

# Determine Your Patients' Risk Status Using the REVEAL 2.0 Risk Calculator

	APAH-CTD	APAH-PoPH	FPAH	Score
WHO Group 1 Subgroup	+1	+3	+2	
Demographics	Males Age >60 yr +2			
Comorbidities	eGFR <60 mL/min/1.73 m <sup>2</sup> or renal inefficiency (if eGFR is unavailable) +1			
NYHA/WHO Functional Class	I -1	III +1	IV +2	
Vital Signs	SBP <110 mm Hg +1	HR >96 BPM +1		
All-Cause Hospitalizations ≤6 mo	All-Cause Hospitalizations within 6 mo +1			
6-Minute Walk Test	≥440 m -2	320 to <440 m -1	<165 m +1	
BNP	<50 pg/mL or NT-proBNP <300 pg/mL -2	200 to <800 pg/mL +1	≥800 pg/mL or NT-proBNP ≥1100 pg/mL +2	
Echocardiogram	Pericardial Effusion +1			
Pulmonary Function Test	% predicted DL <sub>CO</sub> ≤40 +1			
Right Heart Catheterization	mRAP >20 mm Hg Within 1 Year +1	PVR <5 Wood Units -1		
	Sum of above			
				+6
	Risk score			



APAH=associated pulmonary arterial hypertension; BNP=B-type natriuretic peptide; BPM=beats per minute; CTD=connective tissue disease; DL<sub>CO</sub>=diffusing capacity of the lung for carbon monoxide; eGFR=estimated glomerular filtration rate; FPAH=familial pulmonary arterial hypertension; HR=heart rate; mRAP=mean right atrial pressure; NT-proBNP=N-terminal pro-B-type natriuretic peptide; NYHA=New York Heart Association; PAH=pulmonary arterial hypertension; PoPH=portopulmonary hypertension; PVR=pulmonary vascular resistance; REVEAL=Registry to Evaluate Early And Long-term pulmonary arterial hypertension disease management; SBP=systolic blood pressure; WHO=World Health Organization.

Reference: Benza RL, et al. *Chest*. 2019;156(2):323-337.

© 2019 United Therapeutics Corporation. All rights reserved. US/DS/0350



**PAH Initiative**

Sponsored by United Therapeutics  
Committed to Improving the Lives of Patients

# Determine Your Patients' Risk Status Using the ESC/ERS Guidelines

1 point for each **low-risk** variable

2 points for each **intermediate-risk** variable

3 points for each **high-risk** variable

Variables	Low Risk (<5%*)	Intermediate Risk (5%-10%*)	High Risk (>10%*)	Score
WHO FC	I, II	III	IV	
6MWD	>440 m	165-440 m	<165 m	
NT-proBNP plasma levels	NT-proBNP <300 ng/L BNP <50 ng/L	NT-proBNP 300-1400 ng/L BNP 50-300 ng/L	NT-proBNP >1400 ng/L BNP >300 ng/L	
RAP	<8 mm Hg	8-14 mm Hg	>14 mm Hg	
Clinical signs of right heart failure	Absent	Absent	Present	
Progression of symptoms	No	Slow	Rapid	
Syncope	No	Occasional syncope	Repeated syncope	
RA area	<18 cm <sup>2</sup>	18-26 cm <sup>2</sup>	>26 cm <sup>2</sup>	
Pericardial effusion	None	None or minimal	Yes	
CI	≥2.5 L/min/m <sup>2</sup>	2-2.4 L/min/m <sup>2</sup>	<2 L/min/m <sup>2</sup>	
SvO <sub>2</sub>	>65%	60%-65%	<60%	
<b>Total Risk Score:</b>	<b>Divide the sum of all grades by the number of available variables and round to the nearest integer</b>			

**Low Risk**  
1 to <1.5

**Intermediate Risk**  
1.5 to <2.5

**High Risk**  
2.5 to 3

\*Likelihood of mortality after 1 year.

6MWD=6-minute walk distance; CI=cardiac index; ESC/ERS=European Society of Cardiology/ European Respiratory Society; FC=functional class; RA=right atrium; RAP=right atrial pressure; SvO<sub>2</sub>=mixed venous oxygen saturation.

**References:** 1. Galiè N, et al. *Eur Heart J.* 2016;37(1):67-119. 2. Kylhammar D, et al. *Eur Heart J.* 2018;39(47):4175-4181. 3. Hoeper MM, et al. *Eur Respir J.* 2017;50(2). pii:1700740.

© 2019 United Therapeutics Corporation. All rights reserved. US/DS/0350



**PAH Initiative**

Sponsored by United Therapeutics  
Committed to Improving the Lives of Patients