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As an American College of Surgeon’s Commission on Cancer Accredited Cancer Center, Mercy Cancer Center is committed to improving survival and quality of life for cancer patients through standard-setting, prevention, research, education and the monitoring of comprehensive quality of care. Each calendar year, Mercy’s cancer committee develops and disseminates a report of patient and program outcomes to the public. This report will highlight many of Mercy Cancer Center’s activities for calendar year 2015.

One of these activities involves a physician member of the cancer committee performing an in-depth review to examine the evaluation and treatment of patients and ensure that it is compliant with evidence-based national guidelines. In this report, we provide an in-depth analysis of lung cancer cases at Mercy. This study looks at the important role of surgery, radiation therapy and chemotherapy in the comprehensive management of lung cancer, which results in more cancer deaths than any other type of cancer in the United States.

In addition, the cancer committee, under the guidance of the Quality Improvement Coordinator, develops, analyzes and documents studies measuring the quality of care and outcomes for cancer patients. This report includes a comprehensive review of breast cancer cases at Mercy. There is a growing understanding of barriers to cancer care experienced by patients in rural populations and this study helps us understand some of those geographic concerns.

This report also highlights the large number and diverse variety of cancer cases seen at Mercy Cancer Center. Each year the statistics remind us of our responsibility to provide the highest quality of cancer care possible. In addition to our Commission on Cancer accreditation, Mercy Cancer Center has earned accreditation by the American College of Radiology in Radiation Oncology and by the National Accreditation Program for Breast Centers.

The physicians and staff of Mercy Cancer Center are dedicated to providing state-of-the-art comprehensive cancer care in an environment that envelopes patients and family in a warm embrace of compassion. We are committed to quality and we are committed to providing the best possible patient experience through recognition of the sacred nature of our work. I hope you’ll find the information in this report educational and inspiring.

Sincerely,

Richard L. Deming, MD
Medical Director, Mercy Cancer Center
## OVERALL ANALYTIC CASE DISTRIBUTION

**BODY SYSTEM SITE GROUP REPORT**

Filter(s): Quick Filter: Year: 1st Contact Year 2014-2014

<table>
<thead>
<tr>
<th>Body System Site Group Report</th>
<th>Count (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esophagus</td>
<td>22</td>
<td>1.18%</td>
</tr>
<tr>
<td>Stomach</td>
<td>19</td>
<td>1.02%</td>
</tr>
<tr>
<td>Cecum</td>
<td>32</td>
<td>1.72%</td>
</tr>
<tr>
<td>Ascending Colon</td>
<td>39</td>
<td>2.09%</td>
</tr>
<tr>
<td>Sigmoid Colon</td>
<td>23</td>
<td>1.24%</td>
</tr>
<tr>
<td>Rectum</td>
<td>39</td>
<td>2.09%</td>
</tr>
<tr>
<td>Pancreas</td>
<td>53</td>
<td>2.85%</td>
</tr>
<tr>
<td>Larynx</td>
<td>19</td>
<td>1.02%</td>
</tr>
<tr>
<td>Lung &amp; Bronchus</td>
<td>305</td>
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</tr>
<tr>
<td>Melanoma -- Skin</td>
<td>31</td>
<td>1.66%</td>
</tr>
<tr>
<td>Breast</td>
<td>378</td>
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<tr>
<td>Corpus Uteri</td>
<td>85</td>
<td>4.56%</td>
</tr>
<tr>
<td>Ovary</td>
<td>25</td>
<td>1.34%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Body System Site Group Report</th>
<th>Count (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostate</td>
<td>124</td>
<td>6.66%</td>
</tr>
<tr>
<td>Urinary Bladder</td>
<td>68</td>
<td>3.65%</td>
</tr>
<tr>
<td>Kidney &amp; Renal Pelvis</td>
<td>48</td>
<td>2.58%</td>
</tr>
<tr>
<td>Brain</td>
<td>37</td>
<td>1.99%</td>
</tr>
<tr>
<td>Cranial Nerves Other Nervous System</td>
<td>21</td>
<td>1.13%</td>
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<tr>
<td>Thyroid</td>
<td>76</td>
<td>4.08%</td>
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<tr>
<td>NHL - Nodal</td>
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<td>2.04%</td>
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<tr>
<td>NHL - Extranodal</td>
<td>34</td>
<td>1.83%</td>
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<tr>
<td>Myeloma</td>
<td>21</td>
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<tr>
<td>Chronic Lymphocytic Leukemia</td>
<td>27</td>
<td>1.45%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>44</td>
<td>2.36%</td>
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<tr>
<td>Other</td>
<td>254</td>
<td>13.64%</td>
</tr>
</tbody>
</table>

**Total Count: 1,862**  **Total Percent: 100.00%**

*Continued on page 4*
OVERALL ANALYTIC CASE DISTRIBUTION (CONT.)

- Chronic Lymphocytic Leukemia, 27
- Myeloma, 21
- NHL - Extranodal, 34
- NHL - Nodal, 38
- Thyroid, 76
- Cranial Nerves Other Nervous System, 21
- Brain, 37
- Kidney & Renal Pelvis, 48
- Urinary Bladder, 68
- Prostate, 124
- Ovary, 25
- Corpus Uteri, 85
- Breast, 378
- Lung & Bronchus, 305
- Melanoma - Skin, 31
- Rectum, 39
- Pancreas, 53
- Larynx, 19
- Sigmoid Colon, 23
- Cecum, 32
- Ascending Colon, 39
- Stomach, 19
- Other, 254
Since beginning our Lung Cancer Screening program November, 2012 we have observed an increase in the number of early stage lung cancer cases being detected. During our Multidisciplinary Lung Cancer Conferences we have observed that not all patients are treated in exactly the same manner. We would like to move toward standardization of recommendations and ensure compliance with evidence-based national guidelines. We decided to do a review of the entire group of analytic lung cancer cases to assess our current practice.

Continued on page 6
# LUNG REVIEW (CONT.)

## RESULTS

### 305 total analytic lung cases

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>18</td>
<td>Histology not specified (clinical diagnosis)</td>
</tr>
<tr>
<td>59</td>
<td>Small cell carcinoma</td>
</tr>
<tr>
<td>2</td>
<td>Mixed small cell</td>
</tr>
<tr>
<td>3</td>
<td>Carcinoid</td>
</tr>
<tr>
<td>3</td>
<td>Neuroendocrine</td>
</tr>
<tr>
<td>2</td>
<td>Lymphoma</td>
</tr>
<tr>
<td>1</td>
<td>Plasmacytoma</td>
</tr>
<tr>
<td>217</td>
<td>Non-small cell carcinoma</td>
</tr>
<tr>
<td></td>
<td>• 7 Non-specified</td>
</tr>
<tr>
<td></td>
<td>• 80 Squamous cell carcinoma</td>
</tr>
<tr>
<td></td>
<td>• 117 Adenocarcinoma</td>
</tr>
<tr>
<td></td>
<td>• 13 Other specified non-small cell type</td>
</tr>
</tbody>
</table>

### 72 cases cT1N0 or cT2N0 for 2014 in comparison to 62 in 2013 and 65 in 2012.

- 64% (46 cases) not presented at MDC
- 36% (26 cases) presented at MDC

## 1st course of treatment cT1 or cT2 (72 cases)

- 6 No treatment
  - 1 refused treatment
  - 1 expired before treatment was initiated
  - 1 no treatment based on performance status
  - 3 reason not stated

- 2 Chemo only
  - One patient sought outside second opinion in Chicago where recommendation was chemo only due to RT put patient at higher risk for pneumonitis, chemo attempted first to establish responsiveness but patient expired three months after initiation of chemo.
  - Other case patient had bilateral lung cancer; exact reason chemo only recommended by medical oncologist not stated. Patient was 81 years old.

- 39 Radiation
  - 32 Cyberknife
  - 7 Conventional radiation; 1 of the 7 received chemo with radiation

- 25 Surgical resections
  - 4 Wedge resections
  - 19 Lobectomy
  - 1 Extended bilobectomy
  - 1 Pneumonectomy

No radiation with any of the surgical patients.

## CONCLUSION

This data provides a baseline for evaluating future years. We will look at patient and physician factors that determine which treatment option is chosen. We will review this cohort for two and five year survival data.
FEMALE BREAST REVIEW

By Dr. Susan Beck

FEMALE BREAST CANCER MOLECULAR SUBTYPES
NEW CASES, IOWA, 2010-2011

<table>
<thead>
<tr>
<th>Subtype</th>
<th>Markers</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luminal A</td>
<td>ER+ and/or PR+, HER2-</td>
<td>2,798</td>
<td>74.3</td>
</tr>
<tr>
<td>Luminal B</td>
<td>ER+ and/or PR+, HER2+</td>
<td>342</td>
<td>9.1</td>
</tr>
<tr>
<td>HER2/neu</td>
<td>ER-, PR-, HER2+</td>
<td>174</td>
<td>4.6</td>
</tr>
<tr>
<td>Triple Negative</td>
<td>ER-, PR-, HER2-</td>
<td>450</td>
<td>12.0</td>
</tr>
</tbody>
</table>

This chart defines the female breast cancer molecular subtypes through their prognostic marker expressions.

ER – Estrogen receptor
PR – Progesterone receptor
Her 2 – Her2/neu

Triple negative means there were no receptors on the cancer cell wall therefore it is unknown as to what stimulates its growth. In Iowa, Luminal A subtype is the most common breast cancer seen.

A review of data from Mercy Medical Center Cancer registry numbers from 2010–2014 showed a total number of cases, n=1285.

48 of 99 Iowa counties were represented in our population of study during this time period. As expected, the majority of cases were in Polk County where Katzmann Breast center is located. This distribution does follow the Raccoon and Des Moines rivers and their tributaries. The breakdown of subtypes per county is still in progress, though the largest subtype as a whole is Luminal A.

Map based on Longitude (generated) and Latitude (generated). Color shows count of Number of Records. The marks are labeled by County. Details are shown for County.

Continued on page 8
The number of case subtypes per stage and year were reviewed, showing the majority of breast cancers seen in our data set (n=1285) are stage 1 and 2, considered early stage. This is consistent with SEER data in all of Iowa and the U.S. Luminal A dominates the numbers in all stages shown.

This is most likely consistent with the homogenous population and genetic heritage as described by Caralho (2014) in Brazil.

Count of Subtype2 for each year broken down by Stage. Color shows details about Subtype 2. The data is filtered on Stage, which ranges from 1 to 4.
2015: A YEAR OF GROWTH

The year 2015 was one of great progress and growth for the Mercy Cancer Center. We added several new members to our comprehensive team of cancer experts, including a new radiation oncologist, a financial counselor and an additional nurse navigator. Our three oncology nurse navigators have a combined 77 years of oncology experience – a true benefit for all of our patients. Our lung cancer screening program nearly doubled in size and we saw growth in a number of other screening programs as well. While we aim to provide world-class cancer treatment, preventing cancer is an equally important goal for our team.

In August, we completed our Commission on Cancer (CoC) survey. This survey is a program of the American College of Surgeons and takes place every three years. It recognizes cancer care programs for their commitment to providing comprehensive, high-quality and multidisciplinary patient centered care. I’m proud to say we received our three-year certificate of accreditation through 2018 with a silver-level commendation. This achievement was truly a team effort with everyone joining together to ensure we met the requirements and guidelines of this accreditation.

As we look to the future in 2016, we continue to seek out areas where we can make a significant impact in cancer treatment while continuing to provide patients with the best possible cancer care. An ongoing commitment to our patients, coupled with advanced technologies and techniques focused on improving quality of life are key to sustaining our success.

Thank you to everyone who had a role in the many outstanding accomplishments at Mercy Cancer Center during the last year. It is a privilege to serve with you.

Sincerely,

Tim L. Hackbart, M.S.
Director, Oncology Service Line
Mercy Cancer Center
OUR SERVICES

Mercy Cancer Center is proud to offer the following services to our patients and their families:

- Comprehensive team of oncology specialists
  - Radiation Oncology
  - Medical Oncology
  - Gynecologic Oncology
  - Surgical Oncology
- Katzmann Breast Center
- Clinical trials and research
- Nurse Navigators
- Cancer resource center
- Nutritional counseling and support
- Lung Screening Program
- Family and genetic risk assessment
- Survivorship services
- Wellness programs
- Support groups
- Individual counseling
- Wigs, prostheses and self-esteem boutique
- Home Care
- Hospice
- Palliative Care
2015 CANCER COMMITTEE

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Susan Beck, D.O.
Jan Franko, M.D., PhD.
Roman Mirsky, M.D.
Thomas Mallisee, M.D.
Carolyn Pease, M.D.
Avina Kolareth, M.D.
Brian Freeman, M.D.
John Martens, M.D.
George Voynov, M.D.
Sandy Swanson
Tim Hackbart, M.S.
Deane Baldwin
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Cindy Johnson, CGC
Cindy Burgin, CTR
Missy Clarke, CTR