

Prescription patterns of inducers and inhibitors of cytochrome P450 and their potential drug interactions in real-world. A cross-sectional study.

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Annex

Supplementary table 1. Disease groups and International Classification of Diseases 10th version codes

Disease groups	International Classification of Diseases 10th version (ICD-10) codes
Cardiovascular disorders	I050, I051, I052, I058, I059, I060, I061, I071, I072, I079, I08, I080, I081, I083, I088, I089, I10, I10X, I11, I110, I119, I12, I120, I129, I130, I131, I132, I139, I15, I150, I151, I152, I158, I159, I20, I200, I201, I208, I209, I21, I210, I211, I212, I213, I214, I219, I220, I228, I229, I24, I240, I248, I249, I25, I250, I251, I252, I254, I255, I256, I258, I259, I34, I340, I341, I342, I348, I349, I350, I351, I352, I358, I359, I37, I379, I38, I38X, I39, I390, I393, I42, I420, I421, I422, I48, I480, I481, I482, I483, I484, I489, I48X, I49, I490, I50, I500, I501, I509, Z450, Z458, Z459, Z95, Z950, Z952, Z953, Z954, Z955.
Digestive disorders	K21, K210, K219, K25, K250, K253, K257, K259, K26, K263, K267, K269, K27, K28, K284, K289, K29, K290, K291, K292, K293, K294, K295, K296, K297, K30, K30X, K508, K509, K58, K580, K581, K582, K583, K588, K589, K59, K590, K721, K729, K74, K745, K746, R11, R11X.
Endocrine disorders	E00, E000, E001, E009, E01, E018, E02, E02X, E03, E030, E031, E032, E034, E035, E038, E039, E05, E050, E051, E052, E058, E059, E060, E063, E065, E069, E10, E100, E101, E102, E103, E104, E105, E106, E107, E108, E109, E11, E110, E111, E112, E113, E114, E115, E116, E117, E118, E119, E12, E120, E121, E122, E123, E124, E125, E126, E127, E128, E129, E13, E131, E132, E133, E134, E135, E136, E137, E138, E139, E14, E140, E141, E142, E143, E144, E145, E146, E147, E148, E149, E200, E209, E210, E211, E212, E213, E28, E282, E66, E660, E661, E662, E668, E669, E75, E755, E756, E780, E781, E782, E783, E784, E785, E786, E788, E789, E890, E892.
Psychiatric disorders	F06, F063, F064, F20, F200, F201, F202, F203, F204, F205, F206, F208, F209, F21, F21X, F22, F220, F229, F23, F230, F231, F232, F233, F238, F239, F25, F250, F251, F258, F259, F28X, F29, F29X, F30, F300, F301, F309, F31, F310, F311, F312, F313, F314, F315, F316, F317, F318, F319, F32, F320, F321, F322, F323, F328, F329, F33, F330, F331, F332, F333, F334, F338, F339, F34, F340, F341, F348, F349, F381, F39, F39X, F40, F400, F401, F402, F408, F409, F41, F410, F411, F412, F413, F418, F419, F42, F420, F421, F422, F428, F429, F51, F510, F511, F512, F515, F518, F519, G47, G470, G471, G473, G474, G478, G479.
Neurological disorders	F00, F000, F001, F002, F009, F01, F010, F011, F012, F013, F018, F019, F02, F020, F023, F024, F028, F03, F03X, F70, F700, F701, F708, F709, F71, F710, F711, F718, F719, F72, F720, F721, F728, F729, F73, F730, F731, F738, F739, F78, F781, F788, F789, F79, F790, F791, F798, F799, G20, G20X, G30, G300, G301, G308, G309, G35, G35X, G40, G400, G401, G402, G403, G404, G405, G406, G407, G408, G409, G41, G410, G411, G412, G418, G419, G43, G430, G431, G432, G433, G438, G439, G458, G459, G460, G468, G500, G530, G546, G548, G55, G551, G552, G553, G558, G568, G569, G578, G579, G58, G580, G587, G588, G589, G59, G590, G598, G600, G603, G609, G618, G619, G62, G622, G628, G629, G63, G630, G631, G632, G633, G634, G635, G636, G638, I60, I602, I603, I604, I606, I607, I609, I610, I612, I613, I619, I620, I629, I63, I633, I634, I635, I636, I638, I639, I64, I64X, I65, I678, I679, I68, I680, I688, I69, I690, I691, I692, I693, I694, I698, M47, M471, M472, M50, M500, M501, M502, M503, M508, M509, M51, M510, M511, M512, M513, M518, M519, M531, M532, M533, M54, M541, M542, M543, M544, M792, R25, R251.
Respiratory disorders	I270, I272, J41, J410, J411, J418, J42, J42X, J431, J44, J440, J441, J448, J449, J45, J450, J451, J458, J459, J46, J46X, J47, J47X, J84, J841, J848, J849.
Rheumatologic disorders	E853, E858, E859, L400, L401, L405, L408, L409, L93, L930, L931, L932, L990, M05, M052, M053, M058, M059, M06, M060, M064, M068, M069, M070, M073, M075, M08, M080, M089, M100, M104, M109, M15, M150, M151, M152, M153, M154, M158, M159, M16, M160, M161, M162, M163, M164, M165, M166, M167, M169, M17, M170, M171, M172, M173, M174, M175, M179, M18, M180, M183, M185, M189, M19, M190, M191, M192, M198, M199, M300, M313, M318, M319, M32, M320, M321, M328, M329, M331, M332, M339, M340, M342, M348, M349, M35, M350, M352, M353, M45,, M45X, M468, M469, M797, M80, M800, M801, M802, M804, M805, M808, M809, M81, M810, M811, M812, M813, M814, M815, M816, M818, M819, M82, M820, M821, M828, Z966, Z981.

Supplementary table 2. Medications considered inhibitors or inducers of cytochrome P450.

Strong inducers	Apalutamide, carbamazepine, enzalutamide, phenytoin, phenobarbital, fosphenytoin, lumacaftor, lumacaftor-ivacaftor, mitotane, primidone, and rifampin.
Moderate inducers	Bexarotene, bosentan, cenobamate, dabrafenib, efavirenz, eslicarbazepine, etravirine, lorlatinib, modafinil, nafcillin, pexidartinib, rifabutin, and rifapentine.
Strong inhibitors	Atazanavir, ceritinib, clarithromycin, cobicistat (alone or associated), darunavir, idelalisib, indinavir, itraconazole, ketoconazole, lonafarnib, mifepristone, nefazodone, nelfinavir, ombitasvir-paritaprevir-ritonavir with or without dasabuvir, posaconazole, ritonavir (alone or associated), saquinavir, telithromycin, tucatinib, and voriconazole.
Moderate inhibitors	Amiodarone, aprepitant, berotralstat, cimetidine, conivaptan, crizotinib, cyclosporine, diltiazem, duvelisib, dronedarone, erythromycin, fedratinib, fluconazole, fosamprenavir, imatinib, isavuconazole, lefamulin, letermovir, netupitant, nilotinib, ribociclib, and verapamil.

Supplementary table 3. Inhibitors and inducers of cytochrome P450 drugs according to the pharmacological group.

Group	Drugs
Antiarrhythmics	Amiodarone, dronedarone
Antiemetics	Aprepitant, netupitant
Antiseizure medications	Carbamazepine, cenobamate, eslicarbazepine, phenytoin, phenobarbital, fosphenytoin, primidone
Antifungals	Fluconazole, isavuconazole, itraconazole, ketoconazole, posaconazole, voriconazole
Antihypertensives	Diltiazem, verapamil
Antiretrovirals	Atazanavir, cobicistat, darunavir, efavirenz, etravirine, fosamprenavir, indinavir, nelfinavir, ritonavir, saquinavir
Antitubercular	Rifampicin, rifabutin, rifapentine
Cystic fibrosis	Lumacaftor, lumacaftor-ivacaftor
Pulmonary hypertension	Bosentan
Immunosuppressants	Cyclosporine
Macrolides	Clarithromycin, erythromycin
Oncological	Apalutamide, bexarotene, ceritinib, crizotinib, dabrafenib, duvelisib, enzalutamide, fedratinib, idelalisib, imatinib, lonafarnib, lorlatinib, mitotane, nilotinib, pexidartinib, ribociclib, tucatinib
Psychostimulants	Modafinil
Others	Berotrastat, cimetidine, conivaptan, lefamulin, letermovir, ombitasvir-paritaprevir-ritonavir with or without dasabuvir