In total, an estimated 27,722 hours were flown giving a mean average of 122 hours, i.e., approximately 10 long-distance flights per lifetime.

Conclusions This survey provides a large dataset from individuals with PAVMs/HHT, captured without a bias toward flight usage as in flight-specific surveys. The data suggest long-distance travel is less common than previously thought for the HHT population, which adds greater weight to the previously published association[1] between long-distance travel and cerebral abscess risk. This approach should enable the development of better tools to predict and reduce the risk of cerebral abscess for these patients.

REFERENCE

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P177 COMPUTED TOMOGRAPHY DIAGNOSTIC MODEL FOR DIAGNOSIS OF PULMONARY HYPERTENSION

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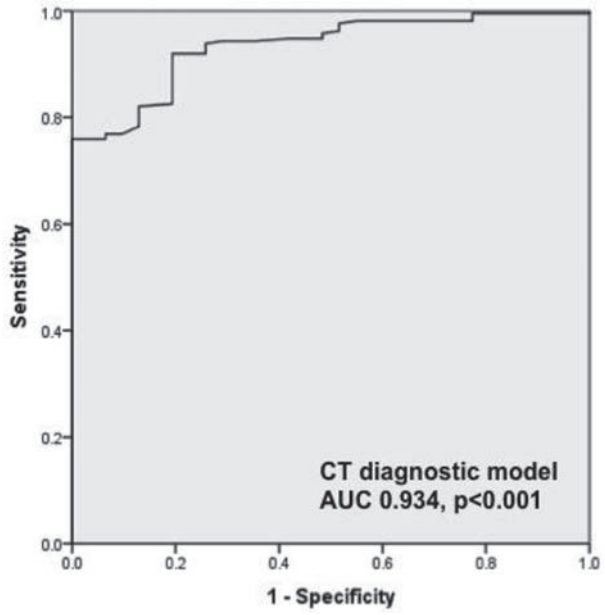
Introduction Pulmonary hypertension (PH) is severe cardiorespiratory condition associated with poor prognosis with diagnosis reliant on invasive right heart catheterization (RHC). Several measurements on computed tomography (CT) have been shown to have diagnostic value in PH, however few studies have attempted to identify the added value of combining CT metrics for the diagnosis of PH.

The aim of this study is to develop a composite diagnostic CT model for patients with suspected PH.

Methods Patients with suspected PH who underwent CT and RHC were identified. Standard axial and reconstructed images were used to derive CT metrics of cardiac and pulmonary vasculature anatomy. A derivation and validation cohort were randomly constructed to derive and test a binary logistic regression model of PH. Receiver operating characteristic (ROC) analysis assessed the diagnostic value of the model and individual metrics.

Results 491 patients were identified (derivation cohort n=247 and validation n=244). Main pulmonary arterial (MPA) diameter, right ventricular outflow tract (RVOT) thickness, right ventricular muscle area and interventricular septal (IVS) angle variables correlated strongest to mean pulmonary arterial pressure, r=0.458 (p<0.001), r=0.441 (p<0.001), r=0.481 (p<0.001) and r=0.622 (p<0.001), respectively. The diagnostic regression model included RVOT, IVS angle, MPA diameter, LV size and the interlobar artery to bronchus ratio. The area under the curve from ROC analysis was 0.931 (p=<0.001) in the derivation cohort and a 0.938 (p=<0.001) value in the validation cohort, more accurate the individual CT metrics (p<0.05). A highly sensitive threshold of 0 units had a sensitivity of 95% and specificity of 50% and a highly specific threshold of 3.3 units had sensitivity of 69% and specificity of 100%.

Conclusion A multivariate diagnostic model derived from axial CT images is accurate in suspected PH. The identified highly sensitive and specific thresholds may help in both patient screening and in selection for referral to specialist centres.



Abstract P177 Figure 1 ROC curve showing the performance of model 2 in the validation cohort with all included variables.

P178 5 YEAR FOLLOW UP OF PATIENTS INVESTIGATED FOR SUSPECTED PE. WHAT FURTHER TESTS FOR SUSPECTED VTE ARE PERFORMED AND ARE THEY POSITIVE?

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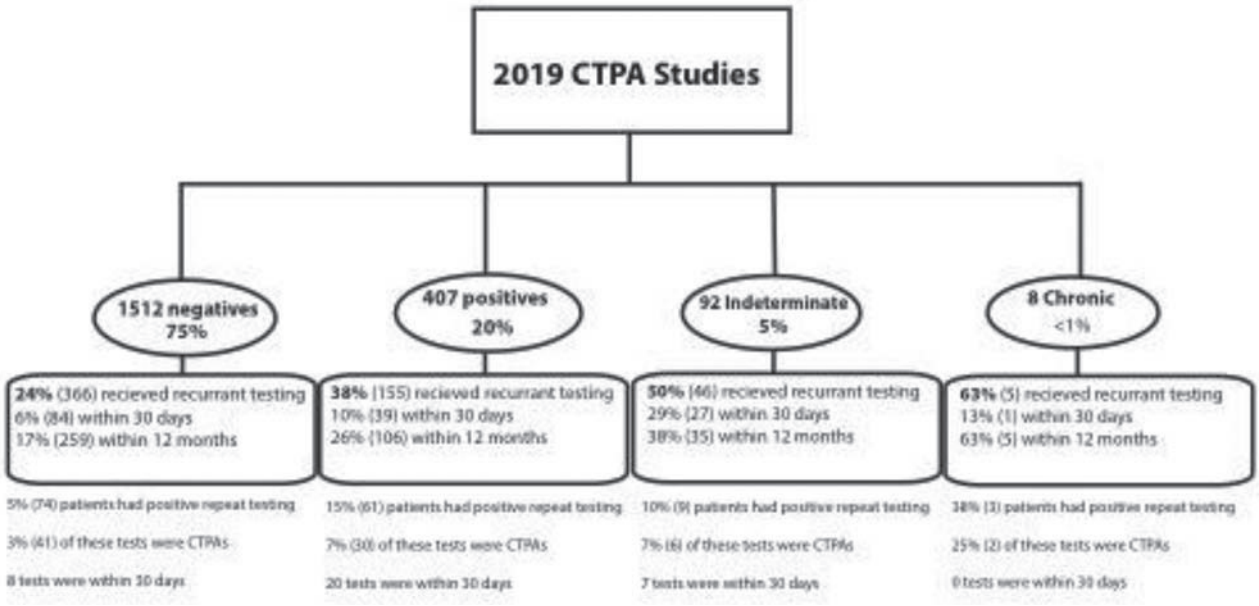
The diagnosis of a Pulmonary Embolism (PE) is a challenging clinical problem, our approach to which has changed greatly since the introduction of Computed tomographic pulmonary angiography (CTPA). CTPA is now established as the imaging modality of choice for the diagnosis of PE, however there are concerns that CTPA causes the over-diagnosis of clinically irrelevant PE,[1,2] and there is little data concerning the outcomes and further imaging following a CTPA at long follow-up times. Here we present long term follow-up of CTPAs over 5 years, looking at further imaging related to suspected thromboembolic disease after more than 2000 studies. After their initial CTPA, further studies were documented retrospectively using electronic patient records. Figure 1 demonstrates what further imaging for suspected venous thromboembolic event (VTE) patients had following their CTPAs scans over 5 years. In a one-year period, 24% of the negative studies, 38% of the positive, and 50% of the indeterminate studies had repeat testing for suspected thromboembolic disease. Indeterminate studies received repeat testing faster (p<0.001), and those with negative studies received fewer repeat tests (p<0.001). Those with a positive initial result were more likely to have positive recurrent testing over the whole 5 year period, and these data also suggest a trend showing increased risk with positive PEs rather than other VTEs. Furthermore, although CTPAs had a very high calculated negative predictive value for excluding PE (over 99%), many patients went on to have repeat testing following a negative result. Understanding



Abstract P178 Figure 1

how test Results influence the predictive value of further testing is essential for effective risk stratification, and this work adds to the growing body of data examining the long-term implications of a CTPA result.

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P179 UTILISATION OF RESPIRATORY AND HAEMATOLOGY MULTI-DISCIPLINARY TEAM (MDT) MEETING FOR EFFECTIVE FOLLOW-UP AND MANAGEMENT OF PULMONARY EMBOLISM (PE) IN A DISTRICT GENERAL HOSPITAL

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Background Patients are diagnosed with PE in our hospital by a variety of health care practitioners in numerous clinical settings including Ambulatory Care. Following diagnosis and initiation of therapy, all patients should be referred to the PE Clinic for follow-up at 3 months to ensure that risk stratification for on-going venous thrombotic episode (VTE) is undertaken, anti-coagulation therapy duration is optimised and adequate screening for cancer and chronic thrombo-embolic pulmonary hypertension (CTEPH) undertaken.
Aim To evaluate the effectiveness of PE MDT (Respiratory and Haematology) meeting prior to Respiratory-led PE follow-up Clinic.
Methods PE patients referred to the PE MDT from January 2016–2017 were included. Demographic data was collected (gender, age, co-morbidities, referral source). The cause of VTE was established and duration of anti-coagulation therapy reviewed. Risk stratification and screening for cancer and PHT outcomes were documented.
Results 113 patients (56 male [49.5%]; average age 64 years; range 20–96) were discussed. 51 (45%) presented via Ambulatory Care with only 9 (8%) from Respiratory. PE was idiopathic in 56 (49.5%) of which 14 (25%) were a second VTE. Secondary causes included surgery (24) and BMI $\geq$40 (11). 66 (58%) received screening tests to exclude underlying cancer: new cancer diagnosed in 2 (lung, urological); 2 had cancer recurrence within 1 year; 5 required lung nodule surveillance. All patients were screened with echocardiography and only 3 did not undertake 6 min walk test (immobility). Subsequently, 2 patients required referral for further investigation of CTEPH. Haematology advice changed management in 47 (42%) cases, usually increased duration of anti-coagulation therapy. 4 patients had high DASH (D-Dimer, Age, Sex, Hormones) score post-treatment necessitating anti-coagulation restart. 1 patient had early PE recurrence following completion of recommended duration anti-coagulation. Only 7 patients required on-going Haematology referral and investigation. Respiratory advice changed treatment in 3 persons by reducing recommended duration of therapy. 16 patients required on-going Respiratory review for another respiratory illness.
Conclusion A systematic MDT approach has been shown to be safe and effective and optimises PE patient care. The next step would be to have Respiratory and Haematology input at MDT with an Acute Physician–led PE follow–up Clinic.

P180 MANAGING PREGNANCY IN PULMONARY HYPERTENSION USING A MULTI-PROFESSIONAL APPROACH: A 16-YEAR EXPERIENCE IN A SPECIALIST REFERRAL CENTRE

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