

**Supplemental Material S1.** Existing studies exploring language in bilingual AD (based on Stilwell et al., 2016, and Calabria et al., 2017).

Study	Total number of participants	Language combination	Bilingualism profile	Language task	Which language was more affected?			
					Dominant	Nondominant	Both	Other
Hyltenstam & Obler (1989)	2	1 German-Swedish	Highly proficient	Interview (to study code switching)				L2 more affected (intrusions from L1)
		1 Swedish-Finnish						
Hyltenstam & Stroud (1993)	6	Finnish (L1)-Swedish (L2)	Late bilinguals	Interview (to study code switching)				L2 more affected (intrusions from L1)
Friedland & Miller (1999)	4	English-Afrikaans	Late bilinguals	Conversation		✓		
De Picciotto & Friedland (2001)	6	English-Afrikaans	Highly proficient	Semantic fluency		✓		
Meguro et al. (2003)	4	Japanese-Portuguese	Reported to communicate in both languages	Naming		✓		
				Oral reading				
				Vocabulary comprehension				
				Lexical Decision				
Hernandez et al. (2007)	1	Catalan (L1)-Spanish (L2)	Early	Naming			✓	
			Highly proficient	Word-picture matching				
				Sentence completion				
Salvatierra et al. (2007)	11	Spanish (L1)-English (L2)	Nonbalanced; L1-dominant	Phonemic and Semantic Fluency			✓	
Gollan et al. (2010)	29	Spanish-English	Non-balanced	Naming	✓			
Gomez-Ruiz et al. (2011)	12	Catalan (L1)-Spanish (L2)	Early bilinguals	Bilingual Aphasia Test (BAT; Paradis, 2011)			✓	

Costa et al. (2012)	Probable AD = 47	Catalan (L1)- Spanish (L2)	Early bilinguals;	Naming			✓	
	MCI = 24		Highly-proficient	Word-picture matching				
				Word Translation				
Ivanova et al. (2014)	12	Spanish-English	Non-balanced	Naming	✓ (Cross- sectionally)	✓ (Longitudinally)		
Manchon et al. (2014)	13	8 German (L1)- French (L2)	Late, proficient- bilinguals	Oral comprehension			✓	
		3 Spanish (L1)- French (L2)		Naming				
		2 Italian (L1)- French (L2)		Repetition				
				Verbal fluency				
Calabria et al. (2017)	AD = 35;	Catalan (L1)- Spanish (L2)	Early bilinguals;	Picture naming			✓ (Longitudinally)	
	MCI = 15		Highly-proficient	Word translation				
				Word comprehension				
Nanchen et al. (2017)	20	14 German (L1)- French (L2)	Late, proficient- bilinguals	Oral comprehension			✓	
		2 Spanish (L1)- French (L2)		Production from BAT and adapted Boston Diagnostic Aphasia Examination (Goodglass & Kaplan, 1972)				
		4 Italian (L1)- French (L2)						

Note. AD = Alzheimer's disease; MCI = mild cognitive impairment.