



DELRAY MEDICAL CENTER

Cancer Program 2018 Annual Report



Cancer Statistical Data From 2017

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Chairman's Report

The Cancer Committee at Delray Medical Center is pleased to present the Cancer Program 2018 Annual Report. This report highlights important cancer statistics for Delray Medical Center. Data being reported in this addition of the report reflects Tumor Registry reporting for the calendar year of 2017. The Cancer Registry staff continues to collect data on all patients diagnosed and treated for cancer at the hospital. The Cancer Committee, Delray's Administrative Team, and the Tumor Registry, monitors the delivery of care for our cancer patients. The American College of Surgeon's Commission on Cancer Program Standards set the benchmark for our standards of practice, performance, and excellence. Our tumor registry team has achieved the Jean Byer's Award for excellence in cancer registration for 16 years, with the last 12 years consecutive. The Jean Byers Memorial Award for Excellence in Cancer Registration honors Florida cancer registries that exhibit outstanding leadership and dedication to the field of cancer registration.

Multidisciplinary tumor boards are held at Delray to review prospective cases. In this forum, physicians and support staff are given an opportunity to discuss newly diagnosed cancer patients in a collegial and consultative setting. This multidisciplinary team reviews data on surgery, pathology, radiology, and other diagnostic tests. The oncology cases are discussed thoroughly and attendees form a consensus and recommendation regarding the best therapeutic management of our patients. All members of the medical staff are encouraged to participate and attend this valuable part of the oncology program. It is an educational and collaborative event which benefits our practice and our patients.

Our dedicated Oncology Team continues to provide care to oncology and hematology patients throughout Delray Medical Center. Our nursing team includes Linda Pillow, Oncology Clinical Manager and Certified Oncology Nurse. Our Registered Nurses who are chemotherapy/biotherapy credentialed provide consistent, compassionate and supportive care to our patients and their families. Our dedicated tumor registry staff provides statistical data as well as case finding and follow up for tumor conferences.

As we unfortunately see an increase in oncology volume, it continues to be our privilege to serve this community. We are truly thankful for every team member who interacts with our patients and remains dedicated to our program.

I sincerely hope that you enjoy this issue of the 2018 Annual Report for our Cancer Program here at Delray Medical Center.

Susan Thérout, RN, BSN, MBA, DHS, NE-BC
Administrative Director, Oncology Services

CANCER COMMITTEE MEMBERS 2018

PHYSICIAN MEMBERS	NON-PHYSICIAN MEMBERS
Tim Williams, M.D. Radiation/Proton - Chair	Susan Theroux, RN, BSN, MBA, DHS, NE-BC Admin Director of Oncology – Co chair
Marc Apple, M.D. Radiation/Proton	Cheri Archer Director of Rehab Services
Frank Cirisano, M.D. GYN Oncology/Surgery	Lisa Brundage Director Clinical Quality Improvement
Anthony Dardano, M.D. Dept. of Medicine/Surgery	Lisa Cook Community Outreach
Stanton F. Dodson, M.D. Surgery	William Fagan Pharmacy
Jeffrey Farber, M.D. Rehab	Humberto Munoz Admin Director Residency Program
John Fortune, M.D. Pathology	Emine Ozbay Director, SFPTI
Elizabeth Gunderson, M.D. Palliative Care	Linda Pillow, RN, OCN Clinical Manager Oncology
Stephen Leighton, M.D. Diagnostic Radiology	Lauren Raetz Admin Director of Supportive Services
Eric Lieberman, M.D. Cardiology	Maria Rosario-Feliciano Chief Strategy Officer
Fernando Recio, M.D. Surgery	Deylis Sequeira, CTR Registry Quality Coordinator
Fernando Rivera, M.D. Diagnostic Radiology	Jan Tucker Director of Lab
David Sachs, M.D. Neurosurgery	Celia Zapata, CTR Cancer Conference Coordinator
Jonathan Waxman, M.D. Thoracic Surgery	
Lawrence Yore, M.D. Urology	

The Tumor Registry at Delray Medical Center

The Tumor Registry Department at Delray captures and follows all patients who have a diagnosis of cancer in our hospital. This department is responsible for compiling a complete summary of patient history, diagnosis, primary site/morphology, treatment, recurrences and status for every cancer patient admitted in this institution. The information becomes a key to enable doctors, researchers, and public health professionals to best understand cancer treatment and trends.

The data that is maintained in the registry files is electronically reported to the Florida Department of Health through the Florida Cancer Data System (FCDS). These data are held in anonymity and shared with the Surveillance Epidemiology Endpoint Registry (SEER) program of the National Cancer Institute to generate the national cancer database. This is the database which tracks and trends cancer diagnoses throughout the nation, and helps to identify patterns and changes in cancer diagnoses among communities and patient demographics. In addition, the Cancer Registry produced reports throughout the year at the request of physicians, administration and ancillary departments for research and planning purposes.

On staff here at Delray, there are two tumor registrars. Both employees are active members of the National Cancer Registrars Association. They attend national and state meetings to keep current in their field. Registry personnel serve as members of the Cancer Committee and they help to coordinate the hospital's Oncology Conferences/Tumor Boards. In addition, they help to coordinate and ensure compliance with the Cancer program's guidelines set forth by the American College of Surgeons.

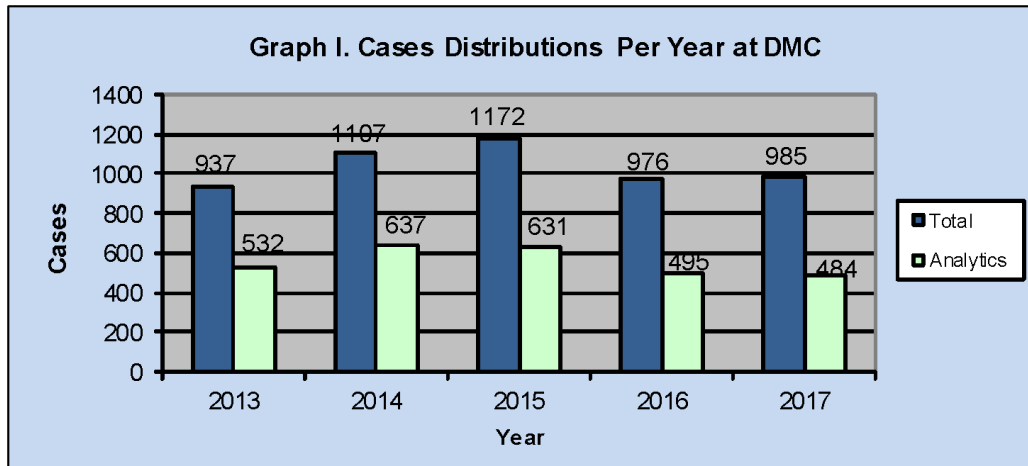
The primary site table summarizes all cases entered into the Delray Medical Center's Tumor Registry in 2017 by class, gender, AJCC staging (at the time of diagnosis). This table also shows all major cancer diagnosis organ systems as well as sub-sites, within each system. The AJCC stage group only demonstrates analytic cases. **Table I.**

Table I. Primary site tabulation for total cases 2017 at DMC

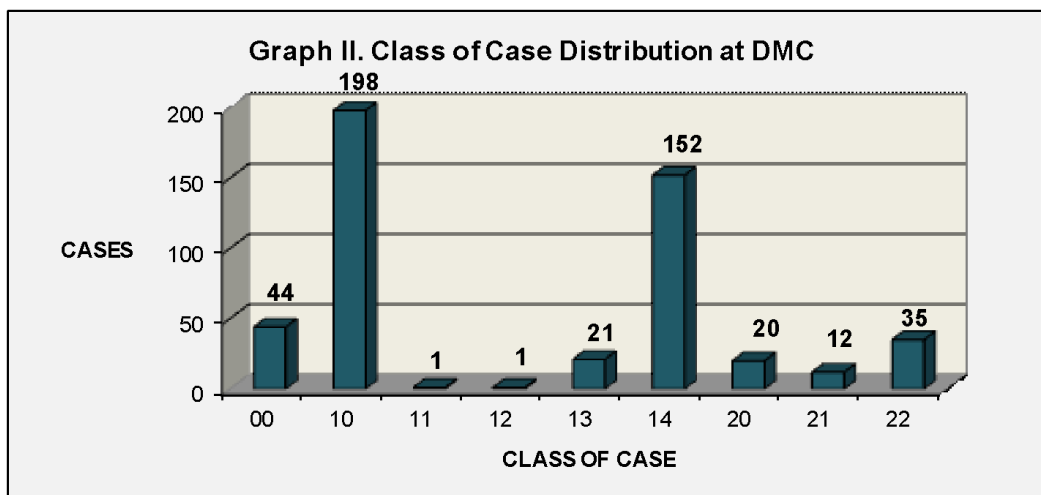
	TOTAL	CLASS		SEX		AJCC STAGE GROUP*						
		A	NA	M	F	0	I	II	III	IV	UNK	N/A
ALL SITES	985	484	501	528	457	43	106	54	52	84	64	81
ORAL CAVITY	12	7	5	10	2	0	2	1	0	3	1	0
TONGUE	3	1	2	2	1	0	0	0	0	0	1	0
OTHER	9	6	3	8	1	0	2	1	0	3	0	0
DIGESTIVE SYSTEM	188	106	82	106	82	3	21	27	23	14	14	4
ESOPHAGUS	12	2	10	9	3	0	0	0	2	0	0	0
STOMACH	12	7	5	8	4	0	0	1	0	3	3	0
COLON	60	44	16	30	30	3	6	17	13	3	2	0
RECTUM	21	11	10	11	10	0	3	2	2	0	4	0
ANUS/ANAL CANAL	1	1	0	1	0	0	0	1	0	0	0	0
LIVER	10	2	8	9	1	0	0	0	1	0	0	1
PANCREAS	50	25	25	25	25	0	12	4	2	6	1	0
OTHER	22	14	8	13	9	0	0	2	3	2	4	3
RESPIRATORY SYSTEM	168	89	79	81	87	0	22	6	9	45	7	0
LARYNX	5	3	2	3	2	0	2	0	0	1	0	0
OTHER	6	6	0	4	2	0	2	1	2	0	1	0
LUNG/BRONCHUS -SMALL CELL	16	10	6	7	9	0	3	0	1	6	0	0
LUNG/BRONC-NON SMALL CELL	88	58	30	39	49	0	12	4	4	32	6	0
OTHER BRONCHUS & LUNG	53	12	41	28	25	0	3	1	2	6	0	0
BLOOD & BONE MARROW	126	27	99	78	48	0	0	0	0	1	0	26
LEUKEMIA	88	19	69	56	32	0	0	0	0	1	0	18
MULTIPLE MYELOMA	27	6	21	16	11	0	0	0	0	0	0	6
OTHER	11	2	9	6	5	0	0	0	0	0	0	2
BONE	1	0	1	1	0	0	0	0	0	0	0	0
CONNECT/SOFT TISSUE	7	3	4	3	4	0	0	0	1	0	2	0
SKIN	22	4	18	18	4	1	0	0	0	1	2	0
MELANOMA	19	4	15	15	4	1	0	0	0	1	2	0
OTHER	3	0	3	3	0	0	0	0	0	0	0	0
BREAST	45	6	39	0	45	0	1	1	0	3	1	0
FEMALE GENITAL	70	40	30	0	70	2	17	3	9	3	4	2
CERVIX UTERI	9	3	6	0	9	0	1	1	1	0	0	0
CORPUS UTERI	24	16	8	0	24	0	12	1	0	1	1	1
OVARY	28	16	12	0	28	0	3	1	8	2	2	0
VULVA	6	4	2	0	6	2	1	0	0	0	1	0
OTHER	3	1	2	0	3	0	0	0	0	0	0	1
MALE GENITAL	60	11	49	60	0	0	0	4	1	2	4	0
PROSTATE	54	7	47	54	0	0	0	4	1	2	0	0
TESTIS	4	3	1	4	0	0	0	0	0	0	3	0
OTHER	2	1	1	2	0	0	0	0	0	0	1	0
URINARY SYSTEM	139	101	38	107	32	37	25	6	3	6	23	1
BLADDER	100	75	25	81	19	36	18	5	3	2	11	0
KIDNEY/RENAL	34	21	13	23	11	0	4	1	0	4	12	0
OTHER	2	1	1	2	0	1	3	0	0	0	0	1
BRAIN & CNS	38	25	13	18	20	0	0	0	0	0	0	25
BRAIN (BENIGN)	1	0	1	0	1	0	0	0	0	0	0	0
BRAIN (MALIGNANT)	27	16	11	15	12	0	0	0	0	0	0	16
OTHER	10	9	1	3	7	0	0	0	0	0	0	9
ENDOCRINE	19	17	2	6	13	0	5	0	2	0	4	6
THYROID	12	11	1	3	9	0	5	0	2	0	4	0
OTHER	7	6	1	3	4	0	0	0	0	0	0	6
LYMPHATIC SYSTEM	65	31	34	32	33	0	13	6	4	6	2	0
HODGKIN'S DISEASE	2	2	0	2	0	0	0	1	0	1	0	0
NON-HODGKIN'S	63	29	34	30	33	0	13	5	4	5	2	0
UNKNOWN PRIMARY	22	17	5	7	15	0	0	0	0	0	0	17
OTHER/ILL-DEFINED	3	0	3	1	2	0	0	0	0	0	0	0

* AJCC stage group only demonstrates analytic cases

In the year 2017, a total of 985 cases were added to the registry, 484 were analytic.
Graph I.

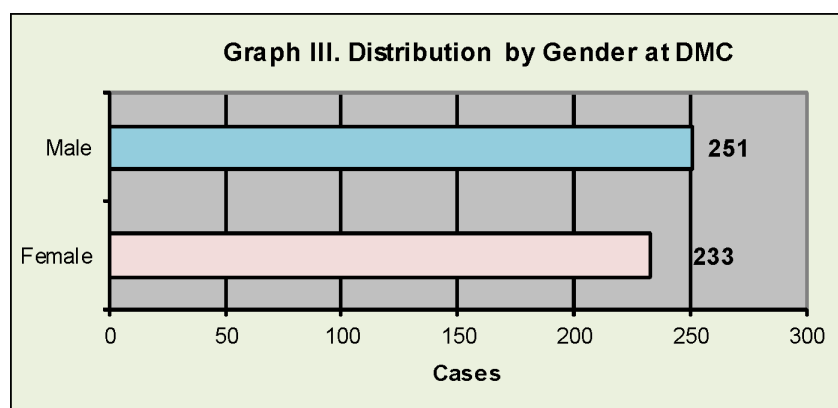


The graph on class of case displays the distribution of analytic cases. Class of case 10 (First diagnosed at DMC and part or all of first course treatment at DMC, NOS) holds the highest amount of cases with 198, followed by class of case 14 (First diagnosed and all first course treatment at DMC) with 152 cases. **Graph II.**

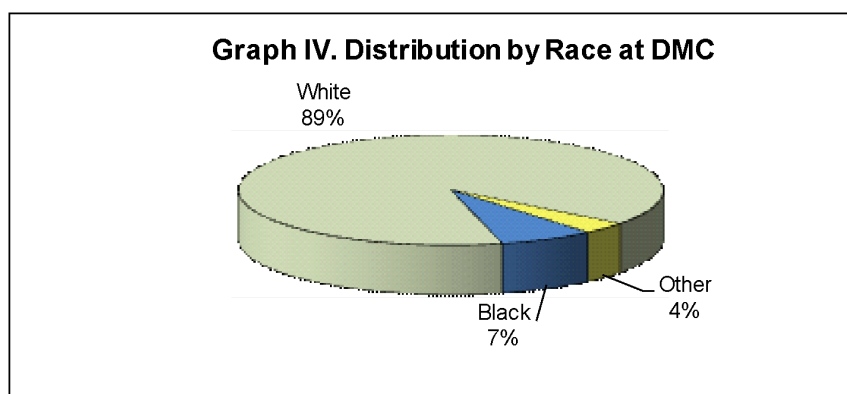


***Please refer to page 17 for the class of case definitions.**

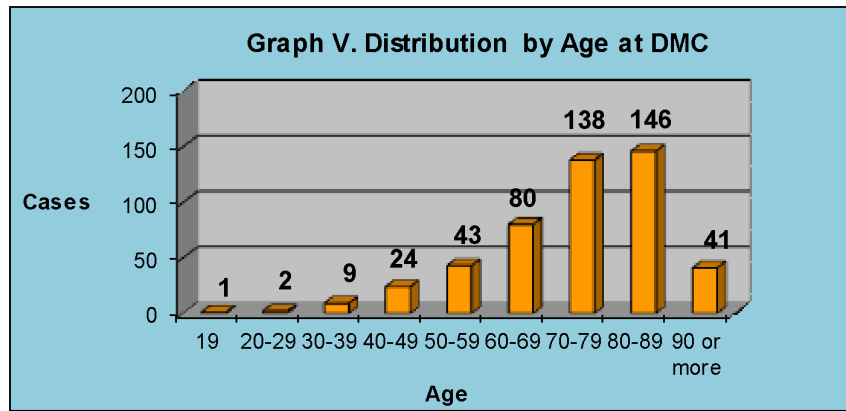
The distribution by gender graph shows there were more males than females diagnosed and/or treated at DMC in 2017. **Graph III.**



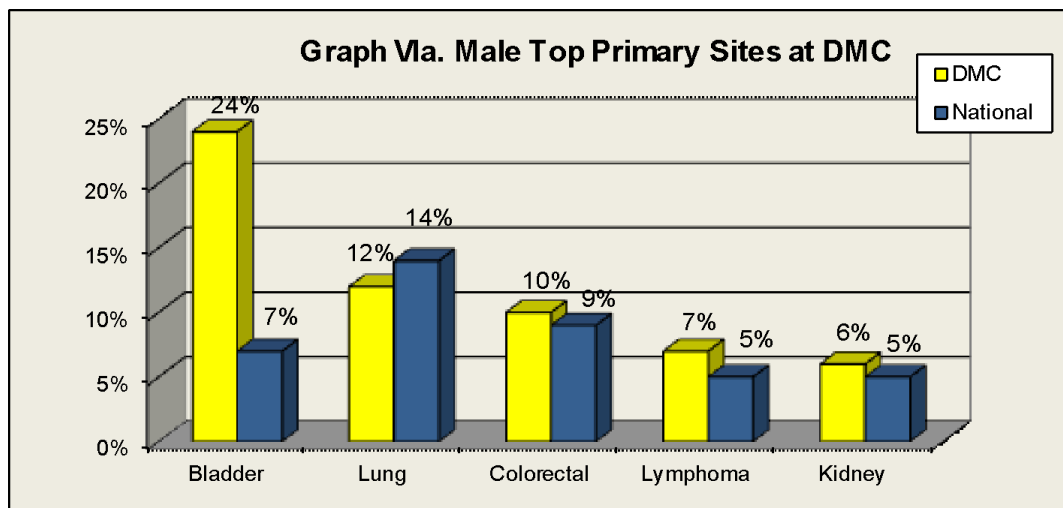
The leading race diagnosed and/or treated at DMC was the white population with 89% compared to the black population with 7% and other or unknown with 4%. **Graph IV.**



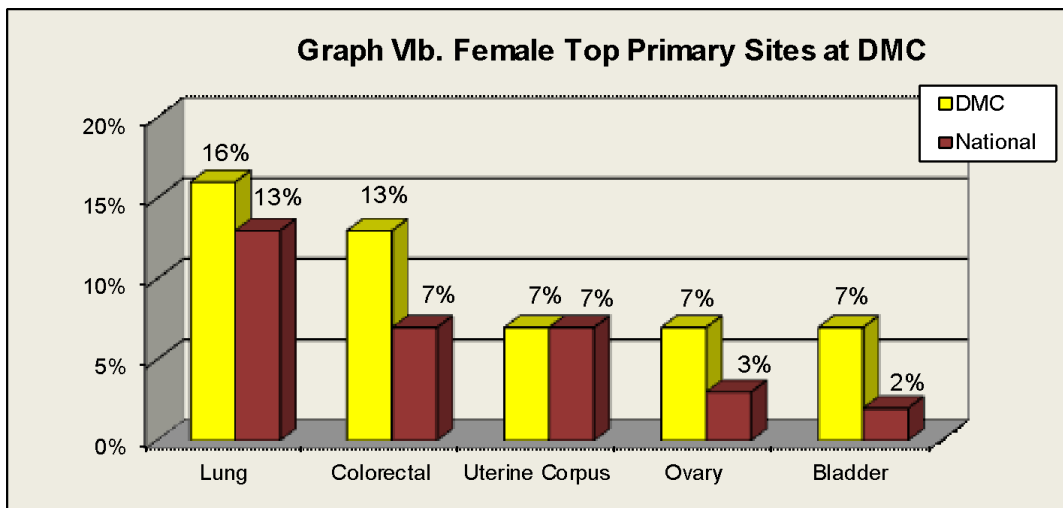
The predominant age group at diagnosis was the 80-89 years old population with 146 cases, followed by 70-79 years old population with 138 cases. **Graph V.**



The leading cancer diagnosed and/or treated at DMC among males in 2017 was bladder cancer with 24% followed by lung cancer with 12%. The third primary site was colorectal cancer with 10%. Lymphoma and kidney completed the top five sites representing 7% and 6%, respectively. This graph also demonstrates the comparison between Delray Medical Center's male top sites to national statistics. **Graph VIa.**



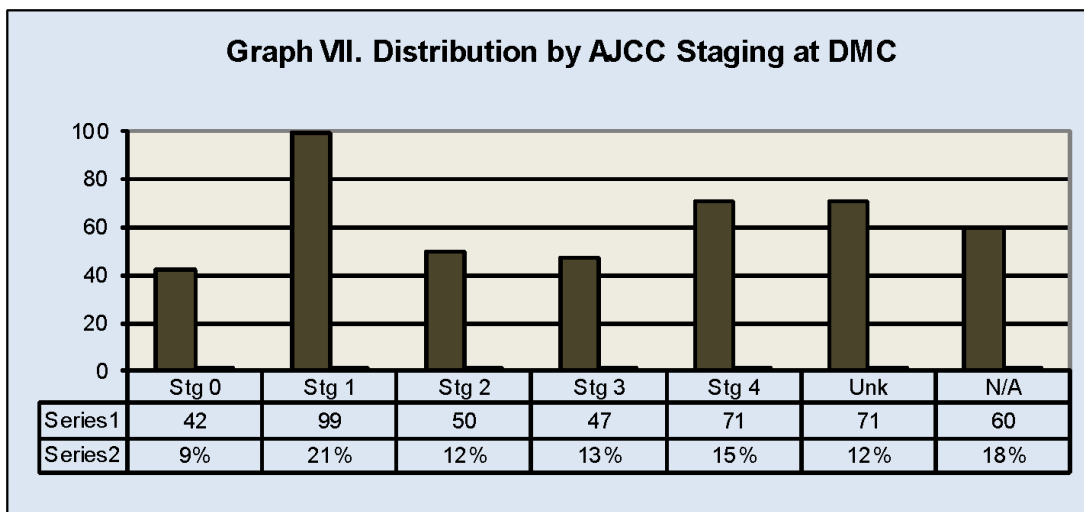
The top female primary site diagnosed and/or treated at DMC was lung cancer with 16% followed by colorectal cancer with 13%. The third leading site was uterine corpus with 7%. Ovary and bladder cancer were each 7% of the cases. This graph shows a comparison with national statistics and Delray Medical Center's female top primary sites. **Graph VIb.**



*American Cancer Society (Cancer Facts & Figures 2018)

The American Joint Committee on Cancer (AJCC) TNM Staging System is used to describe the extent of the primary tumor and its spread in the body. It is utilized as a guideline to help physicians plan the most appropriate treatment and determine a prognosis.

There were 191 analytic cases that were diagnosed Stages 0, I, or II. These are considered to be potentially curable. More advanced stages of cancers, stage III and IV, totaled 118 cases. Seventy one cases were staged Unknown representing cases in which certain criteria did not meet the staging standards, or there was not enough information at the time of diagnosis. The non-applicable cases (60) represent those for which there is not an AJCC staging requirement, such as Leukemia and Brain primaries. According to the AJCC guidelines, class of case 00 is excluded which reduces the number of analytics from 484 to 440. **Graph VII.**



Most patients received surgery as their first course of treatment representing 224 cases. The majority of the cases in the non-treated category are bronchus & lung cancers being diagnosed at an advanced stage. This table excludes all benign tumors and class of case 00, which reduces the total of analytic cases from 484 to 427. **Table II.**

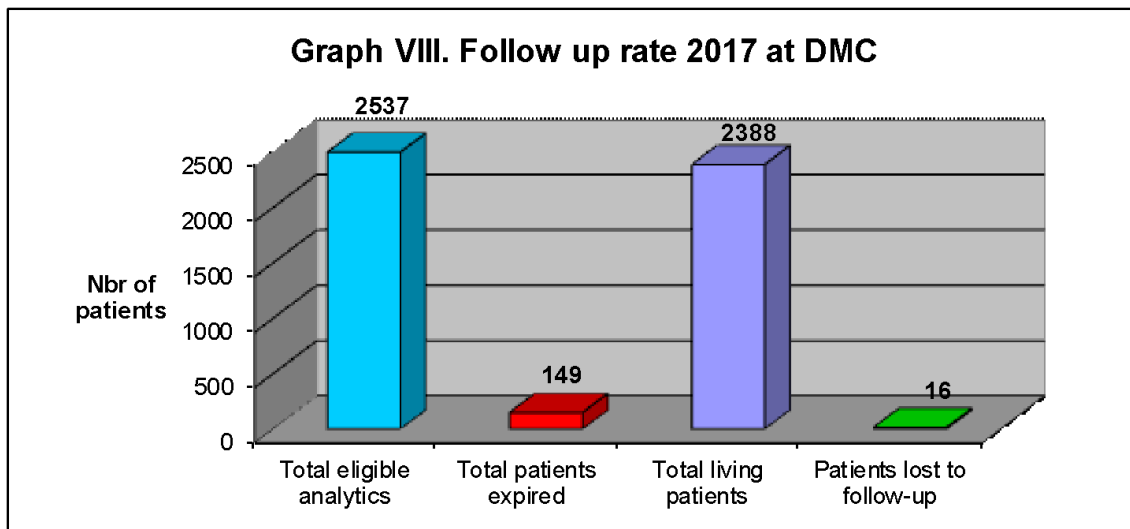
Table II. Analytic Cases Distribution by First Course Treatment

SITE NAME	TOTAL CASES	SURG	SURG/ CHEMO	CHEMO	NONE	ALL OTHERS
OTHER PARTS OF TONGUE	1	1	0	0	0	0
PAROTID GLAND	3	2	0	0	1	0
TONSIL	1	1	0	0	0	0
ESOPHAGUS	1	0	0	0	1	0
STOMACH	10	2	1	1	6	0
SMALL INTESTINE	3	1	0	0	1	1
COLON	48	39	4	0	5	0
RECTOSIGMOID JUNCTION	4	4	0	0	0	0
RECTUM	4	3	0	0	1	0
ANUS & ANAL CANAL	1	0	0	0	1	0
LIVER & BILE DUCTS	2	0	0	0	2	0
GALLBLADDER	1	0	0	0	1	0
OTHER BILIARY TRACT	3	1	0	0	2	0
PANCREAS	21	1	0	1	20*	0
OTHER DIGESTIVE ORGANS	2	1	0	0	1	0
LARYNX	3	3	0	0	0	0
BRONCHUS & LUNG	67	12	0	1	54**	0
HEART MEDIASTINUM PLEURA	5	2	0	0	3	0
BONES JOINTS & OTHER UNSP SITES	3	0	0	0	3	0
BLOOD & BONE MARROW	19	0	0	3	15	1
SKIN	4	3	0	0	1	0
CONNECTIVE SUBCUTANEOUS OTHER SOFT TISSUE	3	2	0	0	1	0
BREAST	6	3	0	0	3	0
VULVA	4	4	0	0	0	0
CERVIX UTERI	3	3	0	0	0	0
CORPUS UTERI	15	12	2	0	0	1
UTERUS NOS	1	1	0	0	0	0
OVARY	16	5	9	0	2	0
PENIS	1	1	0	0	0	0
PROSTATE GLAND	7	6	0	0	1	0
TESTIS	3	3	0	0	0	0
KIDNEY	16	9	0	0	7	0
KIDNEY, RENAL PELVIS	4	2	0	0	2	0
URETER	4	0	0	0	4	0
URINARY BLADDER	74	62	1	0	5	6
OTHER & UNSP URINARY ORGANS	1	0	0	0	1	0
BRAIN	15	9	0	0	5	1
THYROID GLAND	12	9	0	0	2	1
OTHER ENDOCRINE GLANDS	1	1	0	0	0	0
LYMPH NODES	18	4	0	1	12	1
UNK PRIMARY	17	0	0	0	17	0
OVERALL TOTALS	427	212	17	6	180	12

- * Out of 20 pancreatic cases: 6 patient were distant stage, 3 patients went to hospice, 3 patients expired, 2 patients refused any treatment

- ** Out of 54 lung cases: 37 patients were diagnosed at a distant stage (According to SEER statistics 57% of cases with lung cancer are diagnosed after the cancer has already metastasized), 5 patients expired, 5 patients went to hospice due to other issues , 4 patients refused any treatment, 3 patients were not recommended treatment due to risk factors

In accordance with the American College of Surgeons and the Florida Cancer Data Systems (FCDS), each patient is provided with an annual lifetime follow-up service that is essential to evaluate cancer care outcomes. The Cancer Registry follows over 2,500 patients annually throughout Florida and the United States where our patients reside. Per the Commission on Cancer's Standard 5.4, our cancer registry is required to uphold at least 90% follow-up rate. Currently we have a successful rate of 99%. **Graph VIII.**



Lung Cancer at Delray Medical Center, 2012-2017

Lung cancer accounts for more deaths than any other cancer in both men and women. According to the American Cancer Society, an estimated 234,030 new cases of lung cancer are expected in 2018 and an estimated 154,050 deaths will occur. Lung cancers are classified according to the type of cell present in the tumor. There are 2 main types of lung cancer, small cell (13%) and non-small cell (84%), and they are treated differently. Non-small cell carcinoma has 3 subtypes: Adenocarcinoma (40%), Squamous cell carcinoma (25%-30%), and Large cell carcinoma (10%-15%). Other tumors can be found in the lungs too, such as sarcoma, carcinosarcoma, and carcinoid tumors.

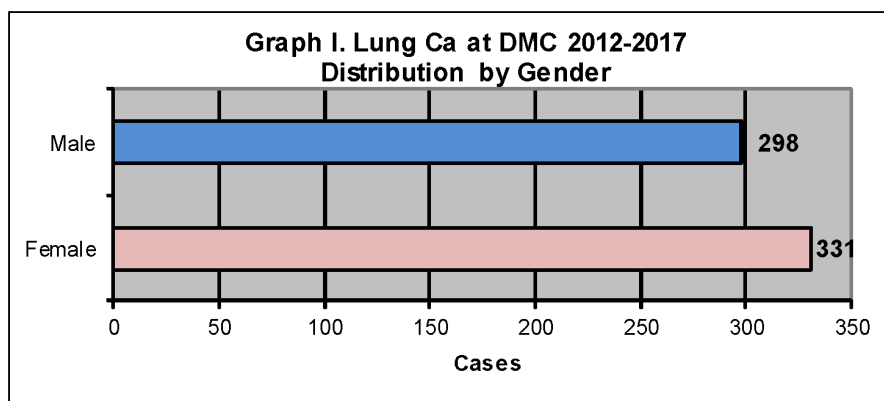
Cigarette smoking is by far the leading risk factor for lung cancer and accounts for 80% of lung cancer deaths. The risk increases with quantity and duration of smoking. Cigar and pipe smoking also boost risk. Exposure to radon gas released from soil and building materials is thought to be the second-leading cause of lung cancer in the US. Other risk factors include exposure to secondhand smoke either in the work place or at home. Asbestos (particularly in smokers), certain metals, inhaled chemicals or minerals such as arsenic, cadmium and chromium, exposure to radiation, air pollution, history of tuberculosis, family history of lung cancer, and genetic susceptibility may also be contributing risk factors.

Patients often do not develop symptoms until the cancer is at an advanced stage or has metastasized. This is primarily why lung cancer has the highest mortality rate out of all other cancers. Screening with low-dose spiral computed tomography (LDCT) has been shown to reduce lung cancer mortality by about 20% compared to standard chest x-ray among current or former heavy smokers 55 to 74 years of age with at least a 30 pack-year smoking history. Signs and symptoms depend on the location of the tumor and include persistent cough, chest pain, voice change, coughing up blood or sputum streaked with blood, shortness of breath and recurrent bronchitis and pneumonia.

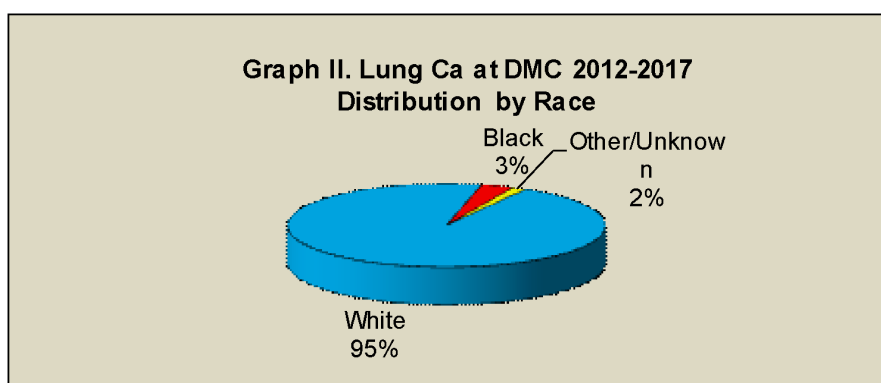
Treatment options vary depending on the histology (non-small cell or small cell), stage of cancer and overall health. They include surgery, chemotherapy, radiation therapy and targeted therapies such as Tarceva and Avastin. Surgery is usually recommended for localized non-small cell carcinoma because it offers the best chances for cure. After surgery, chemotherapy may be added to improve the survival rate of the patient. If the cancer has already spread, radiation therapy in combination with chemotherapy is used. Targeted therapies are certain drugs that help prevent the growth of a tumor either by stopping the formation of new blood vessels in a tumor or by blocking a specific receptor that signals cells to grow and divide. For small cell carcinoma the treatment of choice is chemotherapy alone or combined with radiation therapy.

Nationwide, the 5-year relative survival rate for lung cancer is 18%. Only 16% of lung cancers are diagnosed at a localized stage, for which the 5-year survival rate is 56%. From 2012 – 2017, a total of 629 analytic lung cancer cases were seen in Delray Medical Center. For Delray Medical Center, the 5 year relative survival rate is 76% and the localized stage 5-year survival rate is 84%. (American Cancer Society, 2018)

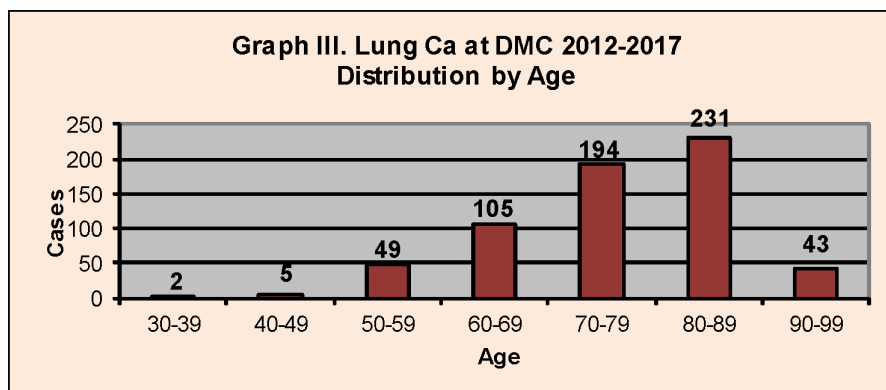
There were a total of 629 lung cancer cases diagnosed and/or treated at Delray Medical Center from 2012-2017. The distribution by gender graph shows there were more females than males. **Graph I.**



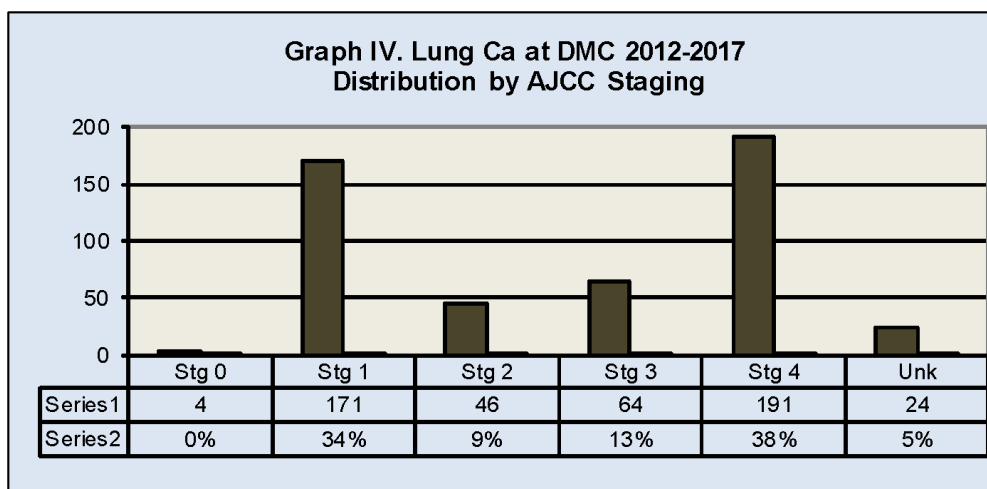
The distribution by race graph shows that the majority were among the white population representing 95%. **Graph II.**



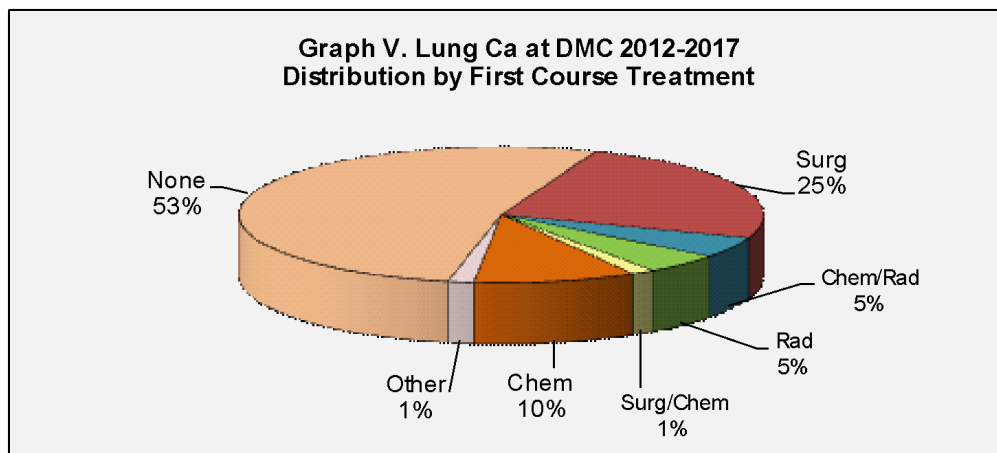
The age of presentation at diagnosis was highest in the 80-89 years old population with 231 cases. Followed by, 194 cases in the 70-79 years old population. **Graph III.**



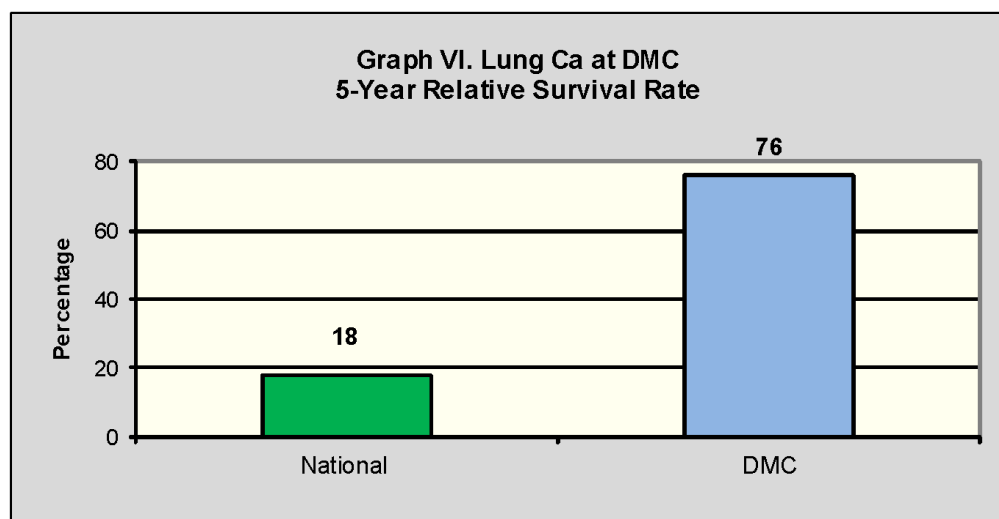
The leading lung cancer stage group was distant disease with 38%, followed by localized stage with 34%. **Graph IV.**



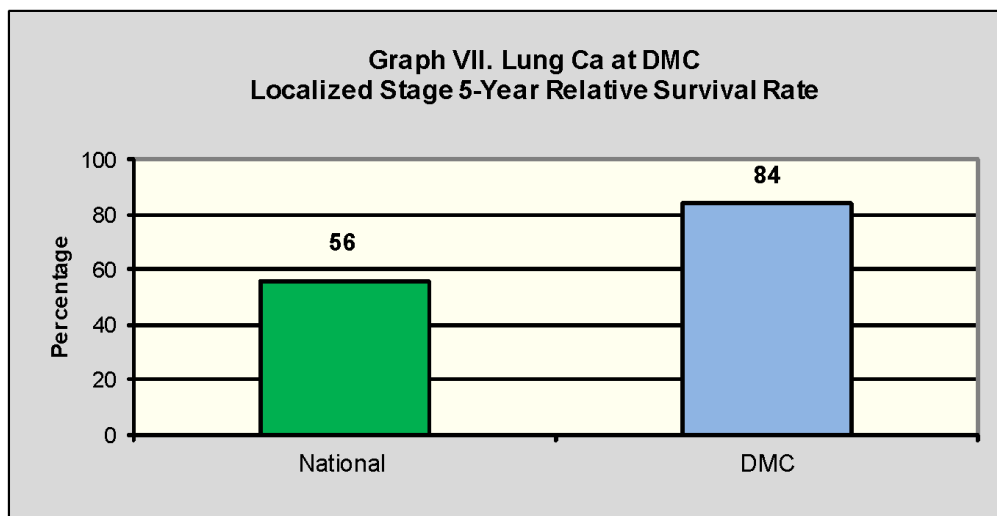
Treatment distribution shows that surgery alone was used in 25% of the cases. Most lung cancer cases not treated are due to patient being diagnosed with an advanced stage, patient refused any treatment and/or patient went to hospice. **Graph V.**



Delray Medical Center's overall five-year relative survival rate for lung cancer is 76% compared to 18% nationwide. **Graph VI.**



Delray Medical Center's localized stage five-year relative survival rate for lung cancer is 84% compared to 56% nationwide. **Graph VII.**



Definitions

Analytic: A case that was either initially diagnosed or received all or part of the first course of treatment at the reporting institution.

Class 00: Initial diagnosis at DMC and all treatment or a decision not to treat was done elsewhere

Class 10: Initial diagnosis at DMC and part or all of first course treatment or a decision not to treat was at DMC, NOS. (If it is not known that the patient actually went somewhere else, code Class of Case 10)

Class 11: Initial diagnosis in staff physician's office AND part of first course treatment was done at DMC

Class 12: Initial diagnosis in staff physician's office AND all first course treatment or a decision not to treat was done at DMC

Class 13: Initial diagnosis at DMC and part of first course treatment was done at the reporting facility; part of first course treatment was done elsewhere.

Class 14: Initial diagnosis at DMC and all first course treatment or a decision not to treat was done at DMC

Class 20: Initial diagnosis elsewhere AND all or part of first course treatment was done at DMC, NOS

Class 21: Initial diagnosis elsewhere AND part of first course treatment was done at DMC

Class 22: Initial diagnosis elsewhere AND all first course treatment or a decision not to treat was done at DMC

Non-analytic (includes Class 32): Patient diagnosed and received all first course of treatment at another institution, patients diagnosed at autopsy, and patients diagnosed and treated at the reporting facility before the registry's reference day.

Stage: The Tumor Registry collects the staging by using the Tumor, Nodes and Metastasis (TNM) system from the American Joint Committee on Cancer, and Local, Regional or Distant

from (SEER) Surveillance, Epidemiology and End Results Program. **Stage 0** = In-situ, **Stage 1** = Local, **Stage 2** = Regional/Direct Extension, **Stage 3** = Regional/Nodes Only, **Stage 4** = Regional/Direct Extension & Nodes.

First course of treatment: Includes all methods of treatments recorded in the treatment plan and administered to the patient before disease progression or recurrence.

Successful follow up: Is the percent of dead and living patients that were contacted by the Tumor Registry in the last 12 months. It is required to use registry data for survival analysis.

Lost to follow up: Represents the percentage of patients that have not been contacted by the Tumor Registry in the last 15 months. They are also known as “delinquent cases”.

References:

American Cancer Society. (2018). *Cancer Facts & Figures*. Retrieved from American Cancer Society: <http://www.cancer.org/research/cancerfactsstatistics/index>