### Introduction

- Adequate management of comorbidities and adverse events is necessary to maximize drug exposure and treatment benefit in patients with advanced breast cancer.

- Ribociclib is an orally bioavailable, selective inhibitor of cyclin-dependent kinases 4 and 6 (CDK4/6).

- The pharmacodynamic interactions between medications and supplements were also evaluated.

- Present here is an analysis of potential DDIs of common medicines and nutritional supplements.

### Methods

- This single-center retrospective chart review of patients (n=42) with advanced breast cancer identified the most commonly used drugs and supplements from 2/2016 to 10/2017, categorized by comorbidity.

- The potential for drug-drug and/or QT interval prolongation was assessed using available clinical pharmacology information listed in the following databases:
  - Lexicomp Online
  - PubChem
  - Memorial Sloan Kettering Cancer Center Integrative Medicine databases
  - A variation of Blockley’s Herbal Medicines Interactions was used to establish severity and recommendation for herbal product interaction with ribociclib.

- The pharmacodynamic interactions between medications and supplements were also evaluated for severity and clinical recommendations.

### Results

- The most common 120 prescription medicines and 32 nutritional supplements (eg, herbal medicines) evaluated for interaction but may cause nausea.

### Conclusions

- There are inadequate awareness and communication in the literature about safe coadministration of medications and nutritional supplements with ribociclib.

- Physicians should monitor patients carefully for adverse effects from concomitant medications and supplements.

### References


### Safe to use

| Acid-reducing agents* | Antihyperglycemic agents
|-----------------------|-------------------------|
| Aspirin | Glibenclamide | Insulin 
| Atenolol | Glipizide | Oral hypoglycemic agents
| Atorvastatin | Metformin | Thiazolidinediones
| Carvedilol | Rosiglitazone | Thiazolidinediones
| Clopidogrel | Sitagliptin | Thiazolidinediones
| Candesartan | Sitagliptin | Thiazolidinediones
| Coenzyme Q10 | Sitagliptin | Thiazolidinediones
| Dapagliflozin | Sitagliptin | Thiazolidinediones
| Diltiazem | Sitagliptin | Thiazolidinediones
| Ezetimibe | Sitagliptin | Thiazolidinediones
| Famotidine | Sitagliptin | Thiazolidinediones
| Fexofenadine | Sitagliptin | Thiazolidinediones
| Losartan | Sitagliptin | Thiazolidinediones
| Metformin | Sitagliptin | Thiazolidinediones
| Simvastatin | Sitagliptin | Thiazolidinediones
| Statins | Sitagliptin | Thiazolidinediones
| Statins | Sitagliptin | Thiazolidinediones
| Statins | Sitagliptin | Thiazolidinediones
| Statins | Sitagliptin | Thiazolidinediones

### With caution

| Acid-reducing agents* | Antihyperglycemic agents
|-----------------------|-------------------------|
| Beta blockers, alpha-2 adrenergic receptor agonists | Glyburide | Oral hypoglycemic agents
| Candesartan | Glimepiride | Thiazolidinediones
| Dapagliflozin | Glipizide | Thiazolidinediones
| Diltiazem | Metformin | Thiazolidinediones
| Ezetimibe | Placebos with ribociclib | Thiazolidinediones
| Famotidine | Sitagliptin | Thiazolidinediones
| Fexofenadine | Sitagliptin | Thiazolidinediones
| Losartan | Sitagliptin | Thiazolidinediones
| Metformin | Sitagliptin | Thiazolidinediones
| Simvastatin | Sitagliptin | Thiazolidinediones
| Statins | Sitagliptin | Thiazolidinediones
| Statins | Sitagliptin | Thiazolidinediones
| Statins | Sitagliptin | Thiazolidinediones
| Statins | Sitagliptin | Thiazolidinediones

### Prohibited

| Acid-reducing agents* | Antihyperglycemic agents
|-----------------------|-------------------------|
| Beta blockers, alpha-2 adrenergic receptor agonists | Glyburide | Oral hypoglycemic agents
| Candesartan | Glimepiride | Thiazolidinediones
| Dapagliflozin | Glipizide | Thiazolidinediones
| Diltiazem | Metformin | Thiazolidinediones
| Ezetimibe | Placebos with ribociclib | Thiazolidinediones
| Famotidine | Sitagliptin | Thiazolidinediones
| Fexofenadine | Sitagliptin | Thiazolidinediones
| Losartan | Sitagliptin | Thiazolidinediones
| Metformin | Sitagliptin | Thiazolidinediones
| Simvastatin | Sitagliptin | Thiazolidinediones
| Statins | Sitagliptin | Thiazolidinediones
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| Statins | Sitagliptin | Thiazolidinediones

ACE, angiotensin-converting enzyme; ARB, angiotensin receptor blocker; MATE1, multidrug and toxin extrusion protein 1; OCT2, organic cation transporter 2. *β-blockers with a higher potential for myopathy complications than the other medications listed.