radioactive Seed Implants for Prostate Cancer
  - Radioactive Iodine Ablations for Thyroid Cancer and Hyperthyroidism
  - Radioactive Injections for Metastatic Bone Cancer
  - Radioactive Applications for Various Other Conditions

Radiation Oncology

We look forward to providing our community with leading edge and high quality radiation medicine for decades to come by our board certified expert physicians, medical physicists, dosimetrists, therapists, nurses and an outstanding clerical team.

Lung Cancer Program

The Lung Cancer Program (LCP) at PVHMC was founded in January 2008. The LCP comprises a team of primary care physicians, radiologists, cardiothoracic surgeons, pulmonologists, medical oncologists, radiation oncologists, pathologists and a clinical trials coordinator. We have a dedicated Lung Cancer Nurse Navigator to assist patients through their treatment journey, while providing education and support.

Our primary goal is to promote early diagnosis and to eliminate treatment delays by expediting patients through the health care process once a suspicious radiologic screening abnormality is identified. We work to replace late stage cancer diagnoses with earlier diagnoses, and thereby improve treatment outcomes.

To promote diagnosing lung cancer at the earliest of stages, PVHMC offers the public low cost and low dose CT Chest Screening, not requiring a physician referral. While not appropriate for everyone, current publications suggest that CT screening could reduce lung cancer mortality by 20% in heavy smokers through early detection of this lethal disease. We also provide smoking cessation literature.

GYN Oncology

Our GYN Oncology services continue to expand since Gynecologic Oncology Associates (GOA), a group of five board certified gynecologic oncologists, joined our medical staff in 2011. GOA continues to be a valuable asset to our community providing GYN oncology expertise to our patients. PVHMC can now serve women with gynecologic cancers right here. Our patients receive the most up to date in gynecologic cancer treatments. This includes minimally invasive laparoscopic or robotic surgery, ultra-precise radiation therapy utilizing TomoTherapy and Trilogy, both of which deliver IMRT treatments with IGRT and high dose rate brachytherapy which places the radiation directly at the site of the cancer, where the cancer was or where the cancer may recur in the pelvis.

Gynecologic Oncology Associates

Palliative Care

Palliative Care is specialized medical care for people with serious illness. This type of care is focused on providing patients with relief from the symptoms, pain, and stress of a serious illness – whatever the diagnosis. The goal is to improve quality of life for both the patient and the family. Palliative care is provided by a team of doctors, nurses, chaplains, social workers and other specialists who work with the patient's other doctors to provide an extra layer of support in discussing goals of care, treatment options, pain and symptom management, and advance care planning. Palliative care can be provided at any age and at any stage in a serious illness, and can be provided together with curative treatment.

Palliative Care is not to be confused with Hospice Care. Palliative Care is pain and symptom management provided at any time during an illness, even while curative treatments are pursued. Hospice Care provides palliative care to terminally ill patients no longer seeking curative treatment.

Clinical Trials

Clinical trials have been offered since 1995 under the leadership of Y. S. Ram Rao, MD, Director of Radiation Oncology and the Cancer Program. We have enrolled over 650 patients into Non-NCI and NCI sponsored co-operative group clinical trials since 1995.

The Cancer Care Center continues to participate and actively enroll cancer patients onto clinical trials through the National Cancer Institute (NCI), other Cooperative Groups such as NRG, and occasionally Pharmaceutical Company sponsored clinical trials.

Each study design is created to focus on answering various scientific questions that will assist in discovering enhanced ways to prevent, diagnose and/or treat various cancers. All clinical trials are fully conducted in compliance with the FDA guidelines including but not limited to, "Good Clinical Practice" guidelines (GCP).

Phase III and some Phase II Clinical Trials are made available to the community providing patients with easy access to the latest cancer research regimes. At any given time, there are more than a dozen clinical trials open to patients with various types and stages of cancer.

There are nine types of cancer related clinical trials:

- Treatment trials test new treatments (like a new cancer drug, new approaches to surgery or radiation therapy, new combinations of treatments, or new methods such as gene therapy.
- Prevention trials test new approaches, such as medicines, vitamins, minerals, or other supplements that doctors believe may lower the risk of a certain type of cancer. These trials look for the best way to prevent cancer in people who have never had cancer or to prevent cancer from coming back or a new cancer occurring in people who have already had cancer.
- Screening trials test the best way to find cancer, especially in its early stages.
- Quality of Life trials (also called supportive care trials) explore ways to improve comfort and quality of life for cancer patients.
- Pain relief (palliative care) and pain progression (comparing relief after radiation and re-irradiation, comparing overall pain progression for symptomatic bone metastases).
- Psycho-Social (Gene Expression Meditative Movement and Cognitive Impairment (GMC) Study).
- Surplus Surgical Tissue and Biofluids Collection for research and some include, but not limited to, one or more of the following: RNA or DNA isolation and analysis, gene and protein expression, diagnostic device and biomarker development, tissue micro array construction, laboratory test and compound identification and validation tests. This is a two part study both Retrospective and Prospective.

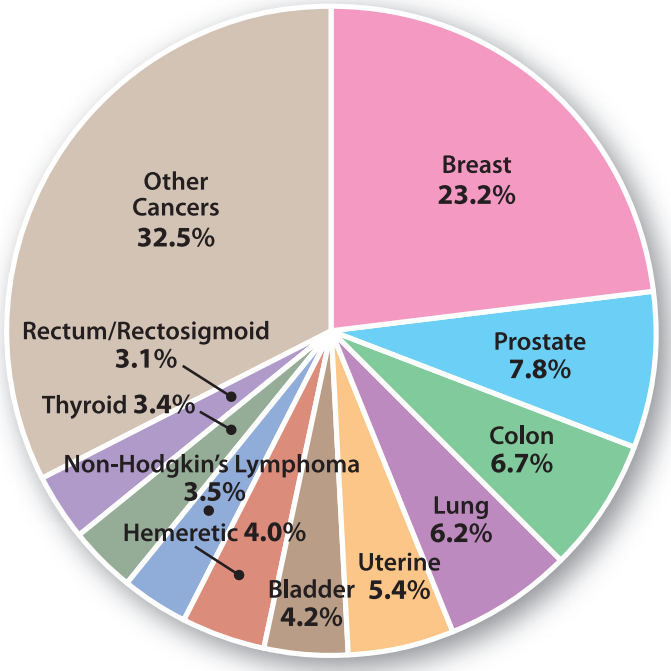
All potential study patients are presented with the most recent version of the IRB Approved Consent Document for each specific trial. All consent documents contain the "Experimental Subject's Bill of Rights." (California law under Health & Safety Code Section 24172) and a "HIPAA," (Authorization) to Use or Disclose (Release) Identifiable Health Information for Research.

The Department of Health and Human Services (HHS) issued the Standards for Privacy of Individually Identifiable Health Information (the Privacy Rule) under the Health Insurance Portability and Accountability Act of 1996 (HIPAA) to provide the first comprehensive Federal protection for the privacy of personal health information.

Potential study patients undergo the consenting process to its entirety before initiating any study related procedures or assessments. All potential study patients are reminded that their study participation is completely voluntary and they have the right to refuse study participation without any bias from our medical and ancillary staff.

Cancer Registry

The Cancer Registry at PVHMC has collected cancer data for analysis, research and mandatory reporting to the California Cancer Registry since 1985. The Cancer Registry also contributes data to the American College of Surgeons (ACoS), Commission on Cancer, and National Cancer Data Base (NCDB) annually. The NCDB contains data from American College of Surgeons approved hospitals nationally. The physicians at PVHMC utilize benchmark reports from the NCDB to measure and evaluate patient care, treatment and survival of our cancer patients. Our computerized database contains 28,229 cancer patients.



Percentages of Total Cancer Cases at PVHMC

In 2017 the Cancer Registry accessioned a total of 1,056 cancer cases. There were 833 analytic or new cases and 223 non-analytic or previously diagnosed and treated cases. We also perform lifetime annual follow-up on all analytic patients in our database as a requirement of the American College of Surgeons approved Cancer Programs.

The top ten cancers are: Breast (193 cases or 23.2%), Prostate (65 cases or 7.8%), Colon (56 cases or 6.7%), Non-small cell lung (52 cases or 6.2%), Uterine (45 cases or 5.4%), Bladder (35 cases or 4.2%), Hemeretic (33 cases or 4%), Non-Hodgkin's Lymphoma (29 cases or 3.5%), Thyroid (28 cases or 3.4%), and Rectum/Rectosigmoid (26 cases or 3.1%), Other Cancers 32.53%.

Customer Satisfaction

Customer Satisfaction is always a top priority. Many of our patients who utilize the hospital based departments are surveyed regarding the service and their satisfaction. The surveys allow us timely feedback about our patients' experience. We also offer "Feedback Forms" throughout the Center that allows patients an immediate opportunity to express appreciation or concerns. All complements, suggestions and concerns are forwarded to the appropriate manager and department for recognition or follow-up as appropriate. In 2017, we continued to experience excellence in Customer Service.

Screening Program

The 2017 Screening Program focused on Breast Cancer as it is the most prevalent cancer in our community. In addition our mammogram screening rate of 53% is below the healthy people goal of 81%. In following evidence-based guidelines, we also advertised and promoted our low-cost screening mammograms year round, especially during the month of October, which is recognized as National Breast Cancer Awareness Month. In 2017, we had 548 self-referred/cash screening mammograms. The majority of screenings were found to be normal and only a few required further imaging. One screening identified a patient requiring a biopsy, which came back negative. The 2017 Screening Program did not identify any breast cancer in all of the screenings. The importance of screening and focus of promoting early breast cancer detection is emphasized to all patients, especially for self-referral/cash patients who are at higher risk for falling through the cracks in healthcare systems. We are committed and focused to individually work with these patients and facilitate any needed work-up.

Support Programs

Support Services continue to offer a wide variety of support programs, workshops and wellness groups. A workshop was held for patients and family members on "Do We Really Need to Talk About It?" on the importance of Advance Directives and other end- ▶

Creative Journaling

Allen Hobson

Ladies Plastic Golf Association

"DigniCap" to help prevent hair loss

of-life issues. A special Nutrition workshop was held to educate and support our cancer patients. We also celebrated survivors' day with a special day workshop on Art Therapy. It was a great day for survivors to express their feelings through the use of various art disciplines.

The PVHMC's Foundation's special fund was once again utilized to offer two different sessions of the "Living Well After Cancer" program in 2017. This program, in conjunction with The Claremont Club's goal is to help cancer survivors improve their fitness level, quality of life and self-esteem. We want them to know that life can improve after cancer treatment ends. The participants (men and women) experienced many forms of exercise specifically designed for them. They met a minimum of twice weekly for 13 weeks. In addition to weight training and cooking classes the program included yoga, Pilates, balance, and aqua classes.

We had 261 different support or wellness group meetings with an attendance of over 3,100. We reviewed, with our physicians' lung cancer treatment management and the benefits of using a multidisciplinary approach by hosting two separate meetings. We also attended several community events to educate about breast health. This year we participated in the "Great American Smokeout" by handing out literature in the main Hospital lobby. Once again, we also ended the year with our annual holiday open house where we celebrate the holidays with over 300 of our current and past patients.

Fundraising

In addition to the ongoing support of The Robert and Beverly Lewis Family Cancer Care Center, donors supported the "It's The Climb" program with special guest speaker, Alan Hobson, a two time cancer survivor and Mt. Everest Summiteer. Guests also enjoyed a reception, theme basket raffle drawings and dinner.

Once again, we are very appreciative of Ladies Plastics Golf Organization (LPGO) holding their 18th annual Golf Tournament to benefit The Robert and Beverly Lewis Family Cancer Care Center's Breast Health fund. The board of LPGO presented a check in the amount of $42,400 during the holidays, making their overall contribution from this annual event exceeded $540,000.

A new DigniCap fund was created to allow donors to contribute funds to assist chemotherapy patients with the possibility of not losing their hair when going through treatment. We are fortunate to have this new technology available.

In 2017, we provided 95 wigs for patients who have lost their hair due to chemotherapy. We are very proud to offer numerous educational and wellness programs to anyone touched by cancer "free of charge."

Thank you to our community family for your ongoing support in our efforts to raise funds for The Robert and Beverly Lewis Family Cancer Care Center.

New Cancer Cases 2017

Pomona Valley Hospital Medical Center

SITE GROUP

	Total Cases	Class A	Class N/A	Sex M	Sex F	Stages 0	Stages I	Stages II	Stages III	Stages IV	Stages Unk	Stages N/A*	Stages Missing
Oral Cavity/Pharynx	**11**	**9**	**2**	**4**	**7**	**0**	**4**	**1**	**1**	**2**	**1**	**0**	**0**
Tongue	5	5	0	2	3	0	3	0	1	1	0	0	0
Salivary Glands, Major	3	2	1	1	2	0	1	1	0	0	0	0	0
Floor of Mouth	1	1	0	1	0	0	0	0	0	1	0	0	0
Tonsil	1	0	1	0	1	0	0	0	0	0	0	0	0
Oropharynx	1	1	0	0	1	0	0	0	0	0	1	0	0
Digestive System	**203**	**160**	**43**	**102**	**101**	**7**	**20**	**34**	**27**	**40**	**27**	**5**	**0**
Esophagus	8	5	3	4	4	0	0	1	0	0	4	0	0
Stomach	20	18	2	11	9	0	2	1	5	6	4	0	0
Small Intestine	2	1	1	1	1	0	1	0	0	0	0	0	0
Colon	72	56	16	32	40	3	8	19	5	15	6	0	0
Rectum/Rectosigmoid	31	26	5	17	14	3	4	5	7	2	5	0	0
Anus, Anal Canal, Anorectum	3	2	1	0	3	1	0	0	1	0	0	0	0
Liver	27	16	11	19	8	0	2	1	4	3	4	2	0
Gallbladder	4	4	0	0	4	0	0	1	3	0	0	0	0
Bile Ducts	5	5	0	2	3	0	0	0	0	0	3	2	0
Pancreas	29	25	4	16	13	0	3	6	1	14	1	0	0
Peritoneum, Omentum, Mesent	1	1	0	0	1	0	0	0	1	0	0	0	0
Other Disgestive	1	1	0	0	1	0	0	0	0	0	0	1	0
Respiratory & Intrathoracic System	**81**	**59**	**22**	**37**	**44**	**1**	**8**	**6**	**10**	**29**	**5**	**0**	**0**
Nasal Cavity, Sinus, Ear	1	0	1	0	1	0	0	0	0	0	0	0	0
Larynx	2	2	0	0	2	0	1	1	0	0	0	0	0
Lung/Bronchus-Small Cell	5	4	1	2	3	0	1	0	2	1	0	0	0
Lung/Bronchus-Non Small Cell	72	52	20	34	38	1	6	5	8	28	4	0	0
Other Respir & Thoracic	1	1	0	1	0	0	0	0	0	0	1	0	0
Hematopoietic	**67**	**45**	**22**	**38**	**29**	**0**	**0**	**0**	**2**	**3**	**0**	**40**	**0**
Hemeretic	44	33	11	27	17	0	0	0	2	3	0	28	0
Myeloma	21	10	11	9	12	0	0	0	0	0	0	10	0
Other Hematopoietic	2	2	0	2	0	0	0	0	0	0	0	2	0
Soft Tissue	**7**	**5**	**2**	**3**	**4**	**0**	**1**	**1**	**0**	**2**	**1**	**0**	**0**
Soft Tissue	7	5	2	3	4	0	1	1	0	2	1	0	0
Skin	**27**	**23**	**4**	**14**	**13**	**1**	**12**	**5**	**1**	**1**	**3**	**0**	**0**
Melanoma of Skin	22	18	4	12	10	1	11	3	0	1	2	0	0
Other Skin CA	5	5	0	2	3	0	1	2	1	0	1	0	0
Breast	**215**	**193**	**22**	**2**	**213**	**25**	**67**	**57**	**17**	**9**	**17**	**1**	**0**
Breast	215	193	22	2	213	25	67	57	17	9	17	1	0
Female Genital Organs	**114**	**85**	**29**	**0**	**114**	**0**	**41**	**4**	**19**	**9**	**10**	**2**	**0**
Cervix Uteri	29	20	9	0	29	0	9	2	7	2	0	0	0
Corpus Uteri	50	45	5	0	50	0	28	0	7	3	7	0	0
Uterus Nos	5	2	3	0	5	0	0	0	0	2	0	0	0
Ovary	18	12	6	0	18	0	2	1	5	1	2	1	0
Vagina	4	2	2	0	4	0	0	1	0	0	1	0	0
Vulva	6	2	4	0	6	0	1	0	0	1	0	0	0
Other Female Genital	2	2	0	0	2	0	1	0	0	0	0	1	0
Male Genital	**90**	**66**	**24**	**90**	**0**	**0**	**5**	**41**	**10**	**8**	**2**	**0**	**0**
Prostate	89	65	24	89	0	0	5	41	10	8	1	0	0
Testis	1	1	0	1	0	0	0	0	0	0	1	0	0
Urinary Tract	**67**	**56**	**11**	**44**	**23**	**21**	**13**	**9**	**6**	**6**	**1**	**0**	**0**
Bladder	40	35	5	25	15	20	3	7	1	4	0	0	0
Kidney and Renal Pelvis	26	20	6	18	8	1	10	2	4	2	1	0	0
Other Urinary	1	1	0	1	0	0	0	0	1	0	0	0	0
Brain and Other Endocrine	**64**	**39**	**25**	**29**	**35**	**0**	**0**	**0**	**0**	**0**	**0**	**39**	**0**
Brain**	26	16	10	14	12	0	0	0	0	0	0	16	0
Other Nervous System	38	23	15	15	23	0	0	0	0	0	0	23	0
Thyroid and Other Endocrine	**51**	**42**	**9**	**9**	**42**	**0**	**16**	**3**	**7**	**0**	**2**	**14**	**0**
Thyroid	29	28	1	4	25	0	16	3	7	0	2	0	0
Other Endocrine**	22	14	8	5	17	0	0	0	0	0	0	14	0
Hodgkin/Non-Hodgkin Lymphoma	**40**	**32**	**8**	**23**	**17**	**0**	**5**	**9**	**8**	**5**	**5**	**0**	**0**
Hodgkin's Disease	4	3	1	4	0	0	0	2	0	0	1	0	0
Non-Hodgkin's Lymphoma	36	29	7	19	17	0	5	7	8	5	4	0	0
Unknown or Ill-Defined	**19**	**19**	**0**	**14**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**
Unknown Or Ill-Defined	19	19	0	14	5	0	0	0	0	0	0	19	0
TOTALS	**1056**	**833**	**223**	**409**	**647**	**55**	**192**	**170**	**108**	**114**	**61*** **	**120***	**0**

Lymphoma: Table includes lymphoma cases coded to lymphatic and extranodal sites.

* Not Applicable: Benign tumors, hematopoietic malignancies and tumors and histopathology in a particular primary site not included in AJCC TNM staging scheme

** Benign tumors: Collection and reporting has been a requirement of the American College of Surgeons and /or the State of California

*** Unknown stage: ACoS, CoC allow 10% or less of the analytic case load to be unstaged. Starting 1/1/2006, analyatic Class 0 cases (diagnosed at our hospital but received all 1st course of treatment elsewhere) are no longer required to be TNM staged. The table reflects a total of 61 cases for 2017. 7 Class 0 cases were subtracted thus leaving 54 cases divided by 833 analytical cases = 6.4% unstaged cases (less than 10%)."

BREAST CANCER UPDATE

by Swarna Chanduri, MD

Breast cancer is the most common cancer among women in United States, and is the second most common cause of cancer death. According to Cancer statistics, in 2018 there will be an estimated 266,120 new cases of invasive breast cancer diagnosed in women, 2,550 cases in men and an additional 63,960 cases of in situ breast lesions in women. An estimated 41,400 breast cancer deaths (40,420 women, 480 men) will occur in 2018.

Breast cancer death rates are declining since 1989. In 1989 death rate from breast cancer was 33.2 per 100,000 and declined to 20.3 per 100,000 in 2015. Improvements in early detection (through screening, as well as increased awareness) and treatment are responsible for this decline and result in 322,600 fewer breast cancer deaths.

At PVHMC we discuss every patient's case in a pretreatment conference. These conferences are attended by radiation oncologists, surgeons, radiologists and pathologists along with support staff.

During these meetings we discuss NCCN guidelines, multimodality treatment approach and try to adhere to guidelines in planning patient's treatment.

We have nurse navigators, a clinical trial coordinator, and a social worker to help patients and physicians in coordinating their care.

Testing for hereditary breast cancer and tumors for gene assays for prediction and prognosis of recurrence are done where indicated.

We were able to skip chemotherapy in early breast cancer patients based on the results and treat them with radiation and hormonal therapy alone.

I reviewed our hospital's (PVHMC) 3 year breast cancer data collected by Cancer registry (2015, 2016 and 2017). Data showed incidence of breast cancer at 236, 234, and 193 analytical cases respectively.

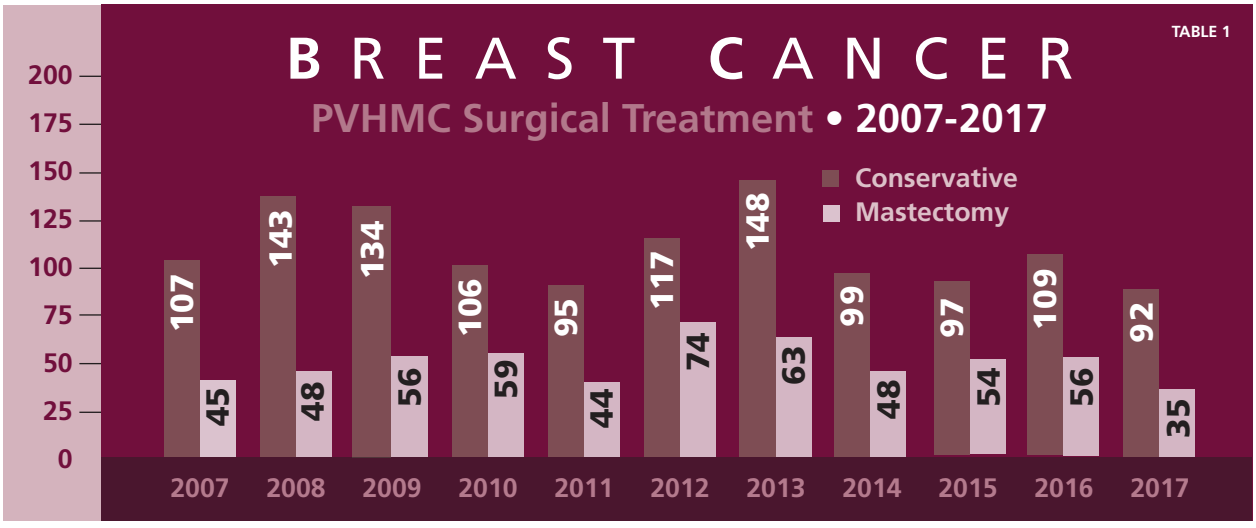
Our data was compared to NCDB data regarding age at diagnosis, stage at diagnosis, and various treatments given and 5 year survival for last 3 years (2015, 2016, and 2017) and are presented in the graphs and tables given below.

Our surgical treatment data as shown below show more conservative surgery than mastectomy. Bilateral mastectomy offered to woman with Hereditary breast cancer syndrome where indicated.

Table 1 **Breast Cancer PVHMC Surgical Treatment 2007-2017**

Table 2 **Breast Cancer Stage At Diagnosis NCDB vs PVHMC**
Our data showed more than two-thirds of our patients are diagnosed at stage I and II. 23% of our patients are over 70 years of age compared to 29% nationwide

Table 3 **Breast Cancer Age at Diagnosis**
Compared to NCDB data, 24% of patients less than 50 years of age were diagnosed



BREAST CANCER • Stage at Diagnosis • NCDB vs PVHMC

TABLE 2

	NCDB		PVHMC					
Stage at Diagnosis	NCDB 2015	% of Total NCDB	PVHMC 2015	% of Total PVHMC	PVHMC 2016	% of Total PVHMC	PVHMC 2017	% of Total PVHMC
0	26,514	20%	49	21%	43	18%	25	13%
I	57,127	43%	75	32%	85	36%	69	36%
II	31,970	24%	70	30%	69	29%	61	32%
III	9,071	7%	16	7%	23	10%	17	9%
IV	4,977	4%	8	3%	6	3%	9	5%
Unknown	89	0%	18	8%	8	3%	11	6%
N/A	1,793	1%	-	-	-	-	1	1%
Totals	**131,541**	**100%**	**236**	**100%**	**234**	**100%**	**193**	**100%**

BREAST CANCER • Age at Diagnosis • NCDB vs PVHMC

TABLE 3

	NCDB		PVHMC					
Age Group	NCDB 2015	% of Total NCDB	PVHMC 2015	% of Total PVHMC	PVHMC 2016	% of Total PVHMC	PVHMC 2017	% of Total PVHMC
Under 20	3	0%	-	-	-	-	-	-
20-29	530	0%	2	1%	3	1%	2	1%
30-39	4,524	3%	10	4%	17	7%	12	6%
40-49	18,534	14%	40	17%	40	17%	47	24%
50-59	31,175	24%	52	22%	55	24%	45	23%
60-69	38,216	29%	74	31%	56	24%	42	22%
70-79	26,349	20%	37	16%	42	18%	29	15%
80-89	10,549	8%	19	8%	11	5%	12	6%
90+	1,661	1%	2	1%	10	4%	4	2%
Unknown	-	-	-	-	-	-	-	-
Totals	**131,541**	**100%**	**236****	**100%**	**234****	**100%**	**193****	**100%**

** Represents analytical cases diagnosed and/or treated at PVHMC. Analytical cases diagnosed and treated elsewhere are not included.*

with breast cancer at our institution vs 14% nationwide. This may be the result of our efforts at screening and increasing awareness at community level.

Table 4 **Breast Cancer Treatment NCDB vs PVHMC**
Our treatment options of surgery, radiation therapy and hormonal therapy are 30%, 23%, 19% in the last 3 years compared to 25% with national data.

Table 5 **PVHMC 5-year Survival Table for Breast Cancer**

Our 5 year survival data for all stages diagnosed in 2006-2011 is 79.5%. These results are consistent with our previous data. Many factors are responsible for this slightly lower rate. Lack of health insurance and awareness and frequent change in insurances are some of the factors along with racial and socio-economic disparities. Some of our patients are seen at an advanced stage due to above factors and resulted in poor survival in spite of treatment.

Biological differences in the tumor types are also a factor.

Five-year survival data for breast cancers with Triple negative , ER/PR+,Triple+, ER+, ER- alone were shown in the tables on page 11 (tables 6-10). ER positive patients have 83.4% overall survival compared to 66.9% with Triple negative breast cancers. We encourage clinical trial participation for these patients.

Advances in understanding endocrine pathway and newer medications are responsible for this success.

With more information we are able to provide individualized treatments depending on their tumor biology and avoiding unnecessary treatments.

Hopefully with newer advances and trials we can achieve better results and improve 5-year survival rates.

BREAST CANCER • Treatment • NCDB vs PVHMC

TABLE 4

Treatment at Diagnosis	NCDB 2015		PVHMC 2015		PVHMC 2016		PVHMC 2017	
	# Cases	%	# Cases	%	# Cases	%	# Cases	%
No 1st Course Treatment	2,215	2%	*14	7%	*23	11%	*26	14%
Surgery Only	19,022	15%	19	9%	37	17%	27	15%
Radiation Only	147	0%	-	-	-	-	-	-
Hormones Only	1,659	1%	1	1%	2	1%	-	-
Chemotherapy Only	912	1%	2	1%	3	1%	3	2%
Immunotherapy Only	-	-	-	-	-	-	-	-
Surgery and Immunotherapy	82	0%	-	-	-	-	-	-
Surgery and Radiation	8,283	7%	17	8%	6	3%	7	4%
Surgery and Chemotherapy	4,960	4%	7	3%	12	6%	9	5%
Radiation and Hormones	331	0%-	1	1%	1	1%	-	-
Radiation, Hormones, Immunotherapy	-	-	-	-	-	-	1	0%
Surgery and Hormones	19,285	16%	23	11%	22	10%	14	8%
Surgery, Hormones and Immunotherapy	-	-	-	-	-	-	-	-
Surgery, Radiation & Hormones	31,381	25%	62	30%	50	23%	35	19%
Surgery, Chemo & Immunotherapy	1,999	2%	2	1%	-	-	3	2%
Surgery, Chemo, Hormones Immunotherapy	-	-	6	3%	3	1%	2	1%
Radiation and Chemotherapy	224	0%	-	-	-	-	-	-
Chemo and Immunotherapy	473	0%	-	-	-	-	6	3%
Chemotherapy and Hormones	436	0%	-	-	1	1%	-	-
Chemotherapy, Hormones and Immunotherapy	110	0%	-	-	-	-	-	-
Hormones and Other	-	-	1	0%	-	-	-	-
Surgery, Radiation, Hormones and Immunotherapy	-	-	1	0%	-	-	-	-
Surgery, Radiation, Chemo and Immunotherapy	-	-	4	2%	7	3%	3	2%
Surgery, Chemo and Radiation	6,026	5%	17	8%	8	4%	8	4%
Surgery, Chemo and Hormones	4,065	3%	5	2%	6	3%	11	6%
Surgery, Chemo, Radiation, Hormones and Immunotherapy	-	-	7	3%	7	3%	3	2%
Surgery, Chemo, Radiation and Hormones	11,335	9%	20	10%	26	12%	20	11%
Other Specified Treatment	11,458	9%	1	0%	1	1%	2	1%
Active Surveillance	51	0%	-	-	-	-	-	-
TOTAL	**124,458**	**100%**	**210**	**100%**	**215**	**100%**	**180**	**100%**

** Reflects cases diagnosed at PVHMC but patient has not sought any further treatment due to personal, spiritual or other reasons (patient expired or went into Hospice). This is based on exhaustive research to physicians and other facilities*

TABLE 5

PVHMC Five-Year Survival Table for Breast Cancer Cases*

Diagnosed in 2006-2011 – Comprehensive Community Cancer Program - PVHMC

Stage	Cases	At dx	1 year	2 years	3 years	4 years	5 years
0	219	100.0	99.5	98.6	96.3	92.2	90.8
I	361	100.0	96.6	95.0	93.3	89.1	87.1
II	278	100.0	97.8	92.7	87.7	81.9	78.6
III	121	100.0	95.0	83.4	74.8	65.2	62.6
IV	40	100.0	74.6	56.6	43.4	27.1	24.4
Overall	**1019**	**100.0**	**97.7%**	**96.0%**	**91.5%**	**81.7%**	**79.5%**

**Based on the TNM Staging 6th Edition which reflects updated changes to tumor staging based on previous research.*

PVHMC Five-Year Survival Table for Breast Cancer ER- Cases

TABLE 6

Diagnosed 2006-2011 – Comprehensive Community Cancer Program - PVHMC

Stage	Cases	At dx	1 year	2 years	3 years	4 years	5 years
0	23	100.0	100.0	100.0	95.7	91.3	91.3
I	56	100.0	96.4	92.9	87.5	83.9	82.1
II	71	100.0	94.4	87.3	85.9	76.1	73.2
III	35	100.0	91.4	77.1	71.4	60.0	60.0
IV	13	100.0	76.9	38.5	38.5	30.8	30.8
Overall	**198**	**100.0**	**93.3%**	**84.2%**	**79.9%**	**72.2%**	**71.3%**

PVHMC Five-Year Survival Table for Breast Cancer ER/PR+ Cases

TABLE 7

Diagnosed 2006-2011 – Comprehensive Community Cancer Program - PVHMC

Stage	Cases	At dx	1 year	2 years	3 years	4 years	5 years
0	143	100.0	99.3	98.6	95.8	93.7	92.3
I	263	100.0	97.0	95.8	94.7	90.8	88.5
II	168	100.0	99.4	95.8	89.2	85.0	81.3
III	70	100.0	95.7	87.1	77.1	68.5	64.1
IV	15	100.0	73.3	73.3	46.7	33.3	26.7
Overall	**659**	**100.0**	**97.1%**	**94.5%**	**90.1%**	**86.0%**	**83.4%**

PVHMC Five-Year Survival Table for Breast Cancer Triple+ Cases

TABLE 8

Diagnosed 2006-2011 – Comprehensive Community Cancer Program - PVHMC

Stage	Cases	At dx	1 year	2 years	3 years	4 years	5 years
0	0	100.0	100.0	100.0	100.0	100.0	100.0
I	12	100.0	100.0	100.0	100.0	100.0	91.7
II	25	100.0	100.0	96.0	92.0	88.0	88.0
III	11	100.0	100.0	100.0	90.0	81.8	72.7
IV	2	100.0	100.0	100.0	90.0	81.8	81.8
Overall	**50**	**100.0**	**100%**	**98.1%**	**90.6%**	**86.8%**	**83.0%**

PVHMC Five-Year Survival Table for Breast Cancer Triple- Cases

TABLE 9

Diagnosed 2006-2011 – Comprehensive Community Cancer Program - PVHMC

Stage	Cases	At dx	1 year	2 years	3 years	4 years	5 years
0	1	100.0	100%	100%	100%	100%	100%
I	36	100.0	94.4	88.9	80.6	75.0	75.0
II	57	100.0	94.7	87.7	86.0	77.2	73.7
III	20	100.0	85.0	60.0	55.0	50.0	50.0
IV	7	100.0	71.4	28.6	28.6	28.6	28.6
Overall	**121**	**100.0**	**91.3%**	**79.5%**	**74.8%**	**68.5%**	**66.9%**

PVHMC Five-Year Survival Table for Breast Cancer ER+ Cases

TABLE 10

Diagnosed 2006-2011 – Comprehensive Community Cancer Program - PVHMC

Stage	Cases	At dx	1 year	2 years	3 years	4 years	5 years
0	155	100.0	99.4	98.7	96.1	93.6	91.6
I	294	100.0	96.6	95.2	94.2	90.1	88.0
II	199	100.0	99.0	94.5	88.4	84.3	80.7
III	84	100.0	96.4	85.7	75.0	66.6	62.9
IV	25	100.0	76.0	68.0	47.4	25.9	21.5
Overall	**757**	**100.0**	**96.7%**	**93.3%**	**88.7%**	**84.1%**	**81.5%**

DEFINITION OF TERMS

Age of Patient	Recorded in completed years at the time of diagnosis for analytic cases or the age of the patient at the time they were first seen at this hospital for non-analytic patients.
Class of Case	Analytic: Patients with a malignant neoplasm (or benign brain or CNS tumor diagnosed in 2001 or after), newly diagnosed and/or received all or part of their 1st course of treatment at Pomona Valley Hospital Medical Center. Non-Analytic: Patients who have been previously diagnosed and treated for a malignancy (or benign brain or CNS tumor after 2001) elsewhere who receive treatment at PVHMC for progressive, recurrent or metastatic disease.
Stage Of Disease	Analytic cancer cases at PVHMC are staged according to the American Joint Commission on Cancer (AJCC), 6th Edition Cancer Staging manual as required by the American College of Surgeons, Commission on Cancer. The AJCC, TNM Classification Systems is based on the premise that cancer of similar types (histology) or site of origin share similar patterns of growth. There are no AJCC TNM Staging Classifications for malignant brain and CNS tumors or hematopoietic diseases. These cases are designated as not applicable (N/A) under stages on the New Cancer Cases 2006 table. This system expresses the anatomic extent of disease based on: T = tumor size, and/or tumor invasion, N = node involvement, M = metastases, spread to distant sites (lung, liver, bone, brain, etc.) A Stage Group, i.e. I, II, III, IV is assigned after the TNM elements have been determined.
Survival Rate	The proportion of patients surviving a particular interval from the time of diagnosis, expressed in terms of percentage, and then computed.
Treatment	Refers to the first course of planned treatment after initial diagnosis.

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