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ABSTRACTS BOOK

A dissected model of pulmonary arteries

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Introduction. Diagnosis of pathology and planning of interventional procedures require knowledge of normal pulmonary artery anatomy on angiographic images in different planes. The image interpretation is paramount in diagnosis and treatment of CTEPH where the gold standard diagnostic method includes 2-dimensional pulmonary angiography. As innumerable variations of vascular branching exist, studying the topography of pulmonary arteries is imperative.

Objectives. Our study aimed to describe branching of pulmonary arteries and their course in a single case model. Evaluation of differences between right and left lung was intended. Morphometry of different branches was assessed, which included arteries' diameters, lengths and branching angles.

Materials and Methods. One human cadaver was dissected, provided by Laboratory of Anatomy and Anthropology, Riga Stradiņš University. Both lungs were removed from the body intact. Then the lungs were dissected starting from hilum by removing lung parenchyma, bronchi and veins. In the process scalpel and surgical forceps were used. A digital caliper was used to measure the revealed pulmonary arteries' lengths and diameters; plastic protractor was used for the angle measurements. After the dissection the arteries were painted with red acrylic paint for better visualization.

Results. Pulmonary arteries in left and right lungs form two distinct patterns. The right pulmonary artery early splits into two equally large branches, while the left pulmonary artery gives off smaller branches and continues its course caudally. It was noted that multiple branches can supply a single segment. Pulmonary segmental arteries differ in diameters several times (3.04mm-9.29mm). The branching angles were wide proximally, while they became narrower in periphery.

Conclusions. Although pulmonary segments in both lungs are named similarly, the course of arteries in them differ. Medical interventions like pulmonary angiography can be challenging due to high degree of variability; although, studying the detailed anatomy might aid in performing invasive procedures quicker and safer.

The impact of pulmonary arterial hypertension–specific medication availability on patient's age at death in Lithuania

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Introduction: Pulmonary arterial hypertension (PAH)–specific therapies have significantly improved patient survival rates over the past decades. However, in Lithuania, due to the absence of reimbursement policies, access to PAH treatment was limited prior to 2014. Since 2016, PAH-specific medications have been fully implemented into clinical practice and are fully reimbursed, improving treatment accessibility.

The aim of the study: To evaluate the impact of PAH-specific medication availability on the mortality rate and the age at death of patients with PAH in Lithuania.

Methods: The data on medication prescriptions, mortality rates, and age at death from the Institute of Hygiene and the State Data Agency of Lithuania for patients diagnosed with PAH (ICD-10-AM codes I27.0 and I27.8) from 2016 to 2024 have been analyzed.
The Chi-square test was applied for mortality analysis. To analyze differences in age at death, Student's t-test for two independent samples was used. To assess the relationship between quantitative variables, correlation analysis and linear regression analysis were applied.

Results: In 2024, a total of 659 patients had a PAH diagnosis, of whom 249 (37.8%) were receiving PAH-specific medications. At least one PAH-specific medication was prescribed to 178 (71.5%) female and 71 (28.5%) male patients. The prevalence of patients receiving PAH-specific treatment in Lithuania in 2024 was 86.3 per 1,000,000 inhabitants. Among the 249 treated patients, 47.0% received sildenafil monotherapy, 33.7% received a combination of sildenafil and an endothelin receptor antagonist, 13.7% were on triple PAH-specific therapy (including selexipag or treprostinil), and 5.6% received other treatment regimens due to specific medical considerations. The mortality rate from 2009 to 2024, based on confirmed causes of death (ICD-10-AM codes I27.0 and I27.8), ranged from 3% to 10% annually, with no statistically significant difference observed between periods with and without access to PAH-specific medications ($p > 0.05$). The mean lifespan of patients (both male and female) increased from 69.88 ± 15.34 years in 2015 to 75.06 ± 12.77 years in 2024 ($p = 0.002$), with a coefficient of determination of 0.739.

Conclusions: A substantial part of pulmonary arterial hypertension (PAH) patients in Lithuania are treated with sildenafil monotherapy only. The reimbursement of PAH-specific therapies may have contributed to the increased duration of life in PAH patients. There was no statistically significant difference of mortality rates during the period with and without access to PAH-specific medications.

Pulmonary hypertension in ILD: is IPF a higher-risk subgroup?

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Introduction: Pulmonary hypertension (PH) is a recognized complication of interstitial lung diseases (ILDs), but its prevalence and features across ILD subtypes, especially idiopathic pulmonary fibrosis (IPF), remain unclear.

Objectives: To evaluate PH in ILD patients and determine whether IPF patients represent a higher-risk subgroup.

Materials and Methods: We prospectively assessed 47 ILD patients (30 IPF, 17 other ILDs). Fibrosis extent was comparable between groups on HRCT. All underwent echocardiography, laboratory tests, pulmonary function tests, and 6-minute walk tests. Cardiac MRI was performed in 28 patients.

Results: IPF patients had more impaired gas exchange (lower DLCO: 42.4% vs. 51.5%, p=0.032) and reduced exercise capacity (peak VO_2: 12.3 vs. 16.3 ml/kg/min, p=0.003). They exhibited lower PaO_2 (76.9 vs. 86.6 mmHg, p=0.035) and higher RDW-SD (44.1 vs. 33.5, p=0.025). Pre- and post-6MWT SpO_2 levels were significantly lower in IPF. Echocardiography showed larger pulmonary artery diameters, greater right atrial areas, and shorter pulmonary acceleration times. Cardiac MRI revealed higher PA maximal flow velocities.

	Parameters	IPF (n=30)	Other ILDs (n=17)	P value
Pulmonary function				
	DLCO (% predicted)	42,39±13,87	51,47±12,44	0,032
	PeakVO_2 (ml/kg/min.)	12,28±3,26	16,29±5,50	0,003
	Max performance (% predicted)	48,97±15,75	68,71±16,39	<0,001
Laboratory tests				
	PaO_2 (mmHg)	76,97±12,30	86,60±16,68	0,035
	RDW-SD	44,09±12,75	33,54±15,72	0,025
6 minute walk test				
	Distance (m)	376,97±108,46	419,81±119,99	NS
	Pre-test SpO_2 (%)	94,87±4,94	97,06±1,95	0,038
	Post-test SpO_2 (%)	88,47±9,10	94,13±6,26	0,017
Echocardiography				
	mPAP (mmHg)	27,56±7,40	28,07±10,57	NS
	Main PA diameter (cm)	3,03±0,08	2,62±0,42	0,013
	RA area (cm^2)	23,05±5,86	16,76±2,52	0,002
	RVOT prox diameter (cm)	3,58±0,31	3,27±0,27	0,009
	RVOT dist diameter (cm)	2,93±0,32	2,54±0,42	0,008
	PV ActTime (ms)	88,19±16,54	122,35±25,94	<0,001
Cardiac MRI		n=23	n=5	
	PA max flow (cm/s)	71,59±21,95	55,75±9,39	0,037

Conclusions: Our results suggest that IPF may represent a higher-risk ILD subgroup with respect to pulmonary hypertension development and overall disease severity.

Assessing PH-ILD: Pulmonary Function, CPET, and Echocardiographic Correlations

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Introduction:
Interstitial lung diseases (ILDs) are a major cause of Group 3 pulmonary hypertension (PH). Although treatments like inhaled treprostinil offer new hope, limited evidence exists to guide ILD patient selection for PH testing.

Objectives:
To assess how pulmonary function tests (PFT) or cardiopulmonary exercise testing (CPET) could help identify ILD patients needing further PH evaluation.

Materials and Methods:
A prospective observational study was conducted. 32 patients with fibrotic ILDs underwent PFT, CPET, and expert echocardiography. 17 patients had idiopathic pulmonary fibrosis, 6 connective tissue disease-associated ILD, 3 progressive nonspecific interstitial pneumonia, 3 fibrotic hypersensitivity pneumonitis, 3 fibrotic pulmonary sarcoidosis.

Results:
CPET showed no significant differences between patients with and without echocardiographic PH signs, though peak VO_2 trended toward significance (p=0.056), possibly limited by small sample size In contrast, PFT results showed significant differences in TLC and DLCO, both lower in patients suspected of PH.

	No echocardiographic PH signs (n=19)		Elevated echocardiographic PH probability (n=13)		
PFT results					
	Mean	SD	Mean	SD	p value
FEV1, proc.	88,63	18,91	89,15	17,12	NS
FVC, proc.	90,47	18,49	84,38	15,60	NS
TLC, proc.	81,16	9,95	66,69	14,84	0,006
VC, proc.	96,37	29,99	88,85	18,47	NS
DLCO, proc.	55,47	12,99	44,25	8,94	0,008
DLCO decline in 3-6 months, proc.	-1,53	11,1	-4,75	8,40	NS
CPET results					
Maximal load, W	82,58	37,87	60,69	32,11	NS
Predicted max load, proc.	63,63	19,02	53,15	20,89	NS
VO_2, L/min.	1,14	0,41	0,87	0,34	NS
VO_2 max, ml/kg/min.	15,41	5,53	12,59	4,00	NS
Predicted VO_2 max, proc.	82,58	37,97	60,69	32,11	NS
AT, L/min.	0,84	0,33	0,84	0,23	NS
VE/VCO_2	41,58	11,52	48,00	9,62	NS

Conclusions:
TLC and DLCO correlate with echocardiographic indicators of PH in ILD patients, suggesting these PFT parameters may help select candidates for PH screening.

Clinical Outcomes of Percutaneus Mechanical Thrombectomy for Acute Pulmonary Artery Thromboembolism

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Introduction: Mechanical thrombectomy is a catheter-directed treatment designed to remove thrombus from pulmonary arteries without the use of thrombolytics. This method provides a safe option for patients who are not eligible for thrombolytic therapy. In addition to minimizing bleeding risk, mechanical thrombectomy also contributes to hemodynamic improvement.

Objectives: To evaluate the safety of percutaneous mechanical thrombectomy by analyzing the incidence rate of complications such as blood loss, vascular injury and other adverse events associated to this treatment. The efficacy of the procedure will be assessed by evaluating changes in hemodynamic parameters, respiratory function and laboratory test results.

Methods: We conducted a retrospective study to evaluate the clinical outcomes of patients at The Hospital of Lithuanian University of Health Sciences who underwent percutaneous mechanical thrombectomy for acute pulmonary embolism (PE) using the 12F Indigo System (Penumbra). All adult patients who received the treatment between October 2023 and March 2025 were included in the study.

Results: Mechanical thrombectomy was performed for patients with a heart rate greater than 100 beats per minute without beta-blocker therapy and/or a respiratory rate greater than 20 breaths per minute. A total of 12 patients (mean age 68 ± 14 years, 67 % women) with intermediate-high-risk PE underwent mechanical thrombectomy.

Conclusions: Treatment of pulmonary embolism (PE) with percutaneous mechanical thrombectomy followed by intravenous heparin administration resulted in a reduction of right ventricular overload, as evidenced by significant improvements in vital signs, including decreased heart rate and respiratory rate. The mortality rate in this cohort was 0 %. This treatment approach demonstrated an acceptable safety profile, with no major complications reported. In this study, complications were primarily associated with the severity of the patients' conditions and the extent and complexity of comorbidities, rather than with procedural learning curve.

The Prognostic Value of Right Ventricle–Pulmonary Artery Coupling for one- and three-year Survival in Patients with Precapillary Pulmonary Hypertension

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Introduction. There is a growing interest in right ventricle (RV) function and RV–pulmonary artery (PA) coupling in patients with pulmonary hypertension (PH). While studies have shown correlation between TAPSE/PASP and pulmonary vascular resistance (PVR) in precapillary PH patients, the prognostic value of RV–PA coupling, as well as possible additional echocardiographic parameters representing RV function and coupling or uncoupling, remains underexplored.

Objectives. The objective of this study was to assess the prognostic value of 2D echocardiographic parameters focusing on the right heart. We aimed to determine the predictive value of RV function and RV–PA coupling at baseline for one- and three-year survival in patients with precapillary PH.

Materials and Methods. In this retrospective study 55 patients diagnosed with precapillary PH (groups 1 and 4) were included. The median age at the time of diagnosis was 57.5 years. Among them, 16 were male (29.1 %), and the remaining 70.9% were female. The median of mean pulmonary arterial pressure (mPAP) was 43 mmHg, pulmonary capillary wedge pressure 10.0 [6.0-11.0] mmHg. Specific treatment for PH did not differ between the survivor and non-survivor groups. Baseline 2D echocardiographic parameters were analyzed. Statistical analysis was performed to identify predictive parameters.

Results. One-year survival was 78.2%, three-year survival was 50.9%. Survival rates did not differ between gender groups. In one-year survival analysis, a tendency towards lower RV fractional area change (FAC) in the non-survivor group was observed; however, the difference was not statistically significant (29.3 [24.2-34.3] % vs. 22.8 [21.0-30.9] %, p=0.087). A similar trend was observed for RV free wall longitudinal strain (FWLS), as baseline values were lower in the one-year non-survivor group compared to the survivor group (-12.9 [-10.2-(-18.2)] % vs. -10.9 [-9.28-(-12.3)] %, p=0.051). At three-year follow-up, several parameters demonstrated significant differences between the analysed groups. Tricuspid annular plane systolic excursion (TAPSE) was higher in the survivor group (17.0 [16.0–19.0] mm) compared to the non-survivor group (15.0 [12.8–17.0] mm), p=0.019. TAPSE/pulmonary artery systolic pressure(PASP) ratio was also higher among survivors (0.23 [0.15-0.37] mm/mmHg) versus non-survivors (0.16 [0.13-0.21] mm/mmHg), p=0.031. In addition, the S'/PASP ratio was higher in the survivor group (0.12 [0.089-0.21] vs 0.10 [0.070-0.13], p=0.046).

Conclusions. Right ventricle FWLS and FAC at baseline could have a predictive value in association with one-year mortality; however, stronger evidential support is still needed. RV-PA uncoupling (TAPSE/PASP, S'/PASP) as well as reduced RV longitudinal function (TAPSE, S') at baseline indicate an unfavorable three-year prognosis.

The Effect of Dual Bronchodilation on Right Ventricular Strain in Patients with Newly Diagnosed Moderate COPD

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Introduction: In patients with chronic obstructive pulmonary disease (COPD) hyperinflation contributes to development of right ventricular (RV) dysfunction. The assessment of RV strain might be useful to evaluate the efect of lung deflation with dual bronchodilation on right-sided cardiac function in COPD patients.
Objectives: To evaluate the effect of dual bronchodilation on lung function and RV strain in patients with newly-diagnosed moderate COPD.

Methods: Body plethysmography, two-dimensional speckle tracking echocardiography (2DSTE) and cardiac magnetic resonance imaging (MRI) were performed before and after 12 weeks of treatment with dual bronchodilation.

Results: Twenty-six patients with newly-diagnosed moderate COPD were enrolled. After 12 weeks of dual bronchodilation there was a significant improvement in functional residual capacity from 133.5% [IQR 41.5] to 122% [IQR 32.25] (p=0.015). In 2DSTE (n=22) the change in RV free-wall longitudinal strain (from -24.75% [IQR 5.25] to -26% [IQR 4.88], p=0.008) and RV global longitudinal strain (from -21.5 [IQR 3.3] to -22.45 [IQR 2.18], p=0.032) were observed. In cardiac MRI (n=24) RV global longitudinal strain improved from -22.72% [IQR 7.19] to -23.97% [IQR 7.51] (p=0.037).

Conclusions: Both cardiac imaging techniques show minor but positive changes in RV strain after 12-weeks of treatment with dual bronchodilation in patients with newly-diagnosed moderate COPD. These findings emphasize the importance of early COPD treatment, as RV dysfunction develops with the progression of COPD.

Commitment to Pulmonary Hypertension Care: the Story of the Pulmonary Hypertension Reference Centre at Vilnius University Hospital Santaros Klinikos

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Introduction
The Pulmonary Hypertension (PH) Reference Centre at Vilnius University Hospital Santaros Klinikos (VUH SK) was established in 2010, while the journey of interest in PH at VUH SK started over 60 years ago.

Objectives
The aim of this report is to present the development of VUH SK PH Reference Centre and to highlight the most important stages of this centre's history.

Materials and Methods
A retrospective time line review of the first-time events of the VUH SK PH Reference Centre was conducted.

Results
The diagnostic pathway of PH at VUH SK began in 1964, with the first right heart catheterization performed at the institution.
In 2008, a dedicated PH working group was established under the leadership of Assoc. Prof. Dr. Alicija Dranenkienė. This initiative led to the formation of the PH Reference Centre in March 2010.
The timeline presented in the poster refers to diagnostic and treatment facilities started in VUH for the first time in the context of international recommendations for PH: the first consecutive administration of specific therapy to VUH SK PH patients, the first endarterectomy and balloon angioplasty procedures performed in Lithuania, establishment of PH rehabilitation program.
Research and educational activities performed at our centre are also highlighted in the timeline: the publication of practical recommendations for the diagnosis and treatment PH; the initiation and organization of 1st Lithuanian PH Conference held in Vilnius; attendance in Baltic PH conferences; participation in international registries and studies; becoming a member of the European Reference Network on Rare Respiratory Diseases.

Conclusions
The PH Reference Centre at VUH has been developing since 2010, following international guidelines and introducing innovative diagnostic and treatment methods. The timeline highlights key clinical achievements, as well as the Centre's involvement in research, education, and international collaboration, contributing to the advancement of PH care in Lithuania.

Higher Spesi Scores are Associated with Increased Risk of Elevated RVSP Suggestive of Pulmonary Hypertension

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Introduction: Pulmonary hypertension is a serious yet frequently overlooked complication of acute pulmonary embolism. Although sPESI is used to assess PE mortality risk, its relationship with concurrent PH is unclear.

Objective: To describe the prevalence of pulmonary hypertension depending on simplified Pulmonary Embolism Severity Index(sPESI) scores in patients diagnosed with acute pulmonary embolism. To assess the relationship between sPESI scores and echocardiographic findings of pulmonary hypertension.

Materials and Methods: A retrospective cohort study using data of 203 patients from the Latvian centre of the RIETE registry, comprising information from medical histories and echocardiography results at the time of hospitalization for pulmonary embolism confirmed via imaging. The sPESI score was calculated for every patient, and patients were categorized based on echocardiographic RVSP into groups with RVSP ≥50 mmHg and RVSP <50 mmHg, with the 50-mmHg threshold selected according to the 2022 ESC/ERS Guidelines for Pulmonary Hypertension.

Results: Of 203 PE patients with complete data, 21.2% demonstrated elevated RVSP (≥50 mmHg) on echocardiography at the time of PE diagnosis, suggestive of possible pulmonary hypertension. sPESI scores were associated with increased RVSP at presentation, rising from 13.2% in patients with sPESI 0 to 38.9% in those with sPESI 3. Logistic regression showed that sPESI score was a significant predictor of elevated RVSP ($p = 0.02$, OR = 1.51). The ROC AUC was 0.61. While sPESI alone exhibited limited discriminative power, higher sPESI scores were significantly associated with elevated RVSP, indicating a potential increased risk of pulmonary hypertension.

Conclusions: Higher sPESI scores are associated with increased prevalence of suspected pulmonary hypertension in acute pulmonary embolism patients. While not a standalone screening tool, sPESI may help identify patients who warrant further evaluation for PH.

Exploratory outcomes of CS1 in Pulmonary Arterial Hypertension: Phase 2A, Prospective, Randomized, Open-Label, Multicenter Trial

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Introduction: CS1 is a novel oral controlled-release formulation of the Class I histone deacetylase inhibitor valproic acid (VPA). Preclinical models of pulmonary arterial hypertension (PAH) have documented that VPA reduces pulmonary artery pressure and reverses pathological vascular remodeling. A Phase 1 study in healthy volunteers showed that CS1 was well-tolerated with a favorable safety profile.

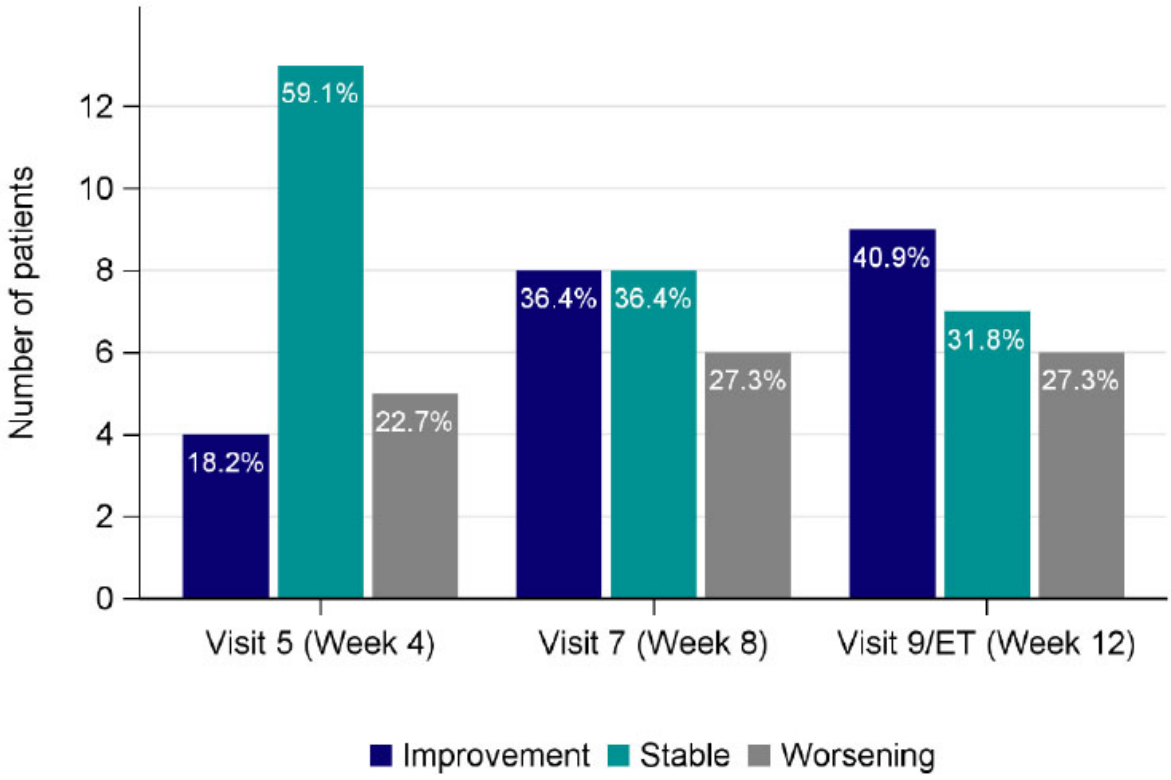
Objectives: The primary endpoint of the study was safety and tolerability of CS1, and exploratory endpoints included parameters of risk, functional class, and quality of life in patients with PAH.

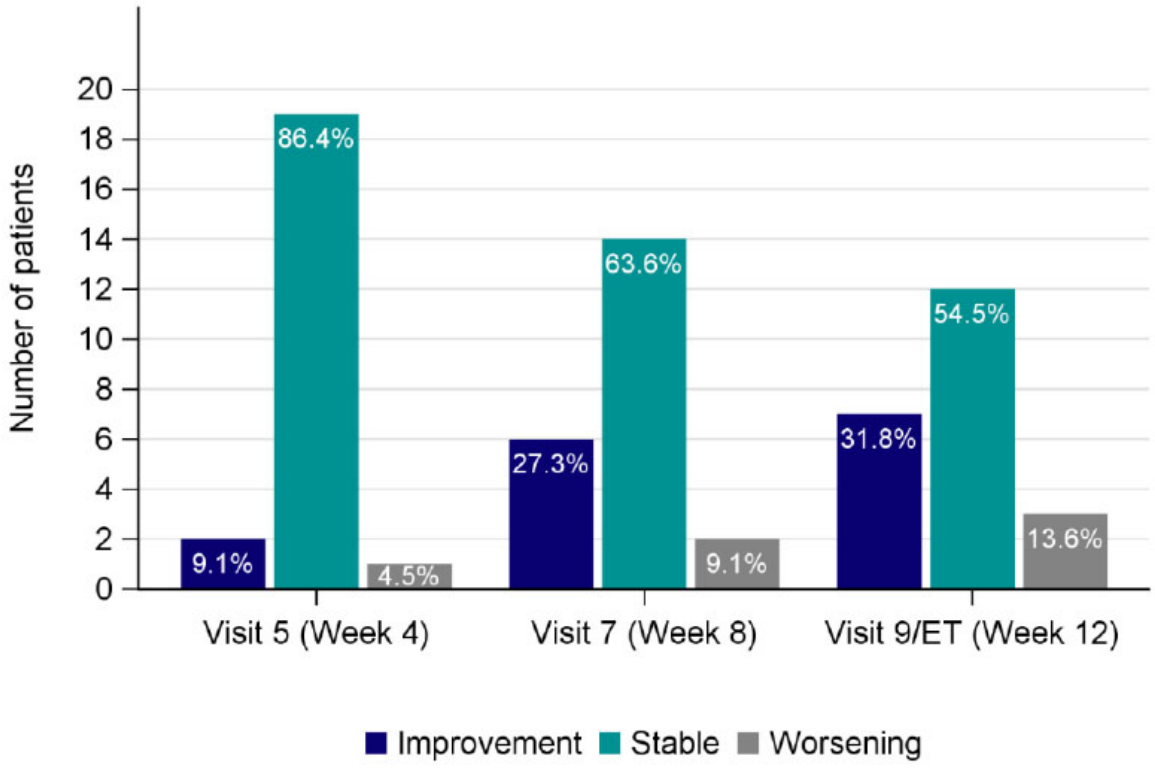
Materials and methods: Patients with symptomatic PAH (WHO functional class II-III; six-minute walk distance [6MWD] ≥150 m and <550 m) and a REVEAL Risk Score 2.0 of 6–10 on stable standard of care treatment for 3 months were randomized 1:1:1 to CS1 at doses of 480, 960, or 1920 mg/day for 12 weeks of treatment. Results were pooled from all three dose groups.

Results: 25 patients were randomized to study treatment (19 females [76.0%]; mean age 54 years). Baseline mean (standard deviation [SD]) 6MWD was 368.2 m (9.13) and 76% of patients were on ≥2 PAH medications at the start of the study. After 12 weeks, REVEAL Risk Score 2.0 was improved from baseline in 40.9% of patients and stable in a further 31.8% of patients (Figure 1A). A total of 31.8% and 54.5% of patients improved or maintained their WHO functional class, respectively (Figure 1B). The majority of patients (71%) have shown an improvement in quality of life as measured by the Minnesota Living with Heart Failure Questionnaire (MLHFQ).

Conclusions: These findings suggest that treatment with CS1 in patients with PAH may improve risk score, functional class and quality of life, and warrants further study.

Figure 1. Change in (A) REVEAL Risk Score 2.0 and (B) WHO functional class over time





ET, end of treatment

Quality of Life in Patients with Pulmonary Hypertension Treated at the Vilnius Pulmonary Hypertension Reference Centre

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Introduction
Pulmonary hypertension (PH) is a debilitating pathophysiological condition that significantly impairs patients' quality of life (QoL). Despite the improving survival of PH patients, QoL deteriorates as the condition progresses.

Objectives
This study aimed to evaluate the quality of life (QoL) of PH patients at Vilnius University Hospital Santaros Klinikos.

Materials and Methods
A retrospective analysis included 143 adult PH patients (≥18 years), diagnosed per 2022 ESC/ERS guidelines, who completed at least one QoL assessment (EmPHasis-10 or EQ-5D-5L).

Results
PAH was present in 56.6% (*n* = 81) of patients - mainly PAH-CHD (51.9%), IPAH (24.7%), and PAH-CTD (19.8%). CTEPH was found in 69.1% (*n* = 56). Monotherapy was used in 60.1% (*n* = 86), mostly in CTEPH (*n* = 51), PAH (*n* = 30), and combined PH (*n* = 5), followed by dual (29.4%, *n* = 42) and triple therapy (10.5%, *n* = 15).
The mean quality of life of patients at the initial EQ-5D-5L assessment was 10.27 ± 3.69 (min. 5, max. 18 points), EQ VAS score 64.97 ± 17.55 % (min. 20%, max. 100%). EmPHasis-10 average was 23.95 ± 22.75 points.
QoL was also assessed according to PH clinical classification groups, age, gender and target therapy - no statistically significant changes were found between these groups.
A secondary evaluation using QoL questionnaires was completed by 43.4% of participants (*n* = 62). The results showed a significant deterioration in mobility ($p < 0.001$) and pain/discomfort ($p = 0.013$), while improvements were observed in self-care ($p < 0.001$), usual activities ($p < 0.001$), and anxiety/depression ($p = 0.003$).

Conclusions
PH patients often experience reduced QoL. Evaluating QoL is crucial, as it serves as a valuable indicator of a patient's current condition, treatment effectiveness, or disease progression.

Biventricular Function and Strain by Cardiac MRI Predict Five-Year Mortality in Precapillary Pulmonary Hypertension

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Introduction
Pulmonary hypertension (PH) is a rare, progressive disease that leads to right ventricular dysfunction and high mortality. Recent studies highlight the prognostic value of cardiac magnetic resonance imaging (CMRI)-derived functional and deformation parameters, which may improve risk stratification and long-term survival in patients with PH.

Objectives:
1. To evaluate the five-year survival of patients with precapillary PH, treated at the Pulmonary Hypertension Centre, Hospital of LSMU Kauno Klinikos.
2. To identify the prognostic value of baseline right and left ventricular (RV and LV) geometry, function, and deformation indices, determined by CMRI, for five-year survival in patients with precapillary PH.

Materials and methods: A retrospective study was conducted by analysing 55 patients with precapillary PH treated at The Pulmonary Hypertension Centre, Hospital of LSMU Kauno Klinikos. Clinical features at the time of diagnosis, levels of serum NT-proBNP concentration, 6-minute walking test results, and both ventricles' functional and deformation parameters determined by CMRI were assessed. Data were analysed using the IBM SPSS Statistics 29.0 software, and differences were considered statistically significant at $p < 0.05$.

Results: The five-year survival rate was 46.75%. Non-survivors had increased levels of serum NT-proBNP (1089.0 [239.0–2541.5] vs 2064.5 [1375.3–5473.5] ng/ml, p = 0.014), decreased LV global longitudinal strain (GLS) (-18.4 [-24.9–(-15.3)] vs -15.3 [-19.4–(-10.2)] %, p = 0.042), reduced RV ejection fraction (EF) (45.0 [34.5–54.0] vs 34.0 [24.3–40.8] %, p = 0.005), increased RV end-systolic volume index (ESVi) (44.0 [25.5–66.5] vs. 62.0 [48.0–88.0], ml/m^2, p = 0.007), and lower RV free wall longitudinal strain (FWLS) (-20.5 [-27.4–(-15.8)] vs -13.9 [-18.1–(-11.0)] %, p = 0.004), when compared to survivors at the time of diagnosis.
Threshold values associated with increased five-year mortality risk included NT-proBNP level of ≥ 534.5 ng/l, LV GLS ≥ -12.75%, RV EF ≤ 43.5%, RV FWLS ≥ -17.7%, and RV ESVi of ≥ 45.5 ml/m^2.

Conclusions: Reduced longitudinal strain in both ventricles and lower right ventricular ejection fraction, as determined by CMRI, are associated with a higher risk of mortality within five years following the precapillary PH diagnosis.