Table S1. Compilation of clinical trials of conventional NSC-based therapy for ischemic stroke (data searched up-to-date 31/3/2020).

Title & Trial number	Study phase & Cell Source	Eligibility Criteria	Primary Outcome Measure	Secondary Outcome Measure	Evaluation Time Frame & Duration of Study	Location
Pilot Investigation of Stem Cells in Stroke (PISCES) (NCT01151124)	Phase I & NSC (CTX0E03)	• Males aged 60 years or over • Unilateral ischemic stroke • Modified National Institutes of Health Stroke Scale (NIHSS) score minimum 6 • Neurologically stable for 2 m • mRS of 2-4 • Fit for general anaesthesia, neurosurgery and have capacity to consent • Infarct at least 1cm diameter	• Adverse events	• Barthel Index (BI) • Mini-Mental State Examination (MMSE) • Modified Rankin Score (mRS) • EuroQol-5 Dimension (EQ-5D)	1 year & 2010.6 to 2023.3 (Active/ not recruiting)	United Kingdom
Phase I Clinical Study of Intracerebral Transplantation of Neural Stem Cells for the Treatment of Ischemic Stroke (NCT03296618)	Phase I & NSC (NSI-566)	• Have the ability to understand the requirements of the study, provide written informed consent and authorization for the use and disclosure of Protected Health Information (PHI) • Men and women 30-65 years old • Women must have a negative serum pregnancy test and practice an acceptable method of contraception or be of non-childbearing potential • At least 3 months but no more than 24 months from time of stroke, with a motor neurological deficit • Documented history of completed ischemic stroke in subcortical region of middle cerebral artery or lenticulostriate artery with or without cortical involvement • mRS of 2-4 • FMMS score of 55 or less	• Adverse Events	• NIHSS • mRS • Fugl-Meyer Motor Score (FMSS) • MMSE Additional Outcome Measure: • *Magnetic Resonance Imaging (MRI) analysis • *Positron Emission	1 year & 2012.6 to 2018.5 (Active/ not recruiting)	China

		• Two evaluations at approximately 3 weeks apart prior to surgery with less than +/- 4 point change in the NIHSS • Able and willing to meet all follow-up requirements and undergo post-physical therapy/rehabilitation		Tomography (PET) analysis		
Pilot Investigation of Stem Cells in Stroke Phase II Eficacy (PISCES II) (NCT02117635)	Phase II & NSC (CTX DP)	• Written informed consent or witnessed informed consent (if the patient is unable to sign informed consent due to paresis of the affected arm) • Supratenorial ishaemic stroke • Male or female aged 40 years or more. • Modified NIHSS of 2-4 • Clinical diagnosis of stroke confirmed by physician using neuro-imaging • A Score of 0 or 1 for test 2 of the ARAT on day 28+7 and day 56+7 post-stroke using the affected arm. • Ability to comprehend verbal commands. • Eligible for neurosurgery including appropriate anatomical target for cell implantation.	• ARAT	• Action Research Arm Test (ARAT) • NIHSS • Rankin Focused Assessment (RFA) version of the MRS • BI • FMMS	1 year & 2014.4 to 2018.7 (Completed)	United Kingdom
Investigation of Neural Stem Cells in Ischemic Stroke (PISCES III) (NCT03629275)	Phase II & NSC (CTX0E03)	• Ischemic stroke that includes the supratentorial region, occurring within 6 to 24 months of the time that surgical intervention will be performed (Qualifying Stroke Event) • mRS of 3 or 4 • Some residual upper limb movement • Sufficient cognitive and language abilities to comprehend verbal commands and to carry out the study assessments • No medical conditions that would preclude neurosurgery	• mRS	• BI • Timed Up and Go Test (TUG) • Chedoke Arm and Hand Activity Inventory (CAHAI) • Symbol Digit Modalities Test	6 month & 2018.8 to 2022.11 (Recruiting)	United State

		• Ability to attend study visits and complete all study assessments		• Controlled Oral Word Association tasks • Multilingual Naming Test • Montreal Cognitive Assessment • NIHSS • FMMS • Stroke Impact Scale (SIS) • EQ-5D		
A Phase II/III Adaptive Crossover Study of Intracerebral Transplantation of Neural Stem Cells for the Treatment of Paralysis Due to Ischemic Stroke (ChiCTR1800014354)	Phase II/III & hNSC NSI-566RSC	• Have the ability to understand the requirements of the study, provide written informed consent and authorization for the use and disclosure of Protected Health Information (PHI) • Men and women 30-65 years old • Women must have a negative serum pregnancy test and practice an acceptable method of contraception or be of non-childbearing potential • At least 4 months but no more than 24 months from time of stroke at the time of screening, with a motor neurological deficit • Documented history of completed ischemic stroke in subcortical region of middle cerebral artery or lenticulostriate artery with or without cortical involvement, with correlated findings by MRI • mRS of 2-4 • FMMS score of 55 or less	• Vital signs treatment-emergent adverse events • Clinical laboratory tests • Physical examination • Whole central nervous system (CNS) MRI • FMMS	• NIHSS • mRS Additional Outcome Measure: • **Fluorodeoxy-glucose*-positron emission tomography (FDG-PET) • *Diffusion Tensor Imaging (DTI) of Brain • * functional MRI	2018.8 to 2021.6	China

		• Two evaluations at approximately 3 weeks apart prior to surgery with no more than +/- 4 point change in the NIHSS • Able and willing to meet all follow-up requirements and willing to undergo post-physical therapy/rehabilitation.				
A single center randomized controlled trial for human-derived neural stem cell in the treatment of ischemic stroke (ChiCTR1900022741)	hNSC	• Aged 18-80 years old • Patients with ischemic stroke 2 to 24 months before screening, and the stroke was caused by unilateral anterior and/or middle cerebral artery • Patients with hemiplegia, NIHSS scores were higher than 6 and at least one limb movement disorder) • Neurologicaly were stable (variety of NIHSS was smaller than 2) • mRS of 2-4 • Minimum infarct diameter of 1 cm on MRI • Informed consent signed by patient or family member and can complete follow-up	• Incidence of adverse events • NIHSS	• mRS • BI • MMSE • Brain MRI	2019.7 to 2021.6	China