



## VA Palo Alto Health Care System

# 2012 VAPAHCS



## Cancer Program Annual Report

With 2011 data



Defining  
**EXCELLENCE**  
in the 21st Century

Cancer Program-111 ONC, 3801 Miranda Avenue, Palo Alto, CA 94304-1207

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## Multidisciplinary Cancer Care Committee Membership 2011-2012

### PHYSICIAN MEMBERS

- Committee Chairman: Harlan Pinto, MD
- Cancer Liaison Physician: John Leppert, MD
- Dermatology: Susan Swetter, MD
- General Surgery: Sherry Wren, MD
- Hepatology: Ramsey Cheung, MD
- Medical Oncology: Millie Das, MD; Russell Pachynski, MD
- Medical Hematology: Beth A. Martin, MD
- Pathology: Robert Rouse, MD
- Radiology Service: John Drace, MD
- Women Veterans: Samina Iqbal, MD;

### ALLIED HEALTH MEMBERS

- American Cancer Society: Janet Chang, MPH
- Cancer Program: Carole Fong, BSN, RN; Maria Tham
- Cancer Registry: Hiep Doan, CTR
- Chief of Staff's Office: Jaclyn Hiura, Health System Specialist
- ENT: Ella Benadam-Lenrow, RN
- General Surgery: Lynne Dempsey, RN, CNS; Nina Bellatorre, RN, CNS
- Hematology: Mary L. Thomas, RN, CNS, AOCN
- Medical Onc: InPatient: Connie Yabes-Sabolboro, RN, CNS, AOCN
- Medical Onc: Out Patient: Peter di Donato, PA
- Pain Management: Janette Elliott, RN, CNS, AOCN
- Pharmacy: Raj Joshi, PharmD; Kyong Kang
- Psychology Service: Veronica A. Reis, Ph.D
- Quality Management: Catherine Schiavone, RN, BSN, Colleen Oelkers, RN
- Social Work Services: Karen Chwick, LSCW
- Women Veterans: Linda Kleinsasser, RN-BC

## Mission Statement

The mission of the Multidisciplinary Cancer Program is to decrease the morbidity and mortality of patients with cancer and improve the quality of patient care by:

- ❖ Early diagnosis
- ❖ Pretreatment evaluation
- ❖ Physician staging
- ❖ Nutritional assessment
- ❖ Optimal treatment and palliation
- ❖ Psychosocial support
- ❖ Rehabilitation
- ❖ Pastoral care
- ❖ Hospice care for terminally ill patients
- ❖ Long-term surveillance for recurrent and multiple primary cancers



Research in cancer prevention, cancer biology, and cancer treatment  
The Cancer Program, through the Cancer Care Committee, will demonstrate efficiency in terms of quality and outcome of all oncology services provided to the cancer patient. This will be achieved through establishing annual goals and objectives for the clinical, educational, and programmatic activities relating to cancer and the cancer patient.

## Chairperson's Summary

I am pleased to present the VAPAHCS Multidisciplinary Cancer Care Program's Annual Report for 2012. This Annual Report provides a comprehensive and detailed overview of the cancer related services and activities available to cancer patients in the VA Palo Alto Health Care System. Overall, we are proud to acknowledge everyone's commitment to our patients, and beginning with the Cancer Registry statistics for 2011, the 2012 Annual Report is an impressive survey and summary of our dedication to quality care through the American College of Surgeon's Commission on Cancer approvals process. The cancer program personnel at the VA Palo Alto Health Care System facilities have done an amazing job in working together across many disciplines to provide patient centered multidisciplinary cancer care.

The cancer program statistics from 2011 show that the number of new veterans served by the cancer program staff continues to increase. The cancer registry caseload increased by 2.5% to a total of 906 new cases. The number of analytic cases (those both diagnosed and treated here) was stable totaling 713 new cases. Prostate cancer is still the most common cancer totaling 188 new cases in 2011. New lung cancer cases increased 11% from 125 new cases in 2010 to 139 new cases in 2011. The head and neck cancer group increased 30% from 52 to 68 new cases. The cancer components of the Women's Health Clinic saw a sustained increase in female breast cancer, and provided breast cancer risk assessments to a growing number of concerned women veterans. Notably the percent of Colon cancer cases seen at our facility is approximately one half the national average, suggesting that our emphasis on colonoscopy screening may be removing adenomaous polyps before even early cancers develop.

Cancer Program highlights in 2012 were the completion of the 3rd Generation Cancer Collaborative process improvement work, where we partnered with Central California VA (Fresno) to improve our processes for lung cancer. Improvements in timeliness and quality were accomplished while focusing on patients from the community based outpatient clinics (CBOC's) and those who have some services done at both Palo Alto and Fresno. Cancer Survivors' Day in September of 2012 was again very successful; it was attended by 154 cancer survivors including two survivors who were diagnosed and treated in 1978! We also implemented a formal cancer navigator program coordinated by Social Work, as we implemented new programs and procedures aligned with the 2012 Standards from American College of Surgeons Commission on Cancer.

Our efforts to provide state of the art care including screening, diagnosis, treatment, survivorship and palliative care ensures that veterans with cancer get the best care available. The staff here at the VA Palo Alto Health Care System is to be congratulated on another outstanding year.

**Harlan A. Pinto, MD**  
**Chief, Medical Oncology Section**  
**Chair, Cancer Care Committee**

## Report from the Cancer Liaison Physician

The Cancer Committee at the Palo Alto Veterans Health Care System (PAVAHCS) is a group of individuals dedicated to the entire spectrum of care for veteran patients with cancer. It is a multidisciplinary group with physician representation including but not limited to medical, surgical, radiation oncology, pathology, radiology, hospice, dermatology, gastroenterology, and pain service. In addition there is broad non-physician representation including nursing, social services, pastoral care, cancer registry, psychology, quality management, the Chief of Staff's office, and a representative from the American Cancer Society. Many other representatives from the hospital give time and effort to insure the care of the patients. Please refer to the entire cancer committee membership list for a total listing. The entire cancer committee meets quarterly - with monthly administrative meetings by an executive committee.

As the Cancer Liaison Physician, I have the opportunity to serve as a clinical champion of efforts to improve the cancer care for Veterans at the PAVAHCS. This work is often "behind the scenes" and many people who contribute to this effort often go unrecognized. Members of the Cancer Committee have worked over the past year as part of VA regional lung cancer performance improvement project to facilitate clinical trials being offered to Veterans with cancer, and to improve cancer staging at PAVAHCS. I would like to take this opportunity to thank everyone on behalf of the Committee for all of their efforts.

In the last year we have completed a number of exciting community outreach projects. I would like to outline some of the year's additional accomplishments.

**Cancer Survivors Day:** Many patients with cancer discover that the impact of a cancer diagnosis does not end after it is treated. Recognizing the need for a supportive care system, the Cancer Care Committee, in coordination with the American Cancer Society, held Cancer Survivors Day on September 28, 2012, to recognize and celebrate our cancer survivors. Nearly 200 cancer survivors and their guests were in attendance. Survivors were also offered a survivorship plan (optional), which outlines the continuing care and supportive services that they may expect to receive as part of their cancer diagnosis.



**Cancer Survivorship Clinic:** Connie Yabes-Sabolboro, RN, has led an effort to establish a dedicated clinic that addresses the issues of cancer survivors. She has worked to secure clinic space and coordinated provider schedules in order to make this clinic a reality. This clinic is now open and we hope to expand the clinic incrementally to include care for survivors of many types of cancer who are at least 5 years from their diagnosis.

**Daffodil Days:** In coordination with the American Cancer Society in excess of 100 veteran cancer patients in the clinics, hospice, and in patient wards received the gift of hope in March 2011.

**Prostate Cancer Support Group:** A group of Prostate Cancer patients/survivors and families meet monthly at the hospital to discuss cancer, treatment options, and survivorship issues.

**John Leppert, MD**  
**Cancer Liaison Physician**

## Acknowledgements

*This 2012 Cancer Program* annual report with 2011 Tumor Registry Data and other components activities was prepared to reflect our 2011 efforts to enhance the quality of the VAPAHCS Cancer Program and, thereby the quality of care for the cancer patients.

In the coming year, our cancer program will face challenges as we gear our program to meet new American College of Surgeons (ACoS) Cancer on Commission (CoC) standards, which contains 34 standards and 12 Eligibility Criteria. We need everyone's assistance more than ever to continue providing support and training opportunities for the Cancer Program staff. Your continued support has a profound impact on the success of our participation in CoC's accredited program, and it strengthens our commitment to providing the best possible care for our patients.

As an accredited program, the Cancer Program at VA Palo Alto under the excellent leadership of the Cancer Care Committee Chairman, Dr. Pinto, Cancer Liaison Physician, Dr. John Leppert, and all the Cancer Care Committee members has committed to provide high quality cancer care for the patients.

We would like to acknowledge our appreciation and thanks to the members of the Multidisciplinary Cancer Care Committee, the Cancer Conferences, the clinical staff, the patients, the American Cancer Society representatives, and all those who have contributed to this report for their time, efforts and support.

We also thank the Volunteer Service for providing us with students, community and Veteran volunteers to work with us on special projects. They provide excellent clerical, computer data entry and overall assistance in the Cancer Program.

Last but not least, we wish to express our appreciation to the Information Resource Management Service staff for their ongoing technical support with our computerized cancer registry system.

**Carole Fong, BSN, RN**  
**Cancer Program Coordinator**

## TUMOR REGISTRY REPORT - 2011 DATA

The Tumor Registry at VA Palo Alto Health Care System (VAPAHCS) is a data system designed for the collection, management, analysis and follow-up of data on patients with a diagnosis of reportable neoplasm. It is one of the required components of National Cancer Strategy under VHA Directive 2003-2004 Policies and American College of Surgeons (ACOS) accredited cancer program. Data collection abstracted for each case comprises information on demography, diagnostic procedures, stage of neoplasm, first course treatment, subsequent treatments, and lifetime annual follow-up.

The data captured and submitted in accordance with the guidelines and procedures are set forth by the ACOS's Commission on Cancer, the State of California, the SEER (Surveillance, Epidemiology and End Results) of the National Cancer Institute, and the VA Central Cancer Registry (VACCR). Tumor registry data is vital for programmatic and administrative planning and a valuable resource for research investigations.

The VAPAHCS is accredited by the Commission on Cancer as a Teaching Hospital Cancer Program. Its Cancer Program compliance with the Commission on Cancer standards is committed to providing the best in cancer diagnosis and treatment. Lifetime follow-up of patients included in the database supports clinical follow-up and surveillance of additional primaries. Follow-up data includes neoplasm status (free or residual/progressive disease), recurrences, subsequent treatment, and vital status. Currently, the Tumor registry maintains follow-up on 3988 cases with a follow-up rate of 97 %.

The Reference Date is January 1, 1977. It refers to the date that all reportable cases were included in the Tumor Registry. Since 1977, there have been 20,245 cases entered into the database. In 2011, there were 906 new cases entered into the tumor registry, 713 analytic cases diagnosed and/or treated here, and 193 non-analytic cases seen here (initially diagnosed and treated somewhere else, presented due to recurrence or progressive diseases).

We strive to provide the highest quality database. We endeavor to achieve this through uniformity of data collection, annually physician review of 10% of our new cases, software edit checks, and accurate and timely follow-up information on our patients. Our ultimate goal is to contribute to the prevention and cure of cancer.

Data search and cancer-related information is available. For further information in regards to the data, the registry personnel may be reached at (650) 493-5000 Ext. 63223.

**Hiep Doan, CTR**  
**Tumor Registry**

# 2011 VAPAHCS CANCER FREQUENCY BY COUNTY

Analytic and Non-Analytic

Total cancer cases = 906\*

Total # of patients = 879

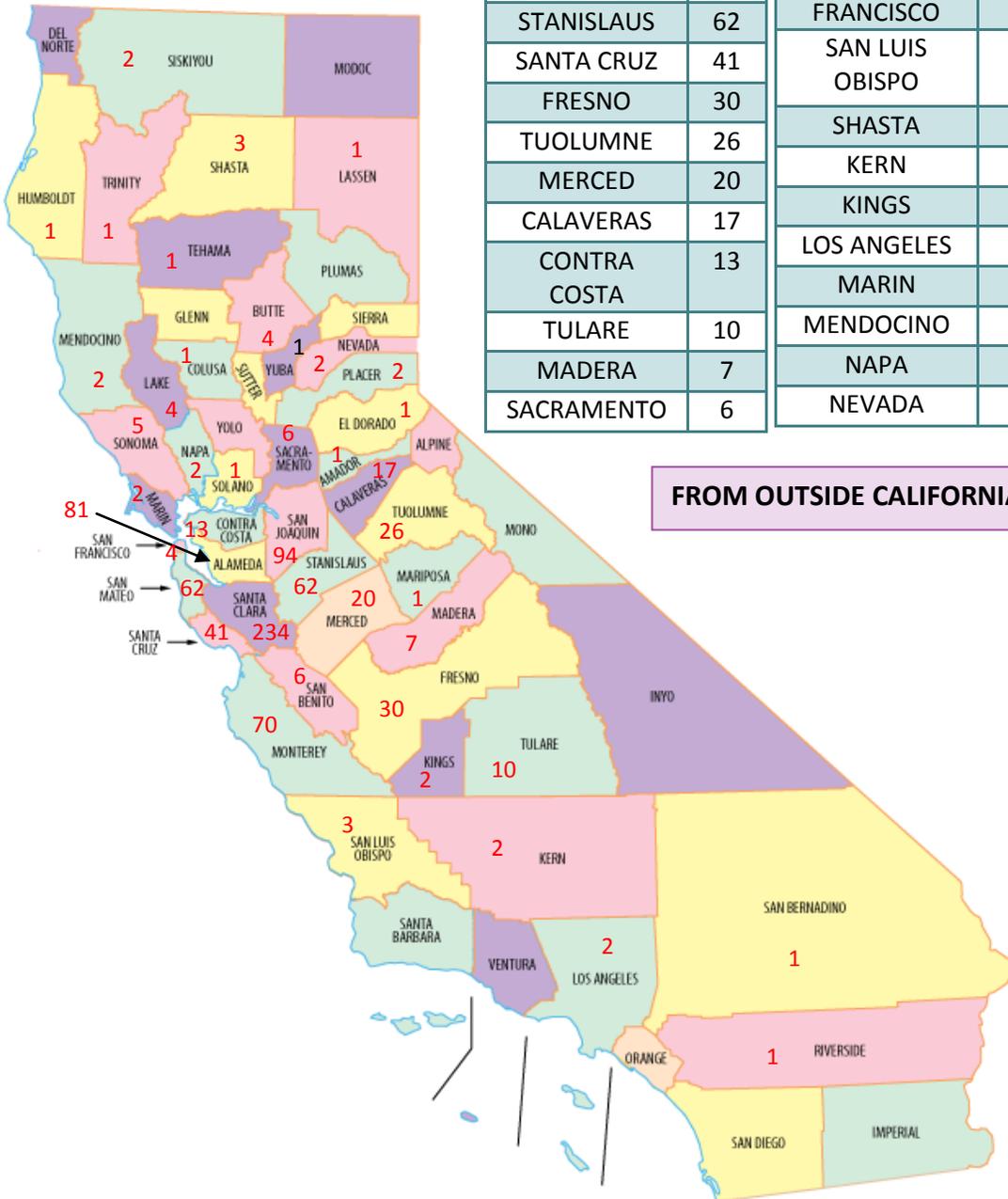
\* includes patients with multiple cancer types

## FROM CALIFORNIA

|              |     |
|--------------|-----|
| SANTA CLARA  | 234 |
| SAN JOAQUIN  | 94  |
| ALAMEDA      | 81  |
| MONTEREY     | 70  |
| SAN MATEO    | 62  |
| STANISLAUS   | 62  |
| SANTA CRUZ   | 41  |
| FRESNO       | 30  |
| TUOLUMNE     | 26  |
| MERCED       | 20  |
| CALAVERAS    | 17  |
| CONTRA COSTA | 13  |
| TULARE       | 10  |
| MADERA       | 7   |
| SACRAMENTO   | 6   |

|                 |   |
|-----------------|---|
| SAN BENITO      | 6 |
| SONOMA          | 5 |
| BUTTE           | 4 |
| LAKE            | 4 |
| SAN FRANCISCO   | 4 |
| SAN LUIS OBISPO | 3 |
| SHASTA          | 3 |
| KERN            | 2 |
| KINGS           | 2 |
| LOS ANGELES     | 2 |
| MARIN           | 2 |
| MENDOCINO       | 2 |
| NAPA            | 2 |
| NEVADA          | 2 |

|                |            |
|----------------|------------|
| PLACER         | 2          |
| SISKIYOU       | 2          |
| AMADOR         | 1          |
| COLUSA         | 1          |
| EL DORADO      | 1          |
| HUMBOLDT       | 1          |
| LASSEN         | 1          |
| MARIPOSA       | 1          |
| RIVERSIDE      | 1          |
| SAN BERNARDINO | 1          |
| SOLANO         | 1          |
| TEHAMA         | 1          |
| TRINITY        | 1          |
| YUBA           | 1          |
| <b>TOTAL</b>   | <b>832</b> |



## FROM OUTSIDE CALIFORNIA

|                  |           |
|------------------|-----------|
| ARIZONA          | 28        |
| NEVADA           | 23        |
| FLORIDA          | 3         |
| TEXAS            | 3         |
| HAWAII           | 2         |
| IDAHO            | 2         |
| MISSISSIPPI      | 2         |
| ARKANSAS         | 1         |
| CANADA           | 1         |
| GUAM             | 1         |
| INDIANA          | 1         |
| MINNESOTA        | 1         |
| PENNSYLVANIA     | 1         |
| PUERTO RICO      | 1         |
| SOUTH CAROLINA   | 1         |
| UTAH             | 1         |
| VIRGINIA         | 1         |
| WASHINGTON STATE | 1         |
| <b>TOTAL</b>     | <b>74</b> |

## 2011 VAPAHCS Cancer Frequency by Primary Site

| GROUP SITE                          |                          | TOTAL CASES | CLASS OF CASE |              | SEX  |        | AJCC STAGE |    |    |     |    |    |      |     |
|-------------------------------------|--------------------------|-------------|---------------|--------------|------|--------|------------|----|----|-----|----|----|------|-----|
|                                     |                          |             | ANALYTIC      | NON ANALYTIC | MALE | FEMALE | 0          | I  | II | III | IV | NA | NONE | UNK |
| C00-C14: LIP, ORAL CAVITY & PHARYNX |                          | 52          | 42            | 10           | 52   | 0      | 0          | 10 | 3  | 6   | 23 | 0  | 10   | 0   |
| C00.1                               | LIP, EXTERNAL LOWER      | 1           | 1             | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |
| C00.4                               | LIP, LOWER MUCOSA        | 1           | 1             | 0            | 1    | 0      | 0          | 0  | 1  | 0   | 0  | 0  | 0    | 0   |
| C01.9                               | TONGUE BASE              | 6           | 5             | 1            | 6    | 0      | 0          | 0  | 0  | 2   | 3  | 0  | 1    | 0   |
| C02.2                               | TONGUE, VENTRAL SURFACE  | 1           | 1             | 0            | 1    | 0      | 0          | 0  | 0  | 1   | 0  | 0  | 0    | 0   |
| C02.3                               | TONGUE, ANTERIOR 2/3 NOS | 2           | 2             | 0            | 2    | 0      | 0          | 2  | 0  | 0   | 0  | 0  | 0    | 0   |
| C02.9                               | TONGUE NOS               | 4           | 3             | 1            | 4    | 0      | 0          | 1  | 1  | 0   | 1  | 0  | 1    | 0   |
| C03.0                               | GUM, UPPER               | 2           | 2             | 0            | 2    | 0      | 0          | 0  | 0  | 0   | 2  | 0  | 0    | 0   |
| C03.1                               | GUM, LOWER               | 3           | 3             | 0            | 3    | 0      | 0          | 0  | 0  | 0   | 3  | 0  | 0    | 0   |
| C04.9                               | MOUTH FLOOR NOS          | 5           | 5             | 0            | 5    | 0      | 0          | 3  | 0  | 0   | 2  | 0  | 0    | 0   |
| C05.0                               | PALATE, HARD             | 1           | 1             | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |
| C06.0                               | MOUTH, CHEEK MUCOSA      | 1           | 1             | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |
| C06.9                               | MOUTH NOS                | 3           | 0             | 3            | 3    | 0      | 0          | 0  | 0  | 0   | 0  | 0  | 3    | 0   |
| C07.9                               | PAROTID GLAND            | 1           | 1             | 0            | 1    | 0      | 0          | 0  | 0  | 1   | 0  | 0  | 0    | 0   |
| C09.1                               | TONSILLAR PILLAR         | 1           | 1             | 0            | 1    | 0      | 0          | 0  | 0  | 0   | 1  | 0  | 0    | 0   |
| C09.9                               | TONSIL NOS               | 6           | 5             | 1            | 6    | 0      | 0          | 1  | 0  | 0   | 4  | 0  | 1    | 0   |
| C10.9                               | OROPHARYNX NOS           | 3           | 3             | 0            | 3    | 0      | 0          | 0  | 0  | 0   | 3  | 0  | 0    | 0   |

| GROUP SITE                       |                         | TOTAL CASES | CLASS OF CASE |              | SEX        |          | AJCC STAGE |           |           |           |           |          |           |          |
|----------------------------------|-------------------------|-------------|---------------|--------------|------------|----------|------------|-----------|-----------|-----------|-----------|----------|-----------|----------|
|                                  |                         |             | ANALYTIC      | NON ANALYTIC | MALE       | FEMALE   | 0          | I         | II        | III       | IV        | NA       | NONE      | UNK      |
| C11.9                            | NASOPHARYNX NOS         | 3           | 2             | 1            | 3          | 0        | 0          | 0         | 1         | 1         | 0         | 0        | 1         | 0        |
| C12.9                            | PYRIFORM SINUS          | 7           | 4             | 3            | 7          | 0        | 0          | 0         | 0         | 1         | 3         | 0        | 3         | 0        |
| C13.9                            | HYPOPHARYNX NOS         | 1           | 1             | 0            | 1          | 0        | 0          | 0         | 0         | 0         | 1         | 0        | 0         | 0        |
| <b>C15-C26: DIGESTIVE ORGANS</b> |                         | <b>173</b>  | <b>144</b>    | <b>29</b>    | <b>167</b> | <b>6</b> | <b>1</b>   | <b>35</b> | <b>34</b> | <b>24</b> | <b>42</b> | <b>1</b> | <b>29</b> | <b>7</b> |
| C15.1                            | ESOPHAGUS, THORACIC     | 1           | 1             | 0            | 1          | 0        | 0          | 0         | 0         | 1         | 0         | 0        | 0         | 0        |
| C15.3                            | ESOPHAGUS, UPPER THIRD  | 1           | 1             | 0            | 1          | 0        | 0          | 0         | 0         | 1         | 0         | 0        | 0         | 0        |
| C15.5                            | ESOPHAGUS, LOWER THIRD  | 18          | 18            | 0            | 17         | 1        | 0          | 2         | 4         | 5         | 6         | 0        | 0         | 1        |
| C15.8                            | ESOPHAGUS OVERLAP       | 1           | 1             | 0            | 1          | 0        | 0          | 0         | 1         | 0         | 0         | 0        | 0         | 0        |
| C15.9                            | ESOPHAGUS NOS           | 3           | 1             | 2            | 3          | 0        | 0          | 0         | 0         | 0         | 1         | 0        | 2         | 0        |
| C16.0                            | STOMACH, CARDIA         | 11          | 11            | 0            | 11         | 0        | 0          | 2         | 2         | 1         | 4         | 0        | 0         | 2        |
| C16.2                            | STOMACH, BODY           | 2           | 2             | 0            | 2          | 0        | 0          | 1         | 0         | 1         | 0         | 0        | 0         | 0        |
| C16.3                            | STOMACH, GASTRIC ANTRUM | 2           | 2             | 0            | 2          | 0        | 0          | 1         | 0         | 0         | 1         | 0        | 0         | 0        |
| C16.6                            | STOMACH, GASTRIC ANTRUM | 1           | 1             | 0            | 1          | 0        | 0          | 1         | 0         | 0         | 0         | 0        | 0         | 0        |

| GROUP SITE                                    |                                   | TOTAL CASES | CLASS OF CASE |              | SEX        |          | AJCC STAGE |           |           |           |           |          |           |          |
|---|-----------------------------------|-------------|---------------|--------------|------------|----------|------------|-----------|-----------|-----------|-----------|----------|-----------|----------|
|   |                                   |             | ANALYTIC      | NON ANALYTIC | MALE       | FEMALE   | 0          | I         | II        | III       | IV        | NA       | NONE      | UNK      |
| C16.9   | STOMA<br>CH NOS                   | 4           | 2             | 2            | 4          | 0        | 0          | 1         | 0         | 0         | 1         | 0        | 2         | 0        |
| C17.0 -<br>.09                                | SMALL<br>INTESTI<br>NE            | 5           | 2             | 3            | 5          | 0        | 0          | 0         | 0         | 1         | 1         | 0        | 3         | 0        |
| C18.0   | COLON,<br>CECUM                   | 6           | 5             | 1            | 5          | 1        | 0          | 2         | 0         | 1         | 0         | 0        | 1         | 2        |
| C18.1   | APPEND<br>IX                      | 4           | 3             | 1            | 3          | 1        | 0          | 1         | 1         | 1         | 0         | 0        | 1         | 0        |
| C18.2 -<br>.9                                 | COLON                             | 27          | 25            | 2            | 25         | 2        | 1          | 7         | 4         | 3         | 8         | 0        | 2         | 2        |
| C19.9   | RECTOSI<br>GMOID<br>JUNCTI<br>ON  | 1           | 1             | 0            | 1          | 0        | 0          | 1         | 0         | 0         | 0         | 0        | 0         | 0        |
| C20.9   | RECTU<br>M NOS                    | 12          | 9             | 3            | 11         | 1        | 0          | 3         | 2         | 2         | 2         | 0        | 3         | 0        |
| C21.0   | ANUS<br>NOS                       | 1           | 0             | 1            | 1          | 0        | 0          | 0         | 0         | 0         | 0         | 0        | 1         | 0        |
| C22.0   | LIVER                             | 39          | 33            | 6            | 39         | 0        | 0          | 8         | 13        | 4         | 7         | 1        | 6         | 0        |
| C22.1   | BILE<br>DUCT,<br>INTRAH<br>EPATIC | 6           | 5             | 1            | 6          | 0        | 0          | 1         | 0         | 0         | 4         | 0        | 1         | 0        |
| C23.9   | GALLBL<br>ADDER                   | 1           | 1             | 0            | 1          | 0        | 0          | 1         | 0         | 0         | 0         | 0        | 0         | 0        |
| C24.0   | BILE<br>DUCT,<br>EXTRAH<br>EPATIC | 2           | 2             | 0            | 2          | 0        | 0          | 0         | 1         | 1         | 0         | 0        | 0         | 0        |
| C24.1   | AMPULL<br>A OF<br>VATER           | 1           | 0             | 1            | 1          | 0        | 0          | 0         | 0         | 0         | 0         | 0        | 1         | 0        |
| C25.0 -<br>.9                                 | PANCRE<br>AS -ALL                 | 23          | 18            | 5            | 23         | 0        | 0          | 3         | 6         | 2         | 7         | 0        | 5         | 0        |
| C26.9   | GASTRO<br>INTESTI<br>NAL<br>NOS   | 1           | 0             | 1            | 1          | 0        | 0          | 0         | 0         | 0         | 0         | 0        | 1         | 0        |
| <b>C30-C39:<br/>RESPIRATORY/THO<br/>RACIC</b> |                                   | <b>159</b>  | <b>130</b>    | <b>29</b>    | <b>157</b> | <b>2</b> | <b>0</b>   | <b>36</b> | <b>16</b> | <b>22</b> | <b>56</b> | <b>0</b> | <b>27</b> | <b>2</b> |
| C30.0   | NASAL<br>CAVITY                   | 1           | 0             | 1            | 1          | 0        | 0          | 0         | 0         | 0         | 0         | 0        | 1         | 0        |
| C30.1   | EAR,<br>MIDDLE                    | 1           | 0             | 1            | 1          | 0        | 0          | 0         | 0         | 0         | 0         | 0        | 1         | 0        |

| GROUP SITE                                 |                        | TOTAL CASES | CLASS OF CASE |              | SEX  |        | AJCC STAGE |    |    |     |    |    |      |     |
|--|------------------------|-------------|---------------|--------------|------|--------|------------|----|----|-----|----|----|------|-----|
|  |                        |             | ANALYTIC      | NON ANALYTIC | MALE | FEMALE | 0          | I  | II | III | IV | NA | NONE | UNK |
| C31.0                                      | SINUS, MAXILLARY       | 2           | 2             | 0            | 2    | 0      | 0          | 0  | 0  | 0   | 2  | 0  | 0    | 0   |
| C31.9                                      | SINUS, ACCESSORY NOS   | 1           | 1             | 0            | 1    | 0      | 0          | 0  | 0  | 0   | 1  | 0  | 0    | 0   |
| C32.0 - .9                                 | LARYNX - ALL           | 11          | 7             | 4            | 11   | 0      | 0          | 2  | 1  | 1   | 3  | 0  | 4    | 0   |
| C34.0                                      | LUNG, MAIN BRONCHUS    | 7           | 7             | 0            | 7    | 0      | 0          | 0  | 0  | 2   | 5  | 0  | 0    | 0   |
| C34.1                                      | LUNG, UPPER LOBE       | 55          | 54            | 1            | 53   | 2      | 0          | 19 | 6  | 10  | 18 | 0  | 1    | 1   |
| C34.2                                      | LUNG, MIDDLE LOBE      | 5           | 5             | 0            | 5    | 0      | 0          | 3  | 1  | 0   | 1  | 0  | 0    | 0   |
| C34.3                                      | LUNG, LOWER LOBE       | 38          | 36            | 2            | 38   | 0      | 0          | 11 | 8  | 7   | 11 | 0  | 1    | 0   |
| C34.9                                      | LUNG NOS               | 34          | 16            | 18           | 34   | 0      | 0          | 0  | 0  | 2   | 13 | 0  | 18   | 1   |
| C38.2                                      | MEDIASTINUM, POSTERIOR | 1           | 1             | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |
| C38.4                                      | PLEURA, NOS            | 3           | 1             | 2            | 3    | 0      | 0          | 0  | 0  | 0   | 2  | 0  | 1    | 0   |
| C42: HEMATOPOIETIC AND RETICULOENDOTHELIAL |                        | 58          | 42            | 16           | 56   | 2      | 0          | 0  | 0  | 0   | 4  | 51 | 3    | 0   |
| C42.0                                      | BLOOD                  | 3           | 3             | 0            | 3    | 0      | 0          | 0  | 0  | 0   | 1  | 2  | 0    | 0   |
| C42.1                                      | BONE MARROW            | 55          | 39            | 16           | 53   | 2      | 0          | 0  | 0  | 0   | 3  | 49 | 3    | 0   |
| C44: SKIN                                  |                        | 99          | 61            | 38           | 97   | 2      | 13         | 22 | 7  | 5   | 2  | 1  | 37   | 12  |
| C44.0 - .9                                 | SKIN - ALL             | 99          | 61            | 38           | 97   | 2      | 13         | 22 | 7  | 5   | 2  | 1  | 37   | 12  |
| C48: RETROPERITONEUM & PERITONEUM          |                        | 1           | 0             | 1            | 0    | 1      | 0          | 0  | 0  | 0   | 0  | 0  | 1    | 0   |

| GROUP SITE                                  |                    | TOTAL CASES | CLASS OF CASE |              | SEX  |        | AJCC STAGE |    |    |     |    |    |      |     |   |
|---|--------------------|-------------|---------------|--------------|------|--------|------------|----|----|-----|----|----|------|-----|---|
|   |                    |             | ANALYTIC      | NON ANALYTIC | MALE | FEMALE | 0          | I  | II | III | IV | NA | NONE | UNK |   |
| C48.2                                       | PERITONEUM NOS     | 1           | 0             | 1            | 0    | 1      | 0          | 0  | 0  | 0   | 0  | 0  | 0    | 1   | 0 |
| C49: CONNECTIVE, SUBCUTANEOUS & SOFT TISSUE |                    | 8           | 6             | 2            | 8    | 0      | 0          | 2  | 1  | 2   | 1  | 0  | 1    | 1   |   |
| C49.0 - .9                                  | SOFT TISSUES - ALL | 8           | 6             | 2            | 8    | 0      | 0          | 2  | 1  | 2   | 1  | 0  | 1    | 1   |   |
| C50: BREAST                                 |                    | 11          | 6             | 5            | 4    | 7      | 1          | 2  | 1  | 2   | 0  | 0  | 5    | 0   |   |
| C50.0 - .9                                  | BREAST - ALL       | 11          | 6             | 5            | 4    | 7      | 1          | 2  | 1  | 2   | 0  | 0  | 5    | 0   |   |
| C51-C58: FEMALE GENITAL ORGANS              |                    | 3           | 1             | 2            | 0    | 3      | 0          | 0  | 0  | 1   | 0  | 0  | 2    | 0   |   |
| C53.9                                       | CERVIX NOS         | 2           | 0             | 2            | 0    | 2      | 0          | 0  | 0  | 0   | 0  | 0  | 2    | 0   |   |
| C56.9                                       | OVARY              | 1           | 1             | 0            | 0    | 1      | 0          | 0  | 0  | 1   | 0  | 0  | 0    | 0   |   |
| C60-C63: MALE GENITAL ORGANS                |                    | 195         | 163           | 32           | 195  | 0      | 4          | 39 | 92 | 16  | 11 | 0  | 32   | 1   |   |
| C60.0 - .9                                  | PENIS - ALL        | 6           | 6             | 0            | 6    | 0      | 4          | 0  | 1  | 1   | 0  | 0  | 0    | 0   |   |
| C61.9                                       | PROSTATE           | 188         | 156           | 32           | 188  | 0      | 0          | 38 | 91 | 15  | 11 | 0  | 32   | 1   |   |
| C62.9                                       | TESTIS NOS         | 1           | 1             | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |   |
| C64-C68: URINARY TRACT                      |                    | 85          | 73            | 12           | 81   | 4      | 16         | 30 | 6  | 8   | 7  | 0  | 12   | 6   |   |
| C64.9                                       | KIDNEY NOS         | 36          | 33            | 3            | 33   | 3      | 0          | 20 | 3  | 4   | 2  | 0  | 3    | 4   |   |
| C65.9                                       | RENAL PELVIS       | 3           | 3             | 0            | 3    | 0      | 1          | 1  | 0  | 1   | 0  | 0  | 0    | 0   |   |
| C66.9                                       | URETER             | 4           | 4             | 0            | 4    | 0      | 2          | 0  | 1  | 1   | 0  | 0  | 0    | 0   |   |
| C67.0 - .9                                  | BLADDER - ALL      | 40          | 31            | 9            | 39   | 1      | 13         | 9  | 2  | 2   | 4  | 0  | 9    | 1   |   |
| C68.0                                       | URETHRA            | 2           | 2             | 0            | 2    | 0      | 0          | 0  | 0  | 0   | 1  | 0  | 0    | 1   |   |
| C69-C72: EYE/BRAIN/OTHERS                   |                    | 17          | 13            | 4            | 17   | 0      | 0          | 0  | 0  | 0   | 0  | 13 | 4    | 0   |   |
| C69.6                                       | EYE, ORBIT NOS     | 3           | 2             | 1            | 3    | 0      | 0          | 0  | 0  | 0   | 0  | 2  | 1    | 0   |   |

| GROUP SITE                              |                       | TOTAL CASES | CLASS OF CASE |              | SEX        |           | AJCC STAGE |            |            |           |            |           |            |           |
|---|-----------------------|-------------|---------------|--------------|------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|-----------|
|   |                       |             | ANALYTIC      | NON ANALYTIC | MALE       | FEMALE    | 0          | I          | II         | III       | IV         | NA        | NONE       | UNK       |
| C70.0                                   | MENINGES, CEREBRAL    | 1           | 1             | 0            | 1          | 0         | 0          | 0          | 0          | 0         | 0          | 1         | 0          | 0         |
| C71.1 - .9                              | BRAIN - ALL           | 10          | 8             | 2            | 10         | 0         | 0          | 0          | 0          | 0         | 0          | 8         | 2          | 0         |
| C72.0                                   | SPINAL CORD           | 1           | 1             | 0            | 1          | 0         | 0          | 0          | 0          | 0         | 0          | 1         | 0          | 0         |
| C72.4                                   | ACUSTIC NERVE         | 2           | 1             | 1            | 2          | 0         | 0          | 0          | 0          | 0         | 0          | 1         | 1          | 0         |
| <b>C73-C75: THYROID/OTHER ENDOCRINE</b> |                       | <b>13</b>   | <b>10</b>     | <b>3</b>     | <b>13</b>  | <b>0</b>  | <b>0</b>   | <b>3</b>   | <b>1</b>   | <b>1</b>  | <b>1</b>   | <b>4</b>  | <b>2</b>   | <b>1</b>  |
| C73.9                                   | THYROID GLAND         | 8           | 6             | 2            | 8          | 0         | 0          | 3          | 1          | 1         | 1          | 0         | 2          | 0         |
| C74.0                                   | ADRENAL GLAND, CORTEX | 1           | 0             | 1            | 1          | 0         | 0          | 0          | 0          | 0         | 0          | 0         | 0          | 1         |
| C75.0                                   | PARATHYROID GLAND     | 1           | 1             | 0            | 1          | 0         | 0          | 0          | 0          | 0         | 0          | 1         | 0          | 0         |
| C75.1                                   | PITUITARY             | 3           | 3             | 0            | 3          | 0         | 0          | 0          | 0          | 0         | 0          | 3         | 0          | 0         |
| <b>C76: OTHER/ILL DEFINED SITES</b>     |                       | <b>1</b>    | <b>0</b>      | <b>1</b>     | <b>1</b>   | <b>0</b>  | <b>0</b>   | <b>0</b>   | <b>0</b>   | <b>0</b>  | <b>0</b>   | <b>1</b>  | <b>0</b>   | <b>0</b>  |
| C76.0                                   | HEAD,FACE,NECK NOS    | 1           | 0             | 1            | 1          | 0         | 0          | 0          | 0          | 0         | 0          | 1         | 0          | 0         |
| <b>C77: LYMPH NODES</b>                 |                       | <b>21</b>   | <b>13</b>     | <b>8</b>     | <b>21</b>  | <b>0</b>  | <b>0</b>   | <b>2</b>   | <b>0</b>   | <b>5</b>  | <b>6</b>   | <b>0</b>  | <b>8</b>   | <b>0</b>  |
| C77.0 - .9                              | LYMPH NODES-ALL       | 21          | 13            | 8            | 21         | 0         | 0          | 2          | 0          | 5         | 6          | 0         | 8          | 0         |
| <b>C80: UNKNOWN PRIMARY SITE</b>        |                       | <b>10</b>   | <b>9</b>      | <b>1</b>     | <b>10</b>  | <b>0</b>  | <b>0</b>   | <b>0</b>   | <b>0</b>   | <b>0</b>  | <b>0</b>   | <b>9</b>  | <b>1</b>   | <b>0</b>  |
| C80.9                                   | UNKNOWN PRIMARY       | 10          | 9             | 1            | 10         | 0         | 0          | 0          | 0          | 0         | 0          | 9         | 1          | 0         |
| <b>Total</b>                            |                       | <b>906</b>  | <b>713</b>    | <b>193</b>   | <b>879</b> | <b>27</b> | <b>35</b>  | <b>181</b> | <b>161</b> | <b>92</b> | <b>153</b> | <b>80</b> | <b>174</b> | <b>30</b> |

**ALL CANCER TYPES (2011) –  
NUMBER OF CASES PER CANCER TYPE (ALPHABETICAL ORDER)**

| ICD CODE | PRIMARY SITE            | TOTAL CASES | CLASS    |              | SEX  |        | AJCC STAGE |   |    |     |    |    |      |     |
|----------|-------------------------|-------------|----------|--------------|------|--------|------------|---|----|-----|----|----|------|-----|
|          |                         |             | ANALYTIC | NON ANALYTIC | MALE | FEMALE | 0          | I | II | III | IV | NA | NONE | UNK |
| C72.4    | ACOUSTIC NERVE          | 2           | 1        | 1            | 2    | 0      | 0          | 0 | 0  | 0   | 0  | 1  | 1    | 0   |
| C74.0    | ADRENAL GLAND, CORTEX   | 1           | 0        | 1            | 1    | 0      | 0          | 0 | 0  | 0   | 0  | 0  | 0    | 1   |
| C24.1    | AMPULLA OF VATER        | 1           | 0        | 1            | 1    | 0      | 0          | 0 | 0  | 0   | 0  | 0  | 1    | 0   |
| C21.0    | ANUS NOS                | 1           | 0        | 1            | 1    | 0      | 0          | 0 | 0  | 0   | 0  | 0  | 1    | 0   |
| C18.1    | APPENDIX                | 4           | 3        | 1            | 3    | 1      | 0          | 1 | 1  | 1   | 0  | 0  | 1    | 0   |
| C24.0    | BILE DUCT, EXTRAHEPATIC | 2           | 2        | 0            | 2    | 0      | 0          | 0 | 1  | 1   | 0  | 0  | 0    | 0   |
| C22.1    | BILE DUCT, INTRAHEPATIC | 6           | 5        | 1            | 6    | 0      | 0          | 1 | 0  | 0   | 4  | 0  | 1    | 0   |
| C67.0-.9 | BLADDER - ALL           | 40          | 31       | 9            | 39   | 1      | 13         | 9 | 2  | 2   | 4  | 0  | 9    | 1   |
| C42.0    | BLOOD                   | 3           | 3        | 0            | 3    | 0      | 0          | 0 | 0  | 0   | 1  | 2  | 0    | 0   |
| C42.1    | BONE MARROW             | 55          | 39       | 16           | 53   | 2      | 0          | 0 | 0  | 0   | 3  | 49 | 3    | 0   |
| C71.1-.9 | BRAIN - ALL             | 10          | 8        | 2            | 10   | 0      | 0          | 0 | 0  | 0   | 0  | 8  | 2    | 0   |
| C50.0-.9 | BREAST - ALL            | 11          | 6        | 5            | 4    | 7      | 1          | 2 | 1  | 2   | 0  | 0  | 5    | 0   |

| ICD CODE | PRIMARY SITE           | TOTAL CASES | CLASS    |              | SEX  |        | AJCC STAGE |   |    |     |    |    |      |     |
|----------|------------------------|-------------|----------|--------------|------|--------|------------|---|----|-----|----|----|------|-----|
|          |                        |             | ANALYTIC | NON ANALYTIC | MALE | FEMALE | 0          | I | II | III | IV | NA | NONE | UNK |
| C53.9    | CERVIX NOS             | 2           | 0        | 2            | 0    | 2      | 0          | 0 | 0  | 0   | 0  | 0  | 2    | 0   |
| C18.2-.9 | COLON                  | 27          | 25       | 2            | 25   | 2      | 1          | 7 | 4  | 3   | 8  | 0  | 2    | 2   |
| C18.0    | COLON, CECUM           | 6           | 5        | 1            | 5    | 1      | 0          | 2 | 0  | 1   | 0  | 0  | 1    | 2   |
| C30.1    | EAR, MIDDLE            | 1           | 0        | 1            | 1    | 0      | 0          | 0 | 0  | 0   | 0  | 0  | 1    | 0   |
| C15.9    | ESOPHAGUS NOS          | 3           | 1        | 2            | 3    | 0      | 0          | 0 | 0  | 0   | 1  | 0  | 2    | 0   |
| C15.8    | ESOPHAGUS OVERLAP      | 1           | 1        | 0            | 1    | 0      | 0          | 0 | 1  | 0   | 0  | 0  | 0    | 0   |
| C15.5    | ESOPHAGUS, LOWER THIRD | 18          | 18       | 0            | 17   | 1      | 0          | 2 | 4  | 5   | 6  | 0  | 0    | 1   |
| C15.1    | ESOPHAGUS, THORACIC    | 1           | 1        | 0            | 1    | 0      | 0          | 0 | 0  | 1   | 0  | 0  | 0    | 0   |
| C15.3    | ESOPHAGUS, UPPER THIRD | 1           | 1        | 0            | 1    | 0      | 0          | 0 | 0  | 1   | 0  | 0  | 0    | 0   |
| C69.6    | EYE, ORBIT NOS         | 3           | 2        | 1            | 3    | 0      | 0          | 0 | 0  | 0   | 0  | 2  | 1    | 0   |
| C23.9    | GALLBLADDER            | 1           | 1        | 0            | 1    | 0      | 0          | 1 | 0  | 0   | 0  | 0  | 0    | 0   |
| C26.9    | GASTROINTESTINAL       | 1           | 0        | 1            | 1    | 0      | 0          | 0 | 0  | 0   | 0  | 0  | 1    | 0   |

| ICD CODE   | PRIMARY SITE        | TOTAL CASES | CLASS    |              | SEX  |        | AJCC STAGE |    |    |     |    |    |      |     |  |
|------------|---------------------|-------------|----------|--------------|------|--------|------------|----|----|-----|----|----|------|-----|--|
|            |                     |             | ANALYTIC | NON ANALYTIC | MALE | FEMALE | 0          | I  | II | III | IV | NA | NONE | UNK |  |
|            | NOS                 |             |          |              |      |        |            |    |    |     |    |    |      |     |  |
| C03.1      | GUM, LOWER          | 3           | 3        | 0            | 3    | 0      | 0          | 0  | 0  | 0   | 3  | 0  | 0    | 0   |  |
| C03.0      | GUM, UPPER          | 2           | 2        | 0            | 2    | 0      | 0          | 0  | 0  | 0   | 2  | 0  | 0    | 0   |  |
| C76.0      | HEAD,FAC E,NECK NOS | 1           | 0        | 1            | 1    | 0      | 0          | 0  | 0  | 0   | 0  | 1  | 0    | 0   |  |
| C13.9      | HYPOPHARYNX NOS     | 1           | 1        | 0            | 1    | 0      | 0          | 0  | 0  | 0   | 1  | 0  | 0    | 0   |  |
| C64.9      | KIDNEY NOS          | 36          | 33       | 3            | 33   | 3      | 0          | 20 | 3  | 4   | 2  | 0  | 3    | 4   |  |
| C32.0 - .9 | LARYNX - ALL        | 11          | 7        | 4            | 11   | 0      | 0          | 2  | 1  | 1   | 3  | 0  | 4    | 0   |  |
| C00.1      | LIP, EXTERNAL LOWER | 1           | 1        | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |  |
| C00.4      | LIP, LOWER MUCOSA   | 1           | 1        | 0            | 1    | 0      | 0          | 0  | 1  | 0   | 0  | 0  | 0    | 0   |  |
| C22.0      | LIVER               | 39          | 33       | 6            | 39   | 0      | 0          | 8  | 13 | 4   | 7  | 1  | 6    | 0   |  |
| C34.9      | LUNG NOS            | 34          | 16       | 18           | 34   | 0      | 0          | 0  | 0  | 2   | 13 | 0  | 18   | 1   |  |
| C34.3      | LUNG, LOWER LOBE    | 38          | 36       | 2            | 38   | 0      | 0          | 11 | 8  | 7   | 11 | 0  | 1    | 0   |  |
| C34.0      | LUNG, MAIN BRONCHUS | 7           | 7        | 0            | 7    | 0      | 0          | 0  | 0  | 2   | 5  | 0  | 0    | 0   |  |

| ICD CODE   | PRIMARY SITE           | TOTAL CASES | CLASS    |              | SEX  |        | AJCC STAGE |    |    |     |    |    |      |     |
|------------|------------------------|-------------|----------|--------------|------|--------|------------|----|----|-----|----|----|------|-----|
|            |                        |             | ANALYTIC | NON ANALYTIC | MALE | FEMALE | 0          | I  | II | III | IV | NA | NONE | UNK |
| C34.2      | LUNG, MIDDLE LOBE      | 5           | 5        | 0            | 5    | 0      | 0          | 3  | 1  | 0   | 1  | 0  | 0    | 0   |
| C34.1      | LUNG, UPPER LOBE       | 55          | 54       | 1            | 53   | 2      | 0          | 19 | 6  | 10  | 18 | 0  | 1    | 1   |
| C77.0 - .9 | LYMPH NODES-ALL        | 21          | 13       | 8            | 21   | 0      | 0          | 2  | 0  | 5   | 6  | 0  | 8    | 0   |
| C38.2      | MEDIASTINUM, POSTERIOR | 1           | 1        | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |
| C70.0      | MENINGES, CEREBRAL     | 1           | 1        | 0            | 1    | 0      | 0          | 0  | 0  | 0   | 0  | 1  | 0    | 0   |
| C04.9      | MOUTH FLOOR NOS        | 5           | 5        | 0            | 5    | 0      | 0          | 3  | 0  | 0   | 2  | 0  | 0    | 0   |
| C06.9      | MOUTH NOS              | 3           | 0        | 3            | 3    | 0      | 0          | 0  | 0  | 0   | 0  | 0  | 3    | 0   |
| C06.0      | MOUTH, CHEEK MUCOSA    | 1           | 1        | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |
| C30.0      | NASAL CAVITY           | 1           | 0        | 1            | 1    | 0      | 0          | 0  | 0  | 0   | 0  | 0  | 1    | 0   |
| C11.9      | NASOPHARYNX NOS        | 3           | 2        | 1            | 3    | 0      | 0          | 0  | 1  | 1   | 0  | 0  | 1    | 0   |
| C10.9      | OROPHARYNX NOS         | 3           | 3        | 0            | 3    | 0      | 0          | 0  | 0  | 0   | 3  | 0  | 0    | 0   |

| ICD CODE   | PRIMARY SITE          | TOTAL CASES | CLASS    |              | SEX  |        | AJCC STAGE |    |    |     |    |    |      |     |
|------------|-----------------------|-------------|----------|--------------|------|--------|------------|----|----|-----|----|----|------|-----|
|            |                       |             | ANALYTIC | NON ANALYTIC | MALE | FEMALE | 0          | I  | II | III | IV | NA | NONE | UNK |
| C56.9      | OVARY                 | 1           | 1        | 0            | 0    | 1      | 0          | 0  | 0  | 1   | 0  | 0  | 0    | 0   |
| C05.0      | PALATE, HARD          | 1           | 1        | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |
| C25.0 - .9 | PANCREAS - ALL        | 23          | 18       | 5            | 23   | 0      | 0          | 3  | 6  | 2   | 7  | 0  | 5    | 0   |
| C75.0      | PARATHYROID GLAND     | 1           | 1        | 0            | 1    | 0      | 0          | 0  | 0  | 0   | 0  | 1  | 0    | 0   |
| C07.9      | PAROTID GLAND         | 1           | 1        | 0            | 1    | 0      | 0          | 0  | 0  | 1   | 0  | 0  | 0    | 0   |
| C60.0 - .9 | PENIS - ALL           | 6           | 6        | 0            | 6    | 0      | 4          | 0  | 1  | 1   | 0  | 0  | 0    | 0   |
| C48.2      | PERITONEUM NOS        | 1           | 0        | 1            | 0    | 1      | 0          | 0  | 0  | 0   | 0  | 0  | 1    | 0   |
| C75.1      | PITUITARY             | 3           | 3        | 0            | 3    | 0      | 0          | 0  | 0  | 0   | 0  | 3  | 0    | 0   |
| C38.4      | PLEURA, NOS           | 3           | 1        | 2            | 3    | 0      | 0          | 0  | 0  | 0   | 2  | 0  | 1    | 0   |
| C61.9      | PROSTATE              | 188         | 156      | 32           | 188  | 0      | 0          | 38 | 91 | 15  | 11 | 0  | 32   | 1   |
| C12.9      | PYRIFORM SINUS        | 7           | 4        | 3            | 7    | 0      | 0          | 0  | 0  | 1   | 3  | 0  | 3    | 0   |
| C19.9      | RECTOSIGMOID JUNCTION | 1           | 1        | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |
| C20.9      | RECTUM NOS            | 12          | 9        | 3            | 11   | 1      | 0          | 3  | 2  | 2   | 2  | 0  | 3    | 0   |
| C65.9      | RENAL PELVIS          | 3           | 3        | 0            | 3    | 0      | 1          | 1  | 0  | 1   | 0  | 0  | 0    | 0   |
| C31.9      | SINUS, ACCESSORY      | 1           | 1        | 0            | 1    | 0      | 0          | 0  | 0  | 0   | 1  | 0  | 0    | 0   |

| ICD CODE  | PRIMARY SITE               | TOTAL CASES | CLASS    |              | SEX  |        | AJCC STAGE |    |    |     |    |    |      |     |  |
|-----------|----------------------------|-------------|----------|--------------|------|--------|------------|----|----|-----|----|----|------|-----|--|
|           |                            |             | ANALYTIC | NON ANALYTIC | MALE | FEMALE | 0          | I  | II | III | IV | NA | NONE | UNK |  |
|           | Y NOS                      |             |          |              |      |        |            |    |    |     |    |    |      |     |  |
| C31.0     | SINUS, MAXILLARY           | 2           | 2        | 0            | 2    | 0      | 0          | 0  | 0  | 0   | 2  | 0  | 0    | 0   |  |
| C44.0-.9  | SKIN -ALL                  | 99          | 61       | 38           | 97   | 2      | 13         | 22 | 7  | 5   | 2  | 1  | 37   | 12  |  |
| C17.0-.09 | SMALL INTESTINE            | 5           | 2        | 3            | 5    | 0      | 0          | 0  | 0  | 1   | 1  | 0  | 3    | 0   |  |
| C49.0-.9  | SOFT TISSUES - ALL         | 8           | 6        | 2            | 8    | 0      | 0          | 2  | 1  | 2   | 1  | 0  | 1    | 1   |  |
| C72.0     | SPINAL CORD                | 1           | 1        | 0            | 1    | 0      | 0          | 0  | 0  | 0   | 0  | 1  | 0    | 0   |  |
| C16.9     | STOMACH NOS                | 4           | 2        | 2            | 4    | 0      | 0          | 1  | 0  | 0   | 1  | 0  | 2    | 0   |  |
| C16.2     | STOMACH, BODY              | 2           | 2        | 0            | 2    | 0      | 0          | 1  | 0  | 1   | 0  | 0  | 0    | 0   |  |
| C16.0     | STOMACH, CARDIA            | 11          | 11       | 0            | 11   | 0      | 0          | 2  | 2  | 1   | 4  | 0  | 0    | 2   |  |
| C16.3     | STOMACH, GASTRIC ANTRUM    | 2           | 2        | 0            | 2    | 0      | 0          | 1  | 0  | 0   | 1  | 0  | 0    | 0   |  |
| C16.6     | STOMACH, GREATER CURVATURE | 1           | 1        | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |  |
| C62.9     | TESTIS NOS                 | 1           | 1        | 0            | 1    | 0      | 0          | 1  | 0  | 0   | 0  | 0  | 0    | 0   |  |
| C73.9     | THYROID GLAND              | 8           | 6        | 2            | 8    | 0      | 0          | 3  | 1  | 1   | 1  | 0  | 2    | 0   |  |

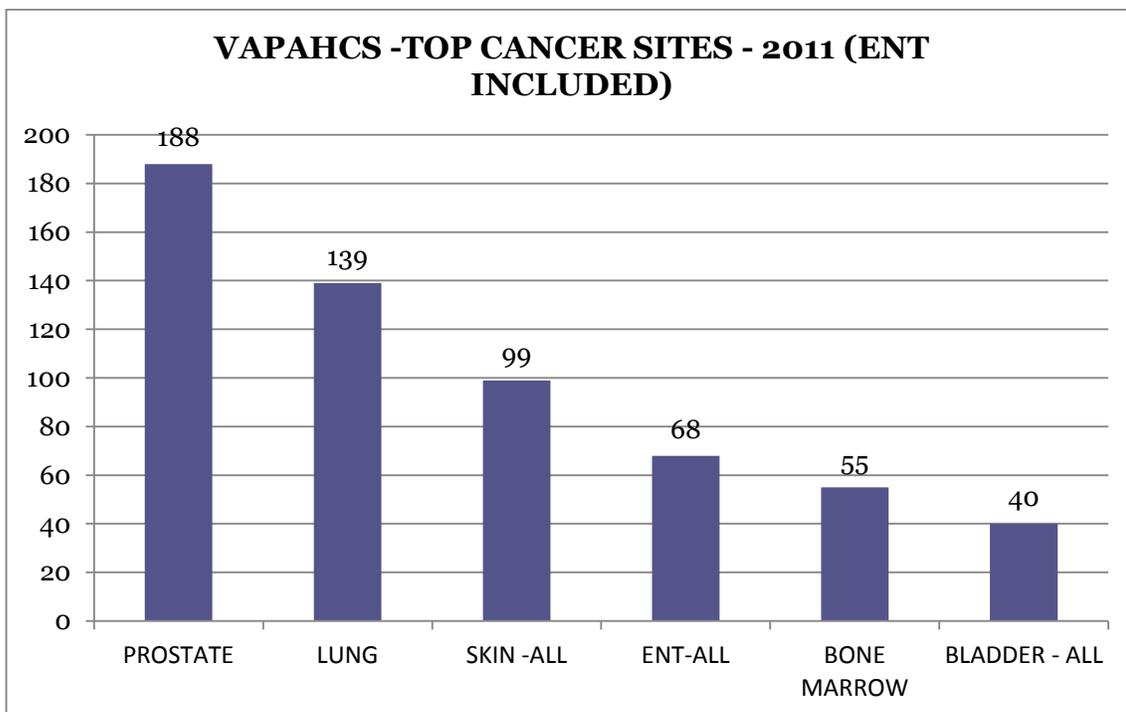
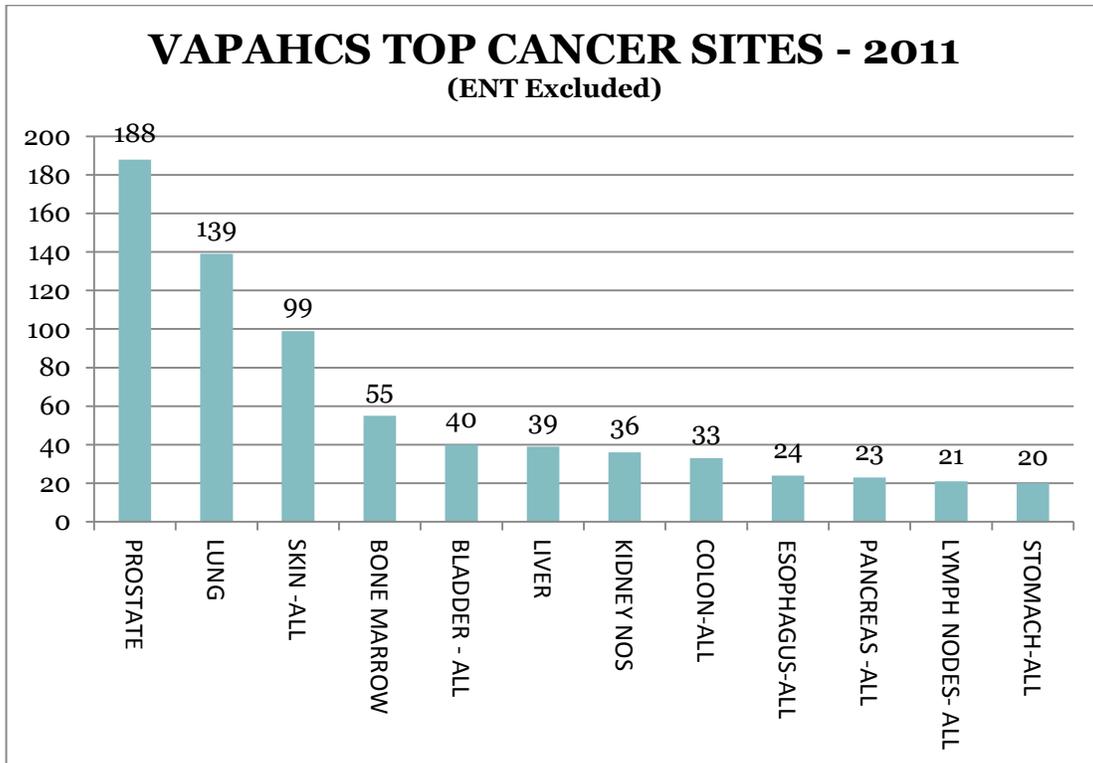
| ICD CODE | PRIMARY SITE             | TOTAL CASES | CLASS      |              | SEX        |           | AJCC STAGE |            |            |           |            |           |            |           |
|----------|--------------------------|-------------|------------|--------------|------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|-----------|
|          |                          |             | ANALYTIC   | NON ANALYTIC | MALE       | FEMALE    | 0          | I          | II         | III       | IV         | NA        | NONE       | UNK       |
| C01.9    | TONGUE BASE              | 6           | 5          | 1            | 6          | 0         | 0          | 0          | 0          | 2         | 3          | 0         | 1          | 0         |
| C02.9    | TONGUE NOS               | 4           | 3          | 1            | 4          | 0         | 0          | 1          | 1          | 0         | 1          | 0         | 1          | 0         |
| C02.3    | TONGUE, ANTERIOR 2/3 NOS | 2           | 2          | 0            | 2          | 0         | 0          | 2          | 0          | 0         | 0          | 0         | 0          | 0         |
| C02.2    | TONGUE, VENTRAL SURFACE  | 1           | 1          | 0            | 1          | 0         | 0          | 0          | 0          | 1         | 0          | 0         | 0          | 0         |
| C09.9    | TONSIL NOS               | 6           | 5          | 1            | 6          | 0         | 0          | 1          | 0          | 0         | 4          | 0         | 1          | 0         |
| C09.1    | TONSILLAR PILLAR         | 1           | 1          | 0            | 1          | 0         | 0          | 0          | 0          | 0         | 1          | 0         | 0          | 0         |
| C80.9    | UNKNOWN PRIMARY          | 10          | 9          | 1            | 10         | 0         | 0          | 0          | 0          | 0         | 0          | 9         | 1          | 0         |
| C66.9    | URETER                   | 4           | 4          | 0            | 4          | 0         | 2          | 0          | 1          | 1         | 0          | 0         | 0          | 0         |
| C68.0    | URETHRA                  | 2           | 2          | 0            | 2          | 0         | 0          | 0          | 0          | 0         | 1          | 0         | 0          | 1         |
|          | <b>TOTAL</b>             | <b>906</b>  | <b>713</b> | <b>193</b>   | <b>879</b> | <b>27</b> | <b>35</b>  | <b>181</b> | <b>161</b> | <b>92</b> | <b>153</b> | <b>80</b> | <b>174</b> | <b>30</b> |

## 2011 VAPAHCS TOP CANCER SITES

| ICD CODE        | PRIMARY SITE        | TOTAL CASES (#) | PERCENT | CLASS OF CASE |              | SEX  |        |
|-----------------|---------------------|-----------------|---------|---------------|--------------|------|--------|
|                 |                     |                 |         | ANALYTIC      | NON ANALYTIC | MALE | FEMALE |
| C61.9           | PROSTATE            | 188             | 21%     | 156           | 32           | 188  | 0      |
| C34.0-<br>C34.9 | LUNG                | 139             | 15%     | 118           | 21           | 137  | 2      |
| C44.0 -<br>.9   | SKIN -ALL           | 99              | 11%     | 61            | 38           | 97   | 2      |
| C42.1           | BONE<br>MARROW      | 55              | 6%      | 39            | 16           | 53   | 2      |
| C67.0 -<br>.9   | BLADDER -<br>ALL    | 40              | 4%      | 31            | 9            | 39   | 1      |
| C22.0           | LIVER               | 39              | 4%      | 33            | 6            | 39   | 0      |
| C64.9           | KIDNEY NOS          | 36              | 4%      | 33            | 3            | 33   | 3      |
| C18.0 -<br>.9   | COLON-ALL           | 33              | 4%      | 30            | 3            | 30   | 3      |
| C15.1-<br>C15.9 | ESOPHAGUS-<br>ALL   | 24              | 3%      | 22            | 2            | 23   | 1      |
| C25.0 -<br>.9   | PANCREAS -<br>ALL   | 23              | 3%      | 18            | 5            | 23   | 0      |
| C77.0 -<br>.9   | LYMPH<br>NODES- ALL | 21              | 2%      | 13            | 8            | 21   | 0      |
| C16.0-<br>C16.9 | STOMACH-<br>ALL     | 20              | 2%      | 18            | 2            | 20   | 0      |

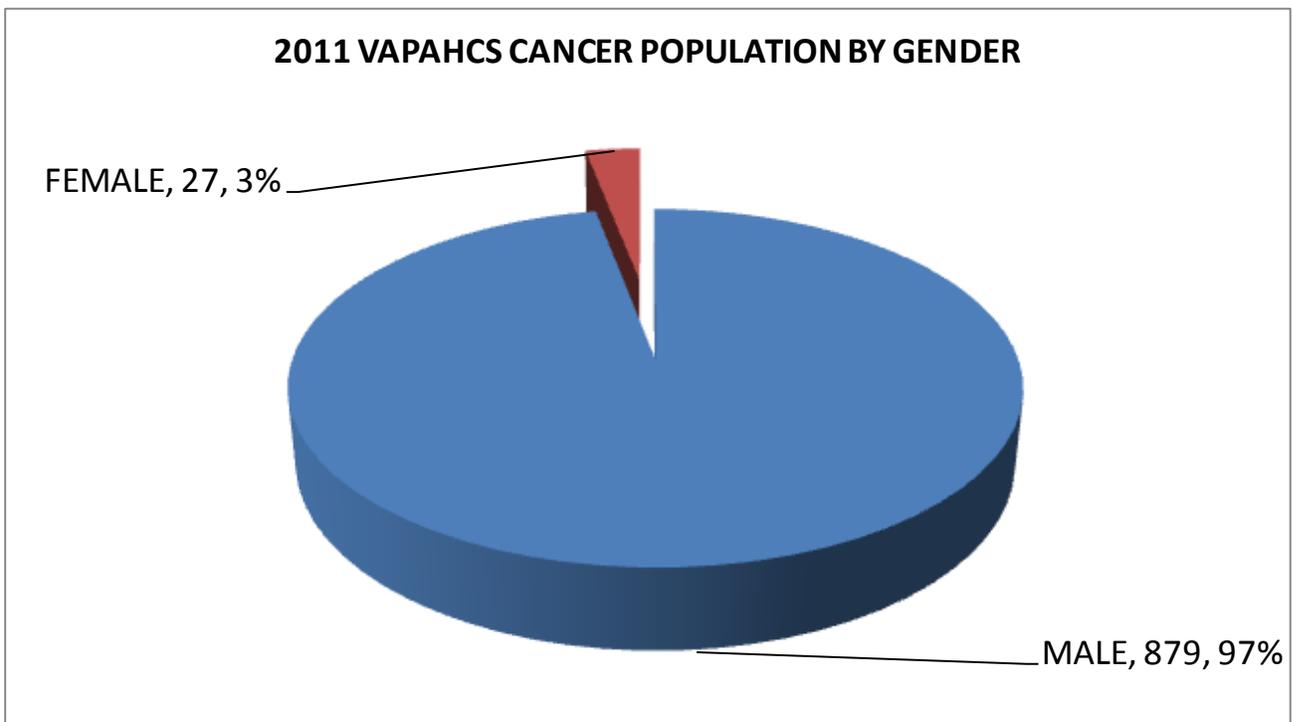
If all Head and Neck cancer cases were grouped together, this group would be among the top 5 Cancer types

| ICD CODE                | PRIMARY SITE     | TOTAL CASES | PERCENT | CLASS OF CASE |              | SEX  |        |
|-------------------------|------------------|-------------|---------|---------------|--------------|------|--------|
|                         |                  |             |         | ANALYTIC      | NON ANALYTIC | MALE | FEMALE |
| C61.9                   | PROSTATE         | 188         | 21%     | 156           | 32           | 188  | 0      |
| C34.0-<br>C34.9         | LUNG             | 139         | 15%     | 118           | 21           | 137  | 2      |
| C44.0 -<br>.9           | SKIN -ALL        | 99          | 11%     | 61            | 38           | 97   | 2      |
| C00-<br>C14:C30-<br>C32 | ENT-ALL          | 68          | 8%      | 52            | 16           | 68   | 0      |
| C42.1                   | BONE<br>MARROW   | 55          | 6%      | 39            | 16           | 53   | 2      |
| C67.0 -<br>.9           | BLADDER -<br>ALL | 40          | 4%      | 31            | 9            | 39   | 1      |



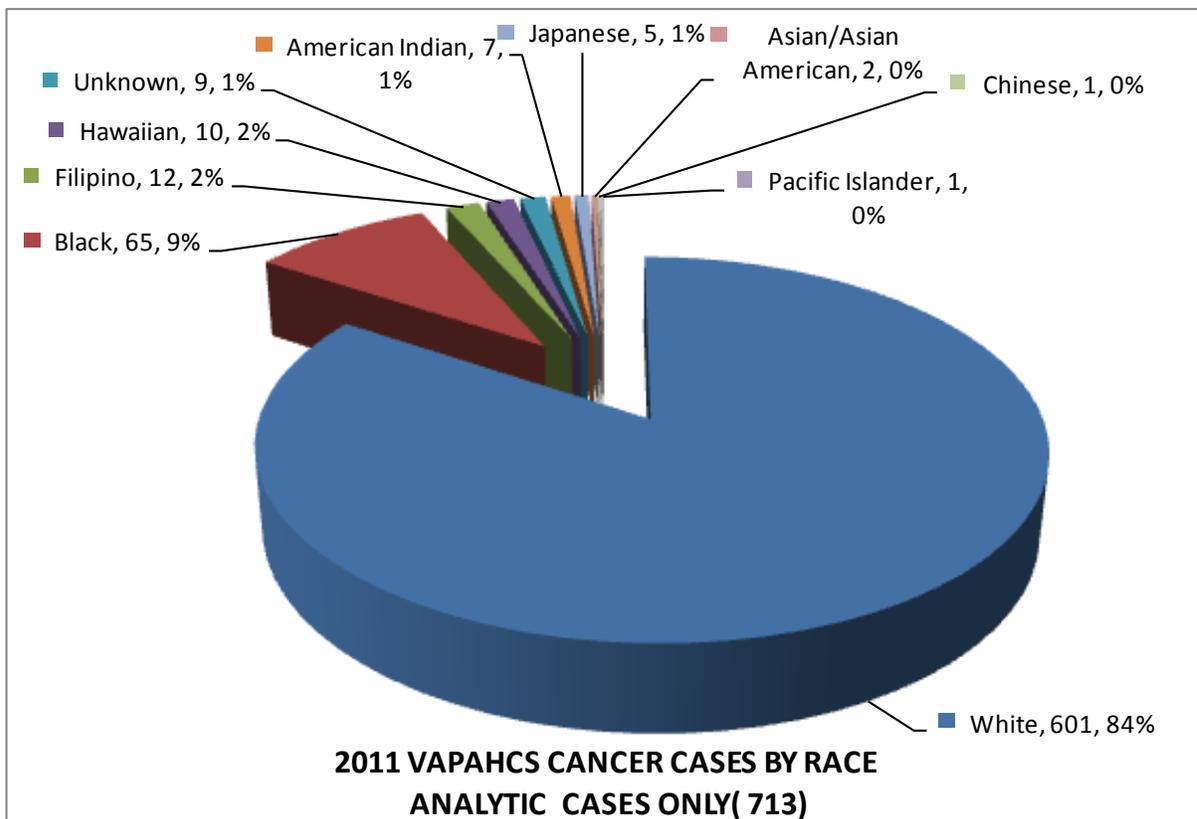
## 2011 VAPAHCS CANCER POPULATION BY GENDER

| SITE GROUP | TOTAL CASES | SEX (#) |        | SEX (%) |        |
|------------|-------------|---------|--------|---------|--------|
|            |             | MALE    | FEMALE | MALE    | FEMALE |
| ALL SITES  | 906         | 879     | 27     | 97%     | 3%     |



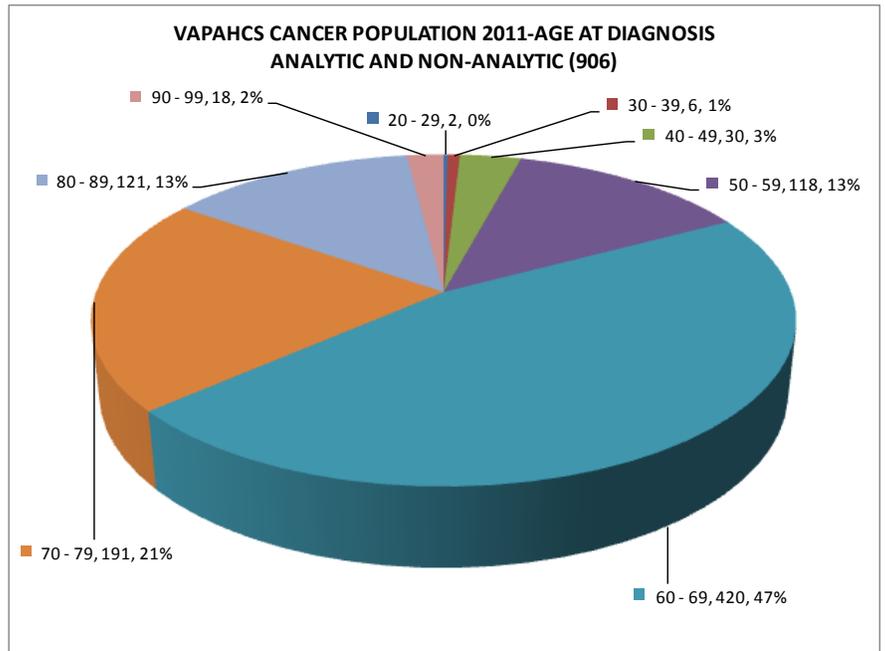
## 2011 VAPAHCS CANCER POPULATION BY RACE – ANALYTIC CASES ONLY (713)

| RACE                 | #          | %           |
|----------------------|------------|-------------|
| White                | 601        | 84.3%       |
| Black                | 65         | 9.1%        |
| Filipino             | 12         | 1.7%        |
| Hawaiian             | 10         | 1.4%        |
| Unknown              | 9          | 1.3%        |
| American Indian      | 7          | 1.0%        |
| Japanese             | 5          | 0.7%        |
| Asian/Asian American | 2          | 0.3%        |
| Chinese              | 1          | 0.1%        |
| Pacific Islander     | 1          | 0.1%        |
| <b>TOTAL</b>         | <b>713</b> | <b>100%</b> |



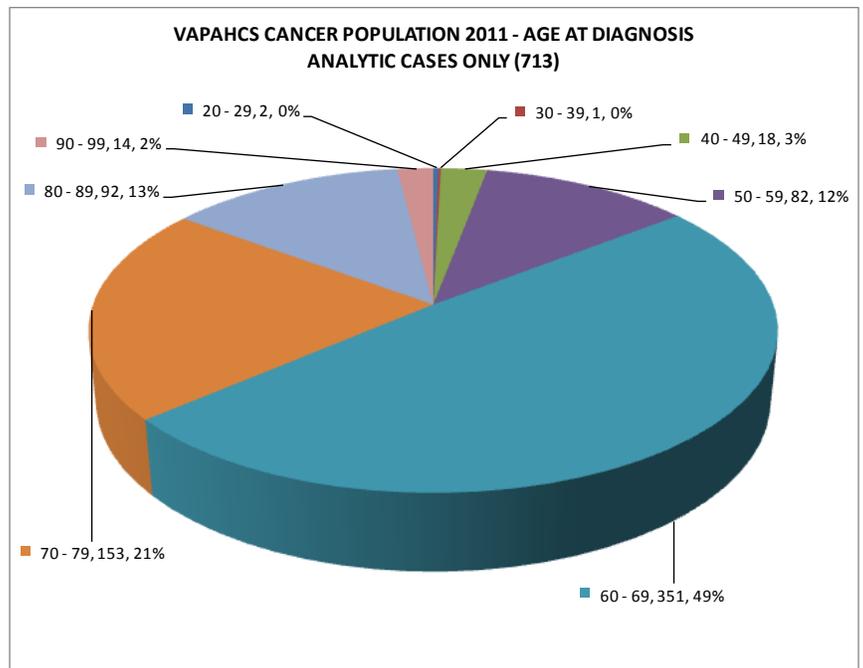
## 2011 VAPAHCS CANCER POPULATION – AGE AT DIAGNOSIS (Analytic and Non-Analytic)

| AGE RANGE    | NUMBER     | PERCENT     |
|--------------|------------|-------------|
| 20 - 29      | 2          | 0.20%       |
| 30 - 39      | 6          | 0.70%       |
| 40 - 49      | 30         | 3.30%       |
| 50 - 59      | 118        | 13.00%      |
| 60 - 69      | 420        | 46.40%      |
| 70 - 79      | 191        | 21.10%      |
| 80 - 89      | 121        | 13.40%      |
| 90 - 99      | 18         | 2.00%       |
| <b>TOTAL</b> | <b>906</b> | <b>100%</b> |



## 2011 VAPAHCS CANCER POPULATION – AGE AT DIAGNOSIS (Analytic Only)

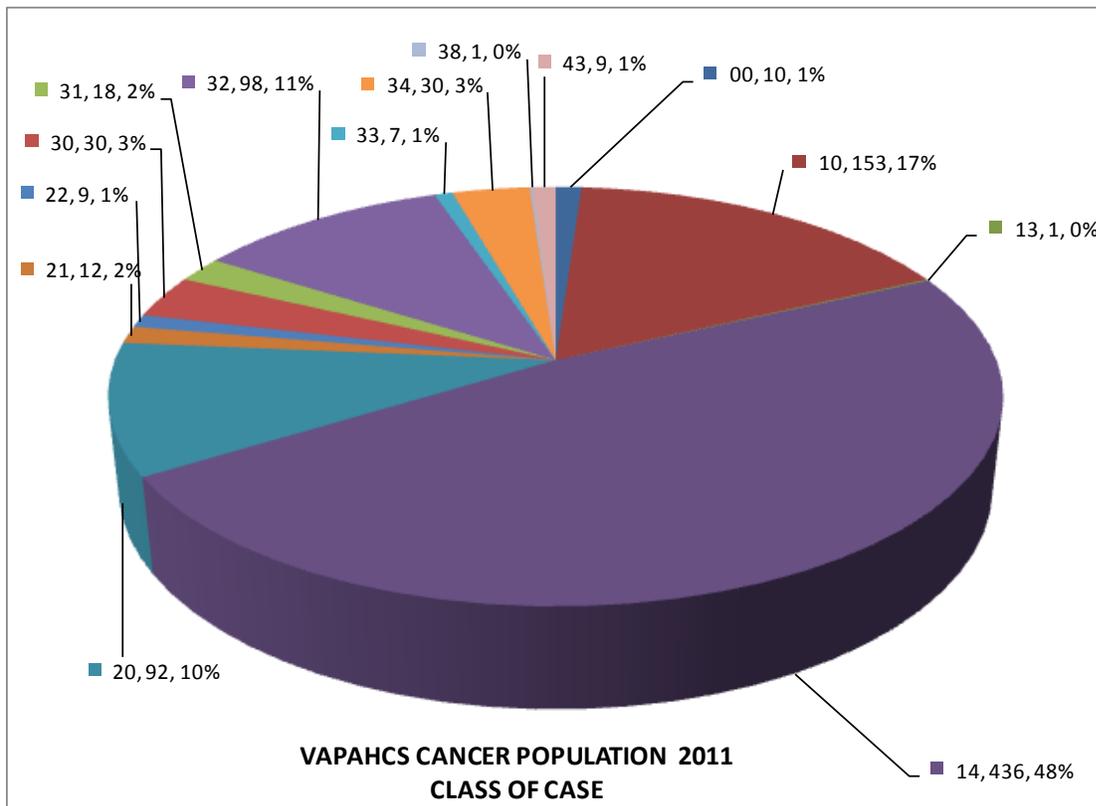
| AGE RANGE    | NUMBER     | PERCENT     |
|--------------|------------|-------------|
| 20 - 29      | 2          | 0.3%        |
| 30 - 39      | 1          | 0.1%        |
| 40 - 49      | 18         | 2.5%        |
| 50 - 59      | 82         | 11.5%       |
| 60 - 69      | 351        | 49.2%       |
| 70 - 79      | 153        | 21.5%       |
| 80 - 89      | 92         | 12.9%       |
| 90 - 99      | 14         | 2.0%        |
| <b>TOTAL</b> | <b>713</b> | <b>100%</b> |



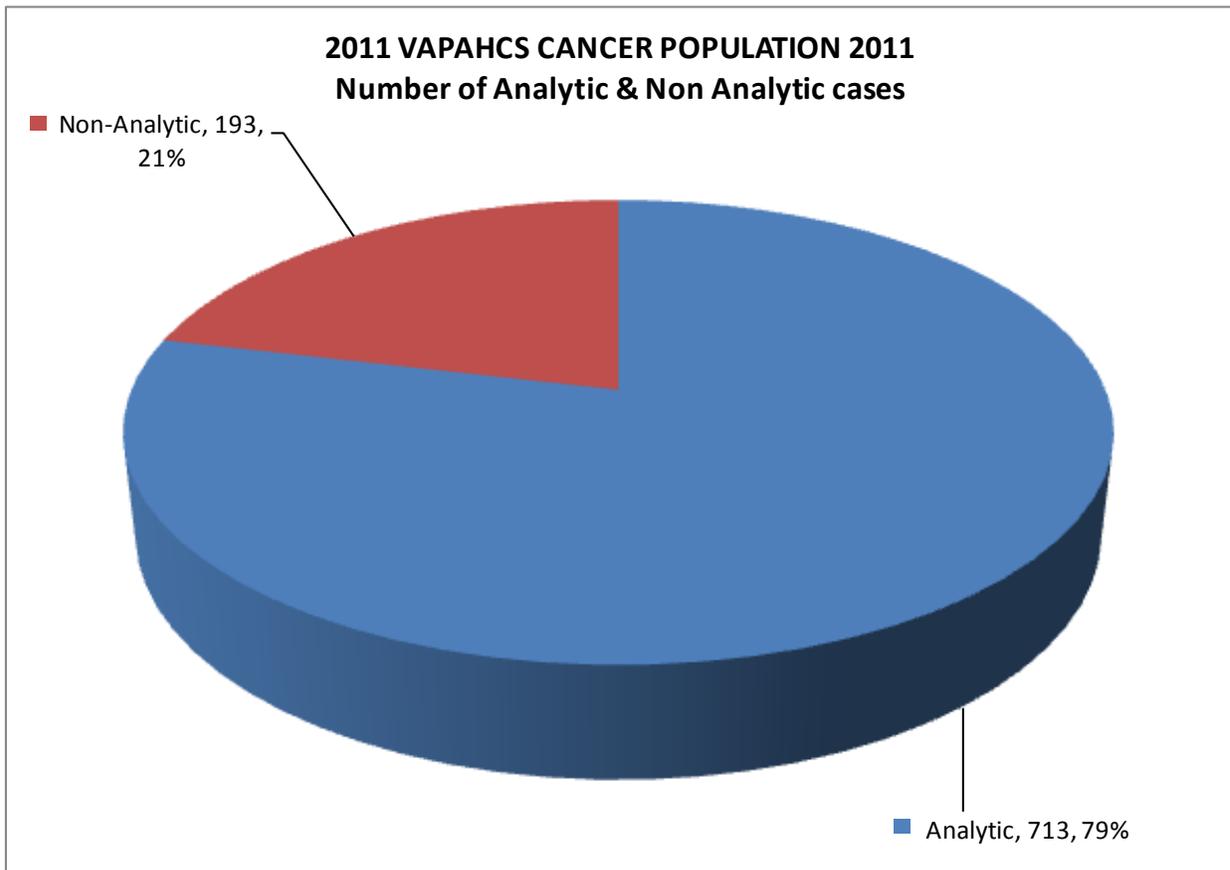
## 2011 VAPAHCS CANCER POPULATION – CLASS OF CASE

| CLASS OF CASE - 2011  |     |            |
|---|-----|------------|
| <b>TOTAL CASES</b>  |     | <b>906</b> |
|   |     |            |
| <b>ANALYTIC CASES</b>   |     |            |
| Class 00: Initial diagnosis at the reporting facility AND all treatment or a decision not to treat was done elsewhere   | 10  |            |
| Class 10: Initial diagnosis at the reporting facility or in a staff physician's office AND part or all of first course treatment or a decision not to treat was at the reporting facility, NOS              | 153 |            |
| Class 13: Initial diagnosis at the reporting facility AND part of first course treatment was done at the reporting facility   | 1   |            |
| Class 14: Initial diagnosis at the reporting facility AND all first course treatment or a decision not to treat was done at the reporting facility  | 436 |            |
| Class 20: Initial diagnosis elsewhere AND all or part of first course treatment was done at the reporting facility, NOS   | 92  |            |
| Class 21: Initial diagnosis elsewhere AND part of first course treatment was done at the reporting facility   | 12  |            |
| Class 22: Initial diagnosis elsewhere AND all first course treatment or a decision not to treat was done at the reporting facility  | 9   |            |
| <b>TOTAL ANALYTIC CASES</b>   |     | <b>713</b> |
|   |     |            |
| <b>NON-ANALYTIC</b>   |     |            |
| Class 30: Initial diagnosis and all first course treatment elsewhere AND reporting facility participated in diagnostic workup (for example, consult only, staging workup after initial diagnosis elsewhere) | 30  |            |
| Class 31: Initial diagnosis and all first course treatment provided elsewhere AND reporting facility provided in-transit care   | 18  |            |
| Class 32: Diagnosis AND all first course treatment provided elsewhere AND patient presents at reporting facility with disease recurrence or persistence   | 98  |            |
| Class 33: Diagnosis AND all first course treatment provided elsewhere AND patient presents at reporting facility with disease history only  | 7   |            |
| Class 34: Type of case not required by CoC to be accessioned AND initial diagnosis AND part or all of first course treatment by reporting facility  | 30  |            |
| Class 38: Initial diagnosis established by autopsy at the reporting facility, cancer not suspected prior to death   | 1   |            |
| Class 43: Pathology or other lab specimens only   | 9   |            |
| <b>TOTAL NON-ANALYTIC CASES</b>   |     | <b>193</b> |

| CLASS OF CASE | NUMBER     | PERCENT        | Analytic or Non-Analytic |
|---------------|------------|----------------|--------------------------|
| 00            | 10         | 1.10%          | Analytic                 |
| 10            | 153        | 16.90%         | Analytic                 |
| 13            | 1          | 0.10%          | Analytic                 |
| 14            | 436        | 48.10%         | Analytic                 |
| 20            | 92         | 10.20%         | Analytic                 |
| 21            | 12         | 1.30%          | Analytic                 |
| 22            | 9          | 1.00%          | Analytic                 |
| 30            | 30         | 3.30%          | Non-Analytic             |
| 31            | 18         | 2.00%          | Non-Analytic             |
| 32            | 98         | 10.80%         | Non-Analytic             |
| 33            | 7          | 0.80%          | Non-Analytic             |
| 34            | 30         | 3.30%          | Non-Analytic             |
| 38            | 1          | 0.10%          | Non-Analytic             |
| 43            | 9          | 1.00%          | Non-Analytic             |
| <b>TOTAL</b>  | <b>906</b> | <b>100.00%</b> |                          |



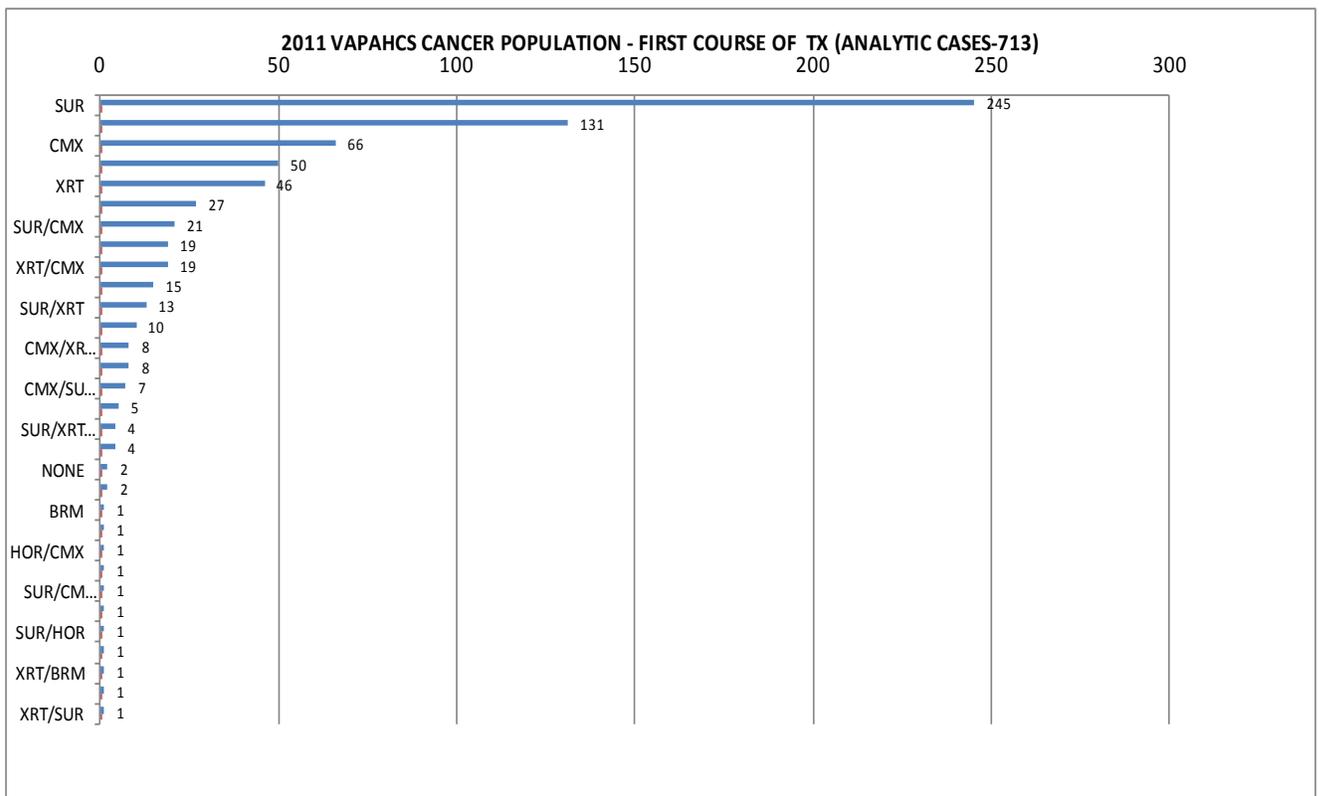
| CLASS        | NUMBER     | PERCENT     |
|--------------|------------|-------------|
| Analytic     | 713        | 79%         |
| Non-Analytic | 193        | 21%         |
| <b>TOTAL</b> | <b>906</b> | <b>100%</b> |



## 2011 VAPAHCS CANCER POPULATION – First Course of treatment (713 Analytic cases only)

| FIRST COURSE OF TX | #   | %     |
|--------------------|-----|-------|
| SUR                | 245 | 34.4% |
| NTX                | 131 | 18.4% |
| CMX                | 66  | 9.3%  |
| CMX/XRT            | 50  | 7.0%  |
| XRT                | 46  | 6.5%  |
| HOR                | 27  | 3.8%  |
| SUR/CMX            | 21  | 2.9%  |
| HOR/XRT            | 19  | 2.7%  |
| XRT/CMX            | 19  | 2.7%  |
| CMX/HOR            | 15  | 2.1%  |
| SUR/XRT            | 13  | 1.8%  |
| OTR                | 10  | 1.4%  |
| CMX/XRT/SUR        | 8   | 1.1%  |
| SUR/CMX/XRT        | 8   | 1.1%  |
| CMX/SUR/BRM        | 7   | 1.0%  |

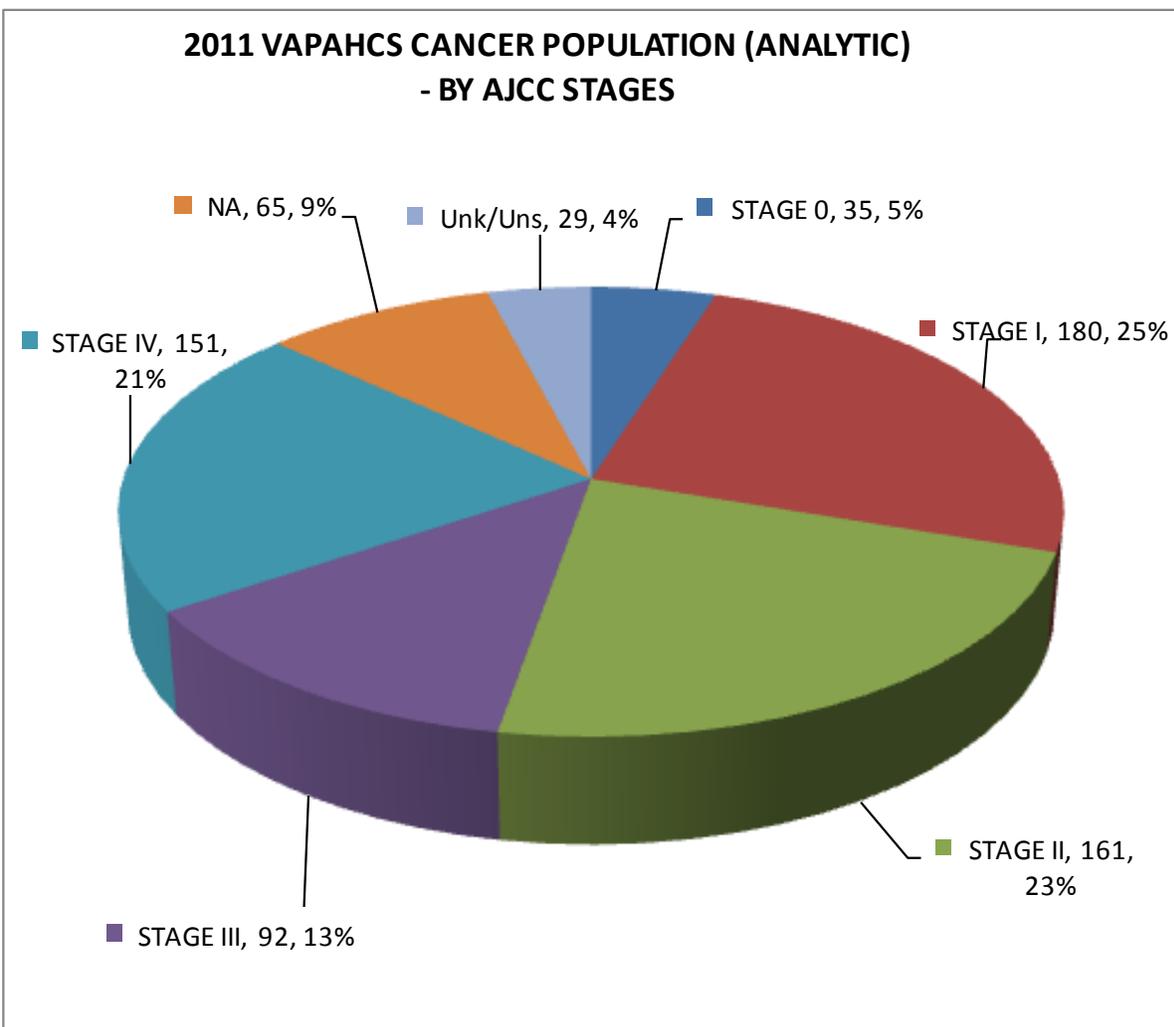
|              |            |               |
|--------------|------------|---------------|
| SUR/BRM      | 5          | 0.7%          |
| SUR/XRT/CMX  | 4          | 0.6%          |
| XRT/CMX/SUR  | 4          | 0.6%          |
| NONE         | 2          | 0.3%          |
| SUR/HOR/XRT  | 2          | 0.3%          |
| BRM          | 1          | 0.1%          |
| CMX/SUR/XRT  | 1          | 0.1%          |
| HOR/CMX      | 1          | 0.1%          |
| HOR/OTR      | 1          | 0.1%          |
| SUR/CMX/BRM  | 1          | 0.1%          |
| SUR/CMX/HOR  | 1          | 0.1%          |
| SUR/HOR      | 1          | 0.1%          |
| SUR/OTR      | 1          | 0.1%          |
| XRT/BRM      | 1          | 0.1%          |
| XRT/HOR      | 1          | 0.1%          |
| XRT/SUR      | 1          | 0.1%          |
| <b>TOTAL</b> | <b>713</b> | <b>100.0%</b> |



## 2011 VAPAHCS CANCER POPULATION

– AJCC Stage (713 Analytic cases only)

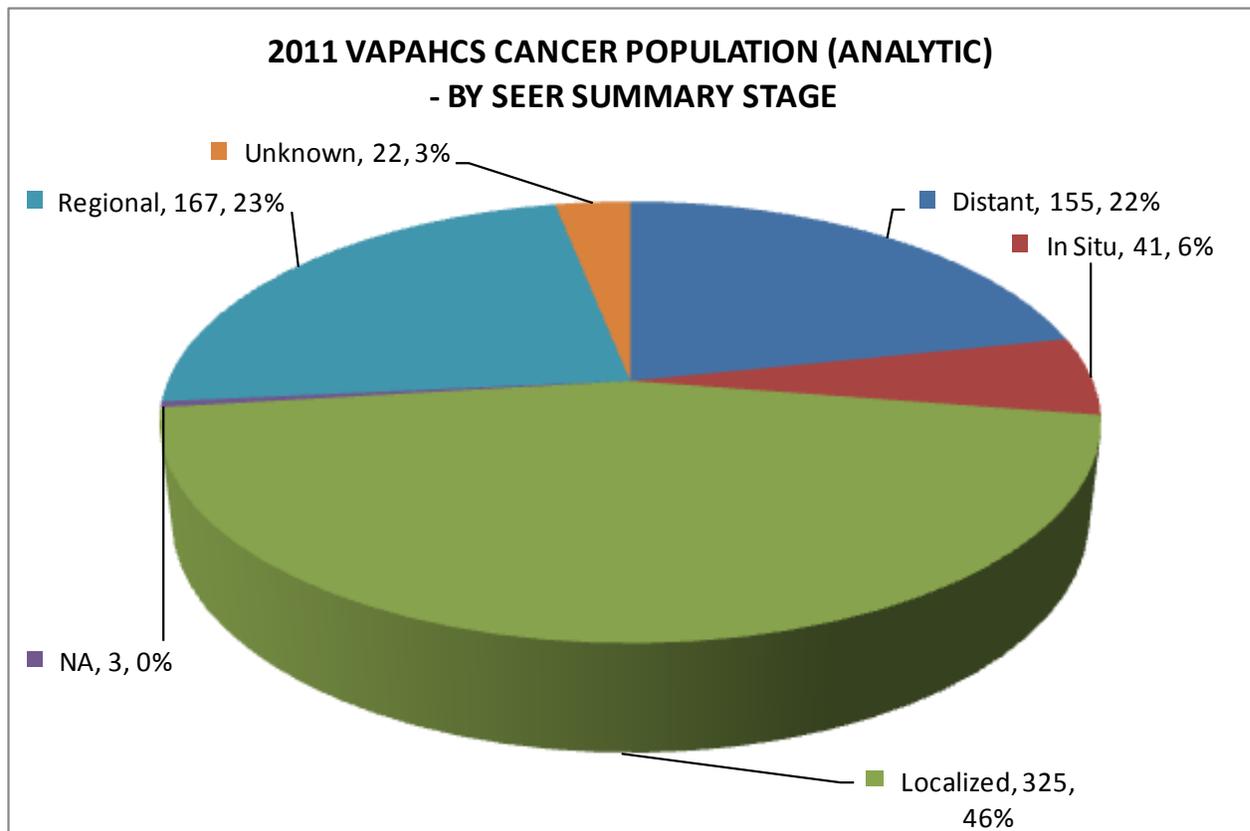
| AJCC STAGING | #   | %    |
|--------------|-----|------|
| STAGE 0      | 35  | 5%   |
| STAGE I      | 180 | 25%  |
| STAGE II     | 161 | 23%  |
| STAGE III    | 92  | 13%  |
| STAGE IV     | 151 | 21%  |
| NA           | 65  | 9%   |
| Unk/Uns      | 29  | 4%   |
|              | 713 | 100% |



## 2011 VAPAHCS CANCER POPULATION

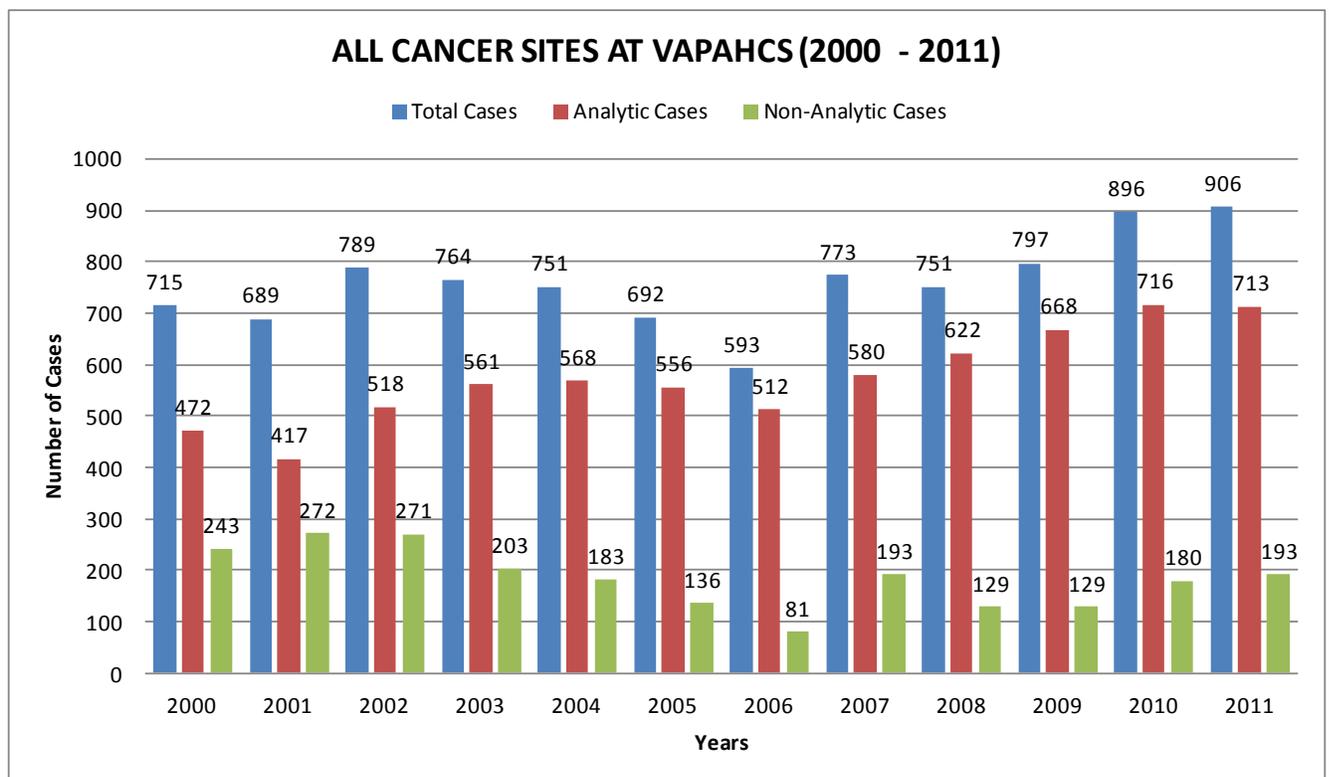
– SEER Summary Stage (713 Analytic cases only)

| SEER SUMMARY STAGE AT DX | #   | %    |
|--------------------------|-----|------|
| Distant                  | 155 | 22%  |
| In Situ                  | 41  | 6%   |
| Localized                | 325 | 46%  |
| NA                       | 3   | 0%   |
| Regional                 | 167 | 23%  |
| Unknown                  | 22  | 3%   |
|                          | 713 | 100% |



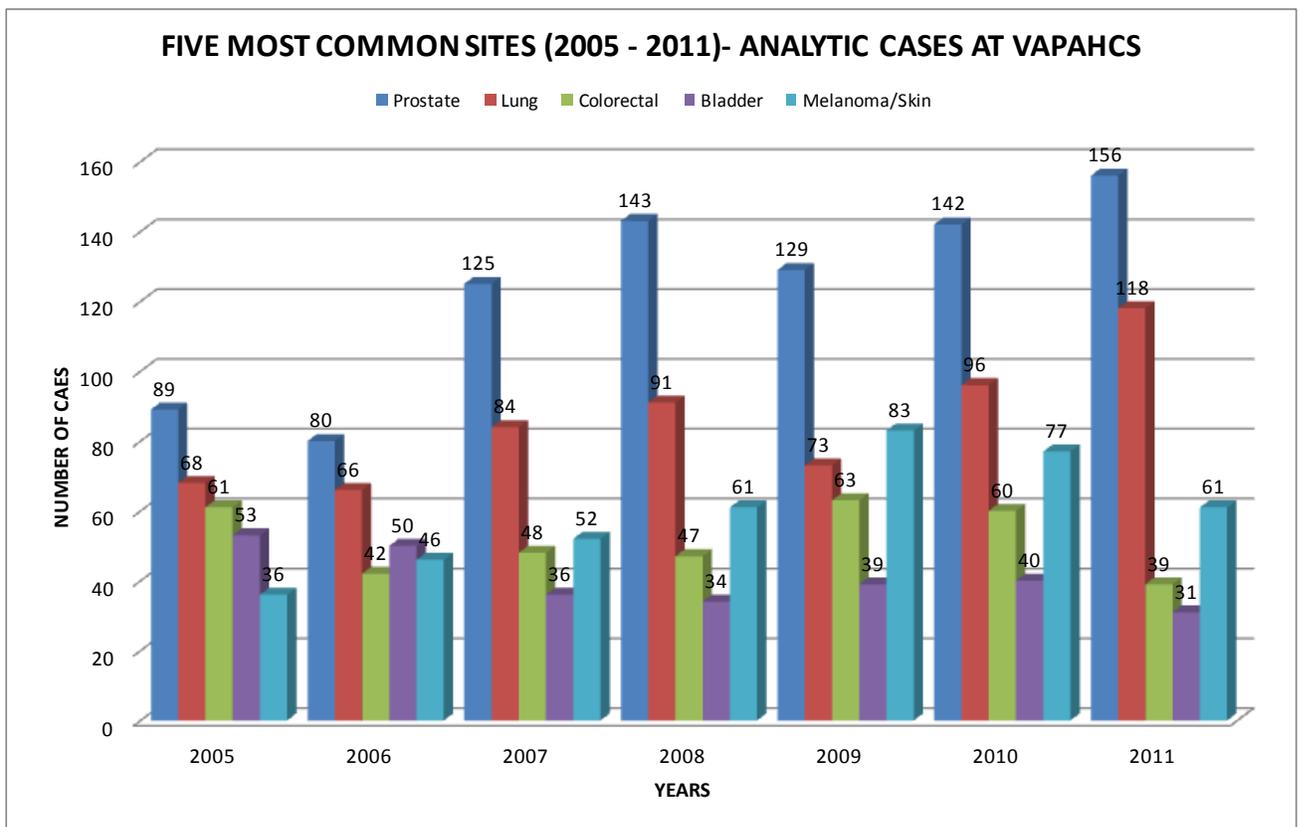
## VAPAHCS ALL CANCER SITES – 2000 - 2011

|                           | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| <b>Total Cases</b>        | 715  | 689  | 789  | 764  | 751  | 692  | 593  | 773  | 751  | 797  | 896  | 906  |
| <b>Analytic Cases</b>     | 472  | 417  | 518  | 561  | 568  | 556  | 512  | 580  | 622  | 668  | 716  | 713  |
| <b>Non-Analytic Cases</b> | 243  | 272  | 271  | 203  | 183  | 136  | 81   | 193  | 129  | 129  | 180  | 193  |



## 2011 VAPAHCS TOP FIVE MOST COMMON CANCER SITES

|                      | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|----------------------|------|------|------|------|------|------|------|
| <b>Prostate</b>      | 89   | 80   | 125  | 143  | 129  | 142  | 156  |
| <b>Lung</b>          | 68   | 66   | 84   | 91   | 73   | 96   | 118  |
| <b>Colorectal</b>    | 61   | 42   | 48   | 47   | 63   | 60   | 39   |
| <b>Bladder</b>       | 53   | 50   | 36   | 34   | 39   | 40   | 31   |
| <b>Melanoma/Skin</b> | 36   | 46   | 52   | 61   | 83   | 77   | 61   |

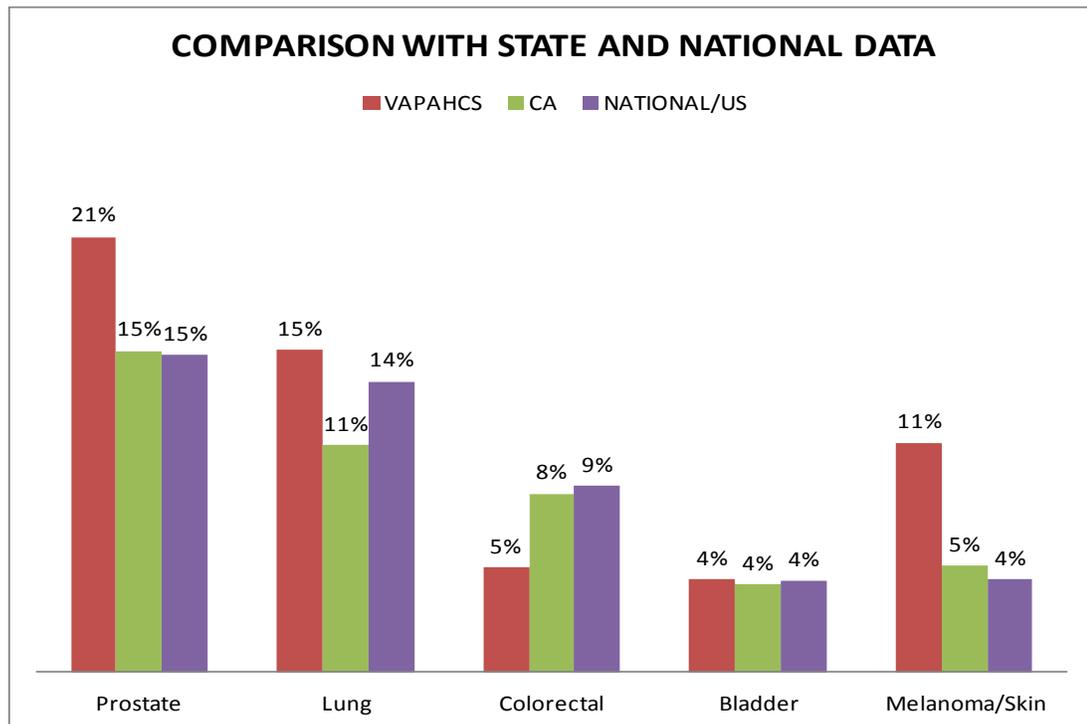


Comparing frequency data of five top most common cancer sites at VAPAHCS, Prostate and Lung cancers were consistently the highest (and increasing) over the period shown.

## COMPARISON -2011 VAPAHCS FIVE MOST COMMON SITES WITH STATE AND NATIONAL DATA

\*Source: American Cancer Society, Cancer Facts and Figures 2011

|                      | VAPAHCS | CA  | NATIONAL/US | VAPAHCS 2011 ALL NEW ACTUAL CASES | CALIFORNIA EXPECTED NEW CASES | NATIONAL US EXPECTED NEW CASES |
|----------------------|---------|-----|-------------|-----------------------------------|-------------------------------|--------------------------------|
| <b>Prostate</b>      | 21%     | 15% | 15%         | 188                               | 25,030                        | 240,890                        |
| <b>Lung</b>          | 15%     | 11% | 14%         | 139                               | 17,660                        | 221,130                        |
| <b>Colorectal</b>    | 5%      | 8%  | 9%          | 45                                | 13,880                        | 141,210                        |
| <b>Bladder</b>       | 4%      | 4%  | 4%          | 40                                | 6,810                         | 69,250                         |
| <b>Melanoma/Skin</b> | 11%     | 5%  | 4%          | 99                                | 8,250                         | 70,230                         |



Comparing with National and State estimates, in 2011 VAPAHCS'S had higher new cases in Prostate cancer than state and national number. This is most likely due to the fact that the VAPAHCS patient population is 97% male. Melanoma/skin cancer was higher while Colorectal was lower. The lower number for Colorectal cancer is attributable to the fact that VAPAHCS has one of the highest colorectal cancer screenings in the nation.\* Lung and Bladder cancers were about the same as National and State numbers.

**Maria Tham**  
Cancer Program

\* See pg 71 for more details on Cancer Prevention Performance Measures at VAPAHCS

## CLINICAL PATIENT SERVICES



## Behavioral Medicine/Psychology

Behavioral Medicine, a sub-discipline of the Psychology service, provides a variety of clinical services to patients with malignant disease and their families. Services include initial assessment and on-going follow-up in outpatient Oncology and Hematology clinics and the Ambulatory Infusion Center, bedside consults and follow-up in inpatient medicine/surgery wards and ICU, and appointments in outpatient Behavioral Medicine clinic. Empirically-supported interventions target emotional support, coping skills training to manage emotional distress, symptoms, procedure-related anxiety, and treatment side-effects, family issues, compliance, tobacco/alcohol/drug use, and issues uniquely related to death and dying. Behavioral Medicine also provides referral to appropriate social and mental health services within the Palo Alto VA, at other VA sites and within the communities in which veterans live. Behavioral Medicine collaborates closely with the treating medical team and other health care providers/services, such as the chaplain service, social work, and hospice.

In 2011, Behavioral Medicine is estimated to have had approximately 500 patient contacts through Oncology and Hematology. In addition, the Staff Psychologist makes her services available for support groups as needed. She is also involved with the interdisciplinary team in meeting the impending Commission on Cancer standards for psychosocial screening of all new cancer patients. The Staff Psychologist also works with the Clinical Nurse Specialist and the Hematology/Oncology Social Worker to address the needs of patients who have completed cancer treatment through the services provided within the Cancer Survivorship clinic.

**Veronica A. Reis, Ph.D.**  
**Staff Psychologist, Behavioral Medicine**  
**Health Behavior Coordinator**

## Dental Service Cancer Care

### Cancer Prevention and Patient Education

As a part of all clinical dental exams, patients are screened for tobacco and alcohol use. Each patient seen is given a head and neck screening exam for detection of head and neck CA and other abnormalities. Biopsies are performed as indicated and if the biopsy is abnormal referrals are made to the appropriate surgical service. Patients who use tobacco products are counseled and are offered referral to the smoking cessation programs our Medical Center offers.

### Clinical Care and Support of Medical Services

The Dental Service continues to be involved in the care of patients who have or have had head and neck Cancer. Once the diagnosis of head and neck cancer is obtained, the Dental Service provides dental care in support of the patient's cancer treatment here at the Medical center. This care includes pretreatment oral care to reduce the risk and severity of oral complications of cancer treatment, oral care during cancer treatment and necessary follow-up oral care once treatment of head and neck cancer is completed.

The Dental service takes an active role to assure that all patients scheduled to receive radiation therapy for head and neck cancer have a complete dental exam and necessary dental treatment prior to starting radiation therapy. The Dental Service receives frequent referrals from Oncology and ENT for supportive dental care, which allows for an excellent multidisciplinary approach to patient management and coordination of care.

The Dental Service also provides pretreatment oral care and necessary oral care during treatment to patients receiving chemotherapy or preparing for bone marrow transplantation. The focus of treatment for these patients is elimination of oral infection or potential infections of dental origin, which could complicate and prolong the course of their medical treatment.

### Tabulation of activity

- In the year 2011 there were **60** patients in the database with a diagnosis of Head & Neck Cancer who needed to be considered for a dental referral.
- The Dental Service saw **34** Head & Neck Cancer patients in 2011 that are either currently under active care or have completed dental evaluations and/or dental care.

- **25** patients had a diagnosis of head & neck CA and no consult was sent to the Dental Service. In each of these cases prior dental screening was not an issue because their radiation therapy was unlikely to involve the oral cavity (maxilla and mandible), these patients were edentulous with no dental issues, no radiation was planned, or the patient was under the care of a private dentist or dental care at another VA facility.
- **1** patient had a Dental Consult sent and was not seen by the dental service during this reporting period. This patient was contacted by the dental service and offered an appointment, but refused to be seen.

**Mark Diehl, DMD**

**Acting Chief, Dental Service**

## Dermatology Service

The Dermatology Service has a longstanding commitment to providing state-of-the-art care for patients diagnosed with all types of skin cancer (basal cell carcinoma, squamous cell carcinoma, melanoma, Merkel cell carcinoma, and cutaneous lymphoma) and continues to advocate skin cancer prevention and early diagnosis. The VAPAHCS Dermatology/Melanoma Clinic is perhaps the only dedicated VA dermatology clinic among VAMCs nationwide to provide specialty care for veterans diagnosed with melanoma and atypical nevi. VA Dermatology coordinates the care of melanoma patients with Surgical and Medical Oncology Services, as well as Stanford Radiation Oncology, for those patients requiring radiation therapy. The Dermatology Service works closely with the Stanford Multidisciplinary Cutaneous Lymphoma Clinic and VAPAHCS medical oncologists to provide appropriate management for individuals diagnosed with cutaneous lymphoma. With the addition of VA Head and Neck Surgeons in VAPAHCS ENT Service, we will be expanding the interdisciplinary care of patients with Merkel cell carcinoma, which is increasing in incidence in our elderly veteran population. The Dermatology Service continues to focus on increased patient and professional awareness of skin cancer as well as early detection and prompt treatment for diagnosed cases.

Clinical research in the field of melanoma has resulted in multiple publications related to the epidemiology, prognostication, and disease outcomes for melanoma. Two VA-study related manuscripts were published by Dr. Susan Swetter in the journal *Cancer* in August 2012, regarding the importance of physician skin examination in promoting thinner melanoma detection in older men, who are more likely to develop and die from melanoma, as well as the adverse effect of lower education and socioeconomic status on physician-patient communication, melanoma awareness, and performance of physician skin examination.

Various interdisciplinary studies related to our (Dermatology/Pathology/Surgery/ENT/Oncology) VAPAHCS/Stanford research are in progress. They utilize existing medical records and archived tissue from melanocytic and other skin tumors for histologic, molecular, and immunohistochemical markers relevant to the pathogenesis and prognosis of melanoma. Current projects including assessment of fluorescence in situ hybridization for improved diagnosis of controversial atypical melanocytic neoplasms, characterization of acquired blue nevi in older individuals, exome sequencing of primary dermal melanoma, and isolation of genomic DNA from the archived paraffin specimens to explore intergenic mutations in a potential regulatory region in melanoma cell lines.

Dr. Swetter continues her work as the national Dermatologist Liaison for the ECOG Melanoma Committee and Co-Director of the Melanoma Prevention Working Group, a unique Intergroup collaboration that has provided a national forum for interdisciplinary research among academic oncologists, surgeons, and epidemiologists dedicated to melanoma prevention. Dr. Swetter serves as the VAPAHCS Principal Investigator for the VA CSP#562 Keratinocyte Carcinoma Chemoprevention Trial, with target accrual of 100 patients achieved in 2011 and study completion anticipated in July 2013.

**Susan M. Swetter, MD**

**Assistant Chief, Dermatology Service, VAPAHCS**

**Director, VAPAHCS Dermatology/Melanoma Clinic**

**Professor of Dermatology, Stanford University Medical Center/VAPAHCS**

## General Surgery-Oncology

The General Surgery-Oncology clinic receives referrals for patients at various stages of their cancer. Approximately 30% of the patients have just received the diagnosis of cancer and need planning and coordination of an extensive pre-operative and metastatic work-up. Much time is spent on patient and family education and support. The other 70% of the patients are seen in follow-up after the primary therapy has been completed. This treatment often is a combined modality approach consisting of chemotherapy, radiation therapy, and surgical resection. The majority of patients have a diagnosis of colorectal cancer, hepatocellular carcinoma, esophageal cancer, breast cancer, and malignant melanoma.

We work closely with Medical Oncology Service to provide a smooth transition to and from their primary auspices if the patient requires active chemotherapy treatment or placement on multi-center clinical trials. We again have an Oncologist full-time in our clinic, which greatly facilitates consultations between Medical and Surgical Oncology and often saves the patient from making two separate appointments. The clinic personnel include 5 General Surgeons, 2 General Surgery Clinical Nurse Specialists, an oncologist, and a rotating team of General Surgery residents, interns, and medical students. A social worker and chaplain are available for consultation.

The General Surgery Clinical Nurse Specialist maintains a database of approximately 150 active cancer patients. The information on the database includes primary procedure, pathologic stage, and recent developments. It is very helpful as a quick reference for what has occurred with patients long-term and provides data for research activities. We continue to monitor all CEA levels done at our facility in order to case-find patients with undiagnosed malignancies or recurrences.

**Lynne Dempsey RN, MS, ACNS-BC**  
**General Surgery Clinical Nurse Specialist**

## Genitourinary Oncology

Palo Alto is the primary referral clinic for veterans from Fresno, Reno, Stockton, Modesto and Sonora with genitourinary cancer. In 2011, approximately 275 cancer operations were performed at the VA facility. As one of a few VA centers with a robotic surgery program, Palo Alto also serves as a regional referral center for complex minimally-invasive and robotic-assisted surgery. The Urology Division of the Palo Alto VA aims to provide latest in specialized care for our cancer patients and strives to provide all patients with individualized, and compassionate care.

The Urologic Oncology Clinic is a weekly clinic based at Palo Alto Division designed to care for Veterans with complex cancers. In order to ensure optimal care for each patient, this multidisciplinary clinic is staffed by two urologists, a medical oncologist, two nurse practitioners and residents. Every week, an average of 40 new and established cancer patients are seen in the GU Oncology clinic at the PA facility.

Genitourinary cancer patients are also seen at Livermore and Monterey and in other urology clinics at the Palo Alto facility. A system of referrals, consultations and exchange of patient information is in existence between all these facilities.

The Genitourinary Tumor Board is held on the third Tuesday of every month and coordinated by Ms. Maria Tham, the Cancer Program Tumor Board Coordinator. It is attended by radiologists, pathologists, medical oncologists and urologists, as well as medical students and residents. Radiation Oncologists also attend on an “as needed” basis. This conference is both a management and indications conference as well as a teaching function.

The Genitourinary Pathology Conference is held once a week for 3 weeks every month. The pathology of surgical specimens and biopsies generated the previous week are reviewed and discussed with a faculty member from the Department of Pathology, and a treatment plan is formulated.

The Genitourinary Radiology Conference is held weekly. Imaging studies from Urology patients and consults are reviewed with the panel of urologists and radiologists to assist in creating a streamlined treatment plan.

Prostate Cancer Support Group is held on the third Tuesday of every month from 11:30 AM to 1:00 PM. Patients are mailed information and an invitation to attend. Each session has a speaker (including urologists and medical oncologists) to facilitate the meeting

**John Leppert, M.D.**

**Assistant Professor of Urology**

**Director of Urologic Oncology**

## Hematology Service

The Hematology Service provides comprehensive care for patients with hematologic malignancies, including myeloma, acute and chronic leukemia. Individuals with clonal myeloproliferative and lymphoproliferative disorders, and with myelodysplastic syndromes are also followed and rendered cared by this service.

### **Clinical Activity**

Patients with the above disorders are typically seen in the Hematology Clinic, Palo Alto Division (PAD). Some patients with stable conditions are seen in the Livermore Division or the Monterey Clinic. The physician staff is composed of VA attending hematologists as well as Stanford-based hematologists (in rotation), and a volunteer faculty physician; the majority of these physicians attend a clinic on average of two clinics/month. However, patients are followed by the same attending physician to provide continuity of care. In addition, two fellows attend weekly clinics at PAD, in addition to an oncology nurse practitioner (PAD) a nurse practitioner (Livermore), and hematology clinical nurse specialist (PAD).

In addition, the nurse practitioners may follow patients who are receiving oral chemotherapy and monitor hematologic response/toxicity to therapy and adjust medication dosage as needed.

The Ambulatory Infusion Center provides excellent care to those hematology patients requiring transfusion support, chemotherapy, bisphosphonate infusions, parenteral iron, IVIG, or hydration. Vascular access care and therapeutic phlebotomies are also performed by the nursing staff in the AIC. Patients staying on the rehab/CLC unit will receive their infusional treatment in the AIC. Patients may receive therapeutic phlebotomies, hydration or transfusion support at the Livermore Division on a limited basis.

Patients requiring admission to the hospital are admitted to the Medicine Service, but are closely followed by the Hematology fellow and attending physician on service, and also by the Hematology clinical nurse specialist as warranted. Frequently, these patients are admitted to the rehab/community living center (CLC) unit, particularly in those situations where the patient lives too far to receive infusional therapy on an out-patient basis. This is particularly advantageous for those patients whose condition may require closer monitoring than is possible in the ambulatory care setting, yet does not warrant a prolonged admission to Acute Medicine.

Many of these patients are seriously ill and need frequent follow-up and management. The Hematology Nurse Practitioner and Clinical Nurse Specialist frequently see patients in the Ambulatory Care setting, primarily in the Ambulatory Infusion Center throughout the week. Patients are seen as urgently and frequently as their condition warrants, reducing the need for hospitalization in many instances, or limiting need for evaluation in the emergency department.

**Multi-Disciplinary Approaches to Patient Care:**

The Hematology Service strives to provide individualized attention to patients and families, which primarily results from continuity of care. Attending physicians see the same patients over time so that a therapeutic relationship can develop; a second-year fellow (with six-month rotations) is afforded the same opportunity. Many patients are routinely seen by the Hematology Clinical Nurse Specialist and psychology staff from Behavioral Medicine. Other services are employed as appropriate, including, Social Work, Home Care, Hospice/Palliative Care, Pain Management, and Radiation Oncology. The Hematology CNS or Nurse Practitioner serves as the contact person for patients and families as questions arise/problems develop while the patient is at home.

One of the Hematology Attendings is also chair of the institution's Transfusion Program and monitors the quality assurance component of this program.

**Education Activities**

Patients with unusual hematological malignancies, or who have problems that exemplify useful learning opportunities for internists and oncologists, are presented as appropriate at the VA Tumor Board. Fellows and an attending Hematologist typically present these cases.

Nursing in-services are provided as need arises or per staff request regarding specific disease states, transfusions, chemotherapy administration, experimental treatment protocols, and vascular access management. A journal club is active within the Ambulatory Infusion Center and typically addresses issues related to infusional therapy (e.g., hypersensitivity reactions to chemotherapy), psychosocial patient issues, new drugs, or review of disease states.

A weekly journal club is convened prior to the weekly Hematology Clinic; one of the clinic staff leads the discussion of an article of interest to the presenter. Fellows and Attendings also participate in hematology educational venues at Stanford.

The Hematology Fellows, CNS, and several Hematology Attendings all attended the annual meeting of the American Society of Hematology. The Hematology Clinical Nurse Specialist attended the annual meeting of the Oncology Nursing Society, and is involved in the Nursing Committee and the Symptom Management and Outcomes Committee of the Eastern Cooperative Oncology Group and as such, attends these semi-annual meetings.

**Mary Thomas, RN, MS, AOCN**  
**Hematology Clinical Nurse Specialist**

## Hospice Care Center and Palliative Care Services

### Inpatient Programs

The Hospice and Palliative Care Center, located on ward 4A, provides Veteran-centric palliative and end of life care. Disciplines represented on the team include medicine, nursing, social work, chaplaincy, psychology, occupational therapy, music therapy, massage therapy, and recreational therapy.

Referrals come from all areas in the acute hospital, including the ICU, IICU, med/surg units and ER, as well as VA Menlo Park Division, Livermore division, community hospices, local hospitals, private community physicians and oncology clinics. Most patients admitted to our unit die on the unit, and the majority of patients live less than one month – the average length of stay is approximately 25 days.

Families receive bereavement support for a period of one year after death, which include an initial letter with a grief booklet, periodic phone calls, bi-monthly bereavement support groups, semi-annual memorial ceremonies, a holiday grief support group, a year anniversary card, and referral to community resources if needed. Ongoing work is being done to improve outreach within the VA system and in the community (e.g. partnering with those who participate in the “We Honor Veterans” program). Ms. Sheila Kennedy is the program’s social worker, serving as the main point of contact for referrals to our inpatient unit for veterans, whether enrolled into our system or not, from community hospice agencies or hospitals. She is critical in facilitating admission to our unit and has been utilized by community case managers at local hospitals to help with transitioning to hospice care for those patients who are appropriate.

Our palliative care program also operates a 5-bed hospice unit in Building 360, under the direction of Dr. Barbara Egan. This unit tends to take Veterans with less acute medical needs and somewhat longer life expectancies.

### Consultation Teams

Our palliative care program operates 2 consultation teams, one in acute care and one within our Community Living Centers (CLCs). The acute care team provides consultation on all acute wards at Palo Alto Division and is a major source of referrals to our Hospice and Palliative Care Center on 4A. Our CLC team is at the Menlo Park Division and provides consultations at both Menlo Park and Livermore Divisions. This consultation team has also made major contributions to quality improvement efforts within our CLCs, which over the past year have focused on improving pain management and addressing goals of care on admission to our CLCs. Dr. Egan from this consultation team also participated in a process improvement effort this past year to improve care of patients with lung cancer.

### **Outpatient Clinic**

The Palliative Medicine Clinic continues to meet once a week for half a day. In addition to managing patients' pain and symptoms, this clinic makes referrals to both inpatient and home hospices.

### **Home Care**

Extended Care Service also oversees and coordinates the provision of home care services, including home hospice, for VA Palo Alto HCS clinics. Home hospice care is provided both through Medicare and VA payment.

### **Role of Hospice and Palliative Care Program in Oncologic Care**

While our Hospice and Palliative Care Program provides care for Veterans with a wide range of illnesses, a cancer diagnosis is the most common diagnosis on admission to our hospice program and for referral to home hospice care. This is also the most common diagnosis for palliative care consultations in acute care. Extended Care Service also provides support for oncology patients with skilled nursing needs through its short-stay CLC programs on ward 4C and 331B, most commonly for patients receiving chemotherapy or radiotherapy, who are too frail or debilitated to receive therapy as outpatients.

### **Leadership**

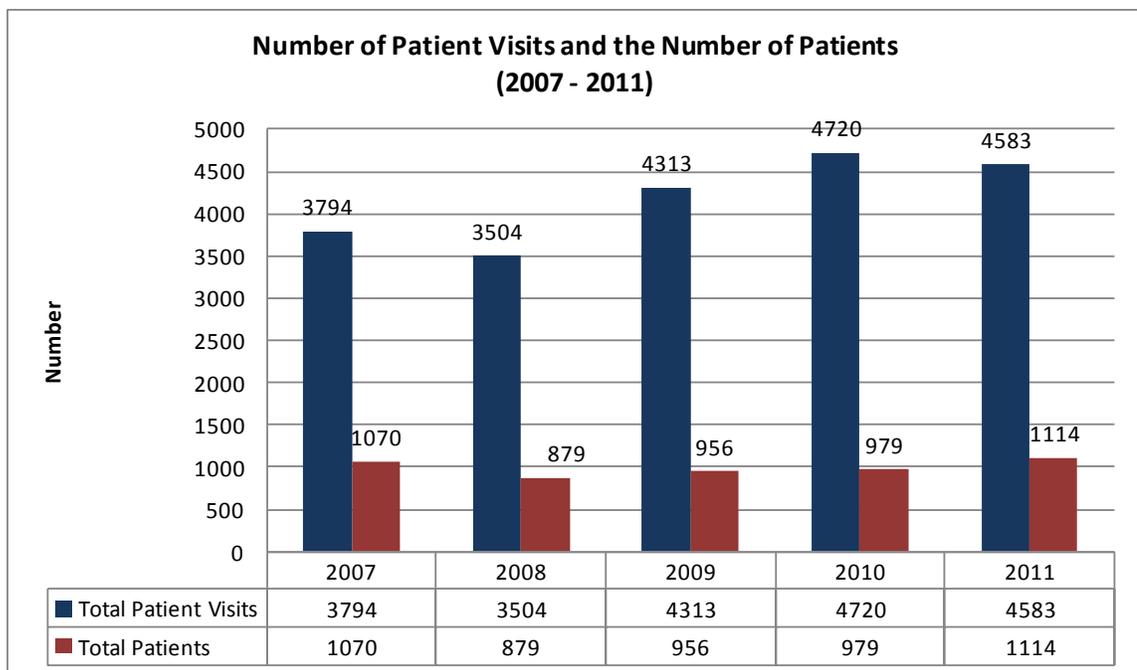
Dr. James Hallenbeck, Medical Director of the Hospice and Palliative Care Program, continues to carry out dual roles as both Director of the Hospice & Palliative Care Center and Associate Chief of Staff for Extended Care. VJ Periyakoil, MD is the Associate Medical Director of Palliative Care Services and the Director of the Palliative Medicine Clinic. Dr. Periyakoil is also the director of the Stanford University/VAPAHCS Palliative Care Inter-professional Fellowship Program. Her research areas include effects of psycho-social distress (PTSD, grief and depression) on the illness trajectories and service utilization of patients with serious life limiting illnesses, and inter-professional education in palliative care and geriatrics. Dr. Periyakoil uses her e-Learning expertise to promote education and training for older adults and all patients with serious illnesses living in rural and highly rural areas through the THRIVE-Online initiative.

**Michelle Gabriel, RN**  
**Palliative Care Clinical Nurse Specialist**

## Medical Oncology – Outpatient

The Medical Oncology clinic is supported by oncologists, pharmacists, a medical social worker, a psychologist, a chaplain, a nurse case manager, and a research nurse. Other members readily available by consult include the Pain Service clinical nurse specialist, dietitian, public health nurse, Hematology/Oncology clinical nurse specialist, and the hospice/ palliative care team.

Medical Oncology sees outpatients in clinic twice a week, with three attending oncologists and 3 to 4 oncology fellows, seeing approximately 60-80 patients each week. The clinic is also assisted by 2 voluntary attending faculties. There were 1114 patients and 4583 patient visits in 2011.



\* Source: PCE Encounter Summary Report by Year, Oncology Stop code 316, VA Vista Database

The Oncology Ambulatory Care Program is supported by the Ambulatory Infusion Center (AIC). The AIC is open 5 days a week to provide chemotherapy, hydration, antibiotic and blood component therapy, patient education and support for procedures such as bone marrow biopsies. Six RNs are certified to administer chemotherapy. They change PICC line dressings, flush central lines and assess intravenous sites. Most infusions are done during clinic days.

**Peter Di Donato, PA**  
**Medical Oncology - Outpatient**

## Medical Oncology – Inpatient Care

Unit 2A (Medical-Oncology-Telemetry), a 31 bed unit in the Specialties and Hospital-Based Services (acute inpatient), is a medical oncology functional equivalent unit, with ten rooms (9 private rooms with one double room) designated for oncology/hematology Veteran patients. Oncology/hematology Veterans receive inpatient chemotherapy/biotherapy treatments, as well as supportive treatments on Unit 2A. The Intermediate ICU (IICU) also provides chemotherapy/biotherapy treatments for those Veterans who are not stable enough to be transferred to Unit 2A to receive treatment. Both 2A & IICU also administer chemotherapy/biotherapy for non-oncology indications.

In 2011, we utilized chemotherapy/biotherapy treatments for both oncology and non-oncology indications including but not limited to Non-Hodgkin's lymphoma (follicular, diffused large B cell, Burkitt's), small cell ca of the liver, sarcoma (chondrosarcoma), myelodysplastic syndrome, multiple myeloma, lung cancer (Non-small cell), head & neck (tonsillar, oral squamous cell), testicular cancer, pancreatic cancer, leukemia, and esophageal cancer.

### Oncology Nursing

RN Nurse Managers provide the day-to-day direction to the staff of Unit 2A & IICU. Oncology nursing care of oncology/hematology Veterans in the inpatient acute-care setting are provided by Chemotherapy-Trained RNs (CTRNs), most especially when it comes to treatment administration. These RNs have completed an initial training that consists of the Oncology Nursing Society (ONS) Chemotherapy and Biotherapy Course, the Oncology Nursing Competency-Based Orientation, and Oncology Nursing Practicum. This is followed by the Annual Chemotherapy Training (ACT). In addition, the CTRNs are required to renew the ONS Chemotherapy Provider Card every two years. On the year that the CTRN is renewing his/her Provider Card, the CTRN does not have to attend the ACT, and vice versa.

|   | 2010                             | 2009                             |
|---|----------------------------------|----------------------------------|
| Number of Chemotherapy -Trained RNs (2A/AIC/IICU) | 26<br>2A = 15; AIC = 6; IICU = 5 | 28<br>2A = 18; AIC = 6; IICU = 4 |
| Number of Oncology-Certified RNs                  | 8 (3 Advanced and 5 Generalist)  | 8 (3 Advanced and 5 Generalist)  |
| % of certification                                | 32%                              | 28%                              |

In 2011, 23 RNS were trained in Chemotherapy and 3 were trained in advance practices. Thus, a total of 26 RNs were trained. Further, in 2011, 30% of the CTRNs had oncology nursing certifications – 5 were chemotherapy trained RNs, and 3 were advanced practice RNs.

Other allied staffs, such as Nursing Assistants and Environmental & Management Service are also trained in some oncology-related topics, such as neutropenia and safe handling of

hazardous drugs involving chemotherapy. In-services are also available to other licensed staff consisting of non-oncology nurses caring for oncology patients, and oncology nurses administering treatments for non-oncology indications. Class on Cancer Basics is provided to new staffs in the Nursing Education New Grad Program and Nursing Orientation.

There are three clinical experts in oncology nursing: one oncology-certified clinical nurse specialist (AOCNS) and two advanced-practice oncology nurses (AOCN), hematology and pain management. They serve as consultative resources.

The AOCNS direct the oncology nursing training program. In addition, the AOCNS has been working collaboratively with the Oncology CNS at another VA facility to set up an oncology certification course to prepare oncology RNs to take the national certification for oncology nursing.

Ms. Connie Yabes-Sabolboro, RN, MS, AOCNS® launched the Cancer Survivorship Clinic in October, 2011. This clinic is a nurse-led program that addresses long-term care needs of oncology Veterans who had completed their cancer treatment. An informational kick-off related to the program was incorporated at the VAPAHCS Cancer Survivorship Day in September 2010. The program was presented at the 2010 Association of VA Hematology/Oncology Conference in Little Rock, Arkansas and in the 2011 VHA Cancer Care Collaborative Learning Session 3 in Orlando, Florida.

The Cancer Survivorship Clinic is held every 4<sup>th</sup> Friday of each month. The average number of patients seen per clinic day so far has been 3. Survivorship Care Plans were initially provided at the first visit. Currently, a two day step was implemented. At the first appointment, the patient will be given an overview of Cancer Survivorship. At the second appointment, a Survivorship Care Plan will be provided. Survivorship Clinic appointments are made in advance. The appointments are noted in the Cancer Survivorship template in CPRS.

Ms. Yabes-Sabolboro, RN, MS, AOCNS® developed a Cancer Survivorship Program Process Policy and Procedures and presented a draft of the policy and procedure to the Cancer Care Committee for review.

Ms. Yabes-Sabolboro, RN, MS, AOCNS® is also involved in the Veterans Health Administration (VHA) Office of Nursing Service Clinical Practice Program as a member of the Oncology Faculty Advisory Committee. Through this Committee, she and eight VHA RNs from various States are collaborating with ONS on a project to develop a handbook on national VHA oncology nursing competency and training standards.

**Sarah Woodward, RN, Nurse Manager  
Medical Oncology – Inpatient**

**Connie Yabes-Sabolboro, RN, MS, AOCNS  
Medical Oncology – Inpatient**

## Nuclear Medicine

The Nuclear Medicine Service uses radioactive tracers with single photon emission-computed tomography (SPECT) and positron emission-computed tomography/computerized tomography (PET/CT) for evaluation of patients with known or suspected malignancy. Imaging is used for diagnosis, staging, treatment evaluation, and surveillance.

Major equipment includes a PET/64-slice CT camera (Discovery STE, General Electric), and three dual-head SPECT (single photon emission computed tomography) cameras (Infinia, General Electric). The SPECT cameras are also capable of low-resolution CT imaging for improved diagnostic accuracy. There is a cyclotron and radiochemistry facility on-site to produce radioactive tracers.

The Nuclear Medicine Service performs PET/CT scans for veteran patients referred from VA Central California, as well as patients who receive their care at Palo Alto. Over 1,500 exams are performed annually. Most patients are referred for evaluation of known or suspected malignancy. The most common cancer diagnoses are: lung, colon and rectum, esophagus, melanoma, lymphoma, and breast.

Other diagnostic examinations include bone scans, octreotide scans (neuroendocrine tumors), radioiodine scans (thyroid cancer) and radionuclide ventriculography (assessment of left ventricular function in patients receiving cardiotoxic agents).

Digital images are available for viewing by health care providers throughout the health care system using a picture archive and communication system (PACS), which also creates a permanent repository for all imaging studies.

The Nuclear Medicine Service also uses unsealed radioactive materials for cancer therapy. Therapeutic procedures include high-dose radioiodine treatment for thyroid cancer metastases, and samarium treatment for palliation of painful skeletal metastases.

The Nuclear Medicine Service collaborates with other clinical departments to support cancer research projects.

The Nuclear Medicine Service trains residents in Nuclear Medicine and Diagnostic Radiology as part of a joint training program with Stanford University. One resident rotates through the department each month.

**George Segall, MD**  
**Chief, Nuclear Medicine Service**

## Otolaryngology (ENT) Service

The Otolaryngology (ENT) service offers comprehensive management of tumors of the head and neck region, which includes detection, surgical treatment of benign and malignant tumors, and post-treatment surveillance. The ENT service works closely with Radiology, Pathology, Oncology, Radiation Therapy, Dental, Audiology/Speech Pathology, Restoration/Reconstruction clinic and many other services as needed. If necessary, facial reconstruction surgery is also available and is offered to patients by the ENT service. Some examples of tumors seen by the ENT service include pharynx (throat), larynx (voicebox), sinus, nose and nasopharynx, mouth and tongue, salivary glands such as the parotid, and endocrine glands such as the thyroid and parathyroid.

A multidisciplinary Head and Neck Cancer Conference meet every Thursday at Stanford to bring together the expertise of surgeons, radiotherapists, and medical oncologists to recommend optimal treatment plans.

During 2010-2011 ENT service participated in a Multidisciplinary Head and Neck Cancer Care VA Collaborative (second generation VA Cancer Collaborative) to improve timeliness of care provided, including how soon new/suspected head and neck cancer patients are being seen. As the results of this Collaborative, ENT service improved timeliness of care rendered from an average of eighteen days to an average of one week. Further, customer satisfaction was increased from 40% to 90%. Both aims will be monitored for at least a year to ensure that they are sustained.

**Ella Benadam-Lenrow, RN,  
ENT Clinic Nurse Coordinator**

## Pain Management

The pain management clinic at the VAPAHCS meets twice weekly. Clinic staff consists of Anesthesia Pain Medicine, Behavioral Medicine, Physical Medicine and Rehabilitation and Nursing disciplines. This year the service staff added one physician from Polytrauma/Physical Medicine and Rehabilitation. From the calendar year 2010 to the calendar year 2011 new patient visits increased from 439 to 452; follow-up visits increased from 960 to 968; and pain procedure appointments increased from 599 to 614. Computerized consult requests and 24-hour paging provide access to the pain service for both inpatient and outpatient cancer patients. Consults for cancer pain management remain the priority and patients with cancer pain are overbooked as needed into the clinic and hospitalized patients are typically seen the day the consult is received. Interventional procedures (e.g. nerve blocks, long-term intraspinal infusions) are available via the pain service, peri-operative epidural management and regional nerve blocks are available via the newly formed regional anesthesiology service, and vertebroplasty is available via interventional radiology. Interactions with oncology, hospice, and palliative care take place on an as needed basis. Patient care conferences with the interdisciplinary team are scheduled as needed. Consistent communication concerning suggested interventions to the referring clinician is routine. Coordination of care between services is the norm. Just-in-time education is done on pain management issues as needed (e.g. management of continuous intrathecal infusions on hospice).

**Janette Elliott, RN, MSN, AOCN**

**Pain Management Clinical Nurse Specialist**

## Pathology and Laboratory Service

All tissue and cytology specimens for the VAPAHCS are processed and interpreted by the Palo Alto Division. The entire report of pathological findings is available in the VA Decentralized Hospital Computer Program (DHCP) patient database for easy access by physicians and other health care providers. For all surgical pathology cases resulting in a diagnosis of cancer, an e-mail “critical pathologic value alert” is sent to the attending physician. New cancer diagnoses are communicated verbally to a member of the health care team. The electronic “critical cancer alerts” provide attending physicians with the pathological TNM staging for complete cancer resections. Pathologic TNM staging is also provided for all cancers newly diagnosed at autopsy. In 2011, we processed 10,000 surgical pathology specimens, of which 968 were diagnosed as containing cancer.

Starting January 1, 2004, the pathology reports on all required cancer resection and biopsy specimens have followed the published College of American Pathologist CAP protocols. We have formalized this now by creating a template for presentation of the required information. This protocol data is included in our standard pathology report.

All cancer cases are confirmed by a second staff pathologist. A critical alert is sent to the submitting physician for all cases with a diagnosis of cancer. New cancer diagnoses are communicated verbally to a member of the health care team and documented in the report.

Before transfer to the hospital computer system, the pathology reports are generated in a database constructed in FileMaker Pro. The reports are retained in archival FileMaker Pro databases where they are available for free text searches. Such searches do not depend on coding of diagnoses, which is subject to errors. This searching ability is a valuable tool for patient care, record analysis and research.

Our database now contains over 150,000 surgical pathology reports dating from 5/91 to the present. All can be accessed for free text searches. Over the last few years we have performed searches for a number of services for cancer-related studies.

We have regular weekly meetings with the following services to review positive biopsies and excisions: General Surgery, Gastroenterology, Urology, and Dermatology (twice a week). In addition all autopsies are reviewed at a weekly conference with the Radiology Department and any interested clinicians.

**Robert V Rouse, MD**

**Service Chief, Pathology and Laboratory Service**

## Pulmonary Medicine (Thoracic Oncology)

Physicians and Staff in the Pulmonary / Critical Care and Sleep Medicine section provide comprehensive care in the diagnosis and staging of lung cancer. Diagnostic services include flexible fiberoptic bronchoscopy, transbronchial biopsy under fluoroscopic guidance, diagnostic and therapeutic thoracentesis, closed pleural biopsies, pulmonary function testing and cardio-pulmonary exercise testing. We also perform advanced state-of-the art interventional pulmonary procedures like Electromagnetic Navigational (EMN) guidance bronchoscopy and Endobronchial Ultrasound (EBUS) guided biopsies. EMN allows sampling of peripheral lung nodules that are not within reach via a conventional bronchoscope. EBUS guidance is utilized for fine needle aspiration biopsies of select mediastinal and hilar lymph nodes and lung masses.

The Lung Nodule Team (comprised of Pulmonary Attending, Pulmonary and Critical Care Fellow, and an RNP or RN) meets two-three times a week to review all the Lung Nodule and Out-patient referrals. After performing a detailed review of their medical record and pertinent radiographic imaging studies, we provide recommendations for management of the patient. For patients with lung nodule(s) 8 mm and above and those with high clinical suspicion for lung malignancy, we coordinate all medical care by ordering and following up on imaging studies, expediting scheduling of PET/CT scan, arranging for lung biopsy procedures and facilitating consult visits with Pulmonary and other specialties such as IR, Thoracic Surgery, Oncology, etc. We also coordinate accommodation and travel-related issues for our veterans coming from satellite areas. The veterans are kept informed at every step of their management. Our team also evaluates all other lung nodules that are less than 8 mm in size and provide appropriate recommendations to the primary care providers. Historically, about twenty percent of Lung Nodule referrals have been diagnosed with lung cancer. In 2011, we received a total of two-hundred three Pulmonary Lung Nodule consults. There were additional Out-patient and In-patient pulmonary consults for lung lesions. We also provided consultation services to admitted lung cancer patients who had ongoing pulmonary issues.

In 2011, the Pulmonary and Critical Care service performed one hundred fifteen Bronchoscopy procedures (103 diagnostic and 12 therapeutic). Sixty-eight of these procedures were conventional cases and there were an additional forty-seven complex interventional cases. Seventy-four of these procedures were performed in the Bronchoscopy Suite and thirty-one were performed in the critical care setting (ICU and IICU). Forty cases were diagnosed with lung cancer and were referred to Thoracic surgery and/or Oncology services for treatment and further management. We also performed 13 pleural procedures (thoracentesis and pigtail catheter placements).

Pulmonary faculty, fellows, and staff participate in a monthly Multi-disciplinary Thoracic Cancer Conference and Lung Nodule Forum that is attended by Oncology, Thoracic Surgery, Radiology, Nuclear Medicine, Pathology and Radiation Oncology. We are actively involved in the Cancer Collaborative Program which monitors, plans, organizes and implements comprehensive cancer care tools and services to better improve our ongoing management of cancer patients at the VA Palo Alto Health Care System.

In 2011, 140 patients with lung cancer were diagnosed and/or treated at VAPAHCS. Most patients were between the ages of 60-79, 99% were male. 91% of patients were diagnosed with non-small cell lung cancer and 9% were diagnosed with small-cell lung cancer. Among those patients diagnosed with non-small cell lung cancer, adenocarcinoma and squamous cell carcinoma were the two most common histologic subtypes.

**Ware Kuschner, MD**

**Harman S. Paintal, MD**

**Luis San Gabriel, BSN,RN**

**Division of Pulmonary/ Critical Care Medicine**

## Radiation Therapy Facilities at Stanford Cancer Center

The Department of Radiation Oncology moved into the Stanford Clinical Cancer Center on March 1, 2004. The Radiation Oncology Clinic, where new and follow-up patients are seen, is located in "Module D" on the first floor. Radiation Therapy procedures and treatments are performed in a 50,000 square feet space on the ground floor.

The Radiation Oncology Department offers extensive medical expertise for the evaluation, planning and administration of radiation treatments for Veterans referred here. Stanford Radiation Oncology faculty are board certified or eligible seasoned experts, all recognized internationally for their specific subspecialties and contributions to the treatment of Hodgkin's disease, non-Hodgkin's lymphoma, prostate, lung, breast, brain, head and neck, mycosis fungoidis, gynecological and pediatric cancers. Our faculty members attend the VA Palo Alto Health Care System's monthly general tumor boards, weekly pulmonary and GU tumor boards and quarterly Cancer Care and Health Physics committees. They are also available for telephone consultation regarding management for patients who have not been seen by us along with providing on-call consultation twenty-four hours a day, seven days a week.

Our radiation therapists are certified by both National and State agencies. Our physicists, as well as the dosimetrists, are board eligible and/or certified. Other staff includes registered nurses, social workers and support staff. Each patient is managed by a medical team consist of a member of the faculty, a resident, therapists, a dosimetrist and a registered nurse. Digital treatment field images are reviewed by the faculty and residents each day. In addition, patients who started a new course of radiation treatments are presented at chart rounds on Wednesdays to ensure optimum quality of patient care.

On September 16, 2010, Stanford Clinical Cancer Center became the first treatment center on the West Coast and the fifth in the world to offer cancer patients the TrueBeam system, a medical linear accelerator that represents an exponential leap forward in the speed, power and precision of radiation therapy. The TrueBeam linear accelerator is capable of delivering radiation at a faster dose rate than most conventional linear accelerators. This advance translates into shorter treatment times for patients. The new machine's radiation delivery precision is controlled to within less than a millimeter, as its advanced imaging checks accuracy every 10 milliseconds, continually monitoring more than 100,000 data points. TrueBeam's 4D imaging system captures views in 60 percent less time than in previous machines and reduces overall X-ray exposure for that imaging by one-quarter. The increased speed means less blurring in each image, which helps to more clearly define the edges of a tumor.

The TrueBeam system is especially good for tumors deep in the body because it adjusts for movements in tumors, which are nudged in various directions with each breath. In a technique called respiratory gating, the TrueBeam's sends out radiation only when the tumor is within the beam's line of delivery. The platform couch which holds the patient also adjusts with the same sub-millimeter accuracy. In combination with the TrueBeam's rapid, multi-dimensional imaging, the effect is a much higher degree of protection for healthy tissue adjacent to the cancer.

In addition to Truebeam, our state of the art treatment equipment includes five medical linear accelerators with identical photon and electron energies. Each linear accelerator has a 120-leaf multi-leaf collimator, two sets of independent jaws and dynamic wedge capabilities along with an electronic portal imager capable of acquiring real time images as treatments are being delivered. Our treatment field verifications are digital instead of film. Truebeam, Trilogy, LA 12 and LA 11 have an imaged-guided radiation therapy system optimized for both conventional and stereotactic approaches to treat cancer. It has "Stereoscopic X-Ray Guidance" capability, which allows radiation oncologists to be able to more accurately ensure that target volume is treated to the planned dose of radiation. Images are acquired in the treatment room and based on this corrections are made, if required, to bring the target volume to the desired location prior to starting that day's treatment. The stereoscopic images have to be fused and registered with the pretreatment digitally reconstructed radiographs and the required shifts calculated using customized software.

Superficial x-ray treatments are provided on the Oldelft Therapix unit.

Two "Cyberknife" systems- robotic arm mounted linear accelerators are available for frameless stereotactic radiotherapy treatments, both for cranial and extracranial tumor sites. One Cyberknife unit is in the Blake Wilbur building and the 2<sup>nd</sup> Cyberknife unit is located in our department in the Cancer Center.

There are 4 dedicated simulators available for simulations. The "PET-CT" and the "AcQsim" CT simulators provide CT geometric accuracy for tumor localization to meet three-dimensional conformal and high precision radiotherapy planning requirements. PET simulation on the "PET-CT" scanner has been available since January 2005. The digital "Acuity" and the "Ximatron" simulators are available for conventional simulations, iso-center, block and field verifications. In addition, the Acuity simulator is installed in a shielded vault to facilitate High Dose Rate (HDR) remote brachytherapy treatments without having to move the patient between simulation and treatment.

Renovation for a second PET-CT scanner is underway and is on track to go clinical early December, 2012.

The radiation oncology department utilizes ARIA, a comprehensive information/treatment record and verification and image management system that aggregates patient data into a single, organized, oncology-specific electronic medical chart. We are scheduled to migrate to ARIA V11, the latest software version in January, 2013.

Radiation therapy treatment modalities:

- ❖ Stereotactic Ablative radiotherapy (SABR)
- ❖ 4D image-guided radiation therapy (IGRT)
- ❖ Volumetric modulated arc therapy (VMAT)
- ❖ Dynamic conformal arc radiation therapy (DCART)
- ❖ Frameless cranial stereotactic radiotherapy
- ❖ Total Body Irradiation

- ❖ Total skin electron therapy
- ❖ Intraoperative radiation therapy (IORT)
- ❖ High dose rate (HDR) brachytherapy treatment in a dedicated shielded vault
- ❖ Low dose rate (LDR) brachytherapy treatment
- ❖ Intensity modulated radiotherapy (IMRT)
- ❖ Prostate permanent seed implant
- ❖ Respiratory gated radiation therapy
- ❖ Radioimmunotherapy

3D Volumetric modulated arc therapy- RapidArc - is a volumetric arc therapy that delivers a precisely sculpted 3D dose distribution with a single 360-degree rotation of the linear accelerator gantry. It is made possible by a treatment planning algorithm that simultaneously changes three parameters during treatment: rotation speed of the gantry; shape of the treatment aperture using the movement of multi-leaf collimator leaves and delivery dose rate.

Volumetric modulated arc therapy (VMAT) differs from existing techniques like helical IMRT or intensity-modulated arc therapy (IMAT) because it delivers dose to the whole volume, rather than slice by slice. And the treatment planning algorithm ensures the treatment precision, helping to spare normal healthy tissue.

Cranial stereotactic radiotherapy, which is carried out in collaboration with faculty from the Department of Neurosurgery, is a technique for treating arteriovenous malformations (AVMs) of the brain, other benign growths as well as metastatic deposits in the brain. Frameless stereotactic radiotherapy treatments for are administered on the "Cyberknife System". The entire course consists of one to five fractions.

Stereotactic ablative radiation therapy (SABR) treatments for lung, prostate, liver, pancreas and other body sites are administered primarily on Truebeam and Trilogy. The entire course of treatment consists of one to five fractions.

Intraoperative radiotherapy (IORT) is available in two of the operating rooms at Stanford. In order for VA patients to receive this therapy, they must be admitted to Stanford.

High dose rate brachytherapy (HDR) treatment provides intense, highly localized doses of radiation quickly and without radiation exposure to hospital staff. This is a one half-day procedure and can be done on an out-patient basis. It is used in treatment of a variety of sites including endobronchial metastases, esophageal, rectal, prostate, uterine and cervical cancers.

Low dose rate brachytherapy (LDR) treatment uses low dose rate radiation isotopes to treat malignancies or benign conditions, by means of radioactive sources placed close to or into the tumor or treatment site. This is a 2-3 days in-patient procedure. It is used in treatment of variety sites including head and neck, breast, uterine and cervical cancers.

Intensity modulated radiotherapy (IMRT) is able to modulate the intensity of a number of beams while the multileaf collimator (MLC) leaves move at constant velocity to their appropriate positions to achieve a conformal dose to the tumor while sparing more normal

tissues. This enables dose escalation with the potential for improved local tumor control and less complications.

Prostate permanent seed implant for early stage prostate cancer, in a single outpatient procedure, provides survival and cancer control equivalent to radical prostatectomy. Comparable treatment with external beam radiotherapy would require 7 weeks of daily treatment.

Radioimmunotherapy program with ongoing clinical protocols is available for the treatment of a variety of cancers with radiolabeled monoclonal antibodies.

Patients also have access to voluntary participation in numerous national (ECOG, RTOG, GOG, POG) and in house clinical trials subject to appropriate protocol review at the PAVAH.

#### 3D Computerized Radiation Therapy Treatment Planning System:

The Eclipse treatment planning system utilizes CT, MRI and PET imaging information by direct input, and correctly accounts for patient anatomy and inhomogeneities in three dimensions for radiation dose planning. Respiratory gated 4D scans can also be downloaded into this system for radiation dose planning of tumor sites that may move during respiration in order to reduce the amount of radiation to normal tissues and structures. The Eclipse treatment planning system is also capable to plan for Volumetric modulated arc therapy.

#### **Physics Quality Assurance Program**

The Radiation Oncology physics division provides a comprehensive quality assurance program for both patient treatments and medical equipment. Medical linear accelerators are fully calibrated annually for mechanical accuracy and radiation output by, or under direct supervision of, a board-certified physicist. High dose rate brachytherapy sources are calibrated upon arrival and checked monthly. Low dose rate source calibration policies vary according to type. Ir-192 sources are checked by measuring of 10% of incoming sources. Low dose rate but long half-life Cs-137 sources are checked against a specially-calibrated standard source and occasional review by a third party. Low-energy Iodine-125 seeds are supplied in a sterile format, having been checked and certified by the provider assays to verify manufacturer's calibration. Instruments used for measuring machine output are calibrated periodically by comparison with instruments calibrated by recognized standards laboratories. Instruments to measure brachytherapy sources are calibrated by an accredited laboratory for the specific source design to be used.

Measurement instruments are maintained by physics staff. Accelerator safety systems, mechanical systems performance and imagers are checked monthly for quality by a physicist. Radiation output for each beam energy is calibrated monthly by a physicist and re-checked daily by radiation therapy staff. Also checked on a daily basis by radiation therapy staff supervised by a designated physicist are the symmetry and uniformity of treatment fields for each beam energy. Staff is trained to notify the supervising physicist of any deviation beyond pre-set values that are entered by the physicist in a computer-based monitoring system that captures the daily measurements into a database. In response to a physician's written

statement of treatment intent, dosimetrists or staff physicists generate manual or computer-based patient treatment plans that are approved by the attending physician, then independently calculated by a staff physicist as a check of calculational accuracy prior to first treatment. Computer planning systems and revisions thereof are commissioned by physics staff prior to clinical use. The treatment record of each patient undergoing multi-fraction treatment is checked weekly by a physicist for compliance with the documented physician-approved treatment plan.

All brachytherapy treatment plans are independently checked signed off by a physicist. After every temporary placement of sealed-source radionuclides, the patient and room are surveyed following removal of the sources to verify that none was inadvertently left behind. Patients with permanent implants are surveyed with a radiation detector to verify compliance with all applicable regulations and policies prior to release. All sealed sources used for temporary placement are tracked and logged in and out of storage.

**Diana Ho, Director, Radiation Oncology Services**  
**Department of Radiation Oncology**  
**Stanford Clinical Cancer Center**

## Radiology Service

At VAPAHCS, the Radiology Service provides a full range of diagnostic and therapeutic imaging-guided examinations and procedures for patients with known malignancies as well as those at risk for developing malignancies. For many patients, top-flight imaging studies are essential for diagnosis, staging, treatment planning, and surveillance of their disease processes. Similarly, thoughtfully planned and carefully executed imaging-guided interventions can play key roles in the management of individuals who are battling cancer.

Radiologists at VAPAHCS are a key part of the cancer care team, providing essential expertise in all subspecialty areas of radiology. Patients are served at the main campus in Palo Alto as well as community-based outpatient clinics (CBOCs). State-of-the-art care is provided in CT (computed tomography), MRI, (magnetic resonance imaging), ultrasound, vascular imaging, interventional radiology, and general radiography, and all of these modalities are combined to deliver optimal support for each cancer patient. The most common types of cancer referred for imaging evaluation at our institution include those related to the lung, colon and rectum, liver, esophagus, lymph nodes, kidneys, skin (especially melanoma), and breast.

In the VAPAHCS community, Radiology images are acquired using modern digital equipment. This provides substantial benefits in terms of throughput, reduction of radiation exposure and diagnostic quality. Our digital images are rapidly made available for clinicians to review throughout the institution utilizing an electronic “picture archiving and communication” (PACS) system, iSite. Additionally, it facilitates the presentation and discussion of patients’ imaging examinations during the many interdisciplinary tumor boards and clinical conferences in which Radiology Service participates. The rapid production of written reports is made possible with PowerScribe, our digital voice recognition dictation system that works hand-in-hand with iSite.

To supplement our existing 1.5 Tesla MRI scanner, a 3.0 Tesla MRI scanner was recently installed. In addition, we recently installed our second 64-slice, dual-energy CT scanner. These devices provide advanced capabilities for multi-phase imaging and high-resolution diagnosis, and provide us with the ability to perform new types of examinations that are not possible with older, less capable devices.

Interventional radiologists provide invasive diagnostic and therapeutic procedures for cancer patients. Their services range from biopsies to placement of long-term venous access devices, diagnostic high-resolution digital subtraction angiography, stent placement to treat obstructed organs, chemoembolization, transjugular intrahepatic portosystemic shunt procedures (TIPSS), and radiofrequency ablations, among other procedures. Important recent acquisitions for interventional radiology include a biplane angiography suite, a CT/Angiography unit, and new tumor ablation devices.

Radiology participates in several active research programs that address many aspects of cancer diagnosis and cancer treatment. Ongoing work relates to abdominal imaging, thoracic imaging, neurological imaging, imaging of the head and neck, and musculoskeletal issues, to name a few.

We are pleased to have strong collaborative relationships with many clinical colleagues in these endeavors.

In addition to these essential clinical and investigative roles, Radiology Service is an integral component in the education of VA colleagues as well as medical students, residents and fellows from Stanford University, all of whom are enhancing their abilities to care for patients with cancer. Teaching activities are conducted throughout each day, in venues including reading sessions for clinical examinations, clinical consultations, multiple tumor board conferences, and interdisciplinary clinical conferences. We are happy to share with others the imaging expertise that is essential for physicians to treat patients with cancer.

We in Radiology eagerly play key roles in the care of cancer patients, in research into ways to treat and prevent cancer, and in the education of individuals learning to treat patients with cancer. We are honored to serve in these ways and to support our Veterans who have cancer.

**Eric Olcott, MD**  
**Chief, Radiology Service**

## Patient and Family Support



## Audiology/Speech Pathology Service

Audiology/Speech Pathology Service (ASPS) is integrally involved in detection and management of patients with a variety of cancers and/or non-malignant tumors. Activities for 2011-2012 included referral of approximately 15-20 patients for identification and evaluation of previously undetected cancers or non-malignant tumors and advances in the management of patients with oral, pharyngeal and laryngeal cancers.

Audiologists are responsible for the diagnosis and management of hearing disorders and routine evaluations resulted in referrals of over 10-15 patients who were ultimately diagnosed with acoustic neuromas or other malignant tumors of the ear or brain where impact on hearing was one of the first sequelae.

Speech Pathologists are responsible for the diagnosis and management of speech, language and swallowing disorders. In 2011-2012 over 1500 patients were screened for speech-language and swallowing problems. These screenings and resultant videofluoroscopic, fiberoptic evaluation of swallowing studies (FEES) and oral-motor evaluations resulted in referral of 20-25 patients who were evaluated for previously undetected oral, pharyngeal or laryngeal cancer. Speech Pathologists also provided over 2,000-3000 treatments for approximately 75-100 patients with problems resulting from surgical or radiation intervention for cancer of the face, mouth, tongue, larynx, pharynx, esophagus or brain. These included speech or swallowing problems resulting from glossectomy, mandibulectomy, or laryngectomy, and cognitive or language problems resulting from brain cancer. Approximately 40-50 patients were continually followed for management of tracheo-esophageal prosthetic devices and speaking valves.

The patient population served was broadened with the addition of 4-5 patients with total laryngectomies/glossectomies, and treatment options were increased for all patients. These included the procurement of new types of voice prostheses and accessories (e.g. washer device to reduce voice prosthesis leakage), expansion of the selection of assistive devices for alternative communication such as text-to-speech, boogie boards, communication applications for portable tablets, etc. In addition, a laryngectomy treatment group was established, and procedures have been developed to initiate telehealth treatment and inclusion in groups for these patients.

Communication between patients and staff has been enhanced by the introduction of "Secure Messaging" which permits non-verbal instant communication for patients without a larynx or tongue. This was particularly beneficial for patients with both laryngectomy and glossectomy.

The efficiency of procuring supplies for cancer patients occurred when Audiology/ Speech Pathology staff worked with Prosthetics Service to develop a stock of items that could be issued immediately to these patients, and for Prosthetics Service to order recurring tracheostoma supplies.

Finally, to assure optimal preparation for patients to respond to the consequences of significant surgical interventions (e.g. removal of tongue or larynx), Speech Pathology staff meet with the Chief of ENT to discuss ways to maximize pre-surgical consultations.

Staff actively participated in team management specifically in the area of nutritional assessment and management and makes every effort to provide convenient follow-up to these patients by staffing clinics at Palo Alto, Menlo Park, Livermore, San Jose, Monterey, and Stockton.

Every effort is made to assure highest quality of service to cancer patients. This includes the initiation of co-treatment with ENT for therapeutic interventions such as changing complex, indwelling voice prostheses, and supporting approximately 200 hours of training in areas that affect cancer patients.

**Arlene Kasprisin, Ph.D.**  
**Chief, Audiology/Speech Pathology Service**

## Cancer Prevention Performance Measures

End Of Year cancer performance scores for FY11:

|                                 |                                 |                            |
|---------------------------------|---------------------------------|----------------------------|
| <b>Breast Cancer Screen</b>     | <b>85%- denominator of 301</b>  | <b>*2010 Benchmark-77%</b> |
| <b>Cervical Cancer Screen</b>   | <b>93%- denominator of 347</b>  | <b>*2010 Benchmark-86%</b> |
| <b>Colorectal Cancer screen</b> | <b>82%- denominator of 1097</b> | <b>*2010 Benchmark-67%</b> |

Tobacco use screen is 99% in patients seen in outpatient clinics. We have done exceptionally well with counseling nearly all tobacco users that were in the sample of records that were audited. The sampling is random, based on patients having a clinic appointment within 12 months in GMC, Pulmonary, Cardiac, Endocrine, Women's Health, and other medical or mental health clinics where primary care management occurs. There has not been a change in the sampling methodology for several years.

The Women Health Program (WH) continues to be proactive in educating and reminding patients to have mammograms and PAP smears. Patients who do not have screening either refuse or are a "no show" for those appointments. The Women's Screening Program has continued to implement continuous quality improvement activities:

- ❖ Simplification of the mammogram ordering process
- ❖ Continued collaboration with the business office
- ❖ Close collaboration with mammography vendor sites
- ❖ Site visits by Linda Kleinsasser, WVPM, to mammography vendors to improve scheduling process
- ❖ Ongoing collaboration with Stanford Mammography on process improvement
- ❖ Patient reminders for overdue mammograms
- ❖ Collaboration with CBOC liaisons and PACT for process improvement
- ❖ Regular visits to CBOCs by WHC staff to provide women's health issues education
- ❖ Provider encouragement to close clinical reminders on cervical cancer and breast cancer screening
- ❖ WH staff to review all EPRP data and to provide feedback to PCPs

Colorectal cancer screening is done by 3 Fecal Occult Blood Test (FOBT) annually, colonoscopy every 10 years; or a sigmoidoscopy every 5 years. Most of the patients screened have had a colonoscopy. Palo Alto HCS has one of the highest colorectal cancer screenings in the nation.

**Catherine Schiavone, RN, BSN**  
**Quality Management**

## Prostate Cancer Support Group

Our Prostate Cancer Support Group has been a great resource for our patients since 1999. We are very proud of our achievements with this group and we have done a lot since we first started. As part of our goal to seek ways to better benefit the group and continuously improve, we decided to open this group to other cancer survivors.

The Prostate Cancer Support Group meeting is in the Library Conference Room located in Palo Alto Division, Building 101, Room A2-120 from 11:30 am to 1:00 PM every month on the third Tuesday of the month. All veterans and the public (with their spouses and families) are welcome to the meeting. Light refreshment is served at each meeting. Staff at the Cancer Program provides the administrative assistance. Each month a speaker from the facility or the community is invited to the meeting to provide interesting and relevant medical and educational presentation to the group.

The following were the presentations/Discussions/Activities for the Cancer Support Group during 2011:

| DATE       | TOPIC   | SPEAKER                          |
|------------|---|----------------------------------|
| 1/18/2011  | General Info About Prostate Cancer  | Video Presentation/Lonnie Howard |
| 2/15/2011  | "Chemotherapy for prostate cancer: when is it given, what does it involve, what's new?" | Dr. Ina Rhee                     |
| 3/15/2011  | Roundtable with an Expert – Q & A with Dr. Fuad Freiha                                  | Dr. Fuad Freiha                  |
| 4/19/2011  | Living with Cancer  | Dr. Veronica Reis                |
| 5/17/2011  | How a Pathologist Diagnoses Prostate Carcinoma  | Dr. Jesse McKenney               |
| 6/21/2011  | Robotic-Assisted Radical Prostatectomy With Video Examples                              | Dr. John Leppert                 |
| 7/19/2011  | New Therapies in Prostate Cancer  | Dr. Sandy Srinivas               |
| 8/16/2011  | "Advances in Prostate Cancer Immunotherapy."  | Dr. Russell Pachynski            |
| 9/20/2011  | Cancer Clinical Trials: Basic Information and Resources                                 | Dr. Harlan Pinto                 |
| 10/18/2011 | PSA Screening and the Overtreatment of Localized Prostate Cancer (confirm with him)     | Dr. William Novotny              |

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| DATE       | TOPIC                | SPEAKER                                     |
|------------|----------------------|---|
| 11/15/2011 | Living with Cancer   | Veronica Reis, Ph.D                         |
| 12/20/2011 | Nutrition and Cancer | Evelyn Shinoda, RD,<br>Registered Dietician |

**Lonnie Howard**  
**Maria Tham**  
**Prostate Cancer Support Group Coordinators**



## Chaplain Service

As part of the Oncology Care Team, it is the on-going assignment of the Chaplain to be the spiritual resource that provides for the spiritual/pastoral cares/concerns of all. Dr. Virginia Jackson, Chief of Chaplain Service, serves, supports and ministers to Oncology patients in Oncology and Surgical Oncology Clinics, the Ambulatory Infusion Center and throughout the hospital on a consulting basis and as needed. Our service provides spiritual care for all faith traditions as well as those who do not profess faith in any religion.

Services provided by the Chaplain to the Oncology Care Team are:

- Chaplain support is available for Oncology/Surgery and Hospice team meetings and Tumor Board Conferences
- Twenty-four hour coverage is available for inpatients by Chaplain Service
- Telephone contact with patients and family members when appropriate (i.e. by referral)
- Ethical decision-making consultations as needed
- Charting patient visitations as a part of the interdisciplinary team functions
- Consultations with staff, patients and families in the Ambulatory Infusion Center
- Pastoral care and counseling visits that provide sensitized compassion, spiritual support, a caring presence and encouragement through prayer, laying-on-of-hands, and ministry of the Sacraments when appropriate.
- Available for walk-in pastoral counseling in the office

There is an ever increasing awareness and attention being given to the benefits derived from combining medicine with spiritual care for patients. VA Chaplains provide spiritual care and counseling for patients and families who request it. We offer a calm, safe and non-judgmental, non-anxious presence, especially regarding end-of-life issues, bereavement and grief counseling. We officiate at funerals and memorial services, on and off-site. It is an awesome privilege to be able to bring quality care and comfort to the veterans who suffer with cancer and their families by being present to meet their spiritual needs. We are grateful for the opportunity to serve our nation's veterans, who have borne the burden of our freedom.

**The Reverend Dr. Virginia Jackson, D. Min., M.Div., BCC**  
**Full-time VA Staff Chaplain**

## Community Health Services

The Community Health Nurse Coordinators are an integral component of the interdisciplinary team and provide a service that contributes significantly to the continuity of care of the veteran patient population. The CHNCs coordinate with the patient care coordinators and providers for timely inpatient discharges and support of outpatient services by rapidly accessing an array of quality home care and home hospice services over a wide geographic area. This coordination facilitates the collaboration of the community agency providers with VA providers to manage patient's symptoms in the home setting and seek early intervention to prevent lengthy hospitalizations, decrease emergency room visits, and improve quality of life.

The home health/hospice care provided varies with the individual needs of the patient from post surgical interventions, pain management, symptom management, medication management, home safety evaluations, home IV therapy, to comprehensive home hospice care. Community-based home health/hospice referrals are made only to agencies that are currently state licensed, JCAHO accredited and/or Medicare certified while home IV referrals are made only to JCAHO accredited agencies. Some of the home infusion agencies are also contracted as Medicare D (pharmacy) providers. The payment sources can be varied but primarily are Medicare and VA Purchased Care.

The CHNCs provide for home health and hospice services that contribute significantly to the quality of care to patients with cancer in the home setting.

## Nutrition And Food Service



Eating well during cancer therapy will help recovery and improve outcomes.

Unfortunately, the treatments used to fight cancer and even the cancer itself can make eating very difficult.

A dietitian can address nutritional concerns early to help patients and caregivers prepare for eating challenges. Nutritional screening and assessment allows for identification of cancer patients who are malnourished or who are at risk for becoming malnourished. Inpatient dietitians and diet technicians individualize a patient's diet with their special needs in mind. A dietitian is available to outpatients and their caregivers upon request.

Educational resources, including videos and cookbooks, are available in the patient waiting areas, the libraries and upon request, to help patients and families cope with common eating problems such as: loss of appetite, nausea, vomiting, diarrhea, taste changes, chewing and swallowing problems, dehydration and weight loss. The ongoing monitoring and intervention by a dietitian is also important to help patients maintain overall nutrition status and overcome eating problems throughout cancer therapy.

The link between nutrition and cancer prevention is recognized. The message that healthy food choices may reduce the risk of some types of cancer is discussed with patients in outpatient Nutrition Clinics and nutrition and cancer prevention handouts are available to patients in other clinics.

**Evelyn Shinoda, MS RD**  
**Nutrition and Food Service**

## Physical Medicine and Rehabilitation

The Physical Medicine and Rehabilitation Service (PM&RS) provides support to the VAPAHCS Cancer Program primarily through its multidisciplinary approach to patient care.

The PM&RS physiatrist provides consultation as needed to address any rehabilitation needs of the oncology patient, such as recommendations for further rehab care and therapy post-discharge.

Physical Therapy and Occupational Therapy receive referrals from the Pain Management Program, PM&R Service, Hospice, Medical Oncology Clinic and Inpatient Services to administer treatment as indicated for oncology patients.

PM&RS has allocated a half-FTEE Occupational Therapy staff to join the team on the Hospice Program.

Occupational Therapy is essential in assessing ADL's, functional mobility, energy conservation, and pain management, as well as provide home evaluations, assessments for adaptive and durable medical equipment, grief counseling and family training.

Interventions provided to clients by Physical Therapy include: therapeutic exercise; functional and mobility training; manual therapy techniques; application and training in the use of assistive, adaptive, orthotic, protective, supportive and prosthetic devices; airway clearance techniques; wound management; electrotherapeutic; physical agents and mechanical modalities; and family training.

**Jeffrey Teraoka, MD**  
Chief, PM&RS

## Recreation Therapy Service

Recreation Therapy Service has 58 staff, including music, art therapists, and RT assistants who provide innovative treatment modalities to patients diagnosed with various forms of cancer. The goals of these therapeutic interventions are to improve functional level and achieve optimal wellness through a comprehensive continuum of quality care.

The veterans seen in the Recreation Therapy Fitness and Wellness Clinic with a primary diagnosis of cancer receive a range of treatments, including exercise instruction/therapy addressing de-conditioning, as well as general strength and endurance. In addition, pain management, relaxation, and stress management are derived benefits. Wellness programs include, but are not limited to, aquatic therapy, individualized exercise programs, cardio/universal weight equipment instruction, and facilitated exercise classes (aquatic and land based). Programs are based on a continuum of care through completion of an assessment, development of treatment programs with a wellness education emphasis, 1:1 therapeutic intervention, and transitioning patients into self-directed fitness participation if clinically appropriate.

Depending on patient's level of functioning and individual interests, recreation/creative arts therapists offer the following: a variety of modalities that address his/her cognitive, social, emotional, physical, and spiritual needs through the provision of 1:1 or group treatment programs; bedside activities; sensory stimulation (auditory, visual, tactile); animal-assisted therapy visits; and music therapy. Moreover, during the patient's stay, Recreation Therapy Service focuses on the importance of creating a home-like environment in order to facilitate patients feeling as comfortable as possible. On the Hospice Unit RT's can create a bedside program using an Ipad that brings the past, present, and future to those unable to get out of bed. Therapists can reminisce, engage, and excite, as well as addressing the patient's cognitive, social, emotional, and spiritual needs.

Over this past year, Shawna Hill, CTRS in the Spinal Cord Injury Homecare Program and certified yoga instructor, provided adaptive yoga and chair yoga for small groups and on a one on one basis to veteran's pre- and post-cancer diagnosis. Some issues targeted via yoga were decreasing pain, anxiety, elevating mood, and overall well being while receiving treatment. Shawna also has provided resources for adaptive yoga exercises, restorative poses, relaxation, and breathing techniques for veterans to use at home.

Our art therapists use creative expression through art as a way to empower Veterans to overcome cancer emotionally.

Music therapy interventions utilized with cancer patients include songwriting, improvisation, guided imagery with music, lyric analysis, singing, instrument playing and relaxation techniques. Current music therapy on the hospice unit addresses the following 5 needs/areas:

- Social- isolation, loneliness, boredom; music therapy can help veterans who are withdrawn become more engaged with others.

- Emotional- depression, anxiety, anger, fear, frustration; music therapy can give veterans a safe, constructive outlet for emotions.
- Cognitive- neurological impairments, disorientation, confusion; music therapy can help orient a veteran to the present time/place, and can also aid in reminiscence and memory.
- Physical- pain, shortness of breath; music therapy can address pain through focusing the mind on a musical activity, therefore reducing the amount of attention given to the pain.
- Spiritual- lack of spiritual connection, need for spiritually based rituals; music therapy can provide a spiritual connection through the singing of spiritual songs/hymns.

Within the VAPAHCS some veterans are faced with cancer while actively engaged in other VA programs. On such occasions the program's Recreation Therapist will adjust treatment approaches. Whatever involvement the veteran has through the Recreation Therapy component of that program, it will speak to concerns posed by their cancer, as well as continuing to recognize individual pre-existing treatment goal(s) as participants in that program. When partnering in treatment work the Recreation Therapist strives to provide service within the veteran's existing milieu or program structure while actively recognizing their cancer experience, thus honoring all facets of their current life in treatment.

In conclusion, Recreation Therapy Service strives to provide the highest quality of care in assisting patients and their families to acquire skills and resources to better cope with the cancer diagnosis and treatment.

**Tracy Marino**  
**Administrative Officer**  
**Recreation Therapy Service**

**Caroline Wyman, CTRS**  
**Chief, Recreation Therapy Service**

## Smoking Tobacco Use Cessation Support Service

March 1993, a Smoking Cessation Task Force was initiated by the Director, Palo Alto VA Health Care System, through Quality Management. The Chairman of the Task Force appointed a Smoke Free Coordinator/Lead Smoking Cessation Clinician. The goal was to improve the state of smoking cessation treatment throughout the medical center; thus a Smoking Cessation Policy was developed and implemented. Since 1993, the Task Force has provided patients and staff with educational materials and has developed smoking and tobacco use cessation treatment programs.

### Smoking Policy

The Smoking Policy, detailing where smokers may smoke on VA property, is set by the Clinical Executive Board and the Partnership Council. Recommendations for new policies come from VA Central Office, VA staff, and the Smoking and Tobacco Use Cessation Lead Clinician. Since October 1<sup>st</sup>, 1998, the Palo Alto VA Health Care System has adopted a policy of a generally smoke-free campus with the exception of specially designated smoking areas. There are 3 areas with such designation at the Palo Alto Division, 5 at the Menlo Park Division and 3 at the Livermore Division, in addition to most parking lots at all facilities.

### Smoking Cessation Treatment

VAPAHCS offers several smoking cessation treatment options. Tobacco cessation medications are available on the Formulary (including nicotine replacement, bupropion and varenicline). Primary Care Providers are able to order these medications and carry out smoking cessation on their own or refer their patients to one of our smoking cessation programs. Varenicline is used very cautiously and is reserved for smokers unable to quit with nicotine replacement or bupropion. Smoking Cessation Clinics are established at three facilities of the Palo Alto Health Care System: Palo Alto, San Jose, and Stockton. Clinics permit patient self-referral. All clinics accept referrals by electronic consult.

Palo Alto Division. (Covers both Palo Alto and Menlo Park outpatients): Call (650) 493-5000. After the computer voice answers the phone, press the number 1, then 1 again, and then extension 67004. Talk to or leave a message for Dr. Jessica Lohnberg, requesting an appointment.

Providers may send electronic consults to Smoking Cessation Wednesdays at 10:30 AM in MB3, Suite 350-Behavioral Medicine Wednesdays 9:00 to 10:30 AM in the same location. Call Dr. L

San Jose Clinic: Patients may call Dr. Gary Miles at (408) 300-3000. After the computer voice answers the phone, press the number 1, then press the number 4, and then extension 73037.



Talk to or leave a message for Dr. Miles, requesting an appointment. Dr. Miles meets new patients for smoking cessation on Fridays at 2:00 PM. Follow-up sessions are Fridays at 3:00pm. Providers may send an electronic consult to Smoking Cessation (SJC).



Stockton Clinic: Patients may call Dr. Hilary Keegan at (209) 946-3407. Talk to or leave a message for Dr. Keegan, requesting an appointment. Dr. Keegan meets new patients for smoking cessation on Thursdays at 11:00 AM. Follow-up sessions are Thursdays at 10:00 AM. Providers may send electronic consults to Smoking Cessation (STC).

**Telequit:** Patients who either live far from one of the three Smoking Cessation Outpatient Clinics or are otherwise unable to come to the clinic can be treated through Telequit, our phone-based program. Providers may send electronic consults to Telequit. Please verify that the patient's phone number is updated in CPRS prior to sending the consult. Nicotine replacement, bupropion, and varenicline are available.



Employee Smoking Cessation Treatment: Employees who are interested in quitting smoking can access services through Telequit and the smoking clinicians named above. As of September 2010, it has become VHA policy to provide free over-the-counter formulations of nicotine replacement therapy to employees who are seeking assistance with quitting.

### Health Education

The Smoking Cessation Task Force uses opportunities such as the Great American Smokeout, Health Fairs, and events through the Health Promotion Disease Prevention Committee as opportunities to provide information to patients and staff on the risks of smoking/tobacco use and benefits of quitting.

**Veronica Reis, Ph.D**  
**VAPAHCS Health Behavior Coordinator and**  
**Smoking and Tobacco Use Cessation Lead Clinician**

## Smoking Cessation – Telequit

The VA's TeleQuit Smoking Cessation Program is a telephone based smoking cessation program. Telephone-based care means no in-person clinic visits to arrange for patients. TeleQuit provides medication management and counseling services to all veterans and VA employees. The counseling is provided by California Smokers Helpline and Nevada Tobacco Users Helpline.



Our program receives the referrals from 4 facilities in VISN 21: Palo Alto, Northern California, San Francisco and Sierra Nevada VA HCS. Providers from these VA facilities place a consult for the TeleQuit Program on CPRS and we accept them on the following day and inform the provider via a CPRS note attached to the TQ consult that we'll contact the patient they are referring. Our TeleQuit coordinator calls the patient, and if she/he is still interested in enrolling in the TeleQuit program, enrolls them. The TQC takes a detailed smoking history including history of chest pain, heart attack, eating disorder, seizure disorder to exclude any contraindication for smoking cessation medication. The Veteran is also asked about the preferred smoking cessation medication. The TQC sends this information to the TeleQuit nurse practitioner (NP). The NP then evaluates the medical information, reviews the patient's chart on CPRS, prescribes smoking cessation medication (if appropriate), and arranges for the medication to be sent to the patient. We offer nicotine patch, gum, lozenge, bupropion and Varenicline. During the enrollment veterans are asked whether they are interested having the counseling service from CSH. If the veteran is interested, he/she is connected to CSH via 3-way phone call. The smoking cessation counseling is provided by CSH per their protocol, and they also send some brochures with helpful information for smoking cessation. TQC also mails the enrollment packet to the enrolled veterans, containing a welcome letter with our contact information, medication refill instruction, medication flyer with side effects of smoking cessation medication, and when to contact Telephone Care Program and a brochure of Telephone Care Program.

TQC makes a follow-up phone call to all veterans who enrolled in TQ program at 6 month to determine if a veteran is currently smoking and, if he/she is a current smoker, to offer treatment options for quitting. We also contact to enrolled veterans at the end of the first month to see how they're doing and if they need any refill on their smoking cessation medication.

Since its launch in 2007, TeleQuit has managed the smoking cessation care of over 6, 500 veterans throughout VISN 21.

**Our 6 month abstinence rate is 25%.**

For more information regarding TeleQuit Program, please visit <http://www.paloalto.va.gov/telequit.asp> or call us at 1-800-455-0057, ext. 60557 (Palo Alto).

## **TeleQuit Team**

Our program Director is Dr. Ware Kushner at the Department of Pulmonary and CCM at VAPAHCS and program manager is Sebnem Guvenc-Tuncturk.

Our program nurse is Liz Benishin, RNP. She evaluates the medical information, reviews the patient's medical history, prescribes smoking cessation medication (if appropriate), and arranges for the medication to be sent to the patient. She also follows up with patients who need refills of the smoking cessation medication.

There are 5 TeleQuit coordinators in the program who contact to veteran for enrollment, take detailed smoking history and send this information to the TeleQuit nurse practitioner (NP). They also inform referring providers via updated clinical notes on CPRS.

Telequit has a toll free phone number available to veterans. **1-800-455-0057, ext. 60557 (Palo Alto).**

The VA TeleQuit coordinator is available to take these calls Monday-Friday, 8:00 AM - 4:30 PM. Veterans may leave a message on the voice mail. A TeleQuit coordinator will return the call as soon as possible.

**Sebnem Guvenc-Tuncturk.**  
**Program Manager**

**Dr. Ware Kushner**  
**Program Director**

## Social Work Service

Social Work Service is an integral part of the VAPAHCS Oncology team. Social Work Service will provide services and support to oncology patients in the outpatient clinic (including Ambulatory Infusion Center); this includes Oncology Clinic, ENT Clinic, General Surgery Oncology Clinic and Urology Clinic; the social worker will continue to follow these patients during admissions to PAD. In addition, the social worker will continue to coordinate with veterans and their families during IICU and MSICU admissions



The following is a list of some of the services offered:

**Orientation:** Social Work provides new Oncology Clinic patients with an orientation to the Oncology Clinic and the VA. All veterans new to the Oncology Clinic meet with the Oncology Social Worker; the New Patient Packet is reviewed at that time. The social worker is responsible for updating and distributing the New Patient Packet. The oncology social workers meets with all new Oncology Clinic patients.

**Assessments:** The social worker will meet with all new oncology clinic patients to complete an initial psychosocial assessments which includes an evaluation of coping skills, support systems and financial needs. Veterans are given concrete information about the cancer program as well as emotional support and psychotherapeutic intervention when needed.

**Concrete Needs:** Social Work will assist veterans and families with applying for benefits, accessing community and VA resources for financial assistance, transportation, housing, at home assistance, food bank referrals, food stamps, Hometel and Fisher House referrals; VA waivers, and many other VA related forms that veterans must complete. Social Work will expedite the process of filing for Agent Orange claims (schedule the initial appointment and refer veteran to Veterans Service Office to file the Agent Orange Claim).

Social Work will also refer veterans to the American Cancer Society, the Leukemia Lymphoma Society and Cancer Care (transportation reimbursement, financial assistance, co-pay assistance). Social Work coordinates referrals to various community agencies (transportation, food, housing, and assistance).

**Counseling:** Social Work will assist veterans and families with coping with a cancer diagnosis and treatment. As part of this, Social Work will assist veterans with the Advance Directive, POLST and end of life discussions and planning.

Social Work now incorporates group psychotherapy (Cancer Forum) as part of the Oncology Team approach to cancer care. This group meets weekly and includes veterans and families; it serves as a method of delivering ongoing education and support as well as psychotherapeutic intervention to our veterans. This group meets weekly.

**Education:** The Social Worker will provide education and information about cultural, familial and interpersonal issues that can impact styles of coping with cancer and treatment implications. Social Work will provide cancer literature provided by the American Cancer Society, Leukemia Lymphoma Society, National Cancer Institute and LiveStrong Foundation.

**Community Resources:** Social Work will provide information about community resources ranging from the American Cancer Society to Food Banks. The Social Worker will actively develop good relationships with the various community agencies that can assist our veterans.

The Social worker has referred more than 105 veterans to the American Cancer Society; in addition, referrals are made to Cancer Care and Leukemia/Lymphoma Society.

The Social Worker provides resources and information by providing literature from the National Cancer Institute, American Cancer Society, Patient Resource Center, LLS and VA related resources (Agent Orange, Gulf War, Iodized Radiation, etc.).

**Collaboration:** The Social Worker will collaborate with Stanford Cancer Center to coordinate radiation schedules for our veterans. The coordination includes the Oncology Clinic, Hometel, Fisher House sub-acute unit inpatient programs, as well as Medical Respite/Little Orchard Shelter. Coordination of radiation treatment is an integral part of the social work function. In addition the Social Worker will work closely with the veteran's oncologist, ambulatory infusion team, behavioral medicine, chaplain services and families to provide the highest quality of care to our veterans.

**Multi-Disciplinary Support:** The Social Worker has instituted an ongoing support group for Ambulatory Infusion Center nursing staff. This group meets monthly. The focus is to provide support to AIC staff as they deal with seriously ill and dying veterans.

**Commission on Cancer:** The Social Worker is responsible for developing and implementing the Commission On Cancer standard: Patient Navigation. The social worker has identified the following areas of navigation: Homelessness, Psychosocial Issues, Transportation and Housing, and Military Service Connected Disabilities (as pertaining to cancer).

The social worker is coordinating with Behavioral Medicine regarding: Psychosocial Distress Commission on Cancer Standard.

**Patient Advocacy:** The social worker also serves as an advocate for the veterans coordinating with inpatient medical teams, ER team, community hospitals and hospices.

**Telemedicine:** The social worker is involved in developing a Cancer Forum Support Group via TeleHealth; the initial group will located at the VA Modesto Clinic.

**Homeless Veterans:** The social worker coordinates cancer treatment for homeless veterans (part of the Navigation Process); the homeless veteran population frequently present with

complicated medical problems (in addition to cancer) as well as complex psychosocial problems.

**Additional Social Work Functions:**

The social worker participates in the Inter Disciplinary Ambulatory Infusion Center meetings.

Social Work participated in the 2<sup>nd</sup> Generation VHA Cancer Care Collaborative (Head and Neck cancer). As part of the core team, the social worker attended three Learning Sessions (New Orleans, Indianapolis and Orlando). The VA-TAMMCS process was introduced and adopted. Two aims were successfully achieved and are currently being sustained. Of note, the storyboard put together by the team was a 3<sup>rd</sup> Place winner. Further, the members of this Collaborative team were recognized by the Director of the VAPAHCS for its achievements at the Cancer Collaborative. The Oncology Social Worker participated in the 3<sup>rd</sup> Generation VHA Cancer Care Collaborative (lung).

Social Work is now an integral part of the 3<sup>rd</sup> Generation Cancer Care Collaborative. As a member of the team that will improve cancer care to lung cancer patients, social work brings a unique perspective to the team.

Social Work is now participating in the VA national effort to establish a VA Cancer Survivorship program; this initiative will develop a plan for VA system wide cancer survivorship plan. The social worker is a participant in the Special Interest Group (SIG) Cancer Survivorship.

The social worker also is a member of the Leukemia Lymphoma Society Patient Services Committee which is a community-wide group that discusses various cancer services available in Silicon Valley.

The social worker has been awarded the Oncology Social Worker-Certified (OSW-C) designation by the Association of Oncology Social Workers.

**Karen L. Chwick, LCSW, OSW-C**  
**Oncology Social Worker**  
**VA Palo Alto Health Care System**

## Women Veterans

VAPAHCS served 4,700 women in FY 2011. This includes women Veterans, TRICARE and CHAMP- VA patients. Women Veterans at VAPAHCS are increasing at all sites of care. We served 2,450 women Veterans in FY 2006; by 2011 the number had increased to 3,400. The growth is expected to continue and even increase over the coming years.

The increase seen at VAPAHCS is consistent with the national statistics. Women Veterans using VHA services have increased significantly in the past decade, doubling between FY00 to FY2010, from 159,630 to 292,921, an approximate 83% increase. Women now comprise 6% of VA healthcare users, but are closer to 10% of VAPHCS users. This increase is seen due to the increase of women serving in active duty roles. Women now comprise approximately 18% of all active duty military and 14.5% of all National Guard and Reserves.

VAPAHCS serves women Veterans of all age groups. The number of women Veteran users at VAPAHCS varies substantially by age group. The largest group is the middle age group (45-64 years). However, we do care for a large number of elderly women (75+ years), and a substantial number of women in the reproductive years (<35 years). The number of elderly women is declining, whereas the number of young women is increasing. Among women <35 years old, the rate of growth has been the highest, suggesting that there will be an increasing need for expertise to meet the health needs of women in the reproductive years. Nearly half of women veteran's users hold a service-connected disability status. VAPAHCS is committed to and equipped to serve the healthcare needs of women Veterans of all age groups from the young returnees of war to the older women Veterans—the largest subpopulation of female VA health care users.

### Women's Health Program

VAPAHCS has made it a priority to ensure that all women Veterans receive equitable, high-quality, and comprehensive health care services and to decrease fragmentation in delivery of healthcare to women Veterans. VAPAHCS understands the importance of planning and meeting the needs of all women Veterans as their numbers continue to increase, especially if market penetration increases among those women Veterans who currently do not use VA services. In recognition all of the services provided by the WH program, it was given the award of Excellence in Clinical Care in 2008.

VAPAHCS is transforming health care delivery to women by delivering Comprehensive **Primary Care** by proficient and interested primary care providers at all sites of care including all of our CBOCs. These designated WH providers are interested and proficient to meet the gender-specific needs of women Veterans in a private and safe environment with dignity, and respect. Comprehensive Primary Care means provision of complete primary care from one primary care provider at one site to include:

- Care for acute and chronic illness
- Gender specific primary care
- Preventive Services

- Mental Health Services
- Coordination of care

### **Women's Health Center**

The Women's Health Center at the Palo Alto campus is a comprehensive clinical center providing a wide variety of services since 1992 and was established as part of a national initiative to improve services for women Veterans. The WHC is a model 3 clinic which not only provides comprehensive primary care but also delivers an array of additional services to meet the needs of the women Veterans

The Women's Health Center is open five days a week and provides the following services:

1. Primary Care including preventive health screening
2. Mental health services including psychology and psychiatry
3. Reproductive health care, including gynecological care, infertility evaluation and genetic testing
4. Care coordination for obstetrical care
5. Comprehensive Breast Care Clinic, (breast surgeons/oncology)
6. Comprehensive OIF/OEF/OND clinic
7. Women's PMR and Acupuncture clinic
8. Women's Rheumatology Clinic
9. Pelvic Floor Rehabilitation Clinic
10. Women's Cardiology Clinic
11. Women's Heart Health Clinic
12. Spirituality groups
13. Women's Wellness Group
14. Mental Health Groups
15. Social Work Services
16. Nutrition Advise
17. Pharmacy care
18. Women's Tele-Health services
19. Psychology CVT services

Maternity care is not available within the VAPHCS but a comprehensive process ensures that all women Veterans receive OB care close to their residence through a fee care process.

Patient education is key, and the WHC strives to educate its patients on topics such as:

1. Incontinence
2. Family planning
3. Menopause management
4. Obesity counseling
5. Smoking cessation
6. Counseling on medical, spiritual, social, and wellness issues.

**Women's Health Education and Research Programs:**

**WE TEACH WHAT WE DO AND WE DO WHAT WE TEACH; WE STUDY WHAT WE DO AND WE DO WHAT WE STUDY.**

In addition to clinical services, the WHP strives to provide the best educational experience for the future generation of clinicians not only in women's health but also in understanding the unique needs of women Veterans. Training in women's health is provided to medical and RNP students as well as psychology interns and medical residents. The award winning research program at VAPAHCS is one of the leading programs in the nation that carries out research in the area of women Veterans. Recently, sensitivity training about women Veterans was provided to staff at different sites and clinics by Linda Kleinsasser, WVPM.

**Women's Mental Health Programs:**

VAPHCS has two outstanding women Veterans mental programs

1. Women's Prevention, Outreach and Education Center (WPOEC)
2. Women's In-Patient Trauma Recovery Program

**Gender Specific Care:**

Breast and cervical cancer screening is performed according to VA guidelines. VAPAHCS provides mammography services through fee care arrangements. Several mammography sites have been chosen strategically which ensures that these services are available within 50 miles of a patient's residence as suggested in policy 1330.01. All mammogram results from fee-based sites are mailed to patients, and patients with abnormal results are contacted in person for follow up. Abnormal results are tracked closely.

Cervical cancer screening is performed as part of the comprehensive primary care by designated WH providers including the CBOCs. Some patients continue to come to the WHC to obtain their gender specific care. All women are notified of Pap smear results by letter and abnormal results are given to the patient by phone. Follow-ups of abnormal pap smears, complicated GYN issues and IFC referrals are done in a timely manner through our gynecologist.

In addition to the routine breast cancer screening efforts described above, we have recently expanded our screening, preventive and diagnostic efforts. We are educating primary care providers on use of a clinical breast cancer risk model to assist with identification of women at significantly elevated risk of breast cancer. These women are then to be referred to breast oncology clinic for counseling on breast cancer risk reduction strategies, including use of a selective estrogen receptor modulator or aromatase inhibitor for chemoprevention. In women with more than twice the average lifetime risk of breast cancer, magnetic resonance imaging (MRI) and twice yearly clinical breast exam are offered for intensive screening, according to national guidelines.

Within our comprehensive breast clinic, women and men are evaluated for likelihood of a hereditary breast or ovarian cancer syndrome, and are offered genetic counseling and testing

as indicated thus decreasing the need to refer identified mutation carriers to tertiary care cancer genetics clinics for consultation regarding management of cancer risk.

Among other recent breast cancer initiatives, we have improved our diagnostic capabilities. An ultrasound machine is now available in our breast clinic, enabling “real-time” biopsy of suspicious lesions; this decreases the wait time for a diagnosis, and in doing so, reduces patient anxiety. Our breast cancer specialists from surgery and oncology meet regularly to devise multidisciplinary treatment plans for newly diagnosed patients; this communication enhances quality of care and expedites initiation of appropriate breast cancer therapy. Additionally, our breast cancer specialists coordinate their weekly clinic on the same day, to reduce travel time for patients and increase their ability to attend all recommended cancer-related appointments.

**Compliance and Satisfaction:**

Patient satisfaction continues to be very high for services offered to women Veterans. Privacy and safety are key for women veterans and all efforts are made at VAPHC to ensure that all veterans including women veterans receive care in a safe and private environment and with dignity.

**Samina Iqbal, MD**  
**Medical Director, Women’s Health Program**

**Linda Kleinsasser, RN-BC**  
**Women Veterans Program Manager**

## 2011 Cancer Conferences

The VAPAHCS Cancer Conference provides clinical information, pathologic staging, and treatment recommendations for the patient's disease. It functions as a multidisciplinary diagnostic and oncologic team for case review. The Cancer Conference Board is comprised of a multidisciplinary group of oncology attending physicians, fellows, residents, physician assistants, nurses, medical students and other specialists from Diagnostic Radiology, Pathology, Radiation Oncology and General Surgery. The format includes a complete presentation of medical history, physical findings, clinical course, radiographic studies and pathological interpretation. The specialists provide multidisciplinary input to resolve complex management problems. They identify patients eligible for chemotherapy protocol or radiation treatment. The conference also provides an education forum for all medical staff. One credit hour of Continuing Medical Education (CME) by the Stanford University School of Medicine is provided for the attendees of the Multidisciplinary CME Tumor Board Conference held on the 4<sup>th</sup> Monday of every month.

A total of 72 Cancer Conferences were held in 2011. 261 analytic cases were presented. This represents 35% of our annual analytic caseload. Out of the 261 cases, 261 were prospective cases, which equal to 100% of the total analytic cases presented. Average physician attendance was 95%. The standard of American College of Surgeons' Commission on Cancer (CoC) requires at least 10% of the analytic caseload and at least 75% of prospective cases to be presented annually. We met and exceeded the CoC requirements. We also met our physician attendance goal set at 80%.

The following are the schedules for VAPAHCS Cancer Conferences.

**Genitourinary (GU) TB** Cancer Conference meets on the 3rd Tuesday of the month in the Pathology Conference Room, Building 100, 4th Floor at 4:00 PM.

**Liver TB** Cancer Conference meets on the 1st Wednesday of the month in the Diagnostic Radiology Conference Room (DRC) at 4:00 PM.

**Multidisciplinary CME** Cancer Conference meets on the 4th Monday of the month in the Auditorium at 12 PM.

**Otolaryngology (ENT)** Cancer Conference meets every Thursday at Stanford Cancer Center, Clinic B at 10 AM.

**Lung TB** Cancer Conference meets on the 3rd Thursday of the month in the DRC Conference Room at 4:00 PM.

**Patient Care Conference** meets on the 2nd and 4th Tuesday of the month in the Surgical Conference Room, Building 100, 3rd Floor at 4:00 PM.

**Maria Tham**  
**Tumor Board Coordinator**

## Clinical Research in Oncology

The following is a list of clinical research protocols open at the Veterans Affairs Palo Alto Health Care System. The VA participates in the Eastern Cooperative Oncology Group (ECOG) as part of the Stanford Main Institution Consortium. The Department of Radiation Oncology at Stanford is also a member institution of the Radiation Therapy Oncology Group (RTOG). In addition, several other clinical trials were available through Nursing Service, Medical Oncology, and Hematology.

### Available Clinical trials in 2011-2012

1. E1305: A Phase III Randomized Trial of Chemotherapy with or without Bevacizumab in Patients with Recurrent or Metastatic Head and Neck Cancer
2. E1609: A Phase III Randomized Study of Adjuvant Ipilimumab Anti-CTLA4 Therapy versus High-Dose Interferon  $\alpha$ -2b for Resected High-Risk Melanoma
3. E2809: Androgen Receptor Modulation Phase II, Randomized Study of MK-2206-Bicalutamide Combination in Patients with Rising PSA at High-Risk of Progression after Primary Therapy
4. E5508: Randomized Phase III Study of Maintenance Therapy with Bevacizumab, Pemetrexed, or a Combination of Bevacizumab and Pemetrexed Following Carboplatin, Paclitaxel and Bevacizumab for Advanced Non-Squamous NSCLC
5. E6508: A Phase II Study of L-BLP25 and Bevacizumab in Unresectable Stage IIIA and IIIB Non-Squamous Non-Small Cell Lung Cancer after Definitive Chemoradiation
6. E2607: A Phase II Trial of Dasatinib in Patients with Unresectable Locally Advanced or Stage IV Mucosal, Acral and Solar Melanomas
7. E1608: A Phase II Trial of GM-CSF Protein plus Ipilimumab in Patients with Advanced Melanoma
8. E1508: A Randomized Phase II Study of Cisplatin and Etoposide in Combination with Either Hedgehog Inhibitor GDC-0449 or IGF-1R MoAB IMC-A12 for Patients with Extensive Stage Small Cell Lung Cancer
9. Phase I Accelerated Hypofractionated IGRT in Stage II-IV NSCLC and Poor Performance Status

10. RTOG1012 Phase II Randomized Trial of Prophylactic Manuka Honey for the Reduction of Chemoradiation Therapy Induced Esophagitis-Related Pain During the Treatment of Lung Cancer
11. Phase II trial of Individualized Lung Tumor Stereotactic Ablative Radiotherapy (SABR)
12. RTOG0915: A Randomized Phase II Study Comparing 2 Stereotactic Body Radiation Therapy (SBRT) Schedules for Medically Inoperable Patients with Stage I Peripheral Non-Small Cell Lung Cancer
13. RTOG0937: Randomized Phase II Study Comparing Prophylactic Cranial Irradiation Alone To Prophylactic Cranial Irradiation And Consolidative Extra-Cranial Irradiation For Extensive Disease Small Cell Lung Cancer (ED-SCLC)
14. CALGB30610/RTOG0538: Phase III Comparison of Thoracic Radiotherapy Regimens in Patients with Limited Small Cell Lung Cancer Also Receiving Cisplatin and Etoposide
15. A Multi-Institutional Phase II study of Radiation and GW572016 (Lapatinib) for Patients with Stage III-IV Head and Neck Cancer Who Cannot Tolerate Concurrent Chemoradiotherapy. LAP #109855
16. Molecular Analysis for New Biomarkers in Colorectal Cancer

**Benjamin Priestley, MPH**  
**Data Manager**  
**ECOG Cancer Clinical Trials**

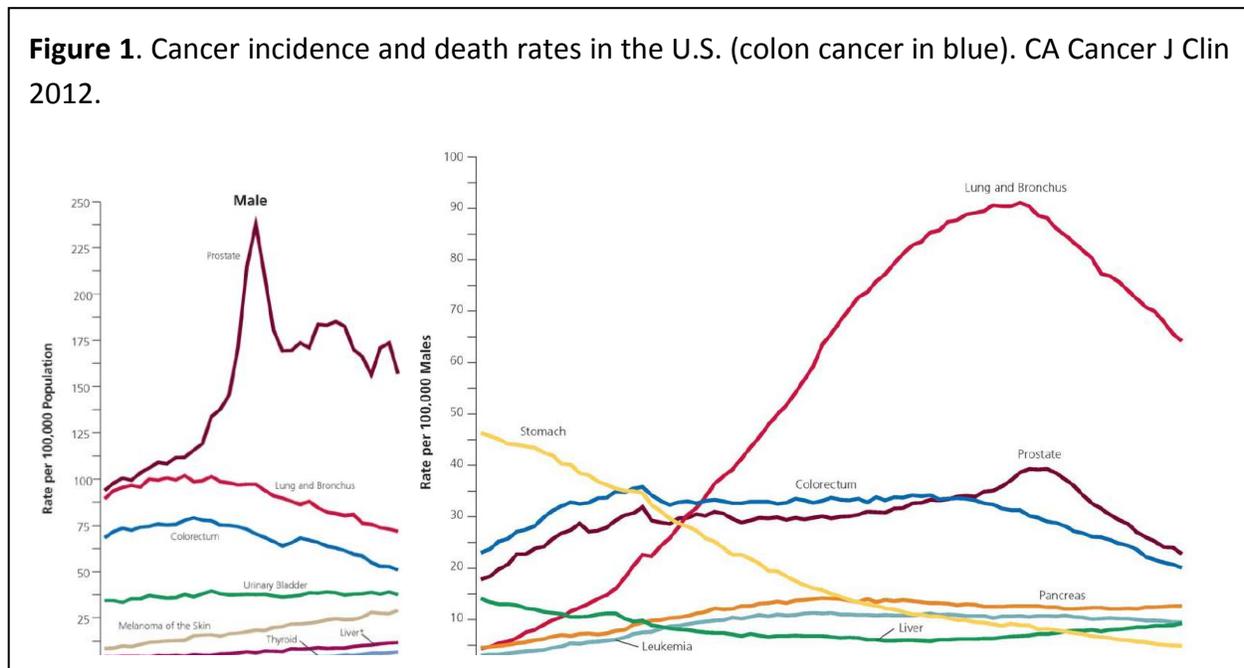
## Cancer Patient Care Evaluation Study- Colon Cancer

### Colon Cancer Screening and Stage at Diagnosis Study (2000 – 2009)

An estimated 103,170 Americans will be diagnosed with colon cancer in 2012 and colon cancer will be responsible for nearly 51,690 deaths. Colon cancer incidence and mortality has declined over the past 20 years and this some of this effect is likely due to increased screening efforts and early detection. **(Figure 1)** According to data from SEER 2002-2008, localized colon cancer is associated with a 5-year relative survival of 89.9%. 5-year relative survival is declines significantly for regional cancers at the time of diagnosis (69%) and metastatic (11.9%) or unstaged cancers (33.9%). We reviewed the stage at diagnosis information for colon cancer at the VA Palo Alto Health Care System (VAPAHCS) from 200-2009 with the intention of determining whether stage at diagnosis patterns here are representative of national statistics. **(Table 1)**

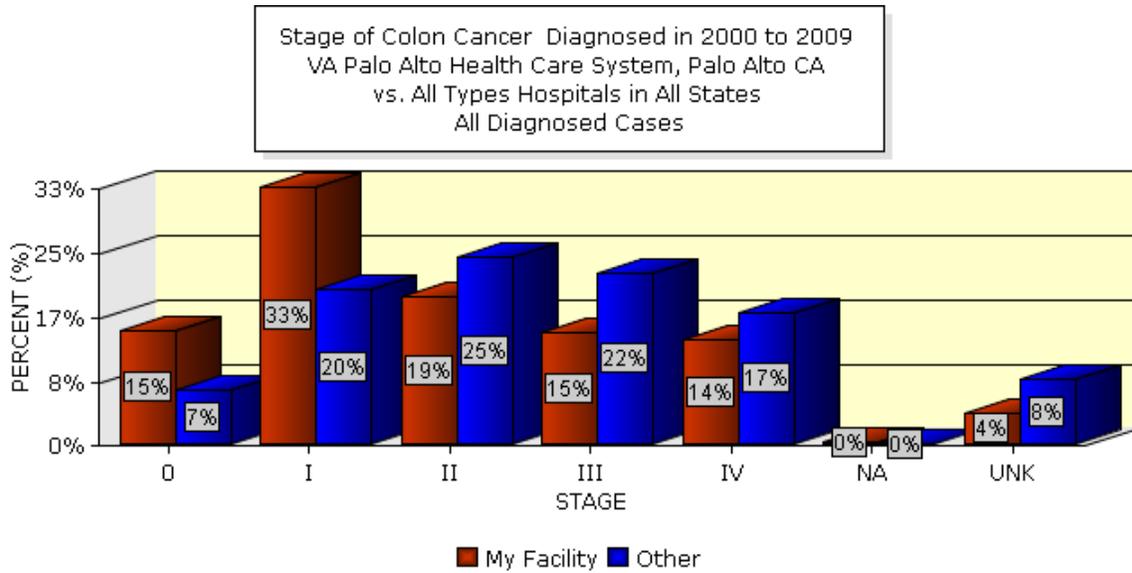
#### Summary

**Figure 1.** Cancer incidence and death rates in the U.S. (colon cancer in blue). CA Cancer J Clin 2012.



This most recent 10 year experience with colon cancer at our facility demonstrates that the majority of our Veteran patients are diagnosed with Stage 2 or earlier colon cancer, with Stage 1 (33%) being the most common at the time of diagnosis. This is also reflected by lower rates of late stage colon cancer diagnosis when compared with national trends. Screening efforts and early detection is critical and represents opportunity for curative treatment of a potentially fatal disease.

Table 1. Colon cancer stage at diagnosis.



|             | 0   | I   | II  | III | IV  | NA | UNK |
|-------------|-----|-----|-----|-----|-----|----|-----|
| My Facility | 15% | 33% | 19% | 15% | 14% | 0% | 4%  |
| Other       | 7%  | 20% | 25% | 22% | 17% | 0% | 8%  |

*Stage of Colon Cancer Diagnosed in 2000 to 2009*  
**VA Palo Alto Health Care System, Palo Alto CA**  
*vs. All Types Hospitals in All States*  
**All Diagnosed Cases**

| #                 | Stage | My (N)     | Oth. (N)      | My (%)      | Oth. (%)    |
|-------------------|-------|------------|---------------|-------------|-------------|
| 1.                | 0     | 51         | 56529         | 14.83%      | 7.09%       |
| 2.                | I     | 115        | 161327        | 33.43%      | 20.24%      |
| 3.                | II    | 66         | 195410        | 19.19%      | 24.51%      |
| 4.                | III   | 50         | 178454        | 14.53%      | 22.39%      |
| 5.                | IV    | 47         | 136829        | 13.66%      | 17.16%      |
| 6.                | NA    | 1          | 834           | 0.29%       | 0.1%        |
| 7.                | UNK   | 14         | 67786         | 4.07%       | 8.5%        |
| <b>Col. TOTAL</b> |       | <b>344</b> | <b>797169</b> | <b>100%</b> | <b>100%</b> |

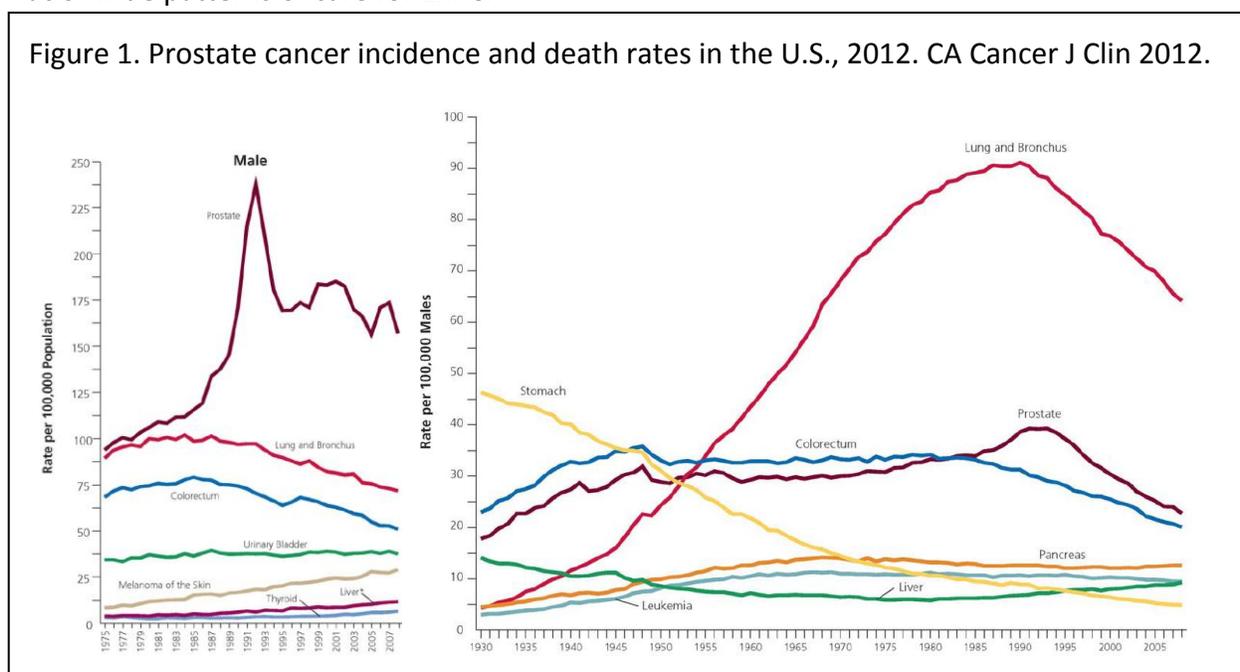
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## Cancer Patient Care Evaluation Study- Prostate Cancer

### Prostate Cancer Patient Care Evaluation Study 2000 – 2009

An estimated 241,740 American men will be diagnosed with prostate cancer in 2012. Prostate cancer detection spiked due to the utilization of prostate cancer screening with PSA blood tests. Following the widespread adoption of prostate cancer screening, prostate cancer mortality has had a steady decline. **(Figure 1)** More than 60% of patients are over the age of 65 years at the time of diagnosis. Over 80% of patients diagnosed today have cancer localized to the prostate gland which confers a disease-specific 5-year survival of 100%. The selection of initial treatment for elderly men diagnosed with low risk prostate cancer (LRPC) represents a clinical challenge. Several guidelines recommend conservative management, in the form of watchful waiting or active surveillance, for men with low risk prostate cancer and limited life expectancy. For patients with longer life expectancy, initial treatment options include active surveillance, radiation therapy (external beam and interstitial), and surgery. The initial treatment of prostate cancer cost an estimated \$4.5 billion in the U.S. in 2010, underscoring the economic impact of nationwide patterns of care for LRPC.

Figure 1. Prostate cancer incidence and death rates in the U.S., 2012. CA Cancer J Clin 2012.



Prostate cancer care has received tremendous attention in the past few years, with several major new developments in national guidelines and recommendations. Recently, the US Preventative Services Task Force has recommended giving a grade D recommendation for prostate cancer screening. This suggests that patients should not undergo prostate cancer screening due to potential harms from screening and prostate cancer directed care. Second, the NCCN has added an additional risk classification for prostate cancer patients in their 2012 Guidelines. The addition of a “Very Low Risk Prostate Cancer” group suggests that these patients should undergo prostate cancer treatment if they have a greater than 20 year life expectancy. **(Table 1)**

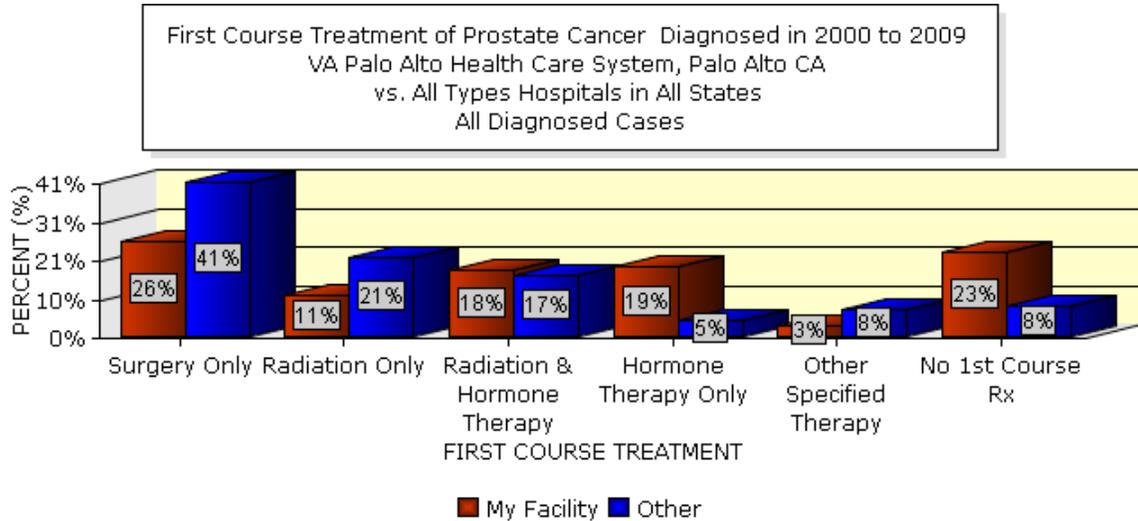
This report surveys the Veterans Affairs Palo Alto Health Care System (VAPAHCS) experience with prostate cancer from 2000-2009. The epidemiology, demographics, staging, and treatment modality is presented and also compared with the National Cancer Database Benchmarks.

**Table 1.** 2007 Period life tables from the US Social Security Administration.

| Age | 2007 Period Life Expectancy | Bottom Quartile Life Expectancy | Top Quartile Life Expectancy |
|-----|-----------------------------|---------------------------------|------------------------------|
| 55  | 24.9                        | 12.4                            | 37.3                         |
| 56  | 24.1                        | 12.0                            | 36.1                         |
| 57  | 23.3                        | 11.6                            | 34.9                         |
| 58  | 22.5                        | 11.2                            | 33.7                         |
| 59  | 21.7                        | 10.8                            | 32.5                         |
| 60  | 20.9                        | 10.5                            | 31.4                         |
| 61  | 20.2                        | 10.1                            | 30.2                         |
| 62  | 19.4                        | 9.7                             | 29.1                         |
| 63  | 18.7                        | 9.3                             | 28.0                         |
| 64  | 17.9                        | 9.0                             | 26.9                         |
| 65  | 17.2                        | 8.6                             | 25.8                         |
| 66  | 16.5                        | 8.2                             | 24.7                         |
| 67  | 15.8                        | 7.9                             | 23.7                         |
| 68  | 15.1                        | 7.5                             | 22.6                         |
| 69  | 14.4                        | 7.2                             | 21.6                         |
| 70  | 13.7                        | 6.9                             | 20.6                         |
| 71  | 13.1                        | 6.5                             | 19.6                         |
| 72  | 12.4                        | 6.2                             | 18.7                         |
| 73  | 11.8                        | 5.9                             | 17.7                         |
| 74  | 11.2                        | 5.6                             | 16.8                         |
| 75  | 10.6                        | 5.3                             | 15.9                         |
| 76  | 10.0                        | 5.0                             | 15.1                         |
| 77  | 9.5                         | 4.7                             | 14.2                         |
| 78  | 8.9                         | 4.5                             | 13.4                         |
| 79  | 8.4                         | 4.2                             | 12.6                         |
| 80  | 7.9                         | 4.0                             | 11.9                         |
| 81  | 7.4                         | 3.7                             | 11.1                         |
| 82  | 6.9                         | 3.5                             | 10.4                         |
| 83  | 6.5                         | 3.2                             | 9.7                          |
| 84  | 6.1                         | 3.0                             | 9.1                          |
| 85  | 5.7                         | 2.8                             | 8.5                          |

Results

Figure 2. First course treatment of Prostate Cancer.

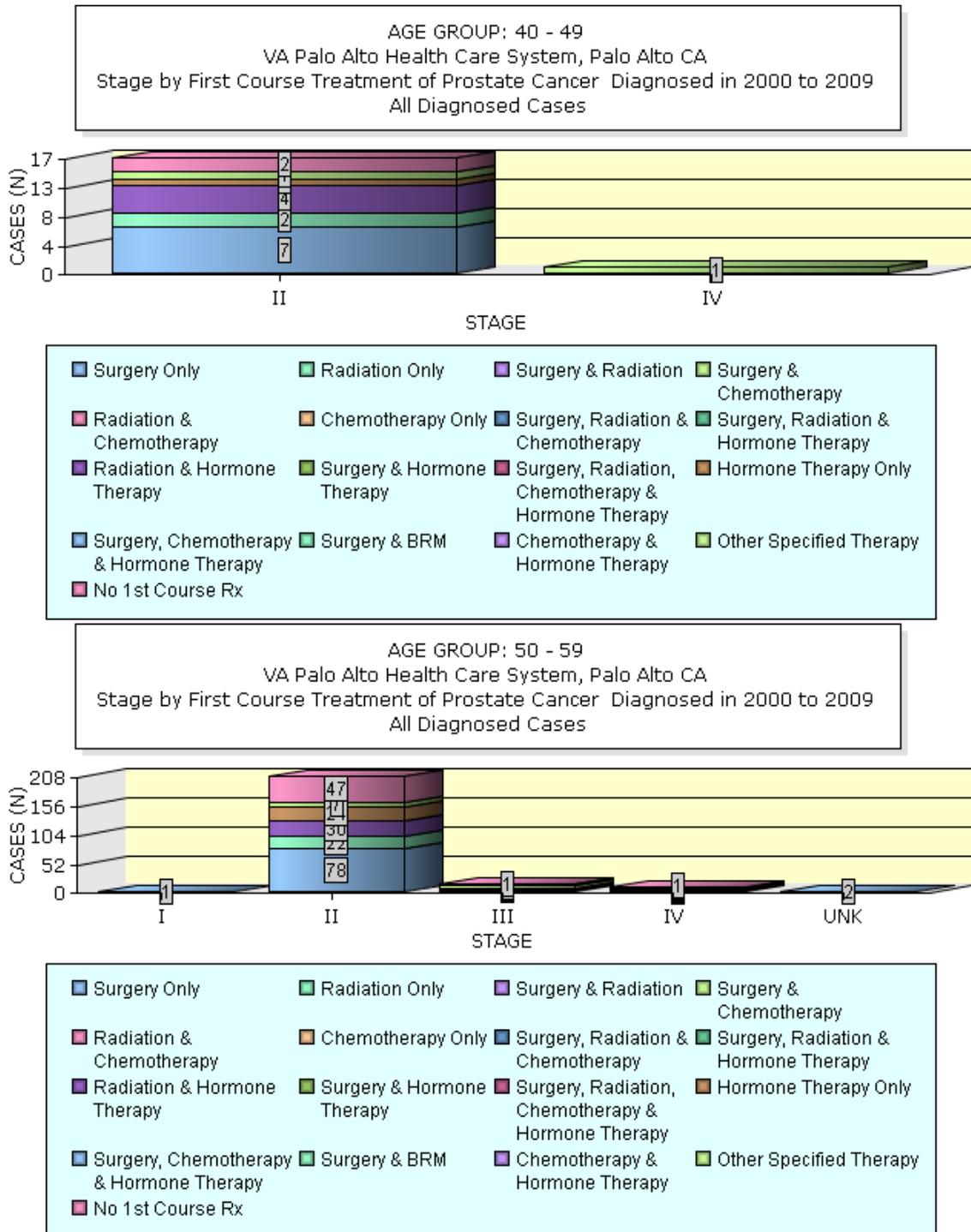


|             | Surgery Only | Radiation Only | Radiation & Hormone Therapy | Hormone Therapy Only | Other Specified Therapy | No 1st Course Rx |
|-------------|--------------|----------------|-----------------------------|----------------------|-------------------------|------------------|
| My Facility | 26%          | 11%            | 18%                         | 19%                  | 3%                      | 23%              |
| Other       | 41%          | 21%            | 17%                         | 5%                   | 8%                      | 8%               |

| #                 | First Course Treatment                 | My (N)      | Oth. (N)       | My (%)      | Oth. (%)    |
|-------------------|--|-------------|----------------|-------------|-------------|
| 1.                | <b>Surgery Only</b>                    | 281         | 566601         | 25.83%      | 41.4%       |
| 2.                | <b>Radiation Only</b>                  | 124         | 291410         | 11.4%       | 21.29%      |
| 3.                | <b>Radiation &amp; Hormone Therapy</b> | 196         | 229149         | 18.01%      | 16.74%      |
| 4.                | <b>Hormone Therapy Only</b>            | 205         | 65134          | 18.84%      | 4.76%       |
| 5.                | <b>Other Specified Therapy</b>         | 35          | 104234         | 3.22%       | 7.62%       |
| 6.                | <b>No 1st Course Rx</b>                | 247         | 112107         | 22.7%       | 8.19%       |
| <b>Col. TOTAL</b> |  | <b>1088</b> | <b>1368635</b> | <b>100%</b> | <b>100%</b> |

Results

Figure 2a. Initial treatment of prostate cancer at VAPAHCS stratified by age group.



**Figure 2b.** Initial treatment of prostate cancer at VAPAHCS stratified by age group.

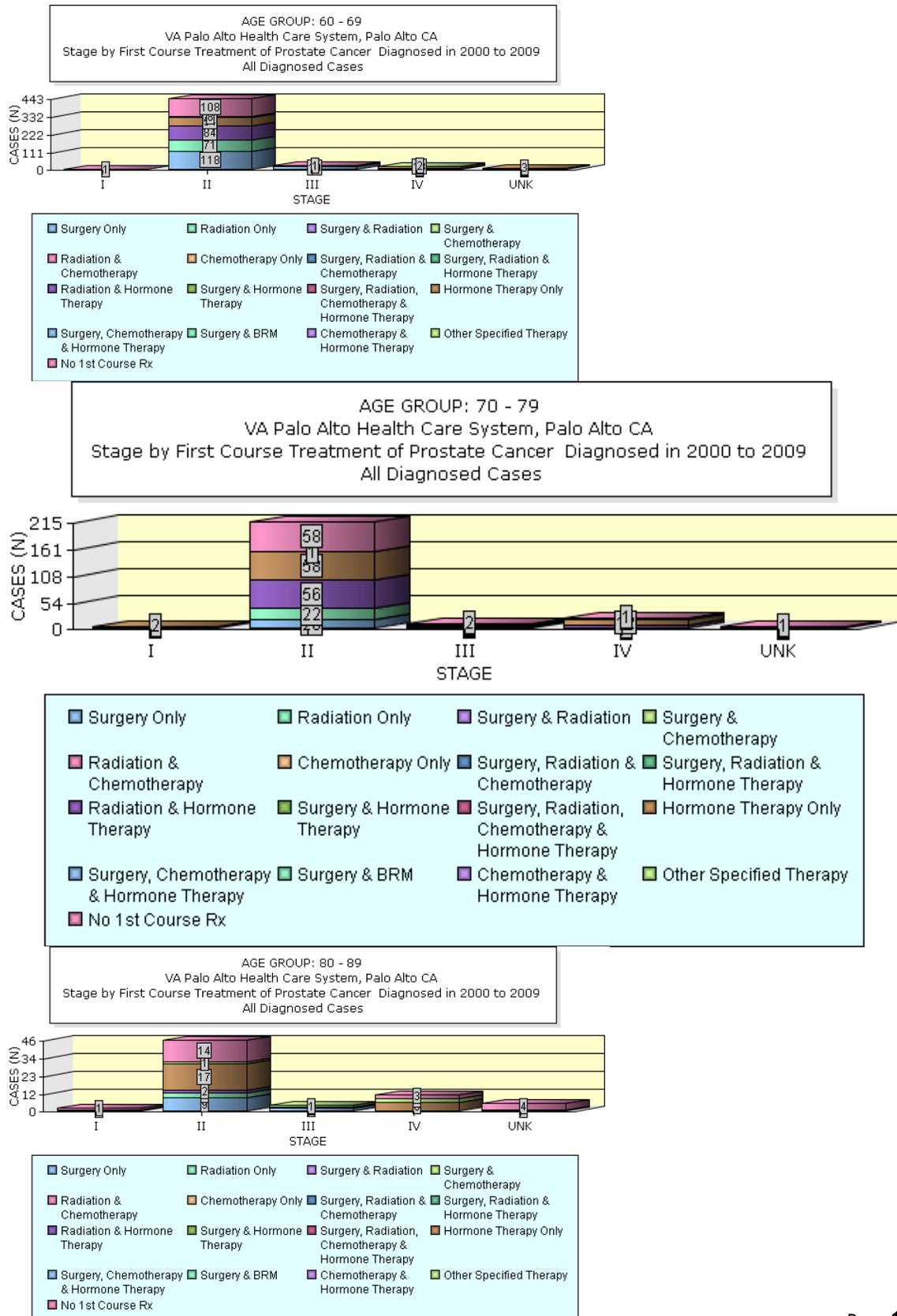
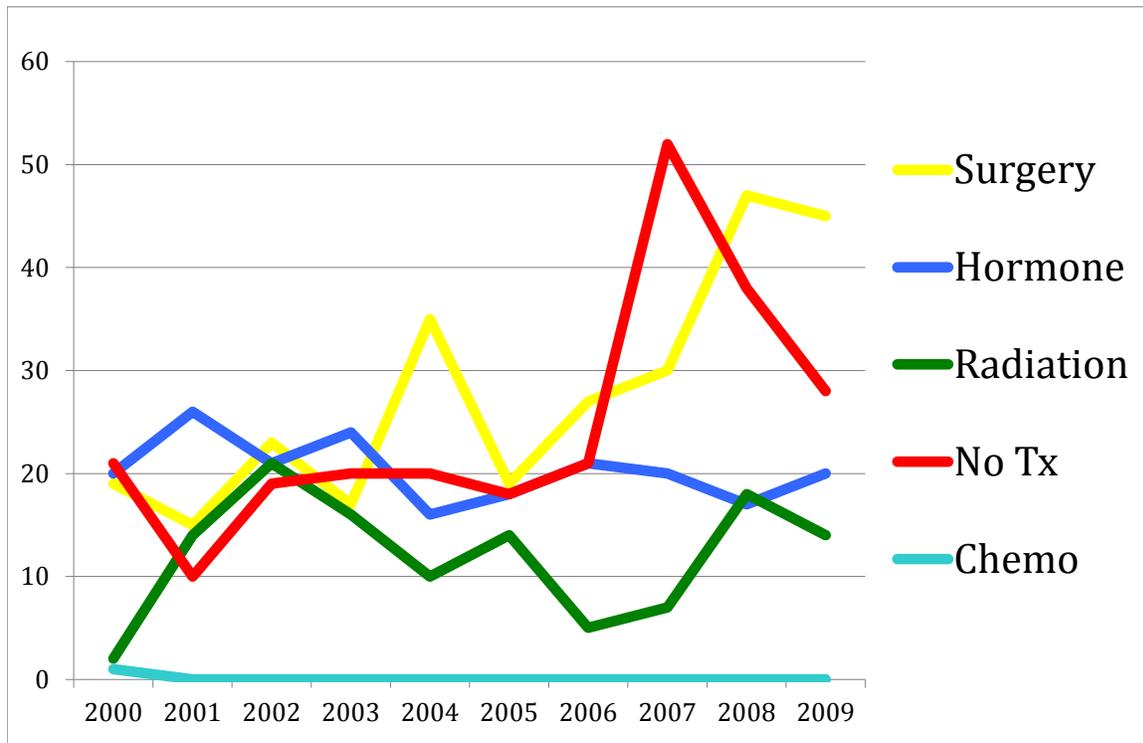


Figure 3. First course treatment of Prostate Cancer in the NCDB by age group.

| VA Palo Alto Health Care System, Palo Alto CA                                |                        |                |                             |                      |                         |                  |            |             |
|--|------------------------|----------------|-----------------------------|----------------------|-------------------------|------------------|------------|-------------|
| Stage by First Course Treatment of Prostate Cancer Diagnosed in 2000 to 2009 |                        |                |                             |                      |                         |                  |            |             |
| All Diagnosed Cases  |                        |                |                             |                      |                         |                  |            |             |
| Cases  | First Course Treatment |                |                             |                      |                         |                  | Totals     |             |
|  | Surgery Only           | Radiation Only | Radiation & Hormone Therapy | Hormone Therapy Only | Other Specified Therapy | No 1st Course Rx | N          | %           |
| Age Group: 40 - 49   |                        |                |                             |                      |                         |                  |            |             |
| 1. II  | 7                      | 2              | 4                           | 1                    | 1                       | 2                | 17         | 94.4%       |
|  | 41.2*                  | 11.8*          | 29.5*                       | 5.9*                 | 5.9*                    | 11.8*            | (100%)     |             |
| 2. IV  | .                      | .              | .                           | .                    | .                       | 1                | 1          | 5.6%        |
|  | .                      | .              | .                           | .                    | .                       | 100*             | (100%)     |             |
| <b>Subtotal</b>  | <b>7</b>               | <b>2</b>       | <b>4</b>                    | <b>1</b>             | <b>1</b>                | <b>2</b>         | <b>18</b>  | <b>100%</b> |
|  | 38.9%                  | 11.1%          | 22.2%                       | 5.6%                 | 5.6%                    | 11.1%            | 100%       |             |
| Age Group: 50 - 59   |                        |                |                             |                      |                         |                  |            |             |
| 1. I   | 1                      | .              | .                           | .                    | .                       | .                | 1          | 0.4%        |
|  | 100*                   | .              | .                           | .                    | .                       | .                | (100%)     |             |
| 2. II  | 78                     | 22             | 30                          | 24                   | 7                       | 47               | 208        | 88.1%       |
|  | 97.5*                  | 10.6*          | 14.4*                       | 11.5*                | 9.4*                    | 22.6*            | (100%)     |             |
| 3. III   | 5                      | 1              | 2                           | .                    | .                       | 5                | 14         | 5.9%        |
|  | 35.7*                  | 7.1*           | 14.3*                       | .                    | .                       | 7.1*             | (100%)     |             |
| 4. IV  | 2                      | .              | 2                           | 4                    | 2                       | 2                | 11         | 4.7%        |
|  | 18.2*                  | .              | 18.2*                       | 36.4*                | 18.2*                   | 9.1*             | (100%)     |             |
| 5. UNK   | 2                      | .              | .                           | .                    | .                       | .                | 2          | 0.8%        |
|  | 100*                   | .              | .                           | .                    | .                       | .                | (100%)     |             |
| <b>Subtotal</b>  | <b>88</b>              | <b>23</b>      | <b>34</b>                   | <b>28</b>            | <b>14</b>               | <b>49</b>        | <b>236</b> | <b>100%</b> |
|  | 37.5%                  | 9.7%           | 14.4%                       | 11.9%                | 5.9%                    | 20.8%            | 100%       |             |
| Age Group: 60 - 69   |                        |                |                             |                      |                         |                  |            |             |
| 1. I   | 1                      | .              | .                           | .                    | .                       | 1                | 3          | 0.6%        |
|  | 99.9*                  | .              | .                           | .                    | .                       | 99.9*            | (100%)     |             |
| 2. II  | 118                    | 71             | 84                          | 54                   | 8                       | 108              | 443        | 88.1%       |
|  | 26.6*                  | 16*            | 19*                         | 12.2*                | 1.8*                    | 24.4*            | (100%)     |             |
| 3. III   | 19                     | .              | 1                           | 3                    | 1                       | 1                | 25         | 5%          |
|  | 76*                    | .              | 4*                          | 12*                  | 4*                      | 4*               | (100%)     |             |
| 4. IV  | 3                      | .              | 4                           | 13                   | 2                       | .                | 22         | 4.4%        |
|  | 10.6*                  | .              | 10.6*                       | 59.1*                | 9.1*                    | .                | (100%)     |             |
| 5. UNK   | 3                      | .              | 4                           | 3                    | .                       | .                | 10         | 2%          |
|  | 90*                    | .              | 40*                         | 30*                  | .                       | .                | (100%)     |             |
| <b>Subtotal</b>  | <b>144</b>             | <b>71</b>      | <b>93</b>                   | <b>73</b>            | <b>12</b>               | <b>110</b>       | <b>503</b> | <b>100%</b> |
|  | 20.6%                  | 14.1%          | 18.5%                       | 14.5%                | 2.4%                    | 21.9%            | 100%       |             |
| Age Group: 70 - 79   |                        |                |                             |                      |                         |                  |            |             |
| 1. I   | 3                      | .              | .                           | 2                    | .                       | .                | 5          | 1.9%        |
|  | 60*                    | .              | .                           | 40*                  | .                       | .                | (100%)     |             |
| 2. II  | 20                     | 22             | 56                          | 58                   | 1                       | 58               | 215        | 83.3%       |
|  | 9.3*                   | 10.2*          | 26*                         | 27*                  | 0.5*                    | 27*              | (100%)     |             |
| 3. III   | 5                      | .              | 1                           | 3                    | .                       | 2                | 11         | 4.3%        |
|  | 45.5*                  | .              | 9.1*                        | 27.3*                | .                       | 18.2*            | (100%)     |             |
| 4. IV  | .                      | 2              | 6                           | 12                   | 1                       | 1                | 22         | 8.5%        |
|  | .                      | 9.1*           | 27.3*                       | 54.5*                | 4.5*                    | 4.5*             | (100%)     |             |
| 5. UNK   | 1                      | 1              | .                           | 2                    | .                       | 1                | 5          | 1.9%        |
|  | 20*                    | 20*            | .                           | 40*                  | .                       | 20*              | (100%)     |             |
| <b>Subtotal</b>  | <b>29</b>              | <b>25</b>      | <b>63</b>                   | <b>77</b>            | <b>2</b>                | <b>62</b>        | <b>258</b> | <b>100%</b> |
|  | 11.2%                  | 9.7%           | 24.4%                       | 29.8%                | 0.8%                    | 24%              | 100%       |             |
| Age Group: 80 - 89   |                        |                |                             |                      |                         |                  |            |             |
| 1. I   | .                      | .              | .                           | .                    | .                       | 1                | 1          | 2.9%        |
|  | .                      | .              | .                           | .                    | .                       | 50*              | (100%)     |             |
| 2. II  | 9                      | 3              | 2                           | 17                   | 1                       | 14               | 46         | 67.6%       |
|  | 19.6*                  | 6.5*           | 4.3*                        | 37*                  | 2.2*                    | 30.4*            | (100%)     |             |
| 3. III   | 2                      | .              | 1                           | 1                    | 1                       | 1                | 4          | 5.9%        |
|  | 50*                    | .              | 25*                         | 25*                  | 25*                     | 25*              | (100%)     |             |
| 4. IV  | .                      | .              | .                           | 6                    | 2                       | 3                | 11         | 16.2%       |
|  | .                      | .              | .                           | 54.5*                | 18.2*                   | 27.3*            | (100%)     |             |
| 5. UNK   | 1                      | .              | .                           | .                    | .                       | 4                | 5          | 7.4%        |
|  | 20*                    | .              | .                           | .                    | .                       | 80*              | (100%)     |             |
| <b>Subtotal</b>  | <b>12</b>              | <b>3</b>       | <b>2</b>                    | <b>24</b>            | <b>5</b>                | <b>22</b>        | <b>68</b>  | <b>100%</b> |
|  | 17.6%                  | 4.4%           | 2.9%                        | 35.3%                | 7.4%                    | 32.4%            | 100%       |             |
| Age Group: 90 and over   |                        |                |                             |                      |                         |                  |            |             |
| 1. II  | .                      | .              | .                           | .                    | .                       | 1                | 1          | 20%         |
|  | .                      | .              | .                           | .                    | .                       | 100*             | (100%)     |             |
| 2. III   | 1                      | .              | .                           | .                    | .                       | .                | 1          | 20%         |
|  | 100*                   | .              | .                           | .                    | .                       | .                | (100%)     |             |
| 3. IV  | .                      | .              | .                           | 2                    | .                       | .                | 2          | 40%         |
|  | .                      | .              | .                           | 100*                 | .                       | .                | (100%)     |             |
| 4. UNK   | .                      | .              | .                           | .                    | .                       | 1                | 1          | 20%         |
|  | .                      | .              | .                           | .                    | .                       | 100*             | (100%)     |             |
| <b>Subtotal</b>  | <b>1</b>               | <b>.</b>       | <b>.</b>                    | <b>2</b>             | <b>.</b>                | <b>2</b>         | <b>5</b>   | <b>100%</b> |
|  | 20%                    | .              | .                           | 40%                  | .                       | 40%              | 100%       |             |
| Age Group: TOTAL   |                        |                |                             |                      |                         |                  |            |             |
| Cases  | First Course Treatment |                |                             |                      |                         |                  | Totals     |             |
|  | Surgery Only           | Radiation Only | Radiation & Hormone Therapy | Hormone Therapy Only | Other Specified Therapy | No 1st Course Rx | N          | %           |
| 1. I   | 5                      | .              | .                           | 2                    | .                       | 2                | 11         | 1%          |
|  | 45.5*                  | .              | .                           | 18.2*                | .                       | 18.2*            | (100%)     |             |
| 2. II  | 232                    | 120            | 176                         | 154                  | 18                      | 18               | 930        | 85.5%       |
|  | 24.9*                  | 12.9*          | 18.9*                       | 16.6*                | 1.9*                    | 2.4*             | (100%)     |             |
| 3. III   | 32                     | 1              | 4                           | 7                    | 7                       | 4                | 55         | 5.1%        |
|  | 58.2*                  | 1.8*           | 7.3*                        | 12.7*                | 12.7*                   | 7.3*             | (100%)     |             |
| 4. IV  | 5                      | 2              | 12                          | 37                   | 8                       | 5                | 69         | 6.3%        |
|  | 7.2*                   | 2.9*           | 17.4*                       | 59.6*                | 11.6*                   | 7.2*             | (100%)     |             |
| 5. UNK   | 7                      | 1              | 4                           | 5                    | .                       | 6                | 23         | 2.1%        |
|  | 30.4*                  | 4.3*           | 17.4*                       | 21.7*                | .                       | 26.1*            | (100%)     |             |
| <b>Grand Total</b>   | <b>281</b>             | <b>124</b>     | <b>196</b>                  | <b>205</b>           | <b>35</b>               | <b>35</b>        | <b>247</b> | <b>100%</b> |
|  | 25.8%                  | 11.4%          | 18%                         | 18.8%                | 3.2%                    | 22.7%            | 100%       |             |

**Figure 4.** Trends in first course treatment at VAPAHCS.



**Summary**

This most recent 10 year experience with prostate cancer represents a crossroads in prostate cancer care that will be particularly relevant to Veterans. The VAPAHCS operates a referral urologic oncology service and so our data may not be reflective of the trend across the VA Health Care System; however we must continue to individualize patient care and be mindful of the risks and benefits of prostate cancer screening and treatment.

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