Q Why is RHC needed to confirm a PH diagnosis?

A Because a definitive diagnosis requires hemodynamics obtained via RHC.[1,2]

RHC provides vital information about your patient's hemodynamic function, which can confirm diagnosis of PH, including[1,2]:

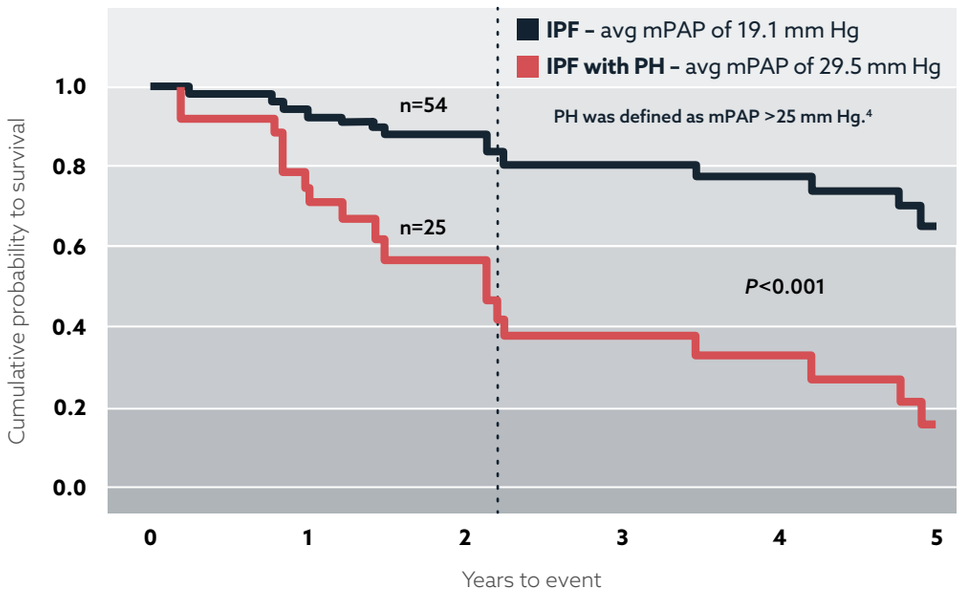
- Mean pulmonary arterial pressure (mPAP) ≥25 mm Hg
- Pulmonary arterial wedge pressure (PAWP) ≤15 mm Hg
- Pulmonary vascular resistance (PVR) >3 Wood units at rest

READ ON TO DIG DEEPER.

PH=pulmonary hypertension; RHC=right heart catheterization.

PH QUICKLY IMPACTS SURVIVAL[3]

PH reduces survival by ½ after 2 years in patients with IPF[4]



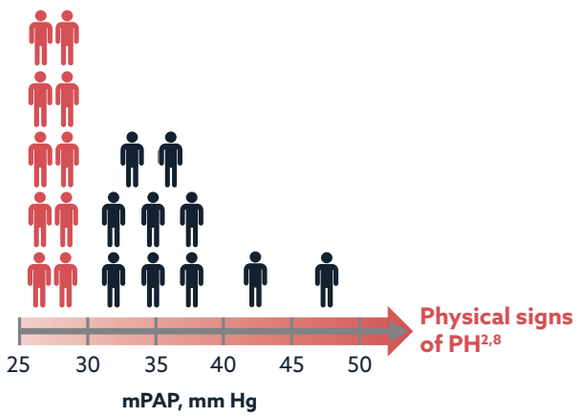
Based on a study of 79 patients with advanced IPF who were referred for lung transplant evaluation and underwent a right heart catheterization.[4]

The effect of PH on prognosis is similar in patients with other types of ILD (eg, CTD and CPFE).[5,6]

Even slightly elevated mPAP can dramatically decrease survival in patients with ILD (eg, IPF)[4]

Slightly elevated mPAP is a distinguishing and common characteristic of PH-ILD.[3,7]

In fact, about half of patients who have both IPF and PH have slightly elevated mPAP of 25-30 mm Hg[3]



- Checking for PH only when physical signs are present (eg, lower extremity edema)—when PH is already severe (or when mPAP is high)—may mean missing many patients with slightly elevated mPAP who have a worsened prognosis.[2-4,8]

CPFE=combined pulmonary fibrosis and emphysema; CTD=connective tissue disease; ILD=interstitial lung disease; IPF=idiopathic pulmonary fibrosis; PH-ILD=pulmonary hypertension associated with interstitial lung disease.

THERE'S NO SUBSTITUTE FOR RHC

Echo is a screening tool for PH but has limited accuracy and sensitivity[2,9]

RVSP estimates of mPAP derived from echocardiograms are frequently inaccurate or not reported.[3,10,11]

- TR jet velocity (used to calculate RVSP) may frequently over- or underestimate RVSP[3,11]
  - **This can cause echo estimates to differ from RHC values by >10 mm Hg in about 50% of patients[10]***
- Additionally, TR jet velocity may be difficult to visualize in patients with ILD, **preventing RVSP from being calculated or reported in about 50% of patients[3,10]**

Echo findings do not reliably detect early-stage PH[2,9,10,12]

- Signs of RV dysfunction appear in later-stage PH[9]
- Additionally, some echo findings that are suggestive of PH **require a thorough assessment and may not be routinely evaluated[2,9,10]**

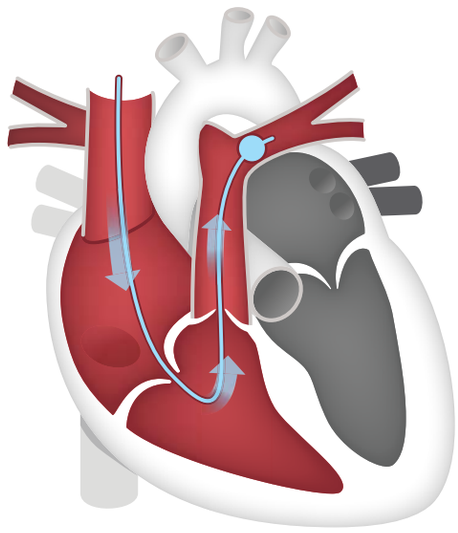
PH can only be confirmed using hemodynamics obtained via RHC[1,2]

RHC provides direct, specific measures of hemodynamics.[1,7]

- It can detect **even a slightly elevated mPAP**, allowing for earlier intervention[7]

RHC is the diagnostic method required by PH guidelines.[1,2]

- It can **differentiate between left heart disease and precapillary PH[2]**



*Echo-estimated pulmonary artery systolic pressure vs RHC-measured pulmonary artery systolic pressure.[10,11]

RV=right ventricular/right ventricle; RVSP=right ventricular systolic pressure; TR=tricuspid regurgitation.

ALLAYING CONCERNS ABOUT SENDING A PATIENT WITH ILD FOR RHC

Transplant candidates are required to undergo RHC[3,7]

There are **few contraindications**[13*]

Low prevalence of serious adverse events/complications (1.1%)[1]

Used to diagnose **several other conditions**[13]

RHC is the only way to confirm PH in your patients with ILD.[1,2]

When other results lead you to suspect PH-ILD, order a RHC to confirm the diagnosis.

*Absolute: right-sided endocarditis, tumor, or thrombus; relative: severe coagulopathy or bleeding diathesis.[13]

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