



2011

Contra Costa Regional Medical Center

Cancer Program
Annual Report

2011 Cancer Committee Members

Michael Gynn, M.D., Chair; General Surgery

Eula Banks, CPC; Cancer Registry

Judy Blazin; Cancer Support Community

Marianne Bunce-Houston, RN, MS, AOCNS; Nursing

Stuart Foreman, M.D.; Gastroenterology

Rosemary Frazier, MSW; Social Services

Elizabeth Gaines, RN, BSN; Quality Assurance

Cindy Hellman-Wylie, FNP; Infusion Clinic

Sharon Hiner, M.D.; Medical Oncology

Jay Kuo, PharmD.; Pharmacy

Robert Liebig, M.D.; Radiology

Trista Leong, MA, RHIT, CHDA, CTR; Cancer Registry

Holly Longmuir, RN, BS, OCN; Nurse Manager

Karen Musak, MBT; Clinical Trials

Jane McCormick, M.D., Cancer Liaison Physician; Medical Oncology

Kim Neal, BSBM, RHIT; Health Information Management

Ali Sideman; American Cancer Society

Dana Slauson, M.D.; Family Practice

Glen Stewart, M.D.; Pathology

Lili Wang, M.D.; Medical Oncology

Contra Costa Health Services

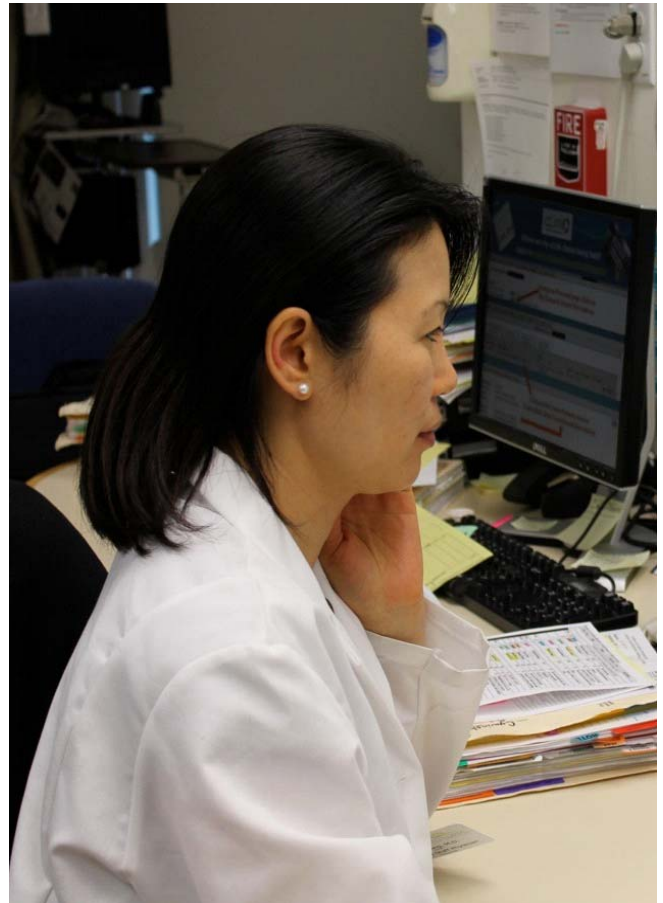
Contra Regional Medical Center and Health Centers are located in northern California serving a population of 1,000,000 residents as the safety net for Contra Costa County. The mission for Contra Costa Health Services is to provide health care for all people, paying special attention to those who are most vulnerable to health problems. This health system provides the physical facilities and system structures that reach into a medically underserved community and provides services to those otherwise may be without care.

Contra Costa Health Services consists of an integrated health delivery system and was the first federally qualified, publicly sponsored health plan in the country. Contra Costa Health Division is one entity of the county structure and is governed by an elected county board of supervisors. The department is comprised of a 166-bed acute care facility, eight ambulatory health centers, public health, mental health, alcohol and other drugs, hazardous materials, emergency medical services, detention health, and health plan. The medical center has approximately 8,000 discharges annually. It is also a teaching facility for a family medicine residency program, preparing physicians for service in third world countries and under-resourced organizations in this country, as well as a provider for clinical instruction of nursing and ancillary care students. The ambulatory care side services approximately 500,000 visits annually.



Medical Oncology

Recent advances in medical oncology have led to the introduction of many novel treatment options for our patients. New systemic treatments become available each year, and individualized treatment planning is becoming a more important component of medical oncology. Patients are enjoying more options for treatment with improved survival secondary to these advances. Chemotherapy has become a standard part of the cancer treatment plan, and the majority of cancer patients will receive some form of it as part of their treatment. Chemotherapy comes in many forms, including cytotoxic chemotherapy, molecularly targeted chemotherapy and hormonal therapy. Improvements in our understanding of cell biology has led to an increasing number of molecularly targeted therapies, or therapies directed at specific sites on the cancer cells. These therapies are expected to become an increasingly important component of the cancer treatment plan.



Radiation Oncology

Radiation oncology services are provided by three of our neighboring hospitals in the East Bay. Mt. Diablo Medical Center in Concord, Doctors Medical Center in San Pablo, and John Muir Medical Center in Walnut Creek provide radiation therapy services to our patients, depending on convenience of location to the patient's home. Implant radiation ser-

vices are provided at UC San Francisco. Radiation therapists attend the weekly Cancer Conference where each of the patients needed radiation therapy are discussed and their treatment planned. All three facilities have experienced staff and are known for providing up-to-date treatment planning and service.

Infusion Center

Contra Costa Regional Medical Center has a dedicated Infusion Center located in the Martinez Health Center. The unit is staffed by oncology nurses maintaining ONS Chemotherapy & Biotherapy Provider Cards. In addition, social workers, financial counselors, home care specialists and dieticians are readily available. The Infusion Center is responsible for administering chemotherapy, biologic agents for autoimmune and rheumatologic conditions, transfusion blood products and doing diagnostic procedures. This allows most patients to be treated as outpatients instead of spending precious time in the hospital.

The nurses spend one-on-one time educating patients and their families about the therapies they are receiving. Each oncology patient is assigned to a nurse whose responsibility for teaching covers an ever increasing range of issues related to treatment. Patients are in-

structed on how to prevent side effects and cope with the symptoms of their cancer. Options are reviewed for dealing with pain, nausea, anxiety and sleeplessness.

Every effort is made to assist each patient in minimizing or overcoming those challenges which interfere with recommended treatment for their disease. Transportation and child care issues are common barriers that prevent patients from keeping every scheduled appointment. The social worker works with them to resolve these issues so they can focus on their treatment. The team also works with the patients to minimize financial constraints and ensure that they are able to get all the symptom management medications they need. The Infusion Center staff is a highly functioning team who continuously strategize, teach and assist patients in coping with the challenges they



Nutrition Services

Nutritional Support is a critical factor in the successful management of cancer patients. Many patients begin their treatment having lost weight prior to knowing their diagnosis and others may lose weight during their treatment. All new patients are encouraged to attend special nutritional classes, which have been setup to discuss optimal diet plans. They receive verbal and written counseling or strategies for maintaining a healthy weight and good nutritional intake. Patients needing extra nutritional support have the opportunity to meet with a dietician in the infusion center. Common side effects of cancer therapy that affect eating including nausea, vomiting, diarrhea, taste changes, or difficulty swallowing, which can occur during radiation therapy.



Palliative Care



Since 2009, thanks to a grant from the California Healthcare Foundation, CCRM has had an inpatient palliative care service. The palliative care team generally consists of a clinician (MD or FNP), a pharmacist, a psychiatry/psychology liaison, a social worker and a nurse. The palliative care team is designed to help with issues such as symptom management, end of life care and decision making, and to help identify patient and family priorities regarding care. We have recently expanded palliative care into the outpatient setting. Patients now have the opportunity to have a special clinic visit devoted to addressing these important issues as an outpatient.

Clinical Trials

In partnership with the Bay Area Tumor Institute (BATI), Contra Costa Regional Medical Center enrolled 8% of our patients into clinical trial in 2011. This number far exceeds the 2% national average for a community hospital. Our diverse patient population in combination with our partnership with BATI enables us to include many minority patients in clinical trials. We have a full time clinical trials associate who screens all new cancer patients for protocol eligibility, coordinates pre-study tests, distributes investigational drugs, submits all treatment and follow-up and data, reports all serious adverse events and sits on the Investigational Review Board.

BATI is one of 50 federally supported Community Clinical Oncology Programs in the United

States. The primary purpose of this program is to bring clinical trials that are often only available at university hospitals to the community hospital setting. The Institute operates as a non-profit California corporation, providing cancer services that no single hospital could provide on a cost effective basis. The BATI program provides a wide array of free services and programs that enable cancer patients to obtain care that is comparable to the best care offered anywhere in the United States. Our partnership affords our patients the opportunity to be some of the first patients to receive new drugs that may eventually become standard of care treatment for their disease. The Bay Area Tumor Institute recently received the gold award for clinical trial enrollment.



Community/Social Services

Contra Costa Regional Medical Center's Cancer Program staff is committed to providing a variety of public and professional education for the community. Upon diagnosis, patients and families meet with a member of the oncology staff as soon as possible. Once a treatment plan has been agreed upon, the patient and family have a one on one chemotherapy education session with our oncology nurse practitioner. During this visit, the patients and family are given the CCRMC Cancer Program Personal Resource Guide, which contains information about specific cancers and treatments, side effect management, nutrition, pain, local cancer organizations and support groups. Patients are taught what to expect at home after their cancer treatment, and learn about chemotherapy side effects, symptom management and when to call the doctor.

The CCRMC Cancer Program collaborates with a number of organizations in the community including the American Cancer Society and the Cancer Support Community. In collaboration with the American Cancer Society, the Look

Good... Feel Better program is held at CCRMC several times each year. This program teaches skin care and makeup hints to women undergoing chemotherapy. The ACS provides transportation and other services for our cancer patients.

The Cancer Support Community has a local site in Walnut Creek and provides many services to cancer patients including classes, support groups and educational material here at CCRMC.

Contra Costa Health Services holds free screenings each year for breast cancer during Breast Cancer Awareness month each October. Our program includes free clinical breast examination and mammography. This event is held in Pittsburg, Richmond and Martinez. This program has been successful through the efforts of the nursing and medical staff in addition to tremendous support from Public Health and the Contra Costa Health Plan.

CCRMC has held free screenings for breast cancer during Breast Cancer Awareness Month for 12 years.

Volunteer Services

The Volunteers are an essential part of our daily life. They can be counted to bring books to infusion patients, run important lab and pharmacy orders through the hospital, or simply brighten the day with their smile. The Auxiliary provides patients with hand-made hats, turbans and lap pads free of charge.

Celebration of Life

Every year, the oncology staff hosts our annual celebration of life party. Each year, the party has a different theme and cancer survivors and their families come to enjoy food, games and music. This party provides an opportunity for patients to share their stories of recovery and victory. Numerous enthusiastic and caring people lend a hand to make this a special party.

The medical staff donates money each year to help provide dinner, desserts and drinks for the

occasion. Donators also provide money for prizes and raffles that are given away throughout the event. Each year at this party, we recognize just how many staff members are involved in the care of our cancer patients, including surgeons, pathologists, oncologists, nurse practitioners, lab technicians, nurses, care coordinators and social workers. We take pride in the care that we provide and enjoy this time to celebrate with our patients.

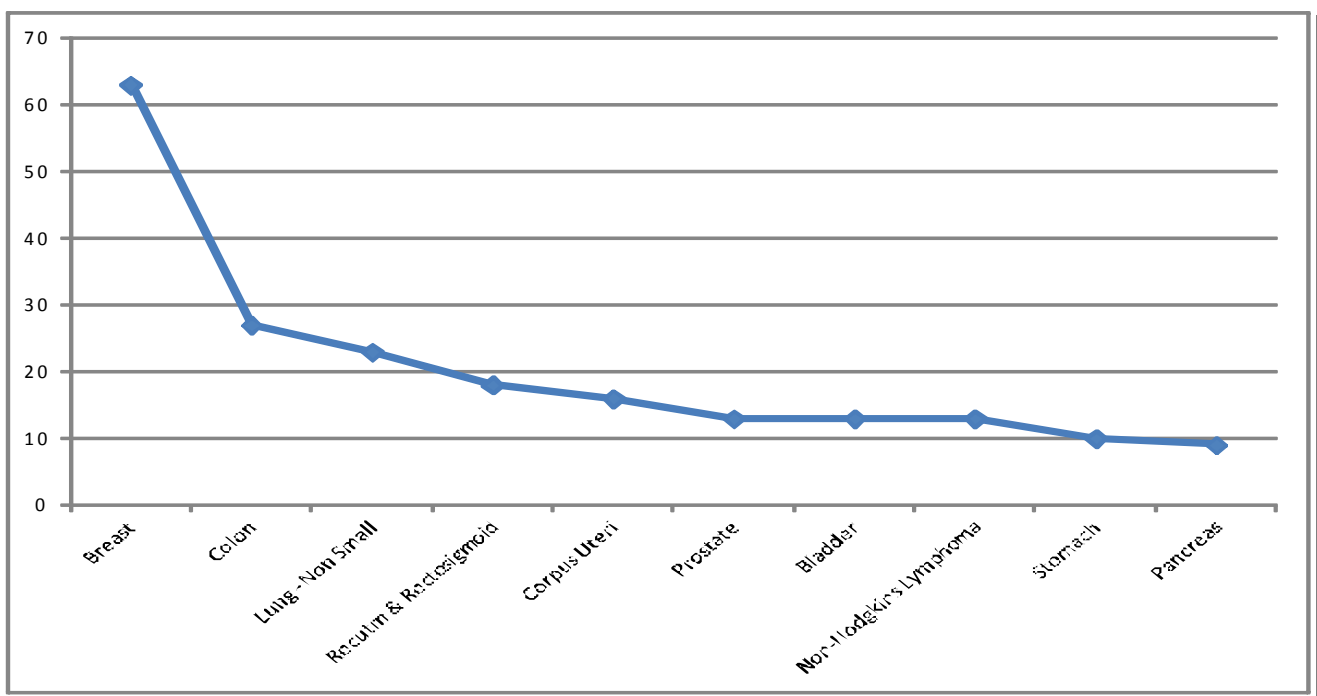


Cancer Conferences

Cancer Conferences at Contra Costa Regional Medical Center are multidisciplinary and are attended by physicians from several specialties. Physicians representing the fields of General Surgery, Hematology/Oncology, Radiation Oncology, Diagnostic Radiology, Pathology, Internal Medicine, and Family Practice, among other specialties, all attended Cancer Conferences in 2011. Cancer Conferences focus on pretreatment evaluation, staging, treatment strategies, referrals to research protocols and rehabilitation.

In 2010, there were a total of 36 meetings, with 158 cases presented. Of the total case presented, all were prospective cases, representing 48.3% of our analytic caseload. The primary sites presented reflect our caseload as well, with the most number of cases presented being breast and colon. The other primary sites presented include but not limited to: Cervix, Endometrium, Esophagus, Larynx, Liver, Lymphoma, Melanoma, Ovary, Rectum, Stomach, Testis, Thyroid, Tonsil, Unknown Primary and Uterus.

Figure 1: Top 10 Primary Cancer Sites At CCRMC, 2010



The most common type of cancer diagnosed at CCRMC is breast cancer. This parallels national data, where breast and prostate cancer are the most common. At CCRMC, our population tends toward younger patients as we serve the medical population of Contra Costa County. Prostate cancer tends to affect older males, and so our number of prostate cancer diagnoses is lower than that of most community hospitals.

Cancer Registry

The Cancer Registry maintains a computerized database of over 6,500 cancer cases diagnosed and/or treated at Contra Costa Regional Medical Center since 1987. In 2010, 402 cases were added to the database, of which 327 were diagnosed and/or received their first course of treatment at CCRMC. The Cancer Registry reports all cases to the Greater Bay Area Cancer Registry, as part of the California Cancer Registry.

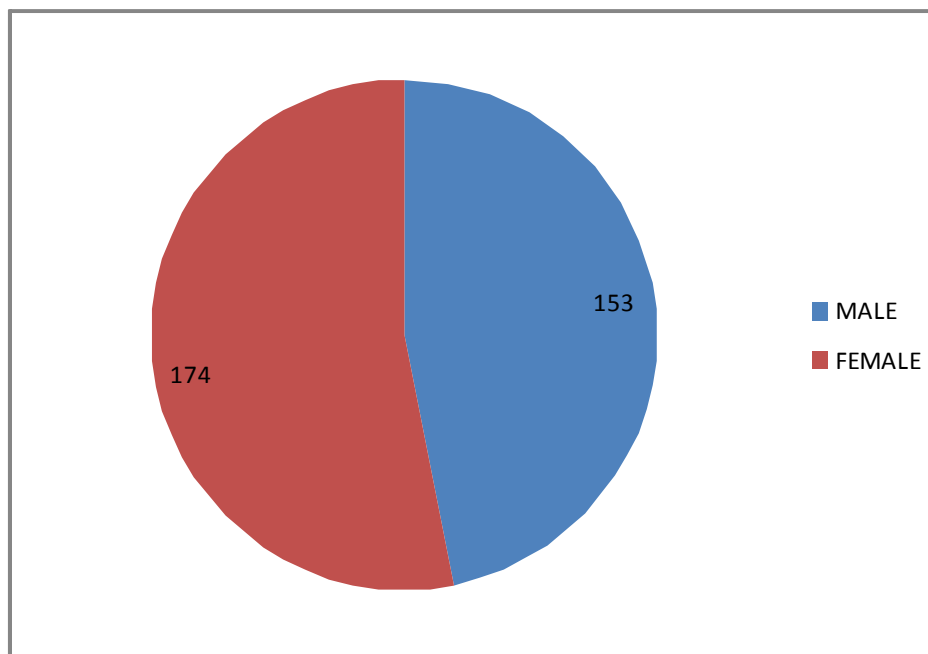
The data maintained by the Cancer Registry is available for use by the medical staff and hospital administration for special studies, end-results reporting, medical education, pa-

tient care evaluations, and research. The data is used for treatment planning and evaluation, outcome measures, clinical research, and cancer program strategic planning.

The Cancer Registry performs lifetime follow-up on all analytic cancer patients, collecting ongoing diagnostic and treatment results.

For information regarding the Cancer Registry or for data requests, please contact the Cancer Registry at (925) 370-5229.

Figure 2: Cancer diagnosis by gender, 2010



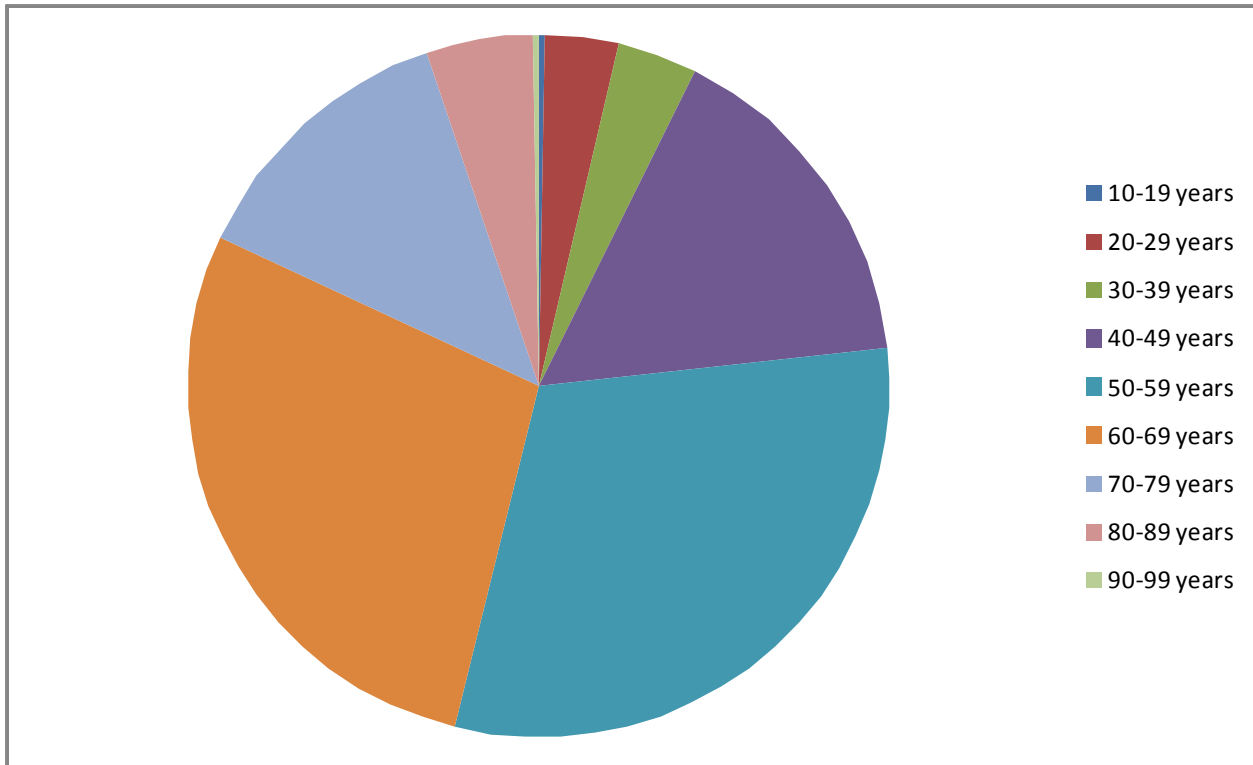
The age distribution of cancer diagnoses at CCRMC is essentially equal for men and women.

2010 Primary Site Table

Site	Total	Class			Sex		Stage							
Group	Cases	Analytic	NonAn	Other	M	F	0	I	II	III	IV	NA	Unk	
ALL SITES	402	327	75	0	185	217	28	71	63	68	55	27	15	
TONGUE	4	2	2	0	3	1	0	0	0	0	2	0	0	
SALIVARY GLANDS, MAJOR	1	1	0	0	0	1	0	1	0	0	0	0	0	
TONSIL	7	6	1	0	7	0	0	1	1	3	1	0	0	
NASOPHARYNX	1	1	0	0	1	0	0	0	0	0	1	0	0	
HYPOPHARYNX	2	2	0	0	2	0	0	0	0	0	2	0	0	
PHARYNX & ILL-DEFINED	1	1	0	0	0	1	0	0	0	0	0	1	0	
ESOPHAGUS	8	7	1	0	5	3	0	0	1	4	0	0	2	
STOMACH	12	10	2	0	6	6	0	1	2	2	3	0	2	
COLON	30	27	3	0	15	15	5	5	5	7	4	0	1	
RECTUM & RECTOSIGMOID	18	18	0	0	9	9	0	3	8	6	0	0	1	
ANUS,ANAL CANAL, ANORECTUM	4	3	1	0	2	2	2	0	1	0	0	0	0	
LIVER	5	3	2	0	5	0	0	0	1	1	0	0	1	
GALLBLADDER	2	1	1	0	1	1	0	0	1	0	0	0	0	
BILE DUCTS	5	4	1	0	3	2	0	1	0	0	1	0	2	
PANCREAS	13	9	4	0	6	7	0	1	2	0	5	0	1	
LARYNX	5	5	0	0	5	0	0	1	0	2	2	0	0	
LUNG/BRONCHUS-SMALL CELL	5	4	1	0	4	1	0	1	0	0	3	0	0	
LUNG/BRONCHUS-NON SM CELL	30	23	7	0	22	8	0	7	2	6	7	0	1	
PLEURA	2	2	0	0	0	2	0	0	0	0	1	1	0	
LEUKEMIA	13	5	8	0	9	4	0	0	0	0	0	5	0	
MYELOMA	6	3	3	0	3	3	0	0	0	0	0	3	0	
OTHER HEMATOPOIETIC	9	5	4	0	4	5	0	0	0	0	0	5	0	
SOFT TISSUE	2	2	0	0	0	2	0	0	0	2	0	0	0	
MELANOMA OF SKIN	9	8	1	0	6	3	0	3	2	1	2	0	0	
KAPOSIS SARCOMA	1	1	0	0	1	0	0	0	0	0	0	1	0	
OTHER SKIN CA	1	1	0	0	0	1	0	0	0	1	0	0	0	
BREAST	66	63	3	0	0	66	11	15	17	17	2	0	1	
CERVIX UTERI	10	8	2	0	0	10	1	2	1	3	1	0	0	
CORPUS UTERI	17	16	1	0	0	17	0	10	2	1	1	0	2	
OVARY	10	6	4	0	0	10	0	0	0	4	2	0	0	
VAGINA	2	0	2	0	0	2	0	0	0	0	0	0	0	
VULVA	8	0	8	0	0	8	0	0	0	0	0	0	0	
PROSTATE	16	13	3	0	16	0	0	0	8	1	4	0	0	
TESTIS	8	8	0	0	8	0	0	6	1	1	0	0	0	
PENIS	2	2	0	0	2	0	0	0	1	1	0	0	0	
BLADDER	15	13	2	0	13	2	9	2	1	0	1	0	0	
KIDNEY AND RENAL PELVIS	9	8	1	0	7	2	0	3	1	3	1	0	0	
EYE	2	1	1	0	1	1	0	0	0	0	0	1	0	
BRAIN	2	1	1	0	0	2	0	0	0	0	0	1	0	
OTHER NERVOUS SYSTEM	4	3	1	0	3	1	0	0	0	0	0	3	0	
THYROID	8	6	2	0	1	7	0	3	1	1	1	0	0	
OTHER ENDOCRINE	1	1	0	0	0	1	0	0	0	0	0	1	0	
HODGKIN'S DISEASE	6	6	0	0	3	3	0	1	2	0	3	0	0	
NON-HODGKIN'S LYMPHOMA	14	13	1	0	7	7	0	4	2	1	5	0	1	
UNKNOWN OR ILL-DEFINED	6	5	1	0	5	1	0	0	0	0	0	5	0	

Cancer Cases at CCRMC

Figure 3: Age distribution of cancer diagnoses at CCRMC, 2010

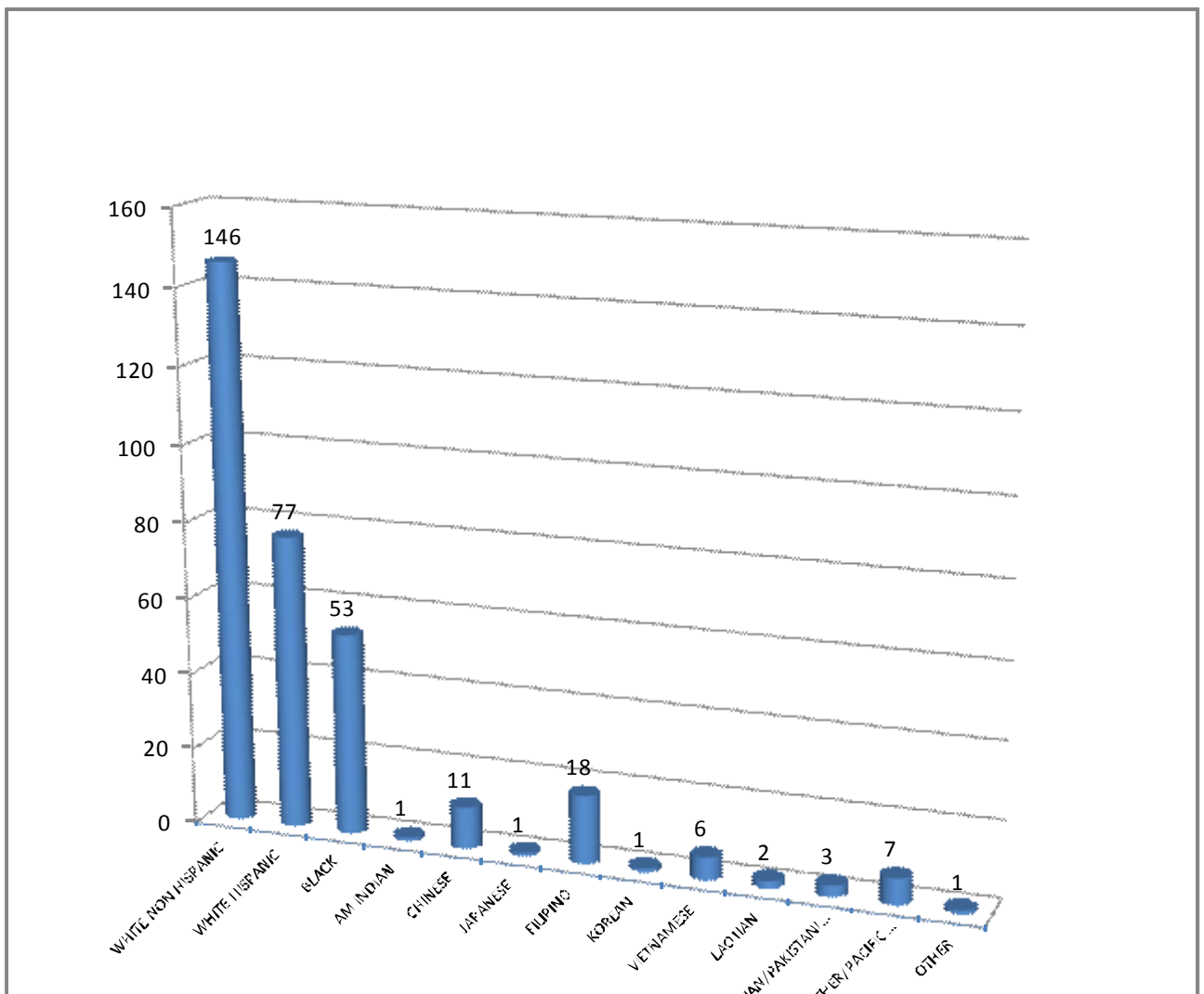


The above graph represents the age distribution of patients diagnosed with cancer at CCRMC in 2010. Patients presenting to CCRMC tend to be younger than the average age of presentation at most community hospitals due to the high percentage of medical patients and relatively lower percentage of Medicare patients that we serve. Our young patient population faces different barriers to care than older patients. Many of our patients have young children for whom they struggle to provide care while they are receiving their treatment. Many of our patients provide the sole income for their families, and they experience increased stress regarding lost wages due to disability. The staff at CCRMC is highly sensitive to these issues, and every attempt is made to provide the necessary support to keep the patients on time with therapy.

Cancer Cases at CCRMC



Figure 4: Cancer distribution By Ethnicity, CCRMC 2010



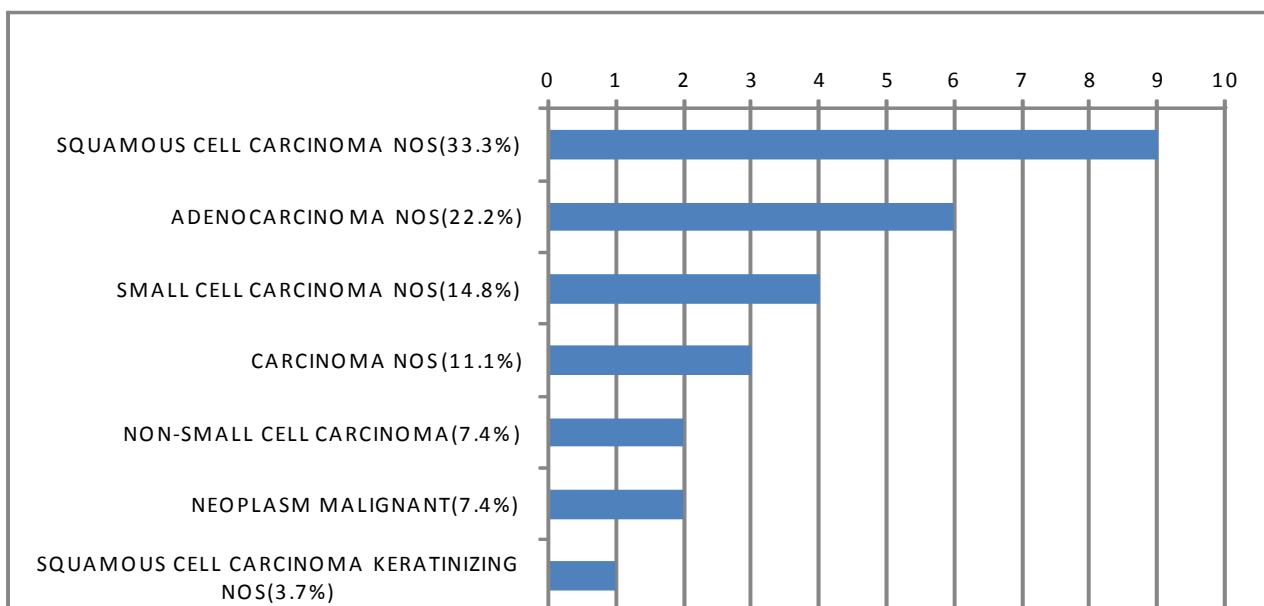
Lung Cancer at CCRMC

Recent advances in chemotherapy have led to improvements in overall survival and quality of life, but despite these improvements, the long term survival in lung cancer patients remains low. At CCRMC, the one year survival for patients with stage I disease was almost 80%, whereas in patients presenting with stage IV disease, the one year survival is only 20% (Figure 6). This is equivalent to national data, where the one year survival is 30-40% for stage IV disease. At CCRMC, the patients tend to present late for care with more advanced disease, lower performance status, and multiple co-morbidities. These factors contribute to the low one year survival. The vast majority of lung cancer patients at CCRMC are also present or past smokers, and this is associated with poor biologic features, and worse prognosis. This survival data also reveals the importance of striving towards creating better screening tools for lung cancer so that we can

treat more patients for cure. Recent evidence in support of CT scan screening for high risk patients may improve lung cancer survival in the future.

Lung cancer can be divided into two large subsets: small cell and non-small cell. Non-small cell lung cancer accounts for nearly 85% of all cases of lung cancer and can be further divided into adenocarcinoma, squamous cell carcinoma, and large cell carcinoma (Figure 7). Treatment depends on several factors specific to the patient, including tumor subtype, stage at diagnosis and co-morbidities. Treatment may consist of surgery, radiation therapy, chemotherapy or a combination of these modalities. Surgical resection is considered the standard therapy for patients with non-small cell stage I, II, and certain subsets of stage IIIA disease. Unfortunately, within this group of patients approximately 40% are not candidates

Figure 6: Distribution of Lung Cancer Subtypes at CCRMC,2010



Lung Cancer at CCRMC

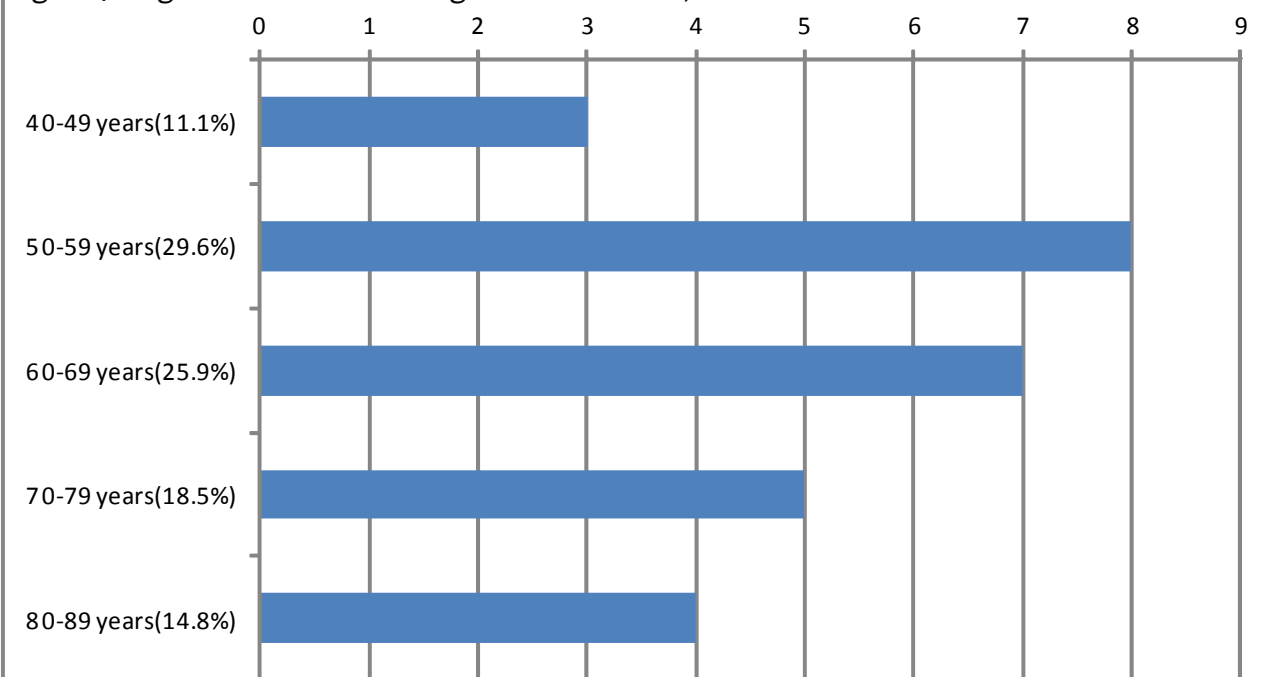
for surgery due to the presence of co-morbid illness. Post-operative chemotherapy and radiation therapy are often recommended for patients post surgery. For patients who are not surgical candidates due to co-morbid illness, radiotherapy and chemotherapy are generally recommended. For advanced disease, supportive care or palliative chemotherapy is appropriate.

The discovery of new molecularly targeted agents has led to prolonged survival in some subsets of lung cancer patients. Epidermal Growth Factor Receptors (EGFR) are activated on certain cancers, and this results in the induction of proliferation, inhibition of apoptosis and increased metastatic potential within the tumor cells. EGFR mu-

tations in tumor cells are present on approximately 10-15% of Caucasian patients and up to 40% of Asian patients with NSCLC lung cancer. The majority of these patients are non-smokers, and their prognosis is better. These patients have significant benefit from treatment with an EGFR tyrosine kinase inhibitor. At CCRMC, all non-small cell tumors are tested for the presence of this mutation so that patients can benefit from molecularly targeted therapy if appropriate.

Another recent exciting discovery in NSCLC has been the identification of an abnormal fusion gene within a small subset of patients. This fusion gene has been dubbed “ALK translocation” and is more common in

Figure 7: Age Distribution of Lung Cancer Patients, CCRMC 2010



Lung Cancer at CCRMC

patients who have never smoked, have adenocarcinoma, and who are younger. Patients with an ALK translocation are less sensitive to EGFR inhibitors or standard chemotherapy. The development of a novel molecularly targeted agent crizotinib has shown impressive results in tumor shrinkage for this small subset of patients. At CCRMC, tumors in non smokers and wild type EGFR screening are screened for ALK translocations.

Despite the recent advances, we still have a long way to go to improve the screening for

and treatment of lung cancer. We encourage clinical trial participation for our patients, so that they may benefit from novel agents and treatment regimens. Clinical trials for lung cancer patients are available at CCRMC, and all patients are screened for eligibility. We are fortunate to have a comprehensive clinical trials program through the Bay Area Tumor Institute, that affords our patients the opportunity to enroll in clinical trials without having to commute to a tertiary care center.

