

# Review of: "A Narrative Review on the Management of Severe COVID-19 Infection Using Stem Cell-based therapies with a Focus on the Registered Clinical Trials"

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Potential competing interests: No potential competing interests to declare.

1. Please provide more details on the clinical outcomes from the completed trials using stem cell-based therapies for COVID-19 patients. What specific improvements were seen in measures like oxygenation, radiographic findings, length of ICU/hospital stay, duration of mechanical ventilation, etc.? This will help strengthen the evidence presented.
2. In the section on induced pluripotent stem cells, please elaborate more on the in vitro disease models that have been created using iPSC-derived cell types to study COVID-19. What have these models shown regarding SARS-CoV-2 infection and pathology?
3. When discussing mesenchymal stem cells, please provide more specifics on the mechanisms by which MSCs provide benefits in COVID-19 - what anti-inflammatory cytokines do they secrete, how do they modulate immune cell responses, what growth factors do they release, etc.? Expounding on this will improve the depth of this section.
4. Please include a brief discussion of any safety concerns and potential risks associated with the administration of the various stem cell products described to COVID-19 patients.