

CDK 4/6 INHIBITORS – ANALYSIS OF POTENTIAL DRUG INTERACTIONS



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BACKGROUND AND IMPORTANCE

- Currently, **CDK4/6* inhibitors** (PALBOCICLIB (P), RIBOCICLIB (R) and ABEMACICLIB (A)) have an established role in the treatment of locally advanced or metastatic breast cancer (CMM) positive for hormone receptors (HR+) and Negative for human epidermal growth factor receptor 2 (HER2-). [1]
- Increasingly prolonged treatments, associated with various co-morbidities and the **concomitant use of medications**, dramatically increases the potential for **drug interactions** (DI). These situations may lead to dose reductions/discontinuations and therefore **sub-optimal treatment**. [2]

The **Hospital Pharmacist** is the medicine professional, who, integrated in the multidisciplinary team, can carry out this **medication review**, guaranteeing the **safety and efficacy** of the treatment.

*Cyclin dependent kinase 4/6 inhibitors

AIM AND OBJECTIVES

Analyze potential DIs of these drugs with the usual medication and define procedures to avoid and/or mitigate possible DIs in patients at our Institution.

MATERIAL AND METHODS

We included all adult patients with **HR+/HER2- CMM** undergoing **iCDK 4/6**, during July and August 2022

Computer program and consultation of clinical files (demographic data and concomitant medication).

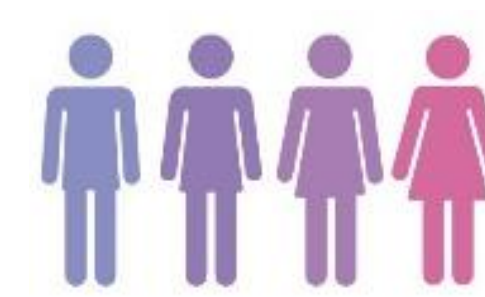
Interactions were identified and classified using the *Radbound UMC Liverpool University* computer platform

RESULTS

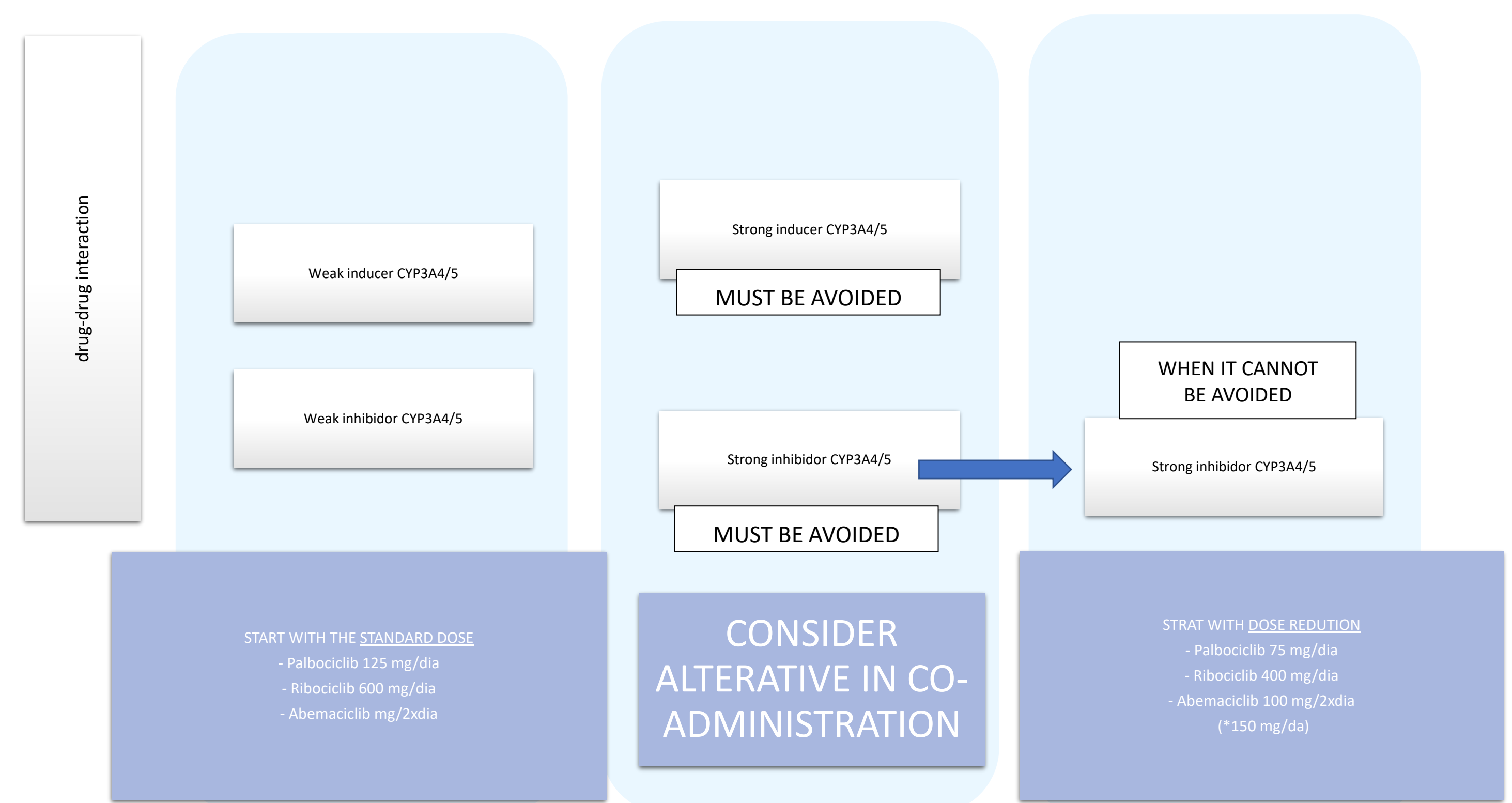
● INTERACTION NOT EXPECTED ● LOW POTENTIAL INTERACTION ● POTENTIAL INTERACTION ● DO NOT COADMINISTER ● N/D

Table 1: Examples of interactions detected in our Institution

	PALBOCICLIB	RIBOCICLIB	ABEMACICLIB
Tapentadol	●	●	●
Gabapentin	●	●	●
Loperamide	●	●	●
Zoledronate EV	●	●	●
Sucralfate	●	●	●
Magnesium metamizole	●	●	●
Fentanyl	●	●	●
Paracetamol	●	●	●
Lorazepam	●	●	●
Metoclopramide	●	●	●
Mirtazapine	●	●	●
Tramadol	●	●	●
Calcium carbonate	●	●	●
Escitalopram	●	●	●



- 125 ♀
- 51 (40,8%) R, 69 (55,2%) P e 5 (4%) A
- Age (average): 62,4 years (34- 86 years)
- 46 (36,8%) polimedicated (≥ 5 medicines)
- 10 (8%) did not take concomitant medication



- 403 interactions:** 96 (23.8%) low potential interactions, 266 (66%) unexpected interactions, 37 (9.2%) potential interactions, and 4 (1%) interactions (3 R and 1 P) in which there should be no co-administration of drugs;
- 109 records:** there is no information about possible drug interactions

CONCLUSÃO

- The complexity of these treatments and of the patient himself makes a **multidisciplinary approach** involving pharmacists and oncologists mandatory.
- This study made it possible to evaluate DIs with iCDK 4/6 in our Institution and generate evidence for the implementation of **pharmaceutical consultation** with a view to avoiding/minimizing possible DIs, being yet **another strategy** within the institution for the **effective and safe** use of these drugs.

BIBLIOGRAFIA

- [1] ABRAHAM, J. et al. Use of cyclin-dependent kinase 4/6 inhibitors for HR+, HER2-, metastatic breast cancer. *Breast Cancer Res Treat.* 2018
[2] Concurrent Use of Medications with Potential Drug–Drug Interactions: Real-World Analysis of Patients Treated with CDK4/6 Inhibitors. *Breast Cancer.* 2021

