

Clinical characteristics and long-term survival of CTEPH patients treated with multimodal therapy – data from a nationwide database

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Background and aim

• Management of CTEPH has significantly changed and is now multimodal with an individualized combination of pulmonary endarterectomy (PEA), balloon pulmonary angioplasty (BPA) and medical therapy.

• We report clinical characteristics and survival of all adult CTEPH patients diagnosed in the Czech Republic between **2017 – 2022**.

METHODS

• All newly diagnosed CTEPH patients treated based on a multidisciplinary team discussion.

• Survival from diagnosis was estimated using Kaplan-Meier analysis.

• Data have been descriptively **compared with the historical CTEPH cohort** (patients diagnosed between 2003 and 2016 when the main treatment option was limited to PEA)

Patient profile

• N = 321 patients

Characteristic	2017–2022	2003–2016
Age, median	66.9 y	65.2 y
Male sex	53 %	55 %
NYHA III–IV	80 %	92 %
6MWD, median	404 m	336 m
1st PE → CTEPH diagnosis, median	1.0 y	2.2 y

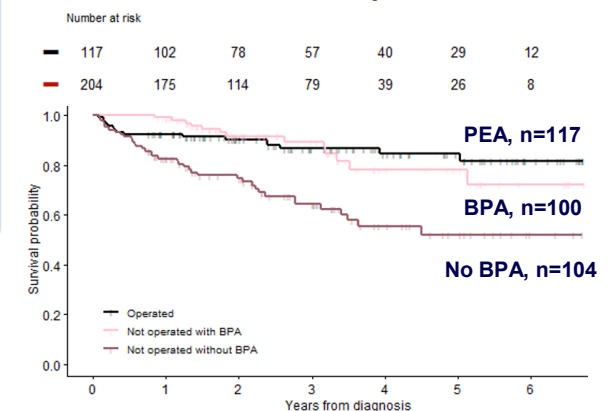
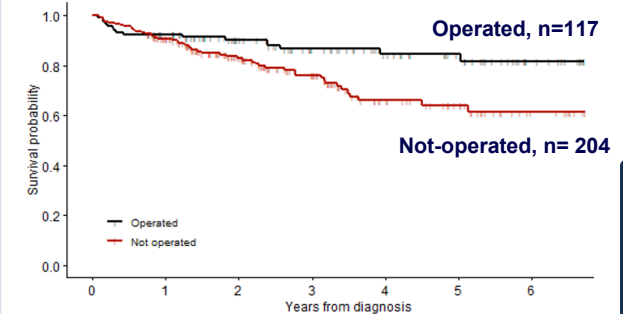
Comorbidity burden

Common comorbidities included arterial hypertension (66.9%), COPD (21.6%), diabetes (20.9%), sleep apnoea (19.7%), atrial fibrillation/flutter (24.0%), ischemic heart disease (17.2%), and cancer (11.6%).

Median follow-up from diagnosis: 2.4 years.

Treatment and survival

• 117 patients (36 %) underwent surgery
• At least one session of BPA was performed in 100 not operated patients (31 %), in 66 patients in combination with medical therapy (66 %)



3-year SURVIVAL

Overall 80 %
PEA 87 %
Not-op. 76 %
- BPA 89 %
- No-BPA 64 %

CONCLUSION & DISCUSSION

In the contemporary multimodal era, CTEPH patients appear to be diagnosed earlier and with less advanced functional impairment than in the historical cohort. Outcomes remain excellent in operated patients, while prognosis in non-operated patients is strongly influenced by treatment strategy and by the substantially higher burden of comorbidities. BPA-treated patients showed markedly better survival than those managed conservatively.