Methods Patients screened in 2016 by our Secondary Care service using NICE-recommendations were included. Those aged 16–65 had an Interferon Gamma Test (QuantiFERON) and those aged 0–16 a Mantoux Test (reported as positive if ≥ 5 mm). Results were then stratified by the TB incidence in their country of birth and by age.

Results 345 patients were offered screening, and 235 patients attended (68%). 44 patients (19%) were found to have LTBI and none had active TB. The Results are displayed in Table 1. 120 patients (51%) were in the Strategy-recommended group, which had the lowest LTBI-positivity rate (10%). Restricting screening to just this group would have resulted in 32 of the 44 LTBI cases (72%) being ‘missed’. The LTBI-positivity rate was high in the younger and older age groups from the ≥ 150 cases/100,000 countries (25% and 33% respectively), and 1/3 of those screened in the age 16–35 group from the 40–150 cases/100,000 countries tested positive, the majority being Romanian.

Conclusions The LTBI rate in New Entrants is high in groups not currently widely screened. Broadening the programme to include patients from a wider age range and from countries with a TB incidence of $\geq 40/100,000$ would achieve higher LTBI detection and aid National TB control.

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Abstract P170 Table 1 LTBI screening results stratified by TB incidence in the country of birth and by age range (shaded cells indicate the Strategy-recommended screening group results)

Age range (n=235 patients)	TB rate 40-150/100,00 (n=72 patients)	TB rate $\geq 150/100,000$ (n=163 patients)
0-15 years	Screened = 1	Screened = 16
	Positive = 1(100%)	Positive = 4(25%)
16-35 years	Screened = 52	Screened = 120
	Positive = 15(29%)	Positive = 12(10%)
36-65 years	Screened = 19	Screened = 27
	Positive = 3(16%)	Positive = 9(33%)

Pulmonary vascular disease: monitoring and managing

P171 ARE THE EUROPEAN SOCIETY OF CARDIOLOGY PULMONARY HYPERTENSION GUIDELINE RISK ASSESSMENT CRITERIA ASSOCIATED WITH 12-MONTH MORTALITY?

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Background The European Society of Cardiology (ESC) guidelines for management of pulmonary hypertension (PAH)

advocate comprehensive assessment of patients to determine prognosis and to guide treatment decisions, using a set of risk assessment criteria based on expert advice. These criteria are coded Red (high), Amber (medium) and Green (low). It is unclear whether these criteria are associated with short term survival.

Aim To determine whether red/amber/green risk status according to ESC guidelines is associated with 12 month mortality.

Methods This was a “snapshot” observational study using routinely collected clinical data for patients eligible for targeted drug treatment at a regional centre, under shared care with a national centre. All data available at the latest visit within the study period were collated, including demographics, echocardiogram and right heart catheterisation data. Data are reported as mean/median/count/%. Characteristics of deceased and surviving patients were compared using Mann-Witney U-test. Association with 12 month mortality was assessed using Receiver Operator Characteristics (ROC) curve analysis.

Results Routinely collected clinic data were available for 104 patients, echocardiograms for 88 and right heart catheter data for 68. 25% were male, mean age 68.2 years. 45.2% had connective tissue disease-associated PAH, 32.7% inoperable chronic thromboembolic PH, 18.3% Idiopathic PAH. 101 were on treatment, of which 35.6% were on monotherapy, 51.0% on dual oral therapy, 9.6% on intravenous treatments. Baseline data are shown in the table. 25% had one red criterion, 14.4% had two and 8.6% had three or more. 19 patients died in the 12 month follow-up period, 6 of whom had no red criteria. Deceased patients were older ($p=0.015$) and had shorter walking distance ($p=0.003$). Risk criteria were worse for symptom progression, WHO functional class, walking distance and for the overall number of red criteria. ROC-curve analysis showed that symptom progression (c-statistic 0.695, $p=0.048$), walking distance (0.748, $p=0.012$) and the overall number of red flags (0.710, $p=0.033$) were the only elements associated with 12 month mortality.

Conclusions The ESC risk assessment criteria are associated with 12 month mortality in this cohort when all criteria are collated. Further work in a large cohort is needed to confirm the clinical utility of these criteria.

Abstract P171 Table 1

	Median/%	Red flags, n(%)
Symptom progression	N/A	11 (10.6)
NT-proBNP (ng/L)	60.5	2 (1.9)
WHO functional class	N/A	13 (12.5)
6 min walk distance (m)	295	28 (28)
Echo RA area (cm ²)	17.5	5 (7.4)
Right heart catheter (any criterion)	N/A	13 (19.1)

P172 PRE-OPERATIVE INSIGHTS FROM CARDIOPULMONARY EXERCISE TESTING IN PATIENTS WITH PULMONARY ARTERIOVENOUS MALFORMATIONS

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Introduction and Objectives Patients with pulmonary arteriovenous malformations (PAVMs) are difficult to assess for anaesthetic risks. Generally, they display well-preserved exercise tolerance, yet may have very low oxygen saturation due to their anatomical intrapulmonary right-to-left shunts. During pre-operative assessments in the general population, anaerobic threshold and peak VO_2 , measured by cardiopulmonary exercise testing (CPET), are increasingly recommended to identify high-risk patients, and appropriately plan post-operative management. For example, "high-risk" for major abdominal surgery has been suggested as an anaerobic threshold $<11 \text{ ml min}^{-1} \text{ kg}^{-1}$ and peak $\text{VO}_2 <20 \text{ ml min}^{-1} \text{ kg}^{-1}$.

Methods In order to evaluate "pre-operative" risk categories for PAVM patients, anaerobic threshold and peak VO_2 , measured by ethically approved research cardiopulmonary exercise tests, were evaluated.

Results 26 PAVM patients underwent research CPET evaluations between April 2011-May 2017. Their median age was 57 years (interquartile range (IQR): 42–66). 16 (61.5%) were male. The median oxygen saturation (SaO_2) was 92% (IQR: 88–95) and median haemoglobin 15.6 g/dl (IQR: 14.2–16.6). Overall, the PAVM group achieved a median 92% of the predicted maximum work (IQR: 67–106), anaerobic threshold ranged from 7.6–24.5 $\text{ml min}^{-1} \text{ kg}^{-1}$ (median: 12.35; IQR: 9.5–17.35), and peak VO_2 ranged from 11.2–45.5 $\text{ml min}^{-1} \text{ kg}^{-1}$ (median: 19.8; IQR: 16.7–28.4). Anaerobic threshold placed 11/26 (42.3%) in the suggested high-risk category for major abdominal surgery. In this group, the anaerobic threshold ranged from 7.6–10.8 $\text{ml min}^{-1} \text{ kg}^{-1}$. Similarly, peak VO_2 placed 14/26 (53.8%) in a high-risk category. Their peak VO_2 ranged from 11.2–16.5 $\text{ml min}^{-1} \text{ kg}^{-1}$. There was full concordance between the categories determined by the 2 measurements. Notably, 6 patients were retested 3–31 months after embolization treatment resulting in increased SaO_2 . However, there was no increase in anaerobic threshold or peak VO_2 , and the 3 patients from this group initially in a higher risk category remained.

Conclusion Anaerobic threshold and peak VO_2 suggest high proportions of PAVM patients are in a high-risk pre-operative risk category. The data suggest an important role for anaesthetic assessments. Noting that 1 in 2600 people are estimated to have PAVMs, further study is recommended to develop appropriate clinical guidance, and allocate resources to optimise care.

P173 PROGNOSTIC FACTORS FOR SURVIVAL IN IDIOPATHIC PULMONARY ARTERIAL HYPERTENSION

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Introduction Idiopathic pulmonary arterial hypertension (IPAH) is rare with an estimated prevalence of 5.9 cases/million population.¹ Untreated, prognosis is poor with one year survival 68%.² The ESC/ERS guidelines' risk assessment tool estimates one year mortality.¹ This tool was used to assess the number of green prognostic factors and observe survival.

Methods Patients were identified retrospectively from a cohort of incident IPAH patients. Prognostic factors of WHO functional class, 6MWT and NT-proBNP were selected at 0 (baseline), 6 and 12 months. The number of green prognostic

factors at baseline was compared with 6 and 12 months and survival observed.

Results 28 patients were identified; 11 male (39%), 17 female (61%), mean age at diagnosis 65 years (range 42–85). At baseline 19 (68%) patients had no green prognostic factors compared with 12 (43%) at 6 months ($p=0.0045$) and 11 (39%) at 12 months ($p=0.002$). At baseline 8 (29%) had 1 green prognostic factor compared with 5 (18%) at 6 months ($p=0.08$) and 10 (36%) at 12 months ($p=0.17$). At baseline 1 (3%) had 2 green prognostic factors compared with 11 (39%) at 6 months ($p<0.0001$) and 7 (25%) at 12 months ($p=0.006$). No patients had 3 green prognostic factors. The number of patients with 0 red prognostic factors increased from 13 (46%) at baseline to 20 (71%) at 12 months ($p=0.005$). At one year all patients survived.

Conclusions There was a statistically significant increase ($p<0.05$) in the number of patients with two green (low risk of mortality) prognostic factors at 6 and 12 months and patients with zero red (high risk) prognostic factors at 12 months, compared with baseline. A concurrent statistically significant reduction in number of patients with no green prognostic factors was seen. These suggest decreased one year mortality. One year survival between patients with 0, 1 or 2 green prognostic factors was identical. Patients are being followed for long term survival.

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P174 A MULTICENTER, RETROSPECTIVE STUDY INTO EARLY MORTALITY IN ACUTE PULMONARY EMBOLISM

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Introduction and Objectives Prognostic accuracy and clinical utility of the Pulmonary Embolism Severity Index (PESI) & simplified PESI (sPESI) at predicting very early mortality (<7 days) has not been previously investigated. We use this time frame to suggest outpatient imaging could be used to confirm a suspected pulmonary embolism (PE).

Methods A retrospective chart review of adult patients (≥ 18 years), who presented to two emergency departments, January 2013 – December 2015, with symptomatic pulmonary embolism (PE) confirmed on computed tomography pulmonary angiogram was carried out. Demographic and clinical parameters were recorded. PESI and sPESI scores were calculated and grouped into classes. Patients were followed up to 90 days. The primary outcome was death at 1, 3, 7, 30 and 90 days.

Results Two hundred and eighty eight patients were eligible for inclusion. Mean age was 63 years (SD 18) and 51% were male. Twenty-two patients died during the follow-up period. PE was attributed to the cause of death in 59%. There was a significant correlation between PESI risk classes (I to V) and death at 3, 7, 30 and 90 days ($p<0.01$) but not day 1. No deaths occurred in the low risk sPESI class and no deaths occurred in PESI Class III. The discriminatory ability for each study end-point expressed as the area under the ROC curve was high (AUROC ≥ 0.8 , $p<0.001$) for both PESI and sPESI.