Varicella Zoster Immune Globulin

Revision Date: December 2, 2018

Rationale for Update:

- May be offered up to 10 days post-exposure to modify varicella disease.

Please consult the Product Monograph[1] for further information about the vaccine.	
	VariZIG ®
Manufacturer	Emergent BioSolutions Inc.
Off-license use	None
Supplied by	**Accessed by Alberta Health Services (AHS) from Canadian Blood Services** The hospital blood bank should be contacted by the attending physician or the Medical Officer of Health when VariZIG ® is required. The hospital blood bank will contact Canadian Blood Services to arrange for the release and delivery of VariZIG®.
Indications for use of varicella zoster immune globulin	**Post-exposure:** • The decision to administer VariZIG® should be based on the susceptibility to varicella, significant exposure, increased risk of severe varicella and contraindication for post-exposure varicella vaccine.[2,3] • Consultation with an infectious diseases/infection control specialist is advised when VariZIG® is being considered.[3] • VariZIG® is of maximal benefit if administered within 96 hours of the most recent significant exposure to varicella disease. • If more than 96 hours but less than 10 days have elapsed since the last exposure, VariZIG® may be used for the purpose of modifying the disease.[2,3] VariZIG® should be considered for: • Susceptible pregnant women.[2,3] • Newborn infants whose mothers develop chickenpox during the five days before to 48 hours after delivery.[2,3] • Susceptible immune compromised individuals with congenital or acquired immunodeficiency due to disease or treatment, including ➢ Individuals receiving high-dose systemic corticosteroid therapy for 2 weeks or longer (prednisone equivalent of 2 mg/kg or more per day OR 20 mg or more per day if weight is greater than 10 kg).[2,3] ➢ Susceptible HIV-infected individuals who are severely immune suppressed (CD4 cell count less than < 200 x 10^6/L or CD4 percentage less than 15%).[3] ➢ Hematopoietic stem cell transplant (HSCT) recipients should be considered susceptible throughout the post-transplant period regardless of a history of varicella immunization, infection, zoster or positive serology results.[3]

	Note: Individuals receiving replacement infusions of intravenous immune globulin IVIg (400 mg/kg or more) are considered protected and do not require VariZIG® if the last dose of IVIG was received within three weeks before varicella exposure.[3] • For management of significant varicella exposure in a neonatal or pediatric intensive care, consultation with the infectious disease/infection control specialist regarding the potential use of VariZIG® is advised.[2,3] Hospitalized preterm infants exposed during the first few weeks of life may be candidates for VariZIG® as listed below: ➢ If less than 28 weeks gestation or birth weight 1,000g or less, regardless of maternal immunity.[3, 4] ➢ If 28 weeks or more gestation and mother lacks evidence of immunity* against varicella.[4] *<u>Evidence of immunity:</u> ▪ Documentation of two valid doses of varicella-containing vaccine,[5] or ▪ Laboratory evidence of immunity,[5] or ▪ Laboratory confirmation of varicella disease.[5] For further disease information, contact assessment and reporting requirements refer to: *Public Health Notifiable Disease Management Guidelines – Varicella (Chickenpox)*.[6]
Dose	• 125 IU/10 kg body weight to maximum of 625 IU[1,3] • Minimum dose 125 IU[1,3]
Route	Intramuscular injection (IM)[1,3]
Schedule	❖ One dose given within 96 hours after exposure. Additional doses of VariZIG® may be required if subsequent exposures occur more than three weeks after first dose.[3] **Notes**: • Immunization with live virus vaccines (MMR and varicella) should be deferred for at least five months after administration of VariZIG®.[3,4] • When it is necessary to administer VariZIG® within 14 days after receiving MMR, MMRV or varicella vaccine, the vaccine should be repeated five months after the VariZIG® administration.[3]
Contraindications	• History of anaphylactic reactions to immune globulins[1] • Known hypersensitivity to any component of VariZIG®[1] • Known immunity to varicella zoster virus.[1] • Individuals with IgA deficiencies have the potential to develop anti-IgA antibodies and have an anaphylactic reaction.[1]
Precautions	• Measures to prevent transmission of viral diseases from VariZIG® include screening plasma donors for prior exposure to certain viruses, testing for the presence of certain current virus infections and using manufacturing techniques to inactivate and/or remove certain viruses. Despite these measures, such products could still potentially transmit disease.[1]
Possible reactions	**Common:** • Pain, erythema and pruritus at the injection site[1,3] • Headache, rash[1,3] • Myalgia, rigors/chills, fatigue, nausea and flushing.[1,3] **Uncommon:** • Mild fever and malaise [3]

	Rare: • Anaphylactic/anaphylactoid reaction[1,3] • Urticaria and angioedema[3] Refer to: *Adverse Events Following Immunization (AEFI), Policy for Alberta Immunization Providers*.[7]
Pregnancy	Should be administered to susceptible pregnant woman who have been exposed to chickenpox.[3]
Lactation	Should be administered to breastfeeding women if indicated.[3] It is not known if VariZIG™ is excreted in breast milk.[1]

References

[1] Emergent Bio Solutions Inc. (2017, December 19).-VariZIG® Varicella Zoster Immune Globulin (Human). *Product Monograph*.

[2] National Advisory Committee on Immunization. (2016 July). Updated recommendations for the use of varicella zoster immune globulin (Varig) for the prevention of varicella in at-risk patients: https://www.canada.ca/en/public-health/services/publications/healthy-living/updated-recommendations-use-varicella-zoster-immune-globulin-varig-prevention-varicella-risk-patients.html.

[3] National Advisory Committee on Immunization. (2018). *Canadian Immunization Guide* (Evergreen ed.). Ottawa, ON: Public Health Agency of Canada. www.canada.ca/en/public-health/services/canadian-immunization-guide.html

[4] American Academy of Pediatrics. (2018) *Red book: Report of the Committee on Infectious Diseases* (31st ed.). Elk Grove Village, IL: Author.

[5] National Advisory Committee on Immunization . (2015 Update). Varicella Proof of Immunity. An Advisory Committee Statement (ACS). http://www.healthycanadians.gc.ca/publications/healthy-living-vie-saine/varicella-proof-immunity-2015-varicelle-preuve-immunite/alt/varicella-proof-immunity-2015-varicelle-preuve-immunite-eng.pdf

[6] Alberta Health. *Public Health Notifiable Disease Management Guidelines – Varicella (Chickenpox)* www.health.alberta.ca/professionals/notifiable-diseases-guide.html

[7] Alberta Health. (2018, December). *Adverse Events Following Immunization (AEFI), Policy for Alberta Immunization Providers.* https://open.alberta.ca/dataset/d86b52a9-45f4-4948-8a06-53b2c045135e/resource/f2da2a7a-e350-4bab-b2c2-77677beeb22b/download/aip-adverse-events-following-immunization-policy.pdf.