Additional Coagulation Products

Product Specifics	Anti-Inhibitor		Anti-Inhibitor / Acquired Hemophilia	Acquired Hemophilia A	Desmopressin Acetate	Fibrinogen Concentrate	Prothrombin Complex Concentrate
	Feiba NF Shire	**HEMLIBRA** Genentech	**NovoSeven® RT** Novo Nordisk	**OBIZUR** Shire	**Stimate®** CSL Behring	**RiaSTAP®** CSL Behring	**Kcentra®** CSL Behring
Indications	FEIBA is an Anti-Inhibitor Coagulant Complex indicated for use in hemophilia A and B patients with inhibitors for: • Control and prevention of bleeding episodes • Perioperative management • Routine prophylaxis to prevent or reduce the frequency of bleeding episodes. FEIBA is not indicated for the treatment of bleeding episodes resulting from coagulation factor deficiencies in the absence of inhibitors to coagulation factor VIII or coagulation factor IX.	HEMLIBRA is a bispecific factor IXa- and factor X-directed antibody indicated for routine prophylaxis to prevent or reduce the frequency of bleeding episodes in adult and pediatric patients with hemophilia A (congenital factor VIII deficiency) with factor VIII inhibitors.	• Treatment of bleeding episodes and peri-operative management in adults and children with hemophilia A or B with inhibitors • Congenital Factor VII (FVII) deficiency, and Glanzmann's thrombasthenia with refractoriness to platelet transfusions, with or without antibodies to platelets. • Treatment of bleeding episodes and peri-operative management in adults with acquired hemophilia.	Indicated for the treatment of bleeding episodes in adults with acquired hemophilia A	Indicated for patients with hemophilia A with Factor VIII coagulant activity levels greater than 5%	Treatment of acute bleeding episodes in patients with congenital fibrinogen deficiency, including afibrinogenemia and hypofibrinogenemia.	Urgent reversal of acquired coagulation factor deficiency induced by Vitamin K antagonist (warfarin reversal) therapy in adult patients with acute major bleeding or the need for an urgent surgery/invasive procedure. • Kcentra has a Boxed Warning: Arterial and Venous Thromboembolic Complications
Contraindications	• History of known anaphylactic or severe hypersensitivity reactions to FEIBA or any if its components, including factors of the kinin generating system. • Disseminated intravascular coagulation (DIC). • Acute thrombosis or embolism (including myocardial infarction).	None	There are no known contraindications to NovoSeven® RT	Do not use in patients who have had life-threatening hypersensitivity reactions to OBIZUR or its components, including hamster protein.	None	Contraindicated in patients with known anaphylactic or severe systemic reactions to human plasma-derived products	Patients with known anaphylactic or severe systemic reactions to Kcentra or any components in Kcentra including heparin, FII, FVII, FIX, FX, Proteins C and S, AT III and Human albumin; patients with DIC; patients with known HIT. Kcentra contains heparin.
Viral Safety Processes	Vapor Heat Treatment and 35 nm Nanofiltration	N/A	Chromatographic purification process, demonstrated to remove exogenous viruses (MuLV, SV40, Pox virus, Reovirus, BEV, IBR virus).	The production process includes two dedicated viral clearance steps - a solvent/detergent treatment step for viral inactivation and a nanofiltration step through a series of two 15-nm filters for removal of viruses	N/A	Cryoprecipitation, Heat treatment, Glycine precipitation (two subsequent steps), and lyophilization	Kcentra is manufactured from cryo-depleted plasma that is adsorbed via ion exchange chromatography, heat treated in aqueous solution for 10 hours at 60°C, precipitated, adsorbed to calcium phosphate, virus filtered, and lyophilized.
Product Half Life	N/A; Dosing intervals: 6 - 12 hours by type of hemorrhage	Following subcutaneous administration, the mean (± SD) absorption half-life was 1.7 ± 1 day. The mean apparent clearance (95% confidence interval [CI]) was 0.24 L/day (0.22, 0.26) and the mean elimination apparent half-life (± SD) was 27.8 ± 8.1 days.	Hemophilia A or B: 2.6-3.1 hours Congenital Factor VII deficiency: 2.82 - 3.11 hours	10 hours mean; range 2.6 - 28.6 hours	3.3-3.5 hours	Mean: 78.7 + 18.13 hours; Range: 55.73-117.26 hours	Terminal half-life; mean (SD): Factor IX = 42.4 (41.6) hours; Factor II = 60.4 (25.5) hours; Factor VII = 5.0 (1.9) hours; Factor X = 31.8 (8.7) hours; Protein C = 49.6 (32.7) hours; Protein S = 50.4 (13.4) hours
Product Recovery Percentage	N/A	Emicizumab-kxwh exhibited dose-proportional pharmacokinetics over a dose range of 0.3 mg/kg (0.1 times approved recommended starting dosage) to 3 mg/kg once weekly following subcutaneous administration. Following multiple subcutaneous administrations of 3 mg/kg once weekly for the first 4 weeks in hemophilia A patients, mean (± SD) trough plasma concentrations of emicizumab-kxwh increased to achieve 54.6 ± 14.3 µg/mL at Week 5. Trough plasma concentrations above 50 µg/mL were sustained thereafter with the recommended weekly dosage of 1.5 mg/kg; the mean (± SD) trough plasma concentrations of emicizumab-kxwh at steady- state was 52.8 ± 13.5 µg/mL.	Hemophilia A or B patients: 45.63%. Congenital Factor VII deficiency: 18.9% and 22.2% with 15 and 30 mcg per kg doses respectively.	A positive response was observed in 95% (19/20) of subjects evaluated at 8 hours and 100% (18/18) at 16 hours.	N/A	N/A	In Vivo Recovery (%/units/kg bW); mean (SD): Factor IX = 1.6 (0.4); Factor II = 2.2 (0.3); Factor VII = 2.5 (0.4); Factor X = 2.2 (0.4); Protein C = 2.9 (0.3); Protein S = 2.0 (0.3)
Manufacturing Method	Plasma	Emicizumab-kxwh is a humanized monoclonal modified immunoglobulin G4 (IgG4) antibody with a bispecific antibody structure binding factor IXa and factor X. Emicizumab-kxwh has an approximate molecular weight of 145.6 kDa and is produced in genetically engineered mammalian (Chinese hamster ovary) cells. Emicizumab-kxwh has no structural relationship or sequence homology to FVIII and, as such, does not induce or enhance the development of direct inhibitors to FVIII.	Recombinant	OBIZUR is expressed in a genetically engineered baby hamster kidney (BHK) cell line which secretes rpFVIII into the cell culture medium. No additives of human or animal origin are used in the formulation of OBIZUR.	Synthetic analogue of the natural pituitary hormone 8-arginine vasopressin (ADH)	Plasma	Plasma
Storage Requirements	• Store at room temperature, not to exceed 25°C (77°F). • Store in the original package in order to protect from light. • Do not freeze.	• Store HEMLIBRA vials in a refrigerator at 2°C to 8°C (36°F to 46°F) in the original carton to protect from light. Do not freeze. Do not shake. • Prior to administration, if needed, unopened vials of HEMLIBRA may be stored out of and then returned to refrigeration. The temperature and total combined time out of refrigeration should not exceed 30°C (86°F) and 7 days (at a temperature below 30°C [86°F]), respectively. • Once removed from the vial, discard HEMLIBRA if not used immediately. • Discard any unused HEMLIBRA.	Prior to reconstitution, keep refrigerated or store between 2–25°C/36–77°F. Do not freeze. Store protected from light. Do not use past the expiration date. After reconstitution, NovoSeven® RT may be stored either at room temperature or refrigerated for up to 3 hours. Do not freeze reconstituted NovoSeven® RT or store it in syringes.	• Store OBIZUR at refrigeration temperature of 2° to 8°C [36° to 46°F]. Do not freeze. • Store vials in the original package to protect from light. • Do not use beyond the expiration date printed on the carton or vial. • Use OBIZUR within 3 hours after reconstitution. • Discard any unused reconstituted product if not used within 3 hours after reconstitution. • Do not use OBIZUR if the reconstituted solution is cloudy or has particulate matter	Store at room temperature not to exceed 25°C (77°F) for the period indicated by the expiration date on the label. Discard six months after being opened. Store bottle in upright position.	Store at temperatures of 2-25°C (36-77°F). Do not freeze. Protect from light.	Prior to Reconstitution: Kcentra is for single use only. Contains no preservatives. Store Kcentra between 2-25°C (36-77°F), this includes room temperature, not to exceed 25°C (77°F). Do not freeze. Store the vial in the original carton to protect it from light. After Reconstitution: Kcentra must be used within 4 hours following reconstitution. Reconstituted Kcentra can be stored at 2-25°C. If cooled, the solution should be warmed to 20-25°C prior to administration. Do not freeze. Discard partially used vials."
Shelf Life from Date of Manufacture	24 months	Patients should not use Hemlibra past the expiration date on the carton or vial label.	NovoSeven® RT should not be used past the expiration date as noted on the carton and vial label.	24 months	Store at room temperature not to exceed 25°C (77°F) for the period indicated by the expiration date on the label. Discard six months after being opened.	60 months	36 months
How Supplied / Diluent Volume	500 U, 1,000 U: 20 mL 2,500 U: 20mL or 50 mL	HEMLIBRA (emicizumab-kxwh) injection is available as a sterile, preservative-free, colorless to slightly yellow solution in single-dose vials in the following dosage strengths: 30 mg per 1 mL; 30 mg/mL Concentration 60 mg per 0.4 mL; 150 mg/mL Concentration 105 mg per 0.7 mL; 150 mg/mL Concentration 150 mg per 1 mL; 150 mg/mL Concentration	A NovoSeven RT with MixPro® package contains: 1 vial of NovoSeven® RT powder and 1 pre-filled histidine diluent syringe with vial adapter for needleless reconstitution. The specified volume of diluent corresponding to the amount of NovoSeven® RT is as follows: • 1 mg (1,000 micrograms) vial + 1 mL Histidine diluent in pre-filled syringe • 2 mg (2,000 micrograms) vial + 2 mL Histidine diluent in pre-filled syringe • 5 mg (5,000 micrograms) vial + 5 mL Histidine diluent in pre-filled syringe • 8 mg (8,000 micrograms) vial + 8 mL Histidine diluent in pre-filled syringe. After reconstitution with the specified volume of diluent, each vial contains approximately 1mg/mL NovoSeven® RT (1,000 micrograms/mL).	1 mL	2.5 mL bottle with spray pump capable of delivering 25 sprays of 150 mcg	Each carton contains one single -use vial of RiaSTAP. The actual potency of fibrinogen concentrate in milligrams (between 900-1300 mg) is stated on each RiaSTAP vial label and carton.	Kcentra is supplied in a single-use vial. The actual units of potency of all coagulation factors (Factors II, VII, IX and X), Proteins C and S in units are stated on each Kcentra carton. The Kcentra packaging components are not made with natural rubber latex. Each kit consists of the following: 1) Nominal potency 500 (range 400-620) units Kcentra in a single-use vial; 20 mL vial of Sterile Water for Injection, USP; Mix2Vial filter transfer set; Alcohol swab 2) Nominal potency 1000 (range 800-1240) units Kcentra in a single-use vial; 40 mL vial of Sterile Water for Injection, USP; Mix2Vial filter transfer set; Alcohol swab