Contribution of Clinical Pharmacy Services in a Hematology/Oncology Inpatient Setting
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Purpose
Clinical pharmacists are contributing to the safe medication use by providing comprehensive management to patients and medical staff. However, little is known regarding their impact in oncology. The purpose of this prospective study was to document and evaluate the services of clinical pharmacists in a hematology/oncology inpatient setting.

Methods
Medication reviews concerning hospitalized adult cancer patients were performed twice a week during a 8-month period (May-December 2012), in a 52-bed hematology/oncology unit of a university hospital. Medications problems, interventions and acceptance rate by the oncologists were recorded by 2 pharmacists.

Results
During the study period, 2,572 prescriptions (including chemotherapy and support) of 212 adult cancer patients (mean age: 59.6 years) were analyzed. The pharmacists identified 255 drug-related problems (9.9% of the prescriptions) primarily related to anti-infective agents (166/255). Medications problems (n=255) included inappropriate medications (20.7%), inappropriate administrations (16.1%), underdosing (13.7%), lack of monitoring (12.1%), drug-drug interactions (10.9%), overdosing (7.8%), administration omissions (2.4%), side effects (1.2%). Interventions (n=255) led to drug dosing adjustments (25.1%), treatment discontinuations (20%), drug additions (15.7%), alternate routes of administration (14.5%), therapeutic drug monitoring (13.3%), replacement of a drug by another one (10.9%). Most (97.2%) of the interventions were accepted and implemented by the medical staff.

Conclusion
The integration of clinical pharmacy services resulted in drug specific interventions in 10% of the prescriptions of hospitalized adult cancer patients. Medication problems mostly concerned anti-infective agents. The intervention acceptance rate by oncologists was high. The outcome of care in the hematology/oncology inpatient setting remains to be measured.