ASCO’s Quality Training Program

Project Title: Improving Time to Initiation of Bone Modifying Agents in Patients with Newly Diagnosed Multiple Myeloma

Presenters: Sarah Lee, MD and Nathaniel Rosko, PharmD, BCOP

Institution: Cleveland Clinic Taussig Cancer Institute

Date: December 6, 2018
The Cleveland Clinic Taussig Cancer Institute is a NCCN and NCI-designated comprehensive cancer center.

Cleveland Clinic offers a multidisciplinary approach to patient care and bring together the expertise of different specialists to bring customized, patient centered care in disease specific groups.

Tertiary care referral center.

Main Campus is the hub for the cancer institute with 20 satellite, or regional locations throughout Northern Ohio and Weston, Florida.

There are approximately 10,000 multiple myeloma (MM) visits per year across the enterprise.

- Approximately 6,000 visits per year at Main Campus
- There are approximately 20-30 newly diagnosed multiple myeloma patients per month
Institutional Overview

CLEVELAND CLINIC REGIONAL HOSPITALS, FAMILY HEALTH CENTERS & HEALTH & WELLNESS CENTERS
# Team Members

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Job Function</th>
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<tbody>
<tr>
<td>Project Sponsor</td>
<td>Jason Valent, MD</td>
<td>Oversees role of team leader; Myeloma program director; staff representative</td>
</tr>
<tr>
<td>Team Leader &amp; Facilitator</td>
<td>Sarah Lee, MD</td>
<td>Primary data collection; provide project direction. Facilitate team meetings; delegate and coordinate individual team members’ role</td>
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<tr>
<td>Core Team Member &amp; Facilitator</td>
<td>Nathaniel Rosko, PharmD, BCOP</td>
<td>Data collection; provide project direction. Facilitate team meetings. Myeloma clinical pharmacist</td>
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<tr>
<td>Other Team Member</td>
<td>Christy Samaras, MD</td>
<td>Myeloma staff physician; staff representative</td>
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<td>Other Team Member</td>
<td>Beth Faiman, PhD, CNP</td>
<td>Outpatient myeloma nurse practitioner</td>
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<tr>
<td>Other Team Member</td>
<td>Saveta Mathur, CNP</td>
<td>Outpatient myeloma nurse practitioner</td>
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<tr>
<td>Other Team Member</td>
<td>Mary Ann Karam, RN</td>
<td>Outpatient myeloma practice nurse</td>
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<tr>
<td>Other Team Member</td>
<td>Janice Reed, RN</td>
<td>Outpatient myeloma practice nurse</td>
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<tr>
<td>Other Team Member</td>
<td>Craig Savage</td>
<td>Finance manager; provide billing data</td>
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<tr>
<td>Other Team Member</td>
<td>Alicia Monroe, MA</td>
<td>Redcap data analyst; build database</td>
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<tr>
<td>Other Team Member</td>
<td>Joseph Hooley, MBA, CPHQ, CPPS</td>
<td>Quality director; institute liaison and representative</td>
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<tr>
<td>Patient Advocate</td>
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<tr>
<td>QTP Improvement Coach</td>
<td>Laurie Kaufman, MSN, RN, CPHQ, CMQ</td>
<td>Provide remote support to the team on methodology of quality improvement and participation in QTP</td>
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<tr>
<td>QTP Improvement Coach</td>
<td>Ronda Bowman, MHA, RN, OCN</td>
<td>Provide remote support to the team on methodology of quality improvement and participation in QTP</td>
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Current ASCO guidelines recommend that all patients on active anti-myeloma therapy be receiving concurrent supportive care treatment with a bone modifying agent (BMA) to decrease the risk of skeletal related events (SRE).

At Cleveland Clinic, the average time difference between the start date of anti-myeloma therapy and the start date of a BMA in newly diagnosed patients is 10.5 weeks.
Cause & Effect Diagram

**Communication**
- Not enough time to discuss during initial visits
- Urgency to start anti-myeloma therapy

**Barriers**
- Need for dental clearance
- Pt compliance in getting dental exam
- Pt authorization
- Documentation/notification by dentist
- Drug authorization
- Timing of dental procedure

**Patient Engagement**
- Pt refusal
- Fear of risks
- Competing priorities - tx, scans, radiation
- Overwhelmed by new dx and tx

**Education**
- Education of infusion RN’s
- Pt’s understanding role of BMA in overall myeloma management
- Pt education re: SRE

**Increased time from start of anti-myeloma therapy to start of BMA**
- What is the data behind the need for dental clearance?
- What is the data behind need for BMA in general?
- Unclear which BMA’s to order
Patient population:

Exclusions:
- Patients with inadequate records
- Patients whose initial treatment started at an outside hospital
- Patients who was previously on BMA for non-myeloma diagnosis prior to MM diagnosis

Calculation methodology:
- Average time in weeks between cycle 1 day 1 of first line anti-myeloma treatment and first dose BMA (first date billed).

Data source:
- EPIC (electronic health record) and internal billing data

Data collection frequency:
- Monthly

Data quality (any limitations):
- Retrospective.
- Treatments administered at various locations.
- No data if patient started treatment with local oncologist outside of CCF
Data Collection:
- Pt ID
- Date of first clinic visit
- Date of C1D1 frontline anti-myeloma therapy
- Date first BMA billed
- BMA type
- eGFR<30
- Presence of lytic lesions at baseline
- Skeletal related events after start of BMA
Baseline Data

Average Difference in Weeks between C1D1 and First Administration of BMA at CC Main Campus Between 2015 – 2018

Average = 10.5 Weeks
Aim: In patients with newly diagnosed multiple myeloma who are being treated at Cleveland Clinic Main Campus, we will decrease the time from start of anti-myeloma therapy to start of a bone modifying agent by 4 weeks in 75% of patients, by December 2018.

Specific: Decrease by 4 weeks from baseline

Measurable: Average time (by weeks) between the start of anti-myeloma therapy and start of BMA

Attainable: Felt to be appropriate and attainable

Relevant: In accordance with ASCO and International Myeloma Working Group (IMWG) guidelines

Time bound: By December 2018
Cause & Effect Diagram

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Increased time from start of anti-myeloma therapy to start of BMA
Priority Matrix

- **IMPACT**
  - **High**
    - Review/educate role of dental clearance
    - Standardize dental clearance
    - Pt education/role of BMA
    - MD standardization
  - **Low**
    - Add to note template; insert hard stop
    - BPA on EPIC
    - Infusion RN to document refusal/route to MD
    - Give before C1D1 if tx delay
    - Pt education pamphlets

- **EFFORT**
  - **Low**
  - **High**
# PDSA Plan (Test of Change)

<table>
<thead>
<tr>
<th>Date of PDSA Cycle</th>
<th>Description of Intervention</th>
<th>Results</th>
<th>Action Steps</th>
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| PDSA Cycle 1 9/26/2018 | 1. BSA Education  
  ➢ Reviewed baseline data and goals for improvement  
  ➢ Discussed evidence re: dental clearance  
  2. Proposed changes to standardized MM Care Path | 1. Improved awareness and timeliness of BMA orders  
  ➢ N = 8  
  ➢ 5/8 patients started BMA within 6 weeks of C1D1 of MM therapy | 1. Schedule committee meeting to update MM Care Path |
Change Data (I)

Average Difference in Weeks Between C1D1 and First BMA
September – November 2018

Weeks

Patient
Average Difference in Weeks between C1D1 and First Administration of BMA at CC Main Campus Between 2015 – 2018

- Main Campus Baseline Average
- Average PDSA 1
  - Average = 2.5 Weeks

PDSA Cycle 1
Conclusions

• We were able to achieve our AIM and decreased the time to initiation of BMA from start of anti-myeloma therapy by at least 4 weeks (~10 weeks → ~2.5 weeks) in 75% of newly diagnosed MM patients

• Most impactful inputs: obtaining baseline data, physician/staff engagement, review of literature, and standardization of practice

• Changing practices and behaviors requires consistent feedback, reinforcement, and encouragement based on ongoing data review
Next Steps/Plan for Sustainability

• Ongoing data collection to assess change and long-term impact

• PDSA Cycle 2 – Updating our institutional MM Care Path
  • Create BSA algorithm for patients who are low risk vs. high risk for osteonecrosis of the jaw (ONJ)

• Implement a best practice alert (BPA) in EPIC to increase awareness of BMA

• Create patient education materials to include information on BMA
Questions?

Thank you

Taussig Leadership
Brian Bolwell, MD
Matt Kalaycio, MD
Michael McNamara, MD
Timothy Gilligan, MD

ASCO Quality Training Program
Laurie Kaufman, MSN, RN, CPHQ, CMQ
Ronda Bowman, MHA, RN, OCN

Our Patients

Myeloma Team Members
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