SUPPLEMENTARY DIGITAL MATERIAL 1

Supplementary Table I.—Characteristics of included clinical practice guidelines of past search with correspondent update and new GLs.

Development organization (year of past version)	Country	Updated GL (year of latest version)	Funding	Grading system	Level of evidence	Robot-assisted recommendation
Previous included GLs (2021) and updates (2024)						
Scottish Intercollegiate Guidelines Network - SIGN (2010)	Scotland[a]	National Clinical Guideline for Stroke for the UK and Ireland (2023)	R	SIGN checklist score	numerical/categorical grading was reported	"Robot-mediated treatment uses devices to provide passive, active-assisted or resistive limb movement, and has the potential to offer extended periods of treatment and an opportunity to increase intensity through repetition. Some robots may be able to adapt treatment in response to performance. [...] People with reduced arm function after a stroke may be considered for robot-assisted movement therapy to improve motor recovery of the arm as an adjunct to usual therapy, preferably in the context of a clinical trial."
Royal College of Physicians (2016)	United Kingdom[a]					
Stroke Foundation of New Zealand (2010)	New Zealand[a]	Australian and New Zealand Living Clinical Guidelines for Stroke	NR	GRADE	Weak recommendati	"For stroke survivors with mild to severe arm weakness,

Stroke Foundation (2017)	Australia[a]	Management (2022*)			on	mechanically assisted arm training (*e.g.* robotics) may be used to improve upper limb function. [...] For stroke survivors with arm weakness, repetitive practice using assistive technology, constraint induced movement therapy (CIMT), and robotics may be used to improve arm strength."
Canadian Heart and Stroke Foundation (2015)	Canada	Canadian stroke best practice recommendations (2019*)	R	GRADE	Subacute, Level A; Chronic, Level A.	"Virtual reality, including both immersive technologies such as head mounted or robotic interfaces and non-immersive technologies such as gaming devices can be used as adjunct tools to other rehabilitation therapies as a means to provide additional opportunities for engagement, feedback, repetition, intensity and task-oriented training."
American Heart Association - AHA/American Stroke Association - ASA (2016)	United States of America	(2016)	R	AHA concerning classes and levels of evidence	Class IIa level A	"Robotic therapy is reasonable to consider to deliver more intensive practice for individuals with moderate to severe upper limb paresis."
Royal Dutch Society for Physical Therapy (2014)	Nederland	(2014)	NR	Self-making system	Level 1	"It has been demonstrated that unilateral robot-assisted training of the paretic shoulder and elbow of patients with a stroke improves the selective movements and muscle strength of the paretic arm and reduces atypical pain in the paretic arm.

						[...] It has been demonstrated that bilateral robot-assisted training of the elbow and wrist improves the selective movements and muscle strength of the arm of patients with a stroke. [...] It remains unclear whether robot-assisted training in which the arm and hand are trained simultaneously is more effective for patients with a stroke in terms of selective movements and muscle strength than other interventions.”
Stroke Foundation Department of Veterans Affairs, Department of Defense (2019)	United States of America	(2019)	NR	Self-making system	Weak	“We suggest offering robot-assisted movement therapy as an adjunct to conventional therapy in patients with deficits in upper limb function to improve motor skill.”
new GLs (2024)						
Guideline Committee of the Japan Stroke Society	Japan	(2021)	NR	Self-making system (Grade of recommendation and level of evidence -LOE-)	Grade B, LOE Moderate Grade B, LOE High	“Impairment of Activities of Daily Living: it is reasonable to perform training to use the affected-side upper limb forcedly, task-oriented training, training using mirror image and robot-assisted training. [...] Upper limb Dysfunction: It is reasonable to perform robot-

						assisted upper limb training.”
Scientific Department of Neurological Rehabilitation of the Brazilian Academy of Neurology[a]	Brazil	(2022)	NR	Adaptation of the framework established by the AHA	Recommendation IIa-A	“Robot-assisted therapy promotes the use of the affected limb, intensifies rehabilitation through task repetition, and offers task-specific practice. Virtual reality (VR) provides augmented feedback and preserves motivation. A common denominator of VR systems and robot-assisted therapy is playful intervention by means of serious games. [...] Robot-assisted therapy might be superior to conventional rehabilitation in improving severe UL motor impairment in stroke patients with hemiplegia and limited potential for spontaneous recovery. [...] Robot-assisted therapy can be indicated in severe UL motor impairment poststroke.”
Clinical Practice Guideline for Stroke Rehabilitation in Korea	South Korea	(2023)	R	GRADE	High, B	“In stroke patients, when applying machine-assisted training, including upper limb robots, there is an improvement in upper limb function and daily living ability compared to conventional rehabilitation therapy, so it is recommended depending on the patient's condition and the medical institution's circumstances.”

Stroke rehabilitation in adults (NICE)	United Kingdom	(2023)	R	GRADE	Reported separated for each considered outcome	“Do not offer robot-assisted arm training as part of an upper limb rehabilitation programme.”

[a]The GL has been integrated into a collective edition, * Latest consulted update, the GL is constantly updated online.

NR: not reported; R: reported.