

# Impact of Live Education on Knowledge and Competence in Clinicians Who Specialize in Hematologic Malignancies: An Interprofessional Initiative into Community Practice

**Background:** The introduction of BTK inhibitors to the B-cell malignancy space has been a significant advance in convenience and control for patients compared to than seen with intravenous therapy. However, they also pose new clinical challenges related to dosing, administration, adverse event management and patient adherence. All members of the oncology healthcare team play a unique role in the management of these patients and must be kept up to date with the latest advances in this clinical space.

**Methods:** From 2018-2020, CEC Oncology developed educational initiatives focused on novel therapies in B-cell malignancies for physicians, pharmacists, and nurses, which included activities across practice settings: symposia held at two Hematology/Oncology Pharmacy Association (HOPA) Annual Meetings, two Grand Rounds (GR) series, two Oncology Nursing Society (ONS) Chapter series, and one American Society of Clinical Oncology (ASCO) Chapter series (N=1,658).

Statistical testing between pre- and post-tests and from pre-test to follow-up were conducted via chi square analysis with a priori significance set at 0.05. Follow-up assessments were sent to participants after each live activity to determine retention of knowledge and whether knowledge was translated into practice at follow-up.

## **Results:**

### *Knowledge (Pre- & Post-activity Assessments)*

We compared Level 3 ONS Chapter data with that from HOPA symposia. ONS Chapters tend to occur in suburbs/rural areas, whereas national meetings are in metropolitan areas, involving clinicians from academic medical centers. Pre-test questions were given prior to the activity to assess baseline understanding and at post-test to assess knowledge gained from the activity. There was a statistically significant increase in knowledge from pre-test to post-test in all ONS and HOPA educational activities for the topics listed in Figures 1-4 (P<0.05).

### *Competence (Intent to Change and Anticipated Barriers)*

Top changes participants intended to make in practice were similar across the activities, with a few differences:

- Share information learned with colleagues/members of the interprofessional team
- Educate patients/caregivers regarding BTK inhibitor adverse events

- Consider use of BTK inhibitors in appropriate patients (GR series and ASCO Chapters)
- Educate colleagues/members of the interprofessional team about safety/efficacy of BTK inhibitors (ONS Chapters & HOPA Symposia)

*Top barriers participants anticipated facing in practice were:*

- Staying current with rapidly evolving clinical data/guidelines
- Lack of patient adherence to oral chemotherapy
- Formulary/insurance restrictions
- Lack of knowledge regarding mitigating resistance to BTK inhibitors (HOPA Symposia)

**Conclusions:** Participant knowledge related to the differentiating between BTK inhibitors, familiarity with adverse event profiles, and proper management of adverse events were assessed in the ONS Chapter series and HOPA Symposia. In all activities, there were statistically significant increases in knowledge for these topics from pre-test to post-test, demonstrating the impact of our education across all practice settings.

-Due to COVID-19, our live educational activities have been converted to a virtual format. HOPA 2020 was the first to go virtual and had similar educational outcomes to our live activities.

-91% of participants stated that they would make a practice change as a result of these educational activities. The top changes participants intended to make in practice were to share information learned with colleagues and to educate patients/caregivers about BTK inhibitor adverse events.

-Barriers to change were most commonly cited by the nursing audience. However, top intended changes were similar among the different professions.