

Table 2. Appropriateness of DOAC prescription according to different criteria.

Inappropriateness criteria	N	% on DOAC
smPC violations (any)	63	31%
smPC inappropriate prescriptions (prescribed even if not recommended)	3	1%
smPC overdosed (higher dose than recommended)	27	13%
smPC underdosed (lower dose than recommended)	34	17%
Explicit list of potentially inappropriate medications (any)	98	48%
STOPP C3. Direct thrombin inhibitors or factor Xa inhibitors with concurrent significant bleeding risk, i.e. bleeding diathesis or recent spontaneous bleeding	11	5%
STOPP C5. Aspirin in combination with direct thrombin inhibitor or factor Xa inhibitors in patients with chronic atrial fibrillation without a clear indication for aspirin (no added benefit from aspirin)	-	-
STOPP C6. Antiplatelet agents with direct thrombin inhibitor or factor Xa inhibitors in patients with stable coronary, cerebrovascular or peripheral arterial disease without a clear indication for anticoagulant therapy (no added benefit from dual therapy)	-	-
STOPP C10. NSAID and vitamin K antagonist, direct thrombin inhibitor or factor Xa inhibitors in combination (risk of gastrointestinal bleeding)	-	-
STOPP E2 and BEERS19. Direct thrombin inhibitors (e.g. dabigatran) if eGFR < 30 ml/min/1.73m ² (risk of bleeding)	2	1%
STOPP E3 and BEERS19. Factor Xa inhibitors (e.g. rivaroxaban, apixaban) if eGFR < 15 ml/min/1.73m ² (risk of bleeding)	1	0.5%
BEERS 2019. Dabigatran and Rivaroxaban: increased risk of gastrointestinal bleeding compared with warfarin and reported rates with other DOACs when used for long-term treatment of VTE or atrial fibrillation in adults ≥75y	90	44%
Pharmacokinetic drug-drug interactions (any)	37	18%
Involving Dabigatran	15	7%
Involving Apixaban	14	7%
Involving Rivaroxaban	6	3%
Involving Edoxaban	2	1%

Data reported as absolute number of DOAC prescriptions meeting the specific criteria with percentage. Percentage is calculated on the sub-cohort of subjects taking DOAC (N 204). The most common pharmacokinetic DDI was Dabigatran-Pantoprazole (N 10), and the interactions with Amiodarone of Dabigatran (N 1), Apixaban (N 7), Rivaroxaban (N 4) and Edoxaban (N 1, see Online resource 3).