The interferon response is one of the major innate immunity defences against virus invasion. Interferons induce the expression of diverse interferon-stimulated genes, which can interfere with every step of virus replication. Previous studies identified type I interferons as a promising therapeutic candidate for SARS[149]. In vitro data showed SARS-CoV-2 is even more sensitive to type I interferons than SARS-CoV, suggesting the potential effectiveness of type I interferons in the early treatment of COVID-19 (REF.[150]). In China, vapor inhalation of interferon-α is included in the COVID-19 treatment guideline[151]. Clinical trials are ongoing across the world to evaluate the efficacy of different therapies involving interferons, either alone or in combination with other agents[152].

Immunoglobulin therapy.
Convalescent plasma treatment is another potential adjunctive therapy for COVID-19. Preliminary findings have suggested improved clinical status after the treatment[153],[154]. The FDA has provided guidance for the use of COVID-19 convalescent plasma under an emergency investigational new drug application. However, this treatment may have adverse effects by causing antibody-mediated enhancement of infection, transfusion-associated acute lung injury and allergic transfusion reactions.

Monoclonal antibody therapy is an effective immunotherapy for the treatment of some viral infections in recent patients. Recent studies reported specific monoclonal antibodies neutralizing SARS-CoV-2 infection