Supplementary Table S1 PRISMA checklist

Section/topic	Item No.	Checklist item	Reported on page number(s)
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both. (Note: the report has been labeled as "a pooled analysis" in response to the suggestion from the reviewer and editor.)	76
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	76
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	77
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	77
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	77
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	77
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	77
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	77
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in a systematic review, and, if applicable, included in the meta-analysis).	77
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	77
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	77
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	77
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	77
Synthesis of results	14		77

(*Continued*)

Supplementary Table S1 (*Continued*)

Section/topic	Item No.	Checklist item	Reported on page number(s)
		Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	78
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were prespecified.	78
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	78–79
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	79 and ►**Supplementary Table S2**
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	79 and ►**Supplementary Table S3**
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (1) simple summary data for each intervention group and (2) effect estimates and confidence intervals, ideally with a forest plot.	►**Fig. 2** and ►**Supplementary Figs. S2-S4**
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	79–81, ►**Fig. 2**, and ►**Supplementary Figs. S2–S4**
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see item 15).	79–81
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see item 16]).	80–81
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., health care providers, users, and policy makers).	81–82
Limitations	25	Discuss limitations at study and outcome levels (e.g., risk of bias), and at the review level (e.g., incomplete retrieval of identified research, reporting bias).	82
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	82–83
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	83

Note: Adapted from Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 2009;6(7):e1000097.

Supplementary Table S2 Characteristics of included studies

References	Country	Study design	Total (*N*)	Inclusion	Exclusion	Primary outcome	Anticoagulant regimens	Screening for asymptomatic DVT	Baseline characteristics			
									Age, mean or median (SD or IQR)	Male, *N* (%)	ICU admission, *N* (%)	History of VTE, *N* (%)
Al-Samkari et al 2020	United States	Retrospective cohort	400	All patients aged ≥18 years with confirmed COVID-19 who had a D-dimer test performed on initial presentation	NR	Bleeding and thrombotic events	Prophylaxis: enoxaparin 40 mg SC daily or unfractionated heparin 5,000 U SC every 8–12 h	Not done	ICU 65 (32–97); Non-ICU 60 (23–99)	ICU (65); Non-ICU (54)	144 (36)	NR
Aleva et al 2020	Netherlands	Retrospective cohort	50	Consecutive patients with COVID-19 admitted to ICU	NR	VTE	All received low-dose LMWH	Not done	65 (10)	33 (66)	50 (100)	NR
Alonso-Fernández et al 2020	Spain	Prospective cohort	30	Consecutive adult patients with confirmed COVID-19 pneumonia admitted to the hospital and with at least one D-dimer value higher than 1 μg/mL during hospitalization	Previous anticoagulant treatment in the 3 months prior to admission; CTPA performed before D-dimer rising above 1 μg/mL	PE	Prophylaxis: enoxaparin 40 mg OD	Not done	64.5 (55.8–71.3)	19 (63.3)	11 (37.9)	NR
Artifoni et al 2020	France	Retrospective cohort	71	All consecutive patients with confirmed COVID-19 hospitalized for more than 48 hours (age > 18 years, adequate thromboprophylaxis and available low limb venous duplex ultrasonography)	Previous anticoagulation and contraindication to thromboprophylaxis	VTE	Weight-appropriate enoxaparin (40 mg/d for BMI < 30 kg/m^2, 60 mg/d for BMI 30–40 kg/m^2 and 40 mg twice daily for BMI > 40 kg/m^2)	Lower limb venous duplex ultrasonography at hospital discharge or earlier if thrombosis was clinically suspected.	64 (46–75)	43 (61)	0 (0)	NR
Bompard et al 2020	France	Retrospective cohort	135	Patients with COVID-19 pneumonia who underwent CTPA	CT examinations with major respiratory motion artifacts	PE	Enoxaparin 40 mg OD in ward patients, or BID in obese and ICU patients	Not done	64 (54–76)	94 (70)	24 (18)	NR
Chen et al 2020	China	Retrospective cohort	88	Critically ill COVID-19 patients in the ICU	No pharmacological thromboprophylaxis, no surveillance results on DVT, thromboprophylaxis before ICU admission	Incidence of DVT (distal and proximal DVT), risk factors of DVT, and bleeding events	All of the patients had VTE pharmacologic thromboprophylaxis prescribed LMWH for more than 1 week	Compression US	63 (55–71)	54 (61)	88 (100)	NR
Cho et al 2020	United States	Retrospective cohort	158	Consecutive hospitalized patients with confirmed COVID-19 status	Age <18 or known DVT or PE prior to admission	DVT detected on duplex US	UFH 5,000 units every 8 hours or LMWH 40 mg per day	Venous duplex US	67.4 (14.6)	85 (54)	NR	NR
Criel et al 2020	Belgium	Retrospective cohort	82	All patients hospitalized in the ICU and non-ICU ward due to SARS-CoV-2	Patients in a palliative phase and/or who were noncontributive, mostly due to agitation or impaired mental status	Insidious VTE was investigated using Doppler ultrasonography of the upper and lower limbs	ICU: 40 mg enoxaparin BID (60 mg BID if >100 kg) Non-ICU: 40 mg enoxaparin OD (60 mg OD if >100 kg)	Doppler ultrasonography of the upper and lower limbs	ICU 64.5 (11.8); Non-ICU 63.6 (14.4)	ICU 20 (67); Non-ICU 63.6 (14.4)	30 (37)	NR
Cui et al 2020	China	Retrospective cohort	82	Patients diagnosed with novel coronavirus pneumonia in the ICU	NR	NR	None	Not done	59.9 (14.1)	37 (46)	81 (100)	NR
Demelo-Rodríguez et al 2020	Spain	Prospective cohort	156	All consecutive patients hospitalized in non-ICU units with diagnosis of COVID-19 pneumonia, D-dimer levels >1,000 ng/mL and had been hospitalized for ≥48 hours	Receiving therapeutic doses of anticoagulation, had a history of DVT of lower limbs, or had clinical signs or symptoms of DVT	Asymptomatic DVT	Enoxaparin 40 mg per day or bemiparin 3,500 UI per day	Complete compression Doppler ultrasound (CCUS) of both legs	68.1 (14.5)	102 (65)	0 (0)	2 (1)
Dugar et al 2020	United States	Cross-sectional	18	Consecutive patients with COVID-19 admitted to ICU	Missing data, repeat scans, scanned beyond 72 hours	DVT	All received thromboprophylaxis	Point of care US within 72 hours after admission	66.74 (10.95)	NR	18 (100)	NR
Fauvel et al 2020	France	Retrospective cohort	1,240	Consecutive adult patients admitted with a diagnosis of SARS-CoV-2 infection	Patients without CTPA to diagnose PE, those who were directly admitted to the ICU on their arrival, and those who were still hospitalized and had not	PE confirmed by CTPA	Prophylactic dose (daily LMWH or twice daily subcutaneous UFH); intermediate dose (double the preventive dose)	Not done	64 (17)	721 (58)	185 (14.9)	NR

(*Continued*)

Supplementary Table S2 (*Continued*)

References	Country	Study design	Total (*N*)	Inclusion	Exclusion	Primary outcome	Anticoagulant regimens	Screening for asymptomatic DVT	Baseline characteristics			
									Age, mean or median (SD or IQR)	Male, *N* (%)	ICU admission, *N* (%)	History of VTE, *N* (%)
					experienced PE at study completion							
Grandmaison et al 2020	Switzerland	Cross-sectional	29	All patients hospitalized with ARDS or pneumonia, and a SARS-CoV-2-positive PCR test	NR	VTE	Prophylaxis: enoxaparin 40 mg/d or UFH 5,000 units twice a day Therapeutic: not listed	Complete duplex ultrasound of the neck, of the upper, and of the lower limb veins in all patients	66 (37–79)	11 (65)	29 (100)	1 (6)
Hanif et al 2020	United States	Retrospective cohort	921	Consecutive patients admitted with COVID-19	Patients who were discharged from emergency room and who were admitted for reasons other than COVID-19 pneumonia	Thrombotic complications and clinically significant bleeding	LMWH, UFH, DOACs	Not done	62 (NR)	574 (62.3)	NR	NR
Klok et al 2020	Netherlands	Retrospective cohort	184	Consecutive patients admitted for COVID-19 to ICU	None	PE, DVT, ischemic stroke, myocardial infarction, or systemic arterial embolism	Nadroparin 2,850 IU SC per day or 5,700 IU per day if >100 kg; nadroparin 5,700 IU per day; nadroparin 5,700 IU twice daily from April 4, 2020 and onwards, nadroparin 2,850 IU SC per day or 5,700 IU per day if >100 kg; nadroparin 5,700 IU per day from March 30, 2020 and onwards	Not done	64 (12)	139 (76)	184 (100)	NR
Koleilat et al 2020	United States	Retrospective case–control	131	Consecutive patients admitted for COVID-19 who underwent Duplex scan	NR	Distal or proximal DVT on duplex scan	Subcutaneous heparin, enoxaparin, oral apixaban Therapeutic heparin, bivalirudin, and apixaban	Not done	NR	NR	NR	10 (7.6)
Le Jeune et al 2020	France	Retrospective cohort	42	Consecutive patients in general ward	NR	VTE	Prophylaxis, intermediate, and therapeutic thromboprophylaxis	Complete Doppler ultrasound	64.5 (19.3)	23 (55)	NR	NR
Llitjos et al 2020	France	Retrospective cohort	26	Consecutive patients admitted for COVID-19 to ICU	NR	VTE by complete duplex ultrasound	Prophylactic AC; therapeutic was LMWH or UFH with Xa monitoring	Screening for asymptomatic VTE by ultrasound	68 (51.5–74.5)	20 (77)	26 (100)	1(4)
Lodigiani et al 2020	Italy	Retrospective cohort	388	Consecutive patients admitted for COVID-19	NR	Distal or proximal DVT, PE, or venous thrombosis at other sites including catheter-related thrombosis, stroke and MI/NSTEMI	LMWH in ICU, fondaparinux, heparin	Not done	66 (55–75)	264 (68)	61 (16)	12 (3.1)
Longchamp et al 2020	Switzerland	Prospective Cohort	25	Patients with laboratory-confirmed COVID-19 infection who were admitted to hospital ICU for hypoxemic respiratory failure	None	Distal or proximal DVT and PE, diagnosed by imaging	UFH infusion (15,000 IU/24 h, or 20,000 IU/24 h for patients >100 kg), or enoxaparin OD (40 mg, or 60 mg for patients >100 kg)	Screening lower limb venous compression ultrasound performed by 2 specialists between day 5 and 10 of ICU stay	68 (11)	16 (64)	25 (100)	0
Mattioli et al 2020	Italy	Retrospective cohort	105	Consecutive patients with laboratory-confirmed COVID-19	Discharged, dead, or transferred to ICU within 48 hours of admission	Thrombosis	Enoxaparin 89 mg/d in normal weight and adequate renal function, 40 mg/d in severe renal failure or low body weight and 100 mg/d for obese	Not done	74 ± 14.6	61 (58)	NR	NR
Mei et al 2020	China	Retrospective cohort	256	Consecutive patients admitted for COVID-19 to ICU	NR	Not specified	Standard protocol of LMWH and UFH	Not done	55.5 (0.5–87)	131 (51.2)	45	0

Supplementary Table S2 (*Continued*)

References	Country	Study design	Total (*N*)	Inclusion	Exclusion	Primary outcome	Anticoagulant regimens	Screening for asymptomatic DVT	Baseline characteristics			
									Age, mean or median (SD or IQR)	Male, *N* (%)	ICU admission, *N* (%)	History of VTE, *N* (%)
Middeldorp et al 2020	Netherlands	Retrospective cohort	198	Consecutive patients admitted for COVID-19	Patients who were diagnosed with COVID-19 during hospital stay for other medical reasons	Distal or proximal DVT, PE, or venous thrombosis at other sites including catheter-related thrombosis	Ward (prophylaxis): nadroparin 2,850 IU OD or 5,700 IU for ≥100 kg ICU (therapeutic): nadroparin 2,850 IU BID or 5,700 IU for ≥100 kg	Screening for lower extremity DVT in 55 patients (28%): ICU 38, ward 17	61 (14)	130 (66)	75 (38)	11 (5.6)
Moll et al 2020	United States	Retrospective cohort	210	Consecutive patients admitted for COVID-19	Readmissions	Symptomatic VTE	Enoxaparin 40 mg OD, or UFH 5,000 IU SC BID or TID	Not done	62.2 (16.2)	101 (48.1)	102	9 (4.3)
Nadkarni et al 2020	United States	Retrospective cohort	4,389	Consecutive adult patients with laboratory-confirmed COVID-19	NR	Bleeding	Prophylaxis and Therapeutic	Not done	65 (53–777)	2,957 (66)	NR	NR
Nahum et al 2020	France	Prospective Cohort	34	Consecutive patients admitted for COVID-19 to ICU with severe COVID/ARDS	NR	Distal or proximal DVT diagnosed by imaging	Not specified	Screening for asymptomatic VTE by ultrasound	62.2 (8.6)	25 (78)	34 (100)	NR
Paolisso et al 2020	Italy	Retrospective cohort	361	Consecutive patients with laboratory-confirmed COVID-19	NR	Mortality	Enoxaparin 40–60 mg/d, enoxaparin 40–60 twice daily	Not done	67 (55–78)	283 (63)	70 (15.6)	NR
Pesavento et al 2020	Italy	Retrospective cohort	324	Consecutive patients admitted for COVID-19	ICU care	Bleeding (secondary outcomes: symptomatic VTE)	Prophylactic: UFH up to 15,000 U, enoxaparin up to 4,000 U, and fondaparinux up to 2.5 mg. Intermediate: higher daily doses, usually adjusted to body weight or laboratory parameters	Not done	71 (59–82)	181 (55.9%)	NR	NR
Pizzolo et al 2020	Italy	Cross-sectional	43	Consecutive patients	NR	DVT rate	Enoxaparin 4,000–6,000 U/d or heparin 5,000 U 2–3/d	Ultrasound	66 (28–96)	29 (77)	10 (23.3%)	NR
Ren et al 2020	China	Cross-sectional	48	Consecutive patients admitted for COVID-19 to ICU	Prior DVT or recent surgery	Distal or proximal DVT diagnosed by imaging	30–40 mg of LMWH daily	Screening for asymptomatic VTE by ultrasound	70 (62–80)	26 (54.2)	48 (100)	0
Santoliquido et al 2020	Italy	Cross-sectional	84	Non-ICU consecutive patients hospitalized for COVID-19	Younger than 18, hospitalized in the ICU, and those receiving prior anticoagulation therapy	Determine the incidence of VTE	Pharmacological prophylaxis: enoxaparin 40 mg OD or fondaparinux 2.5 mg OD	A screening for DVT was performed in all patients	67.6 (13.5)	61 (72.6)	0 (0)	3 (3.6)
Tavazzi et al	Italy	Retrospective cohort	54	Consecutive patients admitted for COVID-19 to the ICU	Patients not admitted to the ICU	Incidence of VTE	LMWH adjusted on body weight in all patients	All patients were screened for VTEs	68 (7)	(83)	54 (100)	NR
Thomas et al 2020	England	Retrospective cohort	63	Consecutive patients admitted for COVID-19 with confirmed thrombosis	NR	Incidence of VTE	Weight-based dalteparin	Not done	NR	44 (69)	63 (100)	1 (2)
Trimaille et al 2020	France	Retrospective cohort	289	Consecutive patients admitted for COVID-19	Patients who did not display CT features of COVID-19 pneumonia	Confirmed diagnosis of VTE	Prophylaxis: enoxaparin 40 mg OD, fondaparinux 2.5 mg OD, or UFH at 200 IU per hour Reinforced prophylaxis: enoxaparin 40 mg BID	Not done	62.2 (17)	171	72 (25)	PE: 9 (3.1) DVT: 19 (6.6)
Zhang et al 2020	China	Retrospective case-control	143	Consecutive patients admitted for COVID-19	Patients not admitted to the hospital wards in which they actively screened for DVT	Confirmed diagnosis of VTE	Prophylaxis: LMWH (dosage not specified)	All patients were screened for DVT using lower extremity venous ultrasound scanning	63 (14)	74 (51.7)	NR	1 (0.7)

Abbreviations: BID, twice daily; DVT, deep vein thrombosis; ICU, intensive care unit; LMWH, low-molecular-weight heparin; NR, not reported; OD, once daily; PE, pulmonary embolism; SC, subcutaneous; US, ultrasonography; VTE, venous thromboembolism.

Supplementary Table S3 Quality assessment of included studies

References	1. A clearly stated aim	2. Inclusion of consecutive patients	3. Prospective collection of data	4. Endpoints appropriate to the aim of the study	5. Unbiased assessment of the study endpoint	6. Follow-up period appropriate to the aim of the study	7. Loss to follow-up less than 5%	8. Prospective calculation of the study size	9. An adequate control group	10. Contemporary groups	11. Baseline equivalence of groups	12. Adequate statistical analyses	Total score	Risk of bias
Al-Samkari et al 2020	2	2	1	2	2	2	2	0	N/A	N/A	N/A	N/A	13	Low
Aleva et al 2020	2	2	1	2	0	2	2	0	N/A	N/A	N/A	N/A	11	Moderate
Alonso-Fernández et al 2020	2	2	2	2	1	2	2	0	N/A	N/A	N/A	N/A	13	Low
Artifoni et al 2020	2	2	1	2	1	2	2	0	N/A	N/A	N/A	N/A	12	Moderate
Bompard et al 2020	2	2	1	2	1	2	2	0	N/A	N/A	N/A	N/A	12	Moderate
Chen et al 2020	2	2	1	2	2	2	2	0	N/A	N/A	N/A	N/A	13	Low
Cho et al 2020	2	2	1	2	1	2	2	0	N/A	N/A	N/A	N/A	12	Moderate
Criel et al 2020	2	2	1	1	2	2	2	0	N/A	N/A	N/A	N/A	12	Moderate
Cui et al 2020	2	2	1	2	1	2	2	0	N/A	N/A	N/A	N/A	12	Moderate
Demelo-Rodríguez et al 2020	2	2	2	2	1	2	2	0	N/A	N/A	N/A	N/A	13	Low
Dugar et al 2020	2	2	1	2	1	1	2	0	N/A	N/A	N/A	N/A	11	Moderate
Fauvel et al 2020	2	2	1	2	2	2	2	0	N/A	N/A	N/A	N/A	13	Low
Grandmaison et al 2020	2	2	1	2	1	2	2	0	N/A	N/A	N/A	N/A	12	Moderate
Hanif et al 2020	2	2	1	2	1	1	2	0	N/A	N/A	N/A	N/A	11	Moderate
Klok et al 2020	2	2	1	2	0	2	2	0	N/A	N/A	N/A	N/A	11	Moderate
Koleilat et al 2020	2	1	0	2	0	2	2	0	N/A	N/A	N/A	N/A	9	Moderate
Le Jeune et al 2020	2	2	2	2	0	2	2	0	N/A	N/A	N/A	N/A	12	Moderate
Llitjos et al 2020	2	2	2	2	1	2	2	0	N/A	N/A	N/A	N/A	13	Low
Lodigiani et al 2020	2	2	1	2	0	2	2	0	N/A	N/A	N/A	N/A	11	Moderate
Longchamp et al 2020	2	2	2	2	0	2	2	0	N/A	N/A	N/A	N/A	12	Moderate
Mattioli et al 2020	2	2	0	2	1	2	2	0	N/A	N/A	N/A	N/A	11	Moderate
Mei et al 2020	2	2	1	1	0	2	2	0	N/A	N/A	N/A	N/A	10	Moderate
Middeldorp et al 2020	2	2	1	2	2	2	2	0	N/A	N/A	N/A	N/A	13	Low
Moll et al 2020	2	2	1	2	2	2	2	0	N/A	N/A	N/A	N/A	13	Low
Nadkarni et al 2020	2	2	0	2	0	2	2	0	N/A	N/A	N/A	N/A	10	Moderate
Nahum et al 2020	2	2	2	2	1	2	2	0	N/A	N/A	N/A	N/A	13	Low
Paolisso et al 2020	2	2	0	2	1	2	2	0	N/A	N/A	N/A	N/A	11	Moderate
Pesavento et al 2020	2	2	1	2	2	2	2	0	N/A	N/A	N/A	N/A	13	Low
Pizzolo et al 2020	2	1	2	1	1	2	2	0	N/A	N/A	N/A	N/A	11	Moderate
Ren et al 2020	2	1	2	2	2	2	2	0	N/A	N/A	N/A	N/A	13	Low
Santoliquido et al 2020	2	2	1	2	0	2	2	0	N/A	N/A	N/A	N/A	11	Moderate
Tavazzi et al 2020	2	2	1	2	0	2	2	0	N/A	N/A	N/A	N/A	11	Moderate
Thomas et al 2020	2	2	1	2	0	2	2	0	N/A	N/A	N/A	N/A	11	Moderate
Trimaille et al 2020	2	2	0	2	0	2	2	0	N/A	N/A	N/A	N/A	10	Moderate
Zhang et al 2020	2	2	1	2	0	2	2	0	N/A	N/A	N/A	N/A	11	Moderate

Supplementary Table S4 Sensitivity analysis performed on selected studies including critical care populations, studies that included systematic screening, studies with lower risk of bias, and studies that included only objectively confirmed thrombotic events on imaging

Outcomes		No prophylaxis	Standard-dose prophylaxis	Intermediate-dose prophylaxis	Therapeutic anticoagulants	Overall *p*-value[a]
ICU population						
Total VTE[b]	No. of participants (No. of studies)	83 (2)	679 (13)	129 (3)	93 (4)	
	Pooled incidence, % (95%CI)	45.5 (6.2–91.3)	38.6 (25.9–53.0)	36.0 (17.9–59.1)	30.7 (14.5–53.7)	0.93
	I^2, %	67	89	79	58	
Studies requiring systematic screening						
Total VTE	No. of participants (No. of studies)	16 (2)	828 (14)	40 (2)	20 (2)	
	Pooled incidence, % (95%CI)	50.9 (12.9–87.8)	34.8 (23.0–48.9)	12.6 (5.3–26.9)	47.5 (18.7–78.1)	0.05
	I^2, %	44	90	0	22	
Studies with low risk of bias by MINORS score						
Total VTE	No. of participants (No. of studies)	4 (1)	1,984 (11)	174 (2)	123 (3)	
	Pooled incidence, % (95%CI)	7.5 (23.8–96.6)	21.4 (8.1–45.6)	18.2 (1.4–77.5)	12.3 (1.0–65.1)	0.24
	I^2, %	0	97	96	92	
Studies with objectively confirmed VTE						
Total VTE	No. of participants (No. of studies)	275 (7)	3,299 (27)	353 (7)	214 (7)	
	Pooled incidence, % (95%CI)	41.9 (28.1–57.2)	20.7 (13.7–30.0)	15.4 (5.8–34.9)	10.0 (2.9–29.2)	0.01
	I^2, %	76	95	90	80	

Abbreviations: CI, confidence intervals; VTE, venous thromboembolism.

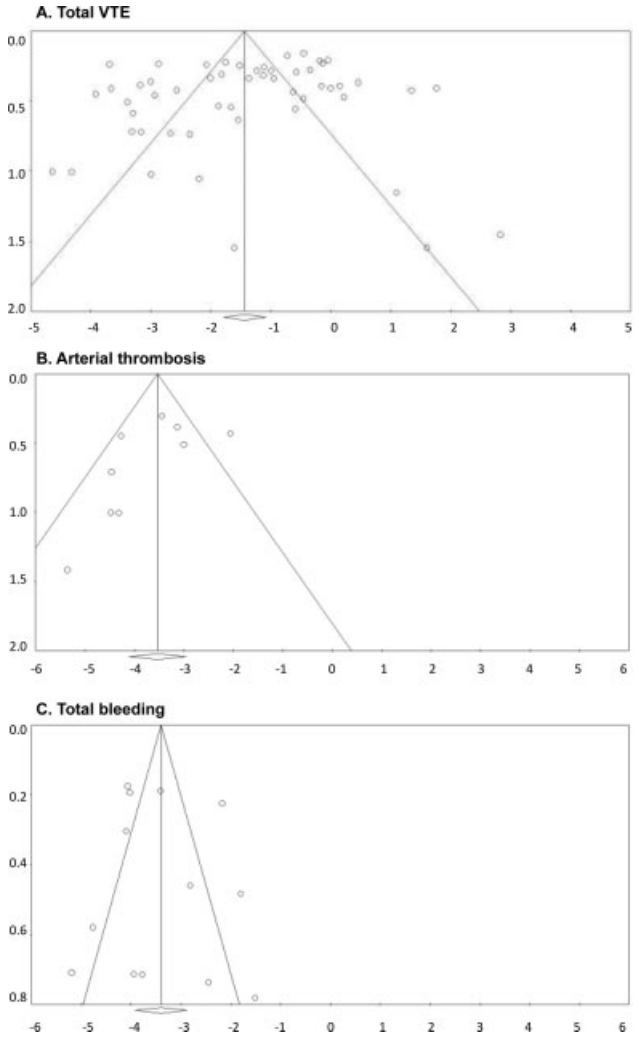
[a] *p*-Values were derived from the Q-test for heterogeneity among the four pharmacologic thromboprophylaxis strategy groups. A *p*-value of <0.05 was considered significant for between-group heterogeneity.

[b] Total VTE included symptomatic or asymptomatic VTE (lower and upper extremity DVT, PE, and catheter-associated thrombosis).

Supplementary Table S5 Sensitivity analysis according to geographic location

Outcomes		No prophylaxis	Standard-dose prophylaxis	Intermediate-dose prophylaxis	Therapeutic anticoagulants	Overall *p*-value[a1]
Europe						
Total VTE[b2]	No. of participants (No. of studies)	90 (4)	2,290 (18)	458 (8)	317 (7)	
	Pooled incidence, % (95%CI)	53.6 (24.5–80.5)	17.7 (10.9–27.3)	11.9 (4.3–28.6)	11.7 (4.0–29.5)	0.045
	I^2, %	78	93	90	85	
Bleeding[c]	No. of participants (No. of studies)	–	361 (1)	194 (2)	–	
	Pooled incidence, % (95%CI)	–	0.6 (0.1–2.2)	2.1 (0.8–5.4)	–	0.13
	I^2, %	–	0	0	–	
North America						
Total VTE	No. of participants (No. of studies)	14 (1)	771 (5)	–	44 (2)	
	Pooled incidence, % (95%CI)	35.7 (15.7–62.4)	14.3 (5.4–32.8)	–	7.1 (2.3–19.8)	0.049
	I^2, %	0	95	–	0	
Bleeding	No. of participants (No. of studies)	936 (3)	1,026 (2)	–	249 (2)	
	Pooled incidence, % (95%CI)	6.7 (2.2–19.0)	1.4 (0.8–2.4)	–	10.9 (7.6–15.4)	<0.001
	I^2, %	71	3	–	0	
China						
Total VTE	No. of participants (No. of studies)	171 (2)	445 (4)	–	–	
	Pooled incidence, % (95%CI)	36.1 (16.5–61.8)	34.3 (8.7–74.0)	–	–	0.94
	I^2, %	90	97	–	–	
Bleeding	No. of participants (No. of studies)	–	88 (1)	–	–	
	Pooled incidence, % (95%CI)	–	5.7 (2.4–12.9)	–	–	–
	I^2, %	–	0	–	–	

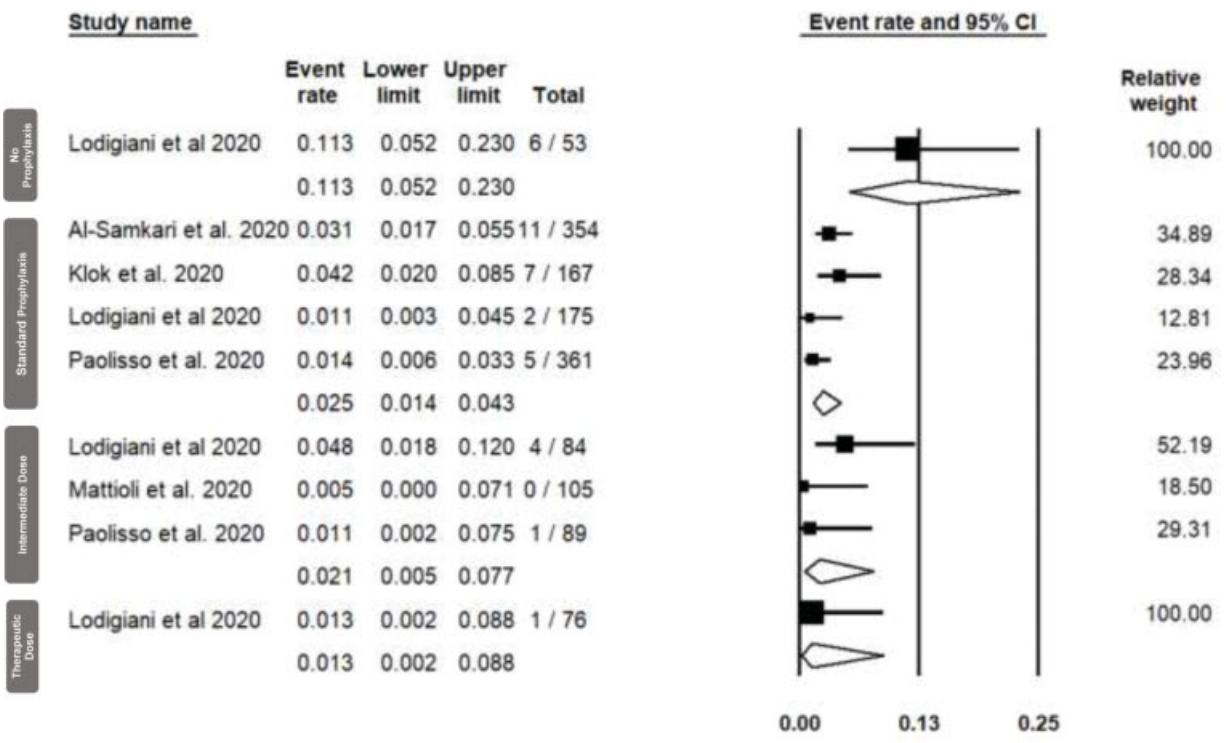
Abbreviations: CI, confidence intervals; VTE, venous thromboembolism.
[c]Bleeding events were extracted as defined by individual studies.



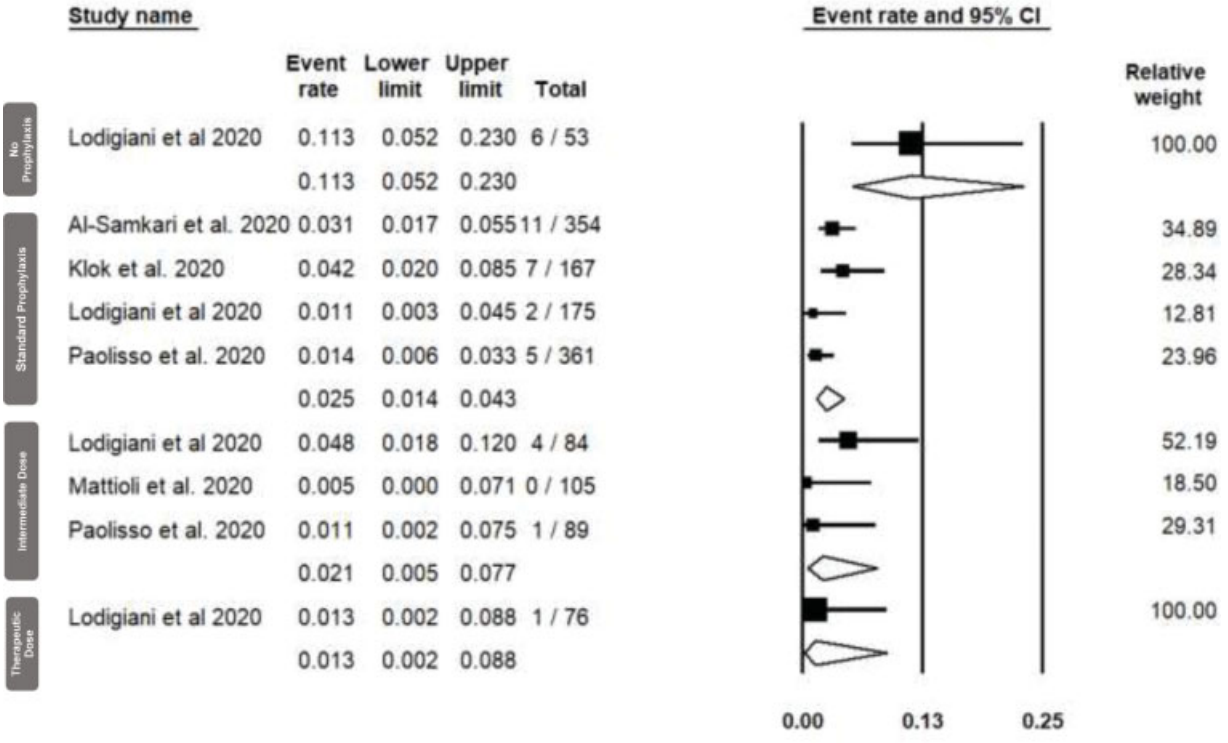
Supplementary Fig. S1 Funnel plots for assessment of publication bias. The standard error is plotted on the vertical axis as a function of logit event rate on the horizontal axis.

[a] *p*-Values were derived from the Q-test for heterogeneity among the four pharmacologic thromboprophylaxis strategy groups. A *p*-value of <0.05 was considered significant for between-group heterogeneity.

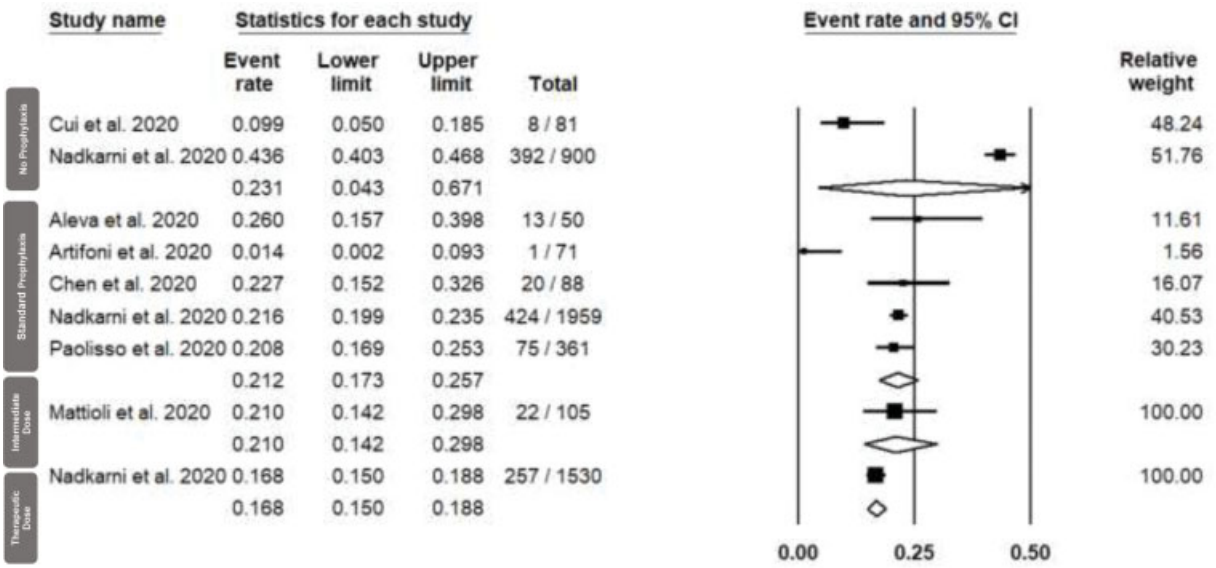
[b] Total VTE included symptomatic or asymptomatic VTE (lower and upper extremity DVT, PE, and catheter-associated thrombosis).



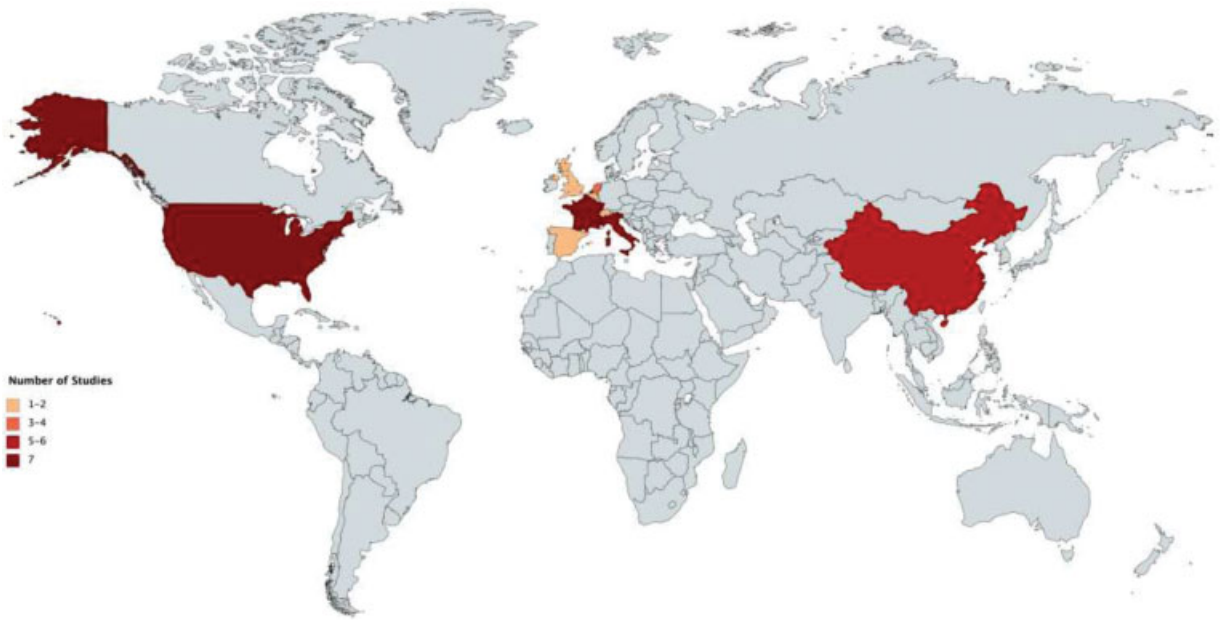
Supplementary Fig. S2 Forest plots showing pooled of total arterial thrombosis in each pharmacologic thromboprophylaxis strategy. Arterial thrombosis included acute coronary syndrome and cerebrovascular accidents.



Supplementary Fig. S3 Forest plots showing pooled incidence of total bleeding in each pharmacologic thromboprophylaxis strategy. Bleeding events were extracted as defined by individual studies.



Supplementary Fig. S4 Forest plots showing pooled incidence of overall mortality in each pharmacologic thromboprophylaxis strategy.



Supplementary Fig. S5 Geographical distribution of included studies.