The Development of Evidence-Based Supportive Therapy Guidelines for Symptom Management

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Systematic incorporation of toxicity assessment and grading during cancer treatment and subsequent provision of evidence-based patient interventions according to national standards for excellence are daunting tasks. To accomplish those goals, the authors’ institution developed evidence-based supportive therapy guidelines for symptom management. This article describes how the guidelines provided concise, user-friendly standardization of toxicity grading and immediate clinical application of evidence-based care.

The application of evidence-based guidelines from the scientific and academic arena to the realities of the clinical world often is daunting (Newhouse, Dearholt, Poe, Pugh, & White, 2007). That notion is particularly true when applied to assessment, grading, therapeutic interventions, patient education, and documentation of oncology symptom management. Converting to the electronic medical record (EMR) has made guideline implementation an even greater challenge in the John Theurer Cancer Center at Hackensack University Medical Center in New Jersey. The staff has developed evidence-based supportive therapy guidelines for symptom management that are understood to result in an acneform eruption, folliculitis, and/or pustular rash about 43%–85% of the time (Segaert et al., 2005). All EGFRIs are used in multiple disease states that cross into different cancer divisions; therefore, creating standardization in the treatment of side effects using evidence-based practice guidelines is crucial. Providing evidence-based care is an ongoing process, requiring a multidisciplinary approach (Eaton & Tipton, 2009).

In addition, cancer- and treatment-related adverse effects may jeopardize the patient in terms of adherence in the delivery of the intended treatment. Early intervention is required to prevent the development of grade 3 and 4 toxicity that goes unrecognized or is not managed until presentation at the center. Education raises awareness of possible side effects and instructs patients on when to contact their healthcare provider. Early toxicity assessments and immediate supportive care interventions are essential to manage the disease and maintain patients’ quality of life.

The authors’ institution’s delivery of care model remains a primary care guide for each division. Every team is disease or division specific and consists of an oncologist, advanced practice nurse or clinician, and oncology nurse navigator. That team cares for each patient from initial consultation throughout the disease continuum. The oncology nurse navigator is a strategic member of the patient care team. All patients calling or presenting with untoward side effects or symptoms are triaged by the oncology nurse navigator team, discussed with the doctor or advanced practice nurse team, and receive immediate intervention. That process involves documentation of the symptoms reported during the triage telephone call, as well as the toxicity grade according to the National Cancer Institute Cancer Therapy Evaluation Program’s
A proactive approach for all patients receiving agents known to cause acneform rash is recommended. This approach includes:
- Generous use of an alcohol-free emollient cream to keep all skin areas moist
- Preventative daily use of a sunscreen with a sun protection factor of 15 or higher (containing zinc oxide or titanium oxide)
- Use of a mild cleansing soap or cleansing liquid (e.g., Dove®, Cetaphil®).

### General Approach

Check the grade below and obtain signed MD or APN orders. All grades require immediate MD notification.

- **Grade 1:** Papules and/or pustules covering less than 10% BSA, which may or may not be associated with symptoms of pruritis or tenderness; considered mild in the literature; generally localized (e.g., face only); minimally symptomatic; no impact on activities of daily living; no sign of superinfection
- **Grade 2:** Papules and/or pustules covering 10%–30% BSA, which may or may not be associated with symptoms of pruritis or tenderness; associated with psychosocial impact; limiting instrumental ADL; considered moderate in the literature; generalized (e.g., face, back, chest); mild symptoms (e.g., pruritis, tenderness); minimal impact on ADL; no sign of superinfection
- **Grade 3:** Papules and/or pustules covering more than 30% BSA, which may or may not be associated with symptoms of pruritis or tenderness; limiting self-care ADL; associated with local superinfection with oral antibiotics indicated; associated with pain, disfigurement, ulceration, or desquamation; generalized (e.g., face, back, chest); severe symptoms (e.g., pruritis, tenderness)
- **Grade 4:** Papules and/or pustules covering any percentage of BSA, which may or may not be associated with symptoms of pruritis or tenderness and are associated with extensive superinfection with IV antibiotics indicated; life-threatening consequences

### Common Terminology Criteria

**MD to Check Preferred Therapy**

<table>
<thead>
<tr>
<th>Mild/Grade 1</th>
<th>Moderate/Grade 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold chemotherapy or EGFR inhibitor or decrease to the following dose.</td>
<td>Hold chemotherapy or EGFR inhibitor or decrease to the following dose.</td>
</tr>
<tr>
<td>Current dose: ____________________________</td>
<td>Current dose: ____________________________</td>
</tr>
<tr>
<td>New dose: ____________________________</td>
<td>New dose: ____________________________</td>
</tr>
<tr>
<td>□ Topical hydrocortisone (circle dose) 1% or 2.5% cream</td>
<td>□ Topical hydrocortisone (circle dose) 1% or 2.5% cream</td>
</tr>
<tr>
<td>15 g tube</td>
<td>15 g tube</td>
</tr>
<tr>
<td>Apply to affected area ____________________________ daily</td>
<td>Apply to affected area ____________________________ daily</td>
</tr>
<tr>
<td>Number of refills: ____________________________</td>
<td>Number of refills: ____________________________</td>
</tr>
<tr>
<td>□ Clindamycin 1% gel</td>
<td>□ Clindamycin 1% gel</td>
</tr>
<tr>
<td>Apply to affected area ____________________________ daily</td>
<td>Apply to affected area ____________________________ daily</td>
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<tr>
<td>Number of refills: ____________________________</td>
<td>Number of refills: ____________________________</td>
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<tr>
<td>□ Other: ____________________________________</td>
<td>□ Other: ____________________________________</td>
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<tr>
<td>Number of refills: ____________________________</td>
<td>Number of refills: ____________________________</td>
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</tbody>
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ADL—activities of daily living; APN—advanced practice nurse; BSA—body surface area; EGFR—epidermal growth factor receptor; MD—doctor of medicine

**FIGURE 1. Dermatology and Skin Care: Acneform Rash Symptom Management Guidelines**

Note. Figure courtesy of the John Theurer Cancer Center. Used with permission.
Severe/Grade 3 or Higher

- Hold chemotherapy/EGFR inhibitor or decrease to the following dose.
  - Current dose: ___________________________ New dose: ___________________________

- Topical hydrocortisone (circle dose) 1% or 2.5% cream
  - 15 g tube
  - Apply to affected area ___________________________ daily Number of refills: ___________________________

- Clindamycin 1% gel or Pimecrolimus 1%
  - Apply to affected area ___________________________ daily Number of refills: ___________________________

- Doxycycline 100 mg or Minocycline 100 mg
  - 100 mg PO BID x ___________________________ days Number of refills: ___________________________

- Methylprednisolone dose pack
  - As directed with food

- Other: ___________________________________________ Number of refills: ___________________________

Pharmacy name and telephone number: ___________________________________________
Medication: ___________________________________________ Number of refills: ___________________________
MD signature: ___________________________________________ MD stamp: ___________________________ Date: ___________________________

ADL—activities of daily living; APN—advanced practice nurse; BSA—body surface area; EGFR—epidermal growth factor receptor; MD—doctor of medicine

(2009) Common Terminology Criteria for Adverse Events (CTCAE), version 4.0, with documentation of prescribed interventions and patient teaching. The new guidelines eliminated the need for multiple charting documents by incorporating them all into one form.

Developmental Strategies

After a review of the literature, the authors created the following evidence-based supportive therapy guidelines for symptom management to address the most frequent treatment-related toxicities (i.e., acneform rash, anorexia, constipation, diarrhea, hand and foot syndrome, oral mucositis, nail changes, and nausea and vomiting) in their practice, with a goal of creating guidelines for all side effects and symptoms. The guidelines for acneform rash are shown in Figure 1; all other guidelines are available from the authors by request. Although providing evidence-based care and standardization throughout the 14 divisions of the John Theurer Cancer Center was the primary goal, the authors also wanted one document that could (a) be built into the EMR, (b) function as a preliminary teaching tool, (c) document CTCAE grading, (d) become an official order sheet for doctors and advanced practice nurses that could be linked with electronic prescription software such as e-prescribing, (e) could be recalled easily in the EMR when the patient returned for a follow-up visit for reassessment of toxicity grading and efficacy of the prescribed intervention(s), and (f) be updated readily as changes in the CTCAE and new evidence-based guidelines become available.

Institutional Approval and Educational Process

The institutional process began with the approval of the project by the chief innovation officer, professor, and vice president of cancer services. The application of all supporting documentation was approved by the evidence-based practice committee, the quality assurance committee, and each division chief. In addition, the order sets were approved by the hospital-based formulary and therapeutics committee. The authors ensured that all format revisions and verifications could be built into the EMR. The advance practice nursing and oncology nurse navigator teams played a pivotal role in development and critical review; that process took about six months to complete.

The entire nursing staff received formal education by the nursing educator on the CTCAE, with emphasis on assessment, grading, and documentation. The education considers the critically important one-on-one interactions that all infusion nurses have with patients during treatment administration. Those nursing intervention opportunities are vital for patient safety, as they can help to capture patient-reported symptoms. Many patients are reluctant to complain or voice concerns to the oncologist or advanced practice nurse for fear of delaying their intended treatment.

FIGURE 1. Dermatology and Skin Care: Acneform Rash Symptom Management Guidelines (Continued)

Note. Figure courtesy of the John Theurer Cancer Center. Used with permission.

(Evidence-Based Practice continues on page 350.)
Implementation

After institutional approval of the evidence-based practice guidelines, a master file was entered into the shared file drive, allowing the documents to be readily accessed via any computer terminal throughout the facility by all team members. The medical record supervisor enthusiastically supported the project by reviewing it with her team to ensure the completed guidelines would be filed in the physician order section of each patient’s medical record. As an official physician order, keeping the completed guideline in a central location has dramatically facilitated comparison of toxicity grading postinterventions and reassessment of toxicities during patients’ next visit. Each advanced practice nurse or clinician and oncology nurse navigator received individual binders that included all evidence-based practice guidelines to support easy availability while the shared file was in the process of being created.

Team feedback required two modifications of the evidence-based practice guidelines to format allergy information and include a nursing signature. The entire team was informed of the new revisions. Ongoing monthly chart audits confirm accurate documentation and communication of toxicities. Immediate goals are communication of toxicities using the language of the CTCAE and provision of evidence-based assessment and intervention for every patient.

Conclusion

The authors’ institution will continue to assess documentation accuracy and improve existing evidence-based practice guidelines while developing additional guidelines to address toxicities such as hot flashes and peripheral paresthesias. Transferring those guidelines to the EMR through collaboration with the EMR development team is underway. In the interim, the staff will perform quality assessments of the accuracy of toxicity grading, efficacy of interventions, and their related documentation in an on-going effort to provide extraordinary care for each individual patient.

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References


