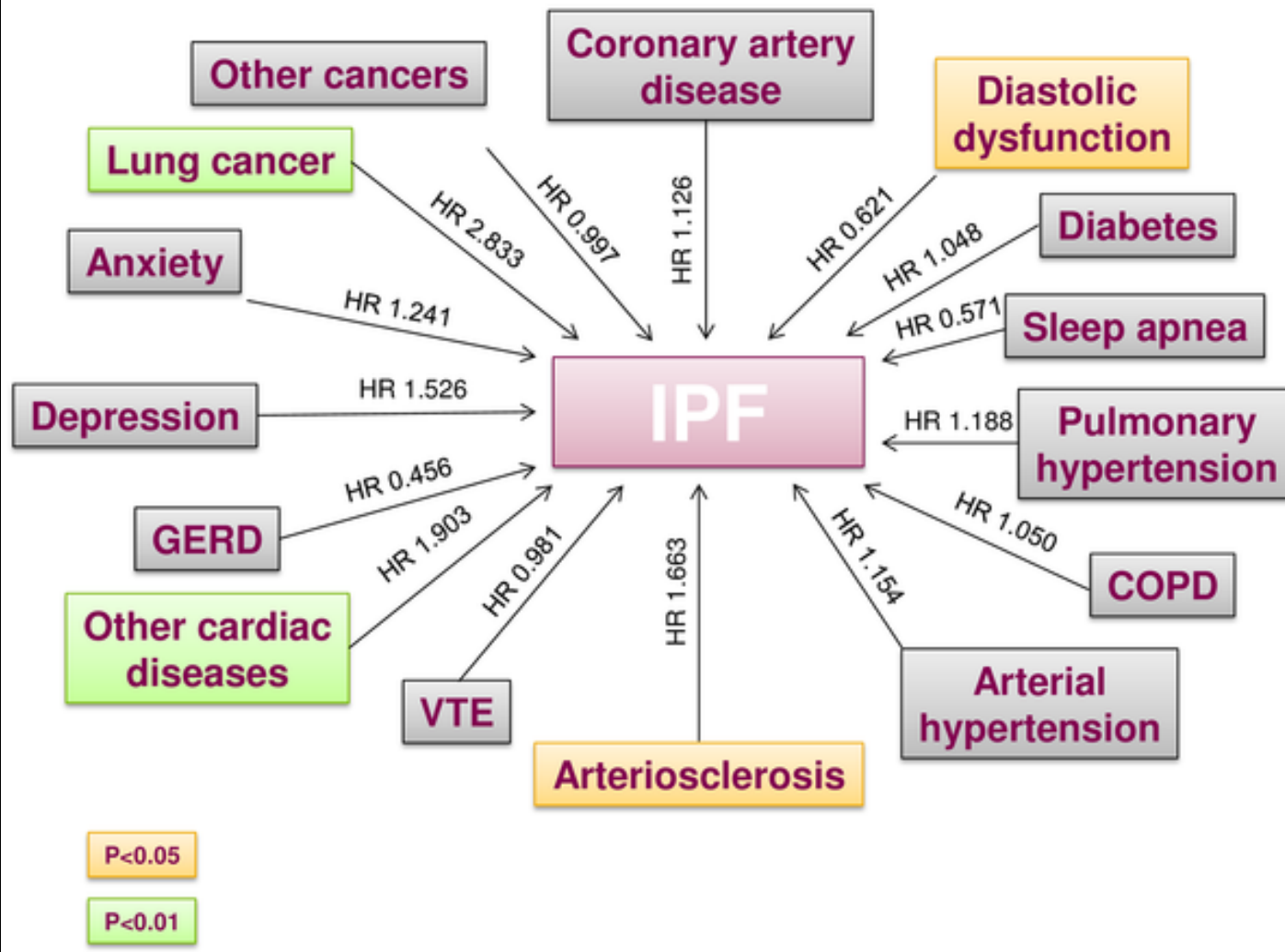


IPF Co-Morbidities and What Can Be Done for Them?

Sydney B. Montesi, MD

Massachusetts General Hospital

Impact of IPF and comorbidities on mortality

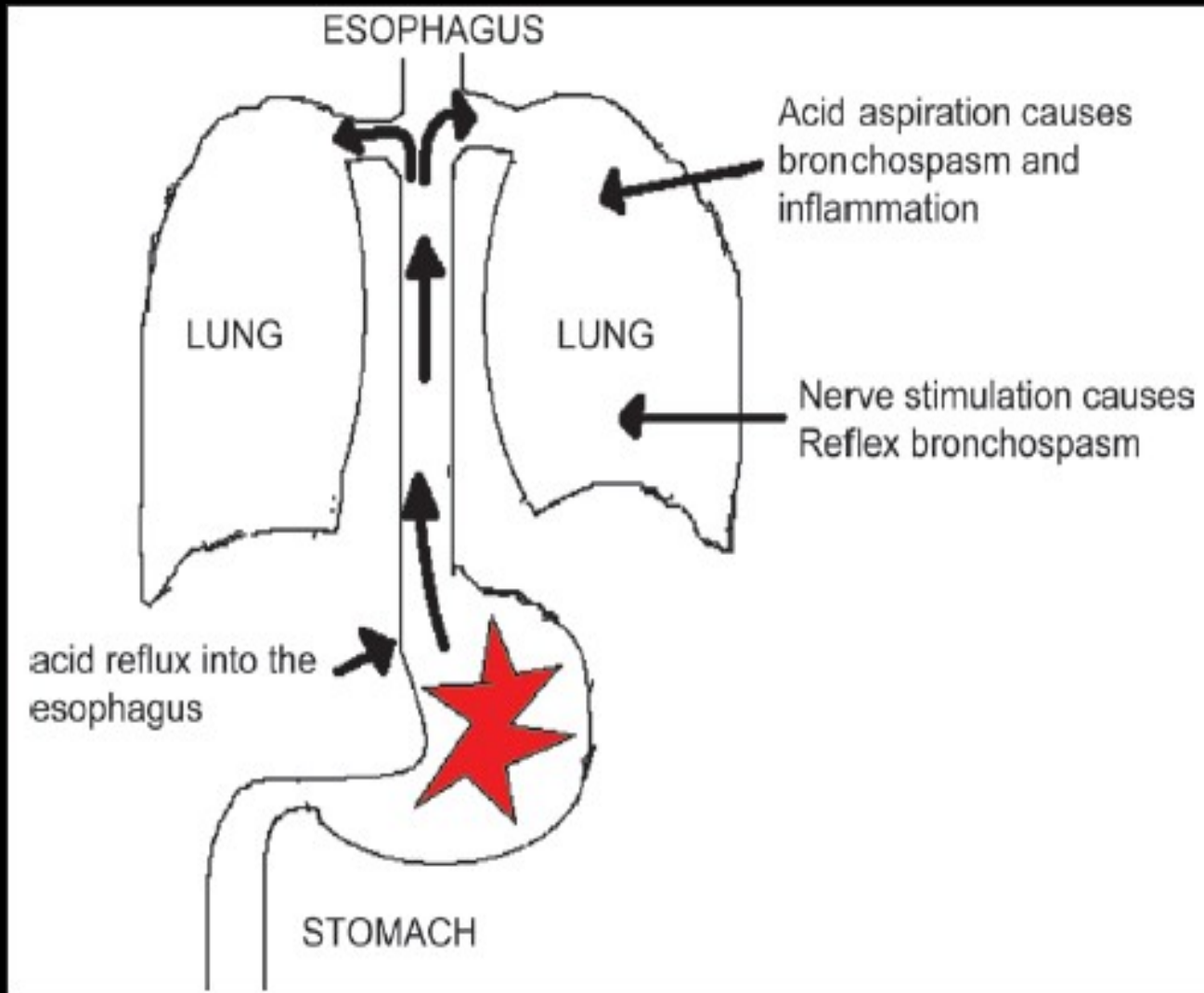


Common IPF Co-Morbidities

- Gastroesophageal Reflux Disease (GERD)
- Pulmonary Hypertension (PH)
- Obstructive Sleep Apnea (OSA)

GERD

- Also called “reflux”
- Very common in patients with IPF
- Why is reflux problematic?



Gaude GS, *Annals of Thoracic Medicine*, 2009

GERD in IPF

TABLE 2 Results of ambulatory oesophageal pH probe studies in IPF patients and a comparison population of asthma patients referred for pH probe study due to symptoms of GER

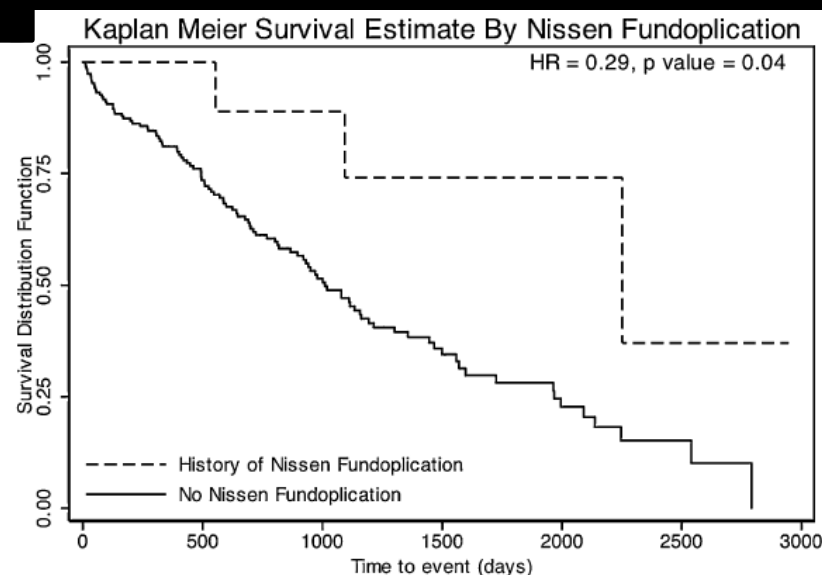
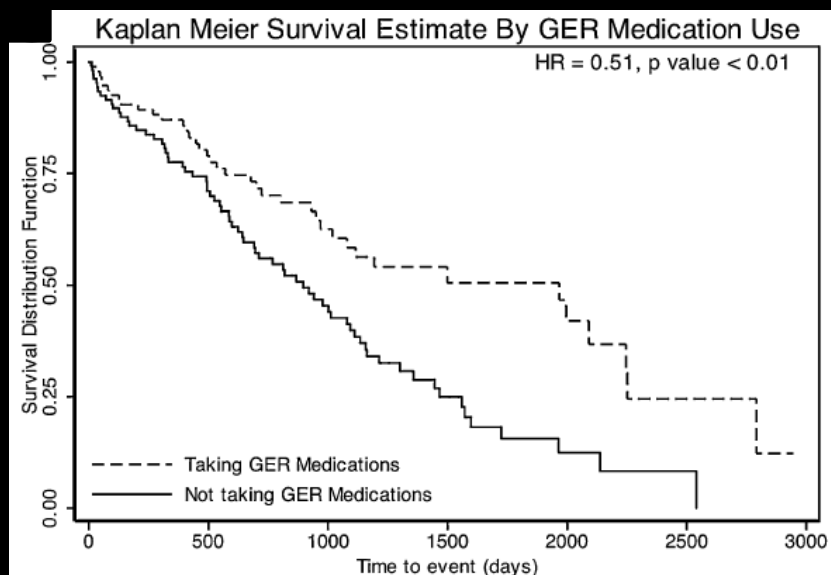
Parameter	IPF [#]	Asthma [#]	p-value
	Mean ± SD	Mean ± SD	
Acid GER %	87 ± 34	68 ± 47	0.014*
Proximal GER %	63 ± 49	61 ± 49	0.80
Distal GER %	76 ± 43	57 ± 50	0.020*
Proximal time %	3.4 ± 4.6	3.4 ± 5.7	0.96
Distal time %	9.6 ± 7.8	7.4 ± 8.3	0.12
Distal upright time %	11.7 ± 9.5	9.2 ± 10.7	0.16
Distal supine time %	6.1 ± 10.1	5.9 ± 12.8	0.94
DeMeester score	35.6 ± 28.4	30.4 ± 34	0.36

GER: gastro-oesophageal reflux; IPF: idiopathic pulmonary fibrosis. [#]: subjects not on proton pump inhibitor therapy at the time of their oesophageal pH probe study (IPF patients: n=46, except for distal upright time, distal supine time and DeMeester score where n=44; asthma patients: n=133, except for DeMeester score where n=131). *: p<0.05.

- GERD is extremely common in IPF
 - Prevalence up to 87%
 - Symptomatic in only 47%
- Cause or consequence?
 - Microaspiration injury to lungs

GERD Therapy in IPF

- Treating GERD may improve survival in IPF
 - Retrospective analysis of 204 IPF patients
 - Anti-GERD RX was associated with improved survival



- Randomized trial of Nissen fundoplication in IPF
 - WRAP-IPF

Reflux

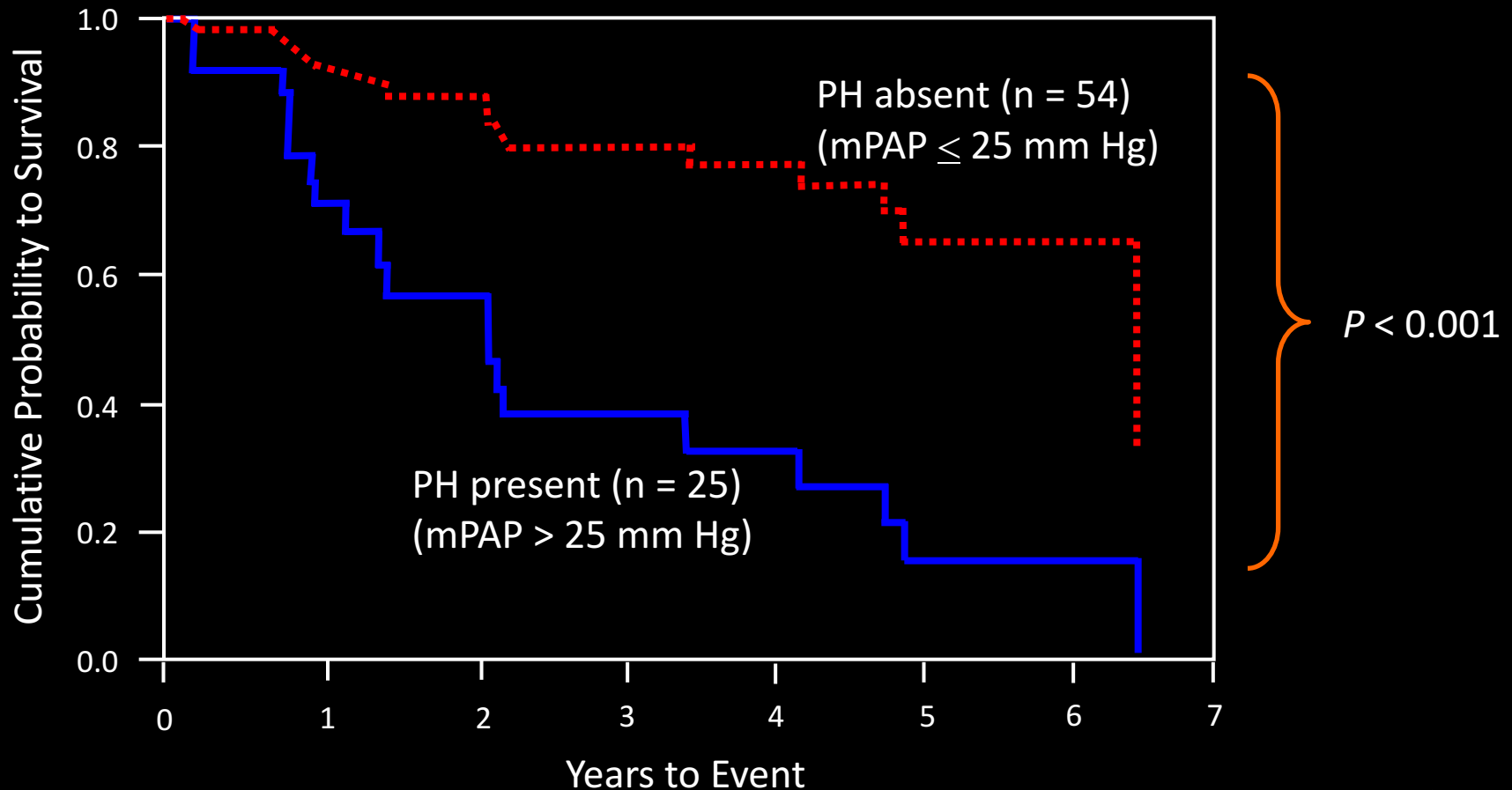
- What are the symptoms?
- How is it diagnosed?
- How is it treated?
- Why is it treated?

Pulmonary Hypertension



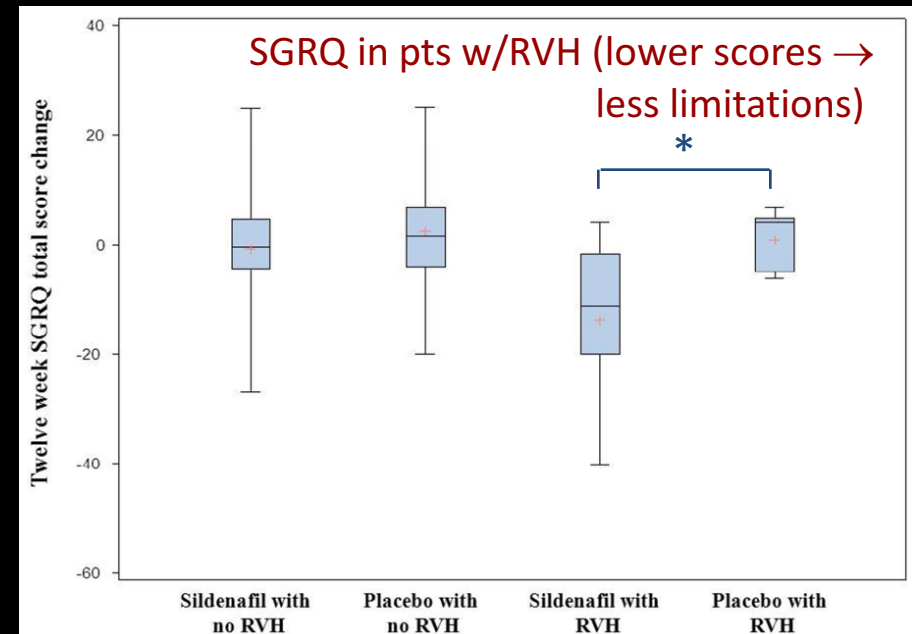
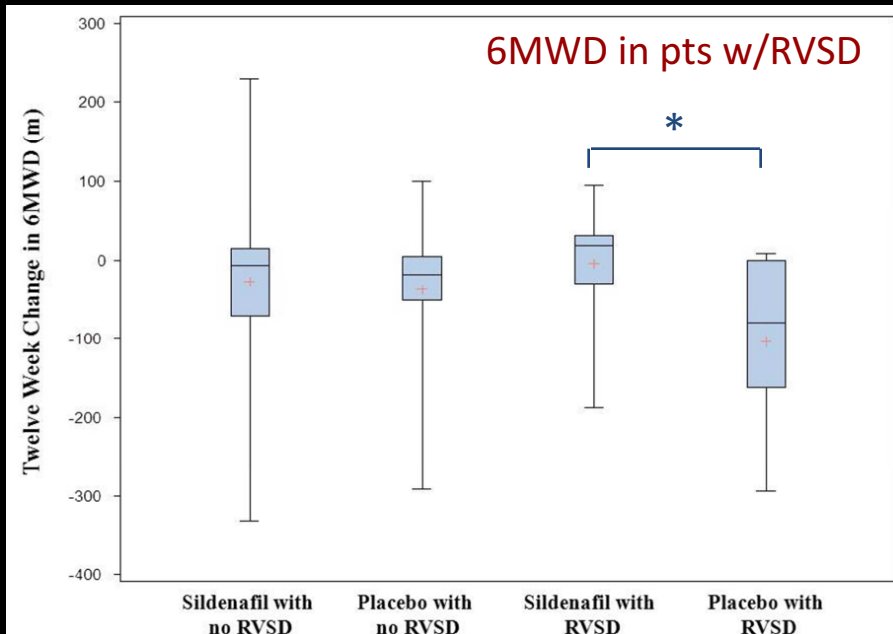
Pulmonary Hypertension in IPF

- Incidence rates of PH in IPF reported to be 20 - 41%
- Effect of PH on IPF mortality



PH Therapy in IPF (STEP-IPF Trial)

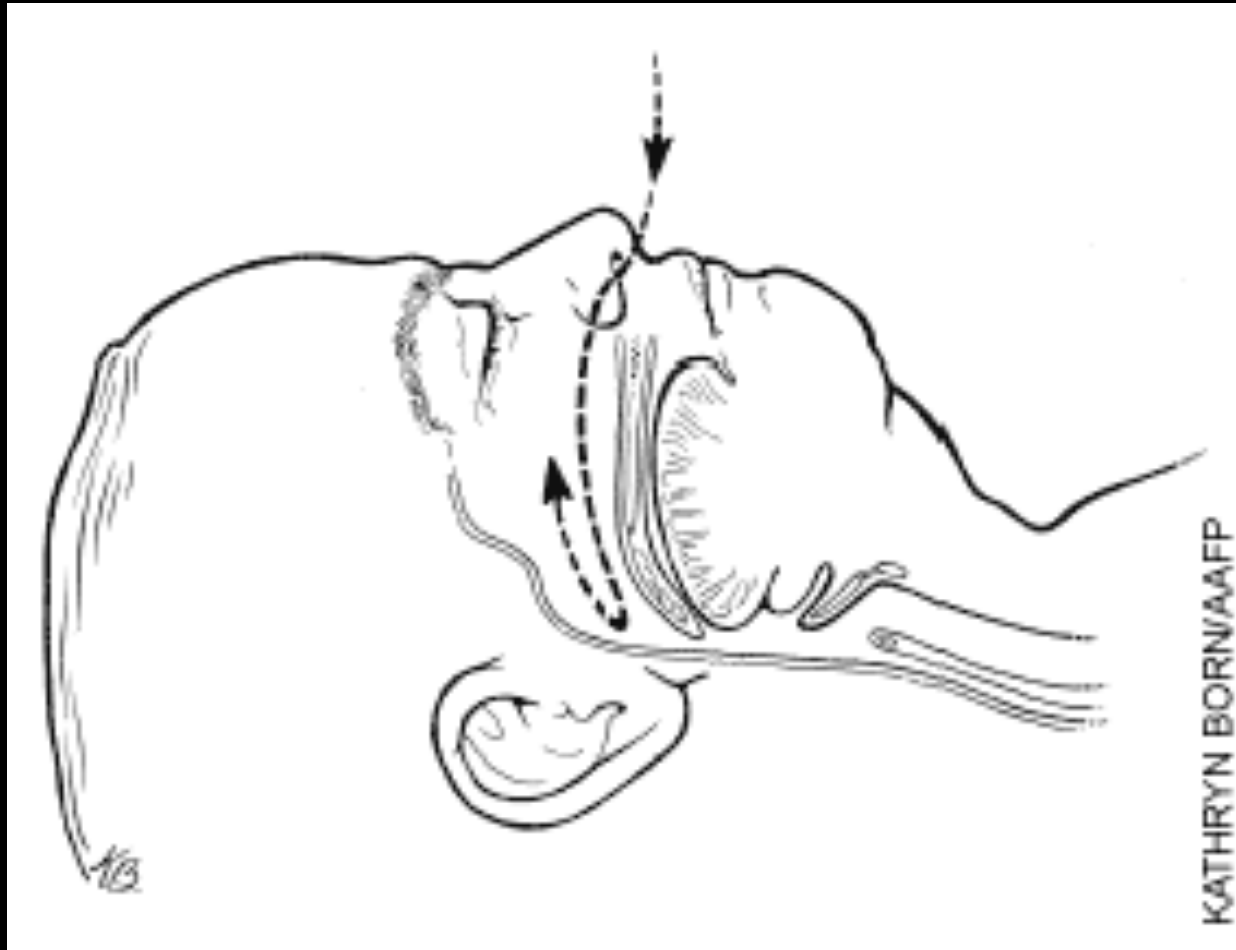
- 12 weeks of Sildenafil vs. Placebo in Advanced IPF (DLCO < 35%)
- Benefit in subgroups with RV systolic dysfunction (RVSD) or RV hypertrophy (RVH)
- Sildenafil in patients with RVSD
 - better preserved exercise capacity
 - improved quality of life
- Sildenafil in patients with RVH
 - improved quality of life



Pulmonary Hypertension

- What are the symptoms?
- How is it diagnosed?
- How is it treated?
- Why is it treated?

Obstructive Sleep Apnea



OSA and IPF

Table 2—Demographics: Physiologic Characteristics

Physiologic Characteristics	No OSA (AHI 0–5 events/h) [n = 6]	Mild OSA (AHI 5.1–15 events/h) [n = 10]	Moderate-to-Severe OSA (AHI > 15 events/h) [n = 34]	p Value*
Supplemental oxygen therapy received at home, %	50	30	29	0.6
PFT results				
FVC, L	2.2 ± 0.9	2.2 ± 0.5	3.0 ± 0.8	0.01
FVC %	58 ± 10.5	63 ± 18.4	73 ± 13.7	0.03
FEV ₁ , L	1.77 ± 0.7	1.8 ± 0.4	2.4 ± 0.6	0.006
TLC, L	3.5 ± 1.9 (n = 2)	3.3 ± 0.6 (n = 10)	4.4 ± 1.3 (n = 30)	0.07
DLCO, mL/mm Hg/min	12.2 ± 4.7	10.4 ± 2.8	14.5 ± 3.8	0.03
DLCO, % predicted	43 ± 13.8	38 ± 12.8	48 ± 11.1	0.11
Echocardiogram				
Calculated SPAP, mm Hg	34 (n = 1)	33 ± 6.4 (n = 4)	38 ± 9.5 (n = 7)	0.72

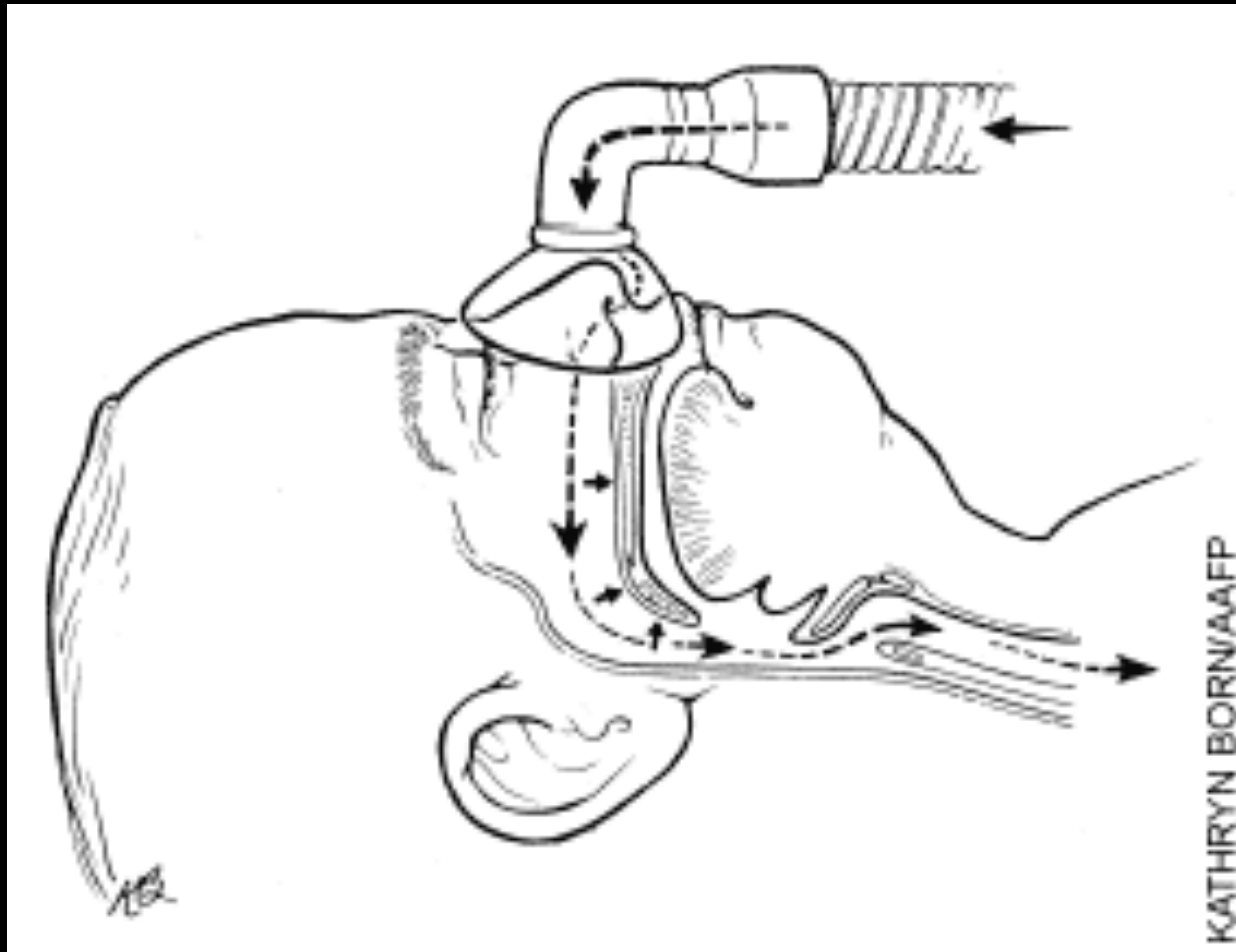
Values given as mean ± SD, unless otherwise indicated. FVC% = percent predicted FVC; SPAP = systolic pulmonary artery pressure; TLC = total lung capacity.

*Comparison among all groups in the ANOVA.

Sleep Apnea

- What are the symptoms?
- How is it diagnosed?
- How is it treated?
- Why is it treated?

CPAP Device



Take Home Points

- Reflux, pulmonary hypertension, and sleep apnea are common in patients with IPF
- Talk to your doctors if you have signs / symptoms of the above conditions

Questions