



VA Connecticut Healthcare System Cancer Program Annual Report 2016

(Utilizing 2015 Registry Data)

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2016 Cancer Program Annual Report
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VA CONNECTICUT HEALTHCARE SYSTEM MISSION STATEMENT

Honor America's Veterans by providing exceptional health care that improves their health and well-being.

**VA CONNECTICUT HEALTHCARE SYSTEM CANCER PROGRAM
MISSION STATEMENT**

Promote the health of our Veterans by providing state-of-the-art cancer prevention, screening, and treatment programs; by educating the next generation of cancer care providers; and by expanding knowledge through research.

2016 VA Connecticut Healthcare System Cancer Committee

The Cancer Committee at the VA Connecticut Healthcare System is a multidisciplinary forum dedicated to providing state-of-the-art, comprehensive patient care. The focus of the committee is to ensure that our Medical Center provides excellent cancer prevention and screening programs, and that quality care is provided to all cancer patients. To achieve these goals, the Committee actively promotes and complies with the standards of the American College of Surgeons Commission on Cancer.

Cancer Committee Members

Coordinators

Director Cancer Center, Chairperson
Cancer Liaisons

Michal Rose, MD
Anthony Kim, MD
Dale Han, MD
Herta Chao, MD, PhD
Jia Li, MD, PhD
Roxanne Wadia, MD
Michal Rose, MD
Donna Connery, CTR
Tammy Smith, CTR

Quality Improvement
Quality Control of Registry Data

Cancer Conference
Certified Tumor Registrar

Members

Radiation Oncology
Pulmonary Medicine
Chief, Pathology
Geriatrics/Long Term Care
Cancer Program Administrator
Chief of Surgery
Chief, Diagnostic Radiology
Urology
Pain Control
Social Worker/Case Manager
Pastoral Care
Research/Data Manager
ACS Control Representative

Nutrition
Performance Improvement/Quality Mgmt.
Patient/Family Education
Oncology Nurse

Cancer Care Coordinator

Kimberly Johung, MD
Hilary Cain, MD
Robert Homer, MD, PhD
Linda Accordino, APRN
Michael Ebert, MD
Ronnie Rosenthal, MD
Caroline Taylor, MD
Preston Sprenkle, MD
Tracy Shamas, APRN
Donna Doris, LSW
Rev. Sergei Bouteneff
Monica Delvy
John Watkins
Maiteyee Shah
Nancy Hessler, MS, RD, CD-N
Tammy Golden, RN
Karen Didomenico, RN
Marcia Burkitt, RN
Clarice Humanick, MSN, AOCN, FMP
Julie Beck, APRN-BC

Chairperson's Report

I am privileged and proud to introduce this 2016 Annual Report which summarizes and highlights the important work done by the VACT Cancer Center this year to promote the health and wellbeing of Veterans living with cancer.

These continue to be exciting times for the field of cancer care with an explosion of new data in the fields of immune checkpoint inhibition and precision oncology. For example, the drugs nivolumab and pembrolizumab, anti-PD1 agent, gained two new FDA indications important in the Veteran population (Hodgkin's lymphoma and head and neck cancer). The anti-PDL1 agent atezolizumab was FDA approved in 2016, again for an indication very important to Veterans, which is bladder cancer (featured in our Annual Report this year). We continue to work hard to offer our Veterans state of the art treatment and have incorporated these new agents into our practice.

The VISN1 Precision Oncology Program, which we spearheaded through the VISN1 Cancer Council, gained national recognition this year as part of the President's Moonshot initiative, and funds were allocated to expand it to all Veterans in the country. Access to clinical trials must be an integral part of any Precision Oncology Program, especially since actionable mutations identified through sequencing may suggest benefit from a medication that is not FDA approved, or not FDA approved for the patient's tumor. We have worked hard to expand access of our patients to clinical trials, both on site, or at other regional academic centers. We continue to be active participants in the high profile Lung MAP protocol of the National Clinical Trials Network, in which either targeted therapy or immune therapy is offered to patients with squamous cell carcinoma of the lung, again, based on sequencing data.

We also continue to promote healthy living for our cancer survivors who receive personalized treatment summaries and recommendations for health maintenance and cancer prevention and screening. Our Survivorship Center continues to be a warm and welcoming room where Veterans and their families can spend time and participate in activities. For the third year in a row we held a Thanksgiving lunch for Veterans and families in the Survivorship Center on the Monday before the holiday. It was truly heartwarming to see our patients enjoy a good meal and each other's company.

As this report demonstrates, the Cancer Center at VACT Healthcare System brings together providers from all disciplines to prevent and treat cancer. We continue to participate in and promote multi-disciplinary cancer research to advance the field, and teach and mentor trainees at all levels from medicine, pharmacy, nursing, psychology, and others. We are very grateful to our administration for their continued support and to the many other entities that work with us to care for our Veterans such as the Volunteer Services of VACT and the American Cancer Society. I continue to feel privileged to belong to such a dedicated group of individuals.

*Michal Rose, MD
Director, Comprehensive Cancer Center*

Cancer Liaison Report

The role of the Cancer Liaison is primarily to promote the quality of care delivered at our institution, to serve as a liaison between the Commission on Cancer, sponsored by the American College of Surgeons and our local Cancer Program, and to facilitate community outreach programs. As such, we have a highly successful Cancer Survivor Day that has been both a celebration of our cancer survivors as well as an educational platform to continue to reach out to the community. This year we celebrated our 11th Cancer Survivor Day at VACT. This year's theme was "Follow the Yellow

Brick Road to Survivorship” to create a joyful event in which we were able to offer entertainment, education, and hope to patients living with cancer, and their families. The event was extremely well attended as usual, and we are already hard at work planning the next one.

In addition, over this past year, we continued our Oncology Education Series here at the VACT Healthcare System. This is a continuing medical education event centered on increasing awareness and knowledge regarding specific cancers and their care teams. This year, we chose to focus on melanoma. To that end, we hosted a highly successful educational event on melanoma on September 30, 2016. The day-long multidisciplinary educational conference was well attended by a variety of clinicians including physicians, nurse practitioners, physician’s assistants, nurses and other healthcare providers.

Our center has a close partnership with our local American Cancer Society chapter and continues to work in coordination with the ACS to provide resources to our patients. The majority of our cancers are reviewed at our Tumor Board Conferences, and due to the large volume of cases, we have separate Multidisciplinary Tumor Boards including Pulmonary Nodule, Urologic, Hematologic, Liver and GI Tumor Boards. The role of the Cancer Liaison is continually evolving, but the mission remains the same: to continue to strengthen and develop VA Connecticut Cancer Center to better serve our Veterans.

*Anthony Kim, MD, FACS
Dale Han, MD
ACoS Liaisons*

Cancer Registry Report

Data of patients who are diagnosed and/or treated for cancer at the VA Connecticut Healthcare System are abstracted into the Cancer Registry. VA Connecticut Healthcare System’s registry is a computerized data collection and analysis center. The registry operation is directed by the Cancer Committee, in accordance with the American College of Surgeons Commission on Cancer standards for a Veterans Affairs Cancer Program.

The data is reported in accordance with the standards set forth by the Veterans Affairs Central Cancer Registry in Washington D.C., the Department of Public Health for the State of Connecticut and the National Cancer Database. Since the reference date of 2000, 9,453 cases have been included in the database, 7,900 being analytic. Approximately 600 cases are entered annually. There were 651 cases (621 analytic cases) added during 2015 (please refer to primary site table on page 23).

Ten percent of all analytic cases are reviewed by VA Connecticut Healthcare’s Quality Control Physician for quality assurance. Edit checks of cases are periodically returned on data submitted to the Veterans Affairs Central Cancer Registry, the State Cancer Registry and the National Cancer Database of the American College of Surgeons. Discrepancies are reviewed, corrected and resubmitted by the Cancer Registrar.

Every patient entered into the database is followed on an annual basis to assure correct and complete data. The cancer registry’s lifetime follow-up rate of 98% exceeds the Commission on Cancer’s standard of 90%. The registry’s rate for follow-up of living patients of 97% exceeds the standard of 80%. The registry’s follow-up rate for all patients diagnosed within the last 5 years is 98%, exceeding the standard of 90%.

Bladder cancer was the site chosen by the Cancer Committee for a long term survival study and is included in this report. Please refer to pages 24-29.

*Donna Connery CTR, CPC-H
Tammy Smith CTR
Cancer Registry*

Cancer Care Coordinator Report

During FY2016, we continued and expanded several initiatives to increase early detection and diagnosis of non-small cell lung cancers in our Veterans, many of whom are at high risk for lung cancer. We continue to track the daily alerts that are generated by our automated Cancer Care Tracking System (“CCTS”) which tracks radiology codes on chest imaging to identify patients with suspicious lung nodules. Patients identified as having lung nodules deemed suspicious due to size or location are discussed in our weekly multidisciplinary Pulmonary Nodule Tumor Board and individualized plans for follow up are determined for each patient. These plans are then entered into CCTS triggering automated reminders for follow-up, thereby increasing patient compliance.

During 2016, the caseload of early cancers and nodule findings continues to be higher than historical rates and there has been a continuous shift to diagnosis of non-small lung cancers at earlier stage with more than 50% of lung cancers diagnosed at Stage I or Stage II. This is partially due to the widespread use of low-dose screening CT for lung cancer in patients who meet the high risk criteria (ages 55-74, current smoker or quit within the last 15 years with 30 pack-years), and also due to the ongoing close monitoring of lung nodules with imaging following national guidelines and Pulmonary Nodule Tumor Board review of nodules >8 mm in size. Screening CT for lung cancer became widespread June 1, 2013. Since that time, the volume of alerts generated by CCTS and the Pulmonary Nodule Tumor Board caseload has more than doubled. In order to maintain our timeliness from suspicion to diagnosis to treatment, the pulmonary, oncology and cardiothoracic surgery APRN-coordinators communicate daily. We have also seen an increase in the number of Cancer Care Coordinator consults ordered by primary care providers to assist them in arranging for imaging, tissue diagnosis, travel and other services. During 2016df, coordination of care for breast cancer patients at WHVA has continued to be an area where we are focused on improving our process. Primary Care Providers now routinely consult the Cancer Care Coordinator to assist patients undergoing work-up for breast cancer. This has been very well received by patients. We are compiling the data associated with these patients and will be reviewing timeliness and patient satisfaction on an ongoing basis.

During 2016, we continued to grow our multidisciplinary Cancer Survivorship Clinic. We work closely with Health Psychology, Social Work, Physical Therapy, and Nutrition to insure that Patients have services in place to help them make life-style changes to help them stay healthy. Particular attention is paid to assisting patients with smoking cessation, adopting a healthy diet, maintaining a regular exercise routine and managing stress.

During 2013, we developed a template that is now used to create an individualized Cancer Survivor Treatment Summary and Care Plan for each patient seen in our Cancer Survivorship Clinic. Since then over 180 Treatment Summaries have been created and provided to patients and additional treatment summaries are created as new patients are seen in clinic. The completed Treatment Summaries become a permanent document in the electronic medical record and are provided in hard copy form to patients. This template has been well received by our patients and their families and provides an accurate, easy to locate, complete summary of the patient’s diagnosis and treatment for primary care providers and other caregivers within the VA System. It can also be a portable record

for patients to take with them if they change providers or move to a different VA. Ten other VA's across the U.S. have requested permission to use our template and we expect to roll the template out for use in other clinics at West Haven that take care of cancer patients.

I continue co-lead the monthly Oncology Nursing Journal Club which is a forum for ongoing education for nurses and other members of the interdisciplinary team. Participants include staff from Nursing, Health Psychology, Oncology Pharmacy and Social Work. We also have colleagues in Vermont and throughout VISN 1 who call in. Nurses who are members of the Oncology Nursing Society earn continuing education credits by completing a short post-test about the article discussed each month. The Journal Club and Survivorship Care Plan were favorably noted as best practices by the Surveyor during the Cancer Center's 2014 accreditation survey by the American College of Surgeons.

During the upcoming year we will be piloting a new webinar series on Cancer Care Coordination using the SCAN-ECHO format to provide a forum to share best practices with other VA's.

*Julie Beck, APRN-BC
Cancer Care Coordinator*

Case Management and Telehealth

The Case Management & Telehealth program is a proactive, integrated, collaborative case management model that utilizes an interdisciplinary team approach. The aim of the program is to provide proactive, high quality, timely care with a focus on health management. Telehealth modalities include Home Telehealth (HT), Clinical Store & Forward (CSF), and Clinical Video Telehealth (CVT). These services are available to improve access, provide timely interventions, and prevent unnecessary travel to the VA. Case managers are specially trained registered nurses and social workers that provide coordination of complex care needs for patients identified as high risk, high cost, or at high risk for decline.

The case manager is proactive in coordinating home and community based care services for skilled care needs including nursing, infusion therapy, medical social services; and physical, occupational and speech therapy; alternative care services including homemaking, home health aide, adult day care, and respite care; and palliative and hospice care. Care is communicated and coordinated with VA and non-VA providers, inpatient Patient Care Coordinators (PCC), Surgical Case Coordinators (SCC), Telehealth Care Coordinators (TCC) covering HT, and the interdisciplinary team to provide the right care, at the right time, in the right place, and at the right cost - each and every time.

Specialized case managers supporting the Cancer Program have training in using the Cancer Care Tracking System (CCTS). This web-based system allows for timely identification, tracking and monitoring of patients with abnormal radiology findings. The Case Management Society of America (CMSA) awarded VA Connecticut with the *CMSA Performance Improvement Award* for quality and performance improvement in cancer care coordination in 2012. VA Connecticut was recognized for 'innovation in the advancement of case management practice and improving timeliness of care by implementing specialized cancer care case management practice and a web based tool to improve patient safety and provider efficiency'. The Case Management & Telehealth team also received the *I-CARE* award for their contribution to timely, quality care in July 2013.

*Donna C. Vogel, MSN, CCM
Director, Case Management & Telehealth*

Chaplain Report

FY2016 Activity

- The Chaplains provide direct care/visitation to the in-patient population through routine visitations on the ward. As the circumstances/conditions change, the minimum 1x/wk. visits are increased to meet needs of the veteran and his/her significant others.
- The Chaplains provide a Ministry of Support and Presence to the Out-patient population – directly/personally, as called upon by the Veterans who come into our offices seeking our Services or in group activity such as the Cancer Survivor Day.
- Direct Chaplain Consultation/referrals are met within 24 hours, or less.
- As members of the Palliative Care Team, Palliative Care Consultation/referrals are met within 48 hours, or less.
- The Palliative Care Chaplain is a member of the Cancer Care Committee.
- The Palliative Care Chaplain is a member of the Cancer Survivor Day Committee.
- In addition to the .5 FTEE Chaplain assigned to the Palliative Care Team, our Service, when the Clinical Pastoral Program is in session (October-July), assigns Chaplain Interns to the various units who provide additional coverage to the Hospice/Palliative Care in-patients.

Chaplain Mission Statement

- To serve the emotional, spiritual and religious needs of all VACT's patients by providing professional Chaplaincy and notifying, with patient consent, local clergy and religious leaders when needed.
- Our department is committed to a Culture of Caring and committed to helping patients utilize their spirituality as part of the healing process.
- Our department works with all people without regard to spiritual belief and/or religious tradition.

Background in caring for Patients and their Loved Ones

For patients or a patient's loved one, a hospitalization may raise profound spiritual questions:

- *Who am I in the midst of illness?*
- *What is my responsibility for my own wellbeing?*
- *What does "healing" mean?*
- *Do I have a reason to go on living?*
- *Where is my Higher Power / God in all of this?*

The chaplains know that these questions are a normal, even necessary, part of moving through an illness. While we cannot give answers to these questions, we are prepared to provide accompaniment and guidance as individuals seek their own answers.

Spiritual Care Referral Hours:

Mon. – Fri., 7:30AM - 3:30 PM

Sat. & Sun, 8AM-4:30PM

How to Contact: Patients currently in the hospital may request to see a Chaplain by speaking with their nurse or simply call ext. **2414** (for family members outside the hospital: **1.203.932-5711**, ext. **2414**).

Off tour hours Emergency:

For **inpatient emergency** only, the chaplains are to be contacted via VACT page operators.

At your request, we will exert every *reasonable* effort to contact the specific clergy of your choice.

Sergei Bouteneff
Chief, Chaplaincy Service

Clinical Health Psychology

At VA Connecticut, the Clinical Health Psychology service (CHP) takes a holistic, person-centered approach in working with veterans with cancer and their families. Clinical Health Psychology is focused on helping veterans improve their health and well-being. The CHP service works with Veterans to improve their physical health by learning self-management and behavioral strategies; learn how to cope better with their illness, and develop new, healthy habits. We can work with veterans individually, with their families, and in groups.

CHP offers services to help with:

- Coping with emotional reactions to cancer including depression and anxiety
 - o Pain management
 - o Stress management
 - o Managing nausea and fatigue
 - o Improving sleep
 - o Sexual Dysfunction
- Developing healthy habits like quitting smoking or making healthy lifestyle changes like healthy eating and exercise
- Using behavioral strategies to help veterans manage other health concerns like: diabetes, hypertension, or chronic pain problems
- Providing support groups for veterans with cancer

The following are the specific services offered by CHP within the Comprehensive Cancer Center:

- Individual CHP Clinics – for individual intervention and assessment. Current clinic times are
 - o Tuesday afternoons from 1-4
 - o Wednesday mornings from 9-noon
 - o One additional Resident Clinic: day/time is TBA
- On the fly consultation and warm handoffs as availability allows.
- Living with Cancer Support Group
 - o Bi-Monthly – 1st and 3rd Tuesday from 11:30-12:30

The following are the services offered through the CHP service that take place outside of the CCC:

- CHP assessments in Health Psychology/Primary Care clinic for bone marrow and stem-cell transplants
 - o Friday mornings from 9-11AM in Firm B – by consult only
- Smoking Cessation Group
 - o Friday afternoons from 1-2 in T3W conference room, building 2 – by consult OR drop in
- MOVE-IT
 - o Mondays from 1-4PM in Firm A – by consult only
- MOVE Group
 - o Mondays from 10-11:30 in T3W day room – drop in

Goals for 2017 are:

- Continue to offer individual and group services and education in the Cancer Center and the Survivorship Center.
- Continue to collaborate with the Cancer Center team to further develop programs in the Survivorship center based on ongoing needs assessment with veterans and staff.
- Continue to collaborate with the Cancer Center team and Patient Education team to develop educational materials for the veterans with cancer.

*Jessica Barber PhD
Clinical Health Psychology*

Clinical Oncology Pharmacist

At VA Connecticut Healthcare System, the clinical oncology pharmacist provides chemotherapy education and symptom management care for patients receiving chemotherapy treatment. Together with our oncology nurse practitioner Clarice Humanick, APRN, we continue to review and update protocols in our electronic chemotherapy program Vista Chemotherapy Manager on a regular basis to assure that our templates are up to date and accurate. The oncology pharmacist and pharmacy resident are currently completing a multisite research protocol evaluating the utilization of oral targeted therapies among Veterans with stage IV or recurrent renal cell carcinoma and are in the process of establishing an oral chemotherapy adherence and monitoring clinic. The oncology pharmacist is a resource to the oncology multidisciplinary team, participates in monthly nursing journal club, attends multidisciplinary tumor board, and maintains board certification.

*John Szymanski, PharmD, BCOP
Clinical Oncology Pharmacist*

Clinical Research/Data Manager Report

The VA CT Cancer Center offers Veteran patients the opportunity to participate in clinical trials either at VA CT, or by referral to outside facilities if an appropriate trial is not available here. We are constantly searching for new trials for our Veterans and each study is evaluated to determine if our patients will possibly benefit from the trial, and be able to make the commitments required of them for study participation.

The VA CT Cancer Center and its physicians have participated as members of the National Cancer Institute's (NCI) Cooperative Group program since 2005, which allows access to a wide variety of studies which we may conduct at our institution. The NCI has been working with the VA at the national level to facilitate participation of more VA facilities in the National Clinical Trials Network. We are currently members of SWOG (Southwest Oncology Group, one of the NCI cooperative groups), and we have been active participants in SWOG-VA working group meetings with the goal of streamlining the process for VA facilities to become members of SWOG.

In 2015 we became the first VA facility to open a new clinical trial for lung cancer, SWOG study "S1400-Lung Master Protocol". We have enrolled ten patients at VA CT since the study opened and are currently the highest enrolling VA facility. Patients with a specific type of lung cancer are screened to determine if their tumor contains certain genetic mutations known to be related to lung cancer. Based on the results of the screening, they are assigned to a treatment group, which will use a "targeted" therapy, specific to the markers found in their tumor.

One of our research coordinators, Ms. Jessica Jordan, was recently selected as a member of the national S1400 Lung-MAP Study Coordinator's Committee and was named as chair of the committee. The goal of the committee is "to represent study site staff at the nursing, CRA, data management, and regulatory levels by providing feedback to and from the study leadership to enhance accrual and improve study management". Ms. Jordan brings experience and perspective to the committee as the coordinator for a VA facility, as well as a site that has a high patient accrual.

The latest addition to our list of prostate cancer studies is a trial being conducted in conjunction with several other VA medical centers. The aim of the study, known as "P-Prove: Prospective Prolaris Value and Efficacy", is to determine whether the addition of genomic testing of prostate biopsy

tissue, using the Prolaris® test, will provide results that impact treatment decisions made by prostate cancer patients and their providers. The study will evaluate the impact of genomic test results towards selecting a first-line therapy option for newly diagnosed localized prostate cancer patients. The study also aims to determine the prognostic utility of prospective Prolaris® testing of prostate biopsy samples to predict biochemical and objective disease progression in men treated with definitive surgery or radiation therapy with curative intent.

Current Research Activities

Clinical Trials

Prostate Cancer

- “A Randomized Phase III Study of Neo-Adjuvant Docetaxel and Androgen Deprivation Prior to Radical Prostatectomy versus Immediate Radical Prostatectomy in Patients with High-Risk, Clinically Localized Prostate Cancer (CALGB 90203)” (P.I.: Preston Sprenkle, M.D.)
- “The Men’s Eating and Living (MEAL) Study: A Randomized Trial of Diet to Alter Disease Progression in Prostate Cancer Patients on Active Surveillance” (CALGB 70807) (P.I.: Preston Sprenkle, MD)
- A Two-Part Prospective Study to Measure the Impact of Adding Genomic Testing (Prolaris®) on the Treatment Decision Following Biopsy in Newly Diagnosed Prostate Cancer Patients with Long Term Follow-up Post- Treatment to Measure the Prediction of Progression/Recurrence in Men Treated in the Veterans Administration Medical Center (VAMC) (P.I.: Preston Sprenkle, MD)
- “Phase III Trial of Enzalutamide (NSC#766085) Versus Enzalutamide, Abiraterone and Prednisone for Castration Resistant Metastatic Prostate Cancer” (A031201) (P.I.: Herta Chao, M.D., Ph.D.)
- “Imaging the Effects of Androgen Deprivation Therapy on Cognitive Functions in Patients with Non-Metastatic Prostate Cancer” (P.I.: Herta Chao, M.D., Ph.D.)
- Androgen Deprivation Therapy (ADT) and brain dysfunction in prostate cancer: the effects of age and neural plasticity (PI: Herta Chao, M.D., Ph.D.)

Lung Cancer

- “S1400: Phase II/III Biomarker-Driven Master Protocol for Second Line Treatment of Squamous Cell Lung Cancer (Lung-MAP Sub-Study)” (P.I.: Herta Chao, M.D., Ph.D.)
- PROTOCOL CA209-370: A Master Protocol of Phase 1/2 Studies of Nivolumab in Advanced NSCLC Using Nivolumab as Maintenance after Induction Chemotherapy or as First-line Treatment Alone or in Combination with Standard of Care Therapies (SUSTAIN) (PI: Herta Chao, M.D., Ph.D.)

Pancreas Cancer

- “Phase II Study of Modified FOLFIRINOX in Advanced Pancreatic Cancer” (P.I.: Jia Li, M.D., Ph.D.)

- **S1505**, "A Randomized Phase II Study of Perioperative mFOLFIRINOX versus Gemcitabine/nab-Paclitaxel as Therapy for Resectable Pancreatic Adenocarcinoma" (P.I.: Michal Rose, M.D)

Leukemia/Lymphoma

- "A Randomized Phase III Study of Bendamustine plus Rituximab versus Ibrutinib plus Rituximab versus Ibrutinib Alone in Untreated Older Patients (≥ 65 Years of Age) With Chronic Lymphocytic Leukemia (CLL)" (A041202) (P.I.: Ellice Wong, M.D.)

GI

- "A Double Blind Placebo-Controlled Trial of Eflornithine and Sulindac to Prevent Recurrence of High Risk Adenomas and Second Primary Colorectal Cancers in Patients with Stage 0-III Colon or Rectal Cancer, Phase III –Preventing Adenomas of the Colon with Eflornithine and Sulindac (PACES)" (P.I.: Michal Rose, M.D.)
- "Prospective Pilot study on role of Con-focal endoscopy in diagnosis of pre-malignant and malignant conditions of the GI tract" (P.I.: Anil Nagar, MD)

Health Outcomes

- "Electronic Hematology Consultations at VACT: Analysis of Effects on Patient Care, and Provider and Patient Satisfaction" (P.I.: Michal Rose, M.D.)
- "Incidence of Peripheral Neuropathy and/or Cognitive Dysfunction in Patients Receiving Mood Stabilizing Medications and Microtubule Dependent Chemotherapeutics" (P.I.: Herta Chao, M.D., Ph.D.)
- "Role of Virtual Colonoscopy in Colorectal Cancer Screening" (P.I.: Caroline Taylor, M.D.)
- "Colonoscopy for CRC screening: Role of inadequate prep of colon in colon polyp detection rates." (P.I. Anil Nagar, M.D.)
- "Incidental Positive PET scans in the GI tract." (P.I. Anil Nagar, M.D.)

Molecular biomarkers

- "Functional and Molecular Correlates of Myelodysplasia" (P.I.: Ellice Wong, M.D.)
- Randomized, placebo-controlled, double-blind phase II/III trial of oral isoquercetin to prevent venous thromboembolic events in cancer patients (CAT-IQ) (PI: Ellice Wong, M.D.)

*Monica Delvy
Clinical Research/Data Manager*

Diagnostic Imaging Report 2016

The Diagnostic Imaging Service of VACT offers comprehensive imaging services including general

radiology, CT (2 320 slice multidetector scanners suitable for advanced cardiac and vascular applications, perfusion imaging, with the latest software which will enables state of the art imaging with optimal radiation dose reduction in both scanners. We offer body and neuroMR (we have 2 scanners, 1.5T and 3T field strength) and state-of-the-art ultrasound and angiography equipment.

We offer fine needle aspirations of accessible lesions of lung, visceral organs, retroperitoneum, head and neck and spine and offer radiofrequency ablation of tumors, including liver, lung and kidney, and have instituted a new program offering chemoembolization of liver tumors. We also are able to perform cryoablation procedures, used mainly in treatment of kidney tumors. Diagnostic and interventional angiography includes peripheral vascular, carotid, aortic and other stent procedures. We offer CT of the coronary arteries, CT arteriography, CT urography and cystography, virtual colonography (we have participated in an ACRIN trial in addition to performing studies on patients who are unable to undergo a completed endoscopy). In addition to offering “completion virtual colonography” to patients on the same day as an incomplete optical colonography, virtual colonography can also be offered as a screening alternative in patients who have relative contraindications to optical colonography, such as those at high risk of complications from sedation, or requiring anticoagulation therapy which should not be discontinued.

We are involved in a screening program of patients with hepatitis C and cirrhosis.

Mammography is referred off site, with incorporation of reports into the electronic medical record, and patients needing subsequent procedures such as ultrasound and MRI/biopsy are also referred for care to external MQSAP qualified programs.

We have implemented NCCN guidelines recommending low dose CT lung cancer screening to high risk patients who are heavy smokers or ex-smokers, in collaboration with Primary Care, who in May 2013 deployed a new clinical reminder developed in association with the IT service, with multidisciplinary cancer management of confirmed cases, and increased focus on smoking cessation for enrollees, as appropriate. We are screening up to 400 patients per month.

Urologic imaging is offered with fluoroscopy, CT and MRI with CT urography used as the initial step in evaluation of patients with hematuria. Multiphase CT urography studies can assist in demonstrating renal, ureteral and bladder lesions. Multiphase CT and MRI are helpful in characterization of renal masses. MRI imaging of the prostate with segmentation has been introduced in the past year to assist urologists in perfuming image guided prostate biopsy, deploying fusion software.

The service can offer advanced image guided pain management procedures, such as deep nerve blocks and vertebral kyphoplasty for compression fractures.

Newington campus offers general radiography, DEXA scanner, and ultrasound services available on site.

We offer nuclear medicine diagnostic services in general nuclear medicine and cardiac nuclear medicine (in association with the Cardiology Section), and therapeutic procedures. We have a PET-CT scanner and a SPECT CT scanner, suitable to dedicated oncologic imaging. We have increased our capacity in this area so essential in cancer care, in addition to offering functional cardiac evaluations through the Department of Cardiology, and neuroPET in evaluation of dementia. We have the capability to deploy radiation planning software integrated with the PET-CT images. Fusion software facilitates reading our PET scans integrated with CT scans and providing these images on

the PAC's workstation. We offer targeted therapy with Ibritumomab Tiuxetan, which is a radiotherapeutic antibody administered for the treatment of patients with relapsed or refractory low grade lymphoma and previously untreated follicular lymphoma who achieve a partial or complete response to first – line chemotherapy. We also offer radioiodine therapy with Iodine 131 and follow up imaging for patients with thyroid cancer, and therapy for refractory painful bone metastasis with Samarium 153. In addition we offer therapy with radium 223 dichloride for patients with castration-resistant prostate cancer (CRPC) with symptomatic bone metastases and no known visceral metastatic disease. All our studies, including nuclear medicine, are available on the PACs network and web servers available to the clinicians.

Our radiologists include specialists available on a daily basis to consult on neuroradiology, general radiology, and cross-sectional and interventional procedures. We participate in the general, head and neck, pulmonary and liver tumor board conferences and multispecialty conferences such as GI, urology on a weekly basis. We train residents in Diagnostic Radiology, Nuclear Medicine (Diagnosis and Therapy), and Interventional Radiology.

We have offered TACE (transarterial chemoembolization) for patients with liver cancer since September 2009.

We welcome referrals from other VA medical centers for the above procedures.

*Caroline Taylor, MD
Chief, Radiology*

Nutrition/Dietary Report

Nutrition services are offered to cancer patients during each phase of their cancer care. Provided by a registered dietitian, nutrition care is available in the Oncology Nutrition Clinic, the Outpatient Nutrition Clinic and on every inpatient unit. In each setting, the dietitian completes a nutrition assessment, determines each patient's nutrition status, plans nutrition interventions that address nutrition-related problems, provides education and monitors patients to determine efficacy of intervention, attainment of goals and changes in nutrition status. Each patient's diet is individualized to meet therapeutic needs for specific cancer diagnoses as well and other pertinent diagnoses such as diabetes, renal disease, heart disease, gastrointestinal disorders, liver disease, and chewing/swallowing disorders. The dietitian provides recommendations to enhance oral intake and reviews overall healthy eating before, during and after cancer treatment.

A variety of interventions are utilized to meet nutrition goals for inpatients. These include adjusting diets to accommodate patient tolerances and preferences, adding between-meal snacks, nutrient dense foods and enteral supplements. For patients who are unable to meet nutrient needs with oral intake, alternate sources of alimentation, such as enteral tube feedings or parenteral nutrition therapy, may be used. Upon discharge, patients can be referred to the oncology nutrition clinic or outpatient nutrition clinic for follow-up.

In the outpatient setting, patients are followed to determine the attainment of mutually agreed-upon goals and changes in nutrition status. A variety of interventions can be planned, including enteral tube feedings that may or may not be the sole source of nutrition. The outpatient dietitians work with patients receiving enteral tube feedings to determine the administration method (bolus, gravity drip, continuous or combined feeds) that best fits their lifestyle and develop a schedule to meet their nutrient needs and minimize intolerance and complications. In addition to individual sessions, the dietitian participates in a support group for patients with cancer.

The nutrition care of cancer patients is met with a spectrum of available nutrition services in order to optimize nutrition status and quality of life.

In July 2016, Stephanie Calhoun RD joined the staff in the Comprehensive Cancer Center as our clinical dietitian.

*Nancy Hessler MS, RD, CD-N
Clinical Coordinator*

Oncology Education and Support

Oncology education for patients and nurses continues to be an important part of my role here at VACT. I continue to work on developing nursing policies and procedures to guide inpatient and outpatient oncology patient care, using guidelines by the Oncology Nursing Society (ONS) and other established organizations. Together with our clinical pharmacist I conduct annual chemotherapy proficiencies for our chemotherapy nurses. I continue to review new protocols that are uploaded into Vista Chemotherapy Manager (VCM), which is our electronic chemotherapy ordering program. I continue to be a resource to the chemotherapy nurses and ancillary staff regarding all issues of chemotherapy administration, clinic schedule and coordination of complex patient care. I am involved in the monthly Journal club and give 5 talks per year to cancer center staff, as well as ancillary staff at VACT.

I continue to be member of the VHA ONS Oncology Field Advisory Committee. We have completed the national LMS project to help nurses and nurse managers understand chemotherapy competencies. We have completed a handbook in LMS titled, "Core Competencies in the Administration of Chemotherapy and Biotherapy." I have also worked on oncology standard operating procedures, cancer survivorship toolkits, cancer coordination, which are all Clinical Practice Program (CPP) products and under the Office of Nursing Services.

I have completed the allotransplant and autotransplants templates, which are useable for direct patient care. These are to be used as tools to care for patients who have undergone a stem cell transplant at one of our national centers. These templates include pre/post-transplant history, conditioning regimen, graft vs. host disease history, and necessary labs and medications per specific transplant and immunization schedule. The majority of our patients undergo their transplants (both allogeneic and autologous) at the Nashville TN VA.

I am certified as a Psychiatric Mental Health Nurse Practitioner (PMHNP). I also remain board certified as a Family Nurse Practitioner (FNP). I continue to participate in educational conferences both for oncology and psychiatry. I continue to be the liaison between Coram, the outside agency with whom we contract to deliver continuous chemotherapy infusions for our Veterans, and the VA, and this process functions seamlessly. I continue to be certified in oncology by the Oncology Nursing Society (ONS) and have a chemotherapy and biotherapy card, which is also issued through ONS every two years, which was renewed this month. I continue to participate in our local oncology chapter and participate in outside activities to support oncology, which include breast cancer survivorship walk, sponsored by the American Cancer Society.

Goals and Objectives for 2017:

1. Continue to troubleshoot and improve VCM while working with the company closely.

2. Expand the role of psycho-oncology in our clinics. Psycho-oncology is one of the most clearly defined sub-specialties of consultation-liaison psychiatry, and is an example of the value of a broad multidisciplinary application of the behavioral and social sciences.
3. Expand my knowledge on end-of-life care.
4. Bring global oncology education to the nursing staff, here at the VA, using simulation to provide oncology education and to assess competency.

*Clarice Humanick, MSN, AOCN, FMP
Oncology Education & Support*

Palliative Care/Hospice

VA Connecticut continues to offer Hospice & Palliative Care services in a variety of different capacities in the outpatient, inpatient and home setting. Sparked by the initiation of the VACT Hospice and Palliative Care Task Force in 2003, there has been a sustained effort to improve and expand the delivery of hospice/palliative care services throughout VA Connecticut consistent with VHA National goals and directives to achieve excellence in hospice & palliative care. The goal of VA Connecticut for palliative care continues to be the prevention and/or alleviation of suffering while promoting dignity and providing support for the best possible quality of life for both Veterans and their families, regardless of the disease or the need for other therapies. Palliative care is operationalized by a multidisciplinary team through effective management of pain and other distressing physical symptoms, while incorporating psychological, social and spiritual care according to the Veteran/family needs, preferences, values, beliefs and culture. The following resources are available to meet the needs of Veterans with life-limiting illnesses including: Palliative Care Consultation Team (PCCT), the Hospice Veteran Partnership (HVP) of Connecticut, Comprehensive Pain Management Team, inpatient hospice and respite programs on the Community Living Center (CLC), chaplain services, care coordination/case management services, social work, patient care coordinators, recreational and creative arts therapists, nutrition and pharmaceutical services, psychotherapy, rehabilitation therapy (PT, KT and OT), and Home Based Primary Care (HBPC) to bridge to home hospice and community hospice services.

Both VISN 1 and VACT continue to have strong involvement in the journey towards excellence in end of life care for our Veterans. In regards to palliative care consults, VISN 1 went from 350 palliative care consults in FY 2005 to 1788 palliative care consults in FY 2016. The VACT Palliative Care Consult Team continues to show remarkable growth. The team went from 29 consults in FY05 to 518 in FY16. In addition, in FY05 only 18% of the patients received a palliative care consult prior to death; while 82% of the inpatient deaths in FY16 had received a palliative care consult. Most veterans are followed longitudinally with the time frame from consultation to death moving earlier in the Veteran's disease course. This is most notable in the oncology service where a large proportion of Veterans with a cancer diagnosis are followed for greater than a year prior to their death. Even though the consults continue to grow, the team strongly feels that only a small percentage of Veterans that are eligible and in need of these services are currently being followed. It is anticipated that with ongoing expansion of dedicated Palliative Care Consultation Team staffing, this number will only continue to rise. Another positive trend that is happening at VACT is the number of deaths in the ICU or acute care settings is decreasing and conversely, the number of patients on the CLC in hospice & palliative care treating specialty designation are increasing. The palliative care team serves Veterans in all inpatient venues as well as the outpatient oncology clinic, ALS multidisciplinary clinic and a once weekly outpatient clinic to render consultation to Veterans without an oncologic diagnosis. Over the latter half of FY16, palliative care has expanded into the liver clinic and is present for one half day clinic session per week. Outpatient availability also is offered as needed in co-management in the CHF/cardiology and pulmonary clinics. As a result of

these efforts, patients are now being identified earlier in their disease process, which means the team is often able to significantly improve distressing symptoms that leads to improved quality of life. The PCCT team also has representation at the pulmonary/ENT tumor board & now liver tumor board in a continued effort to try to identify patients who may be in need of services. The PCCT established a family meeting template for use in all inpatient venues, and have been working cooperatively with our MICU staff with a goal of improvement in timeliness of family meetings in critical illness. In FY14, the No Veteran Dies Alone hospice volunteer program was successfully rolled out on the Community Living Center. This year, our palliative care team was selected by the Birmingham VA to participate in the BEACON research study which allowed two team participants to undergo intensive two day training, with an endpoint goal of facilitation of a hospital wide comfort care order set.

During the past few years, the CLC continues on their cultural transformation journey in an effort to enhance quality of life, preserve dignity and promote personal choice of Veterans. Since this project was undertaken, all of the patient rooms and hallways were painted brighter colors, ambient lighting was added to a corridor of rooms, seasonal landscape pictures have been purchased, and individualized DVD and CD players are available for use. Chairs that convert to twin beds were added to each room in the palliative care wing to allow more comfortable accommodations to families who choose to remain here overnight with their loved ones. A new family education and bereavement room was constructed and furnished. Comfort carts have been added to provide coffee/tea and non-perishable snacks to family members. To provide comprehensive palliative and end of life care, there is an increased emphasis on non-medical modalities for relief of suffering. This has included increases in available music therapy and physical/occupational therapy. In addition, given the larger volume of hospice/palliative care patients that are being admitted to the CLC, it was felt that more formalized hospice training for the staff was necessary. Web-based educational modalities are being used to facilitate palliative & hospice education to all members of the clinical and nursing staff. Because of increasing awareness of professional caregiver fatigue notably on the Community Living Center where Veterans receiving hospice care are located, a grant for Compassion Fatigue for CLC staff in FY15 allowed for specialized training to alleviate the emotional burden of caring for this unique patient population.

Bereavement support continues to be an important aspect of follow up care not only for the family members of the deceased Veterans but also to the staff that have cared for these individuals. The hospice and palliative care service has developed a number of different programs to assist with this aspect of care. Since 2007, this program has been providing an interfaith memorial service that memorializes Veterans who have died in the following programs: Community Living Center, Home Based Primary Care, Oncology service, OEF/OIF/Operation New Dawn, ALS/SCI and the hemodialysis unit. Originally the services were held twice a year but given the large percentage of deaths, the services now occur quarterly. Starting in FY15, all Veterans who die in the inpatient setting at VACT, irrespective of whether they have been served by Palliative Care Consultation Team (PCCT), have been included. The PCCT, Community Living Center, Home Based Primary Care (HBPC), & SCI/ALS programs are also included in the bereavement letter support program for families of the deceased. Specialized letters addressing various aspects of grief and bereavement is sent to participating family members at specified time intervals to help provide education and support. This has been expanded through the Caregiver Support program to include all Veterans who die at VACT. Families are also provided with information on community bereavement programs. A specialized memorial corner where deceased patients can be memorialized by family and staff has been created in an alcove on the Community Living Center. There is also a monthly staff support group led by social work and chaplaincy to help decrease the high level of caregiver burden that can be associated with serving this population.

On January 30, 2006, a steering meeting to launch the Hospice Veteran Partnership (HVP) of Connecticut was held at the Connecticut Hospital Association in Wallingford. The event was sponsored by the VA Connecticut Healthcare System, the Connecticut Council for Hospice and Palliative Care and Rocky Hill. The HVP of Connecticut is a coalition of individuals and organizations whose mission is to establish an enduring network of hospice and VA professionals, volunteers, and other interested organizations working together to provide quality services through the end of life for all of our state Veterans and their families. Connecticut is one of many states that have organized Partnerships and are a part of the national network of Hospice Veteran Partnerships. The Partnerships are an important part of the initiative by the Department of Veteran Affairs and the Veteran Health Administration that has made high quality end-of-life care a priority. The HVP of Connecticut has provided several educational conferences to date as well as various conferences throughout the state that deal with specialized issues such as PTSD and end of life. The HVP has received several grants; one from the National Hospice and Palliative Care Organization for \$25,000 and two VA Rural Health Grants (one for \$57,000 and one for \$61,000) to develop a specialized curriculum for training Veterans to become hospice volunteers to other Veterans in rural areas.

*Linda Accordino APRN
Manager, Geriatrics & Extended Care*

Patient/Family Education

Education programs and support groups are offered to Veterans and their families at the VACHS. Veteran/family education programs are based on patient preferences/needs and may include:

- Discussions with health care disciplines with regard to patient education needs, community resources.
- Health maintenance/screening and cancer related materials that patients and families may view at the medical center or at home.
- Closed Circuit Television. Examples of the films available include pain control, coping with cancer, and cancer care. A video lending library is available for patients who prefer to view films at home. Cancer related programs: C.A.R.E Channel (34 and 35) Patient Health Channel (36): Preventing Colon Cancer, Living with Prostate Cancer, Lung Cancer: Improving Survival, Advanced Directives: Making Family Decisions, many chronic disease management as well as wellness/prevention programs. 24/7.
- <http://www.thepatientchannelnow.com/> access code 05660 for patients to view educational videos relating to cancer(s) and cancer fatigue on demand.
- C.A.R.E.Channel – provides a continuous relaxing environment for patients/families.
- Structured classes are available that are geared to pain control, nutrition, prevention and exercise.
- Patient/Family Education Learning Center which offers a section specific to cancer related subjects and an area to view cancer related videos.

- Use of Clinical Video Telehealth (CVT) to offer education programs to wider audience at VACHS and VISN locations.
- Patient Newsletter – includes health topics on cancer screening, prevention.

Prevention and cancer education related programs:

Colonoscopy pre-screening education program - offered weekly with five-one hour sessions. Advanced directives are obtained at the sessions. A new colonoscopy preparation video developed by endo team will be used in the education sessions, very informative.

Amputee Education/Support Group – Support group meets weekly, once a month education session is provided with topics including smoking cessation, cancer screening, and sessions covering prostate cancer, breast cancer in men, lung cancer, and skin cancer prevention.

Patient Newsletter: Focus on Cancer Prevention topics on different months. Display for cancer prevention at the Patient Learning Center, room 1-300 offered x 2 in 2016.

Health Promotion, Disease Prevention (HPDP): 9-core healthy living messages delivered to patients/staff including tobacco cessation, eating wisely, physical activity, screening procedures. Monthly education sessions focusing on the core elements of healthy living, stress management, coping, relaxation techniques.

Veteran Pain Education Program (V-PEP) – offered weekly, CVT to Newington, Contact Dana Cervone, APRN.

Caregiver Support Group – every other week, contact Dana Savo, RN

Prostate Cancer Support Group – 1st Thursday in West Haven at 9:30am and 2pm, and 3rd Thursday in Newington at 10:00am and 2:00pm.

October is Breast Cancer Awareness month. October 21, 2015 “Pink Out” wear PINK to work for breast cancer awareness. Breast self-exams taught in the learning center 10/21/2015 from 11:00-1:00. Breast cancer display on the learning center table 10/21/2015. 35 veterans and family members stopped by. Plan to repeat on October 20, 2016. Giveaways, breast cancer self-exam education, and educational handouts available at the learning center.

Community Outreach:

Healthy Living Fair 4/27/2016 –Display tables showcasing access to health promotion/disease prevention resources such as veterans’ health library, myhealthvet, telehealth, employee health, blood pressure screening, diabetes screening, and cancer screening education. Open to VA employees and patients, 95 employees and 24 patients attended, total 119, down from last year 127.

1st annual Errera Center health fair 10/7/2016 – at the Errera Center in Orange, CT. 80 veterans attended and received health promotion, disease prevention education on mental health, substance abuse, smoking cessation, blood pressure and diabetes screening, mental health support, healthy living messages, and much more. Flu shots were available, condoms were available, many handouts.

Cancer Survivor Day – 11th annual celebration - – Follow the yellow brick road to Survivorship – 6/3/2016 was a great celebration. 126 people attended the event, 72 cancer survivors. Channel

8 news coverage of the event featuring our own Dr. Rose! Great guest speakers, educational materials, raffle prizes, music, refreshments and lunch provided for our veterans.

Goals for 2017:

- Increase attendance to cancer related education programs
- Continued collaboration with American Cancer Society, Leukemia and Lymphoma Society
- Plan annual Cancer Survivor Day, June 2, 2017 (12th Annual)
- Plan Healthy Living Fair, April 19, 2017
- Planning patient education programs based on Veteran/family need.
- Use of Clinical Video Teleconferencing to provide prevention/health promotion programs to reach wider audience in CBOCs
- Plan staff cancer education program September 14, 2017, focus to be determined
- Continue with community outreach programs

*Karen DiDomenico, BSN, RN
Veteran and Family Education Coordinator
Health Promotion/Disease Prevention Manager*

Pathology and Laboratory Medicine Report

The pathologists review tissue and fluid samples from inpatients and outpatients. The pathologist will contact the clinicians in all cases of new malignancies or in other cases of unexpected findings of immediate clinical significance. The final report describes the type of cancer, its size, grade and extent. If appropriate, the cancer is staged using the American Joint Committee on Cancer staging. If the tumor is rare the case may be sent for expert consultation, usually to Yale-New Haven Hospital or to the Joint Pathology Center, a Federal reference laboratory. Modern anatomic pathology requires selection among a variety of techniques to characterize tumors, including immunohistochemistry, flow cytometry, and molecular diagnostics. While these techniques are largely performed outside of VACT, overall interpretation and integration of the reports is still the responsibility the local pathologist. The pathologists present cancer cases at tumor board conferences. Dr. Homer, the Director of Anatomic Pathology, is an active participant of the Cancer Committee. Our staff includes Dr. Rebecca Baldassarri, who completed the Yale cytology fellowship and has experience in general surgical pathology. She has expertise in molecular aspects of thyroid cancer, Dr. Alexa Siddon, an expert in hematopathology, Dr. Susan Fernandez, an expert in cytology, including performance of fine needle aspirates, Dr. Robert Homer, with 20 years' experience at the VA and with expertise in lung and general surgical pathology, Dr. Susan Gobel, with expertise in cytology, GI and GU pathology and Dr. Richard Torres, an expert in hematopathology. Drs. Homer, Siddon, Baldassarri, Fernandez and Torres all practice at Yale as well as at the VA.

*Robert Homer, MD, PhD
Director of Anatomic Pathology, Pathology and Laboratory Medicine Service*

Physical Medicine and Rehabilitation

Cancer is a category of disease that may lead to changes in physical functioning and ability to manage activities of daily living (ADLs). Rehabilitation professionals, including Physical Therapists, Occupational Therapists, and Kinesiotherapists, are able to assist Veterans affected by cancer, to help them maximize independence and quality of life within their medical status. The goal of Cancer Rehabilitation is to help patients and survivors restore, improve and maintain physical,

psychological and vocational function that has been impacted by their illness and by cancer therapies.

Physical and Occupational Therapy services available include:

- Pain Management: modalities including moist heat, cold therapy, TENS (Transcutaneous Electrical Nerve Stimulation), and ultrasound treatments.
- Equipment provision and training to facilitate safe visits or discharge to home.
- Fall Prevention assessment and treatment to improve safety with transfers and ambulation.
- Education for patients and families in safe and proper use of assistive devices and adaptive ADL equipment to facilitate and encourage increased patient independence.
- Lymphedema assessment, treatment and patient/family training in techniques for bandaging and lymph massage.
- Home Exercise Program designed to maintain and improve range of motion, strength and general endurance.
- Recommendations for continued rehabilitation service needs after discharge home, such as home PT or OT, or modifications to the home to accommodate change in level of mobility.

Rehabilitation Services are available to both inpatients and outpatients. Providers may send consults to Physical Therapy Oncology or Occupational Therapy Oncology Clinics for outpatient evaluations or to Physical Therapy inpatient or Occupational Therapy inpatient for veterans on acute or palliative care services. We can also be reached at 203-932-5711 x 7250 or 2509.

*Mary Dallas, PhD, PT
Laurie Wingard PT, GCS
Physical Medicine and Rehabilitation*

Radiation Oncology

When VA cancer patients require radiation therapy they are referred to the Yale-New Haven Hospital. Radiation Oncologists from the Yale School of Medicine, Department of Therapeutic Radiology are actively involved in the VACT multidisciplinary tumor board. All new consults are seen within 5 days. The Department of Therapeutic Radiology provides a wide range of specialized radiation techniques including the intensity modulated radiation therapy (IMRT), image-guided radiation therapy (IGRT), gamma-knife radiosurgery for intracranial tumors, linac-based stereotactic body radiosurgery (SBRT) for tumors of the lungs, liver and spine, and brachytherapy. The department is actively involved in research protocols offered both by cooperative groups and Yale University investigators. An attending physician and a resident from radiation oncology participate in tumor board and work closely with VA physicians to coordinate care.

*Kimberly Johung MD
Radiation Oncology*

Social Work Services

Social Work began working full time in the Cancer Center in July of 2016. This allows for more Veterans in the Cancer Center who are actively receiving treatment to be seen for assistance with various psychosocial needs. Social Work also follows many Veterans post treatment for continuity of care. Oncology Social Work consults continues to increase.

Social Work will continue to assist with Pet Therapy; Social Work continues to facilitate the Support Group for the Caregivers of Veterans Living with Cancer.

Social Work will continue to be available and offer comprehensive psychosocial evaluation and case management services in the Cancer Center.

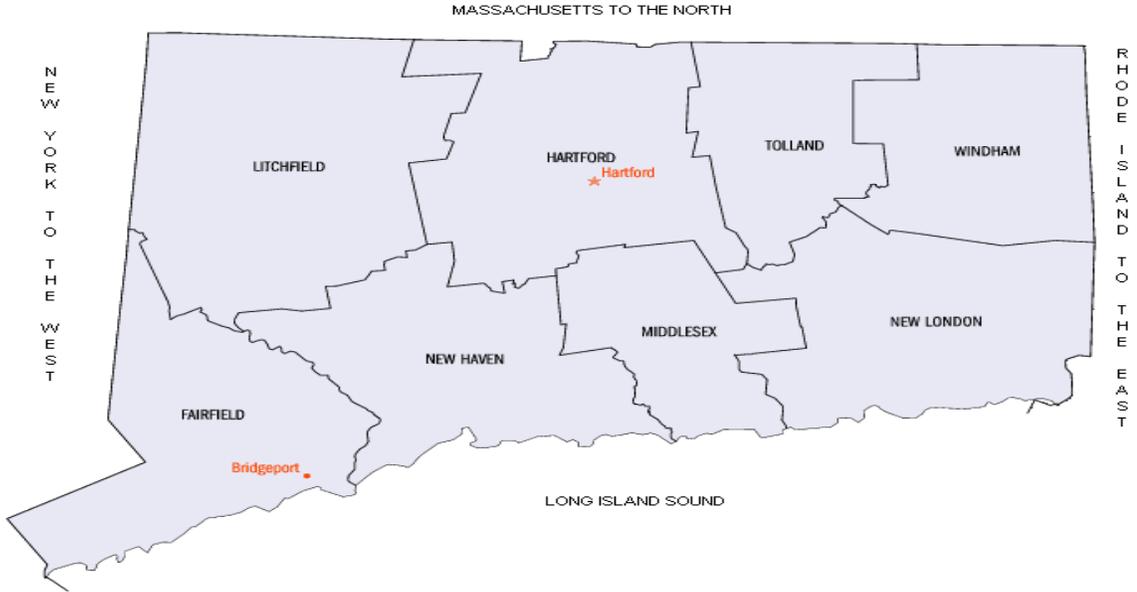
*Donna Doris, LCSW
Social Work*

PRIMARY SITE TABLE

| SITE: | TOT# | ANAL | NON | M | F | 0 | I | II | III | IV | U | NA |
|-------------------------------|------------|------------|-----------|------------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|
| TONGUE, BASE | 2 | 2 | | 2 | | | | | 1 | 1 | | |
| TONGUE, OTHER/NOS | 2 | 2 | | 2 | | 1 | | | | | 1 | |
| FLOOR OF MOUTH | 2 | 2 | | 2 | | | | 1 | | 1 | | |
| PALATE | 1 | 1 | | 1 | | 1 | | | | | | |
| PAROTID GLAND | 1 | 1 | | 1 | | | | | 1 | | | |
| TONSIL | 4 | 4 | | 4 | | | | 1 | | 3 | | |
| OROPHARYNX | 2 | 2 | | 2 | | | | | | 2 | | |
| NASOPHARYNX | 1 | 1 | | 1 | | | | 1 | | | | |
| PYRIFORM SINUS | 1 | 1 | | 1 | | | | | | 1 | | |
| SUBTOTAL | 16 | 16 | 0 | 16 | | 2 | 0 | 3 | 2 | 8 | 1 | 0 |
| ESOPHAGUS | 13 | 13 | | 13 | | 1 | 1 | 1 | 2 | 8 | | |
| STOMACH | 11 | 11 | | 11 | | | 3 | 4 | 3 | 1 | | |
| SMALL INTESTINE | 2 | 1 | 1 | 2 | | | 1 | | | 1 | | |
| COLON | 24 | 24 | | 24 | | 4 | 9 | 2 | 4 | 3 | 2 | |
| RECTOSIGMOID JUNCTION | 1 | 1 | | 1 | | 1 | | | | | | |
| RECTUM | 5 | 5 | | 5 | | | 4 | | | | | 1 |
| ANUS/ANAL CANAL | 2 | 2 | | 2 | | | 1 | | 1 | | | |
| LIVER/INTRAHEPATIC BIL | 40 | 38 | 2 | 37 | 3 | | 19 | 8 | 7 | 6 | | |
| BILARY TRACT - OTHER/N | 2 | 2 | | 2 | | | | | 1 | | 1 | |
| PANCREAS | 11 | 11 | | 11 | | | | 2 | 1 | 7 | 1 | |
| SUBTOTAL | 111 | 108 | 3 | 108 | 3 | 6 | 38 | 17 | 19 | 26 | 4 | 1 |
| NASAL CAV,MIDDLE EAR | 1 | 1 | | 1 | | | | | | 1 | | |
| LARYNX | 10 | 10 | | 10 | | 1 | 3 | 3 | 1 | 2 | | |
| LUNG/BRONCHUS | 125 | 121 | 4 | 123 | 2 | | 63 | 10 | 22 | 30 | | |
| THYMUS | 1 | 1 | | 1 | | | | | | | | 1 |
| HEART/MEDIASTINUM/PLEU | 1 | 1 | | 1 | | | | | 1 | | | |
| SUBTOTAL | 138 | 134 | 4 | 136 | 2 | 1 | 66 | 13 | 24 | 33 | 0 | 1 |
| BONES/JOINTS/ARTICULAR | 1 | 1 | | 1 | | | | | | | | 1 |
| SUBTOTAL | 1 | 1 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| HEMATOPOIETIC/RETICULO | 46 | 44 | 2 | 46 | | | 1 | | | 1 | 5 | 39 |
| SUBTOTAL | 46 | 44 | 2 | 46 | | 0 | 1 | 0 | 0 | 1 | 5 | 39 |
| SKIN | 44 | 31 | 13 | 44 | | 24 | 10 | 2 | 1 | 3 | 4 | |
| SUBTOTAL | 44 | 31 | 13 | 44 | | 24 | 10 | 2 | 1 | 3 | 4 | 0 |
| CONNECTIVE/SUBCUTANEOU | 2 | 2 | | 2 | | | 1 | | | | 1 | |
| SUBTOTAL | 2 | 2 | 0 | 2 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| BREAST | 4 | 2 | 2 | | 4 | 1 | 2 | 1 | | | | |
| SUBTOTAL | 4 | 2 | 2 | | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| CERVIX UTERI | 1 | 1 | | | 1 | | | | | | 1 | |
| SUBTOTAL | 1 | 1 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| PROSTATE GLAND | 168 | 164 | 4 | 168 | | | 48 | 93 | 13 | 10 | 4 | |
| TESTIS | 3 | 3 | | 3 | | | 1 | 1 | | | 1 | |
| SUBTOTAL | 171 | 167 | 4 | 171 | | 0 | 49 | 94 | 13 | 10 | 5 | 0 |
| KIDNEY | 19 | 19 | | 19 | | | 13 | 1 | 2 | 3 | | |
| RENAL PELVIS | 5 | 5 | | 5 | | 1 | 2 | | 2 | | | |
| URETER | 3 | 3 | | 3 | | 2 | 1 | | | | | |
| BLADDER | 57 | 56 | 1 | 57 | | 29 | 17 | 4 | 2 | 4 | 1 | |
| SUBTOTAL | 84 | 83 | 1 | 84 | | 32 | 33 | 5 | 6 | 7 | 1 | 0 |
| EYE/ADNEXA | 3 | 3 | | 3 | | | | | | | | 3 |
| BRAIN | 6 | 5 | 1 | 6 | | | | | | | | 6 |
| SUBTOTAL | 9 | 8 | 1 | 9 | | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| THYROID GLAND | 6 | 6 | | 4 | 2 | | 2 | 1 | 3 | | | |
| ADRENAL GLAND | | | | | | | | | | | | |
| SUBTOTAL | 6 | 6 | 0 | 4 | 2 | 0 | 2 | 1 | 3 | 0 | 0 | 0 |
| LYMPH NODES | 8 | 8 | | 8 | | | 2 | 1 | 5 | | | |
| SUBTOTAL | 8 | 8 | 0 | 8 | | 0 | 2 | 1 | 5 | 0 | 0 | 0 |
| UNKNOWN PRIMARY SITE | 10 | 10 | | 8 | 2 | | | | | | | 10 |
| SUBTOTAL | 10 | 10 | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| TOTAL | 651 | 621 | 30 | 637 | 14 | 66 | 204 | 137 | 73 | 88 | 22 | 61 |

Bladder Cancer

Comparison Data/State of CT Number of Cases Diagnosed by County 2010-2014



| County | 2010 STATE | 2010 VACT | 2011 STATE | 2011 VACT | 2012 STATE | 2012 VACT | 2013 STATE | 2013 VACT | 2014 STATE | 2014 VACT | Total STATE | Total VACT |
|--------------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|------------|
| Fairfield | 260 | 6 | 272 | 4 | 275 | 4 | 283 | 2 | 272 | 9 | 1362 | 25 |
| Hartford | 317 | 12 | 268 | 8 | 304 | 18 | 294 | 13 | 269 | 7 | 1452 | 58 |
| Litchfield | 69 | | 96 | | 73 | 1 | 63 | 3 | 94 | 4 | 395 | 8 |
| Middlesex | 70 | 1 | 67 | | 68 | 1 | 71 | 3 | 56 | 3 | 332 | 8 |
| New Haven | 293 | 19 | 271 | 18 | 306 | 18 | 316 | 20 | 250 | 19 | 1436 | 94 |
| New London | 80 | 1 | 120 | 5 | 89 | 4 | 82 | 4 | 90 | 1 | 461 | 15 |
| Tolland | 36 | 2 | 46 | 2 | 39 | 2 | 42 | 1 | 49 | 2 | 212 | 9 |
| Windham | 32 | 1 | 34 | 3 | 36 | 1 | 57 | | 40 | | 199 | 5 |
| Out of State | | 6 | | | | 5 | | 12 | | 5 | | 28 |
| Total | 1157 | 48 | 1174 | 40 | 1190 | 54 | 1208 | 58 | 1120 | 50 | 5849 | 250 |

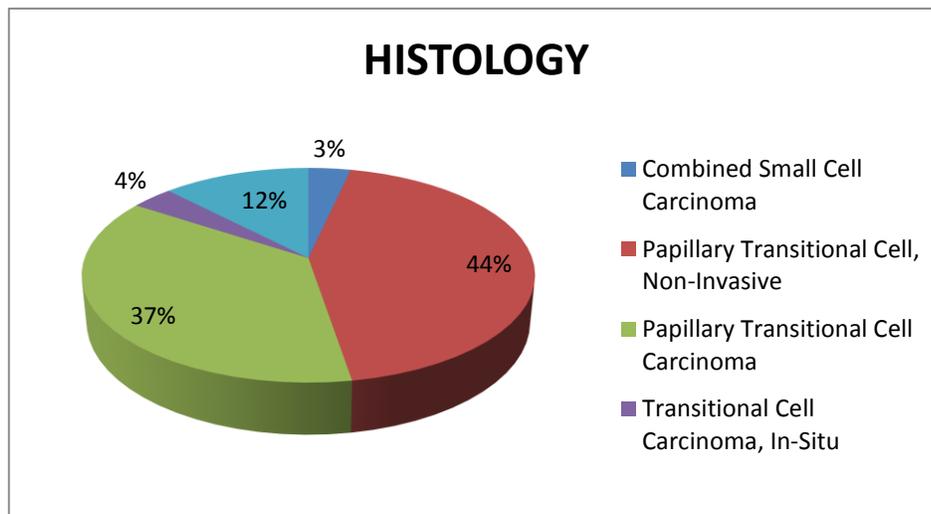
* Cases from VA Connecticut are included in New Haven County

SEX/RACE at Diagnosis, 2015

Of the 57 Veterans (100%) diagnosed at VACT Healthcare System with bladder cancer in 2015 all were male. 56 Veterans (98%) were white; race is unknown for 1 Veteran (2%).

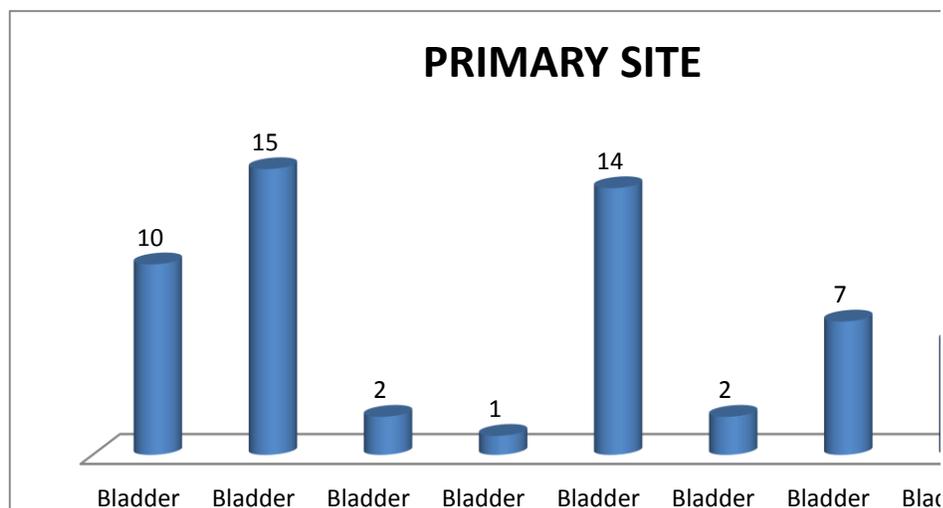
HISTOLOGY, 2015 Data

Of the 57 Veterans diagnosed at VACT Healthcare System with bladder cancer in 2015, 2 Veterans (3%) were diagnosed with combined small cell/non-small cell carcinoma, 25 Veterans (44%) were diagnosed with papillary transitional cell carcinoma, non-invasive, 21 Veterans (37%) were diagnosed with papillary transitional cell carcinoma, 2 Veterans (4%) were diagnosed with transitional cell carcinoma in-situ, and 7 Veterans (12%) were diagnosed with transitional cell carcinoma, nos.



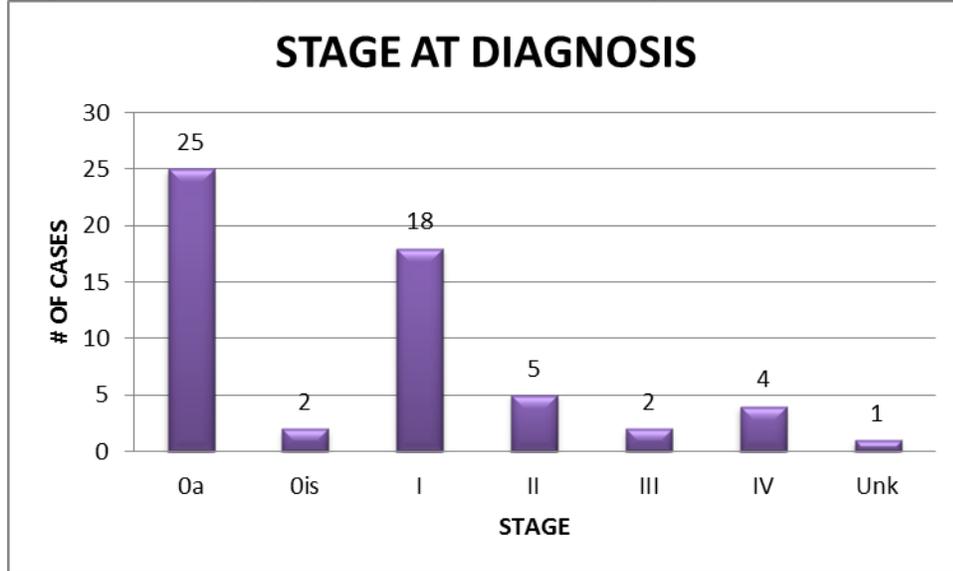
PRIMARY SITE AT DIAGNOSIS, 2015 data

Of the 57 Veterans diagnosed with bladder cancer at VACT Healthcare System in 2015 the primary site at diagnosis was as follows: 10 (18%) bladder nos, 15 (26%) bladder overlap, 2 (3%) bladder anterior wall, 1 (2%) bladder dome, 14 (25%) bladder lateral wall, 2 (3%) bladder posterior wall, 7 (12%) bladder trigone, 6 (11%) bladder ureteric orifice.



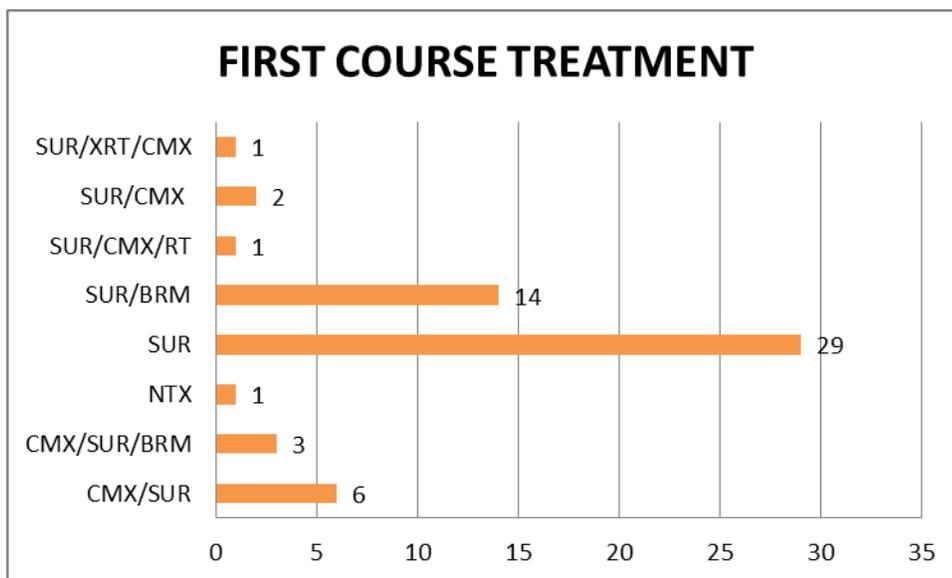
STAGE AT DIAGNOSIS 2015 Data

Of the 57 Veterans who were diagnosed with bladder cancer in 2015, 25 (44%) were diagnosed with Stage 0a, 2 Veterans (3%) were diagnosed with Stage 0is, 18 (32%) were diagnosed with Stage I, 5 Veterans (9%) were diagnosed with Stage II, 2 Veterans (3%) were diagnosed with Stage III, 4 (7%) Veterans were diagnosed with Stage IV and in 1 Veteran (2%) stage of disease was unknown.



FIRST COURSE OF TREATMENT 2014 Data

Of the 57 Veterans who were diagnosed with bladder cancer in 2015, 29 Veterans (51%) received surgery only (SUR), 14 Veterans (24%) received surgery (SUR) and immunotherapy (BRM), 6 Veterans (10%) received chemotherapy (CMX) and surgery (SUR), 3 Veterans (5%) chemotherapy (CMX), surgery (SUR) and immunotherapy (BRM), 2 Veterans (4%) received surgery (SUR) and chemotherapy (CMX), 2 Veterans (4%) received surgery (SUR), radiation therapy (RT) and chemotherapy (CMX), and 1 Veteran (1%) received no treatment (NTX).



**COMPARISON DATA VA CONNECTICUT VS STATE VS NCDB,
2010-2013 Data**

STAGE AT DIAGNOSIS

VA Connecticut Healthcare System vs. State of CT vs. NCDB “All Hospital Types” vs. all VAs

| STAGE | VACT (N) | STATE (N)* | NCDB (N) | All VA (N) | VACT (%) | STATE (%)* | NCDB (%) | All VA % |
|--------------|------------|-------------|---------------|--------------|-------------|-------------|-------------|-------------|
| 0 | 121 | 2580 | 95042 | 6219 | 62.37% | 54.59% | 48.68% | 48.17% |
| I | 20 | 1054 | 42906 | 3327 | 10.30% | 22.30% | 21.97% | 25.77% |
| II | 22 | 493 | 24242 | 1333 | 11.34% | 10.43% | 12.42% | 10.33% |
| III | 8 | 169 | 9105 | 461 | 4.13% | 3.58% | 4.66% | 3.57% |
| IV | 10 | 303 | 14629 | 912 | 5.16% | 6.41% | 7.49% | 7.06% |
| NA | 4 | 1 | 266 | 17 | 2.06% | 0.02% | 0.14% | 0.14% |
| UNK | 9 | 126 | 9062 | 640 | 4.64% | 2.67% | 4.64% | 4.96% |
| Total | 194 | 4726 | 195252 | 12909 | 100% | 100% | 100% | 100% |

As the table shows, the stage distribution of bladder cancer diagnosed at VACT compares favorably with that of other databases, including the State of CT and the NCDB. This is a testament to the excellent primary care, urology and surgery care our patients receive.

BLADDER CANCER FACTS

Incidence: Bladder cancer is 4 times more common in men than women and the incidence is higher in white men than in black men. Bladder cancer is the 4th most common cancer in men and the eighth most common in women. Bladder cancer is most common in the 50-70 year age range.¹

Detection: 70% of all patients have blood in their urine. Other symptoms include painful urination, urgency and sometimes pelvic discomfort after voiding.

Risk factors: Smoking is a well-established risk factor for bladder cancer. Certain occupational exposures also pose a risk. Risk is increased among workers using aniline dyes and benzidine, workers in the rubber and leather industries as well as painters and some metal workers. Previous cancer treatments such as pelvic irradiation and prior chemotherapy with cyclophosphamide are also bladder cancer risk factors.²

Survival: The overall 5 year survival rate for all stages is 77.4%. The 5 year survival rate for stage 0a or 0is bladder cancer is 95.9%.³

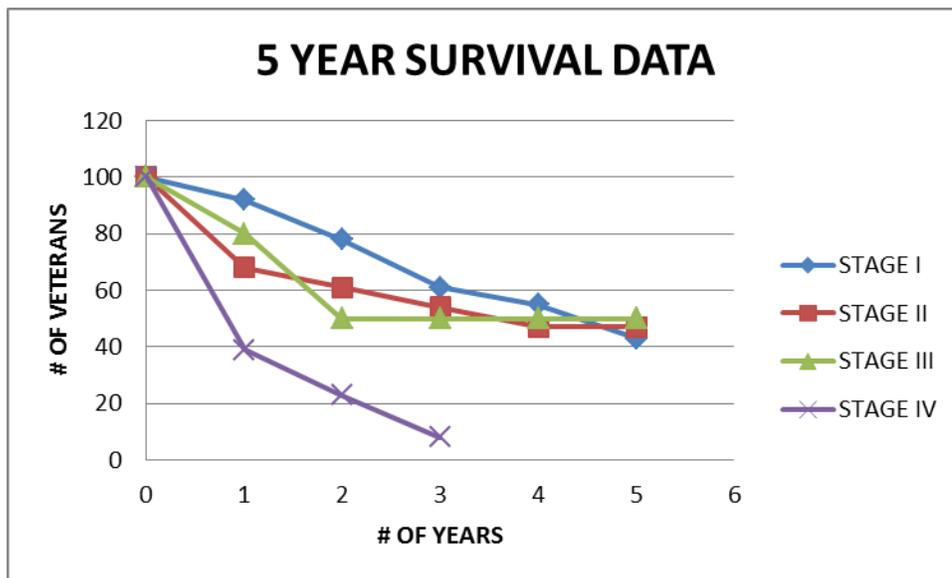
*^{1,2} www.training.seer.cancer.gov

*³ National Cancer Institute, Surveillance, Epidemiology, and End Results Program (seer.cancer.gov).

FIVE YEAR SURVIVAL STUDY BLADDER CANCER

102 cases out of 190 cases did not meet criteria for inclusion in the chart due to a stage of 0 or unknown stage group.

| YEAR | STAGE I | # VETERANS | STAGE II | # VETERANS | STAGE III | # VETERANS | STAGE IV | # VETERANS |
|------|---------|------------|----------|------------|-----------|------------|----------|------------|
| 1 | 92 | 45 | 68 | 10 | 80 | 8 | 39 | 5 |
| 2 | 78 | 38 | 61 | 9 | 50 | 5 | 23 | 3 |
| 3 | 61 | 30 | 54 | 8 | 50 | 5 | 8 | 1 |
| 4 | 55 | 27 | 47 | 7 | 50 | 5 | | |
| 5 | 43 | 20 | 47 | 7 | 50 | 5 | | |



DISCUSSION

Bladder cancer remains a morbid condition with a poor prognosis for higher stage disease and relatively stable incidence of cases over the last five years. It is one of the most common cancers diagnosed at VACT, but fortunately, the majority of patients are diagnosed at early, curable stages. The stage distribution for bladder cancers diagnosed at VACT between 2010 and 2013 is similar to that reported from the State of CT, NCDB, and VA national level, though we have more Stage 0 and less Stage 1 than those other group. The 5-year survival data appears to be lower for patients with stage 2 disease than in previous years, which will require some further investigation.

The mainstay of treatment remains local endoscopic resection and fulguration for low stage disease and more aggressive treatment with neoadjuvant chemotherapy followed by cystectomy for muscle invasive disease. Chemoradiation has a role for patients who are not fit for cystectomy. Patients with metastatic disease receive palliative chemotherapy (usually platinum/gemcitabine) with modest prolongation of survival. One of the most exciting developments in bladder cancer is the activity of immune checkpoint inhibition in this disease. In 2016 atezolizumab became the first anti-PD-L1 antibody to be approved by the FDA, and its first (and so far only indication) is for patients with advanced bladder cancer who have progressed on previous chemotherapy. We continue to collaborate with our Yale colleagues to make novel therapies and clinical trials available to our patients with bladder cancer and hope to offer immune checkpoint inhibition to a wider range of patients with bladder cancer, including patients who have had resection of high risk localized disease.

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Glossary & Acknowledgements

ACCESSIONED: The order in which patients are entered into the tumor registry for a given year. Each patient has one unique accession number.

ACoS: Abbreviation for the American College of Surgeons

AJCC: Abbreviation for American Joint Committee on Cancer, responsible for the TNM cancer staging.

AMERICAN COLLEGE OF SURGEONS: The administrative body responsible for the establishment of guidelines for approved cancer programs.

ANALYTIC: Cases which are first diagnosed and/or received all or part of the first course of therapy at VA Connecticut Healthcare after January 1, 2000, and are eligible for inclusion in treatment and statistical analysis of the database.

FIRST COURSE OF TREATMENT: The initial tumor directed treatment or series of treatments, usually initiated within four months of diagnosis.

NATIONAL CANCER DATABASE: Data collected from hospital cancer registries across the country by the American College of Surgeons Commission on Cancer, which is used to show trends in cancer diagnosis, treatment and outcome.

NCDB: Abbreviation for National Cancer Database.

NON-ANALYTIC: Cases which are first seen at VA Connecticut after a full course of therapy has been completed elsewhere and are now referred for recurrence or subsequent therapy. These cases are not generally included in treatment and survival statistics, but may be included in administrative reports.

PRIMARY SITE: The anatomical location within the human body considered the point of origin for the primary malignancy.

Acknowledgements:

The Connecticut Tumor Registry, 2013

The Cancer Program at VA Connecticut Healthcare System is accredited by the American College of Surgeons Commission on Cancer as a Teaching Hospital Cancer Program.