or both. Using multivariate logistic regression analysis, aspirin was found to be protective for ICU mortality. Additional factors that predicted ICU mortality for patients with ALI were vasopressor use and APACHE II score (Table).

Conclusion Aspirin usage is associated with reduced mortality in patients with ALI. Whilst trials are ongoing to assess if aspirin can prevent ALI, these new data support the need for a clinical trial to investigate if aspirin improves outcomes in patients with established ALI.

Abstract P148 Table 1.

	Multivariate analysis	
Predictor	**OR [95% CI]**	**p-value**
Age	1.02 [1.00–1.05]	0.079
APACHE II score	1.07 [1.02–1.13]	0.010
Aspirin use	0.42 [0.18–0.96]	0.040
PaO2 / FiO2 ratio	0.97 [0.93–1.00]	0.085
Vasopressor use	2.09 [1.05–4.16]	0.036

Pulmonary hypertension: mechanisms and treatment

P149 EFFECT OF MACITENTAN ON PULMONARY ARTERIAL HYPERTENSION-RELATED HOSPITALISATIONS: RESULTS FROM THE RANDOMISED CONTROLLED SERAPHIN TRIAL

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Introduction and objectives Macitentan, a novel dual endothelin receptor antagonist with sustained receptor binding, significantly reduced the risk of morbidity and mortality in pulmonary arterial hypertension (PAH) patients in the SERAPHIN trial (NCT00660179), the first event-driven outcomes trial in PAH. The effect of macitentan on the risk of PAH-related hospitalisation was evaluated in this study.

Methods In SERAPHIN, a multicentre, double-blind, placebo-controlled trial in PAH, patients (aged ≥12 years) in WHO functional class II–IV were randomised (1:1:1) to oral macitentan 3mg, 10mg, or placebo once-daily. Time to death due to PAH or hospitalisation for PAH up to end of treatment (EOT), and time to hospitalisation for PAH up to EOT were evaluated (Kaplan–Meier analysis). Treatments were compared using log-rank tests. Annual rates of PAH-related hospitalisations and inpatient hospital days up to EOT were also assessed.

Results For the 742 patients randomised, the median treatment duration was >2 years. The risk of death due to PAH or hospitalisation for PAH was reduced vs placebo by 33% (97.5% CL: 3–54%; P = 0.0146) in the macitentan 3mg group and 50% (97.5% CL: 25–67%; P < 0.0001) in the macitentan 10mg group. Risk of hospitalisation for PAH was reduced by 39% (97.5% CL: 10–58%; P = 0.0040) with macitentan 3mg and 50% (97.5% CL: 24–66%; P = 0.0001) with macitentan 10mg. Overall, 33% (n = 82), 23% (n = 58), and 20% (n = 49) of patients randomised to placebo, macitentan 3mg, and macitentan 10mg, respectively, were hospitalised at least once for PAH. Compared with placebo, the rate of PAH-related hospitalisations and number of inpatient hospital days per year were reduced by 43% (P = 0.0068) and 33% (P = 0.2707), respectively, with macitentan 3mg, and by 55% (P = 0.0002) and 52% (P = 0.0416), respectively, with macitentan 10mg (Table). Macitentan was well tolerated, with similar incidences of elevated liver aminotransferases and peripheral oedema across groups. Adverse events more frequently associated with macitentan vs placebo were headache, nasopharyngitis, and anaemia.

Conclusions Macitentan significantly reduced the risk of hospitalisation for PAH and the number of PAH-related hospitalisations and inpatient days (10mg only). These data offer further evidence that macitentan has beneficial effects on long-term outcomes in PAH.

Abstract P149 Table 1. Rates of PAH-related hospitalisations and hospital inpatient days up to EOT in SERAPHIN

	Placebo N=249	Macitentan 3mg N=250	Macitentan 10mg N=242
PAH-related hospitalisations per year			
Adjusted* annual rate per 100 patient-years (95% CL)	27 (20–36)	15 (11–21)	12 (9–17)
Treatment effect vs placebo (95% CL)		0.57 (0.38–0.86)	0.45 (0.30–0.69)
P-value		0.0068	0.0002
PAH-related inpatient hospitalisation days per year			
Adjusted* annual rate (95% CL)	5.5 (3.3–9.0)	3.7 (2.2–6.1)	2.7 (1.6–4.4)
Treatment effect vs placebo (95% CL)		0.67 (0.33–1.37)	0.48 (0.24–0.97)
P-value		0.2707	0.0416

*Adjusted in a negative binomial regression model for WHO functional class (I/II vs III/IV) and 6-minute walk distance at baseline (>380 m vs ≤380 m)
CL: confidence limit; PAH: pulmonary arterial hypertension

P150 TREATMENT OF PULMONARY EMBOLISM IN ACTIVE MALIGNANCY - PRESCRIBING PRACTICES AMONGST PHYSICIANS

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Introduction Pulmonary embolism (PE) is a common complication of malignancy. NICE guidance for the treatment of venous thromboembolism (VTE) issued in June 2012 recommended that those with active cancer and confirmed PE be treated with low molecular weight heparin (LMWH) rather than alternative anticoagulants.[1] We assessed whether this guidance is being adhered to in our Trust.

Methods A retrospective review of electronic discharge summaries was undertaken on those who were discharged from the two acute hospitals in our Trust (population 600,000) with a diagnosis of PE between July 2012 and June 2013, the 12 months following the publication of the NICE guidance. In addition, an anonymised, internet-based survey was undertaken of the 62 consultant physicians within the Trust, to determine which anticoagulant they would routinely prescribe for PE in active malignancy.

Results Within the 12 month period of this study, 298 patients (173 women, 125 men) survived to discharge, having had PE confirmed on imaging. Forty six of these were known to have malignancy and a further 13 were found to have cancer at the

time of diagnosis or very shortly afterwards. Two thirds of these (69.5%) were discharged on LMWH but the remainder (30.5%) were discharged on warfarin. Perhaps unsurprisingly, a similar percentage of the consultant physicians who completed the internet-based survey said they would prescribe LMWH, although a sizeable proportion continue to prescribe warfarin.

Conclusion NICE guidance is largely being adhered to but a proportion of clinicians continue to prescribe warfarin despite there being good evidence that LMWH is associated with a reduced risk of VTE recurrence in this group.[2] Further investigation is needed to determine whether this pattern of prescribing is prevalent throughout the UK, and why the guidance is being ignored in our Trust.

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P151 V-DIMERS STUDY - VALUE OF D-DIMERS IN ESTIMATING RISK OF SIGNIFICANT PULMONARY EMBOLISM AND DEEP VEIN THROMBOSIS

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Hypothesis The risk of Venous Thromboembolism (VTE) including Pulmonary Embolism (PE) increases proportionately with the level of d-dimers.

Introduction The risk of PE/VTE is low when the values of d-dimers are below the reference range (1) (<500 ng/ml in our hospital). There is no clear evidence to suggest that risk of VTE increases proportionately with rising levels of d-dimers. We studied the correlation between the various values of d-dimers and the associated risk of having a PE/VTE.

Methods Data was collected retrospectively from March 2011 to Feb 2012. For the study we divided the patients into 3 risk groups based on d-dimers. Group1: 500–1000; Group 2: 1000–5000; Group 3: >5000. Each group was analysed by separate individual. Data was collected by selecting only those patients who had definitive scan to investigate for PE/VTE **Results**

See Table When d-dimers are >5000, the risk of PE/VTE is significantly elevated when compared to <5000. (p value <0.0005)

When the d-dimers are > 5000, it's a good predictor of central PE (p value <0.0005) or Proximal DVT (p value <0.0005).

Results

Abstract P151 Table 1.

	Total Cases	Positive VTE	PE		DVT	
			Central	Peripheral	Proximal	Distal
Group 1	195	16 (8%)	0 (0%)	4 (6.25%)	2 (1.5%)	10 (7.6%)
Group 2	221	34 (15.3%)	4 (5.4%)	7 (9.4%)	7 (4.7%)	16 (10.8%)
Group 3	122	81 (66.4%)	19 (46.3%)	5 (12.2%)	45 (55.5%)	12 (14.8%)

Conclusion Our study suggests that when the d-dimers are significantly elevated (>5000) the associated risk of VTE (PE and DVT) is significantly elevated. The risk appears to increase proportionately until the value of 5000 beyond which it increases exponentially. Levels >5000 strongly predicts the likelihood of a central PE or a proximal DVT. Clinicians could use this as an additional indicator to thrombolyse PE's in absence of confirmatory test. Further validity studies will be required to confirm this.

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P152 PULMONARY EMBOLISM RULE-OUT CRITERIA IN CLINICAL PRACTICE

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Suspected pulmonary embolism (PE) is a common reason for referral to the medical team on call. The pulmonary embolism rule-out criteria (PERC) is a validated scoring system to identify patients at low risk of PE, allowing for possible discharge from the Emergency Department (ED) prior to referral. It is potentially advantageous over the modified Well's score (MWS) for PE, as a D-dimer result is not required.

We aimed to investigate two practice models: the PERC and the MWS in the investigation of suspected PE.

Those patients referred to the medical team on call by the University Hospital Lewisham ED with a suspected PE were identified over a 3 month period (January to March 2012). Further information was gathered on each patient by review of their ED notes. Patients who did not meet all 8 PERC criteria or had a MWS >4 were considered to be at high risk for PE.

94 patients were identified. The mean age was 53 years (range 18–92) and 68 were female (72%). 9 PEs were diagnosed.

13/94 patients met all PERC criteria, among these no PEs were diagnosed. This group underwent 10 D-dimer tests (70% positive), 2 CTPAs, and 3 V/Q scans. The overall length of stay directly related to waiting for these tests was 6 days, with a mean admission length of 1.3 days per patient.When all PERC criteria were not met due to age (>50 years) alone, the D-dimer proved an excellent 'rule-out' test, as the 2 patients in this cohort with PEs, had strongly positive D-dimer results.

Using MWS, 32/94 patients scored >4. Among this group there were 4 confirmed PEs (13%) and 1 indeterminate V/Q result. In the 62 patients with a MWS =4 there were also 4 confirmed PEs (6%), each with a positive D-dimer.

PERC is a useful scoring system to identify patients unlikely to have a PE and seems advantageous over the MWS in terms of reducing unnecessary admissions and investigations, while maintaining patient safety. When the PERC criteria are not met due to age alone, a negative D-dimer may also be an effective 'rule-out' option.

P153 MANAGING SUSPECTED PULMONARY EMBOLISM: APPLYING AN EFFECTIVE AMBULATORY EMERGENCY CARE STRATEGY

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