Responding to the unique challenges of patients with hematologic malignancies

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Introduction

- The clinical course of hem-onc patients differ from patients with solid malignancy and creates unique challenges around end of life care
- Heme-onc patients can have non-linear, rapid and unpredictable changes in trajectory which make it difficult to time LOI discussions and PC involvement
- In 2016, the Journal of Clinical Oncology (JCO) released the results of a survey of hematologist—oncologists suggesting 10 indicators for quality EOL care for hem-onc patients (Oreofe, 2016)
- It was suggested that level of intervention (LOI) discussions may represent important facilitators to quality EOL care
- Many studies have also shown great benefit to palliative (PC) involvement in the care of cancer patients
Objectives

1. Provide a description of the demographics, trajectory and goals of therapy of hem-onc patients from their final admission to hospital to their death.

2. Measure how we performed during that period of time on providing quality EOL care to are patients based on the following 5 of the JCO indicators:
   1. Chemo < 14 days prior to death
   2. ICU < 30 days prior to death
   3. Intubation < 30 days prior to death
   4. CPR < 30 days prior to death
   5. Death in an Acute Setting

3. Measure how PC involvement and LOI discussion impacted our performance.
Methods

- Retrospective chart review from the Cancer Registry of hem-onc patients who died from April 2014 to March 2016
- Collection through the Chartmaxx and Oacis online charting systems
- All ICU, hematology and PCU consultations, LOI sheets, progress notes, clinic notes, discharge summaries, pharmacy prescriptions and SP3 forms were reviewed and needed to be available for the chart to be considered complete

Inclusion Criteria

- Cause of death directly related to malignancy or its treatment
- Pathologically-confirmed malignancy
- Availability of complete data
- Diagnosed and treated at an RCN partner hospital
Patient Breakdown

Assessed for Eligibility (N=749)

Exclude (N=452)
- 215 did not meet inclusion criteria
- 182 were outside of timeframe
- 26 were duplicates
- 29 charts were incomplete in the electronic system

Treatment or Cancer Related Death (N=297)
Demographics

- 29 additional patients are expected to be added upon completion of ongoing paper chart review.
- 47 patients (16%) were new diagnosis.
- 36 patients (12%) had either received or were eligible for allogenic transplant.

*Patients distribution by cancer diagnosis, %*

- Lymphoma
- Leukemia
- Myeloma
- MDS
Goals of Therapy

In an effort to better describe our hem-onc population, goals of therapy for each patient were identified:

- **Curative**: treating a patient with new or relapsed cancer with curative intent

- **Slow progression**: treating a patient with new or relapsed cancer which cannot be cured with the intention of slowing progression and managing symptoms

- **Palliative**: treating symptoms and providing end of life care to a patient who no longer wishes to receive active therapy or for whom there are no more therapeutic options

Patient distribution by goals of therapy, %

- Curative: 38%
- Slow progression: 21%
- Palliative: 41%
Patient Trajectory (median days, 25th and 75th percentile)

0 days (0-8)  
Admission

LOI Documentation  2 days (0-11)

PC Consult  10 days (4-20)

15 days (6-35)

10 days (4-22)

Death

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Overall Performance on JCO Indicators

- Chemo < 14 days prior to death: 17% Yes, 83% No
- ICU < 30 prior to death: 19% Yes, 81% No
- Intubation < 30 days prior to death: 13% Yes, 87% No
- CPR < 30 days prior to death: 4% Yes, 96% No
- Death in Acute Setting: 66% Yes, 34% No
JCO Indicators by Goal of Therapy

- **Curative (N = 61)**
- **Slow Progress (N = 123)**
- **Palliative (N = 113)**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Curative</th>
<th>Slow Progress</th>
<th>Palliative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemo &lt; 14 days of life</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>ICU &lt; 30 days of life</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Intubation &lt; 30 days of life</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>CPR &lt; 30 days of life</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Death in an Acute Setting</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

p < 0.001

p < 0.049

p < 0.001

p < 0.001
PC Involvement (%)

- On Admission: 45%
- Prior: 17%
- No: 38%
JCO Indicators by PC Involvement

- Chemo < 14 days prior to death: Yes 91%, No 31%
- ICU < 30 prior to death: Yes 93%, No 63%
- Intubation < 30 days prior to death: Yes 97%, No 74%
- CPR < 30 days prior to death: Yes 98%, No 92%
- Death in Acute Setting: Yes 99%, No 55%

p < 0.01 for all indicators except, CPR < 30 days prior to death (p = 0.12)
Documented Level of Intervention (%)

- Prior: 29%
- Admission: 56%
- Presumed: 15%
JCO by Level of Intervention

- Prior (N = 86)
- At Admission (N = 167)
- Presumed (N = 43)

- Chemo < 14 days prior to death: p = 2.50
- ICU < 30 prior to death: p < 0.01
- Intubation < 30 days prior to death: p = 0.012
- CPR < 30 days prior to death: p = 0.04
- Death in Acute Setting: p = 0.09
Looking to the Future

• The uncertain clinical course of hem-onc patients and clinician’s challenge at predicting death is reflected in our described trajectory. It is particularly challenging for patients treated with curative intent and puts into question using the suggested JCO indicator as a marker of quality EOL care for patients.

• PC involvement and LOI discussions currently occur less than 10 days prior to death. Exploring these avenues when clinicians feel more certain of death may be what is driving the current trajectory.

• The retrospective nature of our study does not allow us to look at the incredibly important role of patient goals. Discussing goals of therapy and exploring patient wishes may help address uncertainty and allow patient trajectories to move forward at the patient’s desired pace.
Conclusion

- Patient trajectory
- JCO indicators for quality EOL care
- PC involvement
- LOI discussion
Thank you!