

# Variation in Clinical Practice and Attitudes in the Management of Fever and Neutropenia in Patients with Hematologic Malignancy: A Survey of Cancer Centers Across the United States

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on behalf of the Antimicrobial Stewardship in Cancer Consortium (ASCC)

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## ABOUT ASCC

The Antimicrobial Stewardship in Cancer Consortium (ASCC) is a group of pharmacists and physicians practicing at cancer centers nationwide who are dedicated to advancing the science and practice of antimicrobial stewardship in patients with cancer.

## BACKGROUND

- Guidelines from multiple organizations exist for the management of neutropenic fever among patients with cancer
- Recent publications suggest alternative approaches to traditional guideline recommendations for to the management of fever and neutropenia (e.g., continuation of empiric antimicrobial therapy until resolution of neutropenia, use of fluoroquinolone prophylaxis) may not be applicable
- No contemporary information on management of fever and neutropenia in a representative sample of cancer centers is available
- The purpose of this study was to survey cancer centers in the U.S. to gauge current practices for fever and neutropenia in patients with hematologic malignancy and hematopoietic cell transplant (HCT) recipients

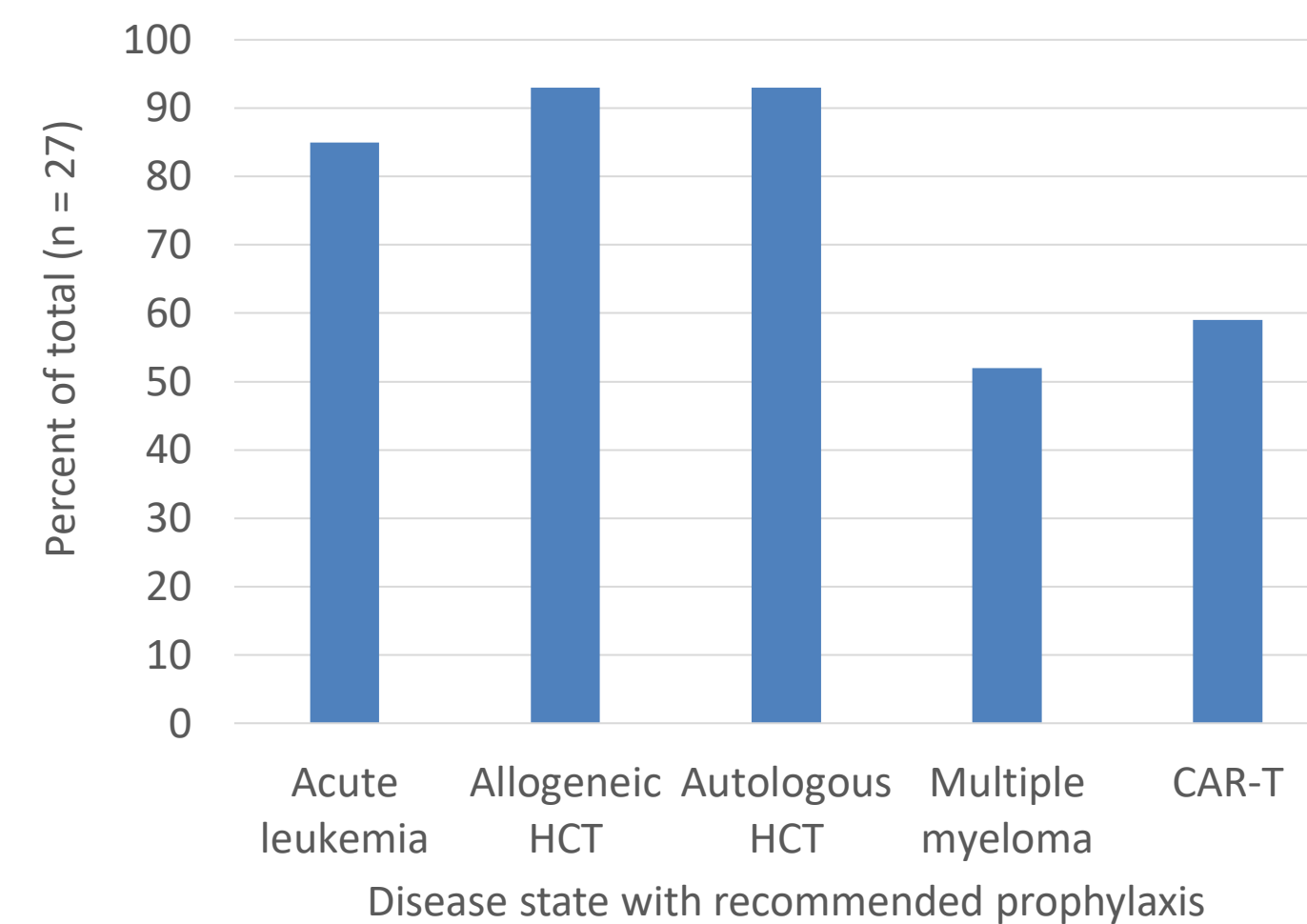
## METHODS

- In order to identify high-volume cancer centers with a large number of patients with hematologic malignancy, we identified all centers performing  $\geq 20$  allogeneic HCTs annually from the National Marrow Donor Program's "Be the Match" registry
- Infectious Diseases (ID) physicians, pharmacists, and others involved in the antimicrobial stewardship program and/or care of immunocompromised patients at each institution were identified by the authors via a manual review of publicly available information sources and personal contacts
- A survey assessing institutional standards and practices was distributed via email using Qualtrics software between 11/7 and 12/12/2019; survey reminders were sent every two weeks
- Duplicate surveys at the hospital level were removed and only complete responses were assessed using a 5-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree"

- 34/148 (24%) individuals responded from 31/86 hospitals (36%)

Characteristic	No. (%) of individuals
<b>Profession (n = 34)</b>	
ID / AMS pharmacist	17 (50)
ID physician	12 (35)
Other	5 (15)
<b>Years in practice (n = 29)</b>	
<5	9 (31)
5 – 9	8 (28)
$\geq 10$	12 (41)
<b>Type of practice (n = 34)</b>	
Academic	30 (88)
Other	4 (12)

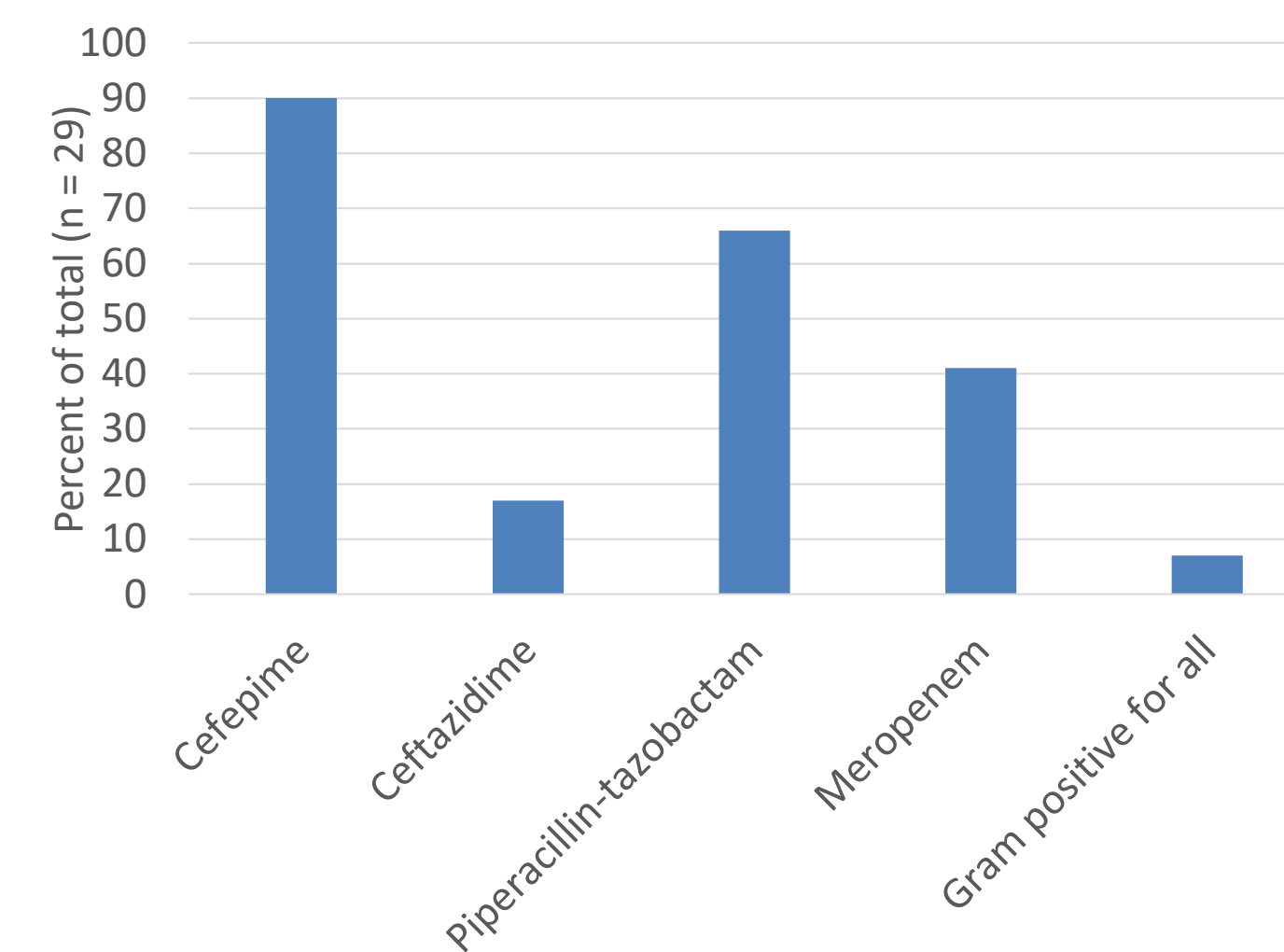
**Figure 1. Disease states where antibacterial prophylaxis is recommended**



- 27 / 31 (87%) centers recommend antibiotic prophylaxis
- Levofloxacin was the most commonly recommended antibiotic in centers recommending prophylaxis

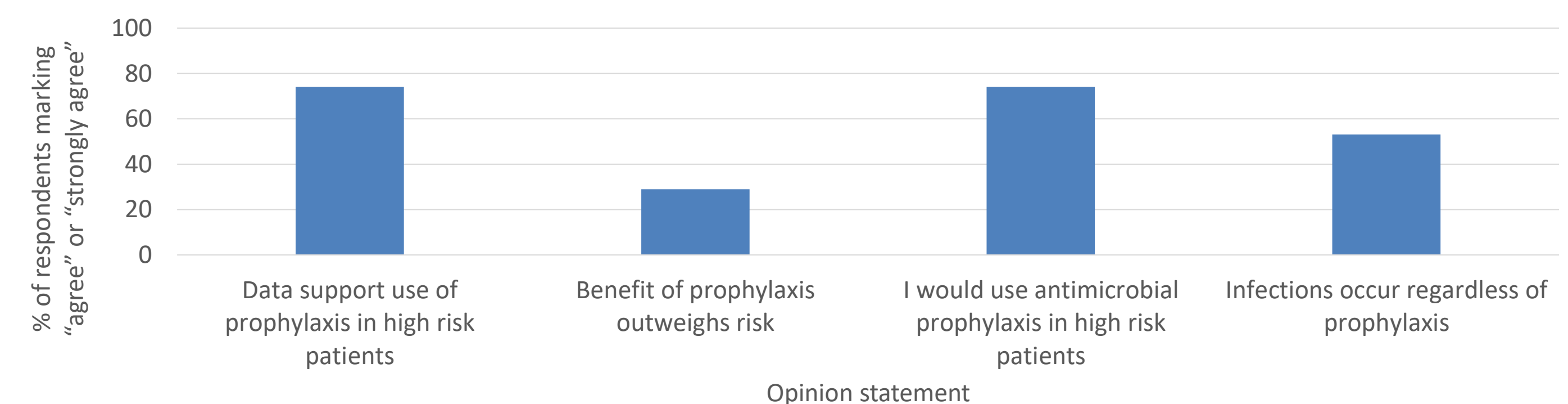
## RESULTS

**Figure 2. Recommendations for empiric therapy for undifferentiated neutropenic fever**



- 18/29 (62%) specifically provided recommendations on the de-escalation of Gram-negative therapy
- 8/18 (44%) at neutrophil recovery, 7/18 (39%) after 48 - >72 hours being afebrile

**Figure 3. Individual attitudes on prophylaxis for fever and neutropenia**



## SURVEY INSTRUMENT



## DISCUSSION

- Administration of prophylaxis and empiric antimicrobial therapy appears to be consistent with national guideline recommendations
- Over 1/3 of respondents do not provide specific guidance on antibiotic de-escalation; among those who provide recommendations, significant heterogeneity in de-escalation approaches were observed
- Prescriber attitudes on antibiotic prophylaxis in patients at high risk for fever and neutropenia indicate uncertainty over the benefit of the practice, yet antibiotic prophylaxis is widely recommended and widely used
- Factors compelling the discordant perceptions surrounding the antibacterial prophylaxis risk/benefit ratio and approach to antibiotic de-escalation requires further exploration.