ANALYSIS GROUP

Raising the Standard in HEOR

# Analysis Group Posters and Presentations

ISPOR EUROPE 2024 | NOVEMBER 17–20 | BARCELONA, SPAIN

**Analysis Group's health economics and outcomes research (HEOR) professionals have extensive experience helping clients quantify product value in a dynamic and rapidly changing marketplace.**

This year, we are pleased to present an educational symposium and eight research posters. Please find details below.

*If time permits, please say hello to our team at Booth #1001.*

# ISPOR Europe 2024 Analysis Group Presentation

**EDUCATIONAL SYMPOSIUM**

**Tuesday, November 19 | 11:45 a.m.–12:45 p.m. | Barcelona International Convention Center, Room 115**

## Advancing Evidence-Based Medicine With Generative AI (GenAI)

GenAI is revolutionizing HEOR and RWE by offering innovative methods to process and analyze vast datasets, model complex health economics phenomena, and enhance decision-making processes. GenAI tools powered by large language models (LLMs) facilitate the development of a deeper and more comprehensive understanding of diseases and treatment outcomes, and significantly improve the extraction of insights from diverse data sources such as electronic health records, claims data, and scientific literature. By harnessing the power of GenAI, researchers and practitioners in the field are unlocking new possibilities for advancing health care innovation and improving patient care. Participants in this symposium will explore the frontiers in GenAI, discuss key developments and challenges, and present examples of GenAI's applications in HEOR and RWE research. Among these examples is Analysis Group's own proprietary GenAI platform, AGHealth.ai, which excels in text classification, research summarization, and rapid data analysis. GenAI can also streamline the automated screening of research published in various languages by providing accurate translations and summarizations, thereby informing decision making with comprehensive insights across diverse sources. These GenAI-powered capabilities have greatly improved the efficiency of HEOR and RWE research and offered powerful and creative insights into health care data and literature. The introduction of this and similar GenAI platforms is set to further empower the health care sector, offering more effective and efficient tools to researchers for streamlining complex analyses, enhancing research accuracy, facilitating evidence-based decision making, and deepening overall understanding of complex diseases and treatments, ultimately leading to more effective health care solutions and policymaking.

**Presenters:**

Eric Q. Wu, Ph.D.; *Managing Principal, Analysis Group*

Jimmy Royer, Ph.D.; *Principal, Analysis Group*

Rajeev Ayyagari, Ph.D.; *Vice President, Analysis Group*

Song Wang, Ph.D.; *Head of Evidence Generation and Publication, Growth & Emerging Markets, Takeda*

# ISPOR Europe 2024 Analysis Group Research Posters

## POSTER SESSION 2

**Monday, November 18 | 4:00–7:00 p.m.**

### Developing and Validating Predictive Models of Vaccine Hesitancy Among Parents in the United States

**Objectives:** We used machine learning to better understand the factors that drive parental decision-making with respect to vaccinating their children.

**Conclusions:** This study introduced an effective machine learning approach to help providers and policy makers understand and monitor factors that shape attitudes and influence behaviors towards vaccination, and disentangle how parents interpret information discussed in shared clinical decision-making.

**Authors:** Vice Presidents Yan Song and Oscar Patterson-Lomba, Associate Arshya Feizi, Analyst Tayler Li, and researchers from Merck

*Funding for this study was provided by Merck.*

### Temporal Trends in Vaccination and Antibiotic Use Among Young Children in the United States, 2000-2019

**Objectives:** To describe temporal trends in vaccine uptake, rates of antibiotic prescriptions, and incidence of antibiotic-treated respiratory tract infections in children <5 years of age in the United States (US).

**Conclusions:** During 2000-2019, as uptake of vaccines increased, antibiotic prescriptions and antibiotic-treated respiratory tract infections declined. The trends observed in this ecologic study support the notion that vaccination programs may contribute to reduced antibiotic use in young children. These findings align with and strengthen similar conclusions drawn from prior controlled analyses conducted in smaller samples. While various factors besides vaccination may have influenced antibiotic use, future research using longitudinal patient-level data is warranted to further validate this association.

**Authors:** Managing Principal James Signorovitch; Vice President Yan Song; Managers Qing Liu and Nicolae Done; Associate Travis Wang; and researchers from Merck; MSD, Value & Implementation Outcomes Research; and the University of Louisville School of Medicine

*Funding for this study was provided by Merck.*

## Updated Cost-Effectiveness Analysis of Pembrolizumab as an Adjuvant Therapy for Renal Cell Carcinoma After Nephrectomy in the United States

*Identified as a semifinalist for a Research Presentation Award (Top 5%)*

**Objectives:** Pembrolizumab was approved by the US Food and Drug Administration as adjuvant treatment of renal cell carcinoma (RCC) at intermediate-high or high risk of recurrence after nephrectomy or after nephrectomy and resection of metastatic lesions, based on prolonged disease-free survival (DFS) versus placebo in the phase 3 KEYNOTE-564 trial. This study aimed to conduct an updated cost-effectiveness analysis of adjuvant pembrolizumab versus routine surveillance alone for RCC post-nephrectomy, incorporating longer-term data from the third interim analysis of KEYNOTE-564 that showed significantly improved overall survival with pembrolizumab.

**Conclusions:** When incorporating more mature survival data, pembrolizumab continued to be associated with LY and QALY gains and was found cost-effective relative to routine surveillance as an adjuvant treatment of RCC.

**Authors:** Vice President Arielle Bensimon, Manager Emily Gao, and researchers from Merck

*Funding for this study was provided by Merck.*

# POSTER SESSION 4

**Tuesday, November 19 | 4:00–7:00 p.m.**

## Carfilzomib in Combination With Dexamethasone and Daratumumab (KdD) Versus Carfilzomib in Combination With Lenalidomide and Dexamethasone (KRd) in Relapsed and/or Refractory Multiple Myeloma: An Indirect Treatment Comparison

**Objectives:** An indirect treatment comparison was performed to compare progression-free survival (PFS) and overall survival (OS) between carfilzomib, dexamethasone, and daratumumab (KdD) and carfilzomib, lenalidomide, and dexamethasone (KRd) in patients with relapsed and/or refractory multiple myeloma (R/RMM), given the absence of head-to-head trials comparing the two regimens. The analysis was conducted for both the overall population and a lenalidomide-exposed (len-exposed) subgroup, considering the increasing use of lenalidomide (len) in R/RMM treatment.

**Conclusions:** In the overall population, KdD and KRd are equally effective, with a numeric trend favoring KdD for long-term OS beyond cycle 18. Findings in the len-exposed subgroup align with those observed in the overall population.

**Authors:** Managing Principal Hongbo Yang, Managers Xinglei Chai and Mandy Du, Associate Shimin Bi, and researchers from Amgen

*Funding for this study was provided by Amgen.*

## Characteristics, Treatments, and Clinical Outcomes of Patients With Ornithine Transcarbamylase Deficiency in the United States

**Objectives:** This study aims to describe the characteristics, treatments, and outcomes of patients with ornithine transcarbamylase deficiency (OTCD), a rare urea cycle disorder, causing accumulation of nitrogen, in the form of ammonia, leading to hyperammonemic events (HAEs) and long-term neurological/cognitive complications.

**Conclusions:** Real-world evidence demonstrates a high symptomatic burden and HAE/crisis event rates, indicating a significant clinical burden in OTCD patients.

**Authors:** Vice President Fan Mu, Manager Qing Liu, Associate Ryan Simpson, Senior Analyst Abigail Zion, Analyst Zoey Kang, and researchers from Moderna

*Funding for this study was provided by Moderna.*

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## Impact of Patient Recall and Reporting Intervals on Real-World Attack Reductions After Berotralstat Initiation in Hereditary Angioedema Patients Without C1-Inhibitor Deficiency

**Objectives:** To evaluate hereditary angioedema (HAE) attacks before and after initiation of berotralstat, a targeted oral long-term prophylaxis, among HAE patients without C1-inhibitor deficiency using 30-day and 90-day baseline recall periods.

**Conclusions:** Berotralstat was associated with significant and sustained reductions in attack rates among HAE patients without C1-inhibitor deficiency in the US using either 30-day or 90-day baseline recall periods.

**Authors:** Principal François Laliberté, Manager Sean MacKnight, Associate Robert Schell, and researchers from BioCryst Pharmaceuticals

*Funding for this study was provided by BioCryst Pharmaceuticals.*

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## Patient Preferences for the Treatment of ER+/HER2- Metastatic Breast Cancer: A Discrete Choice Experiment

**Objectives:** To assess patient preferences for specific attributes of ER+/HER2- metastatic breast cancer (mBC) treatments.

**Conclusions:** Understanding patient preferences may help improve treatment decisions. For the ER+/HER2- mBC patients surveyed in this DCE, the most valued treatment attributes were efficacy defined as time on treatment while disease remains stable before worsening (PFS), being targeted to a specific mutation followed by a manageable and tolerable safety profile and a convenient route of administration.

**Authors:** Managing Principal Elyse Swallow, Managers Erin Cook and Yao Wang, Senior Analyst Hana Akbarnejad, Analyst Kelvin Tamakloe, and researchers from Research Advocacy Network, Menarini Group, and Rush University Cancer Center

*Funding for this study was provided by Menarini Group.*

## POSTER SESSION 5

**Wednesday, November 20 | 9:00–11:30 a.m.**

### Real-DMD: Caregiver Baseline Characteristics From an Electronic Survey of Long-Term Real-World Experiences of Patients With Duchenne Muscular Dystrophy (DMD)

**Objectives:** DMD is a rare, progressive neuromuscular disorder primarily affecting young males, leading to muscle weakness and functional decline. Caring for patients with DMD can impact caregivers' physical and psychological well-being and ability to work. REAL-DMD is a real-world, observational, prospective, longitudinal cohort study surveying caregivers of DMD patients on caregiving experience and patient function over time. Caregiver characteristics and experiences at baseline are reported.

**Conclusions:** REAL-DMD baseline caregiver findings provide insights into the characteristics of caregivers of ambulatory DMD patients in a real-world setting. Findings indicate impacts on mental health and ability to work, along with substantial time commitments. Longitudinal data from REAL-DMD will characterize changes in caregiver impact over time as the care recipients' disease progresses.

**Authors:** Managing Principals Edward Tuttle and Min Yang, Manager Bruno Martins, Associate Fan Yang, Senior Analyst Jessie Lan, and researchers from Sarepta Therapeutics

*Funding for this study was provided by Sarepta Therapeutics.*