ASCO’s Quality Training Program

Project Title:
Integrated Post-Surgical Colon Cancer Care Planning at the Rutgers Cancer Institute of New Jersey and the Robert Wood Johnson University Hospital

Presenter’s Name:
Nell Maloney Patel

Institution: Rutgers Cancer Institute of New Jersey and Rutgers Robert Wood Johnson Medical School

Date:
October 8th, 2015
Institutional Overview

• Rutgers Cancer Institute of New Jersey (CINJ) is the state’s only NCI-designated Cancer Center.

• CINJ is affiliated with Robert Wood Johnson University Hospital (RWJUH) and the Rutgers Robert Wood Johnson Medical School (RWJMS).

• The hospital is staffed by full-time faculty in every department, along with a large group of private faculty, and serves as the clinical campus of RWJMS.

• There are numerous faculty, private and general surgeons with privileges at RWJUH who may be performing colon cancer surgeries.
  – 10 colorectal surgeons unaffiliated with CINJ
  – 1 unaffiliated Surgical Oncologists
  – 8 General Surgeons/ACS surgeons who do colon surgery

• There are almost 20 medical oncologists with privileges at the hospital who are not affiliated with CINJ.

• Pathology services are unified in one RWJMS department.
Problem Statement

• The time to adjuvant chemotherapy (TTAC) in stage III colon cancer has been shown to have an effect on overall and disease-free survival.

• At present, there is no integrated post-surgical colon cancer care planning for patients who have surgery at RWJUH.

• Poor understanding on the part of patients and ancillary providers regarding appropriate follow up may cause delay in TTAC.
Team Members

Team Leaders:
  Rebecca Moss, MD *GI Oncologist*
  Nell Maloney Patel, MD *Colorectal Surgeon*

Team Members:
  Teresa Brown, DO *Medicine Resident*
  Sondra Patella, APN, *Oncology NP*
  Kristen Donohue, MD *Surgical Resident*
  Neil Newman, *Medical Student*

Improvement Coach:
  David Bivens

Statistician
  Viktor Dombrovskiy, PhD

Project Sponsor:
  Howard Kaufman, MD, *Professor of Surgery, Associate Director of Clinical Sciences*
Surgery

Patient
- post-op recovery
- cultural/language
- understands need for chemo
- calls for Med Onc appt

Surgeon
- Call Med Onc inpatient?
- Communicate Path results inpatient?
- Post op surgery visit/Path results?
- Refer to Med Onc as outpatient

Oncologist
- Availability inpatient
- Availability for outpatient visits

Intake Office
- Identify patients as needing Med Onc ASAP
- Obtains records
- MD availability
- Insurance/referral

Institution
- Path report turnaround time
- Clinic space for IPV
- Insurance precert for chemo
- Labs/CT scan done
- Port done
- Treatment space

Adjuvant Chemo
Cause & Effect Diagram

Surgeon/Surgery:
- Delay in consulting Med Onc
- Timing of Post Op visit
- Having patient make own appointment
- SAR
- Post operative complications
- Nutritional evaluation
- Failure to follow up
- Printed Information
- Transportation
- Insurance
- Printed Info
- Mental well being
- Improper referral
- Educational understanding
- Language
- Incorrect contact info

Data:
- Dela in pathology report
- Data availability
- Tumor markers
- Technical Issues
- Port placement
- Additional workup
- Chemo schedule
- Inadequate chemo drugs
- Financial limitations
- Referral Issues

Patient:

Other:

Delay in time to Chemotherapy initiation
Aim Statement

• To decrease the wait time to Time to Adjuvant Chemotherapy (TTAC) to 6 weeks for 80% of patients within a 2 year time period
Measures

• Measure: TTAC

• Patient population: Stage 3 colon cancer patients who have surgery at RWJUH

• Calculation methodology: time from surgery to first dose chemotherapy

• Data source: Tumor Registry and chart review

• Data collection frequency: monthly

• Data quality (any limitations): limited access to private medical oncology practices
Baseline Data

TTAC prior to intervention over time

Days to Chemo

Date of surgery

x
x-bar
LCL
UCL
Results: time from surgery to

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Median</th>
<th>Lower quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemo</td>
<td>79</td>
<td>49.6</td>
<td>20</td>
<td>15</td>
<td>132</td>
<td>46</td>
<td>36</td>
</tr>
<tr>
<td>Path</td>
<td>70</td>
<td>4.92</td>
<td>2</td>
<td>2</td>
<td>15</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Central access</td>
<td>49</td>
<td>40</td>
<td>16.7</td>
<td>8</td>
<td>96</td>
<td>39</td>
<td>29</td>
</tr>
<tr>
<td>Outpatient Med Onc apt</td>
<td>38</td>
<td>30</td>
<td>15</td>
<td>-7</td>
<td>74</td>
<td>27</td>
<td>18</td>
</tr>
</tbody>
</table>
Effect of variables on time to chemotherapy

<table>
<thead>
<tr>
<th>variable</th>
<th>Intraop complications</th>
<th>postop complications</th>
<th>Surg onc vs colorectal</th>
<th>Surg onc vs general surgeon</th>
<th>Colorectal vs general surgeon</th>
<th>inpatient medical oncology consult</th>
<th>Academic vs private practice Med Onc</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-TEST</td>
<td>0.059</td>
<td>0.0155</td>
<td>0.45</td>
<td>0.86</td>
<td>0.67</td>
<td>0.64</td>
<td>0.27</td>
</tr>
<tr>
<td>Pr&gt;Chi-Square</td>
<td>0.21</td>
<td>0.007</td>
<td>0.38</td>
<td>0.61</td>
<td>0.93</td>
<td>0.49</td>
<td>0.212</td>
</tr>
</tbody>
</table>
Histogram with outliers

Histogram: TTAC - Days
(not incl. the 1169 day outlier)
## Prioritized List of Changes (Priority/Pay-Off Matrix)

<table>
<thead>
<tr>
<th>Impact</th>
<th>Ease of Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>

### Impact
- Nursing education
- Inpatient Med Onc consult
- Path results prior to d/c
- Early post-op Surgery visit
- Hire another oncologist
- Make more space in clinic

### Ease of Implementation
- Patient education
- “Passport” with timeline
<table>
<thead>
<tr>
<th>Date of PDSA cycle</th>
<th>Description of intervention</th>
<th>Results</th>
<th>Action steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/1/15</td>
<td>Creation of Pamphlet</td>
<td>Pamphlet printed</td>
<td>Present to Hospital committees for final approval</td>
</tr>
<tr>
<td>9/21/15</td>
<td>Focus Group meeting with nursing staff and leadership to begin to use clinical setting</td>
<td>Education with staff nurses completed</td>
<td></td>
</tr>
<tr>
<td>11/1/15</td>
<td>Go live with pamphlet. Hand out POD 2, review prior to D/C by residents or APN.</td>
<td>Will measure monthly through tumor board.</td>
<td>Pending approvals.</td>
</tr>
<tr>
<td>4/2016</td>
<td>Revise Pamphlet and translate to Spanish</td>
<td></td>
<td>Pending approvals</td>
</tr>
<tr>
<td>1/2016</td>
<td>IRB approval for Private Practice Oncology Group</td>
<td></td>
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</tbody>
</table>
## Passport to Colon Cancer Care

### Chemotherapy

<table>
<thead>
<tr>
<th>Chemotherapy Class</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Date</td>
<td>Time</td>
</tr>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

### First Chemotherapy Session

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Lab</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

### Chemotherapy Medications

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- 
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NCCN guidelines for post chemotherapy follow up includes Blood Tests and Scans:
- Every 3 months for first 2 years,
- Then every 6 months until 5 years

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In Collaboration with
Rutgers Cancer Institute of New Jersey
Robert Wood Johnson University Hospital
Fight Colorectal Cancer
Passport to Colon Cancer Care

**PATIENT INFORMATION**

- **PATIENT NAME:**
- **STREET:**
- **CITY, STATE, ZIP:**
- **CELL PHONE:**
- **HOME PHONE:**
- **WORK PHONE:**
- **EMERGENCY CONTACT:**
- **PRIMARY INSURANCE:**
- **SECONDARY INSURANCE**
- **PRIMARY CARE PHYSICIAN:**
- **SURGEON:**
- **ONCOLOGIST:**
- **RADIATION ONCOLOGIST:**
- **ONCOLOGY NURSE:**
- **PATIENT MEDICAL HISTORY:**
- **PAST SURGICAL HISTORY:**
- **ALLERGIES:**

**DIAGNOSIS**

- **STAGE:**
  - **T**
  - **N**
  - **M**

**PRE-CHEMOTHERAPY CHECK LIST**

* Based on your pathology report, you may or may not require chemotherapy

1. **Surgery Date:**

2. **Pathology Report**
   - Usually available within 7 days of surgery
   - Call Surgeon if not available when discharged

3. **Medical Oncology Appointment**
   - Call for appointment immediately upon receipt of
   - Pathology results as instructed by your Surgeon
   - **Date**
   - **Time**

4. **Surgery Follow up**
   - **Date**
   - **Time**

5. **Port Placement**
   - **Date**
   - **Time**

**DAILY MEDICATIONS:**
Challenges to Implementation

• Site Specific

• Team structure changes

• IRB
Conclusions

• TTAC is an area for quality improvement
• Engaging the patient may help decrease TTAC
Next Steps/Plan for Sustainability

- Roll out Patient Passport in Hospital Setting
- Work on Education with Physicians and supporting staff