

CI	HA (contra)	candidacy	preop	OR	ENT	FIRST PHASE															SECOND PHASE	THIRD PHASE					
						Daily randomization										Free Choice	Shared decision	Preferred	Clinical fit	Final fit							
						first fit	REM														Optimize	Choice					
Timeline	# visit code	-	-	-	-	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	S1	T1	T2				
	# weeks			-4	-3	0	1	2	3	4	5	6	7	8	10	12	16	20	26A	26B	30	34	52				
	# months							1		1,5					3			6	6	7	8	12					
	relative time cfr. previous visit	var	-1M	-	+9D	+4W	+1W	+1W	+1W	+1W	+1W	+1W	+1W	+1W	+2W	+2W	+4W	+4W			+6W	+4W	+18W				
	window cfr. previous visit	var	±1M	-	±3D	±3W	±5D	±5D	±5D	±5D	±5D	±5D	±5D	±5D	±1W	±1W	±2W	±2W			±2W	±2W	±4W				
Clinical rehabilitation	Audiologist (fitting CI/HA)					150 ¹	75 ²	90 ³	75 ²		75 ²				60 ²			45 ⁴		60 ⁵	60 ⁶	60 ⁷					
	Speech therapist (rehab)						45	45	45	45	45	45	45	45	45	45			60				60				
	Social worker (consult)																										
Audiometry	unaided	Thresholds + CNC	20	20		20														20		20					
	HA	Aided thresholds	10 ^E				5 ^E													5 ^E		5 ^D					
	CI	Aided thresholds					10 ^A		10 ^A											5 ^{A*}		5 ^D					
REM	HA	Aided	15			15																					
Imaging	CT/MRI		x																								
	CBCT			x																							
CI-data	M-T levels					0	0	0			0				0					0		0					
	Datalogging					0	0	0	0	2	2	0	2	2	2	0	2	2		0		0					
	Impedances			x		0	0	0	2	2	0	2	2	2	0	2	2		0		0	0					
	Cross-impedances			x		0								0					0		0	0					
	ECAP			x		20								20					20		0	0					
Basic tests	CI	CNC				10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	10 ^A	5 ^{A*}	10 ^{C,D}	5 ^D				
	CI	Matrix quiet				20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	10 ^{A*}	20 ^{C,D}	10 ^D				
	CI	Matrix noise				20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	20 ^A	10 ^{A*}	20 ^{C,D}	10 ^D				
	HA	CNC	15 ^E			5 ^E	5 ^E	5 ^E						5 ^E						5 ^E	5 ^B	5 ^C	5 ^D				
	CIHA	CNC					10 ^A							10 ^A						5 ^{A*}	5 ^B	5 ^C	5 ^D				
	CIHA	Matrix noise					20 ^A							20 ^A						10 ^{A*}	10 ^B	10 ^C	10 ^D				
	<i>Summed up estimated time basic tests</i>					15	55	50	55	85	50	50	50	50	85	50	50	50		45		70	45				
Extended tests	CI + CIHA	Matrix noise spatial												80 ^A						40 ^{A*}	40 ^B	40 ^C					
	CI + CIHA	Listening effort							24 ^A											12 ^{A*}	12 ^B	12 ^C	12 ^D				
	CI + HA	Loudness scaling							18 ^A											12 ^{A*}	12 ^B	12 ^C					
	CI	SMRT							20 ^A											20 ^{A*}		10 ^C					
Questionnaires	SSQ-12			x																A*		C	D				
	HUI-3			x																A*		C	D				
	ICECAP-A			x																A*		C	D				
	Preference scales					A	A	A	A	A	A	A	A	A	A	A	A	A	A	A*		C	D				
	Sound quality					A														A*		C	D				
Compliance checks	CI							x				x															
	HA											x								x							
Trial administration	Adverse events			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				
	Extended adverse events					x														x		x	x				
	Data management check-up					x														x		x	x				
	Device deficiencies			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				
Invoice travel expenses																				x			x				
	Total estimated time (in minutes) per visit (excluding questionnaires and imaging)					60	20	NA	NA	225	190	220	205	217	99	180	99	119	214	217	54	54	119	165	169	199	207
	<i>Reference time standard clinical rehabilitation</i>					60	20	NA	NA	120	105	120	105	105	45	120	45	45	45	45	0	0	195		0	195	

var = variable moment
 extra visit (not combined with clinical visit)
 deviant from clinical rehabilitation (e.g. additional test, visit takes more time)

Test conditions	
A =	measure outcome with standard AND natural FAT (HA = bimodal fit)
A* =	measure with preferred FAT (standard OR natural (HA = bimodal fit)
B =	measure with HA loudness fit in acute setting (CI=preferred FAT)
C =	measure with HA loudness fit after acclimatisation (CI=preferred FAT)
D =	measure with CI and HA in clinical fit
E =	<i>candidacy</i> : measure both hearing aids separately and in case of a bilateral HA user also bilateral for CNC; <i>postop</i> : measure HA contra
0 =	time included in fitting CI

Test	testing properties	# administrations per testing property	Estimated time
Thresholds	250-8000Hz	1x	5 min per ear/condition
CNC	55 dB, 65 dB, 75dB	1x (retest 65 dB)	5 min per ear/condition
Matrix Quiet	65dB	2x (test-retest)	10 min per condition
Matrix Noise	N65dB, Svariable	2x (test-retest)	10 min per condition
Matrix noise spatial	SONCI, SONHA	2x (test-retest)	20 min per condition
Listening effort	6 SNR	5x per SNR	6 min per condition
Loudness scaling (Acalos)	5 noise frequencies	1x	6 min per condition
SMRT	Frequency selectivity test	2x (test-retest)	10 min per condition

Fitting legend	
1	Initial CI-fitting in week 1 according to clinical practices, including impedance measurement and determination of M-T levels, subsequently initial fitting of HA contra. In case of ipsilateral residual hearing: try-out EAS live and decide whether or not to continue study.
2	CI-fitting according to clinical practices, including impedance measurement, datalogging and determination of M-T levels, followed by fitting of HA contra
3	CI-fitting according to clinical practices, including impedance measurement, datalogging and determination of M-T levels, followed by extensive fitting of HA contra based on REM
4	CI evaluation fitting according to clinical practices, including impedance measurement, datalogging and determination of M-T levels, followed by evaluation of HA fitting
5	HA optimization fitting, CI fitting limited to check of impedances and datalogging
6	Programming of preferred HA fitting at the end of testing, programming of preferred CI fitting with Soundwave instead of BEPS+
7	CI evaluation fitting according to clinical practices, including impedance measurement and datalogging, followed by evaluation of HA fitting