PA-396

# Patient Characteristics, Healthcare Utilization and Costs in Multiple Myeloma by Treatment Class Exposure – A German Claims Data Study

Katja Greth,[1] Moritz Lehne,[1] Antje Mevius,[2] Didem Aydin,[3] Mugdha Gokhale,[4] Alexander Russell[5]

[1]Cytel Inc, Berlin, Germany; [2]Institut für Pharmakoökonomie und Arzneimittellogistik e.V. (IPAM), Wismar, Germany; [3]Pfizer Inc, Istanbul, Türkiye; [4]Pfizer Inc, Collegeville, PA; [5]Pfizer R&D UK Ltd, Sandwich, UK

## Objectives

To assess the **real-world burden of disease in incident patients with multiple myeloma (MM)** in Germany, stratified by **double- vs triple-class exposure** (DCE and TCE, respectively)

## Conclusions

German claims data shows that both DCE and TCE are associated with a **substantial healthcare resource use (HCRU) burden** for patients, including:

- **Multiple visits** to specialists and general practitioners (GPs) each month
- A high probability of **hospitalization** and need for **supportive care**

**New therapies** that reduce the frequency of touchpoints with the healthcare system, e.g., by prolonging time in stable remission or reducing adverse event management, can **save costs, time, and alleviate the patient and caregiver burden**

## Background

- MM accounts for 1% of new cancer diagnoses and 10% of hematological malignancies globally, with an increasing incidence in the US and Europe[1,2]
- Treatment typically includes combinations of proteasome inhibitors (PIs), immunomodulatory drugs (IMIDs), and monoclonal antibodies (mAbs)[3]
- Newer options include bispecific antibodies (BsAbs) and CAR T-cell therapies

## Methods

- This was a retrospective cohort study, using a German claims database (AOK PLUS) covering ≈3.5 million patients from 2010 to 2022
- Patients with MM were identified based on ICD-10 GM codes (C90.00) and followed-up for one year (or earlier death)
- To capture all treatments, only newly diagnosed patients were included. This was ensured by requiring a minimum diagnosis-free period of two years before the first MM diagnosis
- Additionally, patients were required to have at least one MM-related treatment code during follow-up to exclude patients with smoldering MM or monoclonal gammopathy of undetermined significance (MGUS)
- Depending on the number of treatment classes (PIs, IMIDs, mAbs) received during follow-up, patients were categorized as DCE or TCE
- Patient characteristics, HCRU, and costs per patient-year (PPY) were analyzed descriptively

## Results

### PATIENT CHARACTERISTICS

- 1849 incident MM patients were identified (incidence rate 4.8/100,000)
  - 1250 (67.6%) of these patients received fewer than two of the defined treatment classes
  - Categorizing the patients by treatment class exposure resulted in 599 DCE patients (32.4%) and 126 TCE patients (6.8%, **Table 1**)
- The mean age and Charlson Comorbidity Index (CCI) decreased with increasing exposure to treatment classes (**Table 1**):
  - The mean age of the total patient population was 71.3 years, 68.7 years for the DCE patient population, and 65.7 years for the TCE patient population
  - The mean CCI decreased from 6.9 (total patient population) to 5.9 and 5.6 (DCE and TCE patient population, respectively)
- While approximately half of the total and DCE patient population were male (52.4% and 52.3%, respectively), this proportion was higher in the TCE patient population (63.5%, **Table 1**)

**Table 1. Patient characteristics stratified by treatment class exposure**

| | Total | DCE | TCE |
|---|---|---|---|
| Patient population, n (%) | 1849 | 599 (32.4) | 126 (6.8) |
| Male, n (%) | 968 (52.4) | 313 (52.3) | 80 (63.5) |
| Mean (SD) age, years | 71.3 (10.3) | 68.7 (10.5) | 65.7 (11.0) |
| Mean (SD) CCI, points | 6.9 (3.6) | 5.9 (3.6) | 5.6 (3.1) |

CCI=Charlson Comorbidity Index; DCE=double-class exposure; SD=standard deviation; TCE=triple-class exposure

### COSTS PER PATIENT YEAR

- Costs PPY for outpatient visits to GPs, and specialists (hematology, oncology, or radiology) decreased with increasing treatment class exposure (**Table 2**):
  - Costs PPY for outpatient visits were 821.01€ for the total patient population, 800.77€ for DCE patients, 453.24€ for TCE patients
- Prescription costs PPY increased with increasing exposure to treatment classes (**Table 2**):
  - From 47,188.81€ for the total patient population to 77,329.01€ for DCE patients and 127,216.20€ in TCE patients
  - For TCE patients, prescription costs PPY were more than five-fold higher than hospitalization costs PPY

**Table 2. Costs PPY stratified by treatment class exposure**

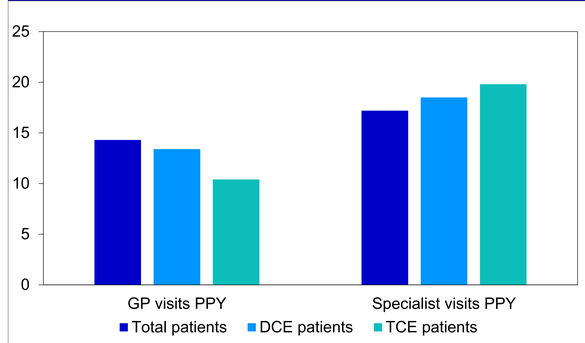
| | Total | DCE | TCE |
|---|---|---|---|
| Outpatient visits PPY, € | 821.01 | 800.77 | 453.24 |
| MM-related hospitalizations PPY, € | 30,935.24 | 37,679.66 | 23,345.36 |
| Prescriptions PPY, € | 47,188.81 | 77,329.01 | 127,216.20 |

DCE=double-class exposure; PPY=per patient year; TCE=triple-class exposure

### HEALTHCARE RESOURCE USE

- Across all treatment exposure groups, patients visited the GP or specialist multiple times per month (**Figure 1**)
- While the frequency PPY for GP visits decreased with increasing treatment class exposure, the frequency of visits to specialists (hematology, oncology, or radiology) increased (**Figure 1**):
  - The frequency PPY for GP visits was 14.3 for all patients, 13.4 for DCE patients, and 10.4 for TCE patients
  - The frequency of specialist visits PPY was 17.2 for all patients, 18.5 for DCE patients, and 19.8 for TCE patients

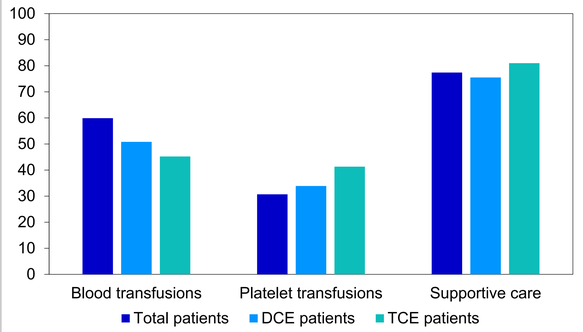
**Figure 1. Visits to the GP and specialists PPY stratified by treatment class exposure**




DCE=double-class exposure; GP=general practitioner; PPY=per patient year; TCE=triple-class exposure

- The proportion of patients with blood transfusions decreased with increasing treatment class exposure (**Figure 2**):
  - 59.9% of the total patient population received at least one blood transfusion, compared with 50.8% of DCE patients and 45.2% of TCE patients
- While on a generally lower level, the proportion of patients with platelet transfusions increased with increasing treatment class exposure (**Figure 2**):
  - 30.7% of the total patient population received at least one platelet transfusion, compared with 33.9% of DCE patients and 41.3% of TCE patients
- Most patients were treated at least once with supportive care, i.e., antibacterial or antifungal treatment or central nervous catheter (CVC) placement, indicating either an increased infection risk or the need for a safe and effective delivery of therapy (**Figure 2**):
  - The proportion of patients receiving supportive care at least once during follow-up was 77.4% and 75.5% for the total patient population and DCE patients, and 81.0% for TCE patients

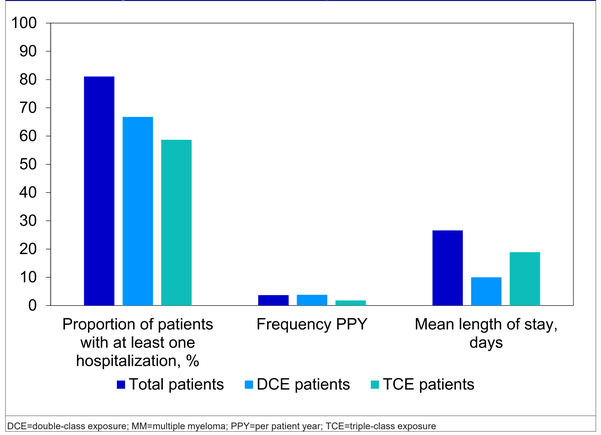
**Figure 2. Proportion of patients receiving supportive care, blood, or platelet transfusions stratified by treatment class exposure**




DCE=double-class exposure; GP=general practitioner; PPY=per patient year; TCE=triple-class exposure

- The majority of patients had at least one MM-related hospitalization during the study period (**Figure 3**)
  - The proportion of hospitalized patients decreased from 81.1% in the total patient population to 66.8% in DCE patients and 58.7% in TCE patients
  - The frequency of MM-related hospitalizations PPY varied from 3.7 for all patients, 3.8 for DCE patients, and 1.8 for TCE patients
  - The mean length of stay was longest for the total patient population (26.6 days) and shortest for DCE patients (10.0 days)

**Figure 3. MM-related hospitalizations (proportion of patients, frequency PPY, and mean length of stay) stratified by treatment class exposure**




DCE=double-class exposure; MM=multiple myeloma; PPY=per patient year; TCE=triple-class exposure

**Electronic Poster**

Please scan this Quick Response (QR) code with your smartphone app to view this poster. If you do not have a smartphone, access the poster via the internet at: https://scientificpubs.congressposter.com/p/bhbd2p5k50m8ttm4



**References: 1**. Firth J. (ed). Clin Med 2019;19:58-60. **2.** Padala SA, et al. Med Sci 2021;9:3. **3.** Rajkumar SV. Am J Hematol 2024;99:1802-1824.

**Acknowledgments:** This study was sponsored by Pfizer. Editorial support was provided by Nucleus Global and was funded by Pfizer.

**Disclosures: KG** and **ML**: employment at Cytel Inc., a research consultancy receiving funding from various pharmaceutical companies. **AM**: employment at IPAM e.V., a scientific institute receiving funding from various pharmaceutical companies. **DA**, **MG**, and **AR**: employment at Pfizer Inc. and may own Pfizer stock.

**Contact:** Alexander Russell, alexander.russell@pfizer.com



Presented at the 2025 IMS Annual Meeting
September 17-20, 2025 | Toronto, ON, Canada