Abstract P27 Table 1 Baseline characteristics and results of invasive and non-invasive investigations.

Gender M/F	11 (69)/5 (31)
Age [years] Median, IQR	53, 46.6–61.5
WHO class I/II/III	2/9/5
NT-proBNP [pg/ml] Mean $\pm$ SD	76.87 $\pm$ 81
6MWT Median, IQR	444, 366–521
• Distance [m]	1.5, 1–3.75
• Δ SpO ₂	
mPAP [mmHg] Median, IQR	20.5, 18–23
PVR [dyn·s·cm ⁻⁵] Median, IQR	158, 112–195.7
PAWP [mmHg] Median, IQR	10.5, 8–12
CO [L/min] Median, IQR	5.35, 4.1–5.8

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P28

CHRONIC THROMBOEMBOLIC PULMONARY HYPERTENSION: LONG TERM OUTCOMES IN SURGICAL AND NON-SURGICAL PATIENTS

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Introduction Chronic thromboembolic pulmonary hypertension (CTEPH) is commonly associated with a history of venous thromboembolism. Pulmonary endarterectomy (PEA) offers a potential cure in surgically accessible disease. However, a significant proportion of patients with CTEPH may not undergo surgery due to various reasons including disease distribution, comorbidities and patient choice. This group of patients have previously been considered to have a poor outcome although an international registry has recently reported on improved medium term outcomes in this patient population.

Aims and objectives To compare long term survival of patients with CTEPH undergoing pulmonary endarterectomy (CTEPH-surgical-operated), surgically accessible disease not undergoing pulmonary endarterectomy (CTEPH-surgical-not-operated), surgically inaccessible disease (CTEPH-non-surgical).

Methods Data was retrieved from hospital records and departmental database for consecutive, treatment-naïve patients with CTEPH diagnosed between 1st January 2001 and 30th November 2014 and followed up till 30th November 2015 at the Sheffield Pulmonary Vascular Disease Unit and collected in the ASPIRE registry. Patients with suspected CTEPH undergo systematic evaluation but formal pulmonary angiography is only performed when other imaging modalities such as CTPA, MR imaging and nuclear medicine imaging are non-diagnostic.

Results 592 patients, mean age ($\pm$ standard deviation), 65 $\pm$ 22 years, mean pulmonary arterial pressure 48 $\pm$ 13 mmHg and median pulmonary vascular resistance 480 $\pm$ 463 dynes/cm⁵ were identified and followed for 4.3 $\pm$ 3.2 years. 5 year survival was significantly ($p < 0.001$) better in CTEPH-surgical-operated ($n = 279$) at 82.9 $\pm$ 3.1% compared to CTEPH-surgical-not-

operated ($n = 206$) at 44.4 $\pm$ 5% (66.7 $\pm$ 9.1% patient choice, 39.4 $\pm$ 6% comorbidities) and 53.4 $\pm$ 5.8% in CTEPH-non-surgical ($n = 107$). Only 4% of the patients in our study were investigated with conventional pulmonary angiography. The median time to PEA surgery from diagnosis was 10.2 months and did not affect long term survival ($p = 0.52$).

Conclusions For operable patients with CTEPH pulmonary endarterectomy is associated with an excellent long term outcome, the long-term survival of patients with surgical disease who decline surgery is significantly better than historically reported and that a non-invasive multimodality imaging approach can be used to assess patients with suspected CTEPH. Furthermore there is no time from diagnosis to surgery which predicts outcome.

Surgical Operated	279	272	228	196	151	122
Surgical Nonoperated	206	166	110	79	57	44
Non surgical	107	96	84	63	49	39
Overall	592	534	422	338	257	205

Abstract P28 Figure 1 Kaplan-Meier estimates survival from date of diagnosis in CTEPH, surgical, operated, CTEPH, surgical, not-operated and CTEPH, non-surgical patients, log-rank test, $p < 0.001$

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EXERCISE INTOLERANCE IN CHRONIC THROMBOEMBOLIC DISEASE: EVALUATION, UNDERLYING MECHANISMS AND CLINICAL IMPLICATIONS

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Introduction Patients with chronic thromboembolic disease (CTED) without pulmonary hypertension commonly present with dyspnoea and fatigue. These symptoms limit physical function and impair quality of life. As resting haemodynamics in these patients are normal or near normal, stress testing may be a useful investigation to clarify mechanisms of functional impairment.

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 guidelines¹ with a minimum of 2 imaging modalities, resting and exercise right heart catheterisation (RHC) and additionally incremental cardiopulmonary exercise testing (CPET). All patients were assessed in a pulmonary endarterectomy MDT.