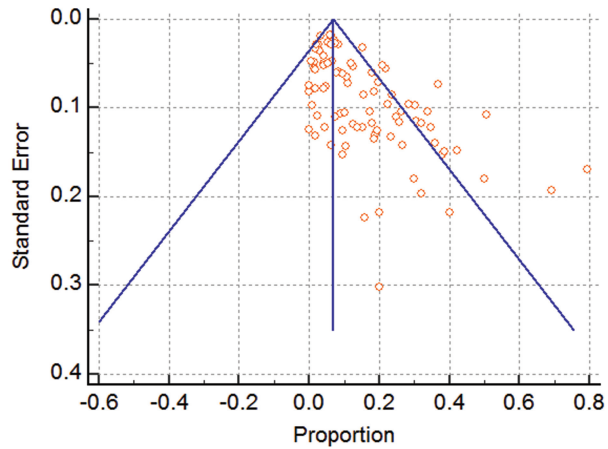
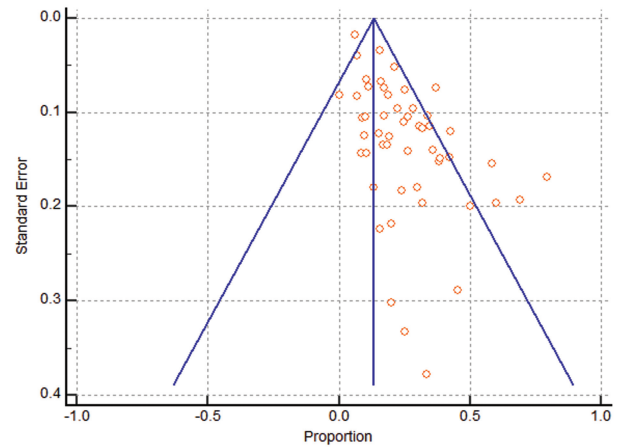


Search Strategy

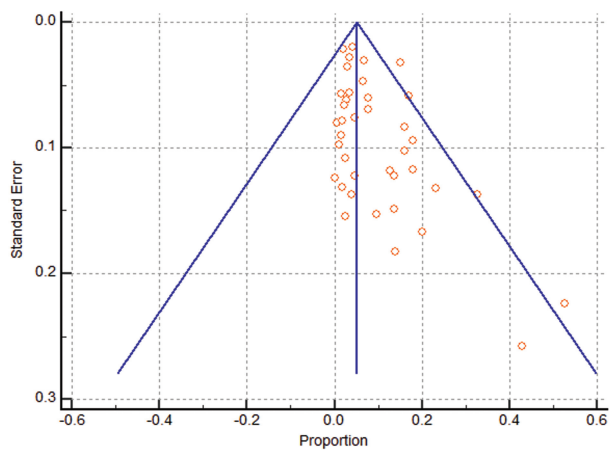
- 1-Covid or (coronavirus)
- 2-Coagulopathy OR (disseminated intravascular coagulation) OR hemostasis
- 3-Thrombosis OR (deep vein thrombosis) OR (pulmonary embolism) OR (venous thromboembolism)
- 4-#1 AND (#2 OR #3)
- 5-1/1/2020 to 13/11/2020
- 6-#4 AND #5



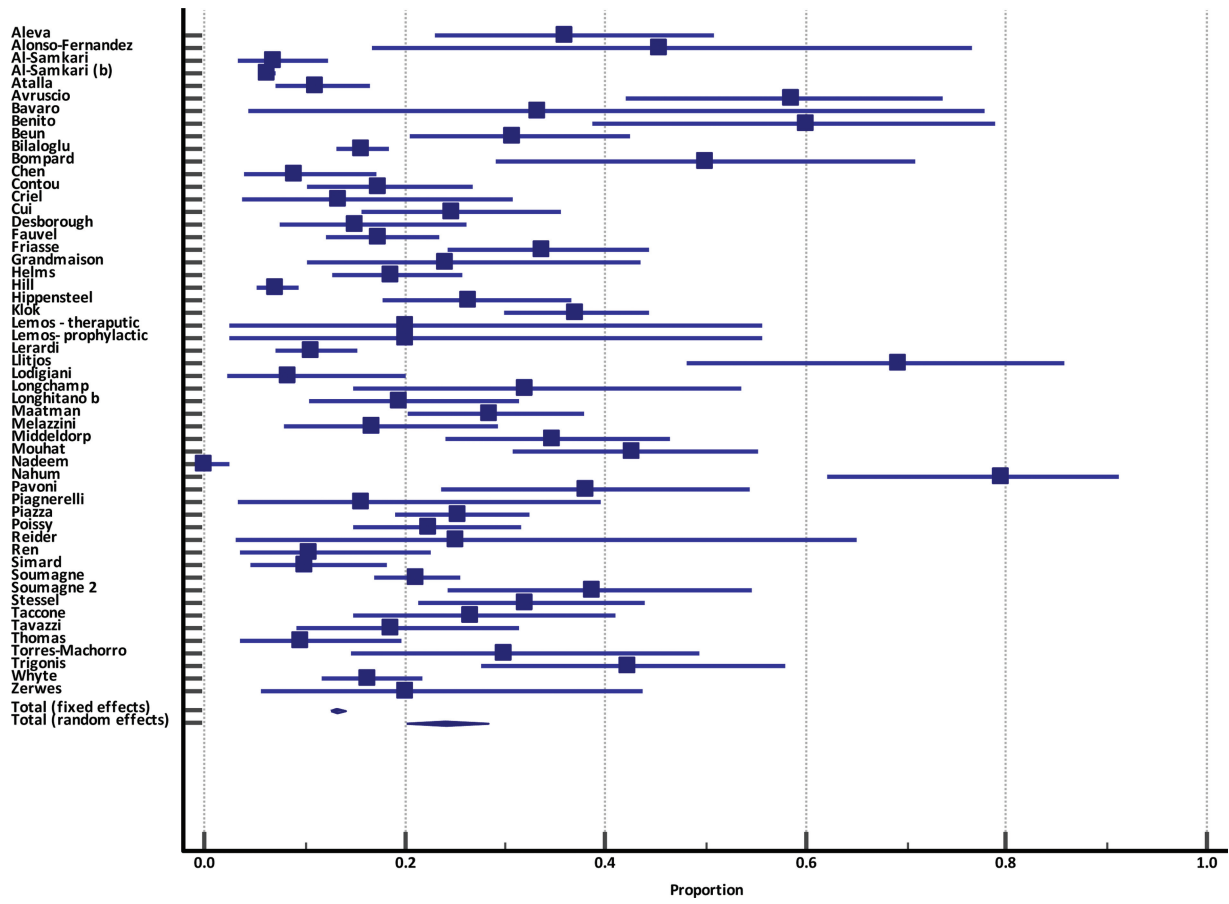
Supplementary Figure S1 Funnel Plot for all patients



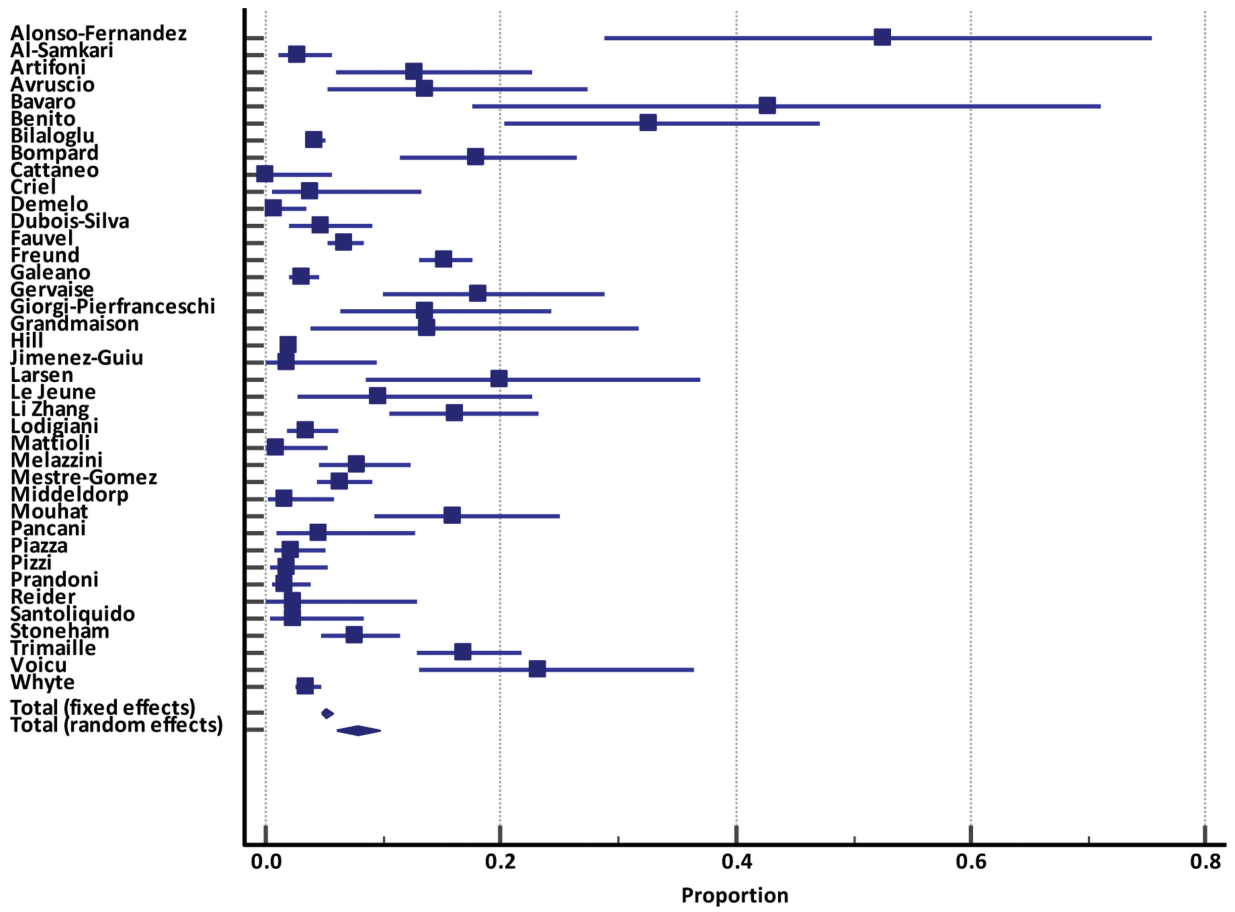
Supplementary Figure S2 Funnel Plot for ICU patients



Supplementary Figure S3 Funnel Plot for non-ICU patients



Supplementary Figure S4 Forest Plot showing proption of ICU patients with VTE. I^2 value of 93.80%, CI (92.60 to 94.81)



Supplementary Figure S5 Forest Plot showing proportion of non-ICU patients with VTE. I^2 value of 92.46%, CI (90.61 to 93.95)

Supplementary Table S1 Study design and setting

Author	Country	Sample Size	Study design	Health care settings	VTE screening	Prophylaxis regimen	VTE (%)	PE (%)	DVT (%)
Al-Samkari ¹	USA	400	Retrospective cohort study	Hospitalized	No	90% on prophylactic anticoagulation	4.3	2.5	2.5
Artifoni ²	France	71	Retrospective cohort study	Non-ICU, with ultrasound	Yes	99% on prophylactic anticoagulation	12.7	9.9	2.8
Beun ³	Netherlands	75	Prospective Cohort study	ICU	No	NR	30.7	26.7	4
Bilaloglu ⁴	USA	3334	Retrospective cohort study	Hospitalized	No	Most patients on prophylactic anticoagulation	6.1	3.2	3.9
Bompard ⁵	France	135	Retrospective cohort study	Hospitalized, with CTPA	No	Prophylactic dose in non-ICU patients and intermediate dose in ICU patients	23.7	23.7	0
Chen ⁶	China	88	Retrospective cohort study	ICU, with U/S	yes	Prophylactic anticoagulation	9.1	0	9.1
Cui ⁷	China	81	Retrospective cohort study	ICU	No	No anticoagulation	24.7	0	24.7
Demelo-Rodriguez ⁸	Spain	156	Prospective cohort study	Non-ICU, D-Dimer >1000	Yes	100% on prophylactic anticoagulation	0.6	0	0.6
Desborough ⁹	UK	66	Retrospective cohort study	ICU	No	100% on prophylactic anticoagulation	15.2	7.6	9.1
Dubois-Silva ¹⁰	Spain	171	Cross-sectional observation study	Non-ICU	No	100% on prophylactic anticoagulation	4.7	4.7	0
Fauvel ¹¹	France	1240	Retrospective cohort study	Hospitalized, with CTPA	Yes	63% on prophylactic dose and 8.4% on intermediate dose	8.3	8.3	1.5
Freund ¹²	6 countries	974	Retrospective cohort study	ER patients who had CTPA	Yes	No anticoagulation	15.2	15.2	0
Fraissé ¹³	France	92	Retrospective cohort study	ICU	No	47% on prophylactic dose and 53% on full dose	33.7	27.2	13
Gervaise ¹⁴	France	72	Retrospective cohort study	ER, with CTPA	Yes	No anticoagulation	18.0	18.1	0
Helms ¹⁵	France	150	Prospective cohort study	ICU	No	Prophylactic dose	18.7	16.7	2
Hippensteel ¹⁶	USA	91	Retrospective cohort study	ICU	NR	NR	26.4	5.5	20.9
Klok ¹⁷	Netherlands	184	Prospective cohort study	ICU	No	Prophylactic dose	36.9	35.3	1.6
Koleilat ¹⁸	USA	135	Retrospective case control study	Hospitalized	No	Multiple doses administered	15.6	2.2	13.3
Larsen ¹⁹	France	35	Prospective cohort study	Hospitalized returned travelers	yes	NR	4.2	3.0	1.2
Litjos ²⁰	Italy	26	Retrospective cohort study	ICU	Yes	31% had prophylactic anticoagulation and 69% had full dose	69.2	23.1	69.2
Lodigiani ²¹	Italy	362	Retrospective cohort study	Hospitalized	No	Multiple doses administered	4.1	2.8	1.4
Longchamp ²²	Switzerland	25	Retrospective cohort study	ICU	Yes	Prophylactic anticoagulation	32	20	24
Mestre-Gomez ²³	Spain	452	Retrospective cohort study	Non-ICU	No	Prophylactic anticoagulation	6.4	6.4	0
Monfardini ²⁴	Italy	1207	Case series	Hospitalized	No	Prophylactic anticoagulation	2.2	2.2	0.3

(Continued)

Supplementary Table S1 (Continued)

Author	Country	Sample Size	Study design	Health care settings	VTE screening	Prophylaxis regimen	VTE (%)	PE (%)	DVT (%)
Nahum ²⁵	France	34	Case series	ICU	Yes	Prophylactic anticoagulation	79.4	0	79.4
Patell ²⁶	USA	398	Retrospective cohort study	Hospitalized	NR	Multiple doses administered	5.3	1.8	3.5
Poissy ²⁷	France	107	Cross sectional	ICU	No	Prophylactic anticoagulation	22.4	20.7	4.7
Poyiadji ²⁸	USA	328	Retrospective cohort study	328 Hospitalized, with CTPA	Yes	NR	21.9	21.9	0
Rieder ²⁹	Germany	49	Prospective Cohort study	Hospitalized	No	NR	6.1	4.1	2.0
Ren ³⁰	China	48	Cross-sectional study	ICU	Yes	Prophylactic anticoagulation	10.4	0	10.4
Santoliquido ³¹	Italy	84	Prospective Cohort study	Non-ICU	yes	Prophylactic anticoagulation	2.4	0	2.4
Soumagne ³²	France and Belgium	375	post hoc analysis of COVADIS	ICU	No	NR	21.1	14.7	9.3
Stoneham ³³	UK	274	Retrospective cohort study	Non-ICU	No	NR	7.7	5.8	1.8
Trigoni ³⁴	USA	45	Retrospective cohort study	ICU, with U/S	Yes	Prophylactic anticoagulation	42.2	0	42.2
Trimaille ³⁵	France	273	Retrospective cohort study	Non-ICU	No	Prophylactic anticoagulation	17.9	15.4	4.4
Voicu ³⁶	France	56	Prospective cohort study	ICU	Yes	Prophylactic anticoagulation	23.2	0	23.2
Whyte ³⁷	UK	1477	Retrospective cohort study	Hospitalized	No	Prophylactic anticoagulation	5.4	5.4	0
Zerwes ³⁸	Germany	20	Prospective cohort study	ICU	Yes	Prophylactic anticoagulation	20	0	20
Li Zhang ³⁹	China	66	Cross sectional study	Non-ICU, with U/S	No	NR	34.8	0	34.8
Maatman ⁴⁰	USA	109	Case series	ICU	No	Prophylactic anticoagulation	28.4	4.6	27.5
Thomas ⁴¹	UK	63	Retrospective cohort study	ICU	No	Prophylactic anticoagulation	9.5	7.9	1.6
Grillet ⁴²	France	280	Retrospective cohort study	Hospitalized	No	NR	8.2	8.2	0
Alharthy ⁴³	Saudi Arabia	89	Prospective cohort study	ICU	Yes	NR	0	24.7	16.9
Hanif ⁴⁴	USA	921	Retrospective cohort study	Hospitalized	No	Multiple doses administered	1.7	0	0
Le Jeune ⁴⁵	France	42	Retrospective cohort study	Non-ICU	Yes	Multiple doses administered (60% on prophylactic dose, 23% on intermediate and 17% on full dose)	9.5	9.5	2.4
Leonard-Iorant ⁴⁶	France	106	Retrospective cohort study	Hospitalized, with CTPA	Yes	NR	30.2	30.2	0
Aleva ⁴⁷	Netherlands	50	Case series	ICU	No	Prophylactic anticoagulation	36	26	14
Ierardi ⁴⁸	Italy	234	Prospective cohort study	Hospitalized	Yes	Prophylactic anticoagulation	10.7	0	10.7
Bavaro ⁴⁹	Italy	20	Case series	Hospitalized, with CTPA	Yes	Prophylactic anticoagulation	40	40	0
Crie ⁵⁰	Belgium	82	Prospective cohort study	Hospitalized	Yes	Prophylactic anticoagulation	7.3	0	7.3
Mattoli ⁵¹	Italy	105	Retrospective cohort study	Non-ICU	No	Intermediate dose anticoagulation	0.95	0.9	0
Middledrop ⁵²	Netherlands	198	Retrospective cohort study	Hospitalized	No	Non-ICU on prophylactic dose and ICU patients on intermediate dose	19.7	6.6	13.1
Piagnerelli ⁵³	Belgium	19	Prospective cohort study	ICU	NR	Intermediate dose anticoagulation	15.8	0	0

Supplementary Table S1 (Continued)

Author	Country	Sample Size	Study design	Health care settings	VTE screening	Prophylaxis regimen	VTE (%)	PE (%)	DVT (%)
Stessel ⁵⁴	Belgium	72	Before and after study	ICU	Yes	Before: prophylactic dose, After: full dose anticoagulation	31.9	0	31.9
Taccone ⁵⁵	Belgium	49	Retrospective analysis of prospective data	ICU	No	Multiple doses administered (45% on prophylactic dose and 37% on intermediate dose)	26.5	26.5	0
Tavazzi ⁵⁶	Italy	54	Prospective cohort study	ICU	NR	Prophylactic anticoagulation	18.5	3.7	14.8
Bi ⁵⁷	China	420	Prospective cohort study	Hospitalized	NR	NR	1.4	0	1.4
Cattaneo ⁵⁸	Italy	64	Prospective cohort study	Non-ICU	Yes	Prophylactic anticoagulation	0	0	0
Galeano-Valle ⁵⁹	Spain	785	Prospective cohort study	Non-ICU	No	Prophylactic anticoagulation	3.1	1.9	1.7
Grandmaison ⁶⁰	Switzerland	58	Cross sectional study	Hospitalized	Yes	Prophylactic anticoagulation	18.9	6.9	12.1
Giorgi-Pierfranceschi ⁶¹	Italy	66	Cross sectional study	Non-ICU with U/S	Yes	Prophylactic anticoagulation	13.6	0	13.6
Contou ⁶²	France	92	Retrospective cohort study	ICU	No	Prophylactic anticoagulation	17.4	17.4	0
Alonso-Fernández ⁶³	Spain	30	Prospective cohort study	Hospitalized, with high D-Dimer and CTPA	Yes	Prophylactic anticoagulation	50	50	0
Benito ⁶⁴	Spain	1275	Prospective cohort study	Hospitalized	Yes	Prophylactic anticoagulation	2.5	2.5	0
Atalla ⁶⁵	UAE	188	Retrospective cohort study	ICU, U/S if D-Dimer high	Yes	Multiple doses administered	11.2	4.8	6.4
Avuscio ⁶⁶	Italy	85	Prospective cohort study	Hospitalized	Yes	Multiple doses administered based on ROTEM	50.6	4.7	30.6
CHOI ⁶⁷	USA	1739	Retrospective cohort study	Hospitalized	No	Multiple doses administer (changed after April to intermediate dose)	7.1	2.4	5.5
Hill ⁶⁸	USA	2748	Retrospective cohort study	Hospitalized	No	Prophylactic anticoagulation in patient with high Padua score	3.1	1.3	1.5
Jimenez-Guiu ⁶⁹	Spain	57	Prospective cohort study	Non-ICU	Yes	Multiple doses administered	1.8	0	1.8
Lemos ⁷⁰	Brazil	20	Randomized controlled trial	ICU	No	One prophylactic arm and one full dose arm	20	5	15
Longhitano ⁷¹	Italy	62	Retrospective cohort study	ICU	NR	Intermediate dose anticoagulation	19.4	17.7	1.6
Longhitano ⁷²	Italy	74	Prospective cohort study	Non-ICU	Yes	Multiple doses administered	25.7	12.2	13.5
Melazzini ⁷³	Italy	259	Retrospective cohort study	Hospitalized	No	92% on prophylactic anticoagulation	9.7	1.5	8.1
Mouhat ⁷⁴	France	349	Retrospective cohort study	Hospitalized	No	Multiple doses administered	12.6	12.6	0
Nadeem ⁷⁵	UAE	149	Retrospective cohort study	ICU	No	Multiple doses administered in the same patient	0	0	0
Pancani ⁷⁶	Italy	66	Prospective cohort study	Non-ICU	Yes	Prophylactic anticoagulation	4.5	1.5	3.0
Pavoni ⁷⁷	Italy	42	Retrospective cohort study	ICU	Yes	Multiple doses administered (intermediate dose if D-Dimer < 3000 and full dose if D-Dimer > 3000)	38.1	7.1	30.9

(Continued)

Supplementary Table S1 (Continued)

Author	Country	Sample Size	Study design	Health care settings	VTE screening	Prophylaxis regimen	VTE (%)	PE (%)	DVT (%)
Piazza ⁷⁸	USA	399	Retrospective cohort study	Hospitalized	No	Prophylactic anticoagulation	12.0	2.0	10.0
Pizzi ⁷⁹	Italy	162	Retrospective cohort study	Non-ICU	Yes	No anticoagulation, screening done on admission	1.9	0	1.9
Prandoni ⁸⁰	Italy	308	Retrospective cohort study	Non-ICU	No	Prophylactic anticoagulation	1.6	0.6	0.9
Soumagne ²⁸¹	France	44	Retrospective cohort study	ICU, with CTPA	Yes	Multiple doses administered	38.6	38.5	0
Torres-Machorro ⁸²	Mexico	30	Prospective cohort study	ICU	Yes	Multiple doses administered based on Padua score (intermediate and prophylactic)	30	0	30
Al-samkari ²⁸³	USA	3239	Retrospective cohort study	ICU with D-Dimer	NR	Multiple doses administered	6.3	0	0
berg ⁸⁴	USA	2180	Retrospective cohort study	Hospitalized	NR	Multiple doses administered	6.1	0	0
Marquez ⁸⁵	Mexico	447	Prospective cohort study	Hospitalized	No	Multiple doses administered	0.7	0.4	0.2
Tan ⁸⁶	Singapore	181	Retrospective cohort study	Hospitalized	NR	NR	0	0	0
Warrior ⁸⁷	USA	1265	Prospective cohort study	Hospitalized	NR	Multiple doses administered	6.2	4.8	5.6
Theprungsirikul ⁸⁸	USA	1352	Retrospective cohort study	Hospitalized	NR	NR	7.5	3.3	5.1
Camille ⁸⁹	Canada	90	Retrospective cohort study	ICU	NR	Multiple doses administered	10	10	3.3
Kodama ⁹⁰	USA	580	Retrospective cohort study	Hospitalized	NR	Multiple doses administered	4.1	0.7	3.4
Jiménez-Soto ⁹¹	Mexico	322	Cross sectional study	hospitalized	NR	Multiple doses administered	1.6	1.6	0

Abbreviations: CTPA, computed tomography pulmonary angiogram; DVT = Deep venous thrombosis; ICU, intensive care unit; NR, Not reported; PE, pulmonary embolism; U/S, ultrasonography; UAE, United Arab Emirates; USA, United States of America; VTE, venous thromboembolism.

Supplementary Table S2 Quality of identified studies

Author	Study design	Health care settings	Selection	Compatibility	Outcome
Al-Samkari ¹	Retrospective cohort study	Hospitalized	****	*	**
Artifoni ²	Retrospective cohort study	Non-ICU, with ultrasound	***	**	*
Beun ³	Prospective Cohort study	ICU	****	*	*
Bilaloglu ⁴	Retrospective cohort study	Hospitalized	****	**	**
Bompard ⁵	Retrospective cohort study	Hospitalized, with CTPA	***	*	**
Chen ⁶	Retrospective cohort study	ICU	***	**	*
Cui ⁷	Retrospective cohort study	ICU	****	**	**
Demeio-Rodriguez ⁸	Prospective cohort study	Non-ICU, D-Dimer > 1000	***	*	**
Desborough ⁹	Retrospective cohort study	ICU	****	**	**
Dubois-Silva ¹⁰	Cross-sectional observation study	Non-ICU	****	**	*
Fauvel ¹¹	Retrospective cohort study	Hospitalized, with CTPA	***	*	**
Freund ¹²	Retrospective cohort study	ER patients who had CTPA	**	*	**
Fraissé ¹³	Retrospective cohort study	ICU	****	**	**
Gervaise ¹⁴	Retrospective cohort study	ER, with CTPA	**	*	**
Helms ¹⁵	Prospective cohort study	ICU	****	**	**
Hippensteel ¹⁶	Retrospective cohort study	ICU	****	**	**
Klok ¹⁷	Prospective cohort study	ICU	****	**	**
Koleilat ¹⁸	Retrospective case control study	Hospitalized	****	**	**
Larsen ¹⁹	Prospective cohort study	Hospitalized returned travelers	**	*	**
Llitos ²⁰	Retrospective cohort study	ICU	****	**	**
Lodigiani ²¹	Retrospective cohort study	Hospitalized	****	**	**
Longchamp ²²	Retrospective cohort study	ICU	****	**	**
Mestre-Gomez ²³	Retrospective cohort study	Non-ICU	****	**	**
Monfardini ²⁴	Case series	Hospitalized	****	**	*
Nahum ²⁵	Case series	ICU	***	*	**
Patell ²⁶	Retrospective cohort study	Hospitalized	****	**	**
Poissy ²⁷	Cross sectional	ICU	****	**	**
Poyiadji ²⁸	Retrospective cohort study	Hospitalized, with CTPA	***	*	**
Rieder ²⁹	Prospective Cohort study	Hospitalized	****	**	**
Ren ³⁰	Cross-sectional study	ICU	***	**	*
Santoliquido ³¹	Prospective Cohort study	Non-ICU	***	**	**
Soumagne ³²	Post hoc analysis of COVADIS	ICU	****	**	**

(Continued)

Supplementary Table S2 (Continued)

Author	Study design	Health care settings	Selection	Compatibility	Outcome
Stoneham ³³	Retrospective cohort study	Non-ICU	****	**	**
Trigoni ³⁴	Retrospective cohort study	ICU, with U/S	***	*	**
Trimaille ³⁵	Retrospective cohort study	Non-ICU	*****	**	**
Voicu ³⁶	Prospective cohort study	ICU	*****	**	**
Whyte ³⁷	Retrospective cohort study	Hospitalized	*****	**	**
Zerwes ³⁸	Prospective cohort study	ICU	*****	**	**
Li Zhang ³⁹	Cross sectional study	Non-ICU, with U/S	***	*	**
Maatman ⁴⁰	Case series	ICU	*****	**	**
Thomas ⁴¹	Retrospective cohort study	ICU	*****	**	**
Grillet ⁴²	Retrospective cohort study	Hospitalized	*****	**	**
Alharthy ⁴³	Prospective cohort study	ICU	*****	*	**
Hanif ⁴⁴	Retrospective cohort study	Hospitalized	*****	**	**
Le Jeune ⁴⁵	Retrospective cohort study	Non-ICU	*****	*	**
Leonard-Iorant ⁴⁶	Retrospective cohort study	Hospitalized, with CTPA	***	*	**
Aleva ⁴⁷	Case series	ICU	*****	**	**
Ierardi ⁴⁸	Prospective cohort study	Hospitalized	*****	*	**
Bavaro ⁴⁹	Case series	Hospitalized, with CTPA	***	*	*
Criel ⁵⁰	Prospective cohort study	Hospitalized	***	**	*
Mattioli ⁵¹	Retrospective cohort study	Non-ICU	*****	**	**
Middelrop ⁵²	Retrospective cohort study	Hospitalized	*****	**	**
Piagnerelli ⁵³	Prospective cohort study	ICU	***	**	**
Stessel ⁵⁴	Before and after study	ICU	*****	**	**
Taccone ⁵⁵	Retrospective analysis of prospective data	ICU	***	**	**
Tavazzi ⁵⁶	Prospective cohort study	ICU	***	**	**
Bi ⁵⁷	Prospective cohort study	Hospitalized	*****	**	**
Cattaneo ⁵⁸	Prospective cohort study	Non-ICU	*****	**	**
Galeano-Valle ⁵⁹	Prospective cohort study	Non-ICU	*****	**	**
Grandmaison ⁶⁰	Cross sectional study	Hospitalized	***	**	*
Giorgi-Pierfranceschi ⁶¹	Cross sectional study	Non-ICU with U/S	***	**	*
Contou ⁶²	Retrospective cohort study	ICU	*****	**	**
Alonso-Fernández ⁶³	Prospective cohort study	Hospitalized, with CTPA	**	*	**
Benito ⁶⁴	Prospective cohort study	Hospitalized	*****	**	**

Supplementary Table S2 (Continued)

Author	Study design	Health care settings	Selection	Compatibility	Outcome
Atalla ⁶⁵	Retrospective cohort study	ICU, U/S if D-Dimer high	***	**	**
Avruscio ⁶⁶	Prospective cohort study	Hospitalized	****	**	**
CHOI ⁶⁷	Retrospective cohort study	Hospitalized	****	**	**
Hill ⁶⁸	Retrospective cohort study	Hospitalized	****	**	**
Jimenez-Guiu ⁶⁹	Prospective cohort study	Non-ICU	****	**	**
Lemos ⁷⁰	Randomized controlled trial	ICU	Randomization 2	Blinding 0	Patients 1
Longhitano ⁷¹	Retrospective cohort study	ICU	****	**	**
Longhitano ⁷²	Prospective cohort study	Non-ICU	****	*	**
Melazzini ⁷³	Retrospective cohort study	Hospitalized	****	**	**
Mouhat ⁷⁴	Retrospective cohort study	Hospitalized	***	*	**
Nadeem ⁷⁵	Retrospective cohort study	ICU	****	**	**
Pancani ⁷⁶	Prospective cohort study	Non-ICU	***	*	**
Pavoni ⁷⁷	Retrospective cohort study	ICU	****	**	**
Piazza ⁷⁸	Retrospective cohort study	Hospitalized	****	**	**
Pizzi ⁷⁹	Retrospective cohort study	Non-ICU	***	**	**
Prandoni ⁸⁰	Retrospective cohort study	Non-ICU	***	**	*
Soumagne ²⁸¹	Retrospective cohort study	ICU, with CTPA	***	*	**
Torres-Machorro ⁸²	Prospective cohort study	ICU	***	*	**
Al-samkari ²⁸³	Retrospective cohort study	ICU	****	**	**
berg ⁸⁴	Retrospective cohort study	Hospitalized	****	**	**
Marquez ⁸⁵	Prospective cohort study	Hospitalized	****	**	**
Tan ⁸⁶	Retrospective cohort study	Hospitalized	****	**	**
Warrior ⁸⁷	Prospective cohort study	Hospitalized	****	**	**
Theprungirikul ⁸⁸	Retrospective cohort study	Hospitalized	****	**	**
Camille ⁸⁹	Retrospective cohort study	ICU	****	**	**
Kodama ⁹⁰	Retrospective cohort study	Hospitalized	****	**	**
Jiménez-Soto ⁹¹	Cross sectional study	Hospitalized	****	**	**

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