## 6ER-001 HEALTHCARE RESOURCE UTILISATION AND COSTS OF INTRAVITREAL RANIBIZUMAB OR AFLIBERCEPT VS. DEXAMETHASONE FOR DIABETIC MACULAR EDEMA IN TAIWAN

[1]HY Chen*, [2]SC Shao. [1]*Linkou Chang Gung Memorial Hospital, Department of Pharmacy, Taoyuan, Taiwan R.O.C*; [2]*Keelung Chang Gung Memorial Hospital, Department of Pharmacy, Keelung, Taiwan R.O.C*

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**Background and Importance** Treatment options for diabetic macular edema (DME) include intravitreal anti-vascular endothelial growth factor (anti-VEGF) drugs and dexamethasone implant (DEX-implant), both with their own treatment pros and cons. To date, few studies have examined the healthcare resource utilisation and medical costs associated with these two drug classes for DME treatment.
**Aim and Objectives** To compare DME-related healthcare utilisation and medical costs of patients with DME receiving intravitreal anti-VEGF drugs or DEX-implant in clinical practice.
**Material and Methods** We conducted a retrospective cohort study by analysing the largest multi-institutional electronic medical records database in Taiwan. We included adult patients with DME newly receiving intravitreal anti-VEGF drugs (ranibizumab and aflibercept), and DEX-implant during 2017–2021. To ensure the homogeneous comparisons, we apply the 1:1 propensity score matching approach to control the potential confounders. The primary outcome was the 1-year DME-related healthcare utilisation and direct medical cost per patient with DME that was reimbursed by Taiwan's National Health Insurance. We used the mean ± standard deviation to present descriptive statistics and applied t-tests to determine statistical differences between the two treatment groups for continuous outcomes.
**Results** We included a total of 214 patients with DME newly receiving intravitreal anti-VEGF drugs (n=107) and DEX-implant (n=107). The mean age (67.0±9.0 vs. 67.0±12.8 years) and HbA1c (7.6±1.1 vs. 7.7±1.3%) and eGFR levels (70.5±26.7 vs. 70.1±22.0 mL/min/1.73m2) were similar for the two treatment groups. The average outpatient medical cost per person for eye care was lower for the DEX-implant group (NTD 81,838± 54,752 vs. 105,109±62,481; p=0.004), compared to the anti-VEGF drug group during the 1-year follow-up period. The average intravitreal injections per person for eye care were lower for the DEX-implant group (1.8±1.4 vs. 3.9±2.6; p<0.001), compared to the anti-VEGF group, during the 1-year follow-up period. However, patients with DEX-implant received more pneumotonometry (3.3±3.7 vs. 2.0 ±2.6; p=0.004), compared to the anti-VEGF drug group, during the 1-year follow-up period.
**Conclusion and Relevance** Compared to the anti-VEGF drug group, DME patients with intravitreal DEX-implant were associated with lower average direct outpatient medical costs for eye care and lower number of intravitreal injections during the first year of treatment in Taiwan.

### REFERENCES AND/OR ACKNOWLEDGEMENTS

**Conflict of Interest** No conflict of interest.

## 6ER-002 POSITIVE PREDICTIVE VALUES OF ANAPHYLAXIS DIAGNOSIS IN CLAIMS DATA: A MULTI-INSTITUTIONAL STUDY IN TAIWAN

[1]SC Shao*, [2]SC Liao. [1]*Keelung Chang Gung Memorial Hospital, Department of Pharmacy, Keelung, Taiwan R.O.C*; [2]*Keelung Chang Gung Memorial Hospital, Department of Emergency Medicine, Keelung, Taiwan R.O.C*

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**Background and Importance** Real-world data sources can facilitate essential understanding of the epidemiological features of anaphylaxis. However, the accuracy of case-identifying definitions based on diagnosis codes for anaphylaxis in healthcare databases remains understudied.
**Aim and Objectives** To evaluate the accuracy of International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes to identify anaphylaxis in claims data from the largest healthcare system in Taiwan.
**Material and Methods** We conducted a cross-sectional study analysing claims data from the largest multi-institutional healthcare system in Taiwan from 2017 to 2021. We included patients with incident anaphylaxis identified by either ICD-10-CM codes for anaphylaxis (Group 1) or ICD-10-CM codes for severe allergic or drug adverse events and additional modifier codes for acute allergy events (e.g., epinephrine, intramuscular or intravascular injection) (Group 2). We randomly selected 20% of the cases to determine the positive predictive value (PPV) of anaphylaxis case-identifying definitions in Groups 1 and 2 after independent review of electronic medical records by two physicians. The clinical criteria for anaphylaxis, proposed at the Second National Institute of Allergy and Infectious Disease/Food Allergy and Anaphylaxis Network, served as the gold standard to confirm anaphylaxis diagnosis (Groups 1 and 2).
**Results** From the original cohort (n=2,176), we randomly selected 433 patients (20%) with either a diagnosis of anaphylaxis (Group 1), or a diagnosis of severe allergic and drug adverse events with additional modifier codes for acute allergy events (Group 2). In Group 1, we judged 135/170 patients as true anaphylaxis cases (median age: 47 years; female: 46.5%), giving a PPV of 79.4% (95% CI: 73.3–85.5). In Group 2, we judged 47/263 patients as true anaphylaxis cases (median age: 48 years; female: 54.0%), giving a PPV of 17.9% (95% CI: 13.3–22.5). The underlying causes for false-positive anaphylaxis identification in Group 2 were urticaria (76.7%) and angioedema (23.4%).
**Conclusion and Relevance** Acceptable PPVs were observed when anaphylaxis cases were identified by ICD-10-CM codes for anaphylaxis, but not by ICD-10-CM codes for severe allergic or drug adverse event with additional modifier codes for acute allergy events. Our multi-institutional findings could serve as a fundamental reference for further studies of anaphylaxis based on real-world healthcare databases.

### REFERENCES AND/OR ACKNOWLEDGEMENTS

**Conflict of Interest** No conflict of interest.