Analysis of Healthcare Provider Management of Immune-Related Adverse Events and Concordance With NCCN Guidelines®

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**Background**

- Immune checkpoint inhibitors (ICIs) have dramatically altered the therapeutic landscape across oncology. However, they are associated with a unique safety profile involving immune-related adverse events (irAEs) that require prompt recognition and management to ensure optimal patient safety.

- In 2017, we developed an online Interactive Decision Support Tool to provide healthcare providers (HCPs) case-specific, evidence-based guidance on management of irAEs. We reported substantial variances in HCP practice vs expert recommendations.

- The National Comprehensive Cancer Network® (NCCN) publishes guidelines for managing irAEs in patients treated with ICIs across all organ systems. In partnership with the NCCN, a new online tool was developed in 2019 providing case-specific recommendations from NCCN Guidelines® on irAE management.

- Here, we report a comparison of HCP-reported planned irAE management strategies of HCPs vs the corresponding management recommendations from the NCCN Guidelines®.

**Methods**

- We obtained data from 1222 respondents of HCPs from 22 countries. The majority were physicians (45%), followed by nurses (35%).

- HCPs were asked to report their planned management of irAEs for up to 10 patients, and self-identified plans among HCPs outside of the US were more consistent with NCCN Guidelines® vs US HCPs.

- A recent study from 2019 showed that only 45% of HCPs planned management of specific irAEs were concordant with NCCN Guidelines® recommendations. The use of an online tool providing interactive and case-specific navigation of the NCCN Guidelines® recommendations can improve patient care and safety.

**Results**

- **Demographics and Cases Entered by Organ System**
  - 794 HCPs entered 1222 different patient cases between February 2019 and September 2019.

- **Patient Management Consistent With NCCN Guidelines® by Organ System**
  - Overall cardiovascular and dermatologic system symptoms managed according to NCCN Guidelines® (22% and 35% concordance, respectively).

- **Concordant Cases (%)**
  - Endocrine, 13%
  - GI, hepatic, or pancreatic, 38%
  - Pulmonary, 19%
  - Musculoskeletal, 3%
  - Neurologic or oculic, 4%
  - Other: IRR, 1%

- **Concordant Cases (%)**
  - Cardiovacular and dermatologic system symptoms managed according to NCCN Guidelines® (22% and 35% concordance, respectively).

- **Concordant Cases (%)**
  - NCCN Guidelines® and Expert Recommendations

- **Concordant Cases (%)**
  - Case Managed Concordant With NCCN Guidelines®

### Case Managed Concordant With NCCN Guidelines® by HCP Role and Symptom Grade

- **Concordant Cases (%)**
  - Physician
  - Nurse
  - Pharmacist
  - NP/PA

### Case Managed Concordant With NCCN Guidelines® by Symptom Grade

- **Concordant Cases (%)**
  - Mild/Moderate
  - Severe/Life-threatening

**Conclusions**

- These data suggest that many HCPs are not managing irAEs consistent with recommendations in the NCCN Guidelines®.

- Overall cardiovascular and dermatologic system symptoms managed according to NCCN Guidelines® (22% and 35% concordance, respectively).

- Significantly more HCPs outside the US managed dermatologic and endocrine system symptoms according to NCCN Guidelines® vs US HCPs (P = 0.001 and P = 0.016, respectively).

- Use of an online tool providing interactive and case-specific navigation of the NCCN Guidelines® recommendations can improve patient care and safety.

**References**


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