

Supplementary Table S1. ICD-10 codes of clinical diagnoses analyzed in the study

Clinical diagnosis	ICD-10 (International Classification of Diseases) codes					
AF	I48					
Severe bleeding (intracranial, gastrointestinal, respiratory, renal/urinary tract, ocular, retroperitoneal or pericardial bleeding episodes)	D50.0	R04.0	R31.0	R31.9	I71.3	J94.2
	H05.2	H21.0	H31.3	H31.4	H35.6	
	H43.1	H44.8	H47.0	R58	M25.0	
	M79.8	N83.7	N89.7	N92.0	N92.1	
	N92.5	N93.0	N93.8	N93.9	O71.7	
	R04.1	R04.2	R04.89	R04.9		
	D62	D68.3	D69.8	D69.9	H11.3	
	H45.0	H92.2	I23.0	I31.2	S26.0	S27.1
	T79.2	N02	R31	N42.1	N92.4	T81.0
	Y60	R58	R04	N02.0	N02.1	
	N02.2	N02.3	N02.4	N02.5	N02.6	
	N02.7	N02.8	N02.9	N42.1	N92.3	
	N95.0	R04.8	N93	N85.7	R23.3	I85.0
	K22.1	K25.4	K26.4	K27.0	K29.0	
	K29.7	K31.8	K92.0	K57.3	K57.9	
	K62.5	K92.1	K92.2	K25.0	K25.2	
	K25.6	K26.0	K26.2	K26.6	K27.2	
	K27.4	K27.6	K28.0	K28.2	K28.4	
	K28.6	K29.2	K29.3	K29.4	K29.5	
	K29.6	K29.8	K55.2	K57.0	K57.1	
	K57.2	K57.4	K57.5	K57.8	I98.3	
	K22.6	K66.1	K76.2	K62.6	K63.3	I84.4
	I62.0	I62.9	I60	I60.0	I60.1	I60.2
	I60.3	I60.4	I60.5	I60.6	I60.7	I60.8
	I60.9	I61	I61.0	I61.1	I61.2	I61.3
	I61.4	I61.5	I61.6	I61.8	I61.9	I62.1
	I62	S06.4	S06.5	S06.6		
Alcohol consumption (alcohol-related medical services)	I42.6	F10	F10.0	F10.1	F10.2	F10.3
	F10.7	F10.8	F10.9	F10.3	F10.4	F10.5
	F10.6	F10.7	F10.8	F10.9	F15.7	
	G31.2	G62.1	G72.1	I42.6	K29.2	K70
	K70.0	K70.1	K70.2	K70.3	K70.4	
	K70.9	K86.0	T51			
CKD (chronic glomerulonephritis, chronic tubulointerstitial nephropathy, diabetic, and hypertensive nephropathy)	N99.0	I12.0	N03.6	N18	N18.0	
	N18.8	N18.9	G63.8	I32.8	N18	N19
Liver disease (chronic liver disease, liver cirrhosis, hepatitis)	K70	K70.9	K71.0	K71.1	K71.2	
	K71.3	K71.4	K71.5	K71.6	K71.7	
	K71.8	K71.9	K75.9	K76.5	K76.9	
	K77.0	K70.4	K71.1	K72	K72.1	
	K72.9	K70.2	K71.7	K74	K74.0	
	K74.2					
HF (including cardiomyopathies)	I50	I50.0	I50.1	I50.9	I42.0	I25.5
	I42	I42.4	I42.9	O90.3	I42.0	I42.1
	I42.2	I42.3	I42.6	I42.7	I42.8	I42.9
	I43.8	I13.0	I13.2	I43	I43.0	I43.1
Hypertension	I10	I11	I11.0	I11.9	I15	I15.0
	I15.1	I15.2	I15.8	I15.9	O11	
Diabetes and prediabetic conditions	E10	E11	N08.3	E10.0	E10.1	E10.2
	E10.3	E10.3	E10.4	E10.5	E10.6	E10.7
	E10.8	E10.9	E10.0	E11.1	E11.2	E11.3
	E11.3	E11.4	E11.5	E11.6	E11.7	E11.8

	E11.9 E10.0 E10.6 E11.5 E12.4 E13.3 E14.2 G59.0 H36.0 R73.0	E13 E10.1 E11.0 E11.6 E12.5 E13.4 E14.3 G63.2 I79.2 T38.3	E14 E10.2 E11.1 E12.0 E12.6 E13.5 E14.4 G73.0 M14.2 Y42.3	E12 E10.3 E11.2 E12.1 E13.0 E13.6 E14.5 G99.0 M14.6 R40	E13 E10.4 E11.3 E12.2 E13.1 E14.0 E14.6 H28.0	E14 E10.5 E11.4 E12.3 E13.2 E14.1 E15
Stroke/TIA/ other thromboembolic events	I63 I63.5 I69.4 G45.9 I74.4 I63.1 I63.5 I65.9 I65 H34.1 I63.3 I67.9 I74.4	I63.0 I63.6 G45 I74 I74.5 I63.2 I66.9 N28.0 K55.0 G45.8 I63.4 I64 I74.5	I63.1 I63.8 G45.3 I74.0 I74.8 I65.1 K55.0 I65.0 I74 G45.9 I63.5 I74.0 I74.8	I63.2 I63.9 G45.4 I74.1 I74.9 I65.2 I63.0 K55.0 M31.1 I63.0 I63.8 I74.1 I74.9	I63.3 I64 G45.6 I74.2 I63.0 I63.3 I63.1 I63 N28.0 I63.1 I63.9 I74.2	I63.4 I69.3 I74.3 I63.0 I63.4 I63.2 G45 I63.2 I67.8 I74.3
Atherosclerosis (myocardial infarction, peripheral artery disease and other atherosclerotic conditions)	I70 I67.2 I21 I21.4 I20.1 I25.5 I70.1 I70.9	I70.0 I25.1 I21.0 I21.9 I25 I25.0 I70.2 I70.1	I70.1 K55.1 I21.0 I20 I25.0 I25.1 I70.8 I70.2	I70.2 I27.0 I21.1 I20.0 I25.1 I67.2 I70.9 I70.8	I70.8 Z95.1 I21.2 I20.8 I25.2 I70 I70.2 I70.9	I70.9 Z95.5 I21.3 I20.9 I25.6 I70.0 I70.8
CAD	Z95.1 I21.2 I20.8 I25.2	Z95.5 I21.3 I20.9 I25.6	I21 I21.4 I20.1 I25.5	I21.0 I21.9 I25 I25.0	I21.0 I20 I25.0	I21.1 I20.0 I25.1
COPD	J44.0	J44.1	J44.8	J44.9	J44	
Smoking history	F17.2 F17.3 F17.9	T65.2 F17.4 Z71.6	F17 F17.5 Z72.0	F17.0 F17.6 Z58.7	F17.1 F17.7	F17.2 F17.8

AF- Atrial Fibrillation; CKD- chronic kidney disease; HF- heart failure; TIA- transient ischemic attack; CAD- coronary artery disease; COPD- chronic obstructive pulmonary disease.

Supplementary Table S2. Confusion matrix for HASBLED score

-	NHF							
IHR	-	0	1	2	3	4	5	6
0		834	145	18	1	82	8	0
1		57	879	334	70	17	117	19
2		4	156	181	59	9	34	13
3		1	19	26	17	6	4	3
4		0	5	2	1	1	1	0
5		0	0	0	0	0	0	0
6		0	0	0	0	0	0	0

Supplementary Table S3. Confusion matrix for HASBLED score according to ≥ 3 points cutoff - high risk of bleeding according to 2020 ESC AF guidelines

-	NHF	<3	>=3
IHR	-		
<3		260 8	429
>=3		53	33

Supplementary Table S4. Confusion matrix for CHA2DS2VASc score

-	NHF	0	1	2	3	4	5	6	7	8	9
IHR	-										
0		69	73	49	14	2	18	0	0	0	0
1		35	146	148	95	27	37	10	0	0	0
2		13	55	136	166	91	39	30	6	0	0
3		4	14	41	127	168	99	39	30	0	0
4		1	8	17	42	168	178	111	54	9	0
5		0	2	15	25	59	146	151	76	20	0
6		0	1	6	9	13	48	119	91	36	0
7		0	0	0	7	3	8	21	53	19	0
8		0	0	0	2	0	1	0	5	10	0
9		0	0	0	0	0	0	0	0	0	0

Supplementary Table S5. Confusion matrix for CHA2DS2VASc score according to >=2 points for men and >= 3 points for woman cutoff– class I recommendation for chronic anticoagulation in atrial fibrillation according to 2020 ESC AF guidelines

Chronic anticoagulation recommended	-	NHF	No	Yes
	IHR	-		
	No		410	516
	Yes		107	2282