

SUPPLEMENTAL MATERIAL

Relative effectiveness of high-dose versus standard-dose influenza vaccine against hospitalizations and mortality according to Charlson Comorbidity Index: A post-hoc analysis of the DANFLU-1 randomized trial

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Supplemental Material, Table S1. Definition and codes of comorbidities in the modified Charlson Comorbidity Indices.

Comorbidity/ condition	CCI Disease definitions according to ICD-10 codes	CCI _{mod} Additional disease definitions (ICD- 10 and ATC codes)	CCI and CCI _{mod} Weight	CCI _{quan} Weight	CCI _{age} Weight
Myocardial infarction	I21 I22 I252		1	0	1
Congestive Heart Failure	I099 I420 I425–I429 I43 I50 I110 I130 I132 I255 P290		1	2	1
Peripheral Vascular Disease	I170 I71 I731 I738 I739 I771 I790 I792 K551	I74	1	0	1

	K558 K559 Z958 Z959				
Cerebrovascular disease	G45 G46 H340 I60–I69		1	0	1
Dementia	F00–F03 F051 G30 G311	G312	1	2	1
Chronic pulmonary disease	I278 I279 J40–J41 J42–47 J40–J41 J60–J67 J684 J701 J703	A15-A16 D860 E84 J84 Z942	1	1	1
Rheumatologic disease	M05 M06 M315 M32–M34 M351 M353 M360		1	1	1

Peptic ulcer	K25–K28		1	0	1
Hemiplegia/ paraplegia	G041		2	2	2
	G114				
	G801				
	G802				
	G81				
	G82				
	G830				
	G831				
	G832				
	G833				
	G834				
	G839				
Diabetes without complications	E100	A10 (ATC)	1	0	1
	E101				
	E106				
	E108				
	E109				
	E110				
	E111				
	E116				
	E118				
	E119				
	E120				
	E121				
	E126				
	E128				
	E129				

	E130 E131 E136 E138 E139 E140 E141 E146 E148 E149				
Diabetes with chronic complications	E102–E105 E107 E112 E115 E117 E122–E125 E127 E132–E135 E137 E142–E145 E147		2	1	2
Mild liver disease	B18 K700–K703 K709 K713–K715 K717 K73 K74	B15-B17 B19 D684C Q618 K75 K77	1	2	1

	K760 K762–K764 K768 K769 Z944				
Moderate/severe liver disease	I850 I859 I864 I982 K704 K711 K721 K729 K765–K767		3	4	3
Renal disease	I120 I131 N032–N037 N052–N057 N18 N19 N250 Z490–Z492 Z940 Z992	N11 N12 N14 N26 N158–N160 N162–N164 N168 M300 M313 M319 M321B Q612–Q613 Q615 Q619	2	1	2

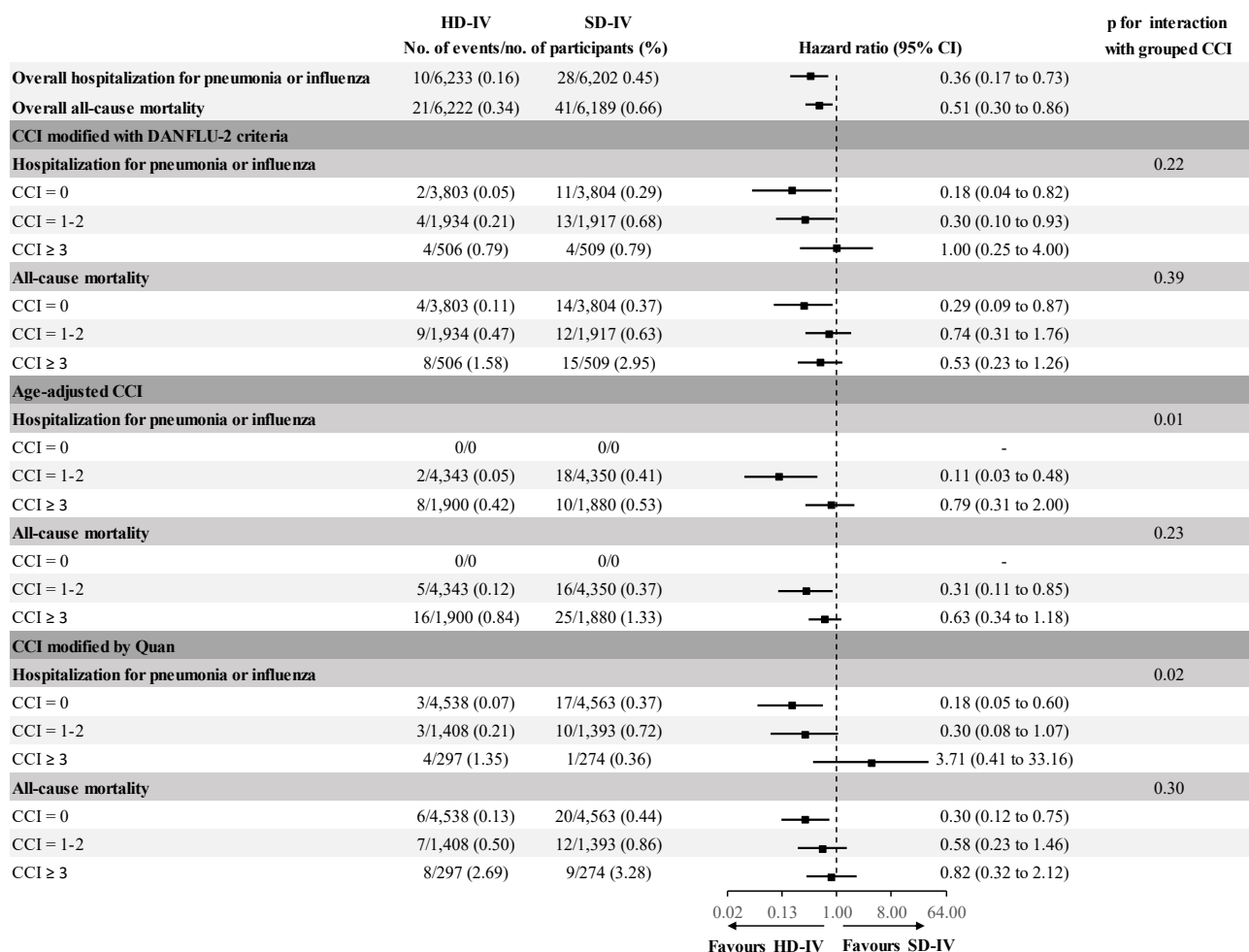
		T858-T859			
Any malignancy (tumor, leukemia, lymphoma)	C00–C26	C27-C29	2	2	2
	C30–C34	C35-C36			
	C37–C41	C42			
	C43	C59			
	C45–C58	C86-C87			
	C60–C76	C89			
	C81–C85				
	C88				
	C90–C97				
Metastatic solid tumor	C77–C80		6	6	6
HIV/AIDS	B20–B22 B24		6	4	6
Age 60-69	-	-	-	-	1
Age 70-79	-	-	-	-	2
Maximum score for respective CCI			29	24	31

CCI, Charlson Comorbidity Index; CCI_{mod}, Charlson Comorbidity Index modified according to diagnoses defined in DANFLU-1; CCI_{quan}, Charlson Comorbidity Index modified by Quan; CCI_{age}, age-adjusted Charlson Comorbidity Index; ICD-10, International Classification of Diseases 10th revision; ATC, Anatomical Therapeutic Chemical code.

Supplemental Material, Table S2. Characteristics of the modified Charlson Comorbidity Indices.

	All participants	CCI _{mod}			CCI _{age}			CCI _{quan}		
		CCI=0	CCI=1-2	CCI≥3	CCI=0	CCI=1-2	CCI≥3	CCI=0	CCI=1-2	CCI≥3
N	12,477	7,607 (61.0%)	3,851 (30.9%)	1,015 (8.1%)	0	8,693 (69.7%)	3,780 (30.3%)	9,101 (73.0%)	2,801 (22.4%)	571 (4.6%)
Age, years	71.7±3.9	71.4±3.9	72.1±4.0	72.9±3.9	-	71.1±3.9	73.1±3.7	71.5±3.9	72.2±3.9	72.7±3.8
Female sex	5,877 (47.1%)	3,809 (50.1%)	1,696 (44.0%)	371 (36.6%)	-	4,303 (49.5%)	15,573 (41.6%)	4,338 (47.7%)	1,316 (47.0%)	222 (38.9%)
HD-IV	6,245 (50.1%)	3,803 (50.0%)	1,934 (50.2%)	506 (49.9%)	-	4,343 (50.0%)	1,900 (50.3%)	4,538 (49.9%)	1,408 (50.3%)	297 (52.0%)
Respective CCI for all		0 (0-1)			2 (1-3)			0 (0-1)		

Data are presented as mean±SD, median (IQR) or n (%). CCI, Charlson Comorbidity Index; HD-IV, high-dose influenza vaccine; CCI, Charlson Comorbidity Index; CCI_{mod}, Charlson Comorbidity Index modified according to diagnoses defined in DANFLU-1; CCI_{quan}, Charlson Comorbidity Index modified by Quan; CCI_{age}, age-adjusted Charlson Comorbidity Index.



Supplemental Material, Fig. S1. Relative effectiveness of HD-IV compared with SD-IV against time to first events according to Charlson Comorbidity Indices. Hazard ratios with 95% confidence intervals were derived from Cox proportional hazard models. HD-IV, high-dose influenza vaccine; SD-IV, standard-dose influenza vaccine; CCI, Charlson Comorbidity Index.