

Table 5. Common or Serious Adverse Reactions Associated with Systemically Administered Drugs Used to Treat Opportunistic Infections

Updated: October 22, 2019

Reviewed: January 11, 2023

Drug(s)	Common or Serious Adverse Reactions
Acyclovir	Crystalluria associated with high doses, dehydration, or pre-existing renal impairment; nephrotoxicity secondary to obstructive urolithiasis, particularly after high dose rapid IV infusion; neurotoxicity (e.g., agitation, confusion, hallucination, seizure, coma) with high doses, especially in patients with renal impairment and/or older patients; thrombophlebitis at peripheral IV infusion site; nausea; vomiting; headache
Adefovir	Nausea, asthenia, nephrotoxicity (especially in patients with underlying renal insufficiency or predisposing comorbidities, or in patients who are currently taking nephrotoxic drugs)
Albendazole	Nausea, vomiting, hepatotoxicity, hypersensitivity reaction, dizziness, headache, reversible alopecia Rarely: Granulocytopenia, agranulocytosis, pancytopenia
Amikacin	Nephrotoxicity, ototoxicity (both hearing loss and vestibular toxicity are possible), neuromuscular blockade (associated with rapid infusion of large aminoglycoside doses), pain upon IM injection
Amoxicillin/Clavulanate and Ampicillin/Sulbactam	Diarrhea, nausea, vomiting, abdominal pain, <i>Clostridium difficile</i> -associated diarrhea and colitis, hypersensitivity reactions (immediate or delayed reactions, including anaphylaxis), bone marrow suppression, drug fever, neurotoxicity (seizure) at high doses (especially in patients with renal dysfunction)
Amphotericin B Deoxycholate and Lipid Formulations	Nephrotoxicity, infusion-related reactions (e.g., fever, chills, rigors, back pain, hypotension), hypokalemia, hypomagnesemia, anemia, thrombophlebitis, nausea, vomiting Lower incidence of nephrotoxicity and infusion-related reactions with liposomal formulations.
Anidulafungin	Generally well-tolerated. Hepatotoxicity, histamine-related infusion reactions (flushing, rash, pruritus, hypotension, and dyspnea are rare when infusion rate <1.1 mg/min), hypokalemia, diarrhea
Artemether/Lumefantrine	Generally well-tolerated. Rash, pruritus, nausea, vomiting, abdominal pain, anorexia, diarrhea, arthralgia, myalgia, dizziness, asthenia, headache, QTc prolongation Rarely: Hemolytic anemia
Artesunate	Generally well-tolerated. Bradycardia, dizziness, nausea and vomiting, skin rash, pruritus, postartemisinin delayed hemolysis, QTc prolongation
Atovaquone	Rash, nausea, vomiting, diarrhea, hepatotoxicity, headache, hyperglycemia, fever
Atovaquone/Proguanil	Pruritus, rash, nausea, vomiting, abdominal pain, diarrhea, anorexia, erythema multiforme, asthenia, dizziness, headache, oral ulcers, hepatotoxicity
Azithromycin	Nausea, vomiting, diarrhea, hepatotoxicity, ototoxicity (with prolonged use), rash, urticaria, pruritus, abdominal pain, <i>C. difficile</i> -associated diarrhea Rarely: Torsades de Pointes (greatest risk in patients with underlying QTc prolongation)

Table 5. Common or Serious Adverse Reactions Associated with Systemically Administered Drugs Used to Treat Opportunistic Infections

Drug(s)	Common or Serious Adverse Reactions
Aztreonam	Diarrhea, thrombophlebitis, neutropenia, increased liver enzymes, <i>C. difficile</i> -associated diarrhea Rarely: Hypersensitivity reaction
Benznidazole	Photosensitivity, allergic dermatitis, paresthesia, peripheral neuropathy, nausea, vomiting, abdominal pain, anorexia, weight loss, bone marrow suppression
Bedaquiline	Nausea, arthralgia, headache, QTc prolongation, elevated transaminases
Capreomycin	Nephrotoxicity, ototoxicity (both hearing loss and vestibular toxicity are possible), pain upon IM injection
Caspofungin	Generally well-tolerated. Fever, thrombophlebitis, histamine-related infusion reactions (flushing, rash, pruritus, facial swelling, hypotension, dyspnea), hypokalemia, anemia, headache, hepatotoxicity, diarrhea
Ceftriaxone	Generally well-tolerated. Cholelithiasis, urolithiasis, pancreatitis, rash, diarrhea, drug fever, hemolytic anemia, <i>C. difficile</i> -associated diarrhea and colitis, injection-site reactions after IM injections
Cephalosporins See above for Ceftriaxone	Hypersensitivity reaction, rash, nausea, vomiting, diarrhea, <i>C. difficile</i> -associated diarrhea and colitis, bone marrow suppression, hemolytic anemia Rarely: CNS toxicities (e.g., seizure, confusion) mostly seen with high doses used in patients with renal insufficiency or elderly patients without dose adjustment
Chloroquine and Hydroxychloroquine	Headache, pruritus, skin pigmentation, nausea, vomiting, abdominal pain, diarrhea, anorexia, photosensitivity, visual disturbances including blurry vision and retinal toxicity, auditory disturbances, QTc prolongation, cardiomyopathy, bone marrow suppression, hemolysis (associated with G6PD deficiency), hypersensitivity reaction (including TEN, SJS, and EM), hepatitis, neuropsychiatric changes (including extrapyramidal reactions and suicidal behavior), convulsive seizures, severe hypoglycemia (which may require adjustment of antidiabetic medications) Rarely: Neuromyopathy (which may occur with long-term use)
Cidofovir	Nephrotoxicity, proteinuria, ocular hypotony, anterior uveitis/iritis, neutropenia, metabolic acidosis (including Fanconi's syndrome), diarrhea, asthenia, fever, headache, alopecia, anemia Side effects most likely related to co-administration with probenecid are rash, nausea, vomiting, anorexia.
Ciprofloxacin	Nausea, vomiting, abdominal pain, diarrhea, <i>C. difficile</i> -associated diarrhea and colitis, headache, dizziness, sleep disturbances, tendonitis and tendon rupture (associated with age >60 and concomitant steroid use), photosensitivity, hypoglycemia, peripheral neuropathy, hepatotoxicity, QTc prolongation, neurotoxicity (especially with high doses, use in elderly patients, or use in patients with renal dysfunction), seizures, and mental health side effects (e.g., disorientation, agitation, memory impairment, delirium) Rarely: Aortic dissection
Clarithromycin	Hepatotoxicity, ototoxicity (with high doses or prolonged use), headache, nausea, vomiting, abdominal cramps, diarrhea, <i>C. difficile</i> -associated diarrhea and colitis, rash, QTc prolongation, dysgeusia

Table 5. Common or Serious Adverse Reactions Associated with Systemically Administered Drugs Used to Treat Opportunistic Infections

Drug(s)	Common or Serious Adverse Reactions
Clindamycin	Nausea, vomiting, abdominal pain, diarrhea, <i>C. difficile</i> -associated diarrhea and colitis, rash, arrhythmia associated with rapid IV infusion, metallic taste (with IV infusion), thrombophlebitis, abnormal liver function tests
Clotrimazole (Troche)	Generally well-tolerated. Nausea, vomiting, anorexia, metallic taste Rarely: Increase in serum transaminases
Cycloserine	Neuropsychiatric toxicities (e.g., headache, somnolence, lethargy, vertigo, tremor, dysarthria, irritability, confusion, paranoia, psychosis), seizures (particularly in patients with history of chronic alcoholism), allergic dermatitis, rash
Dapsone	Methemoglobinemia, hemolytic anemia (especially in patients with G6PD deficiency), neutropenia, dermatologic reactions (including rash), sulfone syndrome (fever, exfoliative dermatitis, lymphadenopathy, hepatic necrosis, hemolysis), peripheral neuropathy, hepatotoxicity, drug-induced lupus erythematosus, nephrotic syndrome, phototoxicity
Daclatasvir	Fatigue, headache, nausea, anemia, bradycardia (when co-administered with sofosbuvir and amiodarone)
Dasabuvir, Ombitasvir, Paritaprevir, and Ritonavir	Hepatotoxicity, nausea, pruritus, rash, insomnia, fatigue, asthenia, dyspnea (associated with ribavirin co-administration)
Doxycycline	Photosensitivity reaction, nausea, vomiting, diarrhea, esophageal ulceration, thrombophlebitis (with IV infusion), intracranial hypertension, <i>C. difficile</i> -associated diarrhea and colitis, tissue hyperpigmentation Rarely: Hepatotoxicity
Elbasvir/Grazoprevir	Fatigue, headache, nausea, ALT elevations, anemia (when given with ribavirin)
Emtricitabine	Generally well-tolerated. Headache, nausea, skin hyperpigmentation, diarrhea, rash
Entecavir	Generally well-tolerated. Headache, fatigue, dizziness, nausea
Erythromycin	Nausea, vomiting, diarrhea, abdominal pain, anorexia, rash, hepatotoxicity, cholestatic jaundice, ototoxicity (hearing loss, tinnitus), rash, QTc prolongation and cardiac arrhythmia, <i>C. difficile</i> -associated diarrhea and colitis, thrombophlebitis (with IV infusion)
Ethambutol	Optic neuritis (dose dependent), peripheral neuropathy, headache, nausea, vomiting, anorexia
Ethionamide	Dose-dependent gastrointestinal side effects (nausea, vomiting, diarrhea, abdominal pain, metallic taste, anorexia), dizziness, drowsiness, depression, postural hypotension, hepatotoxicity, hypothyroidism (with or without goiter), gynecomastia, impotence, hypoglycemia
Famciclovir	Generally well-tolerated. Headache, nausea, vomiting, diarrhea, nephrotoxicity (in patients with underlying renal disease)
Flucytosine	Concentration-dependent bone marrow suppression (anemia, neutropenia, thrombocytopenia), diarrhea, nausea, vomiting, rash, hepatotoxicity
Fluconazole	Hepatotoxicity, rash, nausea, vomiting, diarrhea, abdominal discomfort, reversible alopecia (with doses ≥ 400 mg/day for >2 months), QTc prolongation

Table 5. Common or Serious Adverse Reactions Associated with Systemically Administered Drugs Used to Treat Opportunistic Infections

Drug(s)	Common or Serious Adverse Reactions
Foscarnet	Nephrotoxicity, electrolyte imbalances (e.g., hypocalcemia, hypomagnesemia, hypophosphatemia, hyperphosphatemia, hypokalemia), penile ulceration, nausea, vomiting, anorexia, headache, seizure (associated with electrolyte imbalances), anemia, injection-site associated thrombophlebitis
Fumagillin (Investigational)	Oral Therapy: Neutropenia, thrombocytopenia, vertigo, nausea, vomiting, diarrhea, anorexia, abdominal cramps Ocular Therapy: Minimal systemic effect or local effect
Ganciclovir	Neutropenia, thrombocytopenia, anemia, injection-site-associated thrombophlebitis, increased serum creatinine, carcinogenic and teratogenic potential, impaired fertility, neuropathy
Glecaprevir/Pibrentasvir	Generally well tolerated with only 0.1% discontinuation due to adverse reaction in clinical trials. Mild headache, fatigue, nausea, diarrhea
Imipenem/Cilastatin	Hypersensitivity reaction (immediate or delayed); nausea; vomiting; diarrhea; <i>C. difficile</i> -associated diarrhea and colitis; thrombophlebitis; headache; bone marrow suppression; drug fever; CNS effects (seizure, myoclonus, and confusion) especially with higher doses, in patients with underlying CNS disorders, or with renal insufficiency
Interferon-Alfa and Peginterferon-Alfa	Flu-like syndrome (e.g., fever, headache, fatigue, myalgia), neuropsychiatric disorders (e.g., depression, suicidal ideation), neutropenia, anemia, thrombocytopenia, thyroid dysfunction, injection-site reactions, alopecia, nausea, anorexia, diarrhea, weight loss, development or exacerbation of autoimmune disorders, ocular effects (e.g., retinal hemorrhage, retinal artery or vein obstructions, and cotton wool spots)
Isavuconazonium Sulfate	Hepatotoxicity, cholelithiasis, infusion-related reaction (hypotension, dyspnea, chills, dizziness, paresthesia, and hypoesthesia), hypersensitivity reaction (e.g., anaphylaxis, rash, SJS), nausea, vomiting, diarrhea, headache, hypokalemia, dyspnea, cough. Adverse events primarily reported in immunocompromised patients.
Isoniazid	Hepatotoxicity, peripheral neuropathy, optic neuritis, psychosis, diarrhea, nausea Rarely: Psychosis
Itraconazole	Hepatotoxicity, congestive heart failure, edema, hypokalemia, nausea, vomiting, diarrhea, abdominal pain, rash, QTc prolongation, neuropathy
Lamivudine	Generally well-tolerated. Nausea, vomiting.
Ledipasvir/Sofosbuvir	Fatigue, headache, asthenia (most common), nausea, diarrhea, insomnia, mild transient asymptomatic lipase elevation, mild bilirubin elevation
Levofloxacin	Nausea, vomiting, abdominal pain, diarrhea, <i>C. difficile</i> -associated diarrhea and colitis, headache, dizziness, sleep disturbances, tendonitis and tendon rupture (associated with age >60 years and concomitant steroid use), photosensitivity, hypoglycemia, peripheral neuropathy, hepatotoxicity, QTc prolongation, neurotoxicity (especially with high doses, use in older patients, or in patients with renal dysfunction), seizures, and mental health side effects (e.g., disorientation, agitation, memory impairment, delirium) Rarely: Aortic dissection

Table 5. Common or Serious Adverse Reactions Associated with Systemically Administered Drugs Used to Treat Opportunistic Infections

Drug(s)	Common or Serious Adverse Reactions
Linezolid	Anemia, neutropenia, thrombocytopenia (especially with treatment lasting longer than 2–4 weeks), peripheral neuropathy, optic neuritis with long-term therapy, serotonin syndrome (especially in patients receiving concomitant serotonergic agents), seizure (in patients with a history of seizure or with risk factors for seizure), diarrhea, headache, nausea, vomiting Rarely: Lactic acidosis
Mefloquine	Depression, psychosis, anxiety, rash (reports of TEN and SJS), nausea, vomiting, diarrhea, epigastric pain, agitation, dizziness, headache, insomnia, abnormal dreams, QTc prolongation, arrhythmias (extrasystole, sinus bradycardia), agranulocytosis/aplastic anemia
Meropenem	Generally well-tolerated. Hypersensitivity reaction (immediate or delayed), nausea, vomiting, diarrhea, <i>C. difficile</i> -associated diarrhea and colitis, thrombophlebitis, headache, bone marrow suppression, drug fever
Micafungin	Generally well-tolerated. Histamine-related infusion reactions (e.g., flushing, rash, pruritus, hypotension, dyspnea) may occur, but these are rare if infusion lasts over 1 hour; anaphylaxis and anaphylactoid reaction, hepatotoxicity, thrombophlebitis, nausea, vomiting, diarrhea, hypokalemia Rarely: Hemolysis
Miconazole Buccal Tablets	Dysgeusia, diarrhea, nausea, vomiting, upper abdominal pain, headache, local reactions (oral discomfort, burning, pain, tongue/mouth ulceration, gingival pruritus, swelling, dry mouth) Rarely: Hypersensitivity reaction (may occur in patients with known hypersensitivity reaction to milk product concentrate)
Miltefosine	Nausea, vomiting, diarrhea, headache, motion sickness, leukocytosis, thrombocytosis, nephrotoxicity, retinal degeneration, elevated transaminases and bilirubin, teratogenic potential, impaired fertility
Moxifloxacin	Nausea, vomiting, abdominal pain, diarrhea, <i>C. difficile</i> -associated diarrhea and colitis, headache, dizziness, sleep disturbances, tendonitis and tendon rupture (associated with age >60 years and concomitant steroid use), photosensitivity, hypoglycemia, peripheral neuropathy, hepatotoxicity, QTc prolongation, neurotoxicity (especially with high doses, use in elderly patients or in patients with renal dysfunction), seizures, and mental health side effects such as disorientation, agitation, memory impairment, delirium Rarely: Aortic dissection
Nifurtimox	Anorexia, weight loss, nausea, vomiting, abdominal pain, headache, dizziness, mood changes, insomnia, myalgia, peripheral neuropathy, rash, pruritus, memory loss
Nitazoxanide	Generally well-tolerated. Nausea, vomiting, diarrhea, abdominal pain, headache
Nystatin (Oral Preparations)	Unpleasant taste, nausea, vomiting, anorexia, diarrhea Rarely: Hypersensitivity reaction
Paromomycin	Nausea, vomiting, cramps, anorexia, rash, headache Rarely: Nephrotoxicity and ototoxicity (inflammatory bowel disease and renal insufficiency may increase risk)

Table 5. Common or Serious Adverse Reactions Associated with Systemically Administered Drugs Used to Treat Opportunistic Infections

Drug(s)	Common or Serious Adverse Reactions
Penicillin G	<p>All Penicillin G Preparations: Hypersensitivity reactions (immediate or delayed reactions, including anaphylaxis), bone marrow suppression, nausea, vomiting, diarrhea, <i>C. difficile</i>-associated diarrhea and colitis, drug fever</p> <p>Benzathine Penicillin G and Procaine Penicillin G: IM injection-site reactions (pain and erythema), procaine neuropsychiatric reactions (with high dose), neurovascular damage (due to inadvertent intravascular instead of IM injection)</p> <p>Aqueous Crystalline Penicillin G (IV): Thrombophlebitis, neurotoxicity at high doses, especially in patients with renal dysfunction</p>
Pentamidine	<p>IV Infusion: Nephrotoxicity, infusion-related hypotension, thrombophlebitis, QTc prolongation, arrhythmias (including Torsades de Pointes), pancreatitis, hypoglycemia, hyperglycemia, diabetes mellitus, hepatotoxicity, electrolyte abnormalities, leukopenia, thrombocytopenia</p> <p>Aerosolized Therapy: Bronchospasm, cough, dyspnea, tachypnea, metallic taste</p> <p>Rarely: Pancreatitis</p>
Pentavalent Antimony (Sodium Stibogluconate)	<p>Nausea, vomiting, abdominal pain, anorexia, headache, hepatotoxicity, arthralgia, myalgia, cardiac toxicity with >20 mg/kg dose (prolonged QTc and T wave inversion), rash, thrombophlebitis, leukopenia, anemia, thrombocytopenia</p> <p>Rarely: Pancreatitis</p>
Posaconazole	<p>Nausea, vomiting, diarrhea, abdominal pain, headache, hepatotoxicity, hypokalemia, QTc prolongation, rash</p> <p>IV Infusion: Thrombophlebitis, cyclodextrin accumulation (especially in patients with eGFR <50 mL/min, but an observational study did not show an increased risk of nephrotoxicity)</p>
Piperacillin-Tazobactam	<p>Generally well-tolerated. Hypersensitivity reaction, rash, diarrhea, nausea, vomiting, <i>C. difficile</i>-associated diarrhea and colitis, thrombophlebitis, impaired platelet aggregation, seizure (with high doses used in patients with renal insufficiency)</p> <p>Rarely: Thrombocytopenia</p>
Primaquine	<p>Methemoglobinemia, hemolytic anemia (especially in patients with G6PD deficiency), leukopenia, neutropenia, abdominal cramps, nausea, vomiting, QTc prolongation, pruritus, rash, dizziness</p>
Pyrazinamide	<p>Hepatotoxicity, hyperuricemia, arthralgia, myalgia, nausea, vomiting, rash</p>
Pyrimethamine	<p>Neutropenia, thrombocytopenia, megaloblastic anemia, rash</p>
Quinidine Glucuronate	<p>QTc prolongation, lightheadedness, nausea, vomiting, diarrhea, abdominal pain, drug-induced SLE, headache, rash, hemolysis (with G6PD deficiency), hepatotoxicity, heartburn/esophagitis, cinchonism (tinnitus, vertigo, blurred vision)</p>
Quinine	<p>Headache, nausea, vomiting, diarrhea, cinchonism (tinnitus, vertigo, blurred vision), hypersensitivity reaction, hypoglycemia, thrombocytopenia, QTc prolongation</p>
Ribavirin	<p>Hemolytic anemia, dyspnea, hyperbilirubinemia, fatigue, myalgia, headache, nausea, vomiting, anorexia, dyspepsia, rash, dry cough, teratogenicity, hypersensitivity reaction, hepatotoxicity</p>
Rifabutin	<p>Hepatotoxicity, anterior uveitis (dose dependent), red-orange discoloration of body fluids, rash, arthralgia, neutropenia, nausea, vomiting, abdominal pain, diarrhea, anorexia</p>

Table 5. Common or Serious Adverse Reactions Associated with Systemically Administered Drugs Used to Treat Opportunistic Infections

Drug(s)	Common or Serious Adverse Reactions
Rifampin	Hepatotoxicity (cholestatic hepatitis), red-orange discoloration of body fluids, thrombocytopenia, hemolytic anemia, rash, hypersensitivity reactions with flu-like syndrome, nausea, vomiting, anorexia, abdominal pain, flatulence, diarrhea, renal failure, headache, confusion
Rifapentine	Hypersensitivity reaction, hepatotoxicity, anemia, lymphopenia, neutropenia, arthralgia, conjunctivitis, headache, vomiting, nausea, diarrhea, rash, pruritus, anorexia and lymphadenopathy, red-orange discoloration of body fluids, <i>C. difficile</i> -associated diarrhea and colitis
Sofosbuvir	Generally well-tolerated. Fatigue, headache, nausea, insomnia, anemia, bilirubin elevation (associated with ribavirin co-administration), asymptomatic CK elevation and lipase elevation, pancytopenia, depression (associated with Peg-IFN co-administration)
Streptomycin	Nephrotoxicity, ototoxicity (both hearing loss and vestibular toxicity are possible), neuromuscular blockade (associated with rapid infusion of large aminoglycoside doses), pain upon IM injection
Sulfadiazine	Rash (including SJS, EM, and TEN), anemia, neutropenia, thrombocytopenia, crystalluria (with or without urolithiasis), renal insufficiency, nausea, vomiting, drug fever, hepatotoxicity, headache, peripheral neuritis, tinnitus, vertigo, insomnia
Tafenoquine	Dizziness, nausea, vomiting, headache, hypersensitivity reactions, decreased hemoglobin, methemoglobinemia, hemolytic anemia (associated with G6PD deficiency; may cause harm to fetuses and breastfeeding infants who are GDPD deficient), psychiatric adverse reactions (in patients with history of psychiatric illness)
Telavancin	Taste disturbance, nausea, vomiting, diarrhea, red-man syndrome with rapid infusion (flushing, urticaria, pruritus, rash), nephrotoxicity, QTc prolongation, headache, dizziness, <i>C. difficile</i> -associated colitis
Telbivudine	Generally well-tolerated. Nausea, vomiting, abdominal pain, increase in creatine kinase, headache, dizziness, fatigue, diarrhea, myopathy, myalgia, cough, fever, dyspepsia, abdominal pain
Tenofovir DF	Renal insufficiency, proximal renal tubulopathy (with hypophosphatemia, hypouricemia, normoglycemic glycosuria), decrease in bone mineral density, nausea
Tenofovir Alafenamide	Lower incidence of renal or bone toxicities than with tenofovir DF
Tetracycline	Photosensitivity, tooth discoloration when taken by infants and children aged <8 years, reduced skeletal development, pruritus, esophageal ulceration, nausea, vomiting, diarrhea, hepatotoxicity, rash, increased BUN, intracranial hypertension
Trimethoprim-Sulfamethoxazole	Rash (including SJS, EM, and TEN), photosensitivity, anemia, neutropenia, thrombocytopenia, hepatotoxicity, dose dependent increase in serum creatinine (without change in GFR), interstitial nephritis, nausea, vomiting, crystalluria (in patients with inadequate hydration), hyperkalemia (more common with high-dose TMP), drug fever
Valacyclovir	Generally well-tolerated. Nausea; vomiting; headache; crystalluria (with high dose or in patients with renal impairment); neurotoxicity (e.g., agitation, confusion, hallucination, seizure, coma) with high doses, especially in patients with renal impairment; abdominal pain
Valganciclovir	Neutropenia, thrombocytopenia, anemia, nausea, vomiting, diarrhea, confusion, pyrexia, tremor, acute renal failure, carcinogenic and teratogenic potential, impaired fertility

Table 5. Common or Serious Adverse Reactions Associated with Systemically Administered Drugs Used to Treat Opportunistic Infections

Drug(s)	Common or Serious Adverse Reactions
Vancomycin	Infusion-related reactions (associated with infusion rate and can include flushing, hypotension, and rash), thrombophlebitis, rash, neutropenia, ototoxicity (associated with excessive concentration), nephrotoxicity (associated with high daily dose and high trough concentrations) Rarely: Thrombocytopenia
Velpatasvir/Sofosbuvir	Generally well tolerated. Headache, fatigue, and anemia (associated with ribavirin co-administration)
Voriconazole	Visual disturbances (associated with initial dosing), optic neuritis (associated with >28 days treatment), skin photosensitivity, hepatotoxicity, fever, nausea, rash, vomiting, chills, tachycardia, QTc prolongation, peripheral edema, headache, delirium, hallucination, encephalopathy (associated with trough >5.5 mcg/mL), fluorosis and periostitis with high dose and/or prolonged use, cyclodextrin accumulation (associated with use of IV formulation in patients with CrCl <50 mL/min, but an observational study did not show an increased risk of nephrotoxicity) Rarely: Peripheral neuropathy

Key: ALT = alanine aminotransferase; AST = aspartate aminotransferase; BUN = blood urea nitrogen; CK = creatine kinase; CNS = central nervous system; CrCl = creatinine clearance; eGFR = estimated glomerular filtration rate; EM = erythema multiforme; G6PD = glucose-6-phosphate dehydrogenase; GFR = glomerular filtration rate; IM = intramuscular; IV = intravenous; Peg-IFN = peginterferon alpha; SJS = Stevens-Johnson syndrome; SLE = systemic lupus erythematosus; TEN = toxic epidermal necrolysis