SCE 0806 Public Evidence Appendix

Autoimmune and inflammatory disease

Literature review date: September 13, 2026

Controlling principle. Immunomodulatory activity is not equivalent to clinical disease control. Evidence must remain attached to the exact disease, organ involvement, product, route, dose, background therapy, comparator, endpoint, and follow-up.

Point-by-point evidence framework

Controlling Point	Evidence focus	Interpretive boundary
Rheumatoid arthritis	Synovial inflammation; T-, B-, macrophage, dendritic-cell and cytokine regulation.	Immune modulation does not establish cartilage regeneration or replacement of treat-to-target DMARD therapy.
Systemic lupus erythematosus	Immune tolerance, autoantibodies, immune complexes, complement and organ-specific disease.	Biomarker improvement alone does not establish durable organ protection, steroid sparing, fewer flares or survival benefit.
Systemic sclerosis	Vasculopathy, immune activation and fibrosis in skin and internal organs.	Skin-score change cannot automatically be extrapolated to lung, cardiac, renal or gastrointestinal outcomes.
Sjögren syndrome	Lymphocytic exocrine-gland injury, epithelial support and glandular function.	Inflammatory or salivary-flow changes do not prove restoration of gland architecture or prevention of systemic complications.
Inflammatory bowel disease	Crohn disease, ulcerative colitis, luminal inflammation and perianal fistulizing disease.	Product-specific fistula evidence cannot be generalized to luminal Crohn disease, ulcerative colitis or unrelated systemic products.
Type 1 diabetes	Autoimmune beta-cell loss, immune tolerance and residual endogenous insulin production.	MSC immunomodulation is biologically distinct from donor-islet or stem-cell-derived islet replacement.
Immune dysregulation	Innate/adaptive immune activation or suppression, regulatory networks and cytokine balance.	A measurable immune effect does not prove that the net clinical effect is beneficial, durable or safe.

Evidence-handling rules

Positive, negative, null, mixed, and inconclusive findings are weighted by design quality and directness rather than by whether they favor the intervention.

Mechanistic evidence, development stage, clinical efficacy, safety, regulatory status, guideline position, and manufacturing quality remain separate analytical dimensions.

Established disease-modifying, immunosuppressive, biologic, endocrine, surgical, and organ-specific care remains the appropriate comparator.

Principal references

1. Galipeau J, Sensebé L. Mesenchymal stromal cells: clinical challenges and therapeutic opportunities. Cell Stem Cell. 2018;22:824-833.

2. Pittenger MF, Discher DE, Péault BM, Phinney DG, Hare JM, Caplan AI. Mesenchymal stem cell perspective: cell biology to clinical progress. NPJ Regen Med. 2019;4:22.

3. Relevant contemporary clinical and translational literature concerning MSC/EV interventions in rheumatoid arthritis, systemic lupus erythematosus, systemic sclerosis, Sjögren syndrome, inflammatory bowel disease, type 1 diabetes, and immune dysregulation.

4. Disease-specific rheumatology, gastroenterology, endocrinology, and immunology guidelines should control statements concerning established standard care.

5. Product identity, disease phenotype, organ involvement, route, dose, background immunotherapy, comparator, endpoint, and follow-up must be matched before evidence is generalized.