



## **IVIG & SCIG in Immunodeficiencies: how to make a better choice for each patient's life**

## IG THERAPY: ADVANTAGES AND DISADVANTAGES OF DIFFERENT ROUTES OF ADMINISTRATION

- Therapeutic immunoglobulin (IG) can be given **via intravenous (IV) or subcutaneous (SC) infusion**<sup>1</sup>
- Although both routes of administration provide similar efficacy in preventing serious bacterial infections, each offers different advantages and disadvantages<sup>1</sup>

### Attributes of the different IG routes of administration

Attribute	IVIG	SCIG
Frequency of administration	Typically once per month*	Typically 1-3 times per week
Length of administration	Approximately 3 hours per month*	Approximately 2-8 hours per month
Site of administration	Administered at local infusion center or hospital. In many areas, home infusion is also available	Typically administered in a home based setting
Quality of Life	Preferred by some patients due to personal treatment choice	Preferred by some patients due to personal treatment choice
Contraindications	Advanced renal disease, aseptic meningitis, or history of IVIG associated venous thromboembolic events (VTE)	Severe thrombocytopenia, bleeding disorders, or for patients on anticoagulation therapy and may be problematic for patients with widespread eczema
Compliance	Treatment plan can be managed by health care professional if there is a compliance concern	Requires self-adherence to treatment plan
Suitable Patient Population	Wide range of patients including those with reduced manual dexterity, reluctance to self-administer, or who lack of self-reliance	Requires patient or their caregiver to be trained, have adequate dexterity, understanding of clean technique, comfort with injections, and responsibility for administration
	May be preferred for patients with limited subcutaneous tissue	May be preferred for patients with limited venous access
Care environment	Home or clinic based	Home-based with adequate home facilities for privacy, storage, and clean technique
Opportunity for healthcare provider interaction	Patients can receive IVIG and engage monthly with healthcare provider at home or clinic	Patients self-administer, but still need to see healthcare provider separately for on-going care and management
Opportunity for social interactions	Regular visits can provide a sense of community where patient can talk with other patients and caregivers to gain additional knowledge about their treatment	Patients have fewer opportunities for interaction with other patients and caregivers

\*Also apply to hyaluronidase facilitated subcutaneous immunoglobulin

## PATIENTS' PROFILES FOR EACH ROUTE OF ADMINISTRATION

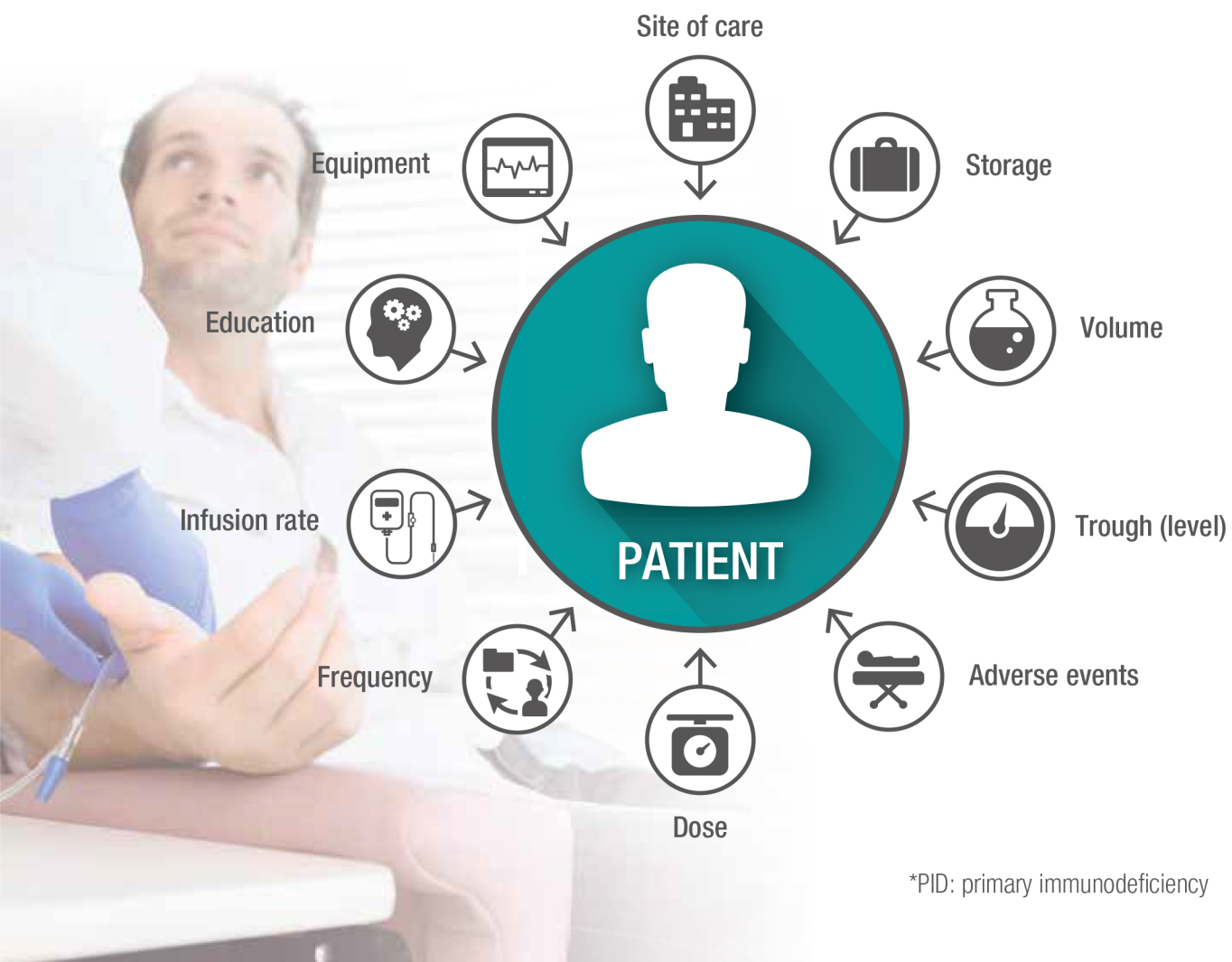
SCIG	IVIG
Are able to understand and carry out instructions for SC self-injection (or have an adult/caregiver available to assist with infusions) <sup>2</sup>	Need high-dose treatment during acute infection <sup>1</sup>
Would prefer more frequent infusions, but with shorter infusion times	Are new to immunoglobulin replacement therapy and have no or limited history of treatment response <sup>5</sup>
Desire less frequent interaction with medical team and/or other patients	Would prefer to have fewer infusions <sup>2*</sup>
May remain compliant with self-administered therapy <sup>3</sup>	Require professional supervision of administration (noncompliance, dependent) <sup>2</sup>
Have the resources to provide storage for supplies and infusion setup <sup>4</sup>	Have bleeding disorders, thrombocytopenia or receive anticoagulation therapy <sup>2</sup>
Have poor venous access <sup>3</sup>	Require monitoring to assess clinical outcomes and assure compliance <sup>2</sup>
	Want to socialize with others (nurses or patients) during the infusion
	Prefer to have infusions administered by a healthcare professional and/or receive therapy in a supervised setting <sup>4</sup>

\*Also apply to hyaluronidase facilitated subcutaneous immunoglobulin

## PATIENTS WANT TO BE INVOLVED IN THEIR TREATMENT CHOICE<sup>6</sup>

- Administration attributes of IG treatment are relevant and **important to patients** since IG treatment **is a life-long therapy** once initiated<sup>6</sup>
- The **choice of route of administration** among other factors should be based on<sup>1</sup>:
  - the **individual patient's preferences**
  - the **medical status of the patient**
- The **choice of IG therapy** for a patient with PID\* **is no longer simply a binary decision between monthly IVIG and weekly SCIG regimens**<sup>7</sup>

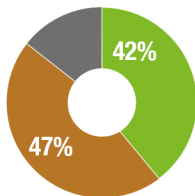
### Variables which impact the choice of a regimen in any given patient with PID<sup>7</sup>



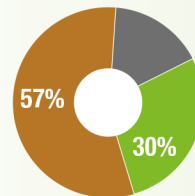


## SOME PATIENTS CONTINUE TO PREFER IVIG ADMINISTRATION<sup>8</sup>

- It has been shown that **patients are fairly divided between IVIG and SCIG preference**, although physicians think patients prefer SCIG to IVIG<sup>9</sup>



- Among patients, preference is fairly evenly split:  
**47%** prefer SCIG and **42%** prefer IVIG



- Physicians **believe** patients prefer SCIG (**57%**) to IVIG (only **30%**)

- Patients who choose one route over the other exhibit even stronger preference for that route<sup>9</sup> and are unwilling to change
- Patients who have opted to **stay on IVIG therapy** have found the following **personal issues affected their decisions**:<sup>10</sup>
  - Desire for the **social interaction** and camaraderie at IVIG infusion appointments
  - Desire to reduce the **frequency of infusion**
  - Greater comfort with a **traditional healthcare setting**
  - Desire for **healthcare professional involvement** to monitor response to treatment
  - Having extreme **discomfort with needles**
- Patients who have opted to **stay on SCIG therapy** have found the following **personal issues affected their decisions**:<sup>10</sup>
  - Desire for more **freedom** and **flexibility** in scheduling treatments
  - Family, school, work or travel requirements that make regular **IVIG infusion appointments problematic**
  - Long distance** to an infusion clinic or lack of in-home IVIG infusion services

Collaborative, **well-informed decision making with one's healthcare provider** is the most likely path to a **successful treatment decision**<sup>10</sup>

## IVIG and SCIG offer different **advantages and disadvantages**<sup>1</sup>

The **choice of administration route** should consider a range of **clinical and patient parameters**<sup>7</sup>

More patients than you may think **prefer IVIG therapies**<sup>8</sup>

### References:

1. Sitaroon P & Ballou M. Immunoglobulin Replacement Therapy for Primary Immunodeficiency. *Immunol Allergy Clin N Am* 2015;35:713–730. 2. Kobrynski L. Subcutaneous immunoglobulin therapy: a new option for patients with primary immunodeficiency diseases. *Biologics* 2012;6:277–287. 3. Ballou M. Dosing and therapy utilization: a discussion of updates on PI treatment guidelines. *J Clin Immunol*. 2012;32(suppl 2):S415–S420. 4. Berger M. Choices in IgG replacement therapy for primary immunodeficiency diseases: subcutaneous IgG vs. intravenous IgG and selecting an optimal dose. *Curr Opin Allergy Clin Immunol* 2011;11(6):532–538. 5. Misbah S, et al. Subcutaneous immunoglobulin: opportunities and outlook. *Clin Exp Immunol*. 2009;158(suppl 1):51–59. 6. Mohamed A, et al. Patient and parent preferences for immunoglobulin treatments: a conjoint analysis. *Journal of Medical Economics* 2012;15(6):1183–1191. 7. Jolles S, et al. Current treatment options with immunoglobulin G for the individualization of care in patients with primary immunodeficiency disease. *Clinical and Experimental Immunology* 2014;179: 146–160. 8. Soler-Palacin P, et al. Intravenous and Subcutaneous Immunoglobulin Replacement: A Two-Way Road. Optimizing Healthcare Quality in Patients with Primary Immunodeficiencies. *J Clin Immunol* 2014;34(8):1015–7. 9. Runken C, et al. Patient and physician beliefs regarding immunoglobulin therapy route of administration. *J Clin Immunol* 2016;36:255, #4337. 10. Gressit KC. Managing SCIG Expectations. *Ig Living* 2008. [http://www.igliving.com/magazine/articles/IGL\\_2008-04\\_AR\\_Managing-SCIG-Expectations.pdf](http://www.igliving.com/magazine/articles/IGL_2008-04_AR_Managing-SCIG-Expectations.pdf) Accessed February 2016.