WASHINGTON STATE UNIVERSITY
College of Pharmacy and Pharmaceutical Sciences

Drug Information Center

Highlights of FDA Activities – 2/1/22 – 2/28/22

FDA Drug Safety Communications & Drug Information Updates:

Ukoniq (umbralisib) by TG Therapeutics: Drug Safety Communication – Possible Increased Risk of Death 2/3/22
The FDA is investigating a possible increased risk of death with the cancer medicine Ukoniq (umbralisib) in a clinical trial evaluating umbralisib in patients with chronic lymphocytic leukemia. Umbralisib is approved to treat marginal zone lymphoma and follicular lymphoma. Health care professionals should review patient progress on umbralisib and discuss with them the risks and benefits of continuing umbralisib in the context of other available treatments.

Potential Strangulation Risk in Children Who Use Enteral Feeding Delivery Sets – Safety Communication 2/8/22
The FDA warned health care providers, parents, and caregivers of the risk of strangulation in children who receive enteral feeding. The FDA has received reports of two toddlers who died after being strangled by feeding set tubing.

Emergency Use Authorization for Bebtelovimab – Drug Information Update 2/11/22
The FDA issued an emergency use authorization (EUA) for bebtelovimab, a monoclonal antibody for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with a positive COVID-19 test, and who are at high risk for progression to severe COVID-19, including hospitalization or death, and for whom alternative COVID-19 treatment options approved or authorized by the FDA are not accessible or currently appropriate. Bebtelovimab retains activity against the omicron variant. It is not authorized for patients who are hospitalized due to COVID-19 or require oxygen therapy due to COVID-19.

Spectrum V8 and Spectrum IQ Infusion Pumps by Baxter: Urgent Safety Communication 2/18/22
Baxter International announced it issued an Urgent Safety Communication to reinforce information regarding upstream occlusion alarms for all Spectrum V8 and Spectrum IQ infusion pumps. After an upstream occlusion alarm, it is important to fully resolve any upstream occlusion before restarting the pump. Failure to do so may cause the pump not to re-alarm and can lead to interruption of infusion.

Updated EUA for Evusheld (Tixagevimab Co-Packaged with Cilgavimab) – Drug Information Update 2/24/22
The FDA revised the recommended dosage of Evusheld (tixagevimab co-packaged with cilgavimab) for pre-exposure prophylaxis of COVID-19 in certain adults and pediatric patients due to evidence suggesting a higher dose may be more effective against omicron subvariants. The new authorized dose is 300 mg of tixagevimab and 300 mg of cilgavimab. The larger volume of the updated dose necessitates injections be limited to large muscles that can accommodate the volume (eg, the gluteal muscle). Patients who received the previously authorized dose (150 mg of tixagevimab and 150 mg of cilgavimab) should receive an additional dose of 150 mg of tixagevimab and 150 mg of cilgavimab as soon as possible.

Updated EUA for Sotrovimab – Drug Information Update 2/25/22
The FDA revised the EUA for sotrovimab to clarify that sotrovimab is not authorized for treatment of mild or moderate COVID-19 in geographic regions where COVID-19 infection is likely to have been caused by a variant not susceptible to sotrovimab. Sotrovimab is currently authorized in all U.S. regions until further notice by FDA. The predominant variants by region can be found on the CDC Variant Proportions page.

Major Medication/Drug-Related Product Recalls Announced Through MedWatch:

Standard Q Covid-19 Ag Home Test by SD Biosensor: Recall – Lack of FDA Authorization 2/4/22
SD Biosensor, Inc., recalled its Standard Q Covid-19 Ag Home Test in the United States due to confirmed reports that the test kits were illegally imported into the United States. If consumers encounter this test, they are encouraged to discard and avoid any use of it as it has not been authorized, cleared or approved by the FDA. Consumers that have used the test are strongly encouraged to consider retesting with an FDA authorized test.

COVID-19 Direct Antigen Rapid Test (DART) by E25Bio: Recall – Risk of False Results 2/4/22, 2/18/22
The FDA warned people not to use the E25Bio COVID-19 Direct Antigen Rapid Test (DART), as the test has not been authorized, cleared, or approved by the FDA for distribution or use in the United States, and it may include false labeling representing that the test is authorized by the FDA. The E25Bio COVID-19 DART may also be sold under the trade name E25Bio SARS-CoV-2 Antigen Test Kit. E25Bio subsequently issued a recall for the tests.

Powder Formulas by Abbott: Recall – Possible Bacterial Contamination 2/18/22
Abbott recalled Similac, Alimentum, and EleCare powder formulas manufactured at the company's facility in Sturgis, Michigan. The recall does not include any metabolic deficiency nutrition formulas. The recall follows four consumer complaints related to infants infected with *Cronobacter sakazakii* or *Salmonella* Newport who had consumed powder infant formula manufactured at this facility. Parents and caregivers should visit the company's website, type the code on the bottom of the package, and follow instructions provided. No action is needed for previously consumed product. Products included in the recall have a multidigit number on the bottom of the package starting with 22 through 37, containing K8, SH, or Z2, and have an expiration date of April 1, 2022, or after.

RNAstill MTM Specimen Collection Kits by BASE10 Genetics: Recall – False Results and Safe Handling 2/18/22
BASE10 Genetics recalled the RNAstill MTM specimen collection kits because they were distributed without proper premarket clearance from the FDA and lack adequate data to know how well the product inactivates and stabilizes a virus for transport and storage. If the specimen is not properly inactivated and stabilized by transport medium, there is concern that the sample could deteriorate (leading to a false negative) or that the virus may not be inactivated prior to testing which could spread virus to people in the lab. The product was distributed to nursing homes, assisted living facilities, and memory facilities. The transport medium of this product contains a hazardous chemical that requires special training and it is not certain that staff at these facilities are properly trained to handle the chemical. Customers should discontinue use and return all unused product. Do not allow the product to come into contact with bleach or other oxidizing agents and do not dispose of unused product yourself.

Family Dollar Stores: Recall – Potentially Contaminated Products in Six States 2/18/22
Several categories of FDA-regulated products purchased from January 1, 2021, through the present from Family Dollar stores in Alabama, Arkansas, Louisiana, Mississippi, Missouri, and Tennessee may be unsafe for consumers to use. Products include human foods, cosmetics, medical devices (such as feminine hygiene products, surgical masks, contact lens solution, bandages, and nasal care products), and OTC medications. Possible contamination sources include live and dead rodents, rodent feces and urine, dead birds, bird droppings, and conditions that did not protect against contamination at a distribution center in Arkansas. Consumers should discard these products, wash their hands after handling these products, and contact a health care professional if they have concerns.

Dietary Supplement Recalls & Public Notifications

Notifications were issued regarding undeclared active ingredients or contaminants in the following products. Patients are advised not to purchase or use these products.

Product	*Promoted Use*	*Undeclared Ingredient(s) or Contaminants*
MAC DADDY RED*	Sexual Enhancement	Sildenafil and Tadalafil
MAC DADDY PURPLE*	Sexual Enhancement	Tadalafil
MegMan Performance Booster*	Sexual Enhancement	Tadalafil
Red Mammoth*	Sexual Enhancement	Sildenafil and Tadalafil
Red Pill Capsules by Your Favorite Shop*	Sexual Enhancement	Tadalafil
Rise Up Red Edition capsules*	Sexual Enhancement	Tadalafil
Sure and Brut Aerosol Sprays	Antiperspirant	Benzene

*recalled

New Product Shortages	*Date Initially Posted*
Dextrose 25% injection	2/7/22
Dextrose 5% injection	2/14/22
Azasite (Azithromycin) 1% Ophthalmic Solution	2/22/22
Diflunisal 500 mg tablets	2/25/22

Brand Name or Sole Source Product Discontinuations/Withdrawals	*Date Posted*
Skelaxin (Metaxalone) Tablets (Pfizer): 800 mg tablets in 100-count (NDC 60793-136-01) and 500-count (NDC 60793-136-05) bottles. Metaxalone tablets remain available from other manufacturers.	2/25/22

New Drug Approvals:	*Description (See Attached Drug Summaries)*	*Date Approved*
Sutimlimab-jome / Enjaymo / Bioverativ	Complement inhibitor to decrease the need for red blood cell transfusion due to hemolysis in adults with cold agglutinin disease	2/4/22
Mitapivat / Pyrukynd / Agios	Pyruvate kinase activator for treatment of hemolytic anemia in adults with pyruvate kinase deficiency	2/17/22
Pacritinib / Vonjo / CTI BioPharma	Kinase inhibitor for the treatment of myelofibrosis	2/28/22
Ciltacabtagene autoleucel / Carvykti / Janssen Biotech & Legend Biotech	CAR-T therapy to treat multiple myeloma after four previous therapies	2/28/22

New Indications:	*Description*	*Date Approved*
Dapagliflozin and Metformin / Xigduo XR / AstraZeneca	FDA has approved this drug to reduce to risk of cardiovascular death and hospitalization for heart failure in adults with heart failure (NYHA class II-IV) with reduced ejection fraction	2/3/22
Empaglifozin / Jardiance / Boehringer Ingelheim; Eli Lilly	FDA has approved Jardiance to reduce the risk of cardiovascular death and hospitalization for heart failure in adults	2/24/22

New Dosage Forms or Formulation:	***Description***	***Date Approved***
Flexquivy / baclofen oral suspension / Azurity	Oral Suspension: 25 mg per 5 mL (5 mg/mL); for the treatment of spasticity resulting from multiple sclerosis	2/4/22
Nalmefene HCl / Purdue	Injection: 2 mg/2 mL; for IV, IM, or subcutaneous administration in the management of known or suspected opioid overdose	2/8/22
Technetium Tc-99m Succimer Kit/ NephroScan / Theragnostics	Radioactive diagnostic agent for use as an aid in the scintigraphic evaluation of renal parenchymal disorders.	2/22/22
Norliqva / amlodipine / CMP Pharma	Oral solution: 1 mg/mL; for the treatment of hypertension and coronary artery disease	2/24/22
Releuko / filgrastim-ayow / Amneal	Injection: 300 mcg/mL and 480 mcg/1.6 mL in a single-dose vial; 300 mcg/0.5 mL and 480 mcg/0.8 mL in a prefilled syringe; Neupogen biosimilar	2/25/22
ACUVUE Theravision with Ketotifen / etafilcon A drug-eluting contact lens with ketotifen / Johnson & Johnson	Etafilcon A daily disposable contact lens with ketotifen (0.019 mg per lens); for the prevention of ocular itch due to allergic conjunctivitis and correction of myopia or hyperopia	2/25/22
Ranolazine / Aspruzyo Sprinkle / Sun Pharmaceutical	Extended-release granules: 500 mg, 1000 mg; for the treatment of chronic angina	2/28/22

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Sutimlimab-jome / Enjaymo / Bioverativ	
Generic Name / Brand Name / Company	Sutimlimab-jome / Enjaymo / Bioverativ
Date of approval	2/4/22
Drug Class (Mechanism of Action if novel agent)	Complement inhibitor
Indication	To decrease the need for red blood cell transfusion due to hemolysis in adults with cold agglutinin disease
Comparative agent – Therapeutic interchange?	Alternative treatments: eculizumab, rituximab
Dosage forms/strengths.	Injection: 1,100 mg/22 mL (50 mg/mL) in a single-dose vial
Common Dose/sig	Administer by IV infusion weekly for 2 weeks, then every 2 weeks For patients weighing 39 kg to less than 75 kg: 6,500 mg For patients weighing 75 kg or more: 7,500 mg
DEA Schedule	None
Date of market availability	Available
Similar Medication Names	Cemiplimab
Clinical Use Evaluation	
Common Adverse Effects	≥10%: respiratory tract infections, viral infections, diarrhea, dyspepsia, cough, arthralgia, arthritis, and peripheral edema.
Severe Adverse Effects	Streptococcal sepsis, staphylococcal wound infection, arthralgia, and respiratory tract infection
Severe Drug-Drug Interactions	None known
Severe Drug-Food Interactions	None known
Important Labs Values to assess prior to order entry or at point of clinical follow up.	Hemoglobin
Used in Pediatric Areas	Safety and effectiveness in pediatric patients have not been established
Renal or Hepatic Dosing	No dose adjustments recommended
Critical Issues (i.e., contraindications, warnings, etc) that should be emphasized	Contraindicated in patients with known hypersensitivity to sutimlimab-jome or any of the active ingredients. Warnings: may increase susceptibility to serious infections, cause infusion-related reactions, potentially increase the risk of developing autoimmune diseases such as systemic lupus erythematosus, and recurrent hemolysis can occur if treatment is interrupted. Vaccinate against encapsulated bacteria at least 2 weeks prior to treatment.
Special administration technique or considerations	Infuse over 1 to 2 hours (depending on the patient's body weight). Administer via a 0.2 micron in-line filter with a polyethersulfone membrane. Prime the infusion tubing with the dosing solution immediately before infusion, flush with sufficient quantity of NS immediately after completion of infusion. Monitor patient for at least 2 hours after completion of the initial infusion and for at least 1 hour after subsequent infusions.
Prepared by	Nicole McCartney
Source	Enjaymo (sutimlimab-jome) [prescribing information]. Waltham, MA: Bioverativ USA Inc.; February 2022.

Mitapivat / Pyrukynd / Agios Pharmaceuticals	
Generic Name / Brand Name / Company	Mitapivat / Pyrukynd / Agios Pharmaceuticals
Date of approval	2/17/22
Drug Class (Mechanism of Action if novel agent)	Pyruvate kinase activator; mitapivat allosterically binds to the pyruvate kinase tetramer to increase pyruvate kinase activity. The red blood cell form of pyruvate kinase is mutated in pyruvate kinase deficiency, which leads to reduced ATP, shortened RBC lifespan, and chronic hemolysis.
Indication	Treatment of hemolytic anemia in adults with pyruvate kinase deficiency
Comparative agent – Therapeutic interchange?	None
Dosage forms/strengths.	Tablets: 5 mg, 20 mg, and 50 mg
Common Dose/sig	Starting dose: 5 mg by mouth twice daily May increase to 20 mg twice daily after 4 weeks if Hb is below normal range or patient has required a transfusion in the last 8 weeks May increase to 50 mg twice daily after 8 weeks total treatment and 4 weeks of 20 mg twice daily dose if Hb is below normal range or patient has required a transfusion in the last 8 weeks
DEA Schedule	None
Date of market availability	Anticipated in early March
Similar Medication Names	Mitrazol, Mitomycin, Mitosol, Mitotane
Clinical Use Evaluation	
Common Adverse Effects	Decreased estrone (56.3%) and estradiol (12.5%) in males, increased urate (15%), back pain (15%), and arthralgia (10%)
Severe Adverse Effects	Acute hemolysis with subsequent anemia following abrupt interruption or discontinuation of mitapivat
Severe Drug-Drug Interactions	Strong CYP3A inhibitors or inducers – avoid co-administration. Moderate CYP3A4 inhibitors – do not titrate mitapivat beyond 20 mg twice daily Moderate CYP3A4 inducers – avoid if possible, otherwise adjust dose Sensitive CYP3A, CYP2B6, CYP2C substrates including hormonal contraceptives and UGT1A1 or P-gp substrates – avoid with substrates with narrow therapeutic index
Severe Drug-Food Interactions	N/A
Important Labs Values to assess prior to order entry or at point of clinical follow up.	Monitor hemoglobin for dosing adjustments Monitor urate in all patients for monitoring of ADRs Monitor estrone and estradiol in men for monitoring of ADRs
Used in Pediatric Areas	Safety and effectiveness have not been established
Renal or Hepatic Dosing	Avoid use in patients with moderate or severe hepatic impairment
Critical Issues (i.e., contraindications, warnings, etc) that should be emphasized	Acute hemolysis seen with subsequent anemia following abrupt interruption or discontinuation of mitapivat. Titrate dose for discontinuation.
Special administration technique or considerations	Swallow tablet whole, with or without food
Prepared by	Keelin Hovrud
Source	Pyrukynd (mitapivat) [prescribing information]. Cambridge, MA: Agios Pharmaceuticals; February 2022.

Pacritinib / Vonjo / CTI BioPharma	
Generic Name / Brand Name / Company	Pacritinib / Vonjo / CTI BioPharma
Date of approval	2/28/22
Drug Class (Mechanism of Action if novel agent)	Kinase inhibitor with activity against Janus kinase 2 (JAK2) and FMS-like tyrosine kinase 3 (FLT3)
Indication	Treatment of adults with intermediate or high-risk primary or secondary (post-polycythemia vera or post-essential thrombocythemia) myelofibrosis with a platelet count less than 50 x 10^9/L
Comparative agent – Therapeutic interchange?	Ruxolitinib
Dosage forms/strengths.	Capsules: 100 mg
Common Dose/sig	200 mg orally twice daily; dose modification recommended for diarrhea, thrombocytopenia, hemorrhage, and prolonged QT interval
DEA Schedule	None
Date of market availability	Available
Similar Medication Names	Ceritinib, crizotinib
Clinical Use Evaluation	
Common Adverse Effects	>20%: diarrhea, thrombocytopenia, nausea, anemia, peripheral edema
Severe Adverse Effects	Anemia, thrombocytopenia, pneumonia, cardiac failure, disease progression, pyrexia, squamous cell carcinoma, diarrhea, epistaxis
Severe Drug-Drug Interactions	Co-administration with strong CYP3A4 inhibitor or inducers is contraindicated; use with moderate CYP3A4 inhibitors or inducers should be avoided. Avoid use with sensitive substrates of CYP1A2, CYP3A4, P-glycoprotein, BCRP, or OCTI
Severe Drug-Food Interactions	None known.
Important Labs Values to assess prior to order entry or at point of clinical follow up.	CBC including differential and platelet count and coagulation testing (prothrombin time, partial thromboplastin time, thrombin time, and INR) prior to initiation and as clinically indicated while on treatment
Used in Pediatric Areas	Safety and efficacy not established.
Renal or Hepatic Dosing	Avoid use in moderate or severe hepatic impairment (Child-Pugh B or C) or severe renal impairment (eGFR less than 30 mL/min).
Critical Issues (i.e., contraindications, warnings, etc) that should be emphasized	Contraindicated in patients using strong CYP3A4 inhibitors or inducers. Warnings: Hemorrhage – monitor for bleeding, discontinue 7 days prior to elective surgery or invasive procedures due to risk of hemorrhage Diarrhea - manage with antidiarrheal medications, fluid replacement, and dose-modification Thrombocytopenia – monitor platelet count Prolonged QT interval – perform ECG prior to initiation, avoid use if baseline QTc greater than 480 msec or with other medications known to prolong QT interval, correct hypokalemia prior to and during treatment. Major adverse cardiac events, thrombosis, secondary malignancies, and infection have been associated with another JAK inhibitor; risks and benefits should be considered prior to initiation. Patients on treatment with other kinase inhibitors before initiation of pacritinib must taper or discontinue those agents prior to initiation.
Special administration technique or considerations	May be taken with or without food, at similar times each day. Swallow capsules whole; do not open, break or chew capsules. .
Prepared by	Terri Levien
Source	Vonjo (pacritinib) [prescribing information]. Seattle, WA: CTI BioPharma Corp.; February 2022.

Ciltacabtagene autoleucel / Carvykti / Janssen Biotech & Legend Biotech	
Generic Name / Brand Name / Company	Ciltacabtagene autoleucel / Carvykti / Janssen Biotech & Legend Biotech
Date of approval	2/28/22
Drug Class (Mechanism of Action if novel agent)	Antineoplastic agent, CAR-T immunotherapy; B-cell maturation antigen (BCMA)-directed autologous T cell immunotherapy
Indication	Treatment of adult patients with relapsed or refractory multiple myeloma, after 4 or more prior lines of therapy including a proteasome inhibitor, an immunomodulatory agent, and an anti-CD38 monoclonal antibody
Comparative agent – Therapeutic interchange?	Idacabtagene vicleucel
Dosage forms/strengths.	Cell suspension: supplied as 0.5-1 x 10^6 CAR-positive viable T cells per kg body weight in one infusion bag
Common Dose/sig	0.5-1 x 10^6 CAR-positive viable T cells per kg body weight, with a maximum dose of 1 x 10^8 CAR-positive viable T cells per single dose infusion, administered as an intravenous infusion
DEA Schedule	None
Date of market availability	Available; only available through a REMS program
Similar Medication Names	Carvedilol
Clinical Use Evaluation	
Common Adverse Effects	>20%: pyrexia, cytokine release syndrome, hypogammaglobulinemia, hypotension, musculoskeletal pain, fatigue, infection, cough, chills, diarrhea, nausea, encephalopathy, decreased appetite, headache, tachycardia, dizziness, dyspnea, edema, coagulopathy, constipation, vomiting, and laboratory adverse reactions ≥50%: thrombocytopenia, neutropenia, anemia, aminotransferase elevation, hypoalbuminemia
Severe Adverse Effects	Cytokine release syndrome, neurotoxicity, Parkinsonism, Guillain-Barre syndrome, bleeding, infection
Severe Drug-Drug Interactions	Avoid systemic corticosteroids during pre-infusion regimen
Severe Drug-Food Interactions	None known
Important Labs Values to assess prior to order entry or at point of clinical follow up.	Blood counts prior to and after infusion; pregnancy test for females of child-bearing age prior to starting treatment
Used in Pediatric Areas	Safety and efficacy have not been established
Renal or Hepatic Dosing	No recommended dosage adjustments
Critical Issues (i.e., contraindications, warnings, etc) that should be emphasized	Warnings: Prolonged and recurrent cytopenias, infections, hypogammaglobulinemia, hypersensitivity, secondary malignancies, neurologic toxicities
Special administration technique or considerations	Autologous use only; verify patient's identity prior to infusion. Administer a lymphodepleting regimen of cyclophosphamide and fludarabine prior to infusion. Premedicate with acetaminophen and an H1 antihistamine; avoid prophylactic use of systemic corticosteroids. Confirm availability of tocilizumab prior to infusion. Do not administer through a leukodepleting filter. Delay administration if active infection, inflammatory disorder, or severe grade 3 non-hematologic toxicities from the lymphodepleting regimen. Monitor patients daily for at least 10 days at a REMS-certified healthcare facility, and then periodically for 4 weeks.
Prepared by	Terri Levien
Source	Carvykti (ciltacabtagene autoleucel) [prescribing Information]. Horsham, PA: Janssen Biotech, Inc.; February 2022.