Alberta Health Services	Varicella Zoster Immune Globulin (Human) Biological Page		
Section 7:	**Biological Product Information**		**Standard #: 07.351**
Created by:	Province-wide Immunization Program Standards and Quality		
Approved by:	Province-wide Immunization Program, Standards and Quality		
Approval Date:	March 1, 2013	**Revised:**	August 1, 2020

	VariZIG®
Manufacturer	Emergent BioSolutions Inc.
Biological Classification	Passive: Immune Globulin
Indications for Provincially Funded Vaccine	**Post-exposure:** • In consultation with the Zone Medical Officer of Health (MOH) and/or Infectious Disease/Infection Control Specialist, VariZIG® should be considered based on the susceptibility to varicella, significant exposure, increased risk of severe varicella and contraindication for post-exposure varicella vaccine. • 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 has elapsed since the last exposure VariZIG® may be used for the purpose of modifying the disease. • VariZIG® should be considered for: o Susceptible pregnant women o Newborn infants of mothers who develop varicella disease during the 5 days before to 48 hours after delivery o Susceptible immunocompromised individuals with congenital or acquired immunodeficiency due to disease or treatment, including: ▪ Individuals receiving high-dose systemic corticosteroid therapy for 2 weeks of 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). ▪ 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%) ▪ Hematopoietic stem cell transplant (HSCT) recipients should be considered susceptible prior to immunization and not on antiviral medication. Those who have received 2 doses of appropriately spaced varicella vaccine generally would not be considered susceptible. **Notes:** • Susceptible individuals are those who do not have documented history of two valid doses of varicella-containing vaccine or laboratory evidence of immunity or laboratory confirmation of varicella disease. • Individuals receiving replacement infusions of 400 mg/kg or more of intravenous immune globulin (IVIG) are considered protected and do not require VariZIG® if the last dose of IVIG was received within 3 weeks before varicella exposure.

	VariZIG®
	• 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. Hospitalized preterm infants exposed during the first few weeks of life may be candidates for VariZIG® as listed below: o If less than 28 weeks gestation or birth weight 1,000 g or less, regardless of maternal immunity. o If 28 or more weeks gestation and mother lacks evidence of immunity against varicella. **Notes:** • Subsequent exposure occurring more than 3 weeks after administration of VariZIG® would require additional doses of VariZIG® if the criteria for post-exposure still exist. • VariZIG® is not available through Alberta Health Services (AHS) public health vaccine depots. Following zone specific process, the product is available to hospital blood banks/hospital lab/Transfusion Medicine Departments through Canadian Blood Services who will arrange for the release and delivery of VariZIG®. • For further disease information refer to *Public Health Notifiable Disease Management Guidelines – Varicella (Chickenpox)* https://open.alberta.ca/publications/varicella-chickenpox
Schedule	• One dose given within 96 hours after exposure • Additional doses of VariZIG® may be required if subsequent exposures occur more than 3 weeks after first dose.
Preferred Use	N/A
Dose	• 125 IU/10 kg body weight to maximum of 625 IU • Minimum dose 125 IU
Route	IM
Contraindications/ Precautions	**Contraindications:** • Known hypersensitivity to any component of VariZIG® • History of anaphylactic reaction to immune globulins • IgA deficiency: Individuals with immunoglobulin A deficiency have the potential for developing IgA antibodies and could develop anaphylactic reactions to subsequent blood products (including immune globulin preparations) that contain IgA. • Known immunity to varicella zoster virus. **Precautions:** • Use with caution in clients with a history of prior systemic allergic reactions following administration of human immunoglobulin preparations. • VariZIG® is made from human plasma. Products made from human plasma may contain infectious agents that can cause disease. 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 viral infections and using manufacturing techniques to inactivate and/or remove certain viruses. Despite these measures, such products could still potentially transmit disease. o A signed *Consent for Treatment/Procedure* is required before administering immune globulin products: https://www.albertahealthservices.ca/frm-09741.pdf

	VariZIG®
Possible Reactions	**Common:** • Pain, bruising, and pruritus at the injection site • Headache, rash • Myalgia, rigors, fatigue, nausea and flushing **Uncommon:** • Mild fever and malaise **Rare:** • Anaphylaxis, allergic reaction • Urticaria and angioedema • As with any immunization, unexpected or unusual side effects can occur. Refer to the product monograph for more detailed information.
Pregnancy	If indicated, VariZIG® should be given to susceptible pregnant women who have been exposed to varicella.
Lactation	Should be administered to susceptible breastfeeding women if indicated. It is not known if VariZIG® is excreted in breast milk.
Composition	Each vial contains: • Approximately 125 IU anti-varicella zoster virus • 10% maltose • 0.03% polysorbate 80 • less than 156 mg human immunoglobulin G Contains no preservative
Blood/Blood Products	Made from pooled human plasma.
Bovine/Porcine Products	No bovine or porcine products are listed in the Product Monograph ingredients list.
Latex	There is no latex in the vaccine or the vaccine packaging.
Interchangeability	There is no other varicella zoster immune globulin (VZIG) product available for use.
Administration with Other Products	• Immunization with live virus vaccines (MMR and varicella) should be deferred for at least 5 months after administration of VariZIG®. VariZIG® cannot be given concurrently with live virus vaccines. • When it is necessary to administer VariZIG® within 2 weeks after receiving MMR or varicella vaccine, the vaccine should be repeated 5 months after the VariZIG® administration. **Note:** • For further information, see #03.110 Standard for Recommended Immunization Schedules.
Appearance	Following reconstitution, the product should be clear or slightly opalescent.
Storage	• Store VariZIG® at +2ºC to +8ºC. The product should be brought to room or body temperature immediately prior to use. • Discard any unused product. • Do not freeze. • Do not use beyond expiration date. • Store in original package when possible to protect from light.
Vaccine Code	VZIG

	VariZIG®
Antigen Code	VZIG
Licensed for	Persons of all ages.
Note:	

Related Resources:

- Varicella Immune Globulin Information Sheet

References:

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2. Alberta Health. (2020, March). Alberta Immunization Policy. *Varicella Zoster Immune Globulin*. Government of Alberta, Alberta Health.
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4. National Advisory Committee on Immunization. (2018). Canadian Immunization Guide (Evergreen Edition). Ottawa, ON: Public Health Agency of Canada.
5. 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.
6. Expert opinion of Alberta HSCT physicians. (October 2019).
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8. 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