Background and importance Different studies in the literature have demonstrated promising efficacy of cisplatin–gemcitabine for the treatment of metastatic breast cancer. Real life studies are commonly performed to confirm the results.

Aim and objectives To analyse cisplatin–gemcitabine effectiveness and safety in patients with metastatic breast cancer.

Material and methods A retrospective observational study was conducted in a university hospital. Patients treated with cisplatin–gemcitabine from January 2007 to February 2020 were included. The following variables were recorded: age, hormone receptor (HR), human epidermal growth receptor-2 (HER2) status, duration of treatment, number of cycles, number and type of previous chemotherapy regimens, progression free survival (PFS) and overall survival (OS), calculated by the Kaplan–Meier method, and adverse events (AEs). Data were obtained from the electronic clinical records and the software where the chemotherapy treatments are registered.

Results 56 patients were included, with a median age of 56.5 years (range 30–82). 40 patients (71%) were HR positive, 13 patients (23%) were triple negative and 6 patients (11%) were HER2 positive. At the time of data analysis, one patient was still receiving treatment with cisplatin–gemcitabine and 55 had finished treatment, with a median duration of 2.8 months (range 1–10). Patients had a median of two previous chemotherapy lines in metastatic stage (range 0–4). 85.7% of patients received cisplatin–gemcitabine as metastatic therapy in the secondline or later. The most common regimens used before cisplatin–gemcitabine in metastatic disease were: non-pegylated–liposomal doxorubicin (54.2%), nab–paclitaxel (37.5%), paclitaxel–bevacizumab (35.4%), eribulin (27.1%), epirubicin–docetaxel (18.8%), paclitaxel monotherapy (16.7%), docetaxel monotherapy (14.6%) and pegylated–liposomal doxorubicin (12.5%), with other regimens used less frequently. Median PFS and OS were 3.4 and 6.8 months, respectively. 51.8% of patients had any AE during treatment and the most frequent were anaemia (62%), neutropenia (31%), thrombocytopenia (24%), peripheral neuropathy (17.2%) and asthenia (10.3%). Six patients interrupted their treatment due to AEs.

Conclusion and relevance Cisplatin–gemcitabine was shown to be another effective treatment option in metastatic breast cancer. However, several studies in the literature have shown better results for PFS and OS. This may be due to differences in the baseline characteristics of the patients and the use of previous chemotherapy regimens. Cisplatin–gemcitabine was well tolerated and in most cases the AEs did cause interruption of treatment.