



# PULMONARY HYPERTENSION

Pulmonary hypertension (PH) is a collection of different conditions, that requires individualized therapy/treatment for each group.



## Epidemiology

PH is very common and affects **1% of the general population**



The prevalence of PH rises to **10% in patients over 65 yo**



WHO group II and III PH are by far **the most common categories**

**PAH targeted therapies are NOT indicated** for WHO group II and III PH

## Types/Groups

### Updated clinical classification of PH

#### Group 1: PAH

- 1.1 Idiopathic PAH
- 1.2 Heritable PAH
- 1.3 Drug- and toxin-induced PAH
- 1.4 PAH associated with: associated with: connective tissue disease, HIV infection, portal hypertension, congenital heart disease, schistosomiasis
- 1.5 PAH long-term responders to calcium channel blockers
- 1.6 PAH with overt features of venous/capillaries (PVOD/PCH) involvement
- 1.7 Persistent PH of the newborn syndrome



#### Group 2: PH due to left heart disease

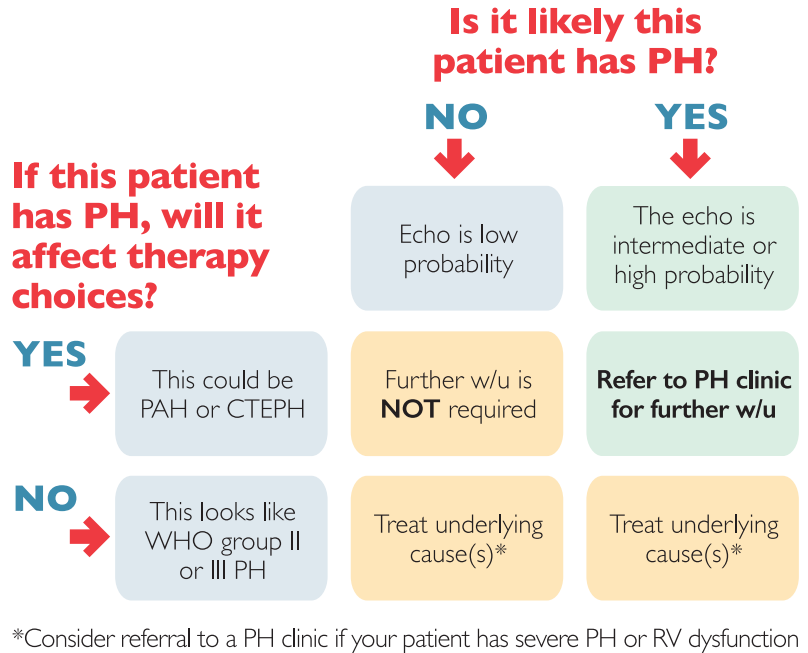
#### Group 3: PH due to lung diseases and/or hypoxia

#### Group 4: PH due to pulmonary artery obstructions

#### Group 5: PH with unclear and/or multifactorial mechanisms

## Echocardiographic probability of PH

Peak tricuspid regurgitation velocity (m/s)	Presence of other echo "PH signs" <sup>a</sup>	Echocardiographic probability of pulmonary hypertension
≤2.8 or not measurable	No	Low
≤2.8 or not measurable	Yes	Intermediate
2.9-3.4	No	
2.9-3.4	Yes	High
>3.4	Not required	



## Is this group II PH?

PH suspected by history and exam

PH on echocardiography

- |  |   |
|--|---|
| 1. Age >60 years?                        | 4. LV systolic dysfunction?                         |
| 2. Comorbidities (DM, HTN, CAD, obesity) | 5. Echo abnormalities (LAE, LVH, or significant DD) |
| 3. Valvular heart disease?               | 6. BNP markedly elevated?                           |

↓ All no

↓ 1-2 yes

↓ ≥3 yes

PAH

Probable PH from LHD

PH from LHD

↓ Required

↓ Consider

↓ Consider in select cases

Catheterization to confirm diagnosis

## Is this group III PH?

### LIMITED CLD

Obstructive LD: FEV<sub>1</sub> >60%  
Restrictive LD: FVC >70%

Physiologic severity

Minimal parenchymal CT changes

Radiographic severity

### SEVERE CLD

Obstructive LD: FEV<sub>1</sub> <60%  
Restrictive LD: FVC <70%

Extensive parenchymal CT changes

Group 1 (PAH)/classification unclear

Group 3 PH

To learn more about Pulmonary Hypertension please visit us at **CCS.CA**



**Canadian Cardiovascular Society**

Leadership. Knowledge. Community.

**Société canadienne de cardiologie**

Communauté. Connaissances. Leadership.