

Table S1. Characteristics of osteoporosis cases in warfarin and DOACs in FAERS database (2004-2016)

Variables	Warfarin		DOACs	
	n = 660	(%)	n = 124	(%)
Age				
Data available	506		90	
mean \pm S.D.	64.0 \pm 13.5		70.7 \pm 12.0	
Sex				
Data available	638		119	
Male	172	(27.0)	31	(26.1)
Concomitant use				
Prednisolone	27	(4.0)	5	(4.0)
Number of concomitant drugs [median]	6		7	

DOAC: direct oral anticoagulant

FAERS: FDA Adverse Event Reporting System

S.D.: standard deviation

Table S2. Baseline characteristics of the study population with the use of oral anticoagulants in JMDC Claims Database (January 2005 to March 2018)

	Warfarin user	DOACs user					
		Total	Oral directfactor Xa inhibitors	Dabigatran	Rivaroxaban	Apixaban	Edoxaban
Claims, n	335,262	176,392	133,964	48,605	66,965	39,553	27,626
Users, n	17,675	17,437	14,776	3,765	5,736	4,220	6,038
Incident users, n	7,078	13,509	12,230	2,312	4,384	3,532	5,483
Age, n(%)							
<20	367 (5.2)	46 (0.3)	43 (0.4)	4 (0.2)	6 (0.1)	5 (0.1)	34 (0.6)
20-39	732 (10.3)	681 (5.0)	603 (4.9)	102 (4.4)	187 (4.3)	141 (4.0)	306 (5.6)
40-59	3,405 (48.1)	6,475 (48.0)	5,798 (47.4)	1,140 (49.3)	2,092 (47.7)	1,526 (43.2)	2,679 (48.9)
60-75	2,574 (36.4)	6,307 (46.7)	5,786 (47.3)	1,066 (46.1)	2,099 (47.9)	1,860 (52.7)	2,464 (44.9)
Median (range)	56 (0–75)	59 (1–75)	59 (7–75)	58 (1–75)	59 (15–75)	60 (7–75)	58 (13–75)
Male, n(%)	4,882 (69.0)	9,528 (70.5)	8,472 (69.3)	1,907 (82.5)	3,532 (80.6)	2,772 (78.5)	3,057 (55.8)

DOACs: dabigatran, rivaroxaban, apixaban, and edoxaban

Oral direct factor Xa inhibitors: rivaroxaban, apixaban, and edoxaban

Table S3. Characteristics of the study population of outcomes in JMDC Claims Database (January 2005 to March 2018)

	Osteoporosis diagnosis	Bisphosphonate use
Claims, n	1,704,762	474,229
Users, n	122,196	33,575
Incident users, n	71,494	18,586
Age, n(%)		
<20	1,584 (2.2)	215 (1.2)
20-39	4,786 (6.7)	1,447 (7.8)
40-59	35,584 (49.8)	6,944 (37.4)
60-75	29,540 (41.3)	9,980 (53.6)
Median (range)	57 (0–75)	60 (2–75)
Male, n(%)	14,471 (20.2)	3,759 (20.2)

Osteoporosis was defined as M80 and M81 in ICD-10 code.

Bisphosphonates: minodronate, etidronate, alendronate, ibandronate, and risedronate