Characterisation of potential drug-drug interactions in oncological patients treated with oral anticancer drugs

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Background and importance

Oral anticancer therapy have advantages over intravenous chemotherapy, such as greater comfort for patients. Although, the use of combination therapies or the administration of concomitant medications to treat patient comorbidities may increase the risk of drug interactions.

Aim and objectives

To determine the **prevalence, level of risk** and **type** of potential drug-drug interactions in oncological outpatients treated with oral anticancer therapy.

Material and methods

Retrospective observational study.
January 2019-October 2019

All patients who collected oral anticancer drugs in the pharmacy service of a third level university hospital during the study period were included.

Sociodemographic variables and active prescriptions in the last dispensing done, were collected in the Abucasis® program.

For the interaction analysis, the **Lexicomp® database** was used, recording the interactions classified as **C** (monitor therapy), **D** (consider therapy modification) or **X** (avoid combination).

Results

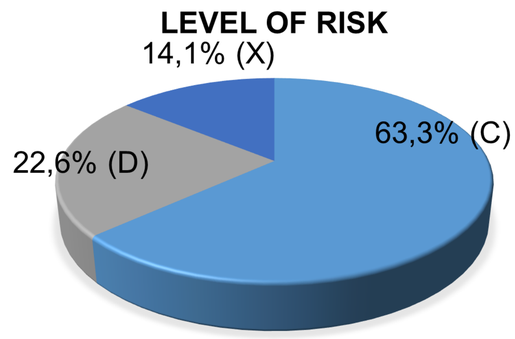
240 patients
53% women
Mean age 63 years

92,9% (n=223) of patients were in treatment with one or more **concomitant drugs** to cancer treatment.

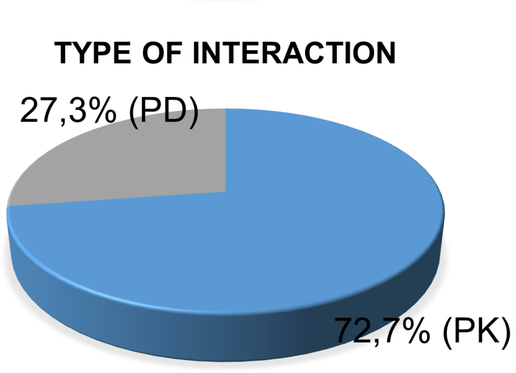
In **68%** (n=152) of these patients at least one potential drug-drug interaction was detected.

657 interactions detected

128 (19.3%) involved the chemotherapeutic agent



Corticosteroids, proton pump inhibitors, allopurinol, antiplatelets and oral anticoagulants were the drugs involved in the interactions classified as X.



*PK (pharmacokinetic interaction): mainly absorption impairment by modification of the gastric pH or the cytochrome P 450 enzymes.
*PD (pharmacodynamic interaction): mainly additive effects of toxicity (such as an increased risk of myelosuppression or QTc prolongation).

Conclusion and relevance

- The prevalence of potential drug-drug interactions in our patients was high; highlighting a high proportion of risk X.
- Pharmacological interactions detected involved commonly used drugs in patients, which may compromise the efficacy of anticancer therapy and expose the patient to a higher toxicity.
- After the study, the risk X interactions found were reported to the responsible physician.

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