



2022

Cancer Center
Annual Report



2022 Cancer Center Annual Report 2022 Cancer Registry Statistical Review

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Introduction



The NorthBay Health Cancer Center is thriving. We have a comprehensive cancer program of prevention, detection, treatment, support, and survivorship services. The Cancer Center is staffed by oncology experts – physicians, a nurse practitioner, nurses, pharmacists, a social worker, a dietitian, and expert technicians. We have an on-site pharmacy to meet the infusion and prescription needs of our patients. We provide a compassionate approach to cancer treatment supported by state-of-the-art technology and access to cutting-edge clinical research protocols. We are treating a record number of patients in radiation/medical oncology and the infusion center.

Since 1987, high quality cancer program's have been available at the NorthBay Health Cancer Center. In 1996, the American College of Surgeon's Commission on Cancer initially approved our Community Hospital Cancer Program, making NorthBay Health Cancer Center the first community-based cancer program in Solano County.

The purpose of the cancer program 2022 Annual Report is to communicate the accomplishments and successes of NorthBay Health's Cancer Program to the medical staff, administration, and partners. This report is also available to the public by accessing it on the NorthBay Health website, at www.NorthBay.org. The NorthBay Health cancer program activities and accomplishments are described in this annual report, along with statistical data from the NorthBay Health Cancer Registry.

Cancer Committee Chair: Jessica F. Powers, M.D.
Commission on Cancer Liaison Physician: Jason Marengo, M.D.
2022 Annual Report

NorthBay Health Cancer Center continued to provide outreach activities throughout the community and countywide. Cancer screening and other presentations were given at service organizations, churches and community centers, NorthBay Health Medical Center, NorthBay Health VacaValley Hospital and the NorthBay Health Primary Care in Vacaville.

2022 Cancer Committee Members

NorthBay Health Medical Center Comprehensive Community Hospital Cancer Program (CCP)

Role	Name
Cancer Committee Chair	Dr. Jessica F. Powers
Cancer Liaison Physician	Dr. Jason Marengo
Diagnostic Radiologist	Dr. James Bronk
Pathologist	Dr. Anthony Victorio
Surgeon	Dr. Jason Marengo
Medical Oncologists	Drs. James Long, Brian Vikstrom, J.D. Lopez
Radiation Oncologist	Dr. Clayton Chen
Palliative Care	Dr. Terrell B. Van Aken
Cancer Program Administrator	Lori Muir
Registered Dietitian	Devin Baker
Oncology Nurses	Louise Henry, R.N., O.C.N. Flo Aruejo, MSN, BSN, R.N.
Oncology Social Services	Magi Philpot, LCSW, OSW-C
Certified Tumor Registrar (CTR)	Charlene K. Thompson, LVN, CTR
Cancer Conference Coordinator	Charlene K. Thompson, LVN, CTR
Quality Improvement Coordinator	Ashley Chadbourne, R.N./Lori Muir
Clinical Trials Coordinator	Natasha Perkins, R.N., O.C.N.
Pharmacist	Christopher Smith, RPh
Rehabilitation	Paula Behrens, P.T.
Nurse Navigators	Keni Horiuchi, R.N., A.O.C.N Maricel Roblez, N.P.
Radiation Oncology	Cassie Marquez, RT

Tumor Board/Cancer Conference Coordinator Report – 2022

The Tumor Board Conferences (also called Breast Care Conference, Lung Care Conference and the addition of G.I. Conference) are an integral part of the hospital's cancer treatment program. The Tumor Board Conferences provide physicians with access to multidisciplinary cancer consultative services for their patients, as well as continuing cancer education. This specialized team consists of board-certified medical oncologists, radiation oncologists, surgeons, diagnostic radiologists, pathologists, a clinical trial nurse, nurse navigators, pharmacists and the cancer registrar. Any staff physician is welcome to present a cancer-related case to the board. During the conference each patient's medical history, physical findings, clinical course, diagnostic work-up, and pathological specimens are reviewed. Discussions regarding the disease process, AJCC Staging, medical literature review and personal experience in the management of disease follow. Recommendations regarding further treatment plans are made based upon available information (NCCN Guidelines) as well as consideration of available clinical trials.

Conferences are held weekly and are divided into three formats: Breast Care Conference, Lung Care Conference and G.I. Conference with general Tumor Board cases discussed at the end of each Site-specific conference.

Two hundred and seventeen NorthBay cancer patients were presented and reviewed in 2022 Cancer Conferences.

The Tumor Board Conferences Also Provide a Forum to Discuss Issues Related to Cancer Care –

- Articles presented at Cancer Conferences:
 1. Lifetime Risk for People with Cowden Syndrome & Surveillance Recommendations for Cowden's Syndrome.

Cancer Conference cases can be scheduled by physicians through the Cancer Registry Office: 707-624-8103 or cthompson@northbay.org.

2022 Cancer Program Elements

Bioethics Committee

NorthBay Health provides bioethics consultations through the Bioethics Committee. The committee consists of physicians, nurses, a chaplain, a social worker, a community lawyer and an administrative representative. This committee is available to any physician, staff person, patient or family needing consultation with an interdisciplinary focus. The Bioethics Committee meets quarterly to conduct business/education and meets whenever called to provide consultations. Decisions or actions to be taken are not decided during a consultation. The committee only provides recommendations regarding the issues brought before it.

Cancer Committee

The NorthBay Health Cancer Committee is a multidisciplinary team that directs and oversees all cancer program activities. Four meetings were held in 2022. Members of the Cancer Committee represent administration, quality improvement, rehabilitation, nursing, social services, the cancer registry, radiation oncology, clinical trials, medical oncology and physicians from several disciplines. The members are named elsewhere in this report.

Cancer Registry

The NorthBay Health Cancer Registry is a data system that has been monitoring the incidence, staging, treatment and survival of cancer patients seen by NorthBay Health since our original reference date, Jan. 1, 1987. The Cancer Registry is an integral part of the NorthBay cancer program and a basic requirement for approval by the Commission on Cancer of the American College of Surgeons. The major objective of the Cancer Registry is to make basic knowledge about the cancer experience at NorthBay available to all members of the medical staff in order to evaluate the results of patient care and compare the results with regional and statewide data. The registry is comprised of 16,874 cases admitted to NorthBay Health Medical Center and 6647 cases admitted to NorthBay Health VacaValley Hospital from 1987-2022. Through the Cancer Registry's lifetime follow-up service, physicians and patients are contacted annually to record and update each patient's progress. The follow-up process helps to ensure patients receive regular medical care and provides the basis for survival statistics. In 1987, the registry began reporting cancer data to the state Department of Health Services California Cancer Registry as part of the mandatory cancer reporting law.

Under the direction of the Cancer Committee, registry staff performs data analyses and participates in internal and national data studies. During 2022, registry data was submitted error-free to the National Cancer Database (NCDB) for cases diagnosed in 2007 through 2021.

Clinical Trials Program – 2022

In 2022, NorthBay Health Cancer Center maintained affiliate membership with Stanford Medical Center that allows continued access to national clinical trials through the Clinical Trials Support Unit (CTSU) and ECOG-ACRIN Cancer Research Group. During 2022, 7 trials for various tumor types were open for accrual. Dr. Brian Vikstrom continued to provide oversight of the program as the principal investigator along with colleagues Drs. James Long, Jonathan Lopez, and Jessica Powers in medical oncology and Dr. Jason Marengo in surgical oncology. Affiliations with academic tertiary cancer programs allowed additional access to cancer treatment trials. NorthBay remains committed to supporting community-based access to national oncology clinical trials.

Diagnostic Imaging Services

Technologically advanced tools for cancer diagnosis, evaluation, treatment, planning and monitoring are available through NorthBay Health's Diagnostic Imaging Services. These include 256 slice spiral CT Scanning, Magnetic Resonance Imaging, Mammography, Ultrasonography, Angiography, Nuclear Medicine, PET Imaging, and PACS. Diagnostic Imaging also offers Interventional Radiology, which includes percutaneous and stereotactic biopsy procedures, both minimally invasive methods for obtaining cells or tissue for diagnosis. The radiologists are available for consultation and are active participants in cancer conferences and the Cancer Committee.

Infusion Center

The infusion center provides a comfortable outpatient setting for patients to receive a variety of treatments, including chemotherapy, bio-immunotherapy, blood transfusions, antibiotics and other parenteral therapies. Patients can choose to receive treatment in one of two settings. Available to them are private infusion rooms with hospital beds or recliners with a privacy curtain to provide a more secluded treatment space and access to private TVs. Heated blankets are on hand for patients who prefer to be warm while reading a book, listening to music or taking a nap. Adult family members who accompany patients to the infusion center are encouraged to sit with the patient. As a safety measure, visitors under 18 years of age or who are pregnant are encouraged to wait in the lounge area that is directly adjacent to the infusion center.

Infusion nurses who are administering cancer treatment are required to have an active Oncology Nursing Society (ONS) chemotherapy provider card and to maintain credentialing by NorthBay Health to administer chemotherapy/biotherapy. Some of the infusion nurses have other oncology credentialing including AOCN, ACNS, and CBCN. All infusion nurses received advanced training in central line maintenance and care. While the primary focus of care for infusion nurses are cancer treatment and symptom management, patients receiving other treatments also receive the specific treatment related education and support. Cancer Center nurses promote nursing excellence at NorthBay by being a resource and by providing education to hospital-based nurses and the community. Cancer Center nurses actively participate in various cancer-related community activities.

Hospice & Bereavement

NorthBay Health Hospice & Bereavement provides comprehensive hospice services to Solano County residents. Hospice is an interdisciplinary program of care that provides palliative care and sophisticated methods of pain and symptom control to help the patient live as fully and comfortably as possible. It also provides emotional and spiritual support to terminally ill patients, their families and friends. The hospice team enables our patients to spend the last months of their lives with dignity and the highest quality of life possible. Hospice care emphasizes quality of life enhancement while preserving the patient's dignity. NorthBay Health bereavement services are free to residents of Solano County, and include written material and support groups. Support groups are available for adults and veterans.

Despite the challenges of COVID, NorthBay Health expanded its services, adding a Drop in Group held and facilitated on Zoom, in addition to continuing the Journey through Grief program, likewise held on Zoom, and with the cooperation of talented NorthBay colleagues, the Annual Tree of Memories Memorial Service was produced and held remotely.

Nursing Department

NorthBay Health VacaValley Hospital's Medical-Surgical Unit provides 24-hour comprehensive acute care for hospitalized cancer patients. It is a multidisciplinary team composed of physicians, registered nurses, social workers, dietitians, rehabilitation specialists, respiratory therapists, and Continuity of Care Coordinators. The registered nurses are skilled in assessment, planning, interventions and evaluation of patient-care needs. Thirty-three percent of the full- and part-time registered nurses participate in chemotherapy credential or certification classes, updates and oncology educational programs to enhance nursing care for the patient receiving chemotherapy.

Nurse Navigation – 2022

The navigation of patients with cancer through diagnosis, treatment and into survivorship is an ongoing challenge for any health care system. This is a key component in Commission on Cancer accreditation. NorthBay has invested in a navigation program since 2012 with oncology nurse navigators continuing to provide cancer patients, family members and care providers with support, education and health system coordination within the NorthBay system and, in some instances, to tertiary medical centers. The two oncology nurse navigators have subspecialty expertise in areas such as breast care, clinical trials and lung cancer screening. Once a patient has completed their cancer treatment, the oncology nurse navigators work with the oncologists to compile survivorship care plans for eligible patients. The nurse navigators also manage NorthBays's Mayo eConsult service. Altogether, these nurse navigators continue to be a central point of contact for cancer patient care in the NorthBay Health System and work together with the health care team to fulfill the Commission on Cancer accreditation requirements for the NorthBay Health Cancer Center.

Nutrition Services

NorthBay Health clinical dietitians are available to provide comprehensive assessments for the special needs of cancer patients. Currently the dietitians are involved with one-on-one patient counseling, nutrition education and the Cancer Committee. The dietitian's goal is to improve or maintain the nutritional status of cancer patients, which can be helpful in improving patients' response to cancer treatment and minimizing the chance of cancer recurrence.

Oncology Social Services

Oncology Social Services provides direct clinical social work service, counseling and case management services to Cancer Center patients and their families, including psychosocial assessment, development of a plan of care, as well as implementation and documentation of emotional, social, financial, environmental or follow-up referral needs. The oncology social worker works collaboratively with members of the Cancer Center interdisciplinary team and other members of the NorthBay Health team. The social worker monitors progress toward goals of plan of care, collaborates with community partners, and facilitates integration with community-based resources to optimize patient health. Activities are consistent with the system's mission, values and in compliance with applicable regulations and systems policies and procedures.

Palliative Care Program

The objective of the NorthBay Bridges palliative care program is to help patients facing a life-limiting, chronic or progressive illness to manage their symptoms and realize the best quality of life. NorthBay Palliative Care Services assists the primary care or attending physician in providing active care that reaches beyond physical pain and symptom relief to address emotional, social, cultural and spiritual needs of seriously ill patients and their families. Guided by a philosophy of care within an organized and structured system, treatment is determined and delivered in the context of the patient's unique life goals. Palliative care can be delivered concurrently with life-prolonging treatment or as the main focus of care.

Pharmacy

To ensure patient safety, NorthBay Health uses standardized treatment plans that have been referenced and reviewed with evidence-based chemotherapy guidelines by the clinical nurse specialist, board-certified oncology clinical pharmacist and the hematologist/oncologist. For non-standardized chemotherapy regimens, pharmacists verify dosing and scheduling based on textbook references, abstracts, journal articles or protocols from other major research institutions. Pharmacists verify calculations for all dosages of chemotherapy (based on unit of dosing i.e. mg/M² or dose per kg etc.) and assess the appropriateness of the dose based upon patient-specific parameters (i.e. renal function; liver function; cardiac function). Any discrepancies or additional patient safety recommendations are discussed with the physician and amended as necessary. The NorthBay Health pharmacy uses a documented double-check system for dosage calculations, drug, drug volume and intravenous solution prior to admixture. NorthBay Health pharmacists oversee the preparation of all chemotherapeutic agents and non-chemotherapeutic agents used in the clinic and in the hospital at NorthBay. NorthBay Health uses a closed system to prepare chemotherapy. This system is an added safety measure to protect health care employees, patients and family members who may be present in the clinic from possible exposure to aerosolized chemotherapy. Pharmacy continues to ensure environmental safety in chemotherapy preparation. We are continually instituting new recommendations from ASHP, NIOSH, USP 797 and USP 800 in regard to employee and patient safety. Pharmacists interact with patients and members of the health care team with drug information, side effect and pain management information and are an important resource at Cancer Committee, Tumor Board and Oncology Team meetings. NorthBay is committed to education and advancing the profession of oncology pharmacy by precepting students at Solano County Touro University; University of Pacific, Stockton; and University of California, San Francisco. NorthBay Health is an accredited PGY1 Residency site through the American Society of Health-System Pharmacists Certification. We are able to offer an elective rotation in oncology to further prepare pharmacists for clinical oncology practice. Our oncology clinical pharmacist is certified by the Board of Pharmaceutical Specialists in Oncology Pharmacy to further offer quality patient care.

Pathology

Pathologists at NorthBay Health provide a full range of oncological-related services, including anatomic pathology, clinical pathology, and immunopathology. Their multi-disciplinary management of cancer care includes an active role in the monthly Cancer Conferences and Cancer Committee, as well as being available to physicians and registry staff for consultation. In 2022, the department of pathology processed 4,895 specimens.

Radiation Oncology Department

Radiation therapy is an important part of treatment for many of our patients. Since each cancer type requires a different approach, treatment plans are based on a patient's individual unique needs and treatment goal. Our radiation oncologists and staff use advanced imaging techniques before and during radiation treatments that closely track the tumor. A dedicated nursing and supportive staff provide integrative oncology services to reduce side effects, monitor well-being and help to maintain quality of life.

In August 2016, the new NorthBay Health VacaValley Wellness Center opened and Radiation Oncology unveiled its new Varian TrueBeam™ linear accelerator. TrueBeam™ is an advanced image-guided radiation therapy (IGRT) system used to treat cancer with speed and accuracy while avoiding healthy tissues and organs. TrueBeam™ was designed for complex cases of cancer of the lung, breast, stomach and brain. It also can be used for cancers of the liver and prostate, along with other cancers treated with radiation therapy. TrueBeam™ combines respiratory gating, real-time tracking, imaging and treatment in a streamlined system. With this integration, we can offer advanced treatment options, such as stereotactic radiosurgery (SRS), stereotactic body radiation therapy (SBRT), image-guided radiotherapy (IGRT), intensity-modulated radiotherapy (IMRT), and RapidArc®.

Ongoing staff education and in-services have provided a smooth transition to our new facility and patients are receiving state-of-the-art, high quality care through an integrative process by competent, caring and compassionate staff, and where the patient is at the center of their own care.

Rehabilitation Services

Through NorthBay Health Rehabilitation Services, and outpatient rehabilitation, cancer patients are helped to achieve a greater degree of functional independence and an improved quality of life. Available services include speech therapy, occupational therapy and physical therapy, all provided by highly trained, licensed personnel. Lymphedema and post-mastectomy programs are also available.



2022 Cancer Program Accomplishments

Professional and Community education lectures/presentations:

- ◆ “Advances in Breast Reconstruction,” given to Thriving Pink by Dr. Jason Marengo, Surgical Oncologist, Plastic Reconstruction Surgeon, June 22, 2022.
- ◆ “Genetic Counseling and Testing-A Personalized Approach to Treatment for Women with Breast Cancer,” given to Thriving Pink Group, by Karen Opheim-Vikstrom, NorthBay Cancer Center Geneticist, October 22, 2022.
- ◆ Participated and Completed the Commission on Cancer Tobacco Cessation Just ASK PDSA, January through December 2022.
- ◆ Published the 2021 Annual Report and posted the report to the Cancer Center website.
- ◆ Submitted all 2021 cases seen at NorthBay Health Medical Center and NorthBay Health VacaValley Hospital to California Cancer Registry in Sacramento with 99 percent of the cases submitted within six months of first being seen at facility and a 99 percent accuracy rate. (State goal is 97 percent)
- ◆ Held monthly Cancer Conferences (Breast, Lung and Tumor Board).
- ◆ Provided an environment that facilitated the delivery of optimal patient care in all phases of evaluation, planning, treatment and follow up.

Quality Studies/Barrier to Care (Quality Improvement) - 2022

The NorthBay Health Medical Center Cancer Committee reviewed and discussed two quality study measures and one barrier to care (Quality Improvement) in 2022.

1. Improve Access to Physical Therapy for Breast Cancer Lymphedema Clients

Prompt access to lymphedema physical therapy services after breast cancer treatment is essential to reducing complications and infections due to lymphedema in breast cancer survivors. We identified delays in care for lymphedema therapy. Baseline data showed that first available appointment was 40 days and the first follow up appointment was available at 18 days. We set a goal for improved access and recommended first appointment within 28 days and first follow up in 14 days. The interventions implemented were to begin recruitment for a new lymphedema specialist and to open two urgent evaluation slots for first appointments per month for breast cancer patients.

2. Smoking in New Cancer Patients PDSA Quality Improvement Project and Clinical Study: Just ASK

This PDSA was designed provide a framework for improving assessment for all newly diagnosed or previously untreated patients with cancer at Commission on Cancer (CoC) accredited facilities. Outcomes assess the rate of ASKing newly diagnosed patients about smoking, as well as current practices, implementation barriers, implementation strategies and organization readiness and the capacity of oncology care provided at participating sites to ASK about smoking status and advise them about the importance of smoking cessation. In 2022, a total of 257 newly diagnosed patients were evaluated at the NorthBay Cancer Center Medical Oncology department of this number there were 30 smokers and information was provided to 14 of the 30 smokers on smoking cessation.

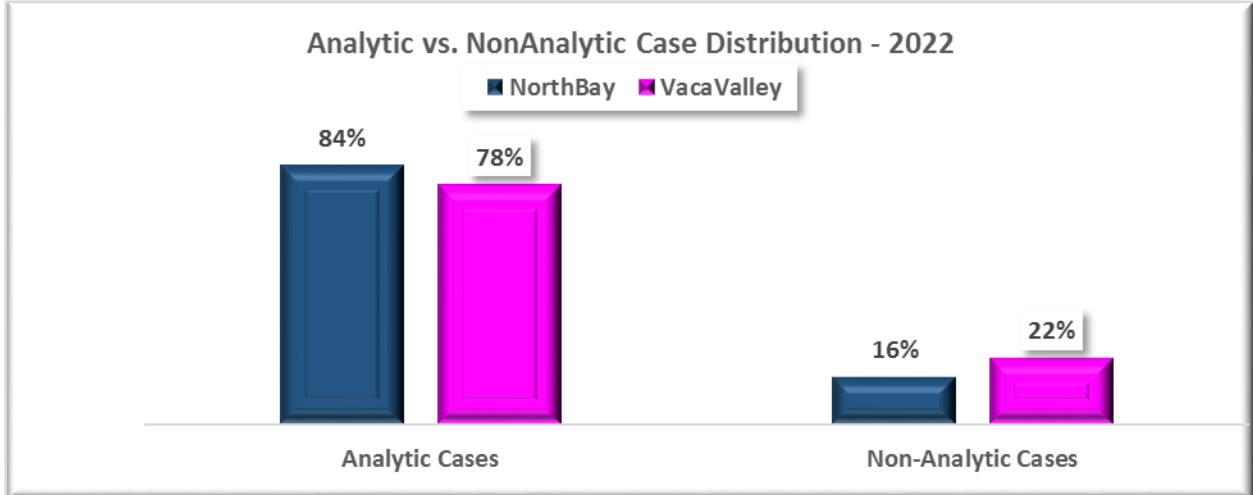
3. Barrier to Care: Access Timeliness MRI/CT Scans

Assessment: Delays in getting patient in for MRI/CT appointment/procedures were noted due to severe staffing/scheduler shortage as well as delays caused by insurance referrals for authorizations for procedures which could push out scanning 4-6 weeks from first request.

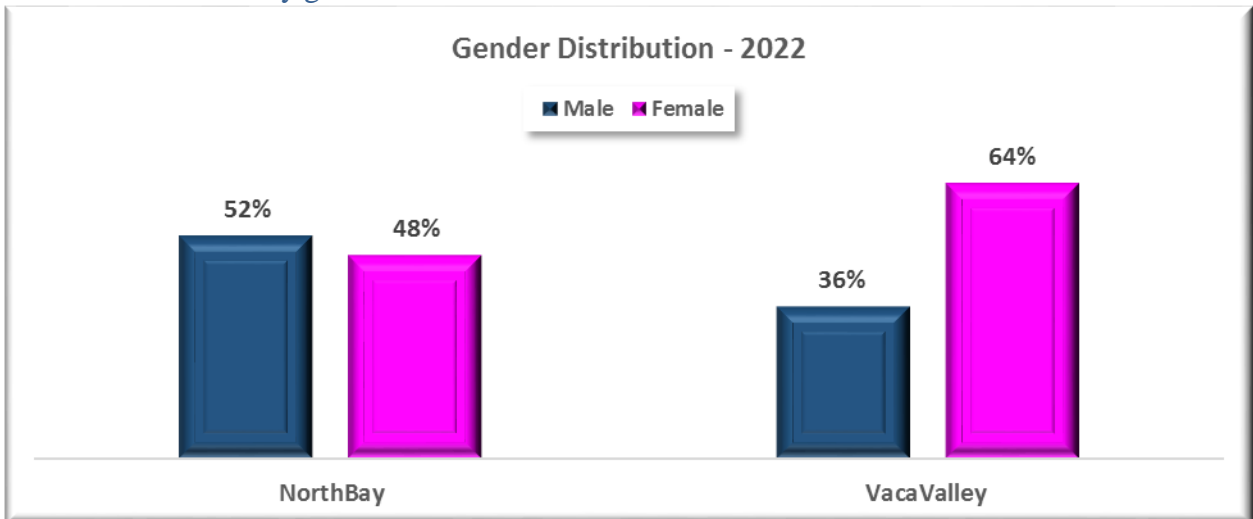
Addressing Barriers: New scheduling program for messaging patients. **Resources/Process Utilized to Address Barrier:** Hiring of staff/training of current and new staff on new scheduling program. **Analysis:** Wait time based on 3rd available time for MRI appointments dropped from 13.5 days to 10.6, CT Scan times increased from 8.1 to 9.8 days and PET Scanning was consistent at 9.8 days.

2022 Cancer Registry Data Overview

In 2022, the NorthBay Health Cancer Center accessioned 483 cancer cases from NorthBay Health Medical Center (NBMC) and 529 cancer cases from NorthBay Health VacaValley Hospital (VVH).



Eighty-four percent of cases seen at NBMC in 2022 were analytic cases (cases diagnosed and/or received some part of their first course treatment at this facility), while the analytic cases reported at VVH were 78 percent of the caseload. The graph below demonstrates the distribution of new cancer cases by gender.



The tables and graphs on the following pages contain 2022 cancer case data compiled and analyzed by the NorthBay Health Cancer Registry. The Primary Site tables contain a breakdown of our cancer caseload by organ of cancer origin and show cancer case distribution by class of case, gender and AJCC Stage. The graphs entitled “Primary Site Distribution” demonstrate our most common cancer diagnoses at NBMC vs. VVH, as a percentage of each institution’s total caseload.

2022 Primary Site Table NorthBay Health Medical Center

Site	Total Cases	Class		Sex		Stage					Unknown
		Analytic	NonAn	M	F	Stage 0	Stage I	Stage II	Stage III	Stage IV	
ALL SITES	483	408	75	253	230	29	122	74	49	65	6
ORAL CAVITY/PHARYNX	6	5	1	6	0	0	2	1	1	0	0
TONGUE	2	2	0	2	0	0	0	1	0	0	0
TONSIL	1	1	0	1	0	0	0	0	1	0	0
NASOPHARYNX	1	0	1	1	0	0	0	0	0	0	0
SALIVARY GLAND MAJOR	2	2	0	2	0	0	2	0	0	0	0
DIGESTIVE SYSTEM	96	79	17	57	39	0	22	9	17	21	4
ESOPHAGUS	6	5	1	5	1	0	0	1	2	1	0
STOMACH	7	6	1	5	2	0	3	1	0	2	0
SMALL INTESTINE	4	4	0	2	2	0	1	0	1	0	0
COLON	32	28	4	16	16	0	6	3	7	9	2
RECTUM & RECTOSIGMOID	11	10	1	7	4	0	1	2	3	4	0
ANUS, ANAL CANAL	1	0	1	0	1	0	0	0	0	0	0
LIVER	13	7	6	10	3	0	3	0	1	2	1
GALLBLADDER	2	2	0	1	1	0	0	1	1	0	0
PANCREAS	16	13	3	9	7	0	8	1	1	3	0
BILE DUCTS	3	3	0	1	2	0	0	0	1	0	1
OTHER DIGESTIVE	1	1	0	1	0	0	0	0	0	0	0
RESPIRATORY SYSTEM	60	46	14	29	31	0	18	1	9	17	1
LUNG/BRONCHUS-SMALL CELL	3	3	0	1	2	0	0	0	0	3	0
LUNG/BRONCHUS-NON SM CELL	56	43	13	27	29	0	18	1	8	14	1
PLEURA	1	0	1	1	0	0	0	0	1	0	0
BLOOD & BONE MARROW	14	11	3	6	8	0	0	0	0	0	0
HEMERETIC	9	8	1	4	5	0	0	0	0	0	0
MYELOMA	5	3	2	2	3	0	0	0	0	0	0
MELANOMA OF SKIN	2	1	1	1	1	1	0	0	0	0	0
SOFT TISSUE	3	2	1	1	2	0	2	0	0	0	0

2022 Primary Site Table NorthBay Health Medical Center

Site	Total	Class		Sex		Stage					Unknown
		Analytic	NonAn	M	F	Stage 0	Stage I	Stage II	Stage III	Stage IV	
ALL SITES	483	408	75	253	230	29	122	74	49	65	6
BREAST	58	52	6	0	58	5	29	8	2	7	1
FEMALE GENITAL	22	18	4	0	22	0	10	1	4	2	0
CERVIX UTERI	1	1	0	0	1	0	0	0	0	1	0
CORPUS UTERI	11	10	1	0	11	0	8	0	2	0	0
OVARY	5	4	1	0	5	0	2	0	1	1	0
VULVA	4	2	2	0	4	0	0	1	0	0	0
OTHER FEMALE GENITAL	1	1	0	0	1	0	0	0	1	0	0
MALE GENITAL	82	73	9	82	0	0	11	37	14	11	0
PROSTATE	77	68	9	77	0	0	8	36	14	10	0
PENIS	1	1	0	1	0	0	0	0	0	1	0
TESTIS	4	4	0	4	0	0	3	1	0	0	0
URINARY SYSTEM	49	43	6	35	14	21	11	5	3	3	0
BLADDER	37	33	4	29	8	20	8	3	1	1	0
KIDNEY AND RENAL PELVIS	11	9	2	6	5	0	3	2	2	2	0
URETER	1	1	0	0	1	1	0	0	0	0	0
BRAIN	11	9	2	6	5	0	0	0	0	0	0
OTHER NERVOUS SYSTEM	25	19	6	6	19	0	0	0	0	0	0
ENDOCRINE SYSTEM	21	19	2	5	16	0	11	4	0	1	0
THYROID	15	15	0	2	13	0	10	4	0	1	0
OTHER ENDOCRINE	6	4	2	3	3	0	1	0	0	0	0
LYMPHATIC SYSTEM	21	19	2	14	7	0	7	9	0	3	0
NON-HODGKIN'S LYMPHOMA	15	13	2	9	6	0	5	5	0	3	0
HODGKIN'S LYMPHOMA	6	6	0	5	1	0	2	4	0	0	0
UNKNOWN OR ILL-DEFINED	13	12	1	5	8	0	0	0	0	0	0

2022 Primary Site Table NorthBay Health VacaValley Hospital

Site	Total Cases	Class		Sex		Stage					
		Analytic	NonAn	M	F	Stage 0	Stage I	Stage II	Stage III	Stage IV	Unknown
ALL SITES	529	414	115	188	341	22	173	59	56	50	10
ORAL CAVITY	11	8	3	6	5	0	4	2	0	2	0
TONGUE	3	3	0	3	0	0	3	0	0	0	0
SALIVARY-GLANDS, MAJOR	3	0	3	1	2	0	0	0	0	0	0
TONSIL	3	3	0	1	2	0	1	2	0	0	0
NASOPHARYNX	1	1	0	1	0	0	0	0	0	1	0
HYPOPHARYNX	1	1	0	0	1	0	0	0	0	1	0
DIGESTIVE SYSTEM	57	44	13	29	28	0	4	10	15	14	0
ESOPHAGUS	6	5	1	5	1	0	0	0	3	2	0
STOMACH	7	5	2	5	2	0	0	0	1	4	0
SMALL INTESTINE	3	2	1	1	2	0	0	1	0	1	0
COLON	6	3	3	3	3	0	0	0	1	2	0
RECTUM & RECTOSIGMOID	9	8	1	3	6	0	0	3	5	0	0
ANUS, ANAL CANAL	8	8	0	4	4	0	0	3	3	2	0
PANCREAS	12	9	3	6	6	0	4	1	1	3	0
LIVER	5	3	2	2	3	0	0	2	0	0	0
RETROPERITONEUM	1	1	0	0	1	0	0	0	1	0	0
RESPIRATORY SYSTEM	48	32	16	27	21	0	0	2	10	16	0
LARYNX	2	1	1	1	1	0	0	0	0	1	0
OTHER RESPIR & THORACIC	1	0	1	1	0	0	0	0	0	0	0
LUNG/BRONCHUS-SMALL CELL	4	4	0	2	2	0	0	0	1	3	0
LUNG/BRONCHUS-NON SM CELL	38	25	13	20	18	0	0	2	9	12	0
NASAL CAVITY, SINUS,EAR	3	2	1	3	0	0	0	0	0	0	0
BLOOD & BONE MARROW	27	24	3	13	14	0	0	0	0	0	0
HEMERETIC	19	16	3	8	11	0	0	0	0	0	0
MYELOMA	8	8	0	5	3	0	0	0	0	0	0
EYE	1	1	0	0	1	0	0	0	0	0	0
SOFT TISSUE	2	2	0	1	1	0	0	0	2	0	0
MELANOMA OF SKIN	9	6	3	6	3	0	2	0	2	1	1
OTHER SKIN	1	1	0	0	1	0	0	0	0	0	1
BREAST	224	207	17	0	224	22	145	23	11	1	2

2022 Primary Site Table NorthBay Health VacaValley Hospital

Site	Total Cases	Class		Sex		Stage					
		Analytic	NonAn	M	F	Stage 0	Stage I	Stage II	Stage III	Stage IV	Unknown
ALL SITES	529	414	115	188	341	22	173	59	56	50	10
FEMALE GENITAL	20	16	4	0	20	0	7	1	5	2	0
CERVIX UTERI	5	5	0	0	5	0	4	1	0	0	0
CORPUS UTERI	7	6	1	0	7	0	2	1	3	0	0
VAGINA	1	1	0	0	1	0	0	0	1	0	0
OVARY	4	1	3	0	4	0	0	0	0	1	0
OTHER FEMALE GENITAL	1	1	0	0	1	0	1	0	0	0	0
VULVA	2	2	0	0	2	0	0	0	1	1	0
MALE GENITAL	64	33	31	64	0	0	2	15	8	7	1
PROSTATE	64	33	31	64	0	0	2	15	8	7	1
URINARY SYSTEM	12	5	7	10	2	0	1	3	1	0	0
BLADDER	8	5	3	7	1	0	1	3	1	0	0
KIDNEY AND RENAL PELVIS	4	0	4	3	1	0	0	0	0	0	0
BRAIN	5	5	0	2	3	0	0	0	0	0	0
OTHER NERVOUS SYSTEM	6	2	4	2	4	0	0	0	0	0	0
ENDOCRINE SYSTEM	8	4	4	5	3	0	1	0	0	0	0
THYROID	1	0	1	1	0	0	0	0	0	0	0
OTHER ENDOCRINE	7	4	3	4	3	0	1	0	0	0	0
LYMPHATIC SYSTEM	28	19	9	17	11	0	7	2	2	7	0
NON-HODKIN'S LYMPHOMA	28	19	9	17	11	0	7	2	2	7	0
UNKNOWN OR ILL- DEFINED	6	5	1	5	1	0	0	0	0	0	0

Top Five Primary Sites Comparative Analysis

of Newly Diagnosed Cases Seen At NBHMC 2022

PRIMARY SITES

Prostate	25%
Breast	19%
Lung Non-Small Cell	18%
Bladder	12%
Colon/Rectum	10%
All Other Sites	16%

The top five Primary Site Distribution of cancer diagnosed and treated at NBHMC and NorthBay Health VVH in 2022 are displayed in the comparative analysis tables. These tables do not reflect the incidence of cancer in the areas surrounding the hospital.

Top Five Primary Sites Comparative Analysis

of Newly Diagnosed Cases Seen At NorthBay Health VVH 2022

PRIMARY SITES

Breast	42%
Prostate	12%
Lung Non-Small Cell	8%
Non-Hodgkin's Lymphoma	5%
Hemeretic	4%
All Other Sites	29 %

**Top Five Body Systems
Comparative Analysis**

of Newly Diagnosed Cases Seen At NBHMC 2020-2022

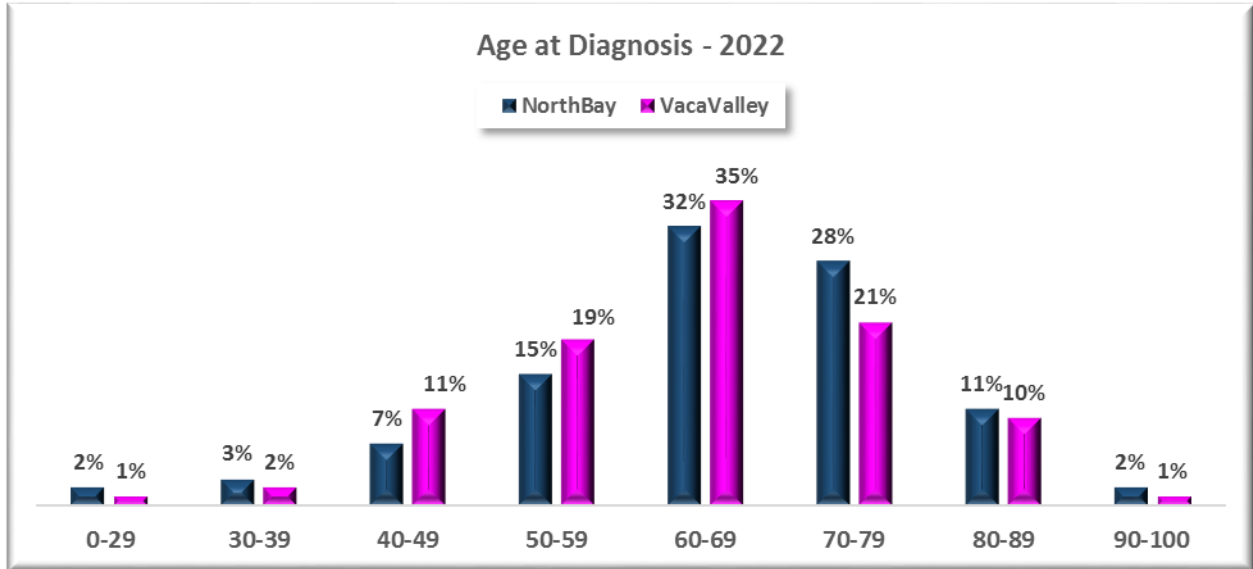
BODY SYSTEM	2020	2021	2022
Digestive System	51	80	79
Respiratory System	36	41	46
Breast	37	35	52
Male Genital System	35	56	73
Urinary System	40	35	43

The comparative analysis tables show the top five body systems distribution of cancer diagnosed and treated at NBHMC and NBHVH in 2020-2022. These tables do not reflect the incidence of cancer in the areas surrounding the hospital.

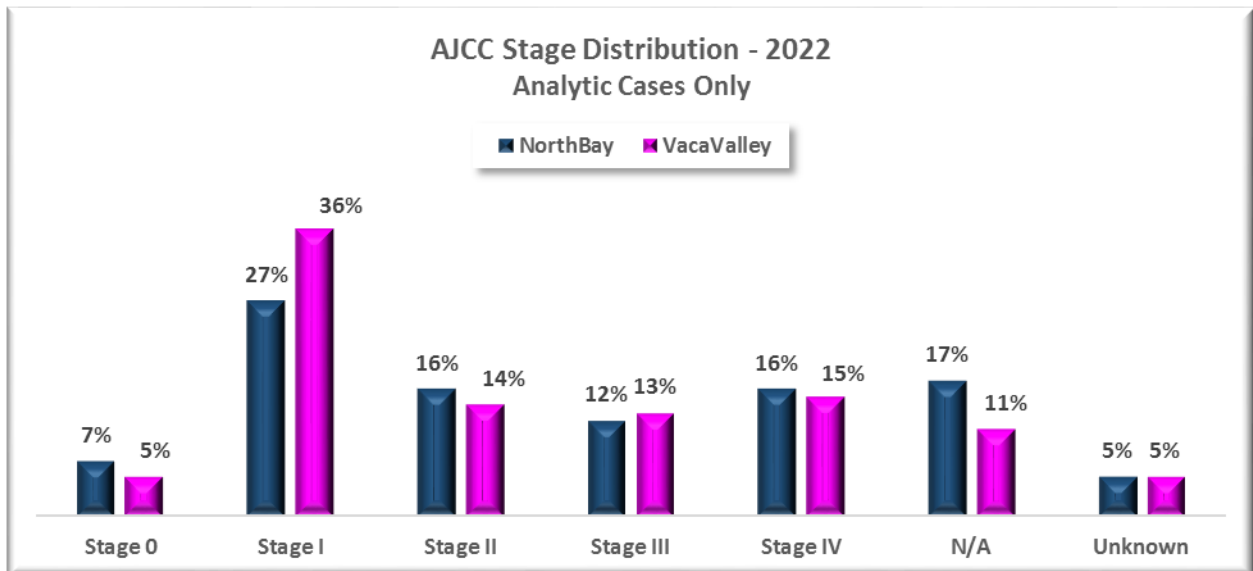
**Top Five Body Systems
Comparative Analysis**

of Newly Diagnosed Cases Seen At VVH 2020-2022

BODY SYSTEM	2019	2020	2022
Digestive System	76	59	44
Respiratory System	61	67	32
Breast	189	170	207
Male Genital System	33	39	33
Urinary System	11	13	5



The largest group of patients diagnosed and/or treated at NorthBay presented between the ages of 60-79 at the time of diagnosis. The mean age of 65 and median age of 67 at diagnosis for patients seen at NorthBay. At VacaValley the largest age group of patients presented between the ages of 60-79, with the mean age of 63 and the median age of 65.



Fifty percent of the patients at NorthBay and 55 percent of patients at VacaValley newly diagnosed and/or treated at NorthBay/VacaValley were considered early-stage (Stages 0-2), meaning that their cancer was localized to the area of origin. A patient's prognosis is based on the stage of disease at the time of diagnosis.

Quality and Outcomes

The following section of the annual report represents NorthBay Health Medical Center's ongoing efforts to collect data and measure results to improve quality, safety and patient outcomes. We hope over time this data helps showcase our strengths in patient-centered care as well as clinical excellence.

Cancer Program Practice Profile Reports (CP3R) 2019-2022

NorthBay Health Medical Center has been accredited by the American College of Surgeons Commission on Cancer (CoC) as a Community Hospital Cancer Program since 1997. CoC accreditation challenges cancer programs to enhance the care they provide by addressing patient-centered needs and measuring the quality of the care they deliver against national standards.

As an accredited cancer program we participate in the Cancer Program Practice Profile Reports (CP3R). CoC provides the performance rates shown in the following reports as an estimate of the proportion of patients concordant with measure criteria by diagnosis year. If appropriate, the CoC Standard and benchmark compliance rate is provided.

The CP3R reports for breast and colorectal cancer are directed toward assuring the completeness of data for breast and colorectal cancer patients recorded in each cancer program's registry as a central means to facilitate accurate comparisons of clinical performance among CoC accredited cancer programs. The CP3R provides a case-by-case review of breast and colorectal cancer cases reported to the National Cancer Database (NCDB) and identifies cases that lend themselves to the evaluation of concordance for each of the measures.

Each year, our cancer committee reviews the CP3R data to evaluate care and how processes can be improved to promote evidenced-based practice. Overall, we are pleased to share that NorthBay Health Medical Center meets or has exceeded the compliance rate in nearly all the measures. In areas that did not meet the standard, our cancer committee has researched the reasons why performance rates were not achieved and actions plans were developed to improve our processes.

Cancer Program Practice Profile Reports (CP3R) 2020-2022 – NorthBay

Breast Measure:

Radiation is administered within one year (365 days) of diagnosis for women under the age of 70 receiving breast conservation surgery for breast cancer.

Estimated Performance Rate (%):

CoC Std. %: 90% 2020: 98% 2021: 98% 2022: 92%

Colon Measure:

At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer.

Estimated Performance Rate (%)

CoC Std. %: 85% 2020: 83% 2021: 91% 2022: 100%

Melanoma Measure:

Melanoma adjuvant systemic therapy was administered within 6 months of surgery or recommended for eligible patients with Stage IIIB-D resected melanoma.

Estimated Performance Rate (%)

CoC Std. %: 95% 2020: No Data 2021: 100% 2022: 100%

Gastric Measure:

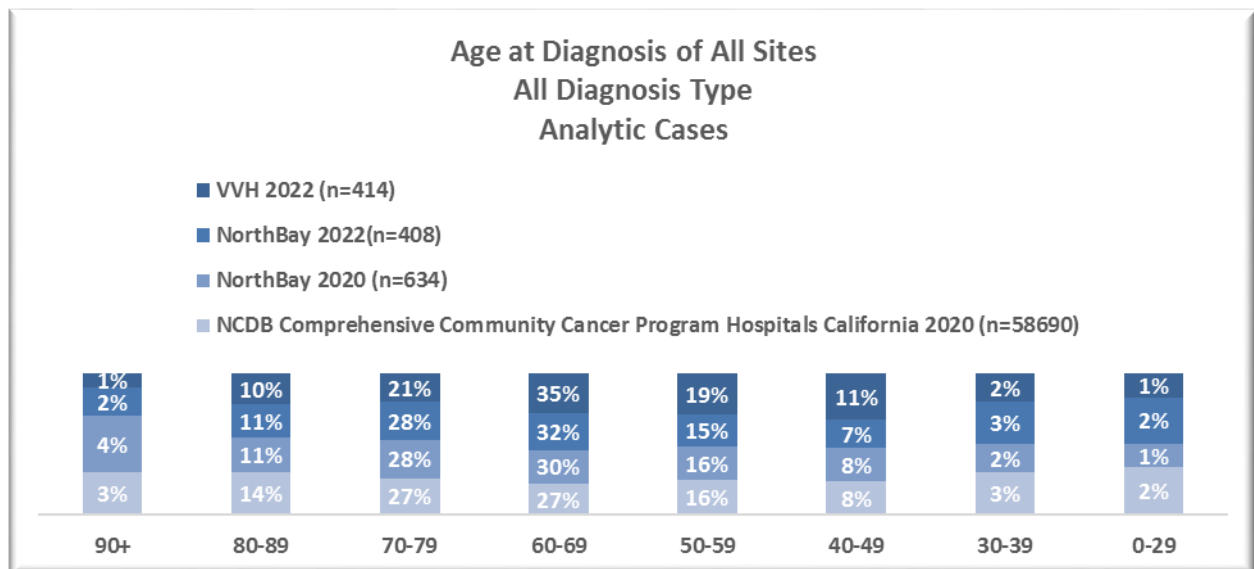
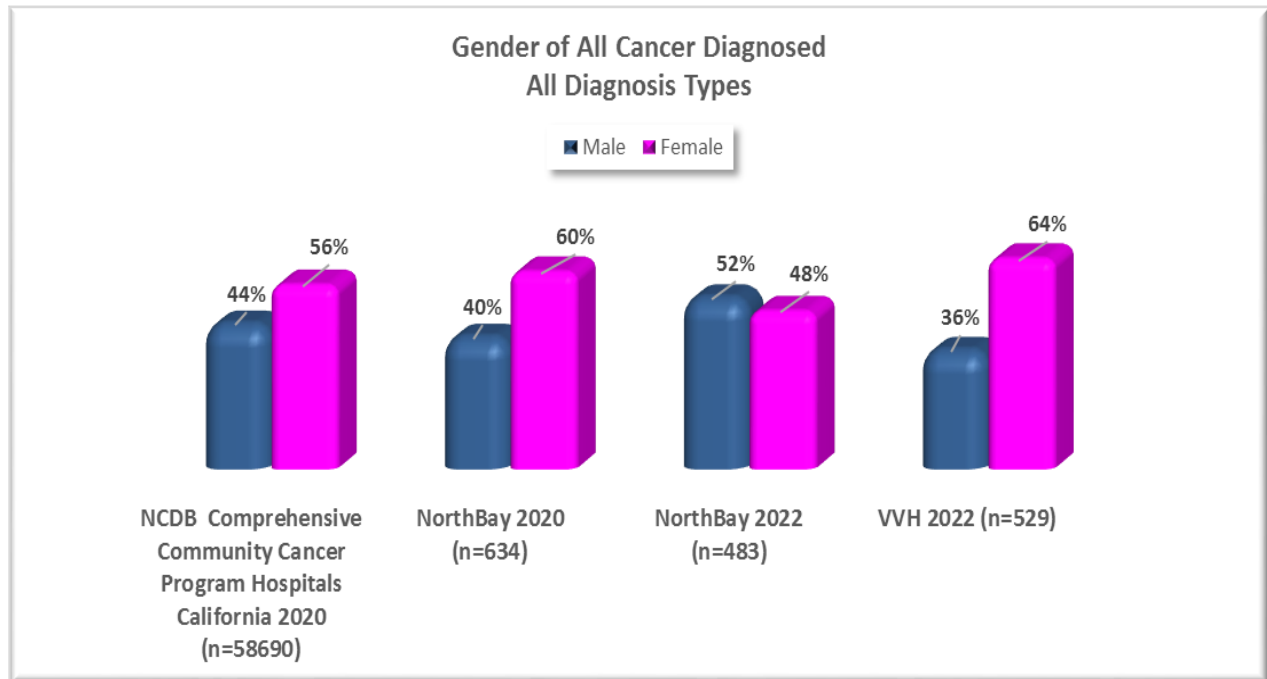
Neo-adjuvant chemo and/or chemo & radiation is administered within 120 days pre-operatively for patients with AJCC cT2+ or cN1+, M0 for gastric carcinoma or cT2 and poor differentiation or cT3+ or cN1+, cM0 for esophageal or esophageal junction carcinoma; age 18-79.

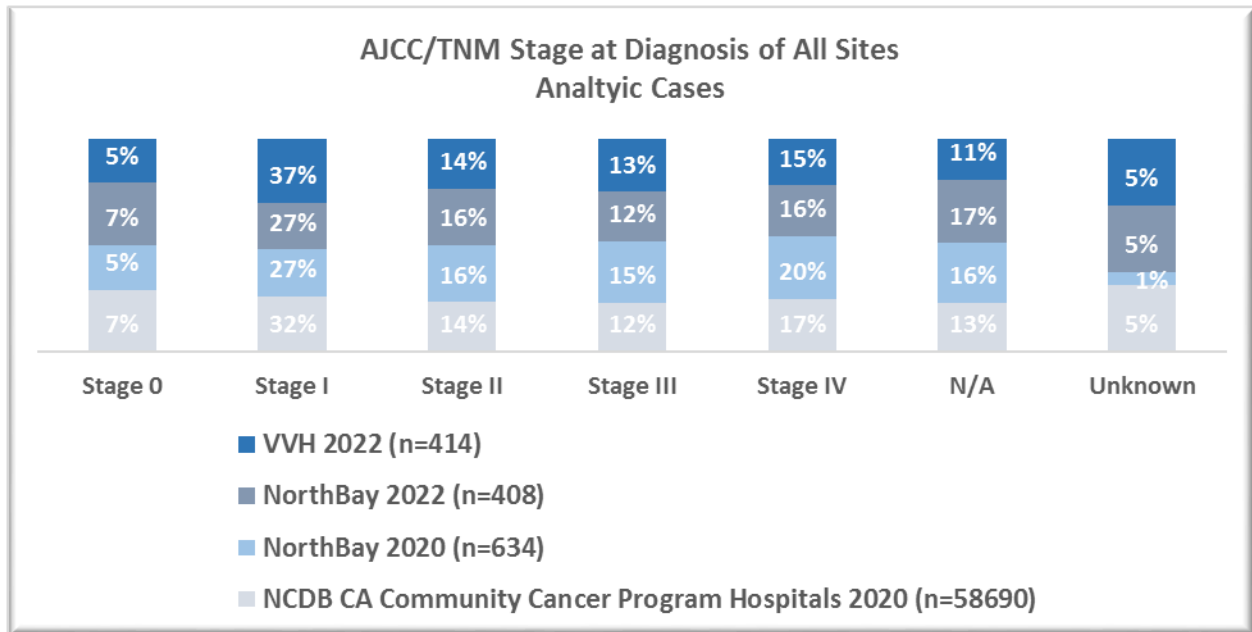
Estimated Performance Rate (%)

CoC Std. %: 95% 2020: 100% 2021: No Data 2022: 100%

*For more information about CP3R, see: <http://www.facs.org/cancer/qualitymeasures.html>

Hospital Comparison Benchmark Report for All Sites 2022 NBHMC and NBHVH Cases Compared to 2020 NBHMC and NCDB Data





First Course Top 10 Treatments for All Sites Cancer Diagnosed

	NCDB Comprehensive Community Cancer Program California Hospitals 2020 (n=58690)	NorthBay 2020 (n=636)	NorthBay 2022 (n=408)	VacaValley 2022 (n=414)
No Rx	15%	14%	26%	10%
All Other RX	24%	31%	21%	32%
Surgery & Chemotherapy	7%	5%	7%	3%
Chemotherapy Only	6%	6%	7%	4%
Surgery & Radiation	3%	4%	2%	7%
Radiation Alone	3%	6%	4%	4%
Surgery Alone	29%	10%	23%	9%
Surgery, Rad & Hormones	6%	10%	4%	20%
Radiation & Chemotherapy	3%	7%	4%	6%
Surgery, Rad & Chemo	4%	7%	2%	5%

Glossary & Abbreviations

ACS: American Cancer Society

AJCC: The American Joint Commission on Cancer, co-creators of the TNM (Tumor, Node, and Metastasis) scheme for staging cancer (See Stage of Disease).

Analytic Case: A situation in which the patient was diagnosed with cancer and/or given at least part of his/her first course of cancer treatment by NorthBay Healthcare. (Class of Case 00-40, see below).

Cancer-Directed Treatment: Therapy intended to affect, control, remove, destroy or cure cancer. Examples are chemotherapy and radiation therapy.

Class of Case: The category of cancer case according to services rendered by the reporting hospital. The classes recognized by the American College of Surgeons and NorthBay Healthcare are:

- ❖ Class 00: Diagnosis only by the reporting hospital; cancer-directed treatment elsewhere.
- ❖ Class 10-14: Diagnosis and at least part of the first course of cancer-directed First Course of Treatment at the reporting facility.
- ❖ Class 20-22: At least part of the first course of cancer-directed First Course of Treatment at the reporting facility; cancer diagnosed elsewhere.
- ❖ Class 30-33: Diagnosis and all of first course of cancer-directed First Course of Treatment elsewhere. Additional treatment, as for a recurrence or progression, administered at the reporting facility.
- ❖ Class 37: Diagnosis and all of first course cancer-directed First Course of Treatment at the reporting facility before the reference date of the Cancer Registry. Additional treatment, as for a recurrence or progression, administered at the reporting facility after the reference date of the Cancer Registry.
- ❖ Class 38: Diagnosis with cancer at autopsy.
- ❖ Class 40-41: Diagnosis and all of first course of cancer-directed First Course of Treatment in the office of a staff physician (not a member of NorthBay Healthcare in our case). The NorthBay Cancer Registry does not currently collect this class of case.

Median: The middle value in a range of numbers arranged in ascending order.

NCDB: National Cancer Data Base: “A nationwide oncology outcomes database for 1,600 hospitals in 50 states...The NCDB was founded as a joint project of the Commission on Cancer of the American College of Surgeons (ACoS) and the American Cancer Society.” (Quoted from the NCDB link on the ACoS website, <http://www.facs.org>)

NOS: Not otherwise specified

Non-cancer Directed Treatment: Procedures intended to diagnose, stage, or palliate (relieve pain) rather than to control or cure cancer.

Stage of Disease: A category describing the extent of cancer present at diagnosis and its distribution through the body, which has implications for treatment and prognosis. NorthBay Healthcare’s preferred staging system is the TNM (Tumor, Node, and Metastasis) scheme from the American Joint Commission on Cancer (AJCC).

References

National Cancer Database – 2000-2021, Commission on Cancer, Benchmark Summary of Cancer Care and Survival, United States. Chicago, IL; Commission on Cancer, 2000-2021.

Acknowledgements

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Members of the Cancer Committee for their continued support of, and commitment to, the Cancer Program.

Sierra Valley Cancer Registry Services, Inc., especially Jean M. Jones, CTR, for her continued excellence in cancer data abstracting.

NorthBay Health Marketing/Communications for editorial and publication assistance.

The NorthBay Cancer Registry, for coordinating the publication of this report. Please direct your comments and questions to Charlene Thompson, LVN, CTR, at (707) 624-8103.

Professional Affiliations

- ❖ American Cancer Society (ACS)
- ❖ American College of Surgeons (ACOS)
- ❖ American Society of Clinical Oncology (ASCO)
- ❖ American Society of Hematology (ASH)
- ❖ Association of Community Cancer Centers (ACCC)
- ❖ Association of Oncology Social Workers
- ❖ California Cancer Registrars Association (CCRA)
- ❖ City of Hope National Medical Center
- ❖ National Association of Social Work
- ❖ National Cancer Data Base (NCDB)
- ❖ National Cancer Registrars Association (NCRA)
- ❖ Oncology Nursing Society (ONS)
- ❖ Southwest Oncology Group (SWOG)

Directory of Cancer Services

Administration.....	646-5001
Cancer Registry.....	624-8103
Cancer Support Group Information.....	646-3595
Clinical Trials Coordinator.....	624-8007
Community Health Education.....	646-4277
Diagnostic Imaging Services	
NorthBay Health Medical Center.....	646-5100
NBH VacaValley Hospital.....	624-7100
Health at Home.....	646-3575
Hospice & Bereavement Services.....	646-3595
Laboratory Services	
NorthBay Health Medical Center.....	646-5000
NBH VacaValley Hospital.....	624-7000
Managed Care Services	646-3290
Medical Director, Cancer Center.....	624-8000
Medical Oncology.....	624-8000
Nursing Services.....	646-5011
Nutritional Counseling.....	646-5055
Oncology Social Services.....	646-4045
Pathology Department.....	646-5143
Pharmacy Services.....	646-5150
Marketing/Communications.....	646-3304
Radiation Oncology.....	624-8100
Rehabilitation Services	
NorthBay Health MedicalCenter.....	646-4150
NBH VacaValley Hospital.....	642-7000