

IMMUNOGLOBULIN REPLACEMENT IN HEMATOLOGIC
MALIGNANCY–ASSOCIATED SECONDARY
IMMUNODEFICIENCY: CONTEMPORARY EVIDENCE ON
INTRAVENOUS AND SUBCUTANEOUS ADMINISTRATION

KORUTM
MEDICAL SYSTEMS

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BACKGROUND AND AIMS

Secondary immunodeficiency (SID) is increasingly recognized in patients with B-cell malignancies and following cellular therapies, including anti-CD20 treatment, hematopoietic stem cell transplantation, and CD19-directed CAR-T therapy. Persistent hypogammaglobulinemia drives recurrent infections, healthcare burden, and reduced quality of life. Authors evaluated contemporary evidence on the efficacy, safety, pharmacokinetics, and patient-reported outcomes of intravenous and subcutaneous immunoglobulin replacement therapy in SID.

METHODS

A structured review of studies published between 2013 and 2026 was conducted, including clinical trials, cohort studies, and registry analyses. Eligible studies evaluated immunoglobulin replacement therapy in SID. Outcomes included infection rates, serious infections, IgG levels, healthcare utilization, adverse events, and quality-of-life measures.

RESULTS

- Across cohorts (>2,000 patients), IgRT consistently and substantially reduced infection burden.
- In registry data from predominantly chronic lymphocytic leukemia (CLL) populations, annual infections decreased by 82.6%, with marked reductions in emergency visits (84.6%) and hospitalizations (83.3%).
- In cohorts receiving 20% SClg, infection rates declined from 3.67 to 1.32 per patient-year.
- In the SIGNS study (n=307), infection prevalence decreased from 82% pre-treatment to 21% at 12 months.
- IVIg and SClg demonstrated comparable efficacy.
- Notably, SClg achieved more stable IgG levels and was associated with fewer systemic adverse events, largely limited to mild local reactions, whereas IVIg was associated with systemic reactions in up to 20–50% of patients.

Infection Burden (IgRT)



CONCLUSIONS

IgRT is highly effective in reducing infection burden in hematologic malignancy–associated SID. While IVIg and SClg provide comparable efficacy, SClg offers clear advantages in tolerability and pharmacokinetic stability, supporting its use as a preferred option for long-term management in appropriate patients.

Consideration	IVIg	SCIg
Infection prevention	Effective	Comparable effectiveness
IgG exposure	Higher peaks and lower troughs	More stable steady-state levels
Systemic adverse events	More common	Less common
Local reactions	Less common	More common, usually mild/self-limited