



MICHAEL E. DEBAKEY
VA Medical Center - Houston, TX

***2012 Cancer Program
Annual Report, 2011
Statistical Analysis***

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Executive Report

The Michael E. DeBakey VA Medical Center (MEDVAMC) is home to a Post Traumatic Stress Disorder Clinic; Network Poly-trauma Center; award-winning Cardiac and General Surgery Programs; Liver Transplant Center; VA Epilepsy and Cancer Centers of Excellence; VA Substance Abuse Disorder Quality Enhancement Research Initiative; Health Services Research & Development Center of Excellence; VA Rehabilitation Research Center of Excellence focusing on mild to moderate traumatic brain injury; Mental Illness Research, Education and Clinical Center. Including the outpatient clinics in Beaumont, Conroe, Galveston, Houston, Lufkin, Richmond, and Texas City, MEDVAMC outpatient clinics logged almost 1.3 million outpatient visits in fiscal year 2011. Veterans from around the country are referred to the MEDVAMC for specialized diagnostic care and treatment, including radiation therapy, general and oncologic surgery, minimally-invasive and robotic surgeries, liver transplantation, cardiovascular surgery, hematology/oncology treatment, and other specialized services including endobronchial ultrasound (EBUS) gastrointestinal endoscopy, nuclear medicine, and ophthalmology.

We take pride in providing world-class care founded on the most current evidence and evidence-based guidelines to our veterans. We do so with a patient-centered approach and craft our partnership with Veterans and their families with compassion, honesty, and mutual respect.

Awards and Accreditation

Many MEDVAMC programs have received national awards and honors including accreditation from the Joint Commission* for hospital, long-term care, behavioral health care, home care, and substance abuse. The hospital is consistently recognized for demonstrating low observed-to-expected mortality rates in general surgery, surgery oncology, and all non-cardiac surgery. In 2011, the medical center's Pathology and Laboratory Medicine was awarded accreditation by the Accreditation Committee of the College of American Pathologists and the Psychosocial Rehabilitation and Recovery Center was awarded a 3-year accreditation by Rehabilitation Accreditation Commission (CARF).

Research & Development:

The MEDVAMC R&D Program includes four components: Biomedical Laboratory Research and Development, Clinical Science Research and Development, Rehabilitation Research and Development, and Health Services Research and Development. Collectively, these services support research covering biomedicine, clinical trials, rehabilitation, and health services. Today, the VA is a leader in many areas of research. The MEDVAMC was recently selected as an enrollment site for The Million Veteran Program (MVP): A Partnership with Veterans. The MVP is a national research program to study how genes affect health and illness, with the goal of improving health care for all veterans. The active oncologic research at MEDVAMC allows us to remain focused on improving outcomes, decreasing morbidity and mortality, and reducing the cost of care.

At the MEDVAMC, we provide a comprehensive range of techniques for both cancer prevention and cancer treatment. This ranges from cancer screening to all of the standard-of-care modalities of chemotherapy, radiation therapy, and surgery. We have surgeons who specialize in oncologic, colorectal, hepatobiliary, pancreatic, ENT, urologic, and thoracic surgery. Chemotherapy and targeted agents provide systemic treatment. State of the art radiation therapy equipment allows us to treat patients more effectively and with less toxicity than the machines of the past. Skilled interventional radiologists are available to perform biopsies, place drains and catheters, and regional cancer therapies such as TACE (Tran's arterial catheter embolization).

The MEDVAMC cancer committee provides direction for multiple activities including the maintenance of Cancer Data Services (cancer registry), multidisciplinary cancer & virtual tumor board conferences, the V-TEL Rural Health Project, community outreach initiatives, cancer screening, palliative care, surveillance programs and quality improvement projects. The committee is responsible for assuring program approval by the American College of Surgeons Commission on Cancer.

The number of new cancer patients seen every year at MEDVAMC continues to increase. Over a thousand newly diagnosed cancer patients were seen at our institution last year. Many of these cases were reviewed at multidisciplinary tumor boards. We now have individual tumor boards for general oncology, thoracic oncology, as well as head and neck, genitourinary (GU), hepatobiliary, and hematologic cancers. In addition, we are working with other VA medical centers through virtual tumor boards to collaborate on cases that might require specialized expertise not available at the smaller VA facilities.

Five elements are keys to the success of a Commission-approved cancer program:

- The clinical departments provide state-of-the-art pretreatment evaluation, staging, treatment and clinical follow-up/survivorship for cancer patients seen at the facility for primary, secondary, tertiary, or quaternary care.
- The cancer committee leads the program by setting goals, monitoring activity, evaluating patient outcomes, and improving care.
- The cancer conferences provide a forum for patient consultation and contribute to physician education.
- The quality improvement program serves as a mechanism for evaluating and improving patient outcomes.
- The cancer registry and database serve as the basis for monitoring the quality of care.

Goals during 2012 remain focused on the timely and accurate abstracting and reporting of data by Cancer Data Services, assuring clinical trials are available for local cancer patients, and providing community screening and outreach programs. The committee supervises regular multidisciplinary tumor conferences that provide a forum for discussion of the care of individual patients.

Daniel A. Anaya, MD
Staff Surgeon and Surgical Oncologist
Cancer Committee Chair
Director, Liver Tumor Program
Michael E. DeBakey VA Medical Center

Cancer Liaison Report

The Cancer Center and its team of physicians, nurses and staff have continued their progress in quality-improvement and the provision of state-of-the-art service throughout the 2012. The changes and improvements implemented during 2011 have been incorporated smoothly and have reinforced the Cancer Center's Three Year Accreditation with Commendation by the Commission on Cancer (CoC).

My duties as the CoC Liaison Physician have included assuring the timely and accurate reporting of cancer statistics through my work with the experienced Cancer Registrars here at MEDVAMC. The Commission on Cancer relies on this data, not only to gauge our progress in delivering cancer care to our Veterans, but also as a tool to enhance the care of cancer patients throughout our VISN16.

I have active input within numerous committees that internally monitor the delivery of care to our cancer patients and help develop novel strategies for improving the quality and efficiency of our processes of care. This includes regular attendance at our monthly Cancer Committee meeting as well as multiple cancer conferences including the HCC tumor board, general multidisciplinary tumor board, and multiple virtual cancer conferences.

Throughout 2012, we have expanded our cancer clinics, increased our oncology ancillary staff, and increased opportunities for multidisciplinary discussion with significant improvements in the delivery of cancer care.

In the coming year, we will take advantage of the momentum we have gained in the year 2012 and continue to seek new strategies and opportunities to further the mission of the Cancer Center and MEDVAMC, with the goal of assuring world-class cancer care to our veterans.

Avo Artinyan, MD
Staff Surgeon and Surgical Oncologist
Cancer Liaison Physician
Michael E. DeBakey VA Medical Center

Surgical Oncology Section

The Surgical Oncology Section at the Michael E. DeBakey VA Medical Center (MEDVAMC) provides state-of-the-art, world-class treatment for Veterans afflicted by solid malignancies. The service is composed of four board-certified surgeons, all with specialized training and/or expertise in the multidisciplinary management of cancer and the performance of complex oncologic procedures. Our service remains the primary referral center for patients with solid malignancies in VISN 16, and for many other Veterans around the nation with complex cancers who require specialized expertise and treatment.

Since our last review, our surgical oncology clinic has greatly expanded and is now composed of four separate clinics as follows: a) a general surgical oncology clinic that sees patients with colorectal cancer, breast cancer, melanoma, sarcoma and other solid malignancies, b) a clinic devoted to patients with hepato-pancreaticobiliary malignancies, c) a postoperative follow-up clinic, and d) a clinic designed specifically for cancer surveillance and survivorship.

All of our surgeons participate in multiple Multidisciplinary Tumor Board conferences, including a large general tumor board conference as well as other specialized tumor boards, such as those for patients with cirrhosis and hepatocellular carcinoma (HCC). Our surgeons are also members and leaders of the MEDVAMC Cancer Committee, which actively reviews care at our center and institutes policies for quality improvement.

Our clinical programs have greatly expanded and include the surgical and multidisciplinary management of solid malignancies including esophageal, gastric, pancreatic, small bowel and colorectal adenocarcinoma, breast cancer, skin cancers, soft tissue sarcomas, gastrointestinal stromal tumors, as well as head-and-neck, adrenal, and other endocrine malignancies. Our center has also been recognized for its expertise in the application of evidence-based minimally-invasive surgical oncology, which includes the performance of state-of-the-art laparoscopic, robotic and endoluminal procedures.

During the last 3 years we have focused on expanding our Liver Tumor Program and now offer comprehensive treatment for the management of HCC as well as metastatic hepatic tumors, including portal vein embolization, transarterial-chemoembolization (TACE), percutaneous as well minimally-invasive and open liver ablation procedures, minimally-invasive major liver resections, and the latest systemic biologic and cytotoxic therapies. We have also expanded our colorectal program and now have an active robotic rectal surgery program, and are one of the few centers in the nation to offer Transanal Endoscopic Microsurgery (TEM) to well selected patients with rectal cancer.

Our section is heavily invested in clinical outcomes and health services research aimed at improving health care delivery and overall care to all patients. This has resulted in multiple national presentation, invited speakerships, peer-reviewed publications and research grants.

With all of our efforts, we have been consistently recognized as providing the most complex care of any VA throughout the nation, with measured surgical outcomes via the VASQIP program that have consistently and uniformly exceeded risk-adjusted expectations for almost a decade. The MEDVAMC Surgical Oncology Section will continue to strive to provide state-of-the-art, high-quality, world-class surgical care for the next decade and beyond.

Avo Artinyan, MD
Staff Surgeon and Surgical Oncologist
Cancer Liaison Physician
Michael E. DeBakey VA Medical Center

Hematology-Oncology Section

The Michael E. DeBakey VA Medical Center Hematology-Oncology Section is comprised of Board-certified specialists in both Hematology and Oncology who work hard to ensure that Veterans receive standard-of-care therapy. Our institution has access to all of the current modalities of chemotherapy, radiation therapy, and surgery. With the help of six site-specific tumor boards, our hematologists and oncologists collaborate with pathologists, radiologists, radiation therapists, and surgeons to devise a comprehensive treatment plan for patients.

In the past year our institution has participated in the development of a V-tel project that enables telemedicine follow-up of patients served by the community based outpatient clinics. This allows rural patients to receive counseling by a physician, nurse, dietician, and/or social worker without the need to travel the long distance to Houston. Telemedicine also helps us to collaborate through virtual tumor boards with other VAs on cases that might require specialized expertise not available at smaller VA facilities.

Members of the section participate in numerous cancer clinical trials in order to further advance the knowledge base in the treatment of malignancy. We recently developed a system of electronic chemotherapy orders that has helped to prevent errors in chemotherapy ordering and administration. Our clinic participates in the teaching of medical students, residents, and fellows, in order to ensure the next generation of hematology-oncology physicians will be capable and well trained.

Most of the goals for this year were achieved, as follows:

1. Acquire and use tablet PCs for patient consent forms.
2. Install security access door for better regulation of patient flow.
3. Hire a hematologist.
4. Increase the number of patients accrued to clinical trials.

Teresa G. Hayes, M.D., Ph.D.
Chief, Hematology-Oncology Section
Michael E. DeBakey VAMC

Research Summary

The MEDVAMC works in close collaboration with the Dan L. Duncan Cancer Center of Baylor College of Medicine to improve cancer care through clinical research. Investigators participate in multiple cooperative group trials as well as many innovative investigator-initiated trials and pharmaceutical trials. There are studies on new targeted agents, chemotherapy drugs and combinations, and a novel radionuclide designed to target metastatic cancer in the bone.

There are currently 32 open cancer and hematology clinical trials at the Michael E. DeBakey VAMC, with three more slated to open soon. These trials address a spectrum of malignancies, including lung, colorectal, prostate, urinary bladder, kidney, lymphoma, multiple myeloma, and leukemia.

This year, the MEDVAMC was named a CSP NODES site under the leadership of Dr. Faisal Bakaeen. This will lead to closer collaboration among multiple VAs doing large clinical research studies to help our Veterans.

VA researchers seek to improve cancer care for Veterans. By evaluating new therapies in cancer clinical trials, we are striving to provide a better outcome for our patients with malignancy.

Teresa G. Hayes, M.D., Ph.D.
Chief, Hematology-Oncology Section
Director of Cancer Clinical Trials
Michael E. DeBakey VAMC

Diagnostic Services

Radiology Section	Pathology and Laboratory Service
<p>The Radiology Department at the Michael DeBakey VA Medical Center provides state of the art imaging and timely reporting for its patients. The department has thirteen general/body imaging radiologists, three neuro-radiologists and three interventional radiologists supported by a staff of physician assistants, technologists and nurses. Imaging equipment throughout the department is completely digital and imaging interpretations are performed on PACS, using speech recognition software for reporting. We have two 64-slice CT scanners and construction is under way to install a third CT scanner. We have two conventional and one high-field open MRI scanners, with partial access to a fourth MRI scanner designated for research. The department is expanding its capabilities and new equipment is being added to keep up with technological advances in the field of imaging. Radiation safety is an important focus of our imaging practice, and we approach this through utilization management, quality assurance, CT protocol optimization and specific software programs on our CT scanners.</p> <p>We performed over 148,000 radiology diagnostic procedures and over 5,000 image-guided interventional procedures in fiscal year 2011 and our 48 hour report turn-around timeliness was over 98% throughout. The physicians provide imaging interpretations, consultations and work very closely with all other clinical sections throughout the facility. They collaborate in multimodality patient management and work with Hematology-Oncology, General Surgery, Otolaryngology, Cardiothoracic Surgery, and Neurosurgery. They participate in numerous multidisciplinary tumor boards including Head & Neck, Pulmonary, General Oncology, Genitourinary, Hematology-Oncology, Endocrine and Liver Cancer tumor boards. In addition, the physicians also participate in virtual Tumor Boards with several facilities in VISN-16.</p> <p>The department is affiliated with Baylor College of Medicine and all the staff are faculty members of the college. Currently there are six residents rotating in the department at all times and one neuro-radiology fellow. We provide training for radiology residents from the Baylor College of Medicine residency program as well as residents taking Radiology as an elective from Rehabilitation, Orthopedics and Internal Medicine. Radiology also provides critical infrastructure support and imaging expertise for cancer research programs in other services.</p> <p>Meena Vij, MD Diagnostic Care Line Executive</p>	<p>The Pathology and Laboratory Service at the Michael E. DeBakey Veterans Affairs Medical Center provides state-of-the-art pathology services to support the clinical Care lines. We provide a full range of services supporting cancer screening and treatment including fine needle aspiration, flow cytometry, surgical pathology, blood bank, therapeutic aphaeresis and clinical pathology services. All of our attending staff is board certified and have a broad range of subspecialty expertise including pulmonary, genitourinary, orthopedic, and gastrointestinal and dermato-pathology. Our laboratory is the national VA referral center for cytopathology.</p> <p>Attending staff in the Pathology and Laboratory Medicine Service have active cancer research programs supported by NIH and DOD peer reviewed funding. Pathology faculty has published 12 cancer related publications over the last year, many in top cancer journals. The laboratory service also provides critical infrastructure support and pathology expertise for cancer research programs in other services including tumor banking.</p> <p>The Pathology and Laboratory Medicine Service actively participates in multiple interdisciplinary tumor boards. Pathological findings are reviewed and discussed to optimize patient management. We also interact extensively with clinical services on a daily basis to integrate all aspects of pathology into state of the art clinical care. Of note, we have worked closely with oncology to integrate appropriate molecular testing into the routine care of our cancer patients.</p> <p>Michael Ittmann MD PhD Chief, Pathology and Laboratory Medicine Michael E. DeBakey VAMC</p>

<p>Nuclear Medicine</p> <p>The Nuclear Medicine Section under the Diagnostic and Therapeutic Care Line at the Michael DeBakey VAMC, provides comprehensive Nuclear Medicine (to include PET/CT and SPECT/CT), Nuclear Cardiology imaging services as well as targeted Radionuclide Therapy. Our full time Nuclear Medicine Physicians are board certified in Internal Medicine as well as Nuclear Medicine, Nuclear Cardiology and Nuclear Medicine Technology. We also have a superb group of well trained technologists, administrative and support staff as well as our Radiation Safety Officer. The entire team is committed to providing timely, safe and compassionate care to all of our patients. Our equipment includes: 1 triple head scintillation camera, 1 solid state dedicated Cardiac camera, 2 SPECT-CT cameras, 1 PET-CT and 2 DXA scanners. Also we have a fully equipped Cardiac Stress Lab. In FY2012, we performed circa 2000 Myocardial Perfusion studies, 829 Bone Scans, 1400 Bone Density Studies, 1595 PET-CT scans as well as numerous other procedures to include Somatostatin Receptor Imaging and Sentinel Lymph Node localization.</p> <p>We also provide residency training to Radiology and (formerly) Nuclear Medicine residents.</p> <p>We currently have active participation in Head and Neck, Thoracic/Pulmonary, General, GU (sporadic), Endocrine and Hematology Tumor Boards.</p> <p>Our PET-CT division is a burgeoning service. We perform about 40 studies a week most of which are oncologic. We also perform Myocardial Viability, Brain (including B-amyloid neuritic plaque imaging) and Infection Imaging.</p> <p>As far as Targeted Radionuclide Therapy, we offer I-131 for the treatment of benign and malignant thyroid disease, bone pain palliation with Samarium or Strontium and Radioimmunotherapy with Y-90 labeled Anti-CD 20 Ab (Zevalin).</p> <p>We have started the preliminary steps for introducing PET/CT Myocardial Perfusion Imaging (MPI) with N-13 Ammonia which is known to be more sensitive and specific than SPECT MPI and which also has the potential for absolute quantification of myocardial blood flow.</p> <p>Luis Tamara, MD Chief Nuclear Medicine</p>	<p>Interventional Radiology</p> <p>Interventional Radiology uses catheters and imaging equipment to diagnose and treat medical problems. While an interventional radiology procedure is usually an invasive procedure, it is much safer and easier for patients than surgery. Often medical conditions can be diagnosed and treated on an outpatient basis when interventional radiology is preformed. Michael E. DeBakey VA Medical Center is proud to offer the following types of procedures to our cancer patients:</p> <ul style="list-style-type: none"> Catheter Embolization Chemoembolization Deep Vein Thrombosis Detachable Coil Embolization Needle Aspiration Biopsy Nephrostomy Drainage Percutaneous Gastrojejunostomy Stent Placement Radiofrequency Ablation of Liver Tumors Thrombolysis Transjugular Intrahepatic Portosystemic Shunt (TIPS) Ultrasound-guided and X-ray Uterine Fibroid Embolization Vascular Access Procedures Vertebroplasty Ablation of Renal Tumors and/or any other soft-tissue tumors Portal Vein Embolization Transjugular liver biopsies abscess drains <p>We hope to initiate Transcatheter arterial Radioembolization (Y-90) for liver tumors within the next year.</p> <p>We are also looking at Irreversible Electroporation (IRE), but that may be a year or two down the road.</p> <p>Guided Breast Biopsy is contracted with The Rose Clinic.</p>
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Inpatient and Outpatient Chemotherapy Services

<p>Inpatient & Outpatient Chemotherapy Services Outpatient Chemotherapy Staff in the Medical Oncology Department at Michael E. DeBakey Cancer Center provides chemotherapy and hormone therapy to patients for the treatment of their cancer. These treatments are often used along with surgery and/or radiation therapy in the treatment of cancer. Chemotherapy is administered by chemotherapy validated nurses under the direction of the medical oncologists. Chemotherapy is usually administered in the outpatient setting at MEDVAMC Cancer Center. Inpatient Oncology Unit 4th Floor is a medical unit which provides quality acute and ambulatory nursing care services focusing on oncology care. Nursing staff are certified in chemotherapy, and there are many Oncology Certified Nurses in the unit.</p>	<p>Rehab Services MEDVAMC Rehabilitation Program is a Commission on Accreditation of Rehabilitation Facilities (CARF Accredited). Accreditation identifies that we have met international standards of quality patient service. Our program is designed for persons with residual impairment from injury, disease or surgical procedures. Rehab services are available for chronic pain, hand therapy, physical therapy, speech/language and prosthetics.</p>
<p>Surgical Section MEDVAMC surgeons are talented and dedicated physicians. Surgical Specialties for cancer care that are available at MEDVAMC include: Ear Nose & Throat (ENT) Surgeons, General Surgeons, Colorectal Surgeons, Gynecologic Surgeons, Neurosurgeons, Plastic Surgeons, Thoracic Surgeons and Urologists.</p>	<p>Palliative Care/Pain Management The goal of palliative care is to relieve suffering and ensure the best possible quality of life for people facing advanced chronic and life-threatening illnesses. It is provided alongside all other appropriate curative treatments. The Pain Management specialist is available to help manage cancer pain. The Pain Management Department is located on the ground floor of MEDVAMC and provides procedures in the department under fluoroscopic guidance.</p>
<p>Home Care and Hospice MEDVAMC Home Services is an interdisciplinary team of physicians, nurses, nurse aides, social workers, chaplains, pharmacists, therapists, medical equipment and supply specialists, and volunteers. They are trained to help patients live more independently in their own homes. MEDVAMC Home Services provides many home-based services including home health, hospice, grief center, rehabilitation technology (mobility products), respiratory care, infusion therapy and medical equipment and supplies.</p>	<p>Palliative Care Palliative care is the comprehensive management of physical, psychological, and spiritual needs of patients and their families. It is provided alongside all other appropriate curative treatments. The goal of palliative care is to relieve suffering and to ensure the best possible quality of life for people facing serious and potentially life-threatening illnesses.</p>
<p>Cancer Services Outreach and Community Education - MEDVAMC offers a wide range of support, outreach, education and early detection programs to the community. Skin cancer screening, Breast, cervical and colorectal cancer awareness programs are held.</p>	<p>Pastoral Care The Pastoral Services Department offers spiritual support and care to persons of all faiths during cancer treatment. Chaplains are members of a multi-disciplinary team and are available to help patients and their families during a hospitalization or while receiving treatment at the MEDVAMC Cancer Center.</p>

Diagnostic Referral Center: We recognize that time is valuable. As such, our patient referral coordinator attentively schedules each new patient visit so that it takes place in a timely manner. Prior to the appointment, the coordinator works with the primary healthcare provider or other referring provider to gather important health information for our oncologist to review. In addition, our coordinator follows up with our patients to answer any questions they may have after the appointment, and communicates visit results to the referring provider.

Multidisciplinary Clinics and Conferences

Multidisciplinary clinics (MDCs) have played an increasingly prominent role in the care of patients with cancer in both the community and in academic cancer centers. Their development has been promoted in health care management literature and by the National Cancer Institute. Intuitively, a multidisciplinary approach provides a rational and coordinated mechanism for evaluation and treatment of patients with complex diseases by bringing health care providers in the surgical, medical, and radiation oncology disciplines together. Yet, each discipline functions in a different environment with different requirements and incentives that can undermine seamless coordination. Additionally, the needs of each disease-based MDC may differ—particularly in large academic centers with highly specialized providers in each discipline who treat patients with a single disease—requiring different models of multidisciplinary care that are suitable for patients with each cancer type.

Multidisciplinary clinics (MDCs) play a prominent role in coordinating complex cancer care delivered by multiple providers from different disciplines. The structure of such clinics and clinicians' perceptions of the advantages and disadvantages of practicing in MDCs has not been well characterized and is currently the subject of ongoing research.

There are two care models: one in which patients is seen sequentially by physicians from each discipline, and a second model in which patients are seen concurrently by physicians from each discipline. Patients seen in each clinic model uniformly expressed high satisfaction with the coordination of care. MDCs are valued by oncology patients and providers.

The multidisciplinary cancer care conferences (MCCs) create opportunities for treatment to be planned involving multiple cancer experts. The MCCs are designed to connect **newly diagnosed** cancer patients and their healthcare team to the latest treatments based on national treatment guidelines. These conferences are designed to provide an expert review of specific health information so that individualized care recommendations can be made for patients seeking cancer treatment planning.

Benefits of the Multidisciplinary Care Approach:

- Access to a Tumor Board consults template in CPRS and a coordinator to facilitate and expedite care coordination
- A regional consultative resource for patients and their healthcare team, available through state-of-the-art tele-video conferencing
- Customized recommended treatment strategy based on national treatment guidelines and evidence-based practices, shared with the patient's healthcare team
- Comprehensive case review by a multidisciplinary panel including surgeons, radiation oncologists, medical oncologists, pathologists, and radiologists
- Education and referral to appropriate resources based on an assessment of each patient's physical, emotional, and practical needs and concerns including nutrition, palliative care, financial resources as well as emotional and spiritual support

MULTIDISCIPLINARY TUMOR BOARD
CONFERENCE SCHEDULES

TYPES	DAYS	TIME	PLACE	CHAIRMAN	Deadline for reports needed (Applies only if radiology/pathology requested)
ENT	1 ST & 3 RD MONDAY	1:00 – 2:00PM	4C-345	Dr. Parke & Chief Resident	None
HCC	Biweekly MONDAY	1:45 – 2:45PM	2C-454	Dr. Hussain	Thursday
HCC	TUESDAY	7:45 – 9:00AM	4C-345	Dr. Hussain	Thursday
PULMONARY	TUESDAY	1:00 – 2:00PM	4C-345	Dr. Green	Monday noon
GENERAL	WEDNESDAY	12:00 - 1:00PM	4C-345	Dr. Yellapragada	Monday
UROLOGY	1 ST & 3 RD THURSDAY	4:00 – 5:00PM	4C-345	Dr. Amiel	Monday
HEMATOLOGY	FRIDAY	4:00 – 5:00PM	4C-345	Dr. Yasin	Wednesday
ENDOCRINE	1 ST & 3 RD THURSDAY	1:00 – 2:00PM	4C-345	Dr. Braxton	None

Virtual Multidisciplinary Cancer Conferences:

Many facilities have made great strides toward implementing Virtual Multidisciplinary Cancer Conferences (VMCCs). The purpose of a VMCC is for a multidisciplinary team to prospectively review cancer patient cases and make recommendations on best management. These forums are new to many VISN 16 facilities but excitement about their potential is skyrocketing. The virtual MCC brings geographically dispersed VISN 16 facilities together weekly or bi-weekly to discuss patient cases for different disease sites. One of the key success factors of MCCs in this cancer center has been the leadership of surgical representatives. Having medical leadership that is interested in and committed to MCCs is invaluable.

Dr. Daniel Anaya has dedicated time to talk to other staff physicians at the VISN 16 facilities, answer concerns and reassure their peers that this and other initiatives can only lead to better patient care without being restrictive or threatening. Committed leaders have also been effective in facilitating consultation with inter-regional hospitals/disciplines to determine the best MCC structure for the VISN.

Success:

- Numerous examples of patients benefiting from improved care
- Interaction between disciplines promotes an understanding of each others' complexities
- Promotes a sense of collegiality among the hospitals
- Clinicians benefit from continuous education
- Meetings are dynamic in a non-threatening environment; all disciplines are encouraged to participate
- With 80%-90% of cancer patients requiring surgery or other treatments, the MCC contributes to a solid cancer program at the MEDVAMC Cancer Center.

Cancer Committee

The Cancer Care Committee is composed of representatives of primary and specialty care physicians, as well as team members involved in the care of cancer patients. The Cancer Program continuously strives to meet and exceed the accreditation requirements set forth by the American College of Surgeons Commission on Cancer (CoC). The multidisciplinary Committee meets monthly to review and evaluate the quality and direction of the overall cancer program. The diversity of Cancer Committee provides MEDVAMC with the ability to assess and make any improvements needed in the areas of diagnosis, care, treatment, and support for patients and their families. In addition to patient care, the Cancer Committee monitors all areas at MEDVAMC related to cancer.

The Cancer Program annually conducts two detailed studies which review our management in specific aspects of cancer care. This year the area of focus was Telemedicine “Improving Cancer Care” in rural areas which has been very successful; and an ongoing colorectal cancer study. You can read more on these topics in this report. The Cancer Program is driven by the concerted efforts of a dedicated group of professionals whose goal is to improve the care of cancer patients in our community. We look forward to continuing this mission in the coming year.

The mission of the Michael E. DeBakey VAMC Cancer Program is to decrease the morbidity and mortality of cancer patients through:

- Patient education aimed at cancer prevention
- Evaluation aimed at early and accurate diagnosis
- Delivery of standard of care within the scope of the patient's wishes
- Appropriate and timely referral to a full range of supportive services including palliative care and hospice
- Life-long surveillance for recurrence

The Cancer Committee wishes to thank the MEDVAMC medical staff and administration for their continued support of the Cancer Program.

Cancer Program Goals and Accomplishments

Cancer Committee Goals 2011 & 2012

- Visited Alexandria and Biloxi VAMC to set up the Virtual Tumor Board process, which was successful
- Started the VTBC with both of these facilities in September 2011
- There have been not any implementation issues so far.
- Plan is to start the VTB conference with other facilities soon.
- Templates/Website is established for Multidisciplinary/Virtual Tumor Board conferences which includes:
 - Guidelines for Tumor Board Conferences
 - Presentation and documenting the notes format
 - Notes to be cosigned by each Tumor Board Chair
 - Patient referral process
 - Goal is to improve and standardize patient care through the VISN 16 VAMCs
- Cancer Registry: Successful submission of cancer registry data to the NCDB call for data in January 2012.
- Continued successful cancer screening programs
- Continued participation in community outreach events such as support groups and other educational programs
- Continue coordination of Cancer Program team to maintain full accreditation status from the American College of Surgeons, Commission on Cancer

All of the above goals have been accomplished.

Goals for 2013

- 1) Visit other VA facilities in VISN to discuss the process and plans of Virtual Tumor Board.
- 2) Hire additional staff for Multidisciplinary Virtual Tumor Board Project.

Hematology/Oncology Section

2011:

- 1) Obtain microscope equipment to enhance the Hematology Multidisciplinary Tumor Board. (Accomplished this goal in June 2011)
- 2) Plan is to develop a comprehensive telemedicine program in order to enhance the care of our VA patients living in rural areas. (Accomplished this goal in August 2011)
- 3) Complete the hiring of HEM physician and nursing staff (In progress)

2012:

- 1) Complete the hiring of physician and nursing staff (completed in August 2012)
- 2) Develop electronic chemotherapy medication orders for the infusion clinic: (completed in April 2012)
- 3) Missed Opportunity Rate: Plan to reduce the number of no-show and cancel by patient appointments: (completed in April 2012)
- 4) Complete the hiring of V-TEL staff (physicians, NP, nutrition and PSA) (completed in August 2012)
- 5) V-TEL encounters: increase the number of V-TEL encounters. (this is an ongoing project and the numbers have increased tremendously)
- 6) CSC: Plan to implement the nurses council meeting at the infusion clinic: (completed in September 2012)

NUCLEAR MEDICINE GOALS FOR 2012

This year is to be fully staffed (both physician and technologist –wise) (partially completed)

GOALS FOR 2013

Increase capacity of PET/CT clinic by having 2 dedicated, full time PET/CT Technologists.

- Explore the possibility of dual isotope Na-F and FDG combined oncologic imaging.
- Recruit another full time NM physician.

Participate in research projects to include TBI imaging with F-18 Florbetapir.

Radiation Oncology Goals for 2011

- Cyberknife went live 2/2011
- ACR Re-accreditation 2011 (for 3 years)
- Implementation of KV Matching (IGRT)
- Implementation of Cone Beam CT (IGRT)
- Installation, Training and Initiation of 1st Phase 4D Simulation
- 100 % Peer Review of all new patient Radiotherapy Treatment Plans
- Established a designated person to coordinate chemoRT scheduling for patients getting combined therapies
- Implemented “dry-run” to improve quality care and patient safety
- Primary facility for Baylor Radiation Oncology Residency Program
- Increased resident rotation slots from 2 to 3 FTEs
- Radiotherapy Student program affiliation with Galveston College
- Successfully recruited an experienced Rad Onc nurse
- Recruited a front desk clerk
- Filled nurse aid/health tech position
- Successfully recruited 3 MDs, one started Sept. 2011, two started July 2012
- Participated in Cooperative Clinical Trial (SWOG)

All of the above goals have been accomplished

Radiation Oncology Goals for 2012

- Establish affiliation with MD Anderson Cancer Center Dosimetry student program
- Will participate in the National VA Radiation Oncology Remote Peer Review pilot study (1 of the 5 sites)
- Complete Radiation Oncology clinic remodeling and expansion

Cancer Registry

The Cancer Registry is an essential component of the Michael E DeBakey VA Medical Center's Cancer Program. The Cancer Registry staff works closely with the Cancer Care Committee to maintain accreditation as a MEDVAMC Comprehensive Cancer Program/Center by the Commission on Cancer of the American College of Surgeons. The Hospital's Cancer Program is accredited with commendation through 2013.

The registry has responsibilities, including the accurate and timely collection of information on cancer diagnosed and/or treated at Michael E. DeBakey VA Medical Center, as well as the management and analysis of this data.

The data collected by the Cancer Registry is electronically submitted to the Texas Department of Health (TDH), Veterans Affairs Cancer Center Reporting (VACCR) and the National Cancer Database (NCDB). This allows comparative analysis with other hospitals or databases. Data analysis for specific sites can be done to compare elements, such as site, demographics, histology, stage of disease, treatment modalities and survival to other published state, regional or national data. This information provides the cancer program benchmarking opportunities to patterns of patient care and survival.

A major priority of the registry is collecting, handling and disseminating patient information while maintaining strict patient confidentiality. Another important function of the registry is to provide annual lifetime follow-up of every patient diagnosed and/ or treated for cancer at Michael E. DeBakey VA Medical Center. The information ensures continuous medical surveillance and also provides end results and survival statistics and is used in the assessment of treatment effectiveness. The registry has worked diligently to achieve follow-up rates that meet or exceed COC standards.

The registry staff participates in ongoing cancer-related education at the local, state, regional and national levels to maintain abstracting skills and to maintain credentials in their field. The registry also coordinates the Cancer Conferences, Grand Rounds and Cancer Care Committee meetings. The registry staff participates in community outreach programs and monitors the standards required for accreditation by the COC accreditation program.

Life Time Follow-up:

After a diagnosis of cancer is made, physicians feel it is ideal that a patient be medically followed for life. To assure the best continuity of care and evaluation of your treatment, the Cancer Registry will obtain and document updated information for our medical records annually. This follow-up can be done two ways.

- If a patient is re-admitted to the hospital or are seen as an outpatient, records will indicate that the patient has been followed this year.
- If a patient has not received any service from MEDVAMC Michael E. DeBakey VA Medical Center during the year, the patient's physician(s) will be contacted.

Follow-up on recent patients:

- Follow-up cancer care involves regular medical checkups that include a review of a patient's medical history and a physical exam.
- A key purpose of follow-up care is to check for recurrence or progression of disease (the return of cancer in the primary site) or metastasis (the spread of cancer to another part of the body).
- Follow-up care is individualized based on the type of cancer, the type of treatment received, and the patient's overall health, including possible cancer treatment-related problems
- Follow-up is generated each month
- A control list of patients due for follow-up is compiled and compared to hospital admission and outpatient records. If the patient has returned to the facility, records are obtained and appropriate information extracted.
- If the patient has not returned to the institution, follow-up letters are usually mailed to the patients.

Cancer Program Quality Improvement & Enhancements

The American College of Surgeons Commission on Cancer defines Quality Performance improvements as actions taken, processes implemented or services created to improve patient care. Implementation of improvements demonstrates the program's continuous commitment to providing high quality cancer care. Our cancer program continues with efforts to achieve high quality care. In 2011 and 2012 the following improvements were implemented. Our V-TEL "Improving Cancer Care" in rural area took place in October 2011. This is very successful and our Veterans appreciate the service provided to them at the CBOCs through the V-TEL systems. The following presentation provides all the details of V-TEL project:

IMPROVING CANCER AND HEMATOLOGY CARE FOR VETERANS THROUGH TELEMEDICINE

A collaborative effort between the MEDVAMC VA
Cancer Center and Health Services
Research & Development

November 29, 2012

VA Program Partners

- Cancer Center
 - T. Hayes, MD
 - S. Yellapragada, MD
 - A. Mulchandani, CTR, HSS
- Health Services Research and Development
 - J. Davila, PhD
 - Y. Sada, MD
 - R. Street, PhD
- Non-Clinical Partners
 - Office of Rural Health (ORH)
 - VISN 16



Why Telemedicine?

- Half of the patients treated at the Houston MEDVAMC for cancer and blood diseases reside in rural areas.
- Care involves multiple trips to the Cancer Center for diagnostic testing, education, therapy and follow-up.
- Physical and/or financial issues may limit multiple trips.
- Family members not able to accompany due to limited space on the VA vans/need to take time off from work.

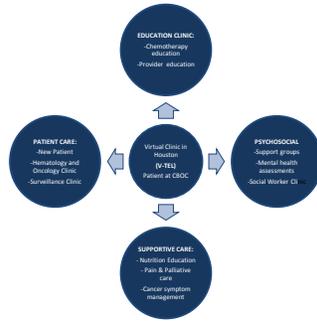
Cancer Care V-TEL Program

- Office of Rural Health (ORH) Strategic Plan seeks to improve access and quality of care delivered to rural and highly rural Veterans by optimizing the use of health information technologies
- Utilize existing V-TEL technology at MEDVAMC and CBOCs
- Previous success using V-TEL for patient care for mental health and other disciplines

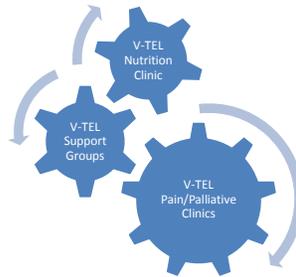
Objectives

- **Objective 1: Improving access and quality of care for cancer patients through telemedicine.**
- **Objective 2: Increase education and training for patients, families & VA providers.**
 - a) Chemotherapy education
 - b) Symptom control
 - c) Psychosocial care
 - d) Nutrition support
- **Objective 3: Optimize use of available and emerging health information technologies**

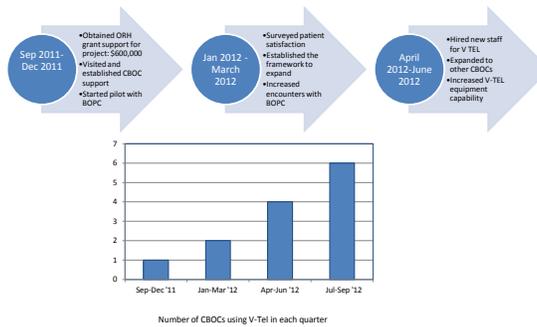
Overview of V-TEL program



Cancer Supportive Services Clinic



Project Initiation



Evaluation: Outcomes of Interest

Objective 1: Improving access and quality of care

Measure:

- Retention in follow-up care
- Patient (& Provider) satisfaction
- Time to appointment and appointment wait times

Objective 2: Increase education and training

Measure:

- Family involvement
- Initiation and utilization of support groups
- Increase psychosocial assessments
- Increase nutrition training

Objective 3: Optimize use of information technologies

Measure:

- Cost-reduction in travel pay
- Quality of audio and visual
- Reduction of in-person visits

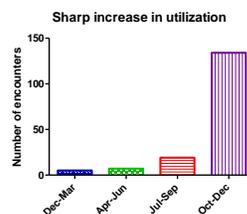
Survey Development: Patient Satisfaction with Telemedicine

- Identified factors relevant to satisfaction
 - Clinic, provider, treatment, patient, and disease characteristics
- Reviewed validated satisfaction surveys
- Developed survey with multidisciplinary input from HSR&D and VA Cancer Center
- Pilot tested survey with 5 veterans
 - Interviewed patients about clarity of each question
 - Average survey completion time = 5 minutes
- Database designed for data collection

Results: Utilization

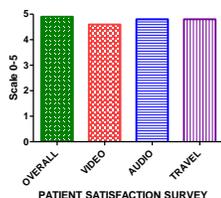
Total number of V-TEL encounters: 115 (till mid-Nov)

- Oncology - 50
- Benign Hematology - 40
- Malignant Hematology – 25

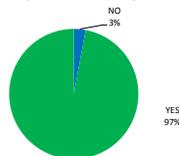


Results: Objective 1: (N=100)

- Patient satisfaction measured by survey tools developed in conjunction with HSR&D
- Scale of 0-5 are used for ratings



Would you do V-TEL again?



Results: Objective 2

- Support groups: 100% increase in utilization
- Psychosocial assessment has increased from 25% to approximately 75%
- Nutrition service provided to 90% of V-TEL patients
- Family involvement in 45% of V-TEL encounters

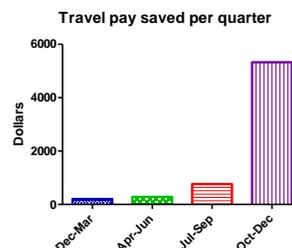
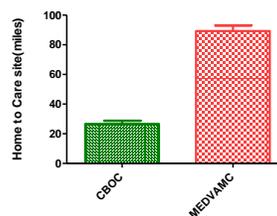
HOPE, HELP, HEALING
 CANCER SUPPORT & DISCUSSION GROUP
 FOR EMPLOYEES, VETERANS, AND THEIR FAMILIES
 Join us **IN PERSON** or **BY PHONE**

Notes:

For information on participating by phone please contact:
 Maria Louann Vingoe, LMSW, Social Worker
 713-791-1414, EXT 5273 or
 Beth Addison, LCSW, Social Worker
 713-791-1414, EXT 5641

Results: Objective 3

- Average travel distance = 97 miles
- Calculation based on \$0.415 per mile
- N=100



WHERE WE ARE AND WHERE WE WANT TO GO:

Accomplished Goals

Measure (Quality, Access, Cost, Satisfaction, etc.)	FY 12 QTR 1	FY 12 QTR 2	FY 12 QTR 3	FY 12 QTR 4
Travel Pay	↓2%	↓5%	↓10%	↓15%
Satisfaction Questionnaires	Avg. scores ≥4	Avg. scores ≥4	Avg. scores ≥4	Avg. scores ≥4
Utilization of services (No. of veterans getting V-TEL)	5	10	25	50 165

V-TEL Challenges

- Currently available at BOPC, CWOPC, Conroe, ROPC, Texas City/Galveston, Lake Jackson.
 - Expansion to Katy, Tomball, other sites?
- Availability of lab results – BOPC, CWOPC same day; Others: takes 1 day.
- Limited to 30 minute patient visit time slots - difficult for multidisciplinary clinic visit.
 - 1 hour slots: System challenge of receiving multiple encounter credits for different services.

V-TEL Challenges

- Bandwidth issues can limit V-Tel connection speed
- Pharmacy-how to deliver medications that are refrigerated, or unstable, or to CBOCs with no pharmacy facilities.
- Medicolegal implications.

Future of V-TEL Cancer Care

LOCAL EVALUATION

- Monitor the percent of unique Hematology/Oncology patients (new) waiting more than 14 days from their desired date for a V-tel appointment. Goal is to make this < 14 days.

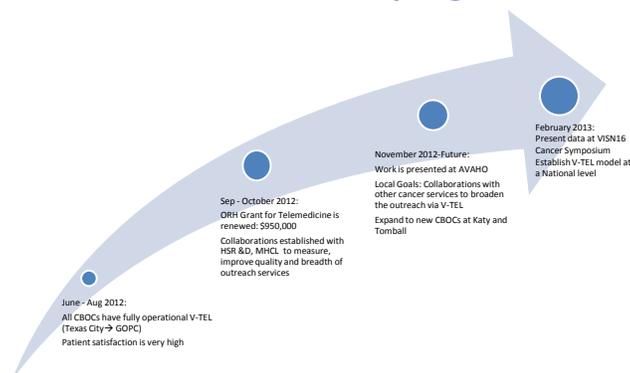
REGIONAL/NATIONAL EXPANSION

- Expand and enhance the community-based programs by development of standard operating procedures to help with implementation on a national scale.

BUILD CONTINGENCY PLANS

- Develop plan to minimize the disruption of care to Tele-health patients in the event of an internal or external disaster or emergency.

Growth of V-TEL program



Key Collaborations/Cancer Committee

- Structured Cancer Committee with excellent resources
- Prior V-TEL experience in disciplines like Virtual Tumor Board Conferences
- Future goal of Telemedicine Expansion Program by unifying multidisciplinary hematology/oncology activities under the aegis of Cancer Committee team

Collaboration for Multidisciplinary Expansion of Telemedicine

Common Resources for Cancer Outreach:		
<ul style="list-style-type: none"> a) Case manager b) Patient navigator c) Program support assistant d) Database management e) Mobile unit oncology nursing & pharmacy 		
<p>Medical Oncology & Hematology Telemedicine (V-Tel) Clinics:</p> <ul style="list-style-type: none"> a) New patient clinic b) Chemotherapy clinic for education and monitoring side effects of chemo c) Follow-up clinic d) Lung nodule clinic d) Palliative and pain clinic <p>Staff needed:</p> <ul style="list-style-type: none"> -V Tel Hematologist, -V tel Oncologist, -Vtel Medical Oncology nurse practitioner 	<p>Surgical Oncology Telemedicine (V-Tel) Clinics:</p> <ul style="list-style-type: none"> a) Cancer surveillance clinics b) Post-procedure follow-up clinics c) Pre-op anesthesia and patient education clinic <p>Staff needed:</p> <ul style="list-style-type: none"> -V Tel Surgical Oncology Nurse Practitioner, V-Tel Physician assistant 	<p>Psychosocial Mental & Social Health Telemedicine (V-Tel) Clinics:</p> <ul style="list-style-type: none"> a) Initial psychosocial assessment clinic b) Support groups c) Family counseling service d) Follow-up clinic for Mental Health Service <p>Staff needed:</p> <ul style="list-style-type: none"> -Social workers: V Tel Surgical Oncology & Medical Oncology -Mental Health services: V-Tel Psychologist

Acknowledgements

- Council Executive Board
- Office of Rural Health
- HSR&D
- CBOC Directors
- Multidisciplinary Cancer Committee team
- Drs. Anaya, Davila, Gottumukkala, Sada, York
- Executive Care Lines: Nutrition and Social Work
- “Team V-Tel”

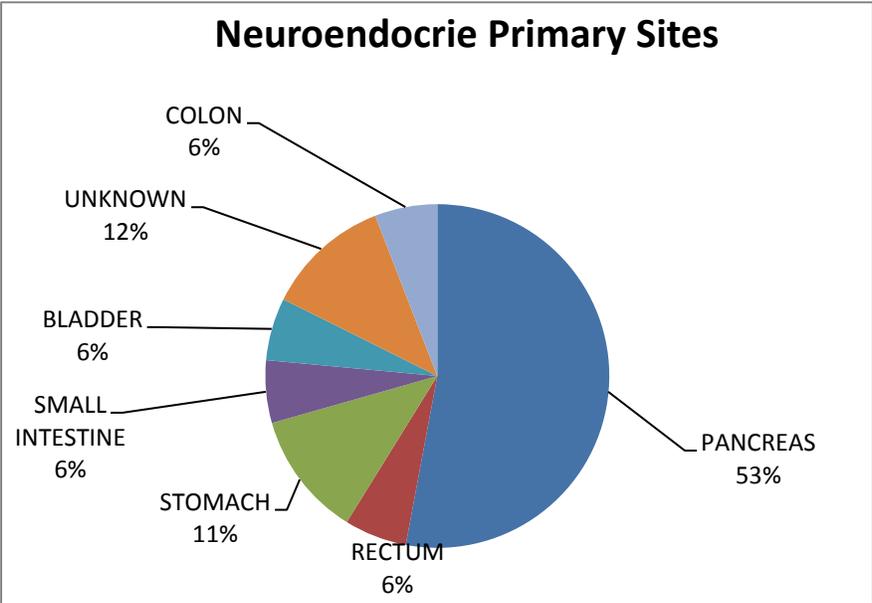
Neuroendocrine Tumors

Neuroendocrine tumors (NETs) arise from cells of the endocrine and nervous systems. Many are benign, while some are malignant. They most commonly occur in the intestine, but are also found in the lung and the rest of the body.

Neuroendocrine tumors therefore represent a large class of cancers that can occur wherever neuroendocrine cells are found throughout the body. They are sometimes called carcinoid tumors, but it would be more accurate to consider these tumors as a sub-category of the larger family of neuroendocrine tumors. Neuroendocrine tumors are most often found in the digestive system and the lung. Statistically, 38% occur in the appendix, 23% in the ileum, 13% in the rectum, and 11.5% in the bronchi. Neuroendocrine pancreatic tumors are rather rare cancers with an incidence of 1-2 cases per 100,000 people. They occur with the same frequency in men and women and the average age at diagnosis is 53 years. Neuroendocrine tumors are also known as apudomas, or tumors that contain apud cells.

At Michael E. DeBakey VAMC 53% of patients were diagnosed with neuroendocrine tumor of the pancreas and 11% were stomach and unknown primaries. The figures are listed in the following chart.

The total incidence of neuroendocrine tumors is thought to be between five and nine million people in the United States. It is possible that these tumors are under-reported because they grow slowly and do not always produce dramatic symptoms.



Other Classifications for Neuroendocrine Tumors

Additionally, neuroendocrine tumors are sub-classified into "functionally active" and "functionally inactive" tumors. Functionally active neuroendocrine tumors display specific symptoms, such as the excessive release of specific neurohormones from the tumor cell, as described above for pancreatic neuroendocrine tumors.

A recent classification groups neuroendocrine tumors into two types, depending on the kind of cells they develop from:

- Group I (epithelial). This group includes neuroendocrine carcinomas, graded 1, 2, and 3. Grade 1 neuroendocrine carcinomas are also known as carcinoid tumors. Grade 2 includes tumors such as atypical carcinoid tumors, medullary thyroid carcinomas, and some pancreatic endocrine tumors. Grade 3 includes small-cell as well as large-cell neuroendocrine carcinomas.
- Group II (neural). Group II neuroendocrine tumors include paragangliomas, neuroblastomas, primitive neuroectodermal tumors, medulloblastomas, retinoblastomas, pineoblastomas and peripheral neuroepitheliomas.

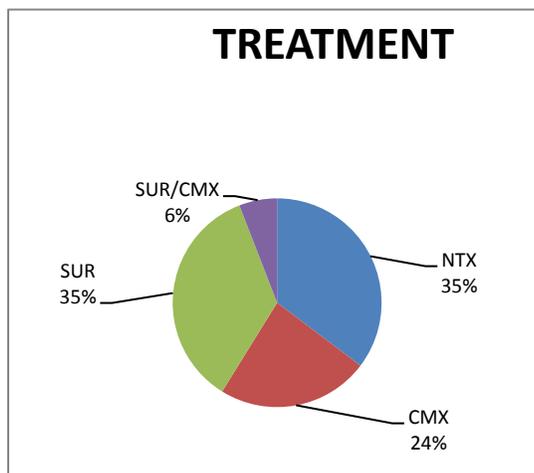
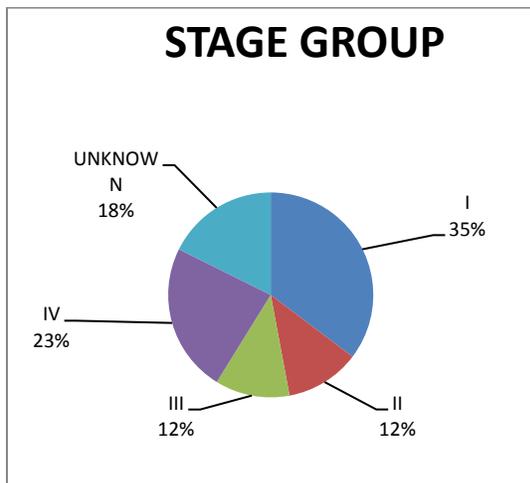
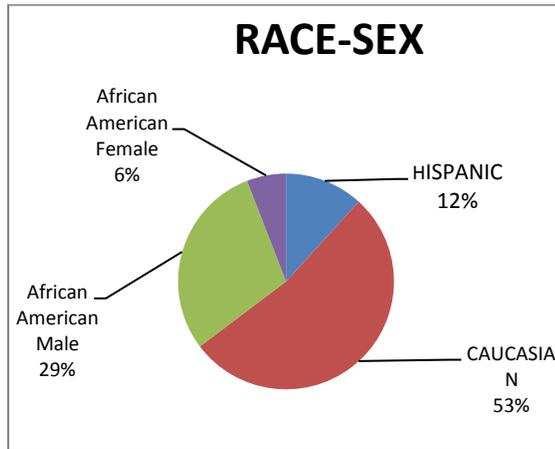
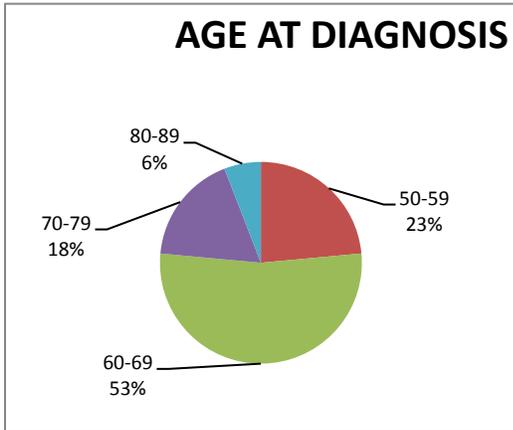
Prevention

Neuroendocrine tumors such as carcinoid tumors are rare, and no information consequently is yet available on cause or prevention.

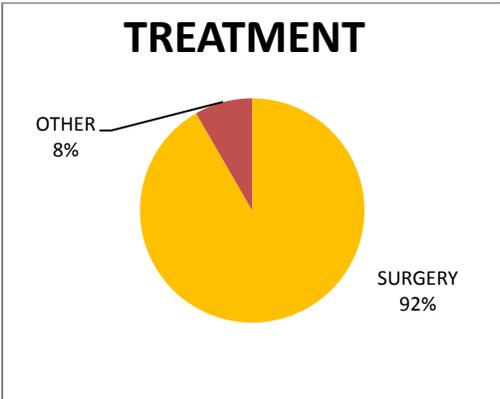
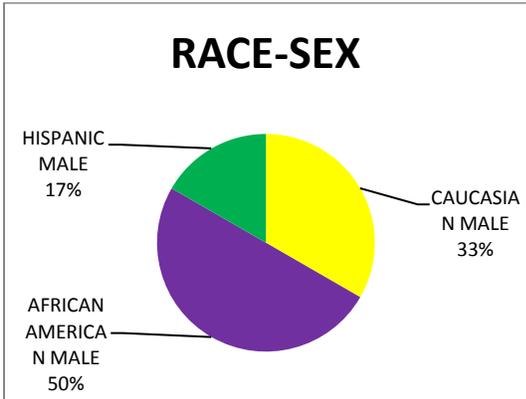
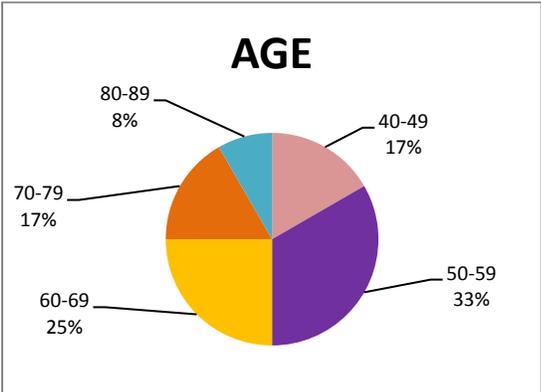
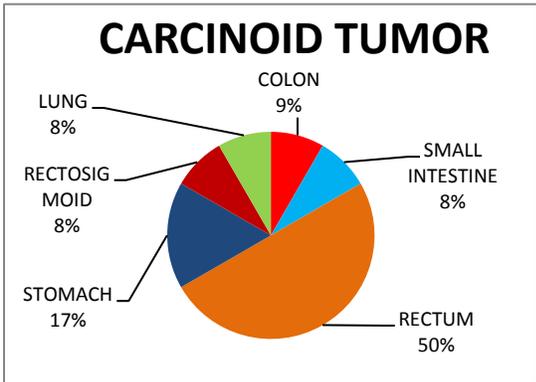
Although estimates vary, the annual incidence of clinically significant neuroendocrine tumors is approximately 6.5-5 per 500,000; two thirds are carcinoid tumors and one third is other NETs. The prevalence has been estimated as 35 per 100,000, and may be considerably higher if clinically silent tumors are included.

Carcinoid tumors are a slow-growing cancer that can arise in several places throughout your body. Carcinoid tumors, which are one subset of tumors called neuroendocrine tumors, usually appear in the gastrointestinal tract (appendix, stomach, small intestine, colon, and rectum) and in the lungs. Carcinoid tumors often don't cause signs and symptoms until late in the disease.

Treatment for carcinoid tumors usually includes surgery and may include medication.



Carcinoid Tumor

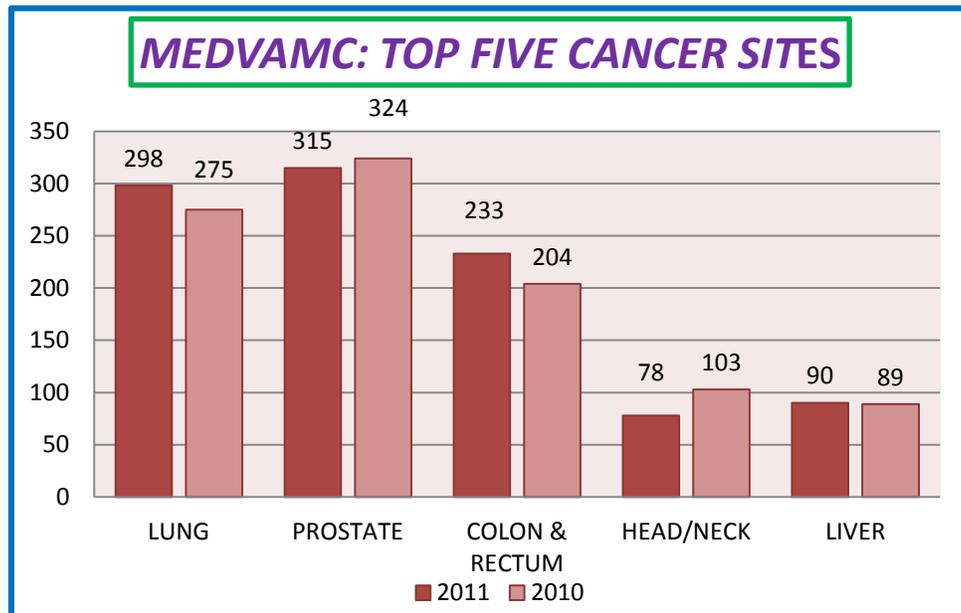


Primary Site Table

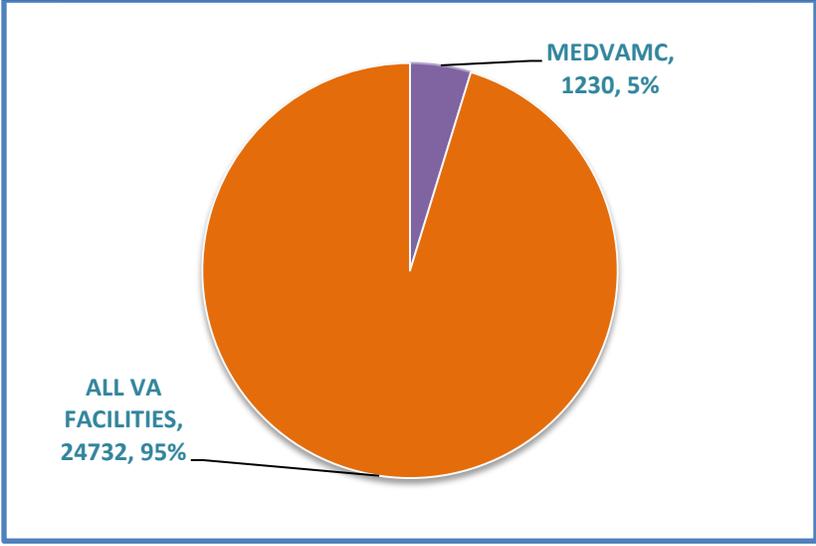
PRIMARY SITE	CLASS OF CASE			RACE/SEX						STAGE DISTRIBUTION							
	TOT#	ANAL	NON	W-M	W-F	B-M	B-F	O-M	O-F	0	I	II	III	IV	U	NA	INC
Lip/Oral Cavity/Pharynx																	
LIP	3	3	0	3	0	0	0	0	0	0	1	1	1	0	0	0	0
TONGUE, BASE	8	8	0	6	0	1	0	1	0	0	2	0	0	5	1	0	0
TONGUE, OTHER/NOS	8	8	0	5	0	2	0	1	0	2	2	1	1	2	0	0	0
GUM	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
FLOOR OF MOUTH	2	2	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0
PALATE	3	3	0	1	0	2	0	0	0	0	2	0	0	1	0	0	0
PAROTID GLAND	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
TONSIL	13	9	4	9	0	3	0	1	0	0	2	3	1	7	0	0	0
OROPHARYNX	4	4	0	3	0	1	0	0	0	0	0	1	1	2	0	0	0
NASOPHARYNX	2	1	1	0	0	1	1	0	0	0	0	0	1	1	0	0	0
PYRIFORM SINUS	2	2	0	1	0	1	0	0	0	0	0	0	0	2	0	0	0
HYPOPHARYNX	3	3	0	1	0	2	0	0	0	0	1	0	0	2	0	0	0
SUBTOTAL	50	45	5	33	0	13	1	3	0	2	10	6	6	25	1	0	0
Digestive Organs																	
ESOPHAGUS	21	19	2	16	0	5	0	0	0	0	2	1	8	6	4	0	0
STOMACH	19	17	2	14	0	5	0	0	0	0	7	4	1	5	1	1	0
SMALL INTESTINE	7	6	1	4	0	3	0	0	0	0	3	2	2	0	0	0	0
COLON	170	162	8	107	2	55	3	3		83	28	21	22	16	0	0	0
RECTOSIGMOID JUNCTION	16	16	0	11	0	5	0	0	0	2	2	2	6	3	1	0	0
RECTUM	47	43	4	33	0	14	0	0	0	13	12	6	8	6	2	0	0
ANUS/ANAL CANAL	2	1	1	1	0	1	0	0	0	1	1	0	0	0	0	0	0
LIVER/INTRAHEPATIC BIL	91	80	11	52	0	39	0	0	0	0	17	30	25	16	2	1	0
GALLBLADDER	2	1	1	1	0	1	0	0	0	0	0	0	1	0	1	0	0
BILARY TRACT - OTHER/N	3	3	0	3	0	0	0	0	0	0	1	2		0	0	0	0
PANCREAS	36	32	4	22	0	14	0	0	0	0	8	9	3	16	0	0	0
OTHER-DIGESTIVE ORGANS	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
SUBTOTAL	415	381	34	264	2	143	3	3	0	99	81	77	76	68	11	3	0
Respiratory System/Intrathoracic Organs																	
NASAL CAV,MIDDLE EAR	3	3	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0
ACCESS SINUSES	3	3	0	3	0	0	0	0	0	0		1	1	1	0	0	0
LARYNX	22	20	2	15	0	7	0	0	0	1	14	3		4	0	0	0
LUNG/BRONCHUS	298	279	19	217	2	70	7	2	0	0	79	30	62	113	14	0	0
THYMUS	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
HEART/MEDIASTINUM/PLEU	5	5	0	5	0	0	0	0	0	0	1	0	0	3	0	1	0
SUBTOTAL	332	311	21	243	2	78	7	2	0	1	97	34	63	121	14	2	0
Hematopoietic/Reticulendothelial																	
HEMATOPOIETIC/RETICULO	74	52	22	43	1	24	3	3	0	0	0	0	0	0	0	74	0
SUBTOTAL	74	52	22	43	1	24	3	3	0	0	0	0	0	0	0	74	0

PRIMARY SITE	CLASS OF CASE			RACE/SEX						STAGE DISTRIBUTION							
	TOT#	ANAL	NON	W-M	W-F	B-M	B-F	O-M	O-F	0	I	II	III	IV	U	NA	INC
Skin (ex. reproducte)																	
SKIN	65	59	6	61	2	2	0	0	0	22	25	10	2	3	3	0	0
SUBTOTAL	65	59	6	61	2	2	0	0	0	22	25	10	2	3	3	0	0
Peripheral Nerve/Automic Nervous System																	
PERIPHERAL NERVES/AUTO	1	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0
SUBTOTAL	1	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0
Connective/Subcutaneous/Other Soft Tissues)																	
CONNECTIVE/SUBCUTANEOU	6	6	0	3	0	3	0	0	0	0	1	1	3	1	0	0	0
SUBTOTAL	6	6	0	3	0	3	0	0	0	0	1	1	3	1	0	0	0
Breast (ex. Skin)																	
BREAST	22	20	2	3	12	0	7	0	0	2	6	8	3	2	1	0	0
SUBTOTAL	22	20	2	3	12	0	7	0	0	2	6	8	3	2	1	0	0
Female Genital Organs																	
CERVIX UTERI	5	0	5	0	5	0	0	0	0	5	0	0	0	0	0	0	0
CORPUS UTERI	3	2	1	0	3	0	0	0	0	0	1	0	1	0	1	0	0
SUBTOTAL	8	2	6	0	8	0	0	0	0	5	1	0	1	0	1	0	0
Male Genital Organs																	
PENIS	5	5	0	2	0	3	0	0	0	2	0	1	0	2	0	0	0
PROSTATE GLAND	315	241	74	164	0	150	0	1	0	0	65	135	29	35	51	0	0
TESTIS	5	1	4	4	0	1	0	0	0	0	3	1	0	0	0	0	1
SUBTOTAL	325	247	78	170	0	154	0	1	0	2	68	137	29	37	51	0	1
Urinary Tract																	
KIDNEY	65	59	6	39	1	21	0	4	0	0	41	4	13	7	0	0	0
RENAL PELVIS	2	2	0	2	0	0	0	0	0	1	0	0	1	0	0	0	0
URETER	4	4	0	4	0	0	0	0	0	2	1	1	0	0	0	0	0
BLADDER	54	46	8	47	0	7	0	0	0	24	17	4	2	7	0	0	0
URINARY ORGANS-OTHER/N	2	2	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0
SUBTOTAL	127	113	14	94	1	28	0	4	0	28	60	9	16	14	0	0	0
Eye/Brain/Other CNS																	
EYE/ADNEXA	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0
MENINGES	16	16	0	8	0	7	1	0	0	0	0	0	0	0	0	16	0
BRAIN	17	14	3	13	0	4	0	0	0	0	2	0	0	0	1	14	0
SP CORD,CRANIAL NERVES	3	1	2	1	0	1	1	0	0	0	0	0	0	0	0	3	0
SUBTOTAL	37	31	6	23	0	12	2	0	0	0	2	0	0	0	2	33	0
Thyroid/Other Endocrine Gland																	
THYROID GLAND	13	12	1	8	2	2	1	0	0	0	9	1	1	2	0	0	0
SUBTOTAL	13	12	1	8	2	2	1	0	0	0	9	1	1	2	0	0	0
Lymph Nodes																	
LYMPH NODES	29	23	6	19	1	6	1	2	0	0	6	2	9	12	0	0	0
SUBTOTAL	29	23	6	19	1	6	1	2	0	0	6	2	9	12	0	0	0
Unknown Primary																	
UNKNOWN PRIMARY SITE	31	30	1	17	0	14	0	0	0	0	0	0	0	0	0	31	0
SUBTOTAL	31	30	1	17	0	14	0	0	0	0	0	0	0	0	0	31	0
TOTAL	1535	1332	203	981	31	480	25	18	0	161	366	285	209	285	85	143	1

Top Five Cancer Sites



Cancer Diagnosed in 2010
VA Medical Center, Houston TX
vs. Veterans Affairs Hospitals in All States
All Diagnosed Cases - Data from 50 Hospitals



Colorectal Cancer

Colonoscopy, FIT and Colorectal Neoplasia

Maria Eugenia Velez, MD
6/21/2012

Quantitative Immunochemical Fecal Occult Blood for CRC

Variable	True Positive Test Result	n	False Negative Test Result	n	True Negative Test Result	n	False Positive Test Result	n	Sensitivity	Specificity
Fecal hgb threshold										
≥ 50ng/ml	17		0		830		153		100	84
≥ 75ng/ml	16		1		865		118		94	87.5
≥ 100ng/ml	15		2		882		101		<u>88</u>	<u>89.7</u>
≥ 125ng/ml	14		3		899		84		82	91.5
≥ 150ng/ml	14		3		903		80		82	91.9

12/5/2012

A Quantitative Immunochemical Fecal occult Blood test for Colorectal Neoplasia ; Annals of Internal Medicine : Vol 146; No 4, 2/20/2007

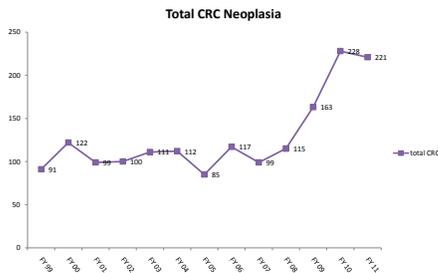
Positive Predictive Value FIT 100mg/ml

- $$PPV = \frac{\text{\# of True positives}}{\text{\# of True positives} + \text{\# false positives}} = \frac{15}{15+101} = 12.9\%$$
- Is the proportion of subjects with a positive test results who are correctly diagnosed. It is a critical measure of the performance of a diagnostic method, as it reflects the probability that a positive test reflects the underlying condition being tested for.
- A small positive (12.9%) predictive value indicates that many of the positive results from the testing procedure are false positives. Thus it will be necessary to f/up any + result with a more reliable test as to obtain a more accurate assessment as to whether cancer is present.
- Such a test may be useful if it is inexpensive and convenient.

Negative Predictive Value FIT 100mg/ml

- $$NPV = \frac{\text{\# of True negatives}}{\text{\# of True negatives} + \text{\# of false negatives}} = \frac{882}{882+118} = 88.2\%$$
- NPV is a summary statistic used to describe the performance of a diagnostic testing procedure. It is defined as the proportion of subjects with a negative result who are correctly diagnosed.
- A high NPV means that the test only rarely misclassifies a sick person as being healthy.

From FY 99 to FY 2011



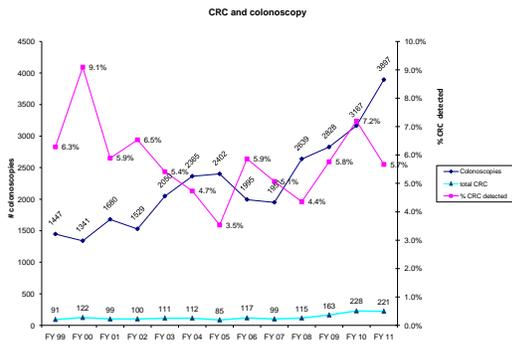
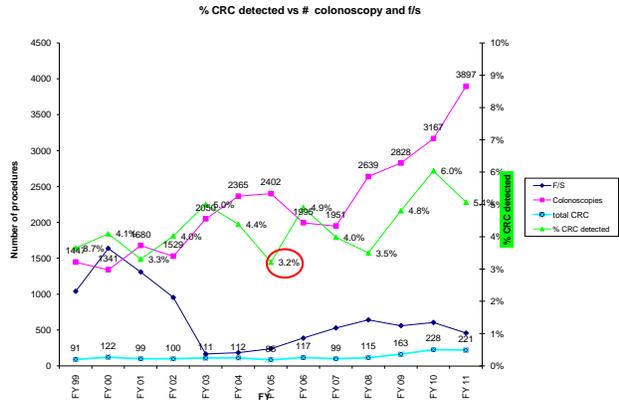
FIT and CRC neoplasia

Colorectal neoplasia detected for first half of the year. 1/1/2011-12/31/2011

	Colon Neoplasia	Rectal neoplasia	Totals
2011	182	39	221
	104 FIT +	19 FIT +	123/221= 56%
2010	170	58	228
	69 FIT +	24 FIT +	93/228 = 41%
2009	119	44	163
	16 FIT +	5 FIT +	21/163 =13%
2008	73	41	114
	10	5 FIT +	15/114 =13%

FY 2011

Stage	0	I	II	III	IV
Colon	129-GI resected	6	8IIA 2IIB	5IIIA 10IIIB 1C	11
Rectum	20-GI resected	5	0	4 IIIA 6 IIIB	4
Totals	67%	5%	4.5%	12%	6.7%



Active monthly and FY 11	Endoscopy production averaging tool	per/d per room (3)	colono scopie done a day										
Month- YEAR	Total Colono	EGD	F/S	ERCP	Upper EUS	Lower EUS	small Bowel	Esoph motilit	Impedanc e	Days	Prod /day	10	15
Oct-10	575	298	218	32	11	13	4	7	9	3	3	20	29
Nov-10	571	290	209	38	12	24		2	4	1	1	21	27
Dec-10	571	312	197	44	12	17		4	1			21	27
Jan-11	604	321	219	39	14	20	3	9	1	1	20	30	10
Feb-11	536	296	196	28	10	21		4	1		19	28	9
Mar-11	607	342	213	41	11	14		1	4	1	23	26	9
Apr-11	576	315	201	40	16	25	1	4			22	26	9
May-11	607	340	186	51	13	13	1	2	1		20	30	10
Jun-11	629	385	175	27	13	15		9	1		22	29	10
Jul-11	523	307	150	32	4	7		7	9	7	21	25	8
Aug-11	648	368	200	44	12	7	2	4	7	3	22	29	10
Sep-11	632	323	226	43	11	16	3	1	2	6	20	32	11
Average monthly	590	325	199	38	12	16	3	2	3	4	6	2	2
											21	28	9
Totals	7079	3897	2390	459	139	192	5	9	5	28	68	19	7
											250		

Acknowledgement

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Daniel Anaya, MD, Chief Surgery Oncology, Cancer Committee Chair
Avo Artinyan, MD, Surgical Oncology Section, Cancer Liaison Physician
Teresa Hayes, MD, PhD, Chief of Hematology Oncology Section
Alka K. Mulchandani, CTR, Cancer Center Program Manager /HSS
Michael Ittmann, MD, Chief of Pathology & Laboratory Section
Luis Tamara, MD, Chief of Nuclear Medicine Section
Maria Velez, MD, GI Section
Meena Vij, MD, Diagnostic Care Line Executive
Sarvari Yellapragada, MD, Hematology/Oncology Section
Jo Parshall, RHIT, Cancer Registry

Michael E. DeBakey VA Medical Center



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4C-340

713-794-8042