List of practices and procedures involving Cell or Stem cell based preparations for therapeutic purposes as identified by experts (other than Standard of Care provided by ICMR)				
S. no.	Source of stem cell	Indication	Level of Evidence with supportive literature	Define whether it is 1. Standard of Care / 2. Clinical option / 3. Developmental / for research
1	Autologous adipose derived stromal vascular fraction by minimal manipulation	Diabetic Foot/ Wounds	Total number of level 2 peer is 1 and level 3/4 articles are 11(Annexure 1)	Standard of Care
2	Autologous adipose derived stromal vascular fraction by minimal manipulation	Osteoarthritis	Total number of level I peer reviewed publications with Recommendation 'Grade A' are 4 and Level 2 and peer reviewed articles are 15; and 30 articles of level 3 / 4 publications. All have shown clinical efficacy and safety in the use of adipose derived stromal vascular fraction in osteoarthritis (Annexure 4, 12, 20, 24)	Standard of Care
3	Autologous adipose derived stromal vascular fraction by minimal manipulation	Tendinopathy	Total number of level I peer reviewed publications with Recommendation 'Grade A' are 1 and Level 2 and peer reviewed articles is 1 (Annexure 5, 19, 25)	Standard of Care
4	Autologous adipose derived stromal vascular fraction by minimal manipulation	Skin rejuvenation	Total number of level 2 peer is 1 and level 3/4 articles are 6 (Annexure 6)	Standard of Care
5	Autologous stromal vascular fraction	Multiple/ Systemic Sclerosis	Total number of level 2/3/4 articles are 8 (Annexure 7)	Standard of Care
6	Minimally manipulated adipose derived stromal vascular fraction	Wounds	Total number of Level 2 articles is 1 and Level 3/4 articles are 5 (Annexure 21, 26)	Standard of Care
7	Stromal Vascular Fraction / Bone Marrow	Avascular necrosis of hip (osteonecrosis	Total number of Level 3/4 articles are 7 (Annexure 29)	Standard of Care
8	Bone marrow derived Stem Cells	Autism	Total number of level 3/4 articles are 16 (Annexure 2, 13)	Clinical option
9	Autologous adipose derived stromal vascular fraction by minimal manipulation	Kidney disease	Total number of level 3 / 4 publications are 7 (Annexure 3)	Clinical option
10	Autologous stromal vascular fraction	Psoriasis	Total number of level 3/4 articles are 3 (Annexure 8)	Clinical option
11	Mesenchymal stromal cells / Bone marrow S	Spinal cord injury	Total number of Level 3/4 publications are 9 (Annexure 9)	Clinical option
12	Bone marrow derived stem cells	Cerebral Palsy	Total number of Level 3/4 publications are 42 (Annexure 10)	Clinical option
13	Bone marrow derived stem cells	Cerebral stroke	Total number of Level 3/4 publications are 4 (Annexure 11)	Clinical option
14	Allogenic MSCs	COVID 19	(ref 1,2,3) (Annexure 14)	Clinical option
15	Autologous bone marrow-derived MSCs	Drug resistant Tuberculosis	(ref 4,5,6,7,8) (Annexure 15)	Clinical option
16	Allogenic bone marrow-derived MSCs	COPD	(ref 9,10) (Annexure 16)	Clinical option
17	Minimally manipulated adipose derived stromal vascular fraction	Alopecia	Total number of Level 3/4 articles are 5 (Annexure 22)	Clinical option
18	Minimally manipulated adipose derived stromal vascular fraction	Erectile dysfunction	Total number of Level 3/4 articles are 2 (Annexure 23, 27)	Clinical option
19	Minimally manipulated adipose derived stromal vascular fraction	Multiple sclerosis	Total number of Level 3/4 articles are 3 (Annexure 28)	Clinical option

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S. no.	Source of stem cell	Indication	Level of Evidence with supportive literature	Define whether it is 1. Standard of Care / 2. Clinical option / 3. Developmental / for research
20	Allogenic bone marrow/adipose tissue -derived MSCs	Acute respiratory distress syndrome / Acute Lung Injury	(ref 11,12) (Annexure 17)	Under Development
21	Allogenic placenta-derived humanMSCs/ Autologous adipose tissue-derived MSCs	Interstitial Lung Diseases	(ref 13,14) (Annexure 18)	Under Development
22	Freshly collected, fully screened for transfusion transmitted diseases, blood group matched, human umbilical cord blood transfusion collected from the umbilical vein (contains hematopoietic stem cell, mesenchymal stem cells, very small embryonic like stem cells, pro and anti-inflammatory cytokines, growth factors.)	Rectifying anaemia at the background of chronic diseases like diabetes, tuberculosis, chronic kidney disease, arthritis includingthalassemi a, cancer and HIV and its immunotherapeutic potentialities.	Cord blood transfusion has already been filed forpatent in 2001.Cord blood transfusion work has been conducted by myself since 1985. We have already submitted a proposal pertaining to cord blood transfusion in Covid19 patients to DCGI for approval in September. I have listed my works and publications below which have been globally appreciated. (Annexure 30)	For research as fully screened, blood group matched cord blood transfusion can be an alternative to adult blood transfusion that has some important shortcomings
23	Freshly collected, fully pathologically and serologically screened amniotic membrane and amniotic fluid application	For treating burn patients, patients with non-healing ulcers due to diabetes, burn and other conditions like gangrene, trauma and accidents and other known or unknown causes.	Clinical case report of more than 100 patients for the last 20 years with subjective findings, pathophysiological findings, pictures and their individual case studies as reported by Niranjan Bhattacharya et al. Dry and processed amniotic membrane has been in use for wound dressing for quiet sometime for more than a century but the application of a properly screened, freshly collected amniotic membrane and amniotic fluid is something never done before. The concept behind using screened and freshly collected amniotic membrane and fluid rather than processed membrane is because freshly collected amniotic membrane and fluid contains a plethora of cytokines, growth factors, progenitor and stem cells that is believed to play an important role in wound healing and remodeling effectively. The studies are still ongoing. (Annexure 31)	For research for the last 20 years without any a single evidence and report of adverse events globally so far.
24	Fetal tissue transplantation (fetal cells)	Parkinson Disease, Thymus transplantation at the background of cancer, fetal cortical brain	Applied for global patent on this topic, individual clinical case studies and publications. We will be continuing with this research (Annexure 32)	For research

Note: Expert group can also refer guidelines published on **"Evidence based status of Stem Cell Therapy for Human Diseases"** which is attached