Rhode Island Hospital

The Miriam Hospital

Newport Hospital

Cancer Program Annual Report
2016

Report of the Cancer Committee

Content

Introduction

In August 2013, the cancer programs at Rhode Island Hospital, The Miriam Hospital, and Newport Hospital officially merged into one, system-wide Comprehensive Cancer Center.

The Comprehensive Cancer Center, a Program of Rhode Island Hospital, brings together world-renowned physicians whose level of knowledge and experience are unparalleled in Rhode Island. A multidisciplinary team of specialists from Rhode Island Hospital, The Miriam Hospital and Newport Hospital provide patients diagnosed with cancer or hematologic disorders access to a full range of cancer services.

The center's hematology and oncology program has a disease specific focus, led by multidisciplinary teams of highly trained board certified specialists. Teams of expert medical oncologists, hematologists, radiation oncologists, oncology surgeons, radiologists, pathologists, nurse practitioners, physician assistants, nurses, clinical pharmacists, patient navigators, geneticists, social workers and dietitians are dedicated to the diagnosis, treatment, and prevention of cancer. They work closely and compassionately with patients and families to ensure evidence based care is provided to achieve the best possible outcome. When treatment is completed, the center continues to support patients and their families through survivorship and wellness programs.

In 2015 the Cancer Program was awarded the Outstanding Achievement Award which includes a 3 year accreditation with commendation from the Commission on Cancer (CoC) of the American College of Surgeons (ACoS). This voluntary accreditation validates that our Comprehensive Cancer Program meets and exceeds the rigorous standards set by the Commission on Cancer of the American College of Surgeons.

The 2016 Annual Report summarizes Cancer Program statistics for 2015, during which time 4,065 cases were accessioned. The analytic case count was 3,344 and the non-analytic case count was 721. For patients diagnosed and treated at Rhode Island Hospital, The Miriam Hospital, and Newport Hospital a lifelong follow-up rate of at least 90% is maintained.

In 2016, the Cancer Committee conducted an esophageal cancer outcome analysis to assess the program's overall experience with this disease. It is estimated 16,910 new cases of esophageal cancer will be diagnosed in the United States during 2016. While esophageal cancer is less common in the United States incidence rates have remained stable over the past few years and it is estimated that 60 residents in Rhode Island will be affected by this disease during 2016.

The goals and achievements of the Cancer Program for 2016 were as follows:

Programmatic:
Increase access to care at the Comprehensive Cancer Center to ensure timely patient assessment and treatment. Interventions included increased hours at the Miriam Hospital and East Greenwich sites. In April 2016 the Cancer Center at TMH extended hours to include Saturday appointments and infusion visits from 8:00 a.m. to 2:00 p.m. In June 2016, the East Greenwich site extended hours to include Friday appointments and infusions from 8:00 a.m. to 2:00 p.m. Epic reports tracking time from referral to first appointment are being developed and will be used measure the impact of these enhancements.

Clinical:
Decrease re-admission rates among the Hematology/Oncology patient population at Rhode Island Hospital and The Miriam Hospital by 3%. Intervention focused on implementation of a proactive patient phone call to an identified at-risk population: patients from either hospital who were discharged from an inpatient unit, seen in the Emergency Department, receiving initial outpatient chemotherapy or a sick visit in the outpatient Cancer Center. Specially trained phone triage nurses confirmed compliance with filling new prescriptions, knowledge of the medication, date and time of follow-up appointments in the Cancer Center and any home care services. A manual review of patient discharges, excluding scheduled chemotherapy admissions, was also conducted to measure and track re-admission rates.

2016 Quality Improvements:

Developed and implemented a Phone Triage Center:

- In October 2016, The Comprehensive Cancer Center implemented a new Phone Triage Center, a collaborative effort to improve access to care, customer service and coordination of care.

  At the beginning of 2016, a small group began to develop and implement a centralized phone triage center with the goal of improving accessibility and convenience for both patients and physicians. Prior to this initiative, the four Cancer Center sites each had an individual phone line, with no coordination of telephone access.

  Now, live operators in the phone center receive all incoming calls across all the CCC sites and immediately respond or triage the caller to the appropriate person or area.

  Thanks to a generous donation from long-time supporters of The Miriam Hospital, the state-of-the-art center was built on the hospital campus and officially opened in October. In preparation for its opening, the center recruited and trained staff for six months. The phone triage center is staffed daily by five to six operators who receive and manage between 400 and 600 calls. New software within the center measures and analyzes several quality metrics, including the average length of time callers are on hold, the length of active telephone conversations, and the number of calls that are dropped before being answered by an agent. This software will also allow the center to track the volume of incoming phone calls, and determine the busiest times of the day, allowing staff to be scheduled most efficiently and effectively.

  The implementation of the centralized phone number and phone triage center marks a significant step toward improving customer service and coordination of care, to provide our patients the best possible health care experience.

Developed and implemented a Colorectal Cancer Multidisciplinary Clinic (MDC) on the Miriam Hospital campus:

- During 2016, a Multidisciplinary Clinic (MDC) devoted to the diagnosis and treatment of colorectal cancer was established on the Miriam Hospital campus. To ensure timely patient assessment and coordination of care, patients referred to the colorectal MDC are seen by medical oncology, radiation oncology, and surgical oncology during their initial visit. At the conclusion of this visit, a preliminary plan of care is established and discussed with the patient.

  Colorectal MDC physicians include: Dr. Matthew Vrees from surgery, Dr. Rimini Breakstone from medical oncology and Dr. Kara Leonard from radiation oncology. The Miriam Hospital's first Colorectal Cancer Multidisciplinary Clinic was held in September 2016.

2016 Cancer Oversight Committee Membership

Charlene Ainscough, RN, OCN	Clinical Manager	Adult Inpatient Oncology Nursing
Denise Barrese, CPA, CGMA	Director of Business Operations	The Comprehensive Cancer Center
Megan Begnoche, RN, AOCN	Nursing Quality & Safety Manager *Quality Improvement Coordinator*	The Comprehensive Cancer Center
Carrie Bridges-Feliz	Director *Community Outreach Coordinator*	Community Outreach
James Butera, MD	Medical Oncologist	The Comprehensive Cancer Center
Michelle Carpentier, RN, OCN	Director	The Comprehensive Cancer Center
Christine Collins, MBA, RPh	Director	Pharmacy
Thomas DiPetrillo, MD	Radiation Oncologist *Chair, Cancer Committee* *Cancer Conference Coordinator*	Radiation Oncology
Nicholas Dominick	Cancer Program Administration Sr. Vice President	Clinical Service Lines & Facilities Development
Damian Dupuy, MD	Director, Tumor Ablation Services	Diagnostic Imaging
Sheila Earle, CTR	Cancer Registrar	Oncology Data Management
Alexandra Fiore	Representative	American Cancer Society
Mary Flynn, PhD, RD, LDN	Nutritionist	Nutrition Services
Theresa Graves, MD	Director, Breast Program Breast Surgeon	Surgery
Arnold Herman, MD	Breast Surgeon *Cancer Liaison Physician (CLP)*	Surgery
Theresa Jenner	Director *Psychosocial Services Coordinator*	Clinical Social Work
Susan Korber, RN, OCN	Cancer Program Administration Administrative Director	The Comprehensive Cancer Center
Mark LeGolvan, MD	Pathologist	Pathology Services
Carrie Marcil, PT, LANA	Physical Therapist	Rehabilitation Services
Alessandro Papa, MD	Medical Oncologist	The Comprehensive Cancer Center
Jayne Ritz, MS, RN, OCN	Clinical Manager	The Comprehensive Cancer Center

2016 Cancer Oversight Committee Membership

Andrew Schumacher, CCRP	Manager *Clinical Research Coordinator*	Lifespan Oncology Clinical Research
Jennifer Schwab, MS, CGC	Genetics Counselor	Genetics Clinic
Marsha Stephenson, RN	Clinical Coordinator	Home & Hospice Care of RI
Tara Szymanski, CTR	Manager, Quality, Accreditations, & Data Management *Cancer Registry Coordinator*	Oncology Data Management
Angela Taber, MD	Palliative Care / Medical Oncologist	The Comprehensive Cancer Center
Christina Vieira, CTR	Cancer Registrar	Oncology Data Management
Patricia Weissman, MS, RN	Quality Improvement Specialist	Operational Excellence
Edward Wittels, MD	Medical Oncologist	The Comprehensive Cancer Center

2015 Analytic Case Distribution by Primary Site

Rhode Island Hospital : The Miriam Hospital : Newport Hospital

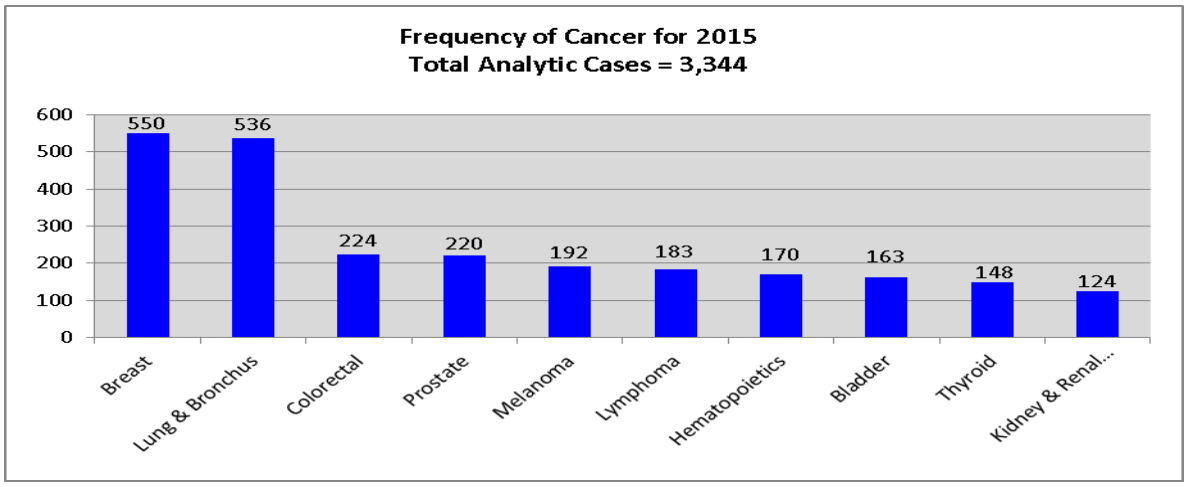
PRIMARY SITE	TOTAL	SEX		AJCC STAGE					Stage Unknown	Stage Not Applicable
		M	F	0	1	2	3	4	99	88
Oral Cavity	45	32	13	0	4	6	7	25	3	0
Lip	0	0	0	0	0	0	0	0	0	0
Tongue	18	12	6	0	2	4	3	7	2	0
Salivary Gland	7	4	3	0	2	1	1	3	0	0
Floor of Mouth	0	0	0	0	0	0	0	0	0	0
Gum & Other Mouth	3	2	1	0	0	1	0	1	1	0
Nasopharynx	2	2	0	0	0	0	2	0	0	0
Tonsil	6	5	1	0	0	0	1	5	0	0
Oropharynx	7	6	1	0	0	0	0	7	0	0
Hypopharynx	2	1	1	0	0	0	0	2	0	0
Other Oral Cavity Organs	0	0	0	0	0	0	0	0	0	0
Digestive System	515	300	215	13	100	97	103	144	45	11
Esophagus	40	33	7	0	7	5	14	9	5	0
Stomach	57	30	27	0	12	12	13	9	10	1
Small Intestine	21	13	8	0	3	3	3	10	2	0
Colon	137	67	70	7	37	28	33	30	1	0
Rectum & Rectosigmoid	87	57	30	3	18	13	20	22	11	0
Anus & Anorectum	16	5	11	2	1	5	4	0	4	0
Liver & Intrahepatic Duct	47	38	9	0	14	10	2	11	5	5
Gallbladder	9	5	4	1	1	1	1	5	0	0
Other Biliary	19	11	8	0	1	5	1	5	4	3
Pancreas	76	39	37	0	5	14	11	43	2	0
Retroperitoneum	2	1	1	0	1	1	0	0	0	0
Other Digestive Organs	4	1	3	0	0	0	1	0	1	2
Respiratory System	564	265	299	0	178	49	109	214	14	0
Larynx	21	17	4	0	5	2	5	6	3	0
Lung & Bronchus	539	244	295	0	172	47	104	205	11	0
Other Respiratory	4	4	0	0	0	0	0	3	1	0
Mesothelioma	4	4	0	0	0	0	0	3	1	0
Bone & Soft Tissue	44	26	18	0	8	8	11	5	8	4
Bone & Joints	9	5	4	0	1	2	0	2	2	2
Soft Tissue	35	21	14	0	7	6	11	3	6	2
Skin Excluding Basal & Squamous Cell	202	112	90							
Melanoma – Skin	192	107	85	53	88	20	11	9	11	0
Other Non-Epithelial Skin	10	5	5	0	4	2	3	0	1	0
Other Defined Sites	55	22	33	0	0	0	0	0	0	55
Breast	550	7	543	110	231	124	35	23	27	0

PRIMARY SITE	TOTAL	SEX		AJCC STAGE					Stage Unknown	Stage Not Applicable
		M	F	0	1	2	3	4	99	88
Female System	132	N/A	132	0	45	14	37	25	5	6
Cervix Uteri	24	N/A	24	0	6	3	11	3	1	0
Corpus & Uterus, NOS	55	N/A	55	0	33	4	12	6	0	0
Ovary	37	N/A	37	0	5	4	12	14	2	0
Vagina	2	N/A	2	0	0	2	0	0	0	0
Vulva	7	N/A	7	0	1	1	2	1	2	0
Other Female Organs	7	N/A	7	0	0	0	0	1	0	6
Male System	250	250	N/A	1	48	105	49	38	8	1
Prostate	220	220	N/A	0	32	101	45	36	6	0
Testis	22	22	N/A	0	15	2	4	0	1	0
Penis	7	7	N/A	1	1	2	0	2	1	0
Other Male Organs	1	1	N/A	0	0	0	0	0	0	1
Urinary System	299	206	93	79	126	31	27	23	9	4
Urinary Bladder	163	122	41	74	51	21	6	9	2	0
Kidney & Renal Pelvis	124	76	48	4	73	7	20	11	7	2
Ureter	7	4	3	1	1	1	1	3	0	0
Other Urinary Organs	5	4	1	0	1	2	0	0	0	2
Brain & Other Nervous System	167	74	93	0	0	0	0	0	0	167
Brain	86	50	36	0	0	0	0	0	0	86
Cranial Nerves & Other	81	24	57	0	0	0	0	0	0	81
Endocrine System	170	46	124	0	95	12	28	9	7	19
Thyroid Gland	148	33	115	0	95	10	28	8	7	0
Other including Thymus	22	13	9	0	0	2	0	1	0	19
Hematopoietic System	161	80	81	0	0	0	0	0	0	161
Leukemia	116	60	56	0	0	0	0	0	0	116
Myeloma	45	20	25	0	0	0	0	0	0	45
Lymphomas	183	92	91	0	51	27	43	47	11	4
Hodgkin's Disease	20	10	10	0	1	7	6	6	0	0
Non-Hodgkin's	163	82	81	0	50	20	37	41	11	4
Kaposi Sarcoma	2	2	0	0	0	0	0	0	0	2
Total Analytic Cases	**3,344**	**1,519**	**1,825**	**256**	**978**	**496**	**463**	**565**	**156**	**430**
		45%	**55%**	**8%**	**29%**	**15%**	**14%**	**17%**	**4%**	**13%**

Top Ten Sites and Residence at Diagnosis

Top Ten Sites

The ten most common sites for the Cancer Program, based on 2015 analytic* cases are (in descending order by percent of total incidence) Breast (16%), Lung & Bronchus (16%), Colorectal (7%), Prostate (7%), Melanoma (6%), Lymphoma (5%), Hematopoietic Malignancy (5%), Bladder (5%) Thyroid (4%), and Kidney & Renal Pelvis (4%). This distribution differs from that of the American Cancer Society (ACS) which was noted to be (in descending order by percent of total incidence) Breast (14%), Lung and Bronchus (13%), Prostate (13%), Colorectal (8%), Hematopoietic Malignancy's (5%), Lymphoma (5%), Bladder (4%), Melanoma (4%), Thyroid (4%), and Kidney & Renal Pelvis (4%).

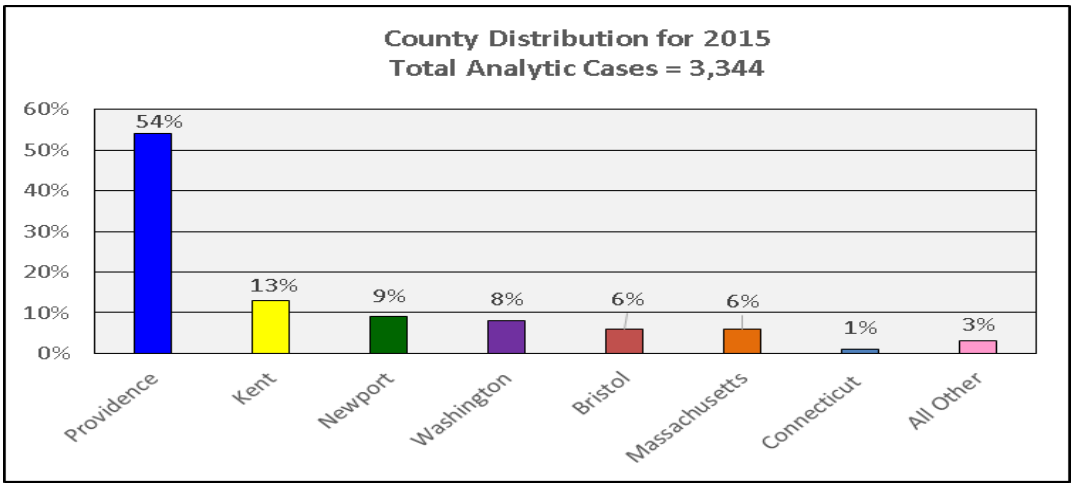


*Analytic - cancer case that was diagnosed and/or received all or part of the first course treatment at the reporting facility.

Source: Rhode Island, Miriam, & Newport Hospital Oncology Data Management Departments
Source: https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2015/estimated-number-of-new-cancer-cases-and-deaths-by-sex-us-2015.pdf

Residence at Diagnosis

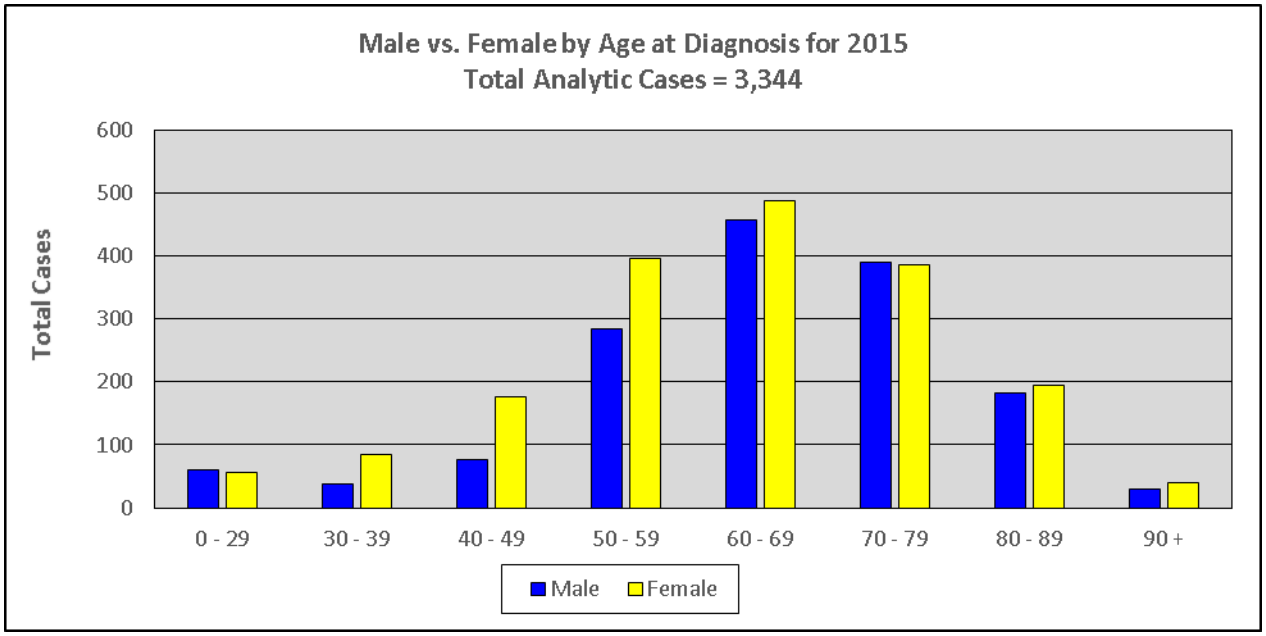
Rhode Island Hospital and The Miriam Hospital are located in Providence County and serve as major referral centers for Rhode Island, Massachusetts, and the surrounding areas. More than 50% of the Hospital's analytic cancer patients accessioned in 2015 reside in Providence County. The remainder of the Hospital's cancer patient population is distributed throughout Rhode Island and Massachusetts. Newport Hospital however, is located on Aquidneck Island and serves as the major referral center for Newport and Bristol County. More than 82% of Newport Hospital's analytic cancer patients accessioned in 2015 reside in Newport County.



Gender by Age and Stage of Disease at Diagnosis

Gender by Age

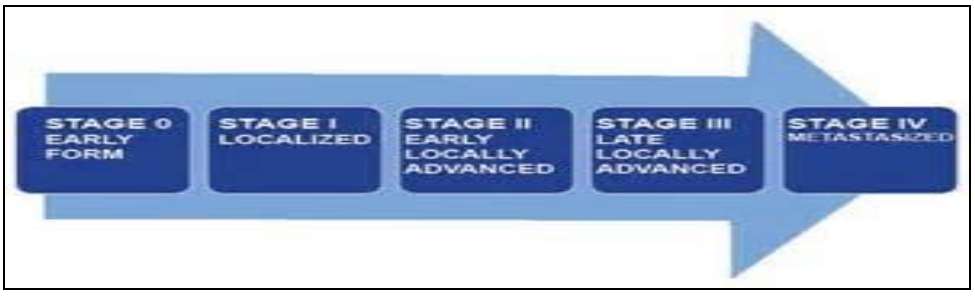
In 2015, the gender distribution for the program was 45% male and 55% female. This distribution differs from the American Cancer Society (ACS) gender distribution. Based on American Cancer Society (ACS) data, the estimated gender distribution of US cancer cases in 2015 was 51% male and 49% female. The most common age group for the cancer program was 60 – 69; approximately 28% of patients were in this age group at the time of initial diagnosis.



Source: Rhode Island, Miriam, & Newport Hospital Oncology Data Management Departments
Source: https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2015/estimated-number-of-new-cancer-cases-and-deaths-by-sex-us-2015.pdf

Stage of Disease at Diagnosis

Cases entered into the Cancer Registry are categorized according to the tumor / node / metastases (TNM) staging system developed by the American Joint Committee on Cancer (AJCC) to describe the extent or spread of disease at diagnosis, which is generally predictive of survival. Of analytic cases entered into the Cancer Registry, 256 (8%) were classified as TNM stage 0, 978 (29%) as stage I, 496 (15%) as stage II, 463 (14%) as stage III, 565 (17%) as stage IV, 156 (4%) were classified as not staged, and 430 (13%) were not applicable to the TNM staging system.



Source:http://www.bing.com/images/search?q=cancer+stages&FORM=HDRSC2#!?q=cancer+stages&view=detailv2&&id=78DB9A177DD4C99436547B8B70CB004C23AFEDA9&selectedIndex=4&ccid=fE66gpL7&simid=607997173216184651&thid=OIP.M7c4eba8292fb58c7868c57d0ed2d67ecH0&mode=overlay

Cancer Program Practice Profile Report (CP3R)

Cancer Program Practice Profile Reports (CP3R)

The Cancer Program Practice Profile Reports were developed by the Commission on Cancer of the American College of Surgeons to encourage quality improvement. Evidence based measures and accountability measures promote improvements in care delivery and are the highest standard for measurement. The measures displayed below demonstrate accountability and promote transparency. The concordance rates for Rhode Island Hospital, The Miriam Hospital, and Newport Hospital are illustrated in the tables below.

	2014 CP3R Rates	Rhode Island Hospital	The Miriam Hospital	Newport Hospital	Combined Program
BREAST	Breast conservation surgery rate for women with AJCC clinical stage 0, I, or II breast cancer (Surveillance) (BCS) **(Compliance – N/A)**	84.2%	80.6%	75%	84.8%
	Image or palpation-guided needle biopsy (core or FNA) of the primary site is performed to establish diagnosis of breast cancer (Quality Improvement) (nBx) **(Compliance – 80%)**	99.2%	50%	66.7%	97.2%
	Radiation therapy is considered or administered following any mastectomy within 1 year of diagnosis of breast cancer for women with > = 4 positive regional lymph nodes (Accountability) (MASTRT) **(Compliance – 90%)**	100%	No data	No data	100%
	Radiation therapy is administered within 1 year (365 days) of diagnosis for women under age 70 receiving breast conserving surgery for breast cancer (Accountability) (BCS/RT) **(Compliance – 90%)**	93.9%	100%	50%	94.2%
	Combination chemotherapy is considered or administered within 4 months (120 days) of diagnosis for women under 70 with AJCC T1c N0 M0, or Stage II or III ERA and PRA negative breast cancer (Accountability) (MAC) **(Compliance – 90%)**	100%	80%	No data	95.7%
	Tamoxifen or third generation aromatase inhibitor is considered or administered within 1 year (365 days) of diagnosis for women with AJCC T1c N0 M0, or Stage II or III ERA and/or PRA positive breast cancer (Accountability) (HT) **(Compliance – 90%)**	94.7%	84.6%	100%	94.9%

	2014 CP3R Rates	Rhode Island Hospital	The Miriam Hospital	Newport Hospital	Combined Program
CERVIX	Radiation therapy completed within 60 days of initiation of radiation among women diagnosed with any stage of cervical cancer (Surveillance) (CERRT) **(Compliance – N/A)**	69.2%	No data	No data	69.2%
	Chemotherapy administered to cervical cancer patients who received radiation for stages IB2-IV cancer (Group 1) or with positive pelvic nodes, positive surgical margin, and/or positive parametrium (Group 2) (Surveillance) (CERCT) **(Compliance – N/A)**	93.3%	No data	No data	93.3%
	Use of brachytherapy in patients treated with primary radiation with curative3 intent in any stage of cervical cancer (Surveillance) (CBRRT) **(Compliance – N/A)**	100%	No data	No data	100%

	2014 CP3R Rates	Rhode Island Hospital	The Miriam Hospital	Newport Hospital	Combined Program
GASTRIC	At least 15 regional lymph nodes are removed and pathologically examined for resected gastric cancer (Quality Improvement) (G15RLN) **(Compliance – N/A)**	90.9%	0%	No data	76.9%

	2014 CP3R Rates	Rhode Island Hospital	The Miriam Hospital	Newport Hospital	Combined Program
COLON	Adjuvant chemotherapy is considered or administered within 4 months (120 days) of diagnosis for patients under the age of 80 with AJCC Stage III (lymph node positive) colon cancer (Accountability) (ACT) **(Compliance – 90%)**	83.3%	92.9%	100%	88.9%
	At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer (Quality Improvement) (12RLN) **(Compliance – 85%)**	93.8%	94.3%	100%	94.5%

	2014 CP3R Rates	Rhode Island Hospital	The Miriam Hospital	Newport Hospital	Combined Program
LUNG	At least 10 regional lymph nodes are removed and pathologically examined for AJCC stage IA, IB, IIA, and IIB resected NSCLC (Surveillance) (10RLN) **(Compliance – N/A)**	46.8%	12.8%	0%	31%
	Surgery is not the first course of treatment for cN2, M0 lung cases (Quality Improvement) (LNoSurg) **(Compliance – N/A)**	100%	100%	No data	100%
	Systemic chemotherapy is administered within 4 months to day preoperative or day of surgery to 6 months postoperatively, or it is considered for surgically resected cases with pathologic lymph node positive (pN1) and (pN2) NSCLC (Quality Improvement) (LCT) **(Compliance – N/A)**	87%	85.7%	No data	84.6%

	2014 CP3R Rates	Rhode Island Hospital	The Miriam Hospital	Newport Hospital	Combined Program
RECTUM	Preoperative chemo and radiation are administered for clinical AJCC T3N0, T4N0, or Stage III; or Postoperative chemo and radiation are administered within 180 days of diagnosis for clinical AJCC T1-2 N0 with pathologic AJCC T3N0, T4N0, or Stage III; or treatment is considered; for patients under the age of 80 receiving resection for rectal cancer (Quality Improvement) (RECRTCT) **(Compliance – N/A)**	100%	100%	No data	100%

	2014 CP3R Rates	Rhode Island Hospital	The Miriam Hospital	Newport Hospital	Combined Program
ENDOMETRIUM	Chemotherapy and/or radiation administered to patients with Stage IIIC or IV Endometrial cancer (Surveillance) (ENDCTRT) **(Compliance – N/A)**	No data	No data	No data	No data
	Endoscopic, laparoscopic, or robotic performed for all Endometrial cancer (excluding sarcoma and lymphoma), for all stages except stage IV (Surveillance) (ENDLRC) **(Compliance – N/A)**	92.3%	No data	No data	92.3%

	2014 CP3R Rates	Rhode Island Hospital	The Miriam Hospital	Newport Hospital	Combined Program
OVARY	Salpingo-oophorectomy with omentectomy, debulking/cytoreductive surgery, or pelvic exenteration in Stages I-IIIC Ovarian cancer (Surveillance) (OVSAL) **(Compliance – N/A)**	85.7%	100%	No data	87.5%

	2014 CP3R Rates	Rhode Island Hospital	The Miriam Hospital	Newport Hospital	Combined Program
BLADDER	At least 2 lymph nodes are removed in patients under 80 undergoing partial or radical cystectomy (Surveillance) (BL2RLN) **(Compliance – N/A)**	100%	100%	No data	100%

2016 Community Outreach Summary

The mission of the Lifespan Community Health Institute (LCHI) is to eliminate health disparities and promote health equity through healthy behaviors, healthy relationships, and healthy environments.

The LCHI envisions a Rhode Island/region in which all people can achieve their full health potential. We will do this by improving the social, economic and environmental conditions in our communities and by increasing access to high quality health services. Strategies include developing, implementing, evaluating, and disseminating initiatives to improve the health status of the people in Rhode Island and southern New England. Through strategic partnerships, LCHI also serves as a liaison/bridge between Lifespan departments and the community, through one-off events and through ongoing relationships. This includes our work through the Community Health Ambassadors and other stakeholder groups.

Below is an overview of some of the Prevention & Screening programs offered in 2016.

Community Need Addressed	Program Name	Program Activities	Program Date	Num. of Participants	Summary of Effectiveness	Guidelines Used
Healthwise is a proprietary training program developed to help people- • Do as much for themselves as they can • Ask for the health care they need • Say "no" to the care they don't need.	Healthwise	1 hour workshop in English or Spanish, delivered at community organizations, teaches people how to use the Healthwise self-care guide to make better health decisions	1/14/16 1/26/16 2/3/16 2/11/16 2/22/16 2/25/16 2/26/16 3/10/16 3/17/16 4/20/16 4/25/16 4/28/16 6/16/16 6/22/16 7/18/16 8/3/16 8/24/16	12 18 3 10 13 15 34 10 75 20 1 14 9 23 19 7 13 Total = 296	None	Healthwise, Inc. has full accreditation by URAC since 2001, expires 1/1/18

Community Need Addressed	Program Name	Program Activities	Program Date	Num. of Participants	Summary of Effectiveness	Guidelines Used
Age-adjusted incidence of melanoma is up 86% (21.2/100,000) in RI from 1987-91 to 2006-10. Age-adjusted mortality is up 4% to 2.6/100,000 during the same time period.	Skin Check (formerly known as Sun Smarts)	In collaboration with the Partnership to Reduce Cancer in RI (statewide coalition), UDerm & LCHI offer free melanoma screening and educational material to beach goers	7/8/16 7/15/16 7/24/16 7/29/16 8/13/16 8/26/16	105 104 127 Canceled-weather 69 111 Total = 516	66 (12.8%) recommended for biopsy 71 (13.8%) referred for f/u (not including biopsies) Total referrals = 137 (26.5%) **5 confirmed melanomas**	American Academy of Dermatology – Melanoma/Skin Screening Form

2016 Esophageal Cancer Outcome Analysis

In 2016, an estimated 16,910 new cases of esophageal cancer will be diagnosed in the United States and it is estimated 60 residents in Rhode Island will be diagnosed with this disease. Overall, esophageal cancer is less common in the United States when compared to other cancers like breast, lung, and colorectal. However, a recent data review revealed the total incidence of esophageal cancer in Rhode Island has remained stable.

The esophagus is a long, hollow tube that runs from the throat to the stomach. Its main function is to transport food to the stomach for digestion. When esophageal cancer occurs it typically arises in the cells which line the walls of the esophagus. While cancer can occur in any portion of the esophagus, it most commonly arises in the lower third.

Risk Factors

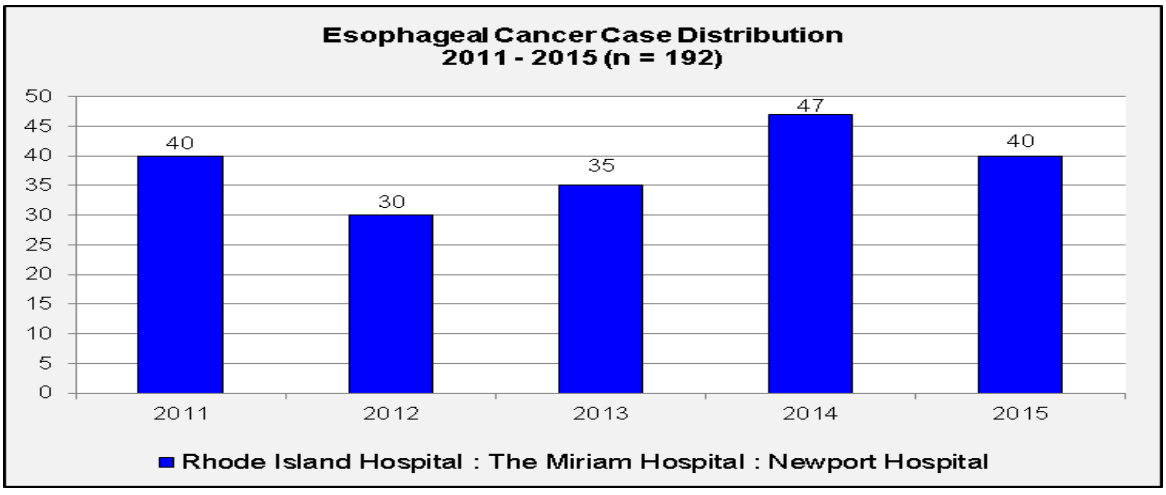
1. Drinking alcohol
2. Having bile reflux (acid reflux)
3. Difficulty swallowing because of an esophageal sphincter that won't relax (achalasia)
4. Drinking very hot liquids
5. Gastroesophageal reflux disease (GERD)
6. Being obese
7. Precancerous changes in the cells of the esophagus (Barrett's esophagus)
8. Radiation treatment to the chest or upper abdomen
9. Smoking

Symptoms/Signs of Esophageal Cancer

- Difficulty swallowing (dysphagia)
- Weight loss without trying
- Chest pain, pressure, or burning
- Worsening indigestion or heartburn
- Coughing or hoarseness

Note: These symptoms may be attributed to a number of conditions other than cancer. It is important to consult with a medical professional.

From 2011 through 2015, the Cancer Program's Oncology Data Management Department accessioned 192 analytic* patients with esophgeal cancer.



*Analytic - cancer case that was diagnosed and/or received all or part of the first course treatment at the reporting facility.
*Source: Rhode Island, Miriam, & Newport Hospital Oncology Data Management Departments

ACoS Commission on Cancer – National Cancer Database
Hospital Comparison Benchmark Reports

Hospital comparison benchmark reports are available from the NCDB for the years 2004 to 2014. Various comparisons can be made by primary site, hospital type (Academic, Comprehensive Community, and Community Cancer Programs), by geographical location (individual state, ACS Division, or all states) and diagnostic year (2004 to 2014, or combined).

Throughout this report are samples of hospital comparison benchmarks on esophageal cancer generated for all ACoS approved Cancer Programs in the United States and the ACoS Cancer Programs in Rhode Island. This will be a valuable tool for assessing our diagnostic and therapeutic efforts as more data from proceeding years is added to the database.

Esophageal Cancer Diagnosed 2004 to 2014 by YEAR
All Diagnosed Cases – Hospital Type: All Types/Systems
Rhode Island Hospital, The Miriam Hospital, Newport Hospital vs. Other Hospitals in the State of Rhode Island

	Number of Cases					Percent of Cases
	Rhode Island Hospital	The Miriam Hospital	Newport Hospital	Combined Program Total	Combined Total All Other Hospitals In Rhode Island	Combined Program Percent
YEAR						
2004	28	17	4	49	57	86%
2005	30	15	5	50	75	67%
2006	38	12	5	55	79	70%
2007	21	15	11	47	60	78%
2008	32	15	1	48	54	89%
2009	27	16	3	46	59	78%
2010	26	8	2	36	56	64%
2011	27	11	4	42	56	75%
2012	24	7	4	35	49	71%
2013	27	5	1	33	50	66%
2014	38	8	2	48	62	77%
Total	318	129	42	489	657	74%

2016 Esophageal Cancer Outcome Analysis

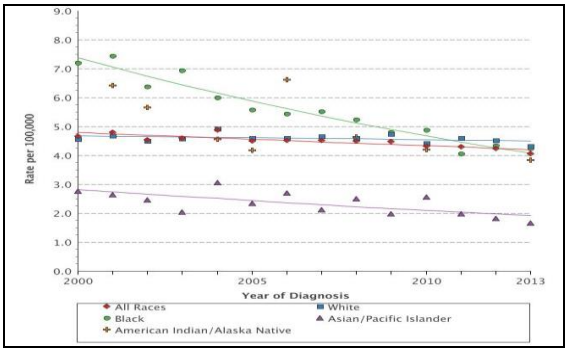
Each year in the United States, over 15,000 individuals will learn they have esophageal cancer. The highest overall esophageal incidence rates are in males who are 60 years of age or older. Esophageal cancer is three times more like to effect men than women. While esophageal cancer is less common in the United States it is eighth most common cancer globally and tends to be more common in areas like Asia and parts of Africa.

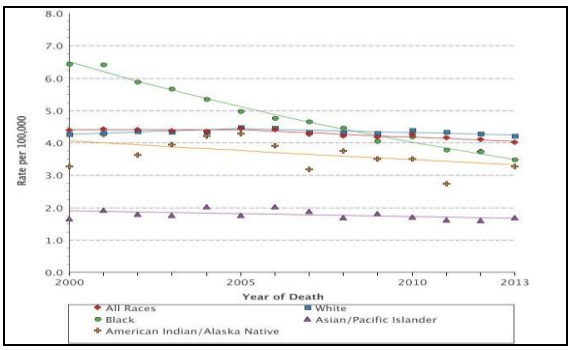
The table below is based on esophageal cancer and contains information obtained from the National Cancer Database (NCDB) which illustrates a race comparison between Rhode Island Hospital, The Miriam Hospital, Newport Hospital and other hospitals within the state of Rhode Island as well as hospitals in all other states.

Esophageal Cancer Diagnosed 2004 to 2014 by RACE
All Diagnosed Cases – Hospital Type: All Types/Systems
Rhode Island Hospital, The Miriam Hospital, Newport Hospital vs. Other Hospitals in the State of Rhode Island vs. Hospitals in All States

	Number of Cases			Percent of Total Esophageal Cancer Cases by Race		
	Combined Program Total	Other Reporting Hospitals In Rhode Island	National Reporting Hospitals	Combined Program Total	Other Reporting Hospitals In Rhode Island	National Reporting Hospitals
RACE						
White	389	261	107,296	92.18%	95.26%	83.31%
Black	16	2	12,463	3.79%	.73%	9.68%
Hispanic	5	6	4,603	1.18%	2.19%	3.57%
Asian & Pacific Islander	3	3	2,202	.71%	1.09%	1.71%
Native American	0	0	334	0%	0%	.26%
Other/Unknown	9	2	1,900	2.13%	.73%	1.48%
Total	422	274	128,798	100%	100%	100%

Esophageal Cancer
Incidence Rates and Death Rates by Race/Ethnicity, U.S., 2000–2013



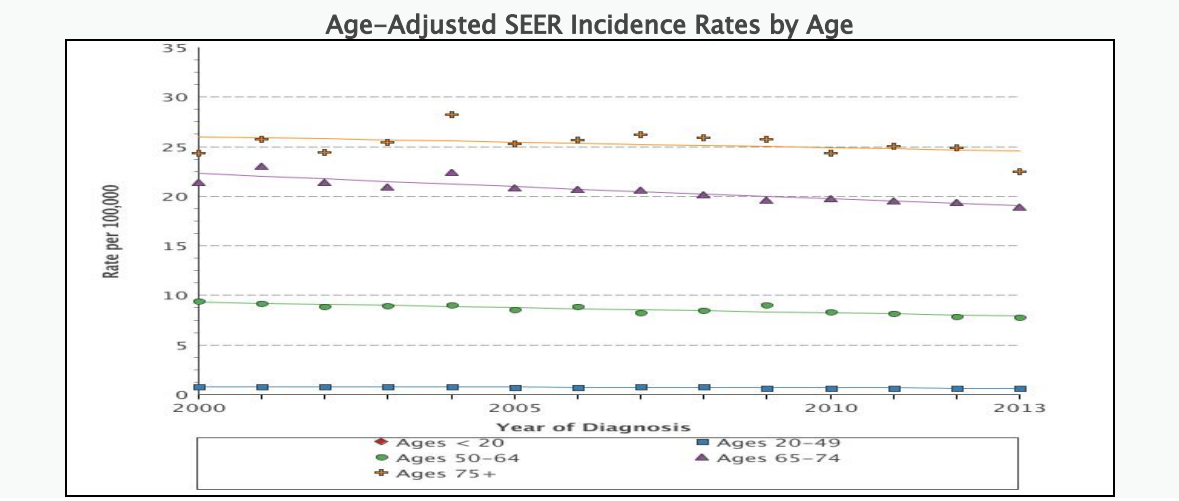


Source: http://www.cdc.gov/cancer/breast/statistics/race.htm

Esophageal Cancer Diagnosed 2004 to 2014 by AGE
All Diagnosed Cases – Hospital Type: All Types/Systems
Rhode Island Hospital, The Miriam Hospital, Newport Hospital vs. Other Hospitals in the State of Rhode Island vs. Hospitals in All States

	Number of Cases			Percent of Total Esophageal Cancer Cases by Age		
	Combined Program Total	All Other Reporting Hospitals In State of RI	National Reporting Hospitals	Combined Program Total	Other Reporting Hospitals In State of RI	National Reporting Hospitals
AGE						
Under 20	0	0	11	0%	0%	.01%
20-29	0	0	173	0%	0%	.13%
30-39	4	0	1,159	.95%	0%	.9%
40-49	28	19	7,832	6.64%	6.93%	6.08%
50-59	90	40	26,899	21.33%	14.6%	20.88%
60-69	128	79	39,274	30.33%	28.83%	30.49%
70-79	111	69	33,501	26.3%	25.18%	26.01%
80-89	53	58	17,520	12.56%	21.17%	13.6%
90+	8	9	2,429	1.9%	3.28%	1.89%
Total	422	274	128,798	100%	100%	100%

Per S.E.E.R. website: From 2000 – 2013, Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130). The age distribution displayed below is not limited by any specific stage or histology.



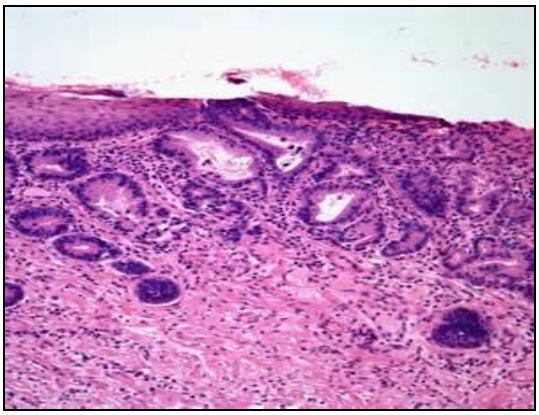
Source: https://seer.cancer.gov/faststats/selections.php?#Output

2016 Esophageal Cancer Outcome Analysis

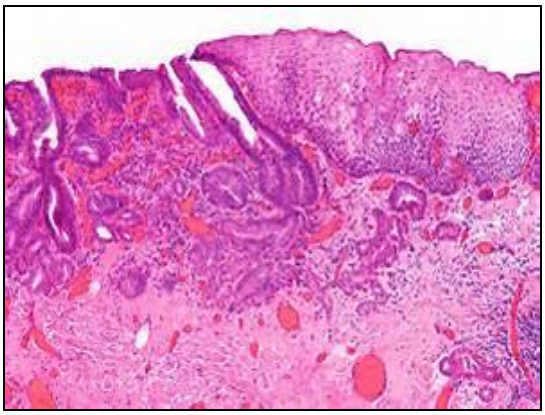
Esophageal cancer is comprised of two main sub-types, squamous cell carcinoma and adenocarcinoma. Squamous cell carcinoma tends to be more prevalent in areas like Asia and parts of Africa while adenocarcinoma is more common in the United States. While other sub-types of esophageal cancer have been noted they are less common and not encountered on a routine basis.

Squamous cell carcinoma arises from epithelial cells (flat cells) that line the wall of the esophagus. This type of esophageal cancer is typically found in the upper and middle parts of the esophagus. Adenocarcinoma on the other hand arise from glandular cells (cells that release mucus) present in the lower third of the esophagus. Individuals with reflux or gastroesophageal reflux disease (GERD) are at increased risk of developing adenocarcinoma of the esophagus. With reflux disease, stomach acid can travel into the esophagus and damage the lining. Over time this can lead to a condition called Barrett's esophagus.

Other types of esophageal cancer such as spindle cell carcinoma, small cell carcinoma, and lymphoma have been noted but are quite rare.



Adenoarcinoma



Squamous Cell Carcinoma

The esophageal cancer histological distribution for Rhode Island, Miriam, and Newport Hospital between 2011 and 2015 are displayed in the table below.

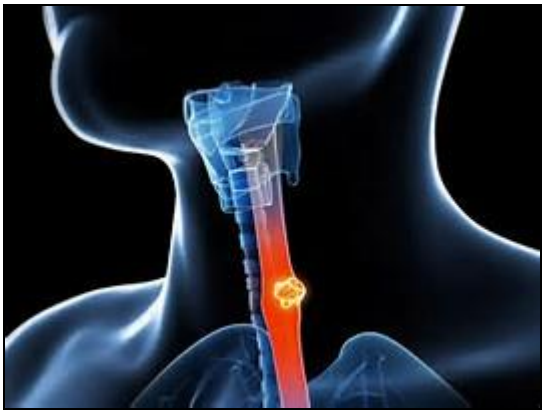
Breast Cancer Histological Distribution	Number of Cases Per Histology	Percentage of Cases Per Histology
Adenocarcinoma, NOS	115	59.90%
Squamous Cell Carcinoma	49	25.52%
Adenocarcinoma w/ Mixed Sub-Types	6	3.13%
Squamous Cell Carcinoma, Keratinizing	5	2.60%
Signet Ring Cell Carcinoma	3	1.56%
Squamous Cell Carcinoma In-Situ	3	1.56%
Carcinoma, NOS	3	1.56%
Other Histology's	8	4.17%

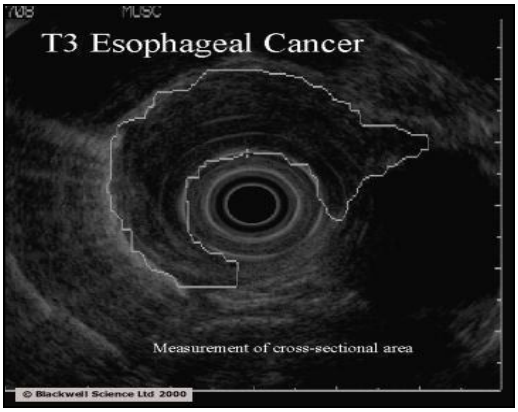
Source Image 1: http://www.cancernetwork.com/sites/default/files/styles/max_width/public/09_CA_Slide1-619.jpg
Source Image 2: https://upload.wikimedia.org/wikipedia/commons/3/34/Esophageal_adenocarcinoma_-_intermed_mag.jpg

Accepted diagnostic techniques that assist the physician with clinical evaluation of esophageal cancer include:

1. Barium Swallow
2. Endoscope
3. Esophagogastroduodenoscopy
4. Endoscopic Ultrasound

Often times additional testing is needed to assess the spread of disease. Computed tomography (CT) of the chest, abdomen, and pelvis is used to evaluate the spread of disease to adjacent tissue or distant organs. Positron emission tomography (PET) is also used to assess the spread of disease and may provide a more accurate assessment then computed tomography (CT).

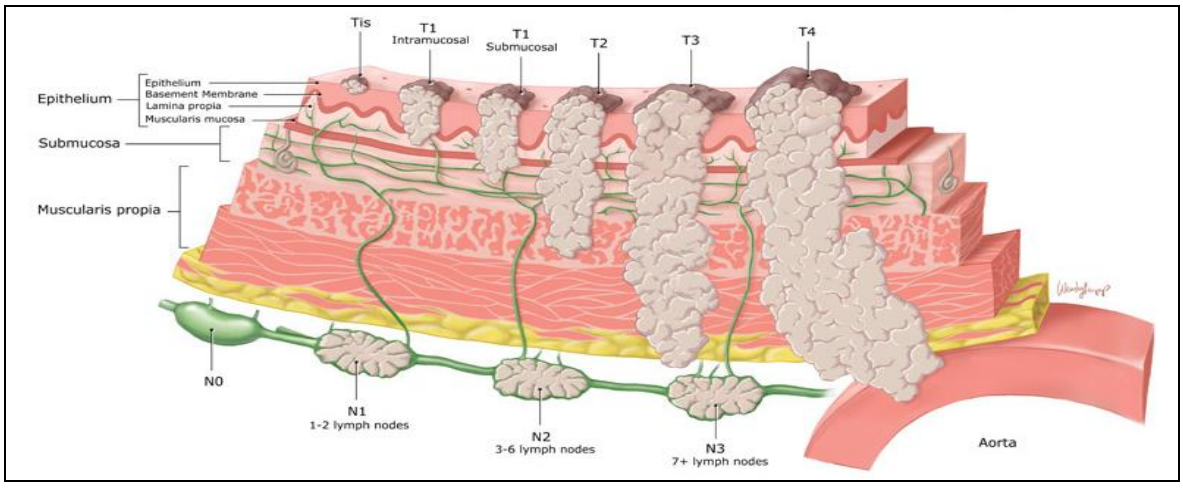




Source Image 1: http://img.medscape.com/news/2014/dt_140703_esophagus_cancer_800x600.jpg
Source Image 2: http://www.gastrohep.com/images_pdfs/images/medium/rperini122.jpg

Staging System

The most widely used staging scheme is the AJCC Cancer Staging Manual (TNM). The TNM describes the extent of primary Tumor (T stage), whether or not the cancer has spread to regional lymph Nodes (N stage), and the absence or presence of distant Metastasis (M stage). Patients diagnosed with esophageal cancer after January 1, 2003 are staged with the AJCC Cancer Staging Manual 6th Edition. The 7th Edition Staging Manual was implemented for all cancers diagnosed on or after January 1, 2010.



Source Image 1: http://www.uhhospitals.org/health-and-wellness/health-library/a-c/~/media/uh/images/services/cnacerstagingwknapp-lg.jpg?iframe=true&width=800&height=438

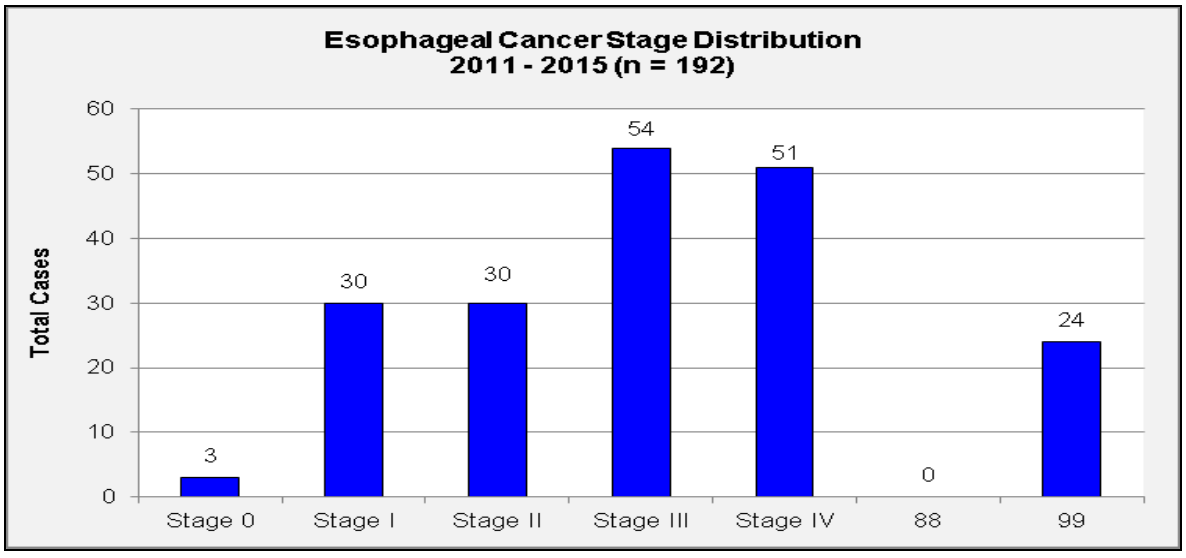
2016 Esophageal Cancer Outcome Analysis

The table below is based on esophageal cancer and contains information obtained from the National Cancer Database (NCDB) which illustrates a stage comparison between Rhode Island Hospital, The Miriam Hospital, Newport Hospital and the other hospitals within the state of Rhode Island as well as hospitals in all other states.

Esophageal Cancer Diagnosed 2004 to 2014 by STAGE
All Diagnosed Cases – Hospital Type: All Types/Systems
Rhode Island Hospital, The Miriam Hospital, Newport Hospital vs.
Other Hospitals in the State of Rhode Island vs. Hospitals in All States

	Number of Cases			Percent of Total Esophageal Cancer Cases by Stage		
	Combined Program Total	Other Reporting Hospitals In Rhode Island	National Reporting Hospitals	Combined Program Total	Other Reporting Hospitals In Rhode Island	National Reporting Hospitals
STAGE						
0	14	9	3,782	3.32%	3.28%	2.94%
I	58	36	17,628	13.74%	13.14%	13.69%
II	86	37	23,825	20.38%	13.5%	18.5%
III	87	40	27,270	20.62%	14.6%	21.17%
IV	106	72	36,860	25.12%	26.28%	28.62%
Not Applicable	0	1	250	0%	.36%	.19%
Unknown	71	79	19,183	16.82%	28.83%	14.89%
Total	422	274	128,798	100%	100%	100%

The stage distribution for the 2,648 breast cancer patients diagnosed at Rhode Island, Miriam, and Newport Hospital from 2010 to 2014 is illustrated in the graph below.



Source: Rhode Island, Miriam, & Newport Hospital Oncology Data Management Departments
*88 – N/A; 99 - Unknown

2016 Esophageal Cancer Patient Outcome Analysis

Treatment for esophageal cancer typically involves a multidisciplinary team of physicians including Medical Oncologist, Radiation Oncologist, and Oncologic Surgeons as well as various allied health professionals. While various treatment options are available the following factors must be considered: the histology of the tumor, the stage of disease, and overall health of the patient. In cases of localized disease, a combined treatment approach including chemotherapy, radiation therapy and/or surgery may be utilized.

For patients with early stage disease, surgical intervention may be possible. For those with small tumors only involving the mucosa, removal via an endoscopic mucosal resection (EMR) may be considered depending on the location of the tumor. Other surgical options include esophagectomy which involves removal of all/or part of the esophagus. However, it's important to note an esophagectomy carries the risk of post-operative difficulties and quality of life after the procedure must be considered.

The table below is based on information obtained from the National Cancer Database (NCDB) and illustrates a treatment comparison between Rhode Island Hospital, The Miriam Hospital, Newport Hospital and the other hospitals within the state of Rhode Island as well as hospitals in all other states.

Esophageal Cancer Diagnosed 2004 to 2014 by TREATMENT
All Diagnosed Cases – Hospital Type: All Types/Systems
Rhode Island Hospital, The Miriam Hospital, Newport Hospital vs.
Other Hospitals in the State of Rhode Island vs. Hospitals in All States

	Number of Cases			Percent of Total Esophageal Cancer Cases by Treatment		
	Combined Program Total	Other Reporting Hospitals In Rhode Island	National Reporting Hospitals	Combined Program Total	Other Reporting Hospitals In Rhode Island	National Reporting Hospitals
TREATMENT						
Radiation & Chemo	148	71	40,039	35.07%	25.91%	31.09%
Surgery, Radiation & Chemo	110	29	19,791	26.07%	10.58%	15.37%
Surgery Only	46	25	15,337	10.9%	9.12%	11.91
No 1st Course Rx	44	89	24,439	10.43%	32.48%	18.97%
Chemotherapy Only	32	34	14,152	7.58%	12.41%	10.99%
Radiation Only	20	22	9,140	4.74%	8.03%	7.1%
Other Specified Therapy	8	0	1,947	1.9%	0%	1.51%
Chemo & BRM	7	0	382	1.66%	0%	.3%
Surgery & Chemo	5	3	2,529	1.18%	1.09%	1.96%
Surgery & Radiation	2	1	662	.47%	.36%	.51%
Total	422	274	128,798	100%	100%	100%

Summary

This report provides an overview of Rhode Island, Miriam, and Newport Hospitals experience with esophageal cancer and includes a comparison to other programs accredited by the American College of Surgeons (ACoS). A review of data obtained from the National Cancer Data Base (NCDB) for a ten year period (2004 – 2014) shows the number of esophageal cancer cases within the program remained stable from 2004 to 2009, averaging 49 cases per year. In 2010, a significant decrease was noted and continued until 2013. While the number of esophageal cancer cases within our program has fluctuated over the years, greater than 60% of patients in Rhode Island were diagnosed and/or treated at Lifespan each year.

A review of the race distribution within our program and across the state revealed Caucasians made-up the vast majority of esophageal cancer cases. However, unlike the rest of the State, African Americans made-up the second most common group at Lifespan as opposed to Hispanics. The age distribution at Lifespan was also reviewed and noted to be similar to that reported by other ACoS accredited programs with the majority occurring between the ages of 60 and 69.

The AJCC stage distribution at Lifespan was also reviewed and revealed the majority of patients diagnosed and/or treated within our program presented with stage IV disease. Further review of data obtained from the NCDB, showed stage IV was the most frequent stage reported by other programs in the State as well as all other ACoS accredited programs.

The Comprehensive Cancer Program at Rhode Island Hospital, The Miriam Hospital, and Newport Hospital adhere to NCCN (National Comprehensive Cancer Network) Clinical Practice Guidelines for the treatment of all cancers. The majority of patients treated for esophageal cancer underwent radiation and chemotherapy which is consistent with the treatment distribution seen at other ACoS accredited programs. The use of surgery, chemotherapy and radiation therapy was higher when compared to other hospitals in the State and ACoS accredited programs. While our distribution is slightly higher, it is in-line with national expectations.

GI Cancer Clinical Trials

BrUOG P-295	Adjuvant pancreatic: FOLFOX-A
BrUOG P-318	FOLFOX-A for Locally Advanced and Borderline Resectable Pancreatic Cancer
RTOG 0848	Evaluating Erlotinib + Chemoradiation as adjuvant treatment for resected head of pancreas adenocarcinoma
LS-P-JSBA	Gastric: C-Met inhibitor + ramucirumab
LS-P Javelin 100	Advanced or metastatic Gastric/GEJ: avelumab vs continuation of 1st line chemotherapy
BrUOG 265	Metastatic – IPDR + RT: NCI SBIR
BrUOG 302	Rectal, BYL719, Capecitabine and Radiation
RU0214161	Refractory mCRC - Capecitabine Bevacizumab + Atezolizumab vs. Capecitabine Bevacizumab + Placebo
CTSU S1316	Prospective Comparative Effectiveness Trial for Malignant Bowel Obstruction