

# Interactions with HCC Therapies

Charts revised July 2021 Full information available at [www.hep-druginteractions.org](http://www.hep-druginteractions.org)

Please note that if a drug is not listed it cannot automatically be assumed it is safe to coadminister.

LEN, lenvatinib; PEM, pembrolizumab; REG, regorafenib; SOR, sorafenib.

|  | LEN | PEM | REG | SOR |
|--|-----|-----|-----|-----|
| <b>Anaesthetics and Muscle Relaxants</b> |     |     |     |     |
| Bupivacaine                              | ◆   | ◆   | ▲   | ▲   |
| Cisatracurium                            | ◆   | ◆   | ◆   | ◆   |
| Isoflurane                               | ◆   | ◆   | ◆   | ◆   |
| Ketamine                                 | ◆   | ◆   | ◆   | ◆   |
| Nitrous oxide                            | ◆   | ◆   | ◆   | ◆   |
| Propofol                                 | ◆   | ◆   | ■   | ■   |
| Thiopental                               | ◆   | ◆   | ◆   | ◆   |
| Tizanidine                               | ◆   | ◆   | ◆   | ◆   |
| <b>Analgesics</b>                        |     |     |     |     |
| Acetoclofenac                            | ◆   | ◆   | ◆   | ◆   |
| Alfentanil                               | ◆   | ◆   | ◆   | ◆   |
| Aspirin                                  | ◆   | ◆   | ◆   | ◆   |
| Buprenorphine                            | ◆   | ◆   | ◆   | ◆   |
| Celecoxib                                | ◆   | ◆   | ◆   | ◆   |
| Codeine                                  | ◆   | ◆   | ◆   | ◆   |
| Dexketoprofen                            | ◆   | ◆   | ◆   | ◆   |
| Dextropropoxyphene                       | ◆   | ◆   | ◆   | ◆   |
| Diamorphine                              | ◆   | ◆   | ◆   | ◆   |
| Diclofenac                               | ◆   | ◆   | ◆   | ◆   |
| Diffunisal                               | ◆   | ◆   | ●   | ◆   |
| Dihydrocodeine                           | ◆   | ◆   | ▲   | ▲   |
| Etoricoxib                               | ◆   | ◆   | ◆   | ◆   |
| Fentanyl                                 | ◆   | ◆   | ◆   | ◆   |
| Flurbiprofen                             | ◆   | ◆   | ◆   | ◆   |
| Hydrocodone                              | ◆   | ◆   | ◆   | ◆   |
| Hydromorphone                            | ◆   | ◆   | ◆   | ◆   |
| Ibuprofen                                | ◆   | ◆   | ◆   | ◆   |
| Indometacin                              | ◆   | ◆   | ◆   | ◆   |
| Ketoprofen                               | ◆   | ◆   | ◆   | ◆   |
| Mefenamic acid                           | ◆   | ◆   | ●   | ◆   |
| Meloxicam                                | ◆   | ◆   | ◆   | ◆   |
| Metamizole (Dipyrone)                    | ◆   | ●   | ■   | ■   |
| Methadone                                | ◆   | ◆   | ◆   | ■   |
| Morphine                                 | ◆   | ◆   | ◆   | ◆   |
| Naproxen                                 | ◆   | ◆   | ◆   | ◆   |
| Oxycodone                                | ◆   | ◆   | ◆   | ◆   |
| Paracetamol (Acetaminophen)              | ◆   | ◆   | ▲   | ■   |
| Pethidine (Meperidine)                   | ◆   | ◆   | ◆   | ◆   |
| Piroxicam                                | ◆   | ◆   | ◆   | ◆   |
| Tapentadol                               | ◆   | ◆   | ◆   | ◆   |
| Tramadol                                 | ◆   | ◆   | ◆   | ▲   |
| <b>Anthelmintics</b>                     |     |     |     |     |
| Albendazole                              | ◆   | ◆   | ◆   | ◆   |
| Ivermectin                               | ◆   | ◆   | ◆   | ◆   |
| Oxamniquine                              | ◆   | ◆   | ◆   | ◆   |
| Praziquantel                             | ◆   | ◆   | ◆   | ◆   |
| Pyrantel                                 | ◆   | ◆   | ◆   | ◆   |
| <b>Antiarrhythmics</b>                   |     |     |     |     |
| Amiodarone                               | ■   | ◆   | ▲   | ■   |
| Bepidil                                  | ■   | ◆   | ◆   | ■   |
| Digoxin                                  | ■   | ◆   | ◆   | ■   |
| Disopyramide                             | ■   | ◆   | ◆   | ■   |
| Dofetilide                               | ■   | ◆   | ◆   | ■   |
| Dronedarone                              | ■   | ◆   | ●   | ■   |
| Flecainide                               | ■   | ◆   | ◆   | ■   |
| Lidocaine (Lignocaine)                   | ■   | ◆   | ◆   | ■   |
| Mexiletine                               | ■   | ◆   | ◆   | ■   |
| Propafenone                              | ●   | ◆   | ◆   | ●   |
| Quinidine                                | ■   | ◆   | ▲   | ■   |
| Vernakalant                              | ◆   | ◆   | ◆   | ◆   |
| <b>Antibacterials</b>                    |     |     |     |     |
| Amikacin                                 | ◆   | ◆   | ◆   | ◆   |
| Amoxicillin                              | ◆   | ◆   | ◆   | ◆   |
| Ampicillin                               | ◆   | ◆   | ◆   | ◆   |
| Azithromycin                             | ■   | ◆   | ◆   | ■   |
| Aztreonam                                | ◆   | ◆   | ◆   | ◆   |
| Bedaquiline                              | ■   | ◆   | ◆   | ■   |
| Benzylpenicillin                         | ◆   | ◆   | ◆   | ◆   |
| Capreomycin                              | ◆   | ◆   | ◆   | ◆   |
| Cefaclor                                 | ◆   | ◆   | ◆   | ◆   |
| Cefadroxil                               | ◆   | ◆   | ◆   | ◆   |
| Cefalexin                                | ◆   | ◆   | ◆   | ◆   |
| Cefazolin                                | ◆   | ◆   | ◆   | ◆   |
| Cefixime                                 | ◆   | ◆   | ◆   | ◆   |
| Cefotaxime                               | ◆   | ◆   | ◆   | ◆   |
| Cefradine                                | ◆   | ◆   | ◆   | ◆   |
| Ceftaroline                              | ◆   | ◆   | ◆   | ◆   |
| Ceftazidime                              | ◆   | ◆   | ◆   | ◆   |
| Ceftriaxone                              | ◆   | ◆   | ◆   | ◆   |
| Cefuroxime                               | ◆   | ◆   | ◆   | ◆   |
| Chloramphenicol                          | ◆   | ◆   | ◆   | ▲   |
| Ciprofloxacin                            | ■   | ◆   | ●   | ■   |
| Clarithromycin                           | ■   | ◆   | ●   | ■   |
| Clavulanic acid                          | ◆   | ◆   | ◆   | ◆   |
| Clindamycin                              | ◆   | ◆   | ▲   | ◆   |
| Clofazimine                              | ■   | ◆   | ●   | ■   |

**Key to symbols**

|   |   |
|---|---|
| ● | These drugs should not be coadministered  |
| ■ | Potential clinically significant interaction that is likely to require additional monitoring, alteration of drug dosage or timing of administration |
| ▲ | Potential interaction likely to be of weak intensity. Additional action/monitoring or dosage adjustment is unlikely to be required                  |
| ◆ | No clinically significant interaction expected  |

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|                               | LEN | PEM | REG | SOR |
|-------------------------------|-----|-----|-----|-----|
| Cloxacillin                   | ◆   | ◆   | ◆   | ◆   |
| Dapsone                       | ◆   | ◆   | ◆   | ◆   |
| Delamanid                     | ■   | ◆   | ◆   | ■   |
| Ertapenem                     | ◆   | ◆   | ◆   | ◆   |
| Erythromycin                  | ■   | ◆   | ●   | ■   |
| Ethambutol                    | ◆   | ◆   | ◆   | ◆   |
| Flucloxacillin                | ◆   | ◆   | ◆   | ◆   |
| Gentamicin                    | ◆   | ◆   | ◆   | ◆   |
| Imipenem                      | ◆   | ◆   | ◆   | ◆   |
| Isoniazid                     | ◆   | ◆   | ◆   | ◆   |
| Levofloxacin                  | ■   | ◆   | ◆   | ■   |
| Linezolid                     | ◆   | ◆   | ◆   | ◆   |
| Lymecycline                   | ◆   | ◆   | ◆   | ◆   |
| Meropenem                     | ◆   | ◆   | ◆   | ◆   |
| Methenamine                   | ◆   | ◆   | ◆   | ◆   |
| Metronidazole                 | ◆   | ◆   | ▲   | ◆   |
| Moxifloxacin                  | ●   | ◆   | ■   | ●   |
| Nitrofurantoin                | ◆   | ◆   | ◆   | ◆   |
| Norfloxacin                   | ◆   | ◆   | ◆   | ◆   |
| Ofloxacin                     | ■   | ◆   | ◆   | ■   |
| Penicillin V                  | ◆   | ◆   | ◆   | ◆   |
| Piperacillin                  | ◆   | ◆   | ◆   | ◆   |
| Pivmecillinam                 | ◆   | ◆   | ◆   | ◆   |
| Pyrazinamide                  | ◆   | ◆   | ◆   | ◆   |
| Rifabutin                     | ◆   | ◆   | ●   | ●   |
| Rifampicin                    | ◆   | ◆   | ◆   | ◆   |
| Rifapentine                   | ◆   | ◆   | ●   | ●   |
| Rifaximin                     | ◆   | ◆   | ▲   | ▲   |
| Spectinomycin                 | ◆   | ◆   | ◆   | ◆   |
| Streptomycin                  | ◆   | ◆   | ◆   | ◆   |
| Sulfadiazine                  | ◆   | ◆   | ◆   | ◆   |
| Tazobactam                    | ◆   | ◆   | ◆   | ◆   |
| Telithromycin                 | ■   | ◆   | ●   | ■   |
| Temocillin                    | ◆   | ◆   | ◆   | ◆   |
| Tetracyclines                 | ◆   | ◆   | ◆   | ◆   |
| Ticarcillin                   | ◆   | ◆   | ◆   | ◆   |
| Trimethoprim/Sulfamethoxazole | ◆   | ◆   | ◆   | ◆   |
| Troleandomycin                | ◆   | ◆   | ●   | ◆   |
| Vancomycin                    | ◆   | ◆   | ■   | ◆   |
| <b>Anticoagulants</b>         |     |     |     |     |
| Acenocoumarol                 | ◆   | ◆   | ■   | ■   |
| Anagrelide                    | ◆   | ◆   | ■   | ◆   |
| Apixaban                      | ◆   | ◆   | ■   | ▲   |
| Clopidogrel                   | ◆   | ◆   | ■   | ◆   |
| Dabigatran                    | ◆   | ◆   | ■   | ▲   |
| Dalteparin                    | ◆   | ◆   | ■   | ◆   |
| Danaparoid                    | ◆   | ◆   | ■   | ◆   |
| Dipyridamole                  | ◆   | ◆   | ■   | ▲   |
| Edoxaban                      | ◆   | ◆   | ■   | ▲   |
| Eltrombopag                   | ◆   | ◆   | ■   | ▲   |
| Enoxaparin                    | ◆   | ◆   | ■   | ◆   |
| Fluindione                    | ◆   | ◆   | ■   | ■   |
| Fondaparinux                  | ◆   | ◆   | ■   | ◆   |
| Heparin                       | ◆   | ◆   | ■   | ◆   |
| Phenprocoumon                 | ◆   | ◆   | ■   | ■   |
| Prasugrel                     | ◆   | ◆   | ■   | ◆   |
| Rivaroxaban                   | ◆   | ◆   | ■   | ▲   |
| Streptokinase                 | ◆   | ◆   | ■   | ◆   |
| Ticagrelor                    | ◆   | ◆   | ■   | ▲   |
| Ticlopidine                   | ◆   | ◆   | ■   | ◆   |
| Tinzaparin                    | ◆   | ◆   | ■   | ◆   |
| Warfarin                      | ■   | ◆   | ■   | ■   |
| <b>Anticonvulsants</b>        |     |     |     |     |
| Carbamazepine                 | ◆   | ◆   | ●   | ●   |
| Clonazepam                    | ◆   | ◆   | ●   | ◆   |
| Eslicarbazepine               | ◆   | ◆   | ●   | ●   |
| Ethosuximide                  | ◆   | ◆   | ◆   | ◆   |
| Gabapentin                    | ◆   | ◆   | ◆   | ◆   |
| Lacosamide                    | ◆   | ◆   | ◆   | ◆   |
| Lamotrigine                   | ◆   | ◆   | ◆   | ◆   |
| Levetiracetam                 | ◆   | ◆   | ◆   | ◆   |
| Oxcarbazepine                 | ◆   | ◆   | ●   | ●   |
| Perampanel                    | ◆   | ◆   | ◆   | ◆   |
| Phenobarbital                 | ◆   | ◆   | ●   | ●   |
| Phenytoin                     | ◆   | ◆   | ●   | ●   |
| Pregabalin                    | ◆   | ◆   | ◆   | ◆   |
| Primidone                     | ◆   | ◆   | ●   | ●   |
| Retigabine                    | ◆   | ◆   | ◆   | ◆   |
| Rufinamide                    | ◆   | ◆   | ◆   | ◆   |
| Sultiame                      | ◆   | ◆   | ◆   | ◆   |
| Tiagabine                     | ◆   | ◆   | ◆   | ◆   |
| Topiramate                    | ◆   | ◆   | ◆   | ◆   |
| Valproate (Divalproex)        | ◆   | ◆   | ■   | ▲   |
| Vigabatrin                    | ◆   | ◆   | ◆   | ◆   |
| Zonisamide                    | ◆   | ◆   | ◆   | ◆   |

**Notes**

- Further information is available at [www.hep-druginteractions.org](http://www.hep-druginteractions.org)
- Predicted interactions are based on known metabolic pathways and routes of clearance.
- Caution is required in patients with hepatic impairment as this may also increase drug levels and require dose modification.
- Where advice differs between countries, the charts reflect the more cautious option.

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|                           | LEN | PEM | REG | SOR |
|---------------------------|-----|-----|-----|-----|
| <b>Antidepressants</b>    |     |     |     |     |
| Agomelatine               | ◆   | ◆   | ◆   | ◆   |
| Amitriptyline             | ■   | ◆   | ◆   | ■   |
| Bupropion                 | ◆   | ◆   | ◆   | ◆   |
| Citalopram                | ◆   | ◆   | ◆   | ◆   |
| Clomipramine              | ■   | ◆   | ◆   | ■   |
| Desipramine               | ■   | ◆   | ◆   | ■   |
| Desvenlafaxine            | ◆   | ◆   | ◆   | ◆   |
| Dosulepin                 | ■   | ◆   | ◆   | ■   |
| Doxepin                   | ▲   | ◆   | ◆   | ▲   |
| Duloxetine                | ◆   | ◆   | ◆   | ◆   |
| Escitalopram              | ■   | ◆   | ◆   | ■   |
| Fluoxetine                | ■   | ◆   | ◆   | ■   |
| Fluvoxamine               | ▲   | ◆   | ●   | ▲   |
| Imipramine                | ■   | ◆   | ◆   | ■   |
| Lithium                   | ■   | ◆   | ◆   | ■   |
| Maprotiline               | ■   | ◆   | ◆   | ■   |
| Mianserin                 | ■   | ◆   | ◆   | ■   |
| Milnacipran               | ◆   | ◆   | ◆   | ◆   |
| Mirtazapine               | ■   | ◆   | ◆   | ■   |
| Moclobemide               | ●   | ◆   | ◆   | ●   |
| Nefazodone                | ◆   | ◆   | ●   | ◆   |
| Nortriptyline             | ■   | ◆   | ◆   | ■   |
| Paroxetine                | ▲   | ◆   | ◆   | ▲   |
| Sertraline                | ◆   | ◆   | ◆   | ◆   |
| Tianeptine                | ◆   | ◆   | ◆   | ◆   |
| Trazodone                 | ■   | ◆   | ◆   | ■   |
| Trimipramine              | ■   | ◆   | ◆   | ■   |
| Venlafaxine               | ●   | ◆   | ◆   | ●   |
| Vortioxetine              | ◆   | ◆   | ◆   | ◆   |
| <b>Antidiabetics</b>      |     |     |     |     |
| Acarbose                  | ◆   | ◆   | ◆   | ◆   |
| Albiglutide               | ◆   | ◆   | ◆   | ▲   |
| Alogliptin                | ◆   | ◆   | ◆   | ▲   |
| Canagliflozin             | ◆   | ◆   | ■   | ■   |
| Dapagliflozin             | ◆   | ◆   | ■   | ■   |
| Dulaglutide               | ◆   | ◆   | ◆   | ▲   |
| Empagliflozin             | ◆   | ◆   | ■   | ■   |
| Exenatide                 | ◆   | ◆   | ◆   | ▲   |
| Glibenclamide (Glyburide) | ◆   | ◆   | ◆   | ▲   |
| Gliclazide                | ◆   | ◆   | ◆   | ▲   |
| Glimepiride               | ◆   | ◆   | ◆   | ◆   |
| Glipizide                 | ◆   | ◆   | ◆   | ▲   |
| Insulin                   | ◆   | ◆   | ◆   | ◆   |
| Linagliptin               | ◆   | ◆   | ▲   | ▲   |
| Liraglutide               | ◆   | ◆   | ◆   | ▲   |
| Lixisenatide              | ◆   | ◆   | ◆   | ▲   |
| Metformin                 | ◆   | ◆   | ◆   | ▲   |
| Nateglinide               | ◆   | ◆   | ◆   | ▲   |
| Pioglitazone              | ◆   | ◆   | ◆   | ▲   |
| Repaglinide               | ◆   | ◆   | ◆   | ▲   |
| Rosiglitazone             | ◆   | ◆   | ◆   | ▲   |
| Saxagliptin               | ◆   | ◆   | ◆   | ▲   |
| Sitagliptin               | ◆   | ◆   | ◆   | ▲   |
| Tolbutamide               | ◆   | ◆   | ◆   | ▲   |
| Vildagliptin              | ◆   | ◆   | ◆   | ▲   |
| <b>Antifungals</b>        |     |     |     |     |
| Amphotericin B            | ▲   | ▲   | ▲   | ■   |
| Anidulafungin             | ◆   | ◆   | ◆   | ◆   |
| Caspofungin               | ◆   | ◆   | ◆   | ◆   |
| Fluconazole               | ■   | ◆   | ●   | ■   |
| Flucytosine               | ▲   | ▲   | ▲   | ▲   |
| Griseofulvin              | ◆   | ◆   | ◆   | ◆   |
| Isavuconazole             | ◆   | ◆   | ●   | ◆   |
| Itraconazole              | ■   | ◆   | ●   | ■   |
| Ketoconazole              | ■   | ◆   | ●   | ■   |
| Miconazole                | ◆   | ◆   | ◆   | ◆   |
| Nystatin                  | ◆   | ◆   | ◆   | ◆   |
| Posaconazole              | ■   | ◆   | ●   | ■   |
| Terbinafine               | ◆   | ◆   | ◆   | ◆   |
| Voriconazole              | ■   | ◆   | ●   | ■   |

|                                    | LEN | PEM | REG | SOR |
|------------------------------------|-----|-----|-----|-----|
| <b>Antihistamines</b>              |     |     |     |     |
| Astemizole                         | ■   | ◆   | ◆   | ■   |
| Bilastine                          | ◆   | ◆   | ◆   | ◆   |
| Cetirizine                         | ◆   | ◆   | ◆   | ◆   |
| Chlorphenamine                     | ◆   | ◆   | ◆   | ◆   |
| Desloratadine                      | ◆   | ◆   | ◆   | ◆   |
| Diphenhydramine                    | ▲   | ◆   | ◆   | ▲   |
| Doxylamine                         | ◆   | ◆   | ◆   | ◆   |
| Ebastine                           | ◆   | ◆   | ◆   | ◆   |
| Fexofenadine                       | ◆   | ◆   | ◆   | ▲   |
| Hydroxyzine                        | ●   | ◆   | ◆   | ●   |
| Levocetirizine                     | ◆   | ◆   | ◆   | ◆   |
| Loratadine                         | ◆   | ◆   | ◆   | ◆   |
| Promethazine                       | ■   | ◆   | ◆   | ■   |
| Terfenadine                        | ●   | ◆   | ◆   | ●   |
| <b>Antimigraine Agents</b>         |     |     |     |     |
| Almotriptan                        | ◆   | ◆   | ◆   | ◆   |
| Dihydroergotamine                  | ◆   | ◆   | ◆   | ◆   |
| Eletriptan                         | ◆   | ◆   | ◆   | ◆   |
| Ergotamine                         | ◆   | ◆   | ◆   | ◆   |
| Frovatriptan                       | ◆   | ◆   | ◆   | ◆   |
| Methylergonovine                   | ◆   | ◆   | ◆   | ◆   |
| Naratriptan                        | ◆   | ◆   | ◆   | ◆   |
| Pizotifen                          | ◆   | ◆   | ◆   | ◆   |
| Rizatriptan                        | ◆   | ◆   | ◆   | ◆   |
| Sumatriptan                        | ◆   | ◆   | ◆   | ◆   |
| Zolmitriptan                       | ◆   | ◆   | ◆   | ◆   |
| <b>Antiprotozoals</b>              |     |     |     |     |
| Amodiaquine                        | ◆   | ◆   | ◆   | ◆   |
| Artemether                         | ●   | ◆   | ◆   | ●   |
| Artemisinin                        | ●   | ◆   | ◆   | ●   |
| Artesunate                         | ●   | ◆   | ◆   | ●   |
| Atovaquone                         | ◆   | ■   | ◆   | ◆   |
| Chloroquine                        | ■   | ◆   | ◆   | ■   |
| Dihydroartemisinin                 | ●   | ◆   | ◆   | ●   |
| Doxycycline                        | ◆   | ◆   | ◆   | ◆   |
| Halofantrine                       | ■   | ◆   | ◆   | ■   |
| Hydroxychloroquine                 | ◆   | ◆   | ◆   | ◆   |
| Lumefantrine                       | ●   | ◆   | ◆   | ●   |
| Mefloquine                         | ■   | ◆   | ◆   | ■   |
| Nitazoxanide                       | ◆   | ◆   | ◆   | ◆   |
| Pentamidine                        | ◆   | ◆   | ◆   | ■   |
| Primaquine                         | ■   | ◆   | ◆   | ■   |
| Proguanil                          | ◆   | ◆   | ◆   | ◆   |
| Pyrimethamine                      | ◆   | ◆   | ◆   | ◆   |
| Quinine                            | ■   | ◆   | ◆   | ■   |
| Sodium stibogluconate              | ◆   | ◆   | ◆   | ◆   |
| Sulfadoxine                        | ◆   | ◆   | ◆   | ◆   |
| <b>Antipsychotics/neuroleptics</b> |     |     |     |     |
| Amisulpride                        | ■   | ◆   | ◆   | ■   |
| Aripiprazole                       | ■   | ◆   | ◆   | ■   |
| Asenapine                          | ■   | ◆   | ◆   | ■   |
| Chlorpromazine                     | ■   | ◆   | ◆   | ■   |
| Chlorprothixene                    | ■   | ◆   | ◆   | ■   |
| Clozapine                          | ■   | ▲   | ▲   | ■   |
| Flupentixol                        | ●   | ◆   | ◆   | ●   |
| Fluphenazine                       | ●   | ◆   | ◆   | ●   |
| Haloperidol                        | ●   | ◆   | ◆   | ●   |
| Iloperidone                        | ●   | ◆   | ◆   | ●   |
| Levomopromazine                    | ■   | ◆   | ◆   | ■   |
| Lurasidone                         | ■   | ◆   | ▲   | ■   |
| Olanzapine                         | ■   | ◆   | ◆   | ■   |
| Paliperidone                       | ■   | ◆   | ◆   | ■   |
| Perazine                           | ▲   | ◆   | ◆   | ▲   |
| Periciazine                        | ■   | ◆   | ◆   | ■   |
| Perphenazine                       | ■   | ◆   | ◆   | ■   |
| Pimozide                           | ●   | ◆   | ◆   | ●   |
| Pipotiazine                        | ■   | ◆   | ◆   | ■   |
| Prochlorperazine                   | ■   | ◆   | ◆   | ■   |
| Quetiapine                         | ■   | ◆   | ◆   | ■   |
| Risperidone                        | ■   | ◆   | ◆   | ■   |
| Sulpiride                          | ■   | ◆   | ◆   | ■   |
| Thioridazine                       | ●   | ◆   | ◆   | ●   |
| Tiapride                           | ■   | ◆   | ◆   | ■   |
| Trifluoperazine                    | ▲   | ◆   | ◆   | ▲   |
| Ziprasidone                        | ●   | ◆   | ◆   | ●   |
| Zuclopentixol                      | ●   | ◆   | ◆   | ●   |

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| ▲ | Potential interaction likely to be of weak intensity. Additional action/monitoring or dosage adjustment is unlikely to be required                  |
| ◆ | No clinically significant interaction expected  |

**Notes**

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- Where advice differs between countries, the charts reflect the more cautious option.

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# Interactions with HCC Therapies

Charts revised July 2021 Full information available at [www.hep-druginteractions.org](http://www.hep-druginteractions.org)

Please note that if a drug is not listed it cannot automatically be assumed it is safe to coadminister.

LEN, lenvatinib; PEM, pembrolizumab; REG, regorafenib; SOR, sorafenib.

|  | LEN | PEM | REG | SOR |
|--|-----|-----|-----|-----|
| <b>Antivirals</b>                      |     |     |     |     |
| Aciclovir                              | ◆   | ◆   | ◆   | ◆   |
| Amantadine                             | ▲   | ◆   | ◆   | ▲   |
| Brivudine                              | ◆   | ◆   | ◆   | ◆   |
| Cidofovir                              | ◆   | ▲   | ◆   | ◆   |
| Favipiravir                            | ◆   | ◆   | ◆   | ◆   |
| Foscarnet                              | ■   | ◆   | ◆   | ■   |
| Oseltamivir                            | ◆   | ◆   | ◆   | ◆   |
| Remdesivir                             | ◆   | ◆   | ◆   | ◆   |
| Rimantadine                            | ◆   | ◆   | ◆   | ◆   |
| Valaciclovir                           | ◆   | ◆   | ◆   | ◆   |
| Zanamivir                              | ◆   | ◆   | ◆   | ◆   |
| <b>Anxiolytics/Hypnotics/Sedatives</b> |     |     |     |     |
| Alprazolam                             | ◆   | ◆   | ◆   | ◆   |
| Amobarbital                            | ◆   | ◆   | ●   | ●   |
| Bromazepam                             | ◆   | ◆   | ◆   | ◆   |
| Bromperidol                            | ■   | ◆   | ◆   | ●   |
| Buspirone                              | ◆   | ◆   | ◆   | ◆   |
| Clobazam                               | ◆   | ◆   | ◆   | ◆   |
| Clorazepate                            | ◆   | ◆   | ◆   | ◆   |
| Clotiapine                             | ■   | ◆   | ◆   | ■   |
| Diazepam                               | ◆   | ◆   | ◆   | ◆   |
| Estazolam                              | ◆   | ◆   | ◆   | ◆   |
| Flurazepam                             | ◆   | ◆   | ◆   | ◆   |
| Lorazepam                              | ◆   | ◆   | ◆   | ◆   |
| Lormetazepam                           | ◆   | ◆   | ◆   | ◆   |
| Midazolam (oral)                       | ◆   | ◆   | ◆   | ◆   |
| Midazolam (parenteral)                 | ◆   | ◆   | ◆   | ◆   |
| Oxazepam                               | ◆   | ◆   | ◆   | ◆   |
| Quazepam                               | ◆   | ◆   | ◆   | ◆   |
| Temazepam                              | ◆   | ◆   | ◆   | ◆   |
| Triazolam                              | ◆   | ◆   | ◆   | ◆   |
| Zaleplon                               | ◆   | ◆   | ◆   | ◆   |
| Zolpidem                               | ◆   | ◆   | ◆   | ◆   |
| Zopiclone                              | ◆   | ◆   | ◆   | ◆   |
| <b>Beta Blockers</b>                   |     |     |     |     |
| Atenolol                               | ▲   | ◆   | ▲   | ◆   |
| Bisoprolol                             | ▲   | ◆   | ▲   | ▲   |
| Carvedilol                             | ▲   | ◆   | ▲   | ▲   |
| Celiprolol                             | ▲   | ◆   | ▲   | ◆   |
| Labetalol                              | ▲   | ◆   | ▲   | ▲   |
| Metoprolol                             | ▲   | ◆   | ▲   | ▲   |
| Nebivolol                              | ▲   | ◆   | ▲   | ◆   |
| Oxprenolol                             | ▲   | ◆   | ■   | ◆   |
| Pindolol                               | ▲   | ◆   | ▲   | ▲   |
| Propranolol                            | ▲   | ◆   | ▲   | ▲   |
| Sotalol                                | ■   | ◆   | ▲   | ■   |
| Timolol                                | ▲   | ◆   | ▲   | ◆   |
| <b>Bisphosphonates</b>                 |     |     |     |     |
| Alendronic acid                        | ▲   | ◆   | ◆   | ▲   |
| Clodronate                             | ▲   | ◆   | ◆   | ▲   |
| Ibandronic acid                        | ▲   | ◆   | ◆   | ▲   |
| Pamidronate                            | ▲   | ◆   | ◆   | ▲   |
| Risedronate                            | ▲   | ◆   | ◆   | ▲   |
| <b>Bronchodilators</b>                 |     |     |     |     |
| Formoterol                             | ◆   | ◆   | ◆   | ◆   |
| Indacaterol                            | ◆   | ◆   | ◆   | ◆   |
| Ipratropium bromide                    | ◆   | ◆   | ◆   | ◆   |
| Montelukast                            | ◆   | ◆   | ◆   | ◆   |
| Omalizumab                             | ◆   | ◆   | ◆   | ◆   |
| Salbutamol                             | ◆   | ◆   | ◆   | ◆   |
| Salmeterol                             | ◆   | ◆   | ◆   | ◆   |
| Theophylline                           | ◆   | ◆   | ◆   | ◆   |
| Tiotropium                             | ◆   | ◆   | ◆   | ◆   |
| Amlodipine                             | ▲   | ◆   | ▲   | ◆   |
| Diltiazem                              | ▲   | ◆   | ▲   | ◆   |
| Felodipine                             | ▲   | ◆   | ▲   | ▲   |
| Nicardipine                            | ▲   | ◆   | ▲   | ◆   |
| Nifedipine                             | ▲   | ◆   | ▲   | ◆   |
| Nisoldipine                            | ▲   | ◆   | ▲   | ◆   |
| Nitrendipine                           | ▲   | ◆   | ▲   | ◆   |
| Verapamil                              | ▲   | ◆   | ▲   | ◆   |

|  | LEN | PEM | REG | SOR |
|--|-----|-----|-----|-----|
| <b>Cancer Therapies</b>                  |     |     |     |     |
| Abiraterone                              | ■   | ◆   | ◆   | ■   |
| Acalabrutinib                            | ◆   | ▲   | ◆   | ▲   |
| Anastrozole                              | ◆   | ◆   | ◆   | ◆   |
| Avelumab                                 | ◆   | ◆   | ◆   | ◆   |
| Axitinib                                 | ◆   | ■   | ◆   | ◆   |
| Bevacizumab                              | ◆   | ■   | ◆   | ◆   |
| Blinatumomab                             | ◆   | ■   | ◆   | ◆   |
| Bortezomib                               | ■   | ■   | ◆   | ■   |
| Bosutinib                                | ■   | ■   | ◆   | ■   |
| Brentuximab vedotin                      | ◆   | ■   | ◆   | ◆   |
| Capecitabine                             | ■   | ■   | ◆   | ■   |
| Carboplatin                              | ◆   | ■   | ◆   | ◆   |
| Cetuximab                                | ◆   | ◆   | ◆   | ◆   |
| Chlorambucil                             | ◆   | ■   | ◆   | ◆   |
| Cisplatin                                | ◆   | ■   | ◆   | ■   |
| Cyclophosphamide                         | ◆   | ▲   | ▲   | ◆   |
| Daratumumab                              | ◆   | ■   | ◆   | ◆   |
| Dasatinib                                | ■   | ■   | ◆   | ■   |
| Doxorubicin                              | ▲   | ◆   | ◆   | ■   |
| Erlotinib                                | ◆   | ■   | ◆   | ◆   |
| Estramustine                             | ◆   | ■   | ◆   | ■   |
| Etoposide                                | ◆   | ■   | ■   | ■   |
| Everolimus                               | ▲   | ●   | ▲   | ■   |
| Exemestane                               | ◆   | ◆   | ◆   | ◆   |
| Fludarabine                              | ◆   | ■   | ◆   | ◆   |
| Gefitinib                                | ◆   | ◆   | ■   | ◆   |
| Gemcitabine                              | ◆   | ■   | ◆   | ◆   |
| Idarubicin                               | ◆   | ■   | ◆   | ◆   |
| Imatinib                                 | ◆   | ■   | ■   | ◆   |
| Ipilimumab                               | ◆   | ■   | ◆   | ◆   |
| Irinotecan                               | ◆   | ■   | ■   | ■   |
| Ixazomib                                 | ◆   | ◆   | ◆   | ◆   |
| Lapatinib                                | ■   | ◆   | ◆   | ■   |
| Letrozole                                | ◆   | ◆   | ◆   | ◆   |
| Medroxyprogesterone (oncology)           | ◆   | ◆   | ◆   | ◆   |
| Mercaptopurine                           | ◆   | ■   | ◆   | ◆   |
| Mesna                                    | ◆   | ◆   | ◆   | ◆   |
| Methotrexate                             | ◆   | ■   | ■   | ■   |
| Mitoxantrone                             | ◆   | ■   | ■   | ■   |
| Nilotinib                                | ■   | ◆   | ■   | ■   |
| Niraparib                                | ◆   | ■   | ◆   | ◆   |
| Nivolumab                                | ◆   | ■   | ◆   | ◆   |
| Obinutuzumab                             | ◆   | ◆   | ◆   | ◆   |
| Ofatumumab                               | ◆   | ■   | ◆   | ◆   |
| Olaratumab                               | ◆   | ■   | ◆   | ◆   |
| Oxaliplatin                              | ■   | ■   | ◆   | ■   |
| Paclitaxel                               | ◆   | ■   | ◆   | ◆   |
| Panitumumab                              | ◆   | ◆   | ◆   | ◆   |
| Rituximab                                | ◆   | ◆   | ◆   | ◆   |
| Ruxolitinib                              | ▲   | ▲   | ▲   | ▲   |
| Sunitinib                                | ■   | ■   | ◆   | ■   |
| Tamoxifen                                | ▲   | ◆   | ◆   | ▲   |
| Temsirolimus                             | ◆   | ●   | ◆   | ◆   |
| Vinblastine                              | ◆   | ■   | ◆   | ◆   |
| Vincristine                              | ◆   | ■   | ◆   | ◆   |
| Vinorelbine                              | ◆   | ■   | ◆   | ▲   |
| <b>Conjugated estrogens (HRT)</b>        |     |     |     |     |
| Desogestrel (POP)                        | ■   | ◆   | ◆   | ◆   |
| Desogestrel/ethinylestradiol (COC)       | ■   | ◆   | ◆   | ◆   |
| Dienogest                                | ■   | ◆   | ◆   | ◆   |
| Drospirenone (POP)                       | ■   | ◆   | ◆   | ◆   |
| Drospirenone/estradiol (HRT)             | ◆   | ◆   | ◆   | ◆   |
| Drospirenone/ethinylestradiol (COC)      | ■   | ◆   | ◆   | ◆   |
| Dydrogesterone/estradiol (HRT)           | ◆   | ◆   | ◆   | ◆   |
| Ethinylestradiol                         | ■   | ◆   | ◆   | ◆   |
| Etonogestrel (implant)                   | ■   | ◆   | ◆   | ◆   |
| Etonogestrel (vaginal ring)              | ■   | ◆   | ◆   | ◆   |
| Gestodene/ethinylestradiol (COC)         | ■   | ◆   | ◆   | ◆   |
| Levonorgestrel (COC)                     | ■   | ◆   | ◆   | ◆   |
| Levonorgestrel (Emergency Contraception) | ■   | ◆   | ◆   | ◆   |
| Levonorgestrel (HRT)                     | ◆   | ◆   | ◆   | ◆   |
| Levonorgestrel (implant)                 | ■   | ◆   | ◆   | ◆   |
| Levonorgestrel (IUD)                     | ■   | ◆   | ◆   | ◆   |
| Levonorgestrel (POP)                     | ■   | ◆   | ◆   | ◆   |

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|   | LEN | PEM | REG | SOR |
|---|-----|-----|-----|-----|
| Medroxyprogesterone (depot)                           | ■   | ◆   | ◆   | ◆   |
| Medroxyprogesterone (oral)                            | ■   | ◆   | ◆   | ◆   |
| Medroxyprogesterone/conjugated estrogens (HRT)        | ◆   | ◆   | ◆   | ◆   |
| Medroxyprogesterone/estradiol (HRT)                   | ◆   | ◆   | ◆   | ◆   |
| Norelgestromin/ethinylestradiol (patch)               | ■   | ◆   | ◆   | ◆   |
| Norethisterone (Norethindrone) (POP)                  | ■   | ◆   | ◆   | ◆   |
| Norethisterone (Norethindrone)/estradiol (HRT)        | ◆   | ◆   | ◆   | ◆   |
| Norethisterone (Norethindrone)/ethinylestradiol (COC) | ■   | ◆   | ◆   | ◆   |
| Norethisterone (Norethindrone)/mestranol (COC)        | ■   | ◆   | ◆   | ◆   |
| Norgestimate/ethinylestradiol (COC)                   | ■   | ◆   | ◆   | ◆   |
| Norgestrel/conjugated estrogens (HRT)                 | ◆   | ◆   | ◆   | ◆   |
| Norgestrel/ethinylestradiol (COC)                     | ■   | ◆   | ◆   | ◆   |
| <b>Erectile Dysfunction Agents</b>                    |     |     |     |     |
| Sildenafil  | ◆   | ◆   | ◆   | ◆   |
| Tadalafil   | ◆   | ◆   | ◆   | ◆   |
| Vardenafil  | ◆   | ◆   | ◆   | ◆   |
| <b>Gastrointestinal Agents</b>                        |     |     |     |     |
| Aluminium hydroxide                                   | ◆   | ◆   | ◆   | ◆   |
| Alverine citrate                                      | ◆   | ◆   | ◆   | ◆   |
| Antacids  | ◆   | ◆   | ◆   | ◆   |
| Aprepitant  | ◆   | ◆   | ■   | ◆   |
| Bisacodyl   | ◆   | ◆   | ◆   | ◆   |
| Cimetidine  | ◆   | ◆   | ▲   | ◆   |
| Cisapride   | ■   | ◆   | ◆   | ■   |
| Cyclizine   | ◆   | ◆   | ◆   | ◆   |
| Dantron   | ◆   | ◆   | ◆   | ◆   |
| Domperidone   | ●   | ◆   | ◆   | ●   |
| Droperidol  | ◆   | ◆   | ◆   | ◆   |
| Esomeprazole  | ◆   | ◆   | ◆   | ◆   |
| Famotidine  | ▲   | ◆   | ◆   | ▲   |
| Granisetron   | ■   | ◆   | ◆   | ■   |
| Hyoscine  | ◆   | ◆   | ◆   | ◆   |
| Ispaghula husk  | ◆   | ◆   | ◆   | ◆   |
| Lactulose   | ◆   | ◆   | ◆   | ◆   |
| Lansoprazole  | ◆   | ◆   | ◆   | ◆   |
| Linaclootide  | ◆   | ◆   | ◆   | ◆   |
| Loperamide  | ◆   | ◆   | ◆   | ◆   |
| Lubiprostone  | ◆   | ◆   | ◆   | ◆   |
| Macrogol  | ◆   | ◆   | ◆   | ◆   |
| Mebeverine  | ◆   | ◆   | ◆   | ◆   |
| Mesalazine  | ◆   | ◆   | ◆   | ◆   |
| Methylcellulose                                       | ◆   | ◆   | ◆   | ◆   |
| Metoclopramide  | ■   | ◆   | ◆   | ■   |
| Naloxegol   | ◆   | ◆   | ◆   | ◆   |
| Omeprazole  | ◆   | ◆   | ◆   | ◆   |
| Ondansetron   | ■   | ◆   | ◆   | ■   |
| Pantoprazole  | ◆   | ◆   | ◆   | ◆   |
| Prucalopride  | ◆   | ◆   | ◆   | ◆   |
| Rabeprazole   | ◆   | ◆   | ◆   | ◆   |
| Ranitidine  | ◆   | ◆   | ◆   | ◆   |
| Senna   | ◆   | ◆   | ◆   | ◆   |
| Simeticone  | ◆   | ◆   | ◆   | ◆   |
| Sulfasalazine   | ◆   | ◆   | ●   | ▲   |
| Trimebutine   | ◆   | ◆   | ◆   | ◆   |

|                              | LEN | PEM | REG | SOR |
|------------------------------|-----|-----|-----|-----|
| <b>HCC Therapies</b>         |     |     |     |     |
| Lenvatinib                   |     | ▲   | ▲   | ▲   |
| Pembrolizumab                | ▲   |     | ▲   | ▲   |
| Regorafenib                  | ▲   | ▲   |     | ■   |
| Sorafenib                    | ▲   | ▲   | ■   |     |
| <b>Hepatitis B Drugs</b>     |     |     |     |     |
| Adefovir                     | ◆   | ◆   | ◆   | ◆   |
| Entecavir                    | ◆   | ◆   | ◆   | ◆   |
| Lamivudine                   | ◆   | ◆   | ◆   | ◆   |
| Peginterferon alfa-2a        | ▲   | ▲   | ▲   | ▲   |
| Peginterferon alfa-2b        | ▲   | ▲   | ▲   | ▲   |
| Telbivudine                  | ◆   | ◆   | ◆   | ◆   |
| Tenofovir alafenamide (TAF)  | ◆   | ◆   | ◆   | ▲   |
| Tenofovir-DF                 | ◆   | ◆   | ◆   | ▲   |
| <b>Hepatitis C Drugs</b>     |     |     |     |     |
| Daclatasvir                  | ◆   | ◆   | ◆   | ◆   |
| Elbasvir/Grazoprevir         | ◆   | ◆   | ▲   | ■   |
| Glecaprevir/Pibrentasvir     | ◆   | ◆   | ▲   | ◆   |
| Ledipasvir/Sofosbuvir        | ◆   | ◆   | ■   | ◆   |
| OBV/PTV/r                    | ◆   | ◆   | ●   | ■   |
| OBV/PTV/r + Dasabuvir        | ◆   | ◆   | ●   | ■   |
| Ribavirin                    | ▲   | ■   | ▲   | ▲   |
| Simeprevir                   | ◆   | ◆   | ▲   | ◆   |
| Sofosbuvir (SOF)             | ◆   | ◆   | ◆   | ◆   |
| SOF/Velpatasvir              | ◆   | ◆   | ■   | ◆   |
| SOF/Velpatasvir/Voxilaprevir | ◆   | ◆   | ■   | ◆   |

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**Key to symbols**

|   |   |
|---|---|
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| ▲ | Potential interaction likely to be of weak intensity. Additional action/monitoring or dosage adjustment is unlikely to be required                  |
| ◆ | No clinically significant interaction expected  |

**Notes**

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- Where advice differs between countries, the charts reflect the more cautious option.

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# Interactions with HCC Therapies

Charts revised July 2021 Full information available at [www.hep-druginteractions.org](http://www.hep-druginteractions.org)

Please note that if a drug is not listed it cannot automatically be assumed it is safe to coadminister.

LEN, lenvatinib; PEM, pembrolizumab; REG, regorafenib; SOR, sorafenib.

|                                   | LEN | PEM | REG | SOR |
|-----------------------------------|-----|-----|-----|-----|
| Aloe vera                         | ◆   | ◆   | ◆   | ◆   |
| Ascorbic acid (Vitamin C)         | ◆   | ◆   | ◆   | ◆   |
| Black cohosh (A. racemosa)        | ◆   | ◆   | ◆   | ◆   |
| Cat's claw (U. tomentosa)         | ◆   | ◆   | ●   | ◆   |
| Colecalciferol (Vitamin D3)       | ◆   | ◆   | ◆   | ◆   |
| Cyanocobalamin (B12)              | ◆   | ◆   | ◆   | ◆   |
| Diosmin                           | ◆   | ◆   | ▲   | ◆   |
| Echinacea                         | ◆   | ◆   | ◆   | ◆   |
| Eucalyptus globulus               | ◆   | ◆   | ■   | ◆   |
| Folic acid                        | ◆   | ◆   | ◆   | ◆   |
| Garlic                            | ◆   | ◆   | ▲   | ▲   |
| Ginger (Z. officinale)            | ◆   | ◆   | ■   | ◆   |
| Ginkgo biloba                     | ◆   | ◆   | ◆   | ◆   |
| Ginseng                           | ◆   | ◆   | ◆   | ◆   |
| Goldenseal (H. canadensis)        | ◆   | ◆   | ■   | ◆   |
| Grape seed extract                | ◆   | ◆   | ■   | ◆   |
| Grapefruit juice                  | ◆   | ◆   | ●   | ◆   |
| Green tea (C. sinensis)           | ◆   | ◆   | ▲   | ◆   |
| Homeopathic remedies              | ◆   | ◆   | ◆   | ◆   |
| Inula racemosa                    | ◆   | ◆   | ■   | ◆   |
| Iodine                            | ◆   | ◆   | ◆   | ◆   |
| Iron supplements                  | ◆   | ◆   | ◆   | ◆   |
| Kava kava (P. methysticum)        | ◆   | ◆   | ■   | ◆   |
| Milk thistle                      | ◆   | ◆   | ◆   | ◆   |
| Retinol (Vitamin A)               | ◆   | ◆   | ◆   | ◆   |
| Riboflavin (Vitamin B2)           | ◆   | ◆   | ◆   | ◆   |
| Serenoa repens                    | ◆   | ◆   | ●   | ◆   |
| St John's wort                    | ◆   | ◆   | ●   | ●   |
| Thiamine (Vitamin B1)             | ◆   | ◆   | ◆   | ◆   |
| Turmeric (curcumin)               | ◆   | ◆   | ▲   | ◆   |
| Valerian                          | ◆   | ◆   | ◆   | ◆   |
| Vitamin E                         | ◆   | ◆   | ◆   | ◆   |
| <b>HIV Drugs</b>                  |     |     |     |     |
| <b>Entry/Integrase Inhibitors</b> |     |     |     |     |
| Bictegravir/FTC/TAF               | ◆   | ◆   | ◆   | ▲   |
| Dolutegravir                      | ◆   | ◆   | ◆   | ◆   |
| Dolutegravir/rilpivirine          | ▲   | ◆   | ▲   | ▲   |
| Elvitegravir/cobi /FTC/TAF        | ◆   | ◆   | ●   | ▲   |
| Elvitegravir/cobi/FTC/TDF         | ◆   | ◆   | ●   | ▲   |
| Ibalizumab-uiyk                   | ◆   | ◆   | ◆   | ◆   |
| Maraviroc                         | ◆   | ◆   | ◆   | ◆   |
| Raltegravir                       | ◆   | ◆   | ▲   | ◆   |
| <b>NNRTIs</b>                     |     |     |     |     |
| Doravirine                        | ◆   | ◆   | ◆   | ◆   |
| Doravirine/3TC/TDF                | ◆   | ◆   | ◆   | ▲   |
| Efavirenz                         | ■   | ◆   | ●   | ●   |
| Etravirine                        | ◆   | ◆   | ●   | ◆   |
| Nevirapine                        | ◆   | ◆   | ●   | ●   |
| Rilpivirine                       | ▲   | ◆   | ◆   | ▲   |
| Rilpivirine/FTC/TAF               | ▲   | ◆   | ◆   | ▲   |
| <b>NRTIs</b>                      |     |     |     |     |
| Abacavir                          | ◆   | ◆   | ◆   | ◆   |
| Didanosine                        | ◆   | ◆   | ◆   | ◆   |
| Emtricitabine (FTC)               | ◆   | ◆   | ◆   | ◆   |
| Emtricitabine + TAF               | ◆   | ◆   | ◆   | ▲   |
| Emtricitabine + TDF               | ◆   | ◆   | ◆   | ▲   |
| Lamivudine                        | ◆   | ◆   | ◆   | ◆   |
| Stavudine                         | ◆   | ◆   | ◆   | ◆   |
| Tenofovir-DF                      | ◆   | ◆   | ◆   | ▲   |
| Zidovudine                        | ▲   | ◆   | ◆   | ▲   |
| <b>Protease Inhibitors</b>        |     |     |     |     |
| Atazanavir alone                  | ■   | ◆   | ●   | ■   |
| Atazanavir/cobicistat             | ■   | ◆   | ●   | ■   |
| Atazanavir + ritonavir            | ■   | ◆   | ●   | ■   |
| Darunavir/cobicistat              | ◆   | ◆   | ●   | ◆   |
| Darunavir/cobi/FTC/TAF            | ◆   | ◆   | ●   | ◆   |
| Darunavir + ritonavir             | ◆   | ◆   | ●   | ■   |
| Fosamprenavir                     | ◆   | ◆   | ●   | ■   |
| Indinavir                         | ◆   | ◆   | ●   | ◆   |
| Lopinavir                         | ■   | ◆   | ●   | ■   |
| Ritonavir                         | ◆   | ◆   | ●   | ■   |
| Saquinavir                        | ●   | ◆   | ●   | ●   |
| Tipranavir                        | ■   | ◆   | ●   | ■   |

|  | LEN | PEM | REG | SOR |
|--|-----|-----|-----|-----|
| <b>Hypertension/Heart Failure Agents</b> |     |     |     |     |
| Acebutolol                               | ▲   | ◆   | ▲   | ◆   |
| Aliskiren                                | ▲   | ◆   | ▲   | ▲   |
| Ambrisentan                              | ▲   | ◆   | ■   | ■   |
| Amiloride                                | ▲   | ◆   | ▲   | ◆   |
| Azilsartan                               | ▲   | ◆   | ▲   | ◆   |
| Benazepril                               | ▲   | ◆   | ▲   | ▲   |
| Bendroflumethiazide                      | ▲   | ◆   | ▲   | ◆   |
| Bosentan                                 | ▲   | ◆   | ■   | ■   |
| Bumetanide                               | ▲   | ◆   | ▲   | ◆   |
| Candesartan                              | ▲   | ◆   | ▲   | ◆   |
| Captopril                                | ▲   | ◆   | ▲   | ◆   |
| Chlorothiazide                           | ▲   | ◆   | ▲   | ◆   |
| Chlortalidone                            | ▲   | ◆   | ▲   | ◆   |
| Cilazapril                               | ▲   | ◆   | ▲   | ◆   |
| Clevidipine                              | ▲   | ◆   | ▲   | ◆   |
| Clonidine                                | ▲   | ◆   | ▲   | ◆   |
| Doxazosin                                | ▲   | ◆   | ▲   | ◆   |
| Enalapril                                | ▲   | ◆   | ▲   | ◆   |
| Eplerenone                               | ▲   | ◆   | ▲   | ◆   |
| Epoprostenol                             | ▲   | ◆   | ▲   | ◆   |
| Eprosartan                               | ▲   | ◆   | ▲   | ◆   |
| Fosinopril                               | ▲   | ◆   | ▲   | ◆   |
| Furosemide                               | ▲   | ◆   | ■   | ▲   |
| Hydralazine                              | ▲   | ◆   | ▲   | ◆   |
| Hydrochlorothiazide                      | ▲   | ◆   | ▲   | ◆   |
| Iloprost                                 | ▲   | ◆   | ▲   | ◆   |
| Indapamide                               | ▲   | ◆   | ▲   | ■   |
| Irbesartan                               | ▲   | ◆   | ▲   | ▲   |
| Isradipine                               | ▲   | ◆   | ▲   | ◆   |
| Ivabradine                               | ■   | ◆   | ▲   | ■   |
| Lacidipine                               | ■   | ◆   | ▲   | ■   |
| Lercanidipine                            | ▲   | ◆   | ▲   | ◆   |
| Lisinopril                               | ▲   | ◆   | ▲   | ◆   |
| Losartan                                 | ▲   | ◆   | ▲   | ◆   |
| Macitentan                               | ▲   | ◆   | ▲   | ◆   |
| Methyldopa                               | ▲   | ◆   | ▲   | ◆   |
| Metolazone                               | ▲   | ◆   | ▲   | ◆   |
| Moxonidine                               | ▲   | ◆   | ▲   | ◆   |
| Olmesartan                               | ▲   | ◆   | ▲   | ◆   |
| Perindopril                              | ▲   | ◆   | ▲   | ◆   |
| Prazosin                                 | ▲   | ◆   | ■   | ◆   |
| Quinapril                                | ▲   | ◆   | ▲   | ◆   |
| Ramipril                                 | ▲   | ◆   | ▲   | ◆   |
| Ranolazine                               | ■   | ◆   | ▲   | ■   |
| Rilmenidine                              | ▲   | ◆   | ▲   | ◆   |
| Riociguat                                | ▲   | ◆   | ▲   | ◆   |
| Selexipag                                | ▲   | ◆   | ▲   | ◆   |
| Sildenafil                               | ▲   | ◆   | ▲   | ◆   |
| Spiroonolactone                          | ▲   | ◆   | ▲   | ◆   |
| Tadalafil                                | ▲   | ◆   | ▲   | ◆   |
| Telmisartan                              | ▲   | ◆   | ▲   | ◆   |
| Torasemide                               | ▲   | ◆   | ▲   | ◆   |
| Trandolapril                             | ▲   | ◆   | ▲   | ◆   |
| Treprostinil                             | ▲   | ◆   | ▲   | ◆   |
| Valsartan                                | ▲   | ◆   | ▲   | ◆   |
| Xipamide                                 | ▲   | ◆   | ▲   | ◆   |
| Zofenopril                               | ▲   | ◆   | ▲   | ◆   |

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|                                  | LEN | PEM | REG | SOR |
|----------------------------------|-----|-----|-----|-----|
| <b>Illicit/Recreational</b>      |     |     |     |     |
| Alcohol                          | ◆   | ◆   | ◆   | ◆   |
| Amphetamine                      | ◆   | ◆   | ◆   | ◆   |
| Cannabis                         | ◆   | ◆   | ◆   | ◆   |
| Carfentanil                      | ◆   | ◆   | ◆   | ◆   |
| Cocaine                          | ●   | ◆   | ◆   | ●   |
| Ecstasy (MDMA)                   | ●   | ◆   | ◆   | ●   |
| GHB (Gamma-hydroxybutyrate)      | ◆   | ◆   | ◆   | ◆   |
| Heroin                           | ◆   | ◆   | ◆   | ◆   |
| LSD (Lysergic acid diethylamide) | ◆   | ◆   | ◆   | ◆   |
| Mephedrone                       | ◆   | ◆   | ◆   | ◆   |
| Methamphetamine                  | ◆   | ◆   | ◆   | ◆   |
| Phencyclidine (PCP)              | ◆   | ◆   | ◆   | ◆   |
| <b>Immunosuppressants</b>        |     |     |     |     |
| Adalimumab                       | ◆   | ▲   | ◆   | ◆   |
| Alemtuzumab                      | ◆   | ●   | ◆   | ◆   |
| Anakinra                         | ▲   | ▲   | ▲   | ▲   |
| Azathioprine                     | ▲   | ●   | ▲   | ▲   |
| Baricitinib                      | ▲   | ▲   | ▲   | ▲   |
| Basiliximab                      | ◆   | ●   | ◆   | ◆   |
| Brodalumab                       | ◆   | ●   | ◆   | ◆   |
| Canakinumab                      | ▲   | ▲   | ▲   | ▲   |
| Ciclosporin                      | ◆   | ●   | ●   | ▲   |
| Eculizumab                       | ◆   | ●   | ◆   | ◆   |
| Etanercept                       | ◆   | ●   | ◆   | ◆   |
| Fingolimod                       | ◆   | ●   | ◆   | ◆   |
| Lenalidomide                     | ◆   | ●   | ◆   | ◆   |
| Mycophenolate                    | ▲   | ●   | ■   | ▲   |
| Pirfenidone                      | ◆   | ●   | ◆   | ◆   |
| Sarilumab                        | ▲   | ▲   | ▲   | ▲   |
| Sirolimus                        | ▲   | ●   | ▲   | ■   |
| Tacrolimus                       | ■   | ●   | ●   | ■   |
| Tocilizumab                      | ▲   | ▲   | ▲   | ▲   |
| Upadacitinib                     | ▲   | ▲   | ▲   | ▲   |
| <b>Lipid Lowering Agents</b>     |     |     |     |     |
| Alirocumab                       | ◆   | ◆   | ◆   | ◆   |
| Atorvastatin                     | ◆   | ◆   | ■   | ■   |
| Bezafibrate                      | ◆   | ◆   | ◆   | ◆   |
| Evolocumab                       | ◆   | ◆   | ◆   | ◆   |
| Ezetimibe                        | ◆   | ◆   | ▲   | ▲   |
| Fenofibrate                      | ◆   | ◆   | ◆   | ◆   |
| Fish oils                        | ◆   | ◆   | ◆   | ◆   |
| Fluvastatin                      | ◆   | ◆   | ■   | ◆   |
| Gemfibrozil                      | ◆   | ◆   | ◆   | ◆   |
| Lovastatin                       | ◆   | ◆   | ◆   | ◆   |
| Pitavastatin                     | ◆   | ◆   | ◆   | ▲   |
| Pravastatin                      | ◆   | ◆   | ■   | ▲   |
| Rosuvastatin                     | ◆   | ◆   | ■   | ▲   |
| Simvastatin                      | ◆   | ◆   | ■   | ▲   |

|                                | LEN | PEM | REG | SOR |
|--------------------------------|-----|-----|-----|-----|
| <b>Other Drugs</b>             |     |     |     |     |
| Acamprosate                    | ◆   | ◆   | ◆   | ◆   |
| Acetazolamide                  | ◆   | ◆   | ◆   | ◆   |
| Acitretin                      | ◆   | ◆   | ◆   | ◆   |
| Activated charcoal             | ◆   | ◆   | ◆   | ◆   |
| Allopurinol                    | ◆   | ■   | ◆   | ◆   |
| Atomoxetine                    | ■   | ◆   | ◆   | ■   |
| Atropine                       | ◆   | ◆   | ◆   | ◆   |
| Baclofen                       | ◆   | ◆   | ◆   | ◆   |
| Bamlanivimab                   | ◆   | ◆   | ◆   | ◆   |
| Benralizumab                   | ◆   | ◆   | ◆   | ◆   |
| Bethahistine                   | ◆   | ◆   | ◆   | ◆   |
| Bimatoprost                    | ◆   | ◆   | ◆   | ◆   |
| Biperiden                      | ◆   | ◆   | ◆   | ◆   |
| Brinzolamide                   | ◆   | ◆   | ◆   | ◆   |
| Bromocriptine                  | ◆   | ◆   | ◆   | ◆   |
| Calcitonin                     | ◆   | ◆   | ◆   | ◆   |
| Calcium carbimide              | ◆   | ◆   | ◆   | ◆   |
| Calcium resonium               | ◆   | ◆   | ◆   | ◆   |
| Cannabidiol (CBD)              | ◆   | ◆   | ◆   | ◆   |
| Carbimazole                    | ◆   | ◆   | ◆   | ◆   |
| Carisoprodol                   | ◆   | ◆   | ◆   | ◆   |
| Casirivimab/imdevimab          | ◆   | ◆   | ◆   | ◆   |
| Cilostazol                     | ■   | ◆   | ◆   | ■   |
| Clomifene                      | ◆   | ◆   | ◆   | ◆   |
| Colchicine                     | ◆   | ◆   | ◆   | ◆   |
| Colestyramine                  | ▲   | ◆   | ■   | ▲   |
| Conivaptan                     | ◆   | ◆   | ●   | ◆   |
| Convalescent plasma (COVID-19) | ◆   | ◆   | ◆   | ◆   |
| COVID-19 vaccines              | ◆   | ◆   | ◆   | ◆   |
| Cyclobenzaprine                | ◆   | ◆   | ◆   | ◆   |
| Cytisine                       | ◆   | ◆   | ◆   | ◆   |
| Darbepoetin                    | ◆   | ◆   | ◆   | ◆   |
| Deferiprone                    | ◆   | ◆   | ◆   | ◆   |
| Denosumab                      | ◆   | ◆   | ◆   | ◆   |
| Dexamfetamine                  | ◆   | ◆   | ◆   | ◆   |
| Dextromethorphan               | ◆   | ◆   | ◆   | ◆   |
| Disulfiram                     | ◆   | ◆   | ◆   | ◆   |
| Donepezil                      | ■   | ◆   | ◆   | ■   |
| Dorzolamide                    | ◆   | ◆   | ◆   | ◆   |
| Dupilumab                      | ◆   | ◆   | ◆   | ◆   |
| Eliglustat                     | ▲   | ◆   | ◆   | ▲   |
| Emicizumab                     | ◆   | ◆   | ◆   | ◆   |
| Epoetin alfa                   | ◆   | ◆   | ◆   | ◆   |
| Etelcalcetide                  | ◆   | ◆   | ◆   | ◆   |
| Febuxostat                     | ◆   | ◆   | ◆   | ◆   |
| Filgrastim                     | ◆   | ◆   | ◆   | ◆   |
| Flibanserin                    | ◆   | ◆   | ◆   | ◆   |
| Gadopentetate (gadolinium)     | ◆   | ◆   | ◆   | ◆   |
| Glycerol phenylbutyrate        | ◆   | ◆   | ◆   | ◆   |
| Goserelin                      | ◆   | ◆   | ◆   | ◆   |
| Influenza vaccine              | ▲   | ◆   | ◆   | ◆   |
| Interferon beta                | ▲   | ▲   | ▲   | ▲   |

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**Key to symbols**

|   |   |
|---|---|
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| ▲ | Potential interaction likely to be of weak intensity. Additional action/monitoring or dosage adjustment is unlikely to be required                  |
| ◆ | No clinically significant interaction expected  |

**Notes**

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# Interactions with HCC Therapies

Charts revised July 2021 Full information available at [www.hep-druginteractions.org](http://www.hep-druginteractions.org)

**Please note that if a drug is not listed it cannot automatically be assumed it is safe to coadminister.**

LEN, lenvatinib; PEM, pembrolizumab; REG, regorafenib; SOR, sorafenib.

|                              | LEN | PEM | REG | SOR |
|------------------------------|-----|-----|-----|-----|
| <b>Other Drugs Continued</b> |     |     |     |     |
| Isosorbide mononitrate       | ▲   | ◆   | ▲   | ◆   |
| Isotretinoin                 | ◆   | ◆   | ◆   | ◆   |
| Lanreotide                   | ◆   | ◆   | ◆   | ◆   |
| Levothyroxine                | ■   | ◆   | ◆   | ◆   |
| Lofexidine                   | ■   | ◆   | ◆   | ■   |
| Lumacaftor/Ivacaftor         | ◆   | ◆   | ●   | ●   |
| Magnesium                    | ◆   | ◆   | ◆   | ◆   |
| Melatonin                    | ◆   | ◆   | ◆   | ◆   |
| Memantine                    | ▲   | ◆   | ◆   | ■   |
| Methylphenidate              | ◆   | ◆   | ◆   | ◆   |
| Minoxidil                    | ◆   | ◆   | ▲   | ▲   |
| Modafinil                    | ◆   | ◆   | ■   | ■   |
| Naftidrofuryl                | ◆   | ◆   | ◆   | ◆   |
| Nalmefene                    | ◆   | ◆   | ◆   | ◆   |
| Naloxone                     | ◆   | ◆   | ◆   | ◆   |
| Naltrexone                   | ◆   | ◆   | ▲   | ▲   |
| Neostigmine                  | ◆   | ◆   | ◆   | ◆   |
| Nicorandil                   | ◆   | ◆   | ◆   | ◆   |
| Nusinersen                   | ■   | ◆   | ◆   | ■   |
| Ocrelizumab                  | ◆   | ◆   | ◆   | ◆   |
| Orlistat                     | ▲   | ◆   | ▲   | ▲   |
| Penicillamine                | ◆   | ◆   | ◆   | ◆   |
| Pentoxifylline               | ◆   | ◆   | ◆   | ◆   |
| Phenylephrine                | ◆   | ◆   | ◆   | ◆   |
| Pilocarpine                  | ◆   | ◆   | ◆   | ◆   |
| Piracetam                    | ◆   | ◆   | ◆   | ◆   |
| Potassium                    | ◆   | ◆   | ◆   | ◆   |
| Protamine sulphate           | ◆   | ◆   | ◆   | ◆   |
| Pseudoephedrine              | ◆   | ◆   | ◆   | ◆   |
| Pyridostigmine               | ◆   | ◆   | ◆   | ◆   |
| Raloxifene                   | ◆   | ◆   | ▲   | ▲   |
| Sevelamer                    | ▲   | ◆   | ▲   | ▲   |
| Strontium ranelate           | ◆   | ◆   | ◆   | ◆   |
| Thalidomide                  | ◆   | ■   | ◆   | ◆   |
| Tranexamic acid              | ◆   | ◆   | ◆   | ◆   |
| Varenicline                  | ◆   | ◆   | ◆   | ◆   |

|                            | LEN | PEM | REG | SOR |
|----------------------------|-----|-----|-----|-----|
| <b>Oxytocics</b>           |     |     |     |     |
| Ergometrine (ergonovine)   | ◆   | ◆   | ◆   | ◆   |
| Mifepristone               | ◆   | ◆   | ◆   | ◆   |
| Misoprostol                | ◆   | ◆   | ◆   | ◆   |
| <b>Parkinsonism Agents</b> |     |     |     |     |
| Benzotropine               | ◆   | ◆   | ◆   | ◆   |
| Carbidopa                  | ◆   | ◆   | ◆   | ◆   |
| Orphenadrine               | ◆   | ◆   | ◆   | ◆   |
| Pramipexole                | ◆   | ◆   | ◆   | ◆   |
| Procyclidine               | ◆   | ◆   | ◆   | ◆   |
| Rasagiline                 | ◆   | ◆   | ◆   | ◆   |
| Ropinirole                 | ◆   | ◆   | ◆   | ◆   |
| <b>PBC Agents</b>          |     |     |     |     |
| Obeticholic acid           | ◆   | ◆   | ◆   | ◆   |
| Ursodeoxycholic acid       | ◆   | ◆   | ◆   | ◆   |
| <b>Steroids</b>            |     |     |     |     |
| Beclometasone              | ◆   | ●   | ◆   | ◆   |
| Betamethasone              | ◆   | ●   | ◆   | ◆   |
| Budesonide                 | ◆   | ●   | ◆   | ◆   |
| Ciclesonide                | ◆   | ●   | ◆   | ◆   |
| Clobetasol (topical)       | ◆   | ◆   | ◆   | ◆   |
| Clobetasone (topical)      | ◆   | ◆   | ◆   | ◆   |
| Dexamethasone              | ◆   | ●   | ▲   | ▲   |
| Fludrocortisone            | ◆   | ●   | ◆   | ◆   |
| Flunisolide                | ◆   | ●   | ◆   | ◆   |
| Fluticasone                | ◆   | ●   | ◆   | ◆   |
| Hydrocortisone (topical)   | ◆   | ◆   | ◆   | ◆   |
| Methylprednisolone         | ◆   | ●   | ◆   | ◆   |
| Mometasone                 | ◆   | ●   | ◆   | ◆   |
| Prednicarbate              | ◆   | ●   | ◆   | ◆   |
| Prednisone                 | ◆   | ●   | ◆   | ▲   |
| Triamcinolone              | ◆   | ●   | ◆   | ◆   |
| <b>Urological Agents</b>   |     |     |     |     |
| Alfuzosin                  | ■   | ◆   | ◆   | ■   |
| Desmopressin               | ◆   | ◆   | ◆   | ◆   |
| Dutasteride                | ◆   | ◆   | ◆   | ◆   |
| Finasteride                | ◆   | ◆   | ◆   | ◆   |
| Mirabegron                 | ▲   | ◆   | ◆   | ▲   |
| Silodosin                  | ◆   | ◆   | ◆   | ◆   |
| Solifenacin                | ■   | ◆   | ◆   | ■   |
| Tamsulosin                 | ◆   | ◆   | ◆   | ◆   |
| Tolterodine                | ■   | ◆   | ◆   | ■   |

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