Treatment patterns, healthcare resource utilization (HCRU), and associated costs in patients with newly diagnosed metastatic urothelial carcinoma (mUC): a real-world analysis of German claims data

M. Kearney,1 F. Hardstock,1 J. Krieges,2 R. Knapp,1 A. Stary,3 B. Deiters,4 U. Maywald,4 U. Osowski,1,2 G. Niepsuch,1 M.-O. Grimm,1 T. Willecke
1Herzkrankenhaus der Versorgungsregion Berlin, Germany; 2Charité Berlin, Germany; 3VSG-Sanitaetskliniken AG, Dresden, Germany; 4Drug Department, AOK PLUS, Dresden, Germany; 5Herz-krankenhaus DKG Creativ; Klinik-Dresden, Germany, an affiliate of Merck, Darmstadt, Germany; 6University Hospital and Medical Faculty of the Heinrich-Heine University, Düsseldorf, Germany; 7Fraunhofer IVI, Aachen, Germany; 8Wissenschaftliches Zentrum der AOK Berlin, Germany

*Affiliation at the time of study.

METHODS
2.32 (1.76-2.69)

RESULTS

A total of 3,228 patients met the prespecified selection criteria and were therefore included in the main cohort (Figure 2): During the 12-month follow-up period, the identified patients with mUC were followed for an average of 0.6 years (min-max: 0.2-0.8 years).

The overall survival rate of mUC is low, especially if left untreated. Nevertheless, phase 3 clinical studies have reported that only 30%-40% of patients start 1L systemic therapy after diagnosis (Table 1). The morbidity level was considerable, shown by a mean (SD) Charlson Comorbidity Index of 17.4 (11.4).

In the first 12 months following initiating systemic treatment was initiated in 1,288 patients (39.9%); the mean observation period in the treated cohort was 0.8 years.

Table 1. Patient characteristics and comorbidities

Among these patients, 825 (64.2%) received PB-CT, 139 (10.8%) received IO, and 322 (25.0%) received non–PB-CT as 1L systemic therapy after diagnosis.

Five (2.5%) of the patients died during the 12-month follow-up period, which accounted for 34.4% of all deaths in the cohort. The most common cause of death was metastatic disease at diagnosis (3.5%), followed by malignant neoplasms of the respiratory system (1.6%) and other malignant neoplasms (1.0%).

This study was sponsored by the healthcare business of Merck KGaA, Darmstadt, Germany (CrossRef Funder ID: 10.13039/100009945), as part of an alliance between the healthcare business of Merck KGaA, Darmstadt, Germany, an affiliate of Merck, Darmstadt, Germany, and UCB, Brussels, Belgium.

PB-CT, immunotherapy, and maintenance: platinum-based chemotherapy (PB-CT), IO, and non–PB-CT (maintenance).

n=1,286

PB-CT, IO, and non–PB-CT: €47,281, €78,118, and €36,099, respectively (mean: €58,467; SD: €25,781; range: €0-€172,198).

Treated cohort

Main cohort

PB-CT cohort

IO cohort

PB-CT–CT cohort

n=825 (64.15%)
n=139 (10.81%)
n=322 (25.04%)

Figure 1. Study overview

1. This retrospective claims data study characterized real-world treatment patterns, HCRU, and associated costs of patients with mUC in Germany

2. This analysis describes real-world HCRU and cost of mUC in Germany, where only approximately 40% of patients received systemic therapy following incident mUC diagnosis

3. The study shows that mUC is associated with significant HCRU and related costs, regardless of whether patients with mUC received systemic treatment

4. The evolving treatment landscape for mUC, additional treatment options for older patients and those with comorbidities are becoming more readily available

5. Additional treatment options, such as avelumab first-line (1L) maintenance,1,2 were approved after the end of the observation period of this study. Therefore, further research is needed to understand how emerging therapies affect HCRU and cost estimates for the mUC population

BACKGROUND

UC is the most common malignancy involving the urinary system worldwide and the tenth most common cancer type.1

In Germany, approximately 30,000 patients (>18 years with invasive tumor) were newly diagnosed with UC in 2018, and 29% of patients with UC had advanced or metastatic disease at diagnosis.2

The overall survival rate of mUC is low, especially if left untreated. Nevertheless, phase 3 clinical studies have reported that only 30%-40% of patients start 1L systemic therapy after diagnosis.2

The recent approval of checkpoint inhibitor immunotherapy (IO) agents as 1L and second-line treatment in patients with locally advanced or mUC has transformed the treatment landscape.

Consequently, payers, hospitals, and clinicians are interested in understanding HCRU and costs associated with the treatment of patients with mUC using existing therapies in order to understand key cost drivers impacting patient care costs.

Patients who received ≥1 application/prescription of a systemic cancer treatment within the first 12 months after the index diagnosis (mUC) were assigned to the treated cohort. Furthermore, 3-mutually exclusive subgroups were deidentified according to the 1L treatment received (excluding maintenance): platinum-based chemotherapy (PB-CT), IO, and non–PB-CT.

METHODS

Two statutory health insurance claims databases (AOK PLUS and GWH, 2015-2020, 6.1 million insured throughout Germany) were used to identify continuously insured adults with an incident mUC diagnosis (ICD-10 C63-C66 and C77-C79) from 2015-2019 (Figure 1). Patients with other malignant tumors were excluded (ICD-10 C34, malignant neoplasm of bronchus and lung; C18, malignant neoplasm of colon; C19, malignant neoplasm of the rectosigmoid junction; C20, malignant neoplasm of the rectum).

Among these patients, 825 (64.2%) received PB-CT, 139 (10.8%) received IO, and 322 (25.0%) received non–PB-CT as 1L systemic therapy after diagnosis (Table 1). The morbidity level was considerable, shown by a mean (SD) Charlson Comorbidity Index of 17.4 (11.4).

Figure 2. Patient attrition chart: inclusion criteria for the main cohort

DISCLOSURES

1. U. Osowski, M. Kearney, with mUC received systemic treatment

2. M.-O. Grimm, A. Starry, is an employee of Cytel and has served in a consulting or advisory role for the healthcare business of Merck KGaA, Darmstadt, Germany.


5. R. Knapp is an employee of the healthcare business of Merck KGaA, Darmstadt, Germany and holds stock and other ownership interests in Novartis, Merck KGaA, Darmstadt, Germany.

6. F. Hardtstock is an employee of GWQ ServicePlus AG.

7. * C34, malignant neoplasm of bronchus and lung; C18, malignant neoplasm of colon; C19, malignant neoplasm of the rectosigmoid junction; C20, malignant neoplasm of the rectum.

8. Treated cohort

Main cohort

PB-CT cohort

IO cohort

PB-CT–CT cohort

n=1,286

n=1,286

n=685

n=97

Figure 3. Healthcare costs PPY during the 12-month follow-up period

This study did not assess indirect financial and social costs in patients with mUC

LIMITATIONS

1. There is a minor risk of misclassification of disease status, as no data on the classification of malignant tumors are available in this context, it is worth mentioning that while most of the observed results in the databases were similar in percentage terms, there is a minor risk of misclassification of disease status, as no data on the classification of malignant tumors are available.

2. Since databases could not be agglomerated (and indeed, a meta-analysis technique was used), it was not possible to assess absolute median risks for mortality risk factors. Nevertheless, all other results could be presented in this agglomerated form.

3. This study did not assess indirect financial and social costs in patients with mUC

Poster No. RWD173. Presented at ISPOR 2023, May 7-10, 2023; Boston, MA.