The Role of Observation Care in the Evaluation and Management of Cancer Emergencies

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FACULTY DISCLOSURE

Nothing to disclose
• What is Observation Care
• Operational Details and Metrics
• Observation Care and Cancer
• OBS or Crazy
What is Observation Care?

• Alternative to hospital admission for patients who do not meet admission criteria at initial evaluation
  1. additional monitoring
  2. short-term treatment

• Inform the decision regarding whether a patient will require a hospital admission or can be discharged

• Time frame

• Nomenclature: Clinical Decision Unit, Observation Unit, ED Short Stay Unit

• Dedicated versus Virtual
Background

- First units for chest pain 30 years ago
- Approximately one third of emergency departments in the United States have an observation unit or clinical decision unit.
- International trends

- Driving factors
  - advances in diagnostics and treatments
  - improved understanding of pathophysiology
  - Emergency Department and inpatient crowding
  - payer policy changes
Benefits of Observation Care

- Reduce hospital length of stay
- Reduce cost
- Outcome and safety data comparable to inpatient hospitalization
- Improved patient satisfaction and protocol compliance

Drawbacks of Observation Care

- Cost shifting - billed as an outpatient encounter rather than inpatient service
Key Observation Metrics

• US National benchmark LOS mean for OUs is 15 hours
• Discharge to home 80 % and inpatient conversion 20%
• ED revisit rate within one week less than 1%
• Observation Unit volume should be 4-10% of ED annual volume
• The midnight census should nearly always be 100% occupancy for an OU operating at peak efficiency

• Fewer than 5 % of hospital admissions originating from the Emergency Department with <24 hour LOS
Is there a role for Observation Care in Evaluation and Management of Cancer Emergencies? MSK Database

- Emergency Department at Sloan-Kettering
- 24,000 visits/year
- Admission rate of 50%
- 95% patients with active cancer diagnosis
  - 70% medical/neurologic complications
  - 30% surgical complications

- Retrospective analysis of all patients seen in the UCC from Jan 1, 2012 to April 21, 2012 (111 days, 6681 encounters), for patients requiring admission,
  - 11% were discharged in less than 24 hours

- Of patients discharged home from the UCC, 10% required care lasting greater than 8 hours.
- 1396 patients (21%) evaluated in the UCC may have benefited from transfer to observation status.
Is there a role for Observation Care in Evaluation and Management of Cancer Emergencies?

CONCERN Database

Admitted patient length of stay (600 patients)

20% of patients LOS 0-1 days
40% of patients LOS 0-2 days
Does Observation Care actually reduce inpatient bed utilization?

Klotz et al. J Oncol Pract. 2015
Outcomes: Does OBS management lead to fewer hospitalizations and less inpatient utilization

<table>
<thead>
<tr>
<th>Chief Complaint</th>
<th>Before Implementation</th>
<th>After Implementation</th>
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<tbody>
<tr>
<td></td>
<td>% Admitted of UCC Visits</td>
<td>Median Total LOS (hr)</td>
</tr>
<tr>
<td>Chest pain</td>
<td>41</td>
<td>69</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>68</td>
<td>99</td>
</tr>
<tr>
<td>Failure to thrive</td>
<td>63</td>
<td>118</td>
</tr>
<tr>
<td>Fever</td>
<td>56</td>
<td>91</td>
</tr>
<tr>
<td>Fluid and electrolyte disorder</td>
<td>55</td>
<td>98</td>
</tr>
<tr>
<td>Nausea and vomiting</td>
<td>69</td>
<td>100</td>
</tr>
<tr>
<td>Neurologic abnormality</td>
<td>57</td>
<td>120</td>
</tr>
<tr>
<td>Uncontrolled back or limb pain</td>
<td>44</td>
<td>135</td>
</tr>
<tr>
<td>Syncope</td>
<td>59</td>
<td>70</td>
</tr>
</tbody>
</table>

Abbreviations: LOS, length of stay; OU, observation unit; UCC, Urgent Care Center.

UCC presenting complaint; the proportion of patients presenting with each complaint was similar between the pre- and post-OU periods.
Includes patients directly admitted from the UCC and admitted from the OU.
Total LOS includes inpatient and OU time.
Statistically significant differences in percent admitted based on χ² tests, pre versus post; P < .05.

Klotz et al. J Oncol Pract. 2015
Clinical scenarios suitable for management in the observation setting

- Chest Pain
- Nausea and vomiting
- Dehydration
- New Atrial Fibrillation
- Pain management
- Febrile patient
  - neutropenia
    low/intermediate risk
  - No source
- Constipation
- Cellulitis
- Hematuria
- Hypersensitivity reactions
- Electrolyte derangements
- Drainage of malignant pleural effusions and ascites
- Uncomplicated IR/GI procedures
- Seizure management
- Transition to hospice

- “I don’t know what is going on in this patient”
Constipation Algorithm

Inclusion Criteria
• No evidence of mechanical bowel obstruction on AXR or CT
• Stable vital signs
• Reasonable likelihood of resolution of acute problem within 24 hours
• Difficulty administering further care at home
• Difficulty tolerating oral intake
• Pain that is not manageable with present outpatient analgesic regimen
• No other medical issues likely to prolong stay or require admission (infection, bleeding, electrolyte abnormalities)

Exclusion Criteria
• Bowel obstruction (or pseudo-obstruction) identified on CT scan
• Peritonitis/other overtly surgical problem
• Hemodynamic or respiratory instability
• Low probability of discharge within 24 hours
Constipation Algorithm

Potential Interventions

- enema and/or manual disimpaction if indicated by exam or imaging
- If no improvement in 2 hours, MethylNaltrexone if using opiates >2 weeks and no contraindication
- If no improvement in 4 hours, osmotic laxatives (magnesium citrate, lactulose, GoLytely if no contraindication)

Disposition

Home

- Benign CDU course, stable vital signs
- Successful laxation with improvement in symptoms

Admission

- Ongoing symptoms
- Inability to tolerate oral intake/medication
- Inability to tolerate treatment in Obs
Caveats regarding specific conditions

- **Pain control** except high doses of opiates or complex regimen of multiple analgesics or PCA

- **Fever** excluding recent bacteremia, likelihood of procedure, indwelling GI or GU catheters; trend lactate; procal, viral PCR

- **Cellulitis** must have suitable oral regimen based on allergies and prior cx

- **Dehydration** when underlying condition is likely to improve

- Select immunotherapy toxicities such as grade 2 colitis

- BMT patients with early complications

- CAR-T cell therapy patients greater than 30 days after infusion
Key differences between Observation Care in the noncancer and cancer populations

<table>
<thead>
<tr>
<th>Metric</th>
<th>Noncancer ED</th>
<th>Cancer ED</th>
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<tbody>
<tr>
<td>LOS</td>
<td>15 hours</td>
<td>19 hours</td>
</tr>
<tr>
<td>Discharge to Home</td>
<td>80%</td>
<td>66%</td>
</tr>
<tr>
<td>Occupancy</td>
<td>60-75%</td>
<td>85%</td>
</tr>
<tr>
<td>Return to ED within one week</td>
<td>&lt;1%</td>
<td>3%</td>
</tr>
<tr>
<td>OC Volume / ED Volume</td>
<td>4-10%</td>
<td>10%</td>
</tr>
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“OBS or Crazy”

- 64 year old female with metastatic pancreas cancer and history of upper GI bleeding presents with a single episode of melena 18 hours ago. She is afebrile, hemodynamically stable, and has unchanged hemoglobin from 7 days earlier when she last received chemotherapy. She is neutropenic. She is requiring parenteral opiate analgesia for worsening back pain.

- 45 year old male with metastatic renal cell carcinoma found to have a new segmental pulmonary embolus. His vital signs are normal. He has a history of intermittent heavy hematuria and requires an IVC filter. Labs remarkable for Hgb 7.9, and found to have significant electrolyte derangements as well as new mild AKI.
What is this patient’s path out of the hospital?

Is there a 66% or greater chance of this happening?
Conclusions

• Observation Care can reduce inpatient bed utilization by cancer patients

• Cancer patients require longer stays in Observation Care and are admitted to the hospital more frequently than patients without cancer

• Cancer patients with a single medical problem are most likely to be discharged home following Observation Care
Areas of Investigation

• Is care Observation Care cost effective for the management of oncologic emergencies?

• Which other oncologic emergencies can be safely managed in the observation setting?

• What are the ideal operational characteristics for the management of cancer patients in the observation setting?