

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.^[1]
- The National Comprehensive Cancer Network® (NCCN) publishes guidelines for managing irAEs in patients treated with ICIs across all organ systems.^[2] 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

1. Clinician enters organ system affected

2. Clinician enters grade or severity of event

3. Clinician selects his/her intended management plan for this case

4. Clinician views NCCN Guidelines® recommendations for their specific patient scenario

5. Clinician is able to compare intended management vs NCCN Guidelines®

NCCN Guidelines Recommendations

- Permanently discontinue immunotherapy
- Initiate prednisone/methylprednisolone 2 mg/kg/day*
- Inpatient care; Monitor liver enzymes daily; Hepatology consult
- If steroid refractory or no improvement after 3 days, consider taper over at least 1 month. Re-escalate as needed.

*When liver enzymes show sustained improvement or return to taper over at least 1 month. Re-escalate as needed.

[†]Mycophenolate mofetil treatment (0.5–1 g every 12 hours) can be considered in patients who have persistent severe hepatitis despite high-dose corticosteroids.

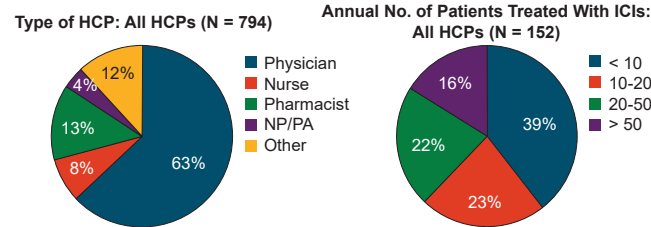
The tool is online at: clinicaloptions.com/immuneAETool



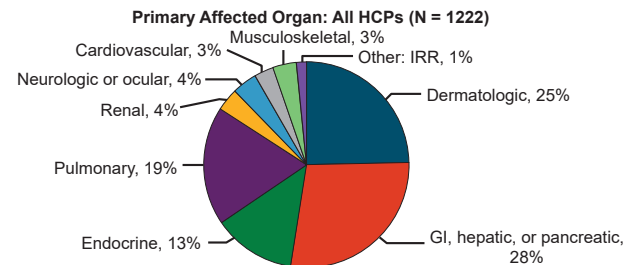
Results

Demographics and Cases Entered by Organ System

- 794 HCPs entered 1222 different patient cases between February 2019 and September 2019



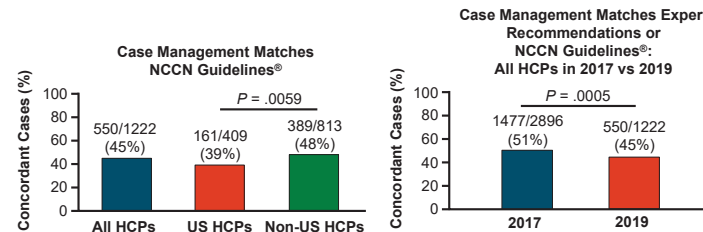
Intended Use of Tool (n = 235 cases)	Cases, %
Hypothetical patient case (educational resource)	54
Actual patient case (virtual consultation)	46



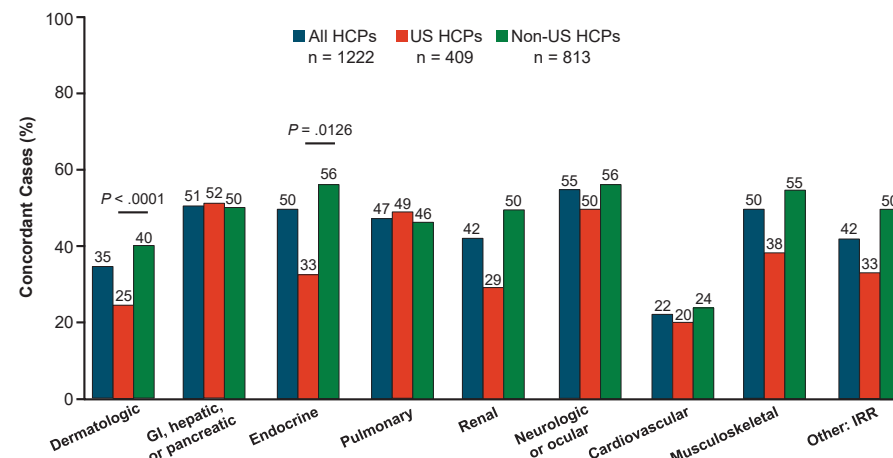
- No significant difference in cases entered by organ system between US vs non-US HCPs ($P = .332$)

Planned Management of HCPs Compared With NCCN Guidelines® and Expert Recommendations

- Fewer cases in the US managed according to NCCN Guidelines® recommendations vs those outside the US (39% vs 48%, respectively; $P = .0059$)
- No improvement in cases managed concordant with NCCN/expert recommendations in 2019^[3] vs 2017^[1] versions of online tool



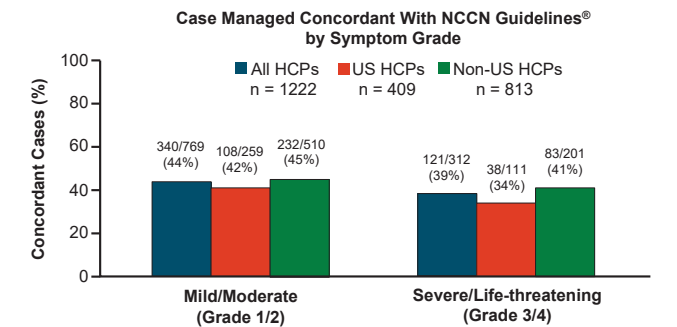
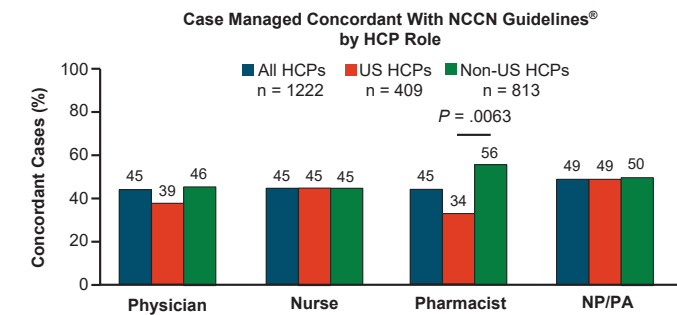
Patient Management Consistent With NCCN Guidelines® by Organ



- 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 ($P < .0001$ and $P = .0126$, respectively)

Self-Identified Impact on Practice (n = 257 cases)	Cases, %
Changed management plan to match NCCN Guidelines®	44
Confirmed management plan	50

Patient Management Consistent With NCCN Guidelines® by HCP Role and Symptom Grade



Conclusions

- These data suggest that many HCPs are not managing irAEs consistent with recommendations in the NCCN Guidelines®
 - Only 45% of HCPs planned management of specific irAEs were concordant with NCCN Guidelines® recommendations
 - Self-identified practice plans among HCPs outside of the US more consistent with NCCN Guidelines® vs US HCPs
 - Optimal management of irAEs has not significantly improved from 2017^[1] to 2019^[3]
 - The irAEs with the poorest concordance to NCCN Guidelines® recommendations were those affecting the dermatologic and cardiovascular systems
- Use of an online tool providing interactive and case-specific navigation of the NCCN Guidelines® recommendations can improve patient care and safety
 - Most HCPs treat < 20 patients/year with ICIs; given the relative rarity of many irAEs, clinicians are not experienced managing them in their practice
 - 44% of HCPs using the tool indicated intent to change practice to be concordant with the NCCN Guidelines® recommendation for their specific case

References:

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- National Comprehensive Cancer Network. Management of Immunotherapy-Related Toxicities. V.1.2019 [<http://www.nccn.org>]. Accessed October 10, 2019.
- NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Managing Immune Checkpoint Inhibitor–Related Toxicities: An Interactive Decision Support Tool [<https://www.clinicaloptions.com/immuneAETool>]. Accessed July 16, 2019.

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