

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

				Score
WHO Group 1 Subgroup	APAH-CTD <b>+1</b>	APAH-PoPH <b>+3</b>	FPAH <b>+2</b>	
Demographics	Males Age >60 yr <b>+2</b>			
Comorbidities	eGFR <60 mL/min/1.73 m <sup>2</sup> or renal inefficiency (if eGFR is unavailable) <b>+1</b>			
NYHA/WHO Functional Class	I <b>-1</b>	III <b>+1</b>	IV <b>+2</b>	
Vital Signs	SBP <110 mm Hg <b>+1</b>	HR >96 BPM <b>+1</b>		
All-Cause Hospitalizations ≤6 mo	All-Cause Hospitalizations within 6 mo <b>+1</b>			
6-Minute Walk Test	≥440 m <b>-2</b>	320 to <440 m <b>-1</b>	<165 m <b>+1</b>	
BNP	<50 pg/mL or NT-proBNP <300 pg/mL <b>-2</b>	200 to <800 pg/mL <b>+1</b>	≥800 pg/mL or NT-proBNP ≥1110 pg/mL <b>+2</b>	
Echocardiogram	Pericardial Effusion <b>+1</b>			
Pulmonary Function Test	% predicted DL <sub>CO</sub> ≤40 <b>+1</b>			
Right Heart Catheterization	mRAP >20 mm Hg Within 1 Year <b>+1</b>	PVR <5 Wood Units <b>-1</b>		
	<b>Sum of above</b>			
				<b>+6</b>
	<b>Risk score</b>			



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.

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# 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.

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