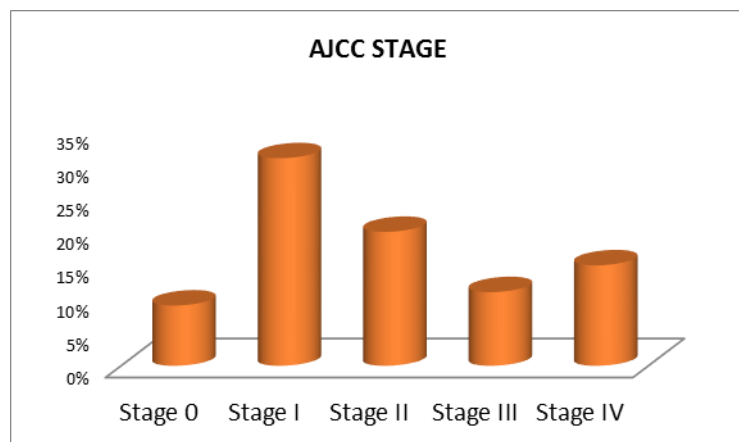


Stage 0 cancers accounted for 9 percent of our patients for 2015. An additional 31 percent of our patients presented with Stage I disease. Stage II accounted for 20 percent of our patients and Stage III disease was 11 percent and Stage IV represented 15 percent of our patients. See figure 5.

Figure 5



A review of the top five sites for women at our 3 campuses indicates that breast cancer represented 46 percent of cancer in 2015. This is followed by lung & bronchus, uterine, colon and kidney. For men, prostate represented 26 percent of cancer, followed by lung & bronchus, kidney, colon and bladder. For comparison, the American Cancer Society data showed breast cancer representing 29 percent and prostate cancer representing 26 percent for men.

See figures 6 & 7

Figure 6

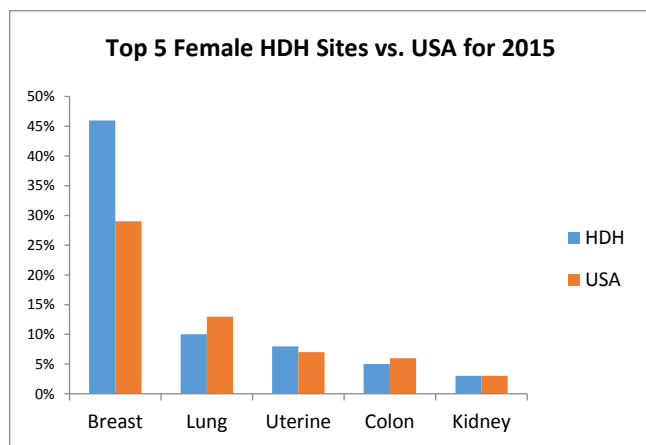
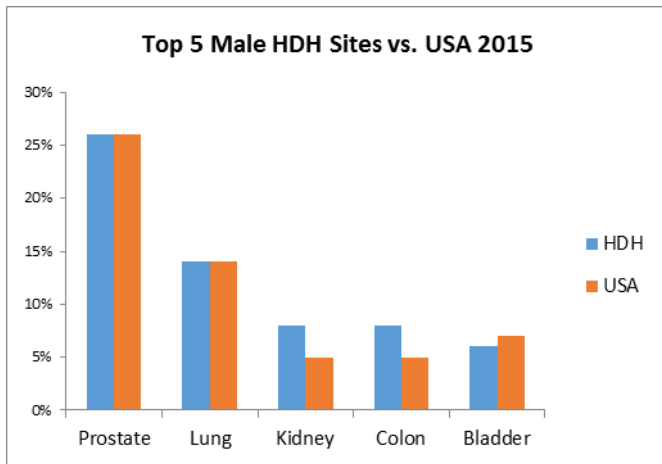


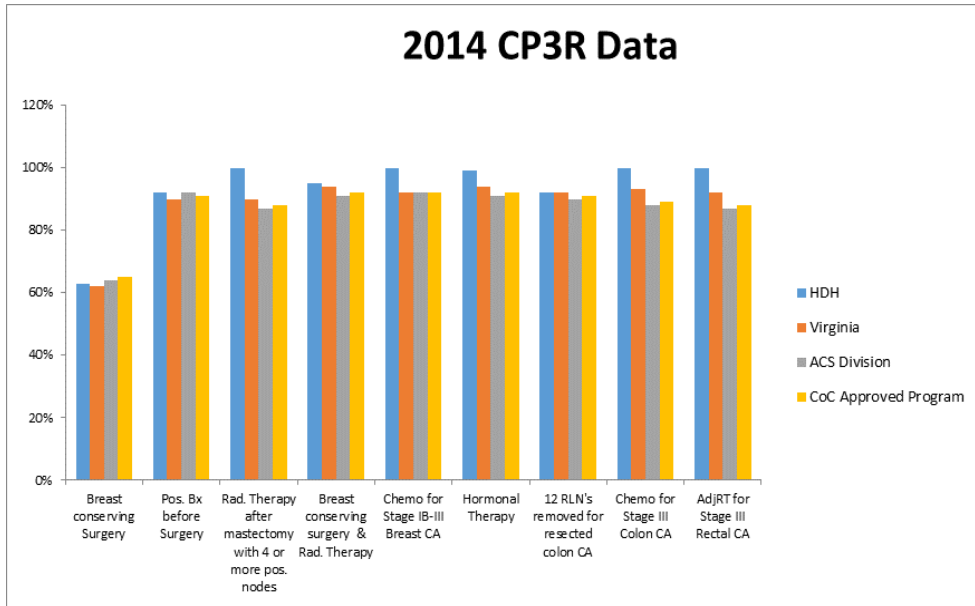
Figure 7



Annual life time follow-up is required in all analytic cases. Our follow-up rate is 82 percent for our reference year and 91 percent for our 5-year reference year. These percentages are higher than the CoC requirement of 80 percent for our reference year and 90 percent for our 5-year reference year. The database provides the medical staff, administrators and other health professionals with useful information for research, evaluation and program planning.

Annually, our Cancer Registry submits cases to the National Cancer Data Base (NCDB). This is a required standard of the Commission on Cancer (CoC) for accredited cancer programs. The NCDB publishes a report with the data which is referred to as the Cancer Program Practice Profile Reports (CP3R). This report compares our program performance rate measures with the state of VA, American Cancer Society (ACS) and the CoC approved programs. When reviewing the performance measures, you will see that our cancer program rates are higher than other programs in the state of VA, ACS and CoC approved programs. The graph below includes the measures and performance rates being followed.

See figure 8



Annual life time follow-up is required in all analytic cases. Our follow-up rate is 82 percent for our reference year and 91 percent for our 5-year reference year. These percentages are higher than the CoC requirement of 80 percent for our reference year and 90 percent for our 5-year reference year. The database provides the medical staff, administrators and other health professionals with useful information for research, evaluation and program planning.

2015 PRIMARY SITE TABLE

Primary Site	Total	Sex		Class of			Stage Distribution - Analytic Cases Only					
		M	F	Analy	NA	Stg 0	Stg I	Stg II	Stg III	Stg IV	N/A	Unk
ORAL CAVITY & PHARYNX	27	22	5	25	2	1	6	1	6	6	0	5
Lip	3	3	0	3	0	0	2	0	0	1	0	0
Tongue	7	7	0	6	1	1	0	1	1	0	0	3
Floor of Mouth	2	2	0	1	1	0	1	0	0	0	0	0
Gum & Other Mouth	3	1	2	3	0	0	2	0	0	1	0	0
Tonsil	9	7	2	9	0	0	1	0	3	3	0	2
Hypopharynx	3	2	1	3	0	0	0	0	2	1	0	0
DIGESTIVE SYSTEM	265	148	117	234	31	7	53	52	44	55	1	22
Esophagus	13	10	3	12	1	0	0	2	2	5	0	3
Stomach	23	14	9	19	4	0	3	2	3	5	0	6
Small Intestine	6	6	3	8	1	0	1	1	3	1	0	2
Colon Excluding Rectum	92	50	42	89	3	4	19	21	23	17	0	5
Cecum	11	6	5	11	0	0	1	3	4	1	0	2
Appendix	4	3	1	4	0	0	1	2	0	1	0	0
Ascending Colon	18	9	9	18	0	1	6	6	3	2	0	0
Hepatic Flexure	1	0	1	1	0	0	0	0	1	0	0	0
Transverse Colon	12	5	7	12	0	0	2	3	4	3	0	0
Splenic Flexure	5	4	1	5	0	1	0	0	2	1	0	1
Descending Colon	6	4	2	6	0	1	1	0	3	0	0	1
Sigmoid Colon	28	15	13	26	2	1	8	7	5	5	0	0
Large Intestine, NOS	7	4	3	6	1	0	0	0	1	4	0	1
Rectum & Rectosigmoid	49	28	21	46	3	3	19	13	4	5	0	2
Rectosigmoid Junction	14	7	7	13	1	0	3	4	3	2	0	1
Rectum	35	21	14	33	2	3	16	9	1	3	0	1
Anus, Anal Canal & Anorectum	12	5	7	9	3	0	3	2	2	0	0	2
Liver & Intrahepatic Bile Duct	14	9	5	11	3	0	3	0	3	3	1	1
Liver	9	6	3	7	2	0	3	0	2	2	0	0
Intrahepatic Bile Duct	5	3	2	4	1	0	0	0	1	1	1	1
Other Biliary	5	3	2	3	2	0	1	1	0	0	0	1
Pancreas	45	22	23	35	10	0	4	10	3	18	0	0
Retroperitoneum	2	1	1	2	0	0	0	0	1	1	0	0
Peritoneum, Omentum & Mesentery	1	0	1	0	1	0	0	0	0	0	0	0
RESPIRATORY SYSTEM	212	111	101	183	29	0	44	9	40	86	1	3
Nose, Nasal Cavity & Middle Ear	3	2	1	3	0	0	0	0	0	2	1	0
Larynx	10	9	1	9	1	0	2	0	2	3	0	2
Lung & Bronchus	198	99	99	170	28	0	42	9	37	81	0	1
Trachea, Mediastinum & Other	1	1	0	1	0	0	0	0	1	0	0	0
SOFT TISSUE	10	7	3	8	2	0	3	3	0	1	0	1
Soft Tissue (including Heart)	10	7	3	8	2	0	3	3	0	1	0	1
SKIN	44	21	23	34	10	12	11	1	0	5	0	5
Melanoma -- Skin	43	21	22	34	9	12	11	1	0	5	0	5
Other Non-Epithelial Skin	1	0	1	0	1	0	0	0	0	0	0	0
BREAST	482	3	479	402	80	91	176	87	17	13	1	17
Breast	482	3	479	402	80	91	176	87	17	13	1	17
FEMALE GENITAL SYSTEM	155	0	155	120	35	4	61	7	16	22	0	10
Cervix Uteri	12	0	12	10	2	0	6	1	2	1	0	0
Corpus & Uterus, NOS	78	0	78	73	5	4	42	4	5	10	0	8
Corpus Uteri	75	0	75	71	4	4	42	4	5	8	0	8
Uterus, NOS	3	0	3	2	1	0	0	0	0	2	0	0
Ovary	37	0	37	27	10	0	6	2	7	11	0	1
Vagina	3	0	3	2	1	0	1	0	1	0	0	0
Vulva	23	0	23	6	17	0	5	0	1	0	0	0
Other Female Genital Organs	2	0	2	2	0	0	1	0	0	0	0	1
MALE GENITAL SYSTEM	203	203	0	165	38	0	14	115	22	6	1	7
Prostate	199	199	0	161	38	0	12	115	22	5	0	7
Testis	2	2	0	2	0	0	2	0	0	0	0	0
Penis	2	2	0	2	0	0	0	0	0	1	1	0
URINARY SYSTEM	139	100	39	125	14	19	71	5	8	14	1	7
Urinary Bladder	50	43	7	43	7	18	12	3	0	6	0	4
Kidney & Renal Pelvis	86	55	31	79	7	1	58	2	8	6	1	3
Ureter	3	2	1	3	0	0	1	0	0	2	0	0
BRAIN & OTHER NERVOUS SYSTEM	51	23	28	46	5	0	0	0	0	0	46	0
Brain	21	13	8	18	3	0	0	0	0	0	18	0
Other Nervous System	30	10	20	28	2	0	0	0	0	0	28	0
ENDOCRINE SYSTEM	41	7	34	33	8	0	13	3	3	2	12	0
Thyroid	25	3	22	21	4	0	13	3	3	2	0	0
Other Endocrine including Thymus	16	4	12	12	4	0	0	0	0	0	12	0
LYMPHOMA	55	29	26	43	12	0	13	13	8	8	0	1
Hodgkin Lymphoma	9	5	4	8	1	0	1	6	0	1	0	0
Non-Hodgkin Lymphoma	46	24	22	35	11	0	12	7	8	7	0	1
NHL - Nodal	38	19	19	29	9	0	8	7	7	7	0	0
NHL - Extranodal	8	5	3	6	2	0	4	0	1	0	0	1
MYELOMA	24	11	13	14	10	0	0	0	0	0	14	0
Myeloma	24	11	13	14	10	0	0	0	0	0	14	0
LEUKEMIA	25	15	10	12	13	0	0	0	0	0	12	0
Lymphocytic Leukemia	11	7	4	4	7	0	0	0	0	0	4	0
Acute Lymphocytic Leukemia	1	1	0	1	0	0	0	0	0	0	1	0
Chronic Lymphocytic Leukemia	10	6	4	3	7	0	0	0	0	0	3	0
Myeloid & Monocytic Leukemia	12	7	5	7	5	0	0	0	0	0	7	0
Acute Myeloid Leukemia	6	3	3	4	2	0	0	0	0	0	4	0
Acute Monocytic Leukemia	2	2	0	1	1	0	0	0	0	0	1	0
Chronic Myeloid Leukemia	3	2	1	1	2	0	0	0	0	0	1	0
Other Myeloid/Monocytic Leukemia	1	0	1	1	0	0	0	0	0	0	1	0
Other Leukemia	2	1	1	1	1	0	0	0	0	0	1	0
MISCELLANEOUS	42	26	16	34	8	0	0	0	0	0	34	0
Miscellaneous	42	26	16	34	8	0	0	0	0	0	34	0
Total	1,775	726	1,049	1,478	297	134	465	296	164	218	123	78

Overall Survival in Patients with Lung Cancer Treated with Chemoradiotherapy at Henrico Doctors' Hospital from 2010-2014

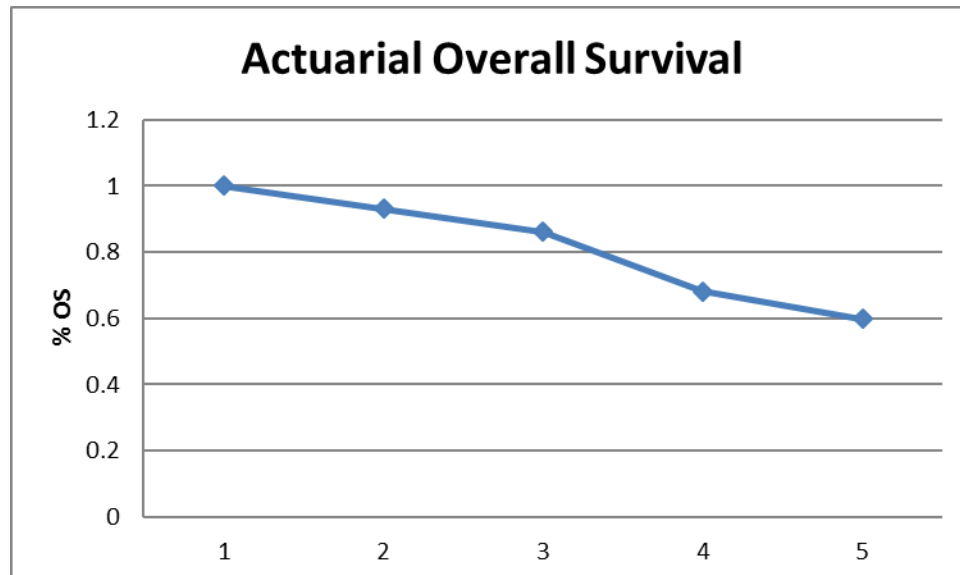
Background: The optimal dose of radiotherapy used to treat non-small cell lung cancer is a subject of controversy. A recent phase III clinical trial suggested that radiation doses in excess of 66Gy might result in decreased overall survival relative to lower doses, presumably because of radiation-related esophageal or cardiac toxicity (1). In contrast, a review of the National Cancer Database suggested that moderate dose escalation (66-70Gy) is associated with improved overall survival (2).

Purpose: Moderate dose escalation is the standard of care at Henrico Doctors' Hospital. In light of the recent controversy surrounding the recommended dose for definitive radiotherapy, this retrospective review of the cancer registry was initiated to determine long-term outcomes in patients with unresectable stage III non-small cell lung cancer treated with definitive chemoradiotherapy at our institution.

Methods: Between 2010 and 2014, data was abstracted for 194 patients diagnosed with lung cancer at Henrico Doctors' Hospital. Of patients diagnosed, 72 were treated with chemoradiotherapy with curative intent at the Forest Campus. Chemotherapy consisted of a platinum doublet regimen. Radiation dose ranged from 66-74Gy. Meticulous care was given to normal tissue radiation dose constraints. Survival data was examined for these patients through June 2015.

Results: Median follow-up is 35 months. Using the Kaplan-Meier method, 5-year actuarial overall survival in our patient population was 59.7%.

Conclusions: Moderate dose escalation, when delivered with stringent normal tissue constraints, is associated with excellent overall survival in our patient population. The study demonstrated 59.7 % 5 year overall survival at HDH which mirrors the NCDB data.



1. Bradley JD, Paulus R, Komaki R, Masters G, Blumenschein G, Schild S, Bogart J, Hu C, Forster K, Magliocco A, Kavadi V, Garces YI, Narayan S, Iyengar P, Robinson C, Wynn RB, Koprowski C, Meng J, Beitler J, Gaur R, Curran W Jr, Choy H. Standard-dose versus high-dose conformal radiotherapy with concurrent and consolidation carboplatin plus paclitaxel with or without cetuximab for patients with stage IIIA or IIIB non-small-cell lung cancer (RTOG 0617): a randomised, two-by-two factorial phase 3 study. *Lancet Oncol.* 2015 Feb;16(2):187-99.
2. Brower JV, Amini A, Chen S, Hullett CR, Kimple RJ, Wojcieszynski AP, Bassetti M, Witek ME, Yu M, Harari PM, Baschnagel AM. Improved survival with dose-escalated radiotherapy in stage III non-small-cell lung cancer: analysis of the National Cancer Database. *Ann Oncol.* 2016 Oct;27(10):1887-94.

