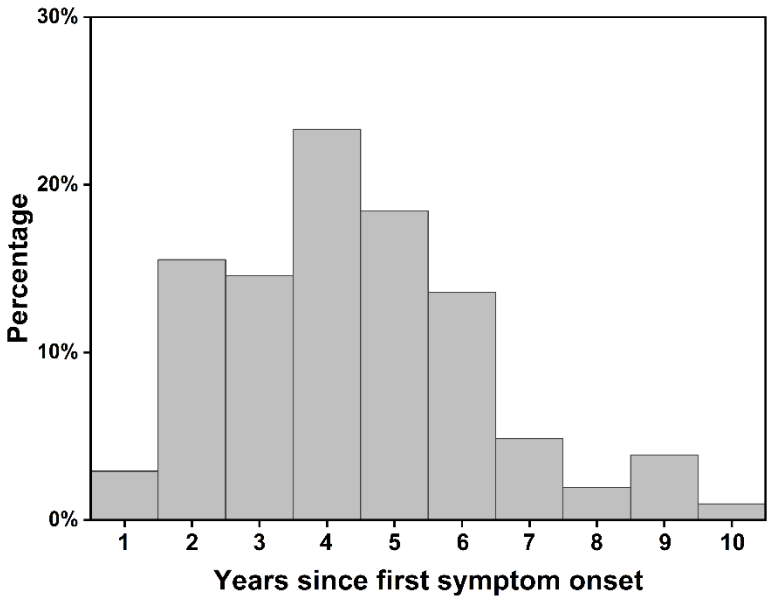
Supplementary Table 1 Demographic, clinical, and pathological description of the four mutation carriers

Mutation	Sex	Handedness	Years of education	Age at onset	Age at scan	MMSE	CDR	Clinical presentation	Pathology
GRN	F	R	12	63	67	28	0	Difficulty articulating words	TDP-A
GRN	F	R	20	67	69	30	0	Difficulty articulating polysyllabic words; simplified sentences with morphosyntactic errors	TDP-A
GRN	F	R	16	60	63	26	0.5	Shorter, simplified sentences; word-finding difficulty	---
GRN	M	R	16	62	65	25	1	Difficulty with speech initiation and finding words; shorter sentences	---

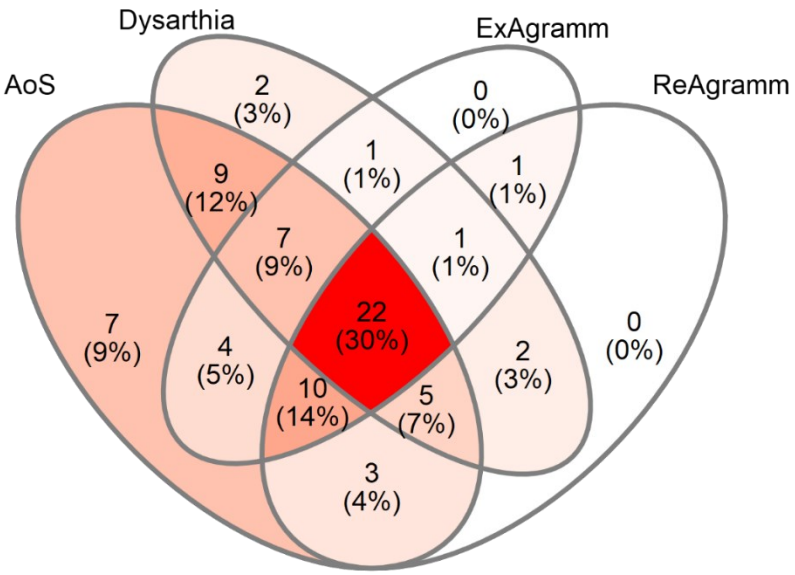
F = female; M = male; R = right-handed; MMSE = Mini-Mental State Examination; CDR = Clinical Dementia Rating; TDP-A = transactive response DNA-binding protein 43kD type A.

Supplementary Table 2 Non-exhaustive list of deviant motor speech characteristics indicative of apraxia of speech or dysarthria

Apraxia of Speech	Spastic Dysarthria	Hypokinetic Dysarthria
Slow speech rate	Slow speech rate	Accelerated speech rate
Distorted articulation	Strained-strangled/harsh voice quality	Breathy/harsh voice quality
Distorted sound substitutions and/or additions	Imprecise articulation	Short rushes of speech
Sound sequencing errors	Audible/strenuous inspiration	Imprecise articulation
Articulatory groping/false starts	Hypernasality	Reduced loudness and stress
Trial-and-error articulation	Slow, regular speech alternating motion rates	Inappropriate silences
Difficulty initiating speech	Pitch breaks	Repeated sounds
Reduced accuracy with increased utterance length, complexity and/or rate		Rapid, blurred speech alternating motion rates
Prosodic alterations		Monopitch and monoloudness



Supplementary Figure 1 Histogram of years since first symptom onset. The figure shows the sample composition (n = 103) in terms of the time elapsed between first symptom onset and scan acquisition.



Supplementary Figure 2 Characteristic speech-language symptoms in nfvPPA. The figure (Venn diagram) shows a breakdown of the subset of patients ($n = 74$) with complete cross-sectional data into those with AoS, dysarthria, expressive agrammatism (ExAgramm), or receptive agrammatism (ReAgramm), or any combination of these.