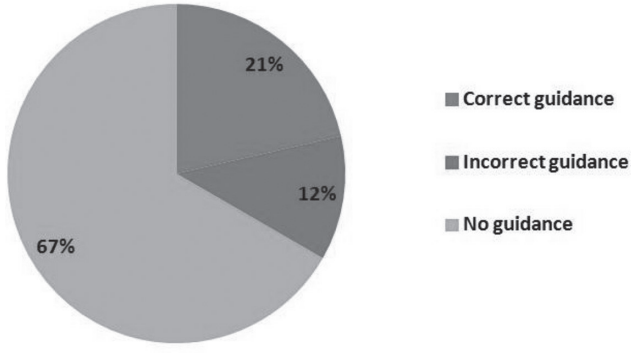
Results Of the 42 reports included, only fourteen of these (33%) provided any guidance on follow-up. Of these, nine (21% of reports) complied with BTS or Fleischner Society recommendations. The reasons for non-compliance with guidelines when advice was provided were no timescales or follow-up modalities suggested (four of five) and incorrect follow-up time (one of five). Results are summarised in Figure 1.

Conclusions From our results it is evident that no or incorrect follow-up advice is being given, based on radiological appearances, for the majority (79%) of pulmonary nodules seen on CT imaging. Clearly the potential consequences of this may include malignancy not being detected and managed in a timely fashion. It is therefore fundamental that each unit has a system, based on existing guidelines, to ensure correct advice is provided based on radiological findings.



Abstract P23 Figure 1 Guidance given for lung nodules reported on CT imaging

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Clinical Aspects of Pulmonary Vascular Disease

P24 SHORT TERM OUTCOME OF PATIENTS WITH ACUTE PULMONARY EMBOLISM AND HIGH LACTATE AT A DISTRICT GENERAL HOSPITAL

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Introduction The risk stratification of haemodynamically stable patients presenting with pulmonary embolism (PE) is currently focussed on evidence of right ventricular (RV) dysfunction and myocardial necrosis (elevated Troponin). However these single markers have insufficient evidence to definitively guide treatment decision making. Plasma lactate has been shown to be potentially useful in identifying normotensive PE patients at high risk of PE related adverse events. The aim of this retrospective cross sectional study is to assess the role of serum lactate in the risk assessment of patients presenting with acute PE in a "real world" setting.

Methods We reviewed the cases of all patients with a radiologically confirmed PE on CTPA from Royal Wolverhampton Hospital between June 2014 and June 2015. The primary outcome was PE related complications within 7 days of diagnosis. This comprised of shock (systolic blood pressure <90 mmHg or pressure drop of ≥40 mmHg for ≥15 min), RV dysfunction, or need for cardiopulmonary resuscitation/mechanical ventilation.

Results 172 patients were diagnosed with acute PE during this time. 169 cases were analysed (insufficient information recorded in 3). Serum lactate was recorded in 92 (54.4%). Out of the 92 patients, 38 (41.3%) had a PE related complication with a higher average lactate (2.40 mmol/L) than the 54 (58.7%) who did not (lactate of 1.73 mmol/L) ($p < 0.018$ using the unpaired t test). PE related complications occurred in 33 (38.8%) of the 85 normotensive patients that had a lactate recorded. These patients also had a higher average lactate (2.24 mmol/L) than the 52 (61.2%) patients without complications (lactate 1.72 mmol/L) ($p < 0.05$). The positive predictive value of lactate as a single marker for a PE related complication is 53.1%. However the combination of a lactate ≥2, evidence of RV dysfunction and positive Troponin had a positive predictive value of 100%.

Conclusions This study adds to the evidence that a high serum lactate used in combination with a positive troponin and RV dysfunction can be a useful predictor of early adverse PE related events and may aid treatment decision making.

P25 RETROSPECTIVE ANALYSIS OF PATIENTS PRESENTING WITH ACUTE PULMONARY EMBOLISM (PE) AS THE FIRST MANIFESTATION OF MALIGNANCY

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Introduction A link between development of PE and presence of malignancy has long been established. NICE recommends patients presenting with PE should be offered: history, examination, chest x-ray and urinalysis. Further investigation for cancer with abdomino-pelvic CT (CT A/P) scan in patients over 40 with a first unprovoked PE should be considered.[1] CT screening has not been shown to improve occult cancer diagnosis or mortality from cancer.[2]

	Total presenting with PE	Total with established cancer (all cancers) prior to diagnosis of PE	Total with new cancer (all cancer) diagnosis	Total with cancer diagnosis on CT A/P	1 year mortality in cancer diagnosed on CT A/P
Number of Patients	177	47	10	5	4

Abstract P25 Figure 1 Number of patients presenting with PE depending on cancer diagnosis

Methods We conducted a retrospective review of patients diagnosed with new PE at Milton Keynes hospital between August 2014 and 2015 to determine the proportion of patients found to have malignancy after CT. Selected patient notes were interrogated for clinical and laboratory findings at the time of diagnosis, and for details of subsequent management.

Results 177 patients were included in our study. 102 received a CT A/P, 88 of whom did not have an established diagnosis of cancer. Out of the 88, 5 new diagnoses of cancer were made. In 10 cases, CT revealed incidental findings. 8 patients received further imaging, and 2 investigated with invasive procedures. 4 of the 5 new cancer diagnoses had abnormal findings after basic screening.

Standardised incidence ratios were calculated to assess the probability of presence of undiagnosed cancer in patients presenting with PE. Our data showed no significant increase in the incidence of cancer in patients presenting with PE compared to national cancer statistics (SIR of 0.75 in males (CI: 0.2–0.64) and 1.0 in females (CI: 0.23–0.56) aged 70–79).

Discussion Our data suggests that in patients presenting with acute PE, clinical acumen (as outlined by NICE) can be used to identify patients with potential malignancy. Our data would support limiting CT A/P to patients with significant clinical features or deranged tests.

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P26 CT ABDOMEN AND PELVIS FOR UNPROVOKED PULMONARY EMBOLISM – WHAT IS THE BEST PRACTICE?

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Background NICE guidelines advocate further investigations for cancer with an abdomino-pelvic CT scan (CT A/P) in all patients aged over 40 years with a first unprovoked deep vein thrombosis (DVT) or pulmonary embolism (PE) who do not have signs or symptoms of cancer based on initial investigation.[1] Recent prospective study showed no difference between 'limited' screening and CT A/P in diagnosing occult cancer.[2] We aimed to establish whether the number of new malignancies detected justified the risk of radiation exposure from performing a CT A/P in patient with unprovoked PE.

Methods We performed a retrospective analysis of all CT Pulmonary Angiograms (CTPA) performed during a one year period (2014–2015) in a district general hospital. Records of those patients with confirmed pulmonary embolism on CTPA (n = 254) were examined to ascertain whether performing CT A/P increased the detection rate of occult malignancy.

Results 124 (49%) out of a total 254 patients had an acute unprovoked PE. Of these, 6 patients were under the age of 40 years. Out of the remaining 118 patients, 80 (68%) patients underwent CT A/P. Unexpected malignancy was found in 3 (4%) of these 80 patients. No evidence of malignancy has been found in those patients that did not undergo CT A/P (n = 38) so far based on the follow up clinical encounters – both as an in-patient and outpatient.

Conclusion Our data support the finding that the routine use of CT A/P in patients with unprovoked PE doesn't detect significant number of occult malignancies.

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P27 EVALUATION AND BASELINE CHARACTERISTICS OF PATIENTS WITH CHRONIC THROMBOEMBOLIC DISEASE IN A SINGLE REFERRAL CENTRE

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Introduction Chronic thromboembolic disease (CTED) is a consequence of failure of thrombus resolution following pulmonary embolism. Thrombotic material becomes fibrosed, resulting in chronic vascular occlusion without pulmonary hypertension. The prevalence and incidence of the condition is unknown and the mechanisms behind exercise intolerance are poorly understood. Surgical management in selected cases may significantly improve symptoms and patient functioning.[1]

Methods We prospectively evaluated baseline characteristics of patients with CTED in a single referral centre between January 2015 and June 2016. Newly referred patients with suspected CTED underwent a standard assessment as delineated in international guidelines with a minimum of 2 imaging modalities, resting and exercise right heart catheterisation and additionally incremental cardiopulmonary exercise testing (CPET). All patients were assessed in a pulmonary endarterectomy (PEA) MDT.

Results 128 patients were diagnosed with CTEPH or CTED from our referral centre. 28 patients were referred with suspected CTED due to ECHO findings. Of these 21 patients were confirmed to have CTED at right heart catheterization and 16 underwent full investigation protocol and were analysed. Patients with CTED were younger than contemporary cohorts of CTEPH[2] and were more likely to have a past medical history of VTE (94%). Patients with CTED had normal resting haemodynamics, preserved RV function at rest and normal NT-proBNP (Table1). After careful review of each patient's investigations only 5 of the 21 patients with CTED were offered PEA.

Conclusions Patients with CTED represent a significant proportion of the new referrals to our specialist centre. Surgery is deemed an appropriate therapeutic approach in a small subset of patients with significant functional and symptomatic impairment. The natural history of CTED is unclear so any discussion of surgery needs to carefully consider surgical risk of death and morbidity against the potential for symptomatic improvement.