

**The Cancer Center  
at Roger Williams Medical Center**

**2016 ANNUAL PATIENT  
OUTCOMES REPORT**



**Roger Williams**  
CANCER CENTER



*An affiliate of CharterCARE Health Partners*



# Cancer Committee Membership

## Cancer Committee Members – 2016

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James Kones, MD – Surgical Oncology & Physician Liaison  
Steven Katz, MD – Surgical Oncology  
Peter Libbey, MD – Pathology  
Mohsin Malik, MD – Blood & Marrow Transplant  
Bharti Rathore, MD – Hematology Oncology  
Ritesh Rathore, MD – Hematology Oncology  
Mark Ridlen, MD – Diagnostic Radiology  
Thomas Ruenger, MD – Dermatology  
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Elizabeth Angell, LCSW – Oncology Social Worker  
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Melody Barthelemy – Community Outreach Coordinator  
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Brett Davey – Director of Communications  
Alexandra Fiore – American Cancer Society  
Nancy Fogarty, RN – Performance Improvement  
Maryanne Forgione, CCC-sp – Speech Pathologist / Rehabilitation Services  
Thomas Habershaw, RPh – Cancer Center Pharmacist  
Ben Isaiah – Quality Improvement  
Samantha Mossman, RD – Registered Dietitian  
Annemarie Mullaney, BSN, RN, OCN, CHPN – Cancer Center Manager  
Jennifer Parker, RN – Manager, Oncology Inpatient Units  
Kathy Perry, RN, MBA – Cancer Program Administrator  
Cheryl Raffle, RHIA, CTR – Cancer Registry Manager  
C. Kelly Smith, MSW – Rhode Island Health Department  
Jim Willsey – Chaplain / Pastoral Care

# From the Cancer Committee Chairperson

On behalf of my fellow Cancer Committee members and all our colleagues who are providing excellent patient care, I am pleased to present the 2016 Cancer Program report from Roger Williams Medical Center. This report includes quality measures and other statistics from our Cancer Center, along with studies and information regarding our breast cancer program among others. Additionally, you can learn more about our quality improvement programs, along with our efforts to provide cancer screening and prevention to our community.



This report provides you with a snapshot of our efforts to bring new and better ways to care for cancer patients in Rhode Island and far beyond.

Thank you for taking the time to review the 2016 Annual Patient Outcomes Report.

John Coen, MD  
Committee Chairman

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## CoC Cancer Program Practice Profile Reports (CP3R) Quality Measures – 2016 Review of 2014 Cases

The Commission on Cancer (CoC) has defined several quality measures for hospitals with accreditation status. Tracking these measures provides an opportunity for continuous practice improvement to achieve high quality care for our patients.

Quality Measure	RWMC 2011	RWMC 2012	RWMC 2013	RWMC 2014	CoC / NCDB Required Performance Rate
<b>Breast Cancer</b>					
<b>BCS</b> - Breast conservation surgery rate for women with AJCC clinical stage 0, I or II breast cancer (Surveillance).	85.7% (18/21)	76.2% (16/21)	70.0% (7/10)	50% (6/12)	<b>Not Yet Established</b>
<b>nBx</b> - Image or palpation-guided needle biopsy (core or FNA) of the primary site performed to establish diagnosis of breast cancer (Quality Improvement).	85.7% (12/14)	88.2% (15/17)	92.3% (12/13)	87.5% (7/8)	<b>&gt;=80%</b>
<b>HT</b> - Tamoxifen or other third generation aromatase inhibitor is recommended or administered within 1 year (365 days) of diagnosis for women with AJCC T1c or Stage IB-III hormone receptor positive breast cancer (Accountability).	88.2% (15/17)	82.6% (19/23)	100% (9/9)	100% (17/17)	<b>&gt;= 90%</b>
<b>MASTRT</b> - Radiation therapy is considered or administered following any mastectomy within 1 year (365 days) of diagnosis of breast cancer for women with >= 4 positive regional lymph nodes (Accountability).	100% (4/4)	50% (1/2)	100% (1/1)	No Cases	<b>&gt;= 90%</b>
<b>BCSRT</b> - Radiation is administered within 1 year (365 days) of diagnosis for women under the age of 70 receiving breast conservation surgery for cancer (Accountability).	100% (11/11)	92.3% (12/13)	81.8% (9/11)	100% (22/22)	<b>&gt;= 90%</b>
<b>MAC</b> - Combination chemotherapy is recommended or administered within 4 months (120 days) of diagnosis for women under 70 with AJCC T1c N0 or Stage IB-III hormone receptor negative breast cancer (Accountability).	100% (2/2)	100% (2/2)	100% (2/2)	100% (3/3)	<b>Not Established</b>
<b>Colorectal Cancer</b>					
<b>ACT</b> - Adjuvant chemotherapy recommended/administered within 4 months (120 days) of diagnosis for patients under age 80 with AJCC Stage III (lymph node positive) colon cancer(Accountability)	100% (4/4)	100% (7/7)	100% (5/5)	100% (3/3)	<b>Not Established</b>
<b>12RLN</b> - At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer (Quality Improvement).	100% (9/9)	100% (19/19)	94.4% (17/18)	66.7% (8/12)	<b>&gt;= 85%</b>
<b>RECRTCT</b> - Pre-op chemo & radiation are administered for clinical AJCC T3N0, T4N0 or Stage III or postoperative chemo & radiation administered within 180 days of diagnosis for clinical AJCC T1-2N0 with pathologic AJCC T3N0, T4N0 or Stage III, or treatment is considered for patients under age 80 with resection for rectal cancer (Quality Improvement).	100% (1/1)	100% (5/5)	100% (4/4)	100% 5/5	<b>&gt;= 85%</b>

Quality Measure	RWMC	RWMC	RWMC	RWMC	CoC / NCDB
	2011	2012	2013	2014	Required Performance Rate
<b>Gastric Cancer</b>					
<b>G15RLN</b> - At least 15 regional nodes are removed & pathologically examined for resected gastric cancer (Quality Improvement).	33.3% (2/6)	100% (2/2)	50% (1/2)	66.7% (2/3)	<b>Not Yet Established</b>
<b>Lung Cancer</b>					
<b>10RLN</b> - At least 10 regional nodes are removed & pathologically examined for AJCC Stage IA, IB, IIA & IIB resected NSCLC (Surveillance).	50.0% (1/2)	50.0% (1/2)	66.7% (2/3)	85.7% (6/7)	<b>Not Yet Established</b>
<b>LNoSurg</b> - Surgery is not the first course of treatment for cN2, M0 lung cancer cases (Quality Improvement).	100% (2/2)	100% (4/4)	100% (4/4)	100% (5/5)	<b>&gt;= 85%</b>
<b>LCT</b> - Systemic chemotherapy is administered within 4 months preoperatively or day of surgery to 6 months postoperatively, or it is considered for surgically resected cases with pathologic node-positive (pN1) and (pN2) NSCLC (Quality Improvement).	100% (2/2)	66.7% (2/3)	No Cases	100% (1/1)	<b>&gt;= 85%</b>
<b>Cervical Cancer</b>					
<b>CERRT</b> - Radiation completed within 60 days of radiation start for women diagnosed with any stage cervical cancer (Surveillance).	No Cases	No Cases	No Cases	No Cases	<b>Not Yet Established</b>
<b>CBRR</b> - Brachytherapy use in patients treated w/primary radiation with curative intent in any stage of cervical cancer (Surveillance).	No Cases	No Cases	No Cases	No Cases	<b>Not Yet Established</b>
<b>CERCT</b> - Chemotherapy administered to cervical cancer patients who received radiation for Stages 1B2-IV cancer (group 1) or with positive pelvic nodes, positive surgical margins and/or positive parametrium (group 2) (Surveillance).	No Cases	No Cases	No Cases	No Cases	<b>Not Yet Established</b>
<b>Endometrial Cancer</b>					
<b>ENDCTR</b> - Chemotherapy and/or radiation administered to patients w/Stage IIIC-Stage IV Endometrial cancer (Surveillance).	No Cases	100% (2/2)	No Cases	No Cases	<b>Not Yet Established</b>
<b>ENDLRC</b> - Endoscopic, laparoscopic or robotic performed for all Endometrial cancer (excluding sarcoma & lymphoma) for all stages except Stage IV (Surveillance).	0% (0/1)	0% (0/2)	0% (0/1)	0% (0/1)	<b>Not Yet Established</b>
<b>Ovarian Cancer</b>					
<b>OVSAL</b> - Salpingo-oophorectomy with omentectomy, debulking/cytoreductive surgery or pelvic exenteration in Stages I-IIIC Ovarian cancer (Surveillance).	100% (1/1)	No Cases	No Cases	100% (1/1)	<b>Not Yet Established</b>
<b>Bladder Cancer</b>					
<b>BL2RLN</b> - At least 2 lymph nodes are removed in patients undergoing partial or radical cystectomy (Surveillance).	No Cases	No Cases	No Cases	No Cases	<b>Not Yet Established</b>

# STAGE 2 BREAST CANCER STUDY

## Roger Williams Medical Center - 2016

Our hospital routinely reviews at least one cancer site each year with comparisons to state and national cases using the National Cancer Data Base hospital comparison benchmarks function. During a review of breast cancer cases, it was noted that RWMC had a higher percentage of Stage 2 and Stage 3 breast cancer cases than the State of Rhode Island and the U.S., along with a corresponding lower percentage of Stage 0 and Stage 1 cases.

### *AJCC Stage of Breast Cancer Diagnosed in 2009,2010,2011,2012,2013*

**Roger Williams Medical Center, Providence RI**  
**vs. All Hospitals in Rhode Island - Data from 9 Hospitals**  
**and All U.S. States - Data from 1484 Hospitals**

<b>Stage</b>	<b>RWMC(N)</b>	<b>R.I.(N)</b>	<b>U.S.(N)</b>	<b>RWMC(%)</b>	<b>R.I.(%)</b>	<b>U.S.(%)</b>
<b>0</b>	32	1170	224797	13.62%	22.88%	20.58%
<b>I</b>	90	2236	443530	38.3%	43.72%	40.61%
<b>II *</b>	64	1090	262348	27.23%	21.31%	24.02%
<b>III *</b>	29	311	90036	12.34%	6.08%	8.24%
<b>IV</b>	9	169	42498	3.83%	3.3%	3.89%
<b>NA</b>	.	3	938	.	0.06%	0.09%
<b>UNK</b>	11	135	28059	4.68%	2.64%	2.57%
<b>Col. TOTAL</b>	<b>235</b>	<b>5114</b>	<b>1092206</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

40% of RWMC's cases were Stage 2-3 at diagnosis, with 27% of the Rhode Island cases Stage 2-3 and 32% for the U.S. cases. Consequently, RWMC had a lower percentage of early stage (0-1) cases than R.I. and the U.S.

It was decided to do a thorough review and QA study of our analytic Stage 2-3 breast cancer cases and attempt to determine why we have a higher percentage of these cases than the state and national percentage, and if there is a reason or pattern for why these cases are not being diagnosed at an earlier stage. We only included patients of Class of case 10-22, and excluded Class 00 cases that had all of their treatment elsewhere.

We initially did further review of the Stage 2-3 breast cancer cases, looking at state and national NCDB cases for 2003-2013 compared to our cases, to see if the five year interval of 2009-2013 was perhaps an anomaly. We also looked at the stage of our 2014-2015 cases that were not yet available online via the NCDB system, to see if our percentages had possibly decreased more recently. In 2014 and 2015 RWMC's stage 2 cases percentages were still above 30%, at 33.9% for 2014 and 31.1% for 2015. RWMC's stage 3 cases were lower in 2014 and 2015, at 3.4% and 9.8%. The Stage 2 Breast cases in the U.S. from 2003-2013 ranged between 24.1% and 26.2%, averaging 24.7% and actually decreased slightly over the 11-year period. Stage 3 Breast cases in the U.S. decreased from a high of 9.7% in 2003 to 7.8% in 2013. Stage 2 Breast cases in Rhode Island from 2003-2013 ranged between 20.5% and 24.9%, averaging 23.06% and actually decreased slightly over the 11-year period. Stage 3 Breast cases in Rhode Island ranged between 5.5% and 7.9%, averaging 6.65% and also decreased slightly between 2003 and 2013.

Stage 2 Breast cases at RWMC from 2003-2013 were very close to the 24.7% average of the U.S. cases, but rose from 16.4% in 2003 to 32.4% in 2013, nearly doubling over the 11-year time period. Stage 3 Breast cases at RWMC ranged between 2.8% and 18.2% with no pattern of rising or declining, but was 3% above the average of Stage 3 Cases for the U.S.

**RHODE ISLAND: Stage 2 Cases range 20.5% to 24.9%, averaging 23.1%**

**Stage 3 Cases range 5.5% to 7.9%, averaging 6.6%**

**UNITED STATES: Stage 2 Cases 24.1% to 26.2%, averaging 24.7%**

**Stage 3 Cases 7.8% to 9.7%, averaging 8.9%**

**RWMC CASES: Stage 2 Cases range 16.4% to 32.4%, averaging 24.3%**

**Stage 3 Cases range 2.8% to 18.2%, averaging 12.0%**

After review of the 2003-2013 cases, it did appear that the Stage 3 cases overall were closer in line with state and national averages and not increasing over time, so the detailed review would concentrate on just our Stage 2 breast cases from 2009 to 2015. (Note: for detailed graphs of the NCDB data comparisons from 2003-2013, see separate document, “Breast Cancer NCDB Stg 2-3”).

## **STAGE 2 BREAST CANCER CASES REVIEW**

During our review, we looked at a number of case variables, including age at diagnosis, class of case, referral patterns, histology, presenting symptoms, interval since previous mammogram, and physician data, including surgeon, medical oncologist and primary physician. We compared the Stage 2 cases to the Stage 0-1 cases and Stage 3-4 cases to check for any noticeable patterns. Findings from each aspect of the review are presented in graphic form, with comments below each graph.

### **RWMC STAGE OF BREAST CA 2009 – 2015**

(Analytic Cases – Excluding Class 00 Cases with all Treatment Elsewhere)

<b>Age at Diagnosis</b>	<b>Stage 2 Number of Cases</b>	<b>Stage 2 Percent (%)</b>	<b>Stage 0-1 Number of Cases</b>	<b>Stage 0-1 Percent (%)</b>	<b>Stage 3-4 Number of Cases</b>	<b>Stage 3-4 Percent (%)</b>
0-29	0	0%	1	0.5%	1	2.1%
30-39	9	8.1%	2	1.1%	2	4.2%
40-49	8	7.1%	22	11.9%	4	8.3%
50-59	27	24.1%	47	25.4%	12	25.0%
60-69	25	22.3%	53	28.7%	12	25.0%
70-79	26	23.2%	32	17.3%	6	12.5%
80+	17	15.2%	28	15.1%	11	22.9%
<b>Total</b>	<b>112</b>	<b>100%</b>	<b>185</b>	<b>100%</b>	<b>48</b>	<b>100%</b>

Age at diagnosis review showed a higher percentage of Stage 2 cases in the 30-39 and 70-79 age group, comparing Stage 2 cases to Stage 0-1 and 3-4 cases. Seventy percent of the Stage 2 cases were between age 50 and 70, consistently between 22-24% for each decade.

Class Of Case	Stage 2 Number of Cases	Stage 2 Percent (%)	Stage 0-1 Number of Cases	Stage 0-1 Percent (%)	Stage 3-4 Number of Cases	Stage 3-4 Percent (%)
10 – Dx here & All OR part of 1 <sup>st</sup> Course Tx here	7	6.2%	10	5.4%	6	12.5%
11 – Dx in MD Office, PART of 1 <sup>st</sup> Course Tx here	0	0%	0	0%	0	0%
12 – Dx in MD Office & ALL 1 <sup>st</sup> Course Tx here	1	0.9%	0	0%	0	0%
13 – Dx here & PART of 1 <sup>st</sup> Course Tx here, part else	4	3.6%	5	2.7%	2	4.2%
<b>14 – Dx here &amp; ALL 1<sup>st</sup> course Tx Done here</b>	<b>31</b>	<b>27.7%</b>	<b>30</b>	<b>16.2%</b>	<b>21</b>	<b>43.7%</b>
20 – Dx Else & all Or part of 1 <sup>st</sup> Course Tx here	7	6.2%	18	9.7%	2	4.2%
21 – Dx else & PART of 1 <sup>st</sup> course Tx done here	42	37.5%	69	37.3%	12	25.0%
22 - Dx else & ALL of 1 <sup>st</sup> course Tx done here	20	17.9%	53	28.7%	5	10.4%
<b>Total</b>	<b>112</b>	<b>100%</b>	<b>185</b>	<b>100%</b>	<b>48</b>	<b>100%</b>

The majority of cases (37%) were diagnosed elsewhere and had only part of their 1<sup>st</sup> course of treatment at RWMC. The next highest group (at 28%) were cases diagnosed and treated entirely at RWMC, followed by (18%) cases diagnosed elsewhere but with all treatment at RWMC. It does appear that almost a third of our Stage 2 cases are originating within our healthcare system.

HISTOLOGIC TYPE Stage 2 Breast Cancer 2009-2015	Stage 2 - Number of Cases	Stage 2 Percent (%)
Infiltrating Ductal Carcinoma	72	64.3%
Infiltrating Lobular Carcinoma	12	10.7%
Mixed Infiltrating Ductal & Lobular Carcinoma	9	8.0%
Infiltrating Ductal Ca mixed w/other types of carcinoma	6	5.4%
Micropapillary Carcinoma	5	4.5%
Infiltrating Lobular Ca mixed w/other types of carcinoma	2	1.8%
Metaplastic (Spindle Cell) Carcinoma	2	1.8%
Adenocarcinoma with Neuroendocrine Differentiation	1	0.9%
Papillary Carcinoma	1	0.9%
Ductal Carcinoma, Cribriform Type	1	0.9%
Adenoid Cystic Carcinoma	1	0.9%
<b>Total</b>	<b>112</b>	<b>100%</b>

The majority of the Stage 2 cases were infiltrating ductal carcinoma or infiltrating lobular carcinoma.



<b>HOSPITAL REFERRED FROM Stage 2 Breast Cancer 2009-2015</b>	<b>Stage 2 - Number of Cases</b>	<b>Stage 2 Percent (%)</b>
FATIMA / ST JOSEPH HOSPITAL	32	28.6%
WOMEN & INFANTS HOSPITAL	13	11.6%
RHODE ISLAND HOSPITAL	6	5.3%
THE MIRIAM HOSPITAL	4	3.6%
KENT HOSPITAL	3	2.7%
PHYSICIAN OFFICE ONLY	3	2.7%
UNKNOWN HOSPITAL / FACILITY	3	2.7%
NEWPORT HOSPITAL	2	1.8%
OUT OF STATE HOSPITAL / FACILITY	2	1.8%
LANDMARK MEDICAL CENTER	1	0.9%
NO OTHER FACILITY / DIAGNOSED AT RWMC	43	38.3%
<b>Total</b>	<b>112</b>	<b>100%</b>

Although 38% of the cases were diagnosed at RWMC, the majority of cases referred from another facility were from Fatima Hospital (29%) and Women & Infants Hospital (12%).

### **STAGE 2 BREAST CASES 2009-2015, ALL CASES VS THOSE CASES DIAGNOSED AT RWMC (112 Total Stage 2 Cases, 43 Cases Diagnosed & Treated at RWMC)**

After reviewing all Stage 2 cases we then separated out those that were diagnosed at RWMC (Class of Case 10-14), to see if there was a difference from other cases that were referred to our hospital after a diagnosis elsewhere. The following graphs show results from looking at the cases diagnosed within our hospital system.

<b>Age at Diagnosis</b>	<b>Stage 2 Total Number of Cases</b>	<b>Stage 2 Percent (%) (All cases)</b>	<b>Stage 2 – Dx &amp; Tx at RWMC (Class of Case 10-14)</b>	<b>Stage 2 – Dx &amp; Tx at RWMC (Class 10- 14) Percent (%)</b>
30-39	9	8%	4	9%
40-49	8	7%	2	5%
50-59	27	24%	9	21%
60-69	25	22%	6	14%
70-79	26	23%	11	26%
80-89	12	11%	7	16%
90 +	5	5%	4	9%
<b>Total</b>	<b>112</b>	<b>100%</b>	<b>43</b>	<b>100%</b>

Age at diagnosis did not vary more than a few percentage points except for the age 60-69 group.

<b>INITIAL PRESENTATION / SYMPTOM Stage 2 Breast Cancer 2009-2015</b>	<b>Number of Cases (All Stage 2)</b>	<b>Percent (%) of Cases</b>	<b>Class 10-14 Only (Dx &amp; Tx at RWMC)</b>	<b>Class 10-14 Percent (%) (Dx+Tx RW)</b>
PALPABLE MASS (FOUND BY PT OR MD)	71	63%	37	86%
ABNORMAL SCREENING MAMMOGRAM	30	27%	6	14%
NOT SPECIFIED / UNKNOWN	11	10%	0	0%
<b>Total</b>	<b>112</b>	<b>100%</b>	<b>43</b>	<b>100%</b>

63% of patients presented due to a palpable mass, 27% after an abnormal screening mammogram and for 10% the reason was not specified. When looking at just the Class 10-14 cases, all of the patients had the presenting reason documented, with 86% finding a palpable mass and 14% after an abnormal screening mammogram.

<b>INTERVAL SINCE LAST MAMMOGRAM Stage 2 Breast CA – Class 10-14 / Dx at RW</b>	<b>Stage 2 - Number of Cases</b>	<b>Stage 2 Percent (%)</b>
WITHIN THE PAST YEAR (12 months or less)	9	21%
1 – 2 YEARS AGO	3	7%
3 – 5 YEARS AGO	8	19%
6 – 10 YEARS AGO	4	9%
OVER 10 YEARS AGO	3	7%
NEVER HAD A MAMMOGRAM 3 – Male Breast Cancer 3 – Under age 40 1 - Age 40-50 (no screening yet)	7	16%
UNKNOWN / NOT STATED 2 – age 50-69 1 – age 70-79 4 – age 80-89 2 – age 90+	9	21%
<b>Total</b>	<b>43</b>	<b>100%</b>

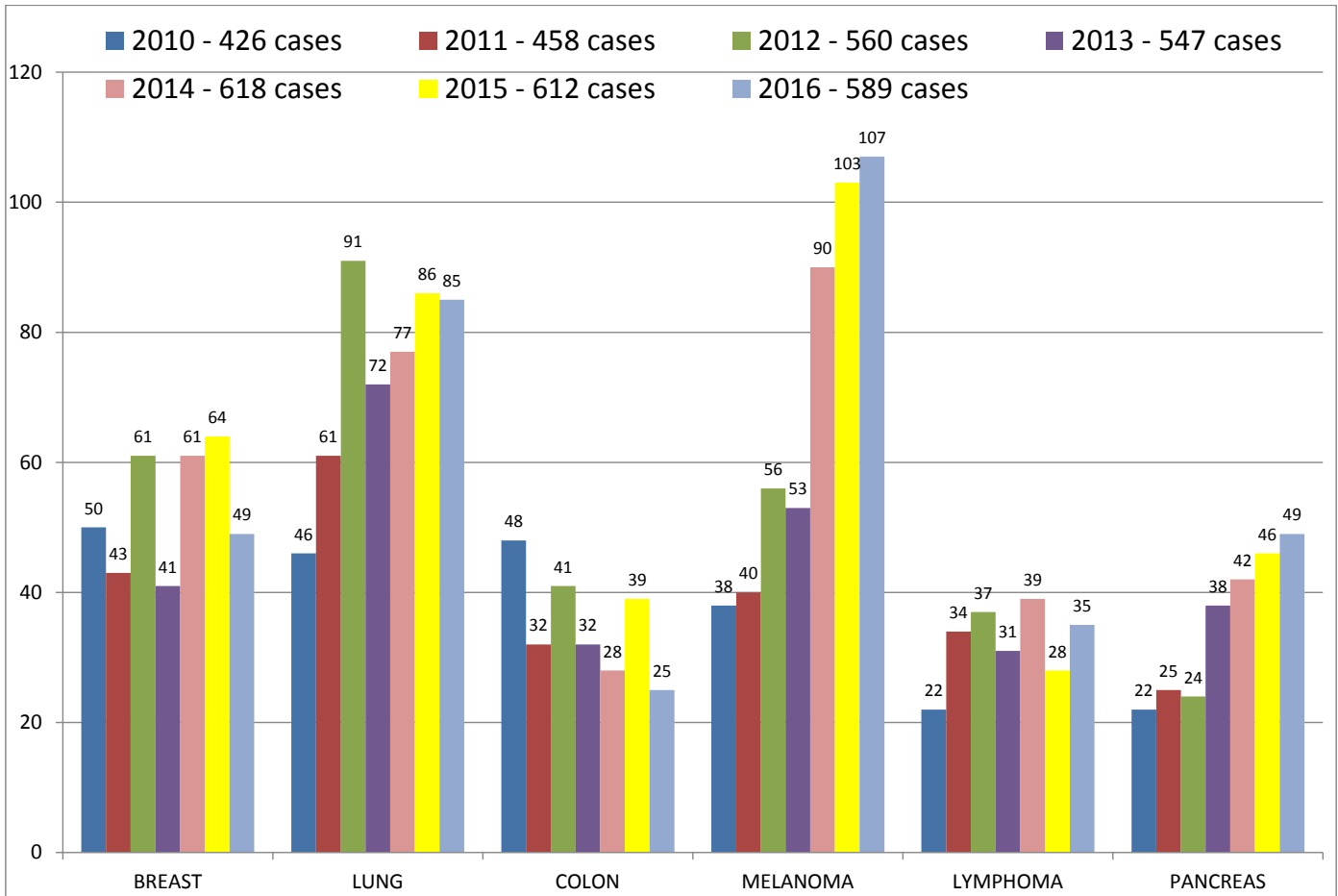
For the interval since the patient's last mammogram, we only reviewed Class 10-14 cases, because for cases diagnosed at another facility we may not have had any control over those patients' screening habits. Of the Class 10-14 cases, 16% of the patients never had a mammogram, although 3 patients were male and the others were younger patients (under 50) that had not yet started breast cancer screening. Many of the patients had not had a screening mammogram in several years, with 51% having their prior mammogram over 3 years ago. For 21% of the patients it was unknown when they had their prior mammogram, however, all but two of these patients were over age 70 and half of them had dementia.

## CONCLUSION AND RECOMMENDATIONS

After a detailed review of our Stage 2 breast cancer cases, there was no definite pattern noted to explain a higher percentage of these cases at RWMC compared to state and national data. It is felt that part of the reason for our higher percentage of Stage 2 cases may be referrals from other facilities to our hospital, being a tertiary care center with five surgical oncologists and specialized oncology services. It was also felt that due to the number of cases in this study diagnosed at our hospital that did not have a mammogram within the past 12 months (42%), an increased focus on getting patients to yearly mammogram screenings would be helpful. It was noted that we do see a large number of elderly patients and it is sometimes difficult to encourage screenings for this population, especially those with dementia or other significant health issues. Despite this, we may be able to decrease the percentage of Stage 2 breast cancer cases with an increased emphasis on mammogram screening and breast self-exams. It was recommended to pass along this information to the CharterCare primary physician group to emphasize this issue.

We will continue to follow the Stage 2 breast cancer percentage closely over the next several years, to see if our efforts are making a difference, and to determine if further study in this area is necessary.

### ROGER WILLIAMS MEDICAL CENTER NEWLY DIAGNOSED CANCER CASES 2010 TO 2016 - TOP SIX CANCER SITES



**CASES BY PRIMARY SITE BY YEAR – 2011 to 2016**  
**Analytic Cases (Newly Diagnosed)**

<b>PRIMARY SITE</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
MELANOMA OF SKIN	40	56	53	90	103	107
LUNG	61	91	72	77	86	85
BREAST	43	61	41	61	64	49
COLON	32	41	32	28	39	25
RECTUM / RECTOSIGMOID	19	25	20	26	18	22
PANCREAS	25	24	38	42	46	49
LYMPHOMA	34	37	31	39	28	35
LEUKEMIA	16	29	23	17	23	26
MYELOMA	15	13	11	8	7	12
MDS/REFRACTORY ANEMIA	9	7	10	8	6	8
LIVER / I.H. BILE DUCT	11	15	19	21	22	23
GALLBLADDER / BILIARY	6	14	5	9	11	8
STOMACH	15	9	16	17	17	13
ESOPHAGUS	7	9	10	5	10	6
BLADDER	21	7	16	16	9	17
KIDNEY / URETER	14	15	17	16	8	17
PROSTATE / TESTIS	13	24	21	30	21	16
HEAD & NECK SITES	23	19	32	28	33	12
LARYNX	7	2	9	4	3	5
THYROID	16	14	12	19	15	11
FEMALE GENITAL	5	5	8	7	7	4
BRAIN / MENINGIOMA	10	12	16	18	2	4
SOFT TISSUE / SARCOMAS	2	9	10	12	9	6
UNKNOWN PRIMARY	5	10	10	8	6	16
OTHER / MISC SITES	9	12	15	12	19	13
<b>TOTAL</b>	<b>458</b>	<b>560</b>	<b>547</b>	<b>618</b>	<b>612</b>	<b>589</b>

## An Assessment of Lymph Node Examination in Melanoma Patients with Mitotic Activity

### Background:

According to the NCCN guidelines, sentinel lymph node biopsy (SLNB) should be offered for all melanomas with depth > 1 mm. SLNB in patients with thin melanomas (depth < 1/mm<sup>2</sup>) remains controversial. For patients with melanomas 0.76 mm to 1 mm, NCCN guidelines recommend offering SLNB if ulceration is present or if mitotic rate is > 1/mm<sup>2</sup>. Melanomas 0.76 mm to 1 mm with no ulceration or mitoses present a grey area, and it is recommended that SLNB be discussed and considered for these patients. There is also significant debate regarding LN sampling for thinner melanomas ≤ 0.75mm. For these patients, NCCN guidelines do not recommend SLNB regardless of the presence of ulceration or mitotic rate. However, numerous studies have shown ulceration and mitotic rate to be independent predictors of nodal metastasis and some recommend nodal examination for melanomas of any depth with the presence of mitotic figures.

### Methods & Results:

We conducted a retrospective review of our melanoma database at Roger Williams Medical Center to examine the rate of lymph node examination in patients with melanomas exhibiting mitotic activity from January 2010 to December 2014. During this period of time, there were 370 patients diagnosed with primary cutaneous melanoma. 153 (41.35%) had a mitotic rate < 1/mm<sup>2</sup> while 122 (32.97%) had a mitotic rate of > 1/mm<sup>2</sup>. Of these patients whose tumors exhibited mitotic activity, 107 of them (87.70%) underwent LN examination (either SLNB or completion lymphadenectomy or both). The rate of lymph node sampling was higher for tumors with greater mitotic activity compared to tumors with < 1 mitosis/mm<sup>2</sup> (80.00% for tumors with mitotic rate > 10/mm<sup>2</sup>, 82.35% for tumors with mitotic rate 1-10/mm<sup>2</sup> vs 12.42% for tumors with < 1 mitosis/mm<sup>2</sup>). The overall rate of lymph node sampling was 43.27% (Table 1).

	Mitotic Rate (Mitoses/mm <sup>2</sup> )		
	<1	1-10	>10
Total Number of Patients	153	102	20
Number of Patients with Lymph Nodes Examined	19	84	16
Rate of Lymph Node Examination	12.42%	82.35%	80.00%

Table 1. Rate of Lymph Node Sampling Stratified by Mitotic Activity.

### Conclusion:

This data shows that we have been compliant with NCCN recommendations regarding LN sampling in patients whose melanomas exhibit mitotic activity. It also demonstrates that as the degree of mitotic activity increased, so did the rate of LN examination.

## Prevention Programs

Sun Safe and Skin Cancer Prevention Event at the Rhode Island State House, May 2016 – A skin cancer screening and education program held at the RI State House on 5/04/16 allowed state workers and visitors to get screened during working hours. A total of 70 people were screened during the course of the event, which included education on sun safety, sunscreen use and skin cancer prevention. Dermatology staff was interviewed by Channel 10 News for broadcast to further spread the word about the importance of sun safety and screenings.

Cancer Prevention event during National Night Out at Governor Notty Park in North Providence, August 2016 – Staff was available during this evening event to answer questions regarding skin cancer prevention and sun safety. Participants were educated on a variety of skin cancer risks and samples of sun block were given away. Education was provided on smoking cessation, smoking avoidance and the dangers of second hand smoke.

Breast Cancer Awareness / Breast Self Exam at Gloria Gemma Flames of Hope, October 2016 - Offerings at our booth included educational materials on breast self-exam including plastic breast models for demonstration. Information distributed also included general breast health and wellness material.

## Screening Programs

Skin Cancer Screening at the Rhode Island State House 5/04/16 – Offered as a joint program between Roger Williams Dermatology Department and the Partnership to Prevent Cancer in Rhode Island. A total of 70 people were screened during the course of the event. Two people were referred for follow-up with dermatology for suspicious lesions.

Skin Cancer Screening 8/02/16 at National Night out in North Providence. – An evening event in the community with a multitude of activities available. A total of 49 people were screened during this event, with 17 people referred for follow-up with Dermatology for suspicious lesions or skin conditions.

## Quality Improvements & Goals Achieved

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- Added a Geriatrician to the Cancer Center to see patients on-site, rather than having to travel elsewhere.
- Added capability to provide Stereotactic Body Radiation Therapy in our Radiation Oncology department.
- Finished development of the Oncology Module in the electronic medical record.
- Added a new position of a bilingual Community Needs Navigator to work with the Hispanic community.
- Increased participation in “Breaking Bad” program from 10 residents in 2015 to 37 residents in 2016. This program is provided by the Palliative Care Team, educating residents and fellows in the teaching program on how to break bad healthcare news to patients.
- Continued the Lung Cancer Screening Program started in 2015 and screened 43 patients during 2016 (increased from 12 patients screened in 2015).
- Increased the capabilities of our distress screening program to provide more effective psychosocial alerts, and more referrals to our Oncology Social Worker.

