

# SCIG IMMUNE GLOBULIN Cutaquig, Cuvitru, Hizentra, Hyqvia, Xembify (subcutaneous immunoglobulin)

# **RATIONALE FOR INCLUSION IN PA PROGRAM**

### Background

Human immune globulin therapy is used for the treatment of immunodeficiency, prophylaxis of infectious diseases, and in the management of a variety of other inflammatory and autoimmune disorders. There are two main routes of administration: intravenous (IV) and subcutaneous (SC). A third route is intramuscular (IM), although this is uncommonly used, except for hyper-immune globulins (e.g., rabies immune globulin). There are also three different methods of administering immune globulin subcutaneously: traditional, facilitated subcutaneous, and subcutaneous rapid-push. Immune globulin products from human plasma were first used in 1952 to treat immune deficiency. Subcutaneous immunoglobulin (SCIG) contains the pooled immunoglobulin G (IgG) immunoglobulins from the plasma of approximately a thousand or more blood donors (1).

### **Regulatory Status**

FDA-approved indications:

Cutaquig, Cuvitru, Hizentra, and Xembify are indicated as replacement therapies for primary humoral immunodeficiency (PI) in adult and pediatric patients two years of age and older. This includes, but is not limited to, common variable immunodeficiency (CVID), X-linked agammaglobulinemia, congenital agammaglobulinemia, Wiskott-Aldrich syndrome, and severe combined immunodeficiencies (2-5).

Hizentra and Hyqvia are also indicated for maintenance therapy in adults with chronic inflammatory demyelinating polyneuropathy (CIDP) (3, 6).

Hyqvia is indicated as replacement therapy for primary humoral immunodeficiency (PI) in adults and pediatric patients two years of age and older. This includes, but is not limited to, common variable immunodeficiency (CVID), X-linked agammaglobulinemia, congenital agammaglobulinemia, Wiskott-Aldrich syndrome, and severe combined immunodeficiencies (6).

### Limitations of Use:

Safety and efficacy of chronic use of recombinant human hyaluronidase in Hyqvia have not been established in conditions other than PI (6).



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Immune globulin use is associated with increased risk of thrombosis, particularly in the elderly and patients with risk factors such as cardiovascular disease, hypercoagulopathy, those on estrogen therapy, and patients with central venous catheters. Patients should be monitored carefully for signs and symptoms of thrombosis (2-6).

Immune globulin products have also been associated with renal dysfunction, acute renal failure, osmotic nephrosis, and death. Patients predisposed to acute renal failure include patients with any degree of pre-existing renal insufficiency, diabetes mellitus, age greater than 65 years, volume depletion, sepsis, paraproteinemia, or patients receiving known nephrotoxic drugs (2-6).

Other potential complications to monitor include the following: (2-6)

**Immunoglobulin A deficiency:** People with this condition have the potential for developing antibodies to IgA and could have anaphylactic reactions to subsequent administration of blood products that contain IgA.

**Aseptic meningitis syndrome (AMS):** Rare occurrences of AMS have been reported in association with immune globulin treatment. AMS usually begins within several hours to 2 days following immune globulin treatment and is characterized by symptoms including severe headache, drowsiness, fever, photophobia, painful eye movements, muscle rigidity, nausea, and vomiting. AMS may occur more frequently in association with high-dose (2 g/kg) immune globulin treatment. Discontinuation of immune globulin treatment has resulted in remission of AMS within several days without sequelae.

**Bleeding complications:** Bleeding complications may be encountered in patients with thrombocytopenia or other bleeding disorders.

**Severe reactions:** Severe reactions, such as anaphylaxis or angioneurotic edema, have been reported in association with immune globulin immunoglobulins, even in patients not known to be



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sensitive to human immunoglobulins or blood products.

### Summary

Human immune globulin therapy is used for the treatment of immunodeficiency, prophylaxis of infectious diseases, and in the management of a variety of other inflammatory and autoimmune disorders. Cutaquig, Cuvitru, Hizentra, and Xembify are subcutaneous immunoglobulin (SCIG) indicated as replacement therapies for primary humoral immunodeficiency (PI) in adult and pediatric patients two years of age and older. Hizentra and Hyqvia are also indicated for maintenance therapy in adults with chronic inflammatory demyelinating polyneuropathy (CIDP). Hyqvia is indicated as replacement therapy for primary humoral immunodeficiency (PI) in adults and pediatric patients two years of age and older.

Prior approval is required to ensure the safe, clinically appropriate, and cost-effective use SCIG while maintaining optimal therapeutic outcomes.

#### References

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