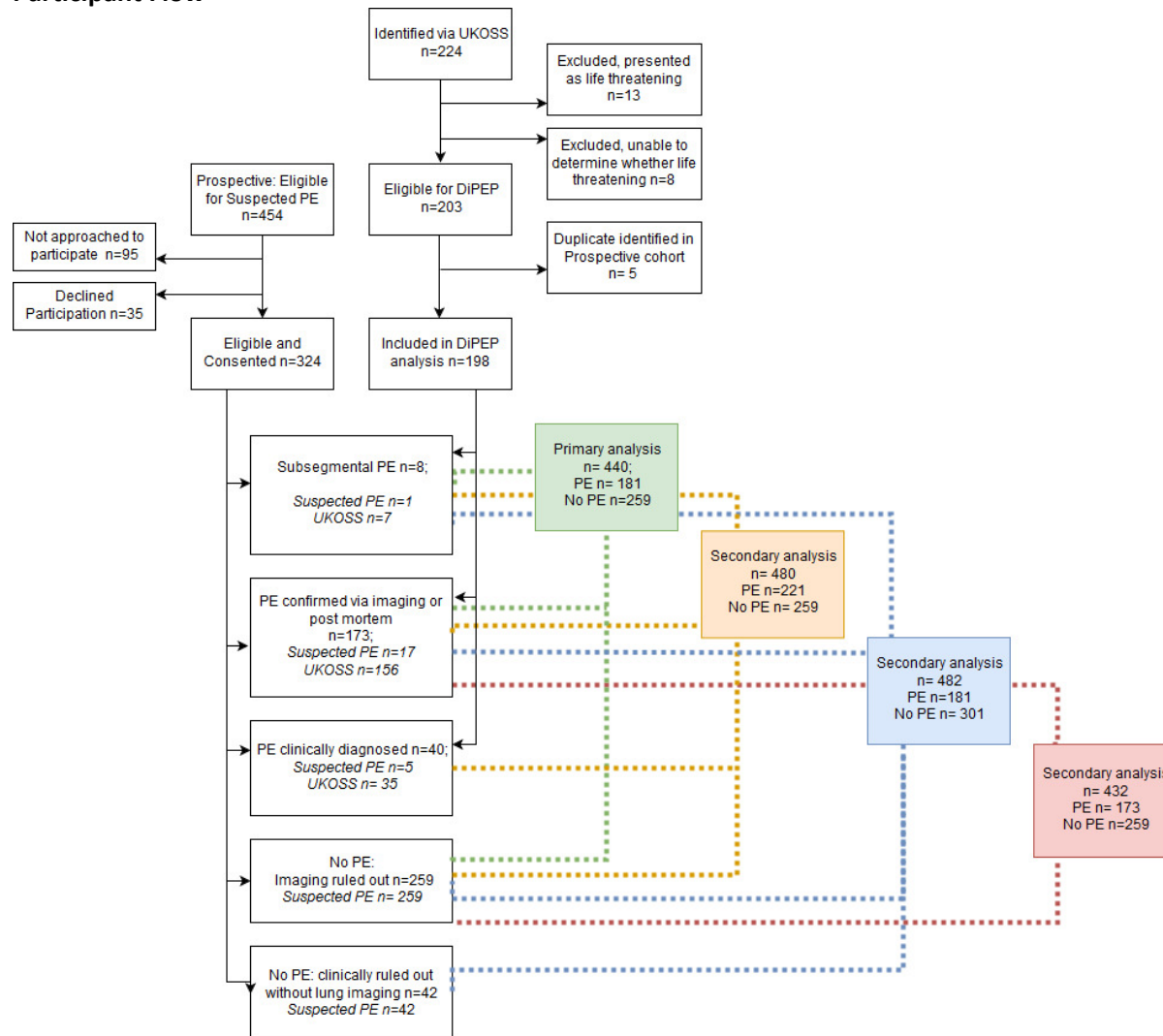## Participant Flow

Baseline Characteristics

Characteristic		Diagnosed PE (N=198)	Recruited suspected PE (N=324)	Non recruited suspected PE (N=95)
Mean age (years)		30.1	29.3	30.0
Mean BMI (kg/m^2)		28.3	28.0	28.7
Ethnic group	White British	151 (76.3%)	204 (63.0%)	50 (52.6%)
	White Irish	4 (2.0%)	-	-
	White Other	9 (4.5%)	18 (5.6%)	5 (5.3%)
	Mixed white and black Caribbean	-	3 (0.9%)	-
	Mixed white and black African	-	2 (0.6%)	-
	Mixed white and Asian	-	2 (0.6%)	-
	Mixed other	-	1 (0.3%)	-
	Asian Indian	4 (2.0%)	6 (1.9%)	4 (4.2%)
	Asian Pakistani	7 (3.5%)	36 (11.1%)	15 (15.8%)

	Asian Bangladeshi	1 (0.5%)	19 (5.9%)	3 (3.2%)
	Asian other	3 (1.5%)	5 (1.5%)	5 (5.3%)
	Black Caribbean	4 (2.0%)	5 (1.5%)	2 (2.1%)
	Black African	9 (4.5%)	17 (5.2%)	6 (6.3%)
	Black other	-	4 (1.2%)	1 (1.1%)
	Chinese	-	-	-
	Other	3 (1.5%)	2 (0.6%)	2 (2.1%)
	Missing	3 (1.5%)	-	2 (2.1%)
Marital status	Cohabiting	67 (33.8%)	87 (26.9%)	29 (30.5%)
	Married	93 (47.0%)	171 (52.8%)	46 (48.4%)
	Single	35 (17.7%)	65 (20.0%)	19 (20.0%)
	Missing	3 (1.5%)	1 (0.3%)	1 (1.1%)
Employment	Unemployed	74 (37.4%)	127 (39.2%)	46 (48.4%)
	Employed	111 (56.0%)	195 (60.2%)	33 (34.7%)
	Missing	13 (6.6%)	2 (0.6%)	16 (16.8%)
Previous	None	59 (29.8%)	115 (35.5%)	30 (31.6%)

pregnancies less than 24 weeks	1 or more	136 (68.7%)	209 (64.5%)	63 (66.3%)
	Missing	3 (1.5%)	-	2 (2.1%)
Previous pregnancies more than 24 weeks	None	116 (58.6%)	199 (61.4%)	62 (65.3%)
	1 or more	74 (37.3%)	125 (38.6%)	27 (28.4%)
	Missing	8 (4.0%)	-	6 (6.3%)
1st trimester		15 (7.6%)	21 (6.5%)	7 (7.4%)
2nd trimester		43 (21.7%)	110 (34.0%)	18 (18.9%)
3rd trimester		70 (35.4%)	138 (42.6%)	34 (35.8%)
Post-partum		60 (30.3%)	55 (17.0%)	35 (36.8%)
Missing		10 (5.1%)	-	1 (1.1%)

Outcome Measures

Decision rule	AUROC using full range of score values 95% CI	Sensitivity at usual or recommended threshold 95% CI n/N	Specificity at usual or recommended threshold 95% CI n/N
Primary consensus	0.626 0.572 to 0.681	0.609 0.532 to 0.683 103/169	0.585 0.523 to 0.646 151/258
Sensitive consensus	0.620 0.566 to 0.675	0.959 0.917 to 0.983 162/169	0.035 0.016 to 0.065 9/258
Specific consensus	0.589 0.537 to 0.642	0.361 0.289 to 0.438 61/169	0.783 0.728 to 0.832 202/258
PERC	0.621 0.570 to 0.672	0.675 0.598 to 0.745 114/169	0.519 0.457 to 0.582 134/258
Simplified Revised Geneva	0.579 0.526 to 0.632	0.444 0.368 to 0.522 75/169	0.636 0.574 to 0.694 164/258
Well's (permissive)*	0.577 0.522 to 0.632	0.490 0.410 to 0.571 77/157	0.617 0.553 to 0.678 153/248
Well's (strict)*	0.732 0.682 to 0.782	0.376 0.300 to 0.457 59/157	0.895 0.850 to 0.930 222/248
D-dimer (standard threshold)	-	0.884 0.741 to 0.956 38/43	0.880 0.047 to 0.156 11/125
D-dimer (pregnancy-specific threshold)	-	0.698 0.537 to 0.823 30/43	0.328 0.248 to 0.419 41/125

*Well's criteria were tested using a liberal (permissive) interpretation of clinical diagnosis text to determine whether PE was the most likely or equal most likely diagnosis and a more strict interpretation

Cost-effectiveness analysis

Deterministic													
	Costs (£)							QALYs	Incr Costs	Incr QALYs	ICER		Prob CE at £20k per QALY gained
Strategy	DR	Scans	Drugs	VTE	Bleeds	Induced Cancers	CTEPH	Total					
No Scan Treat None	0	0	15	56	1	0	2,757	2,830	19.8589	-	-	Dominated by Scan All	N/A
Wells Strict	4	27	73	155	4	1	1,970	2,233	20.0575	-	-	Dominated by Scan All	N/A
Delphi Specific	4	49	71	157	4	2	1,979	2,265	20.0630	-	-	Dominated by Scan All	N/A
Geneva	4	82	85	173	5	3	1,825	2,175	20.0952	-	-	Dominated by Scan All	N/A
Wells permissive	4	88	89	186	5	3	1,727	2,101	20.1213	-	-	Dominated by Scan All	N/A
Delphi Primary	4	96	104	222	6	3	1,462	1,896	20.1914	-	-	Dominated by Scan All	N/A
PERC	4	109	109	236	6	4	1,351	1,818	20.2164	-	-	Dominated by Scan All	N/A
No Scan Treat All	0	0	1260	322	122	0	647	2,352	20.3013	-	-	Dominated by Scan All	N/A
Delphi Sensitive	4	215	145	313	9	7	733	1,424	20.3663	-	-	Dominated by Scan All	N/A
Scan All	0	223	151	322	9	7	647	1,359	20.3855	-1,470	0.5266	Dominant	N/A
PSA													
	Costs (£)								QALYs	Incr Costs	Incr QALYs	ICER	Prob CE at £20k per QALY gained
Strategy	DR	Scans	Drugs	VTE	Bleeds	Induced Cancers	CTEPH	Total					
No scanning, treat none	0	0	16	59	1	0	2,173	2,249	19.8157	-	-	Dominated by Scan All	0.5%
Delphi Specific	4	49	70	157	4	1	1,629	1,914	20.0291	-	-	Dominated by Scan All	0.0%
Wells Strict	4	27	73	157	4	1	1,599	1,865	20.0308	-	-	Dominated by Scan All	0.4%
Geneva	4	83	84	175	5	2	1,504	1,855	20.0695	-	-	Dominated by Scan All	0.0%
Wells permissive	4	88	89	188	5	2	1,430	1,805	20.0984	-	-	Dominated by Scan All	0.0%
Delphi Primary	4	95	103	222	6	2	1,250	1,682	20.1710	-	-	Dominated by Scan All	0.0%
PERC	4	109	108	237	7	3	1,161	1,628	20.2006	-	-	Dominated by Scan All	0.1%
No scanning, treat all	0	0	1260	321	123	0	650	2,353	20.2937	-	-	Dominated by Scan All	0.0%
Delphi Sensitive	4	217	143	312	9	5	714	1,403	20.3618	-	-	Dominated by Scan All	0.1%

| Scan All | 0 | 225 | 150 | 321 | 9 | 5 | 650 | 1,360 | 20.3832 | -£888 | 0.5675 | Dominant | 98.9% |

DR – decision rule; VTE – venous thromboembolisms; CTEPH – Chronic Thromboembolic pulmonary hypertension; QALYs – quality adjusted life years; Incr – incremental; ICER- incremental cost-effectiveness ratio;

Prob CE – probability that an intervention is the most cost-effective; PERC - Pulmonary Embolism Rule-out Criteria

Adverse Events
There were no adverse events associated with this observational study