

Post-hospitalization mortality in patients with idiopathic pulmonary fibrosis: data from the IPF-PRO Registry

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INTRODUCTION

- Hospitalizations are common among patients with idiopathic pulmonary fibrosis (IPF) and are associated with high mortality, particularly hospitalizations with a respiratory cause.¹⁻⁴
- The Idiopathic Pulmonary Fibrosis Prospective Outcomes (IPF-PRO) Registry (NCT01915511) is a prospective observational US registry of patients with IPF.⁵

AIM

- To evaluate the risk of mortality following different types of hospitalization in patients with IPF.

METHODS

- Hospitalizations reported while patients were followed in the IPF-PRO Registry were categorized by the investigator as having a respiratory or a non-respiratory cause and as with or without ventilatory support.
- Kaplan-Meier event rates of death at month 60 were estimated among patients with ≥ 1 hospitalization, ≥ 1 respiratory-related hospitalization, and ≥ 1 hospitalization with ventilatory support.
- Associations between hospitalizations and mortality during hospitalization or within 90, 180 and 360 days of discharge were analyzed using univariable and multivariable Cox regression models.
 - The multivariable model included age, body mass index (BMI), FVC % predicted, DLco % predicted, oxygen at rest, and history of coronary artery disease or heart failure at enrollment, in addition to hospitalization as a time-dependent covariate.

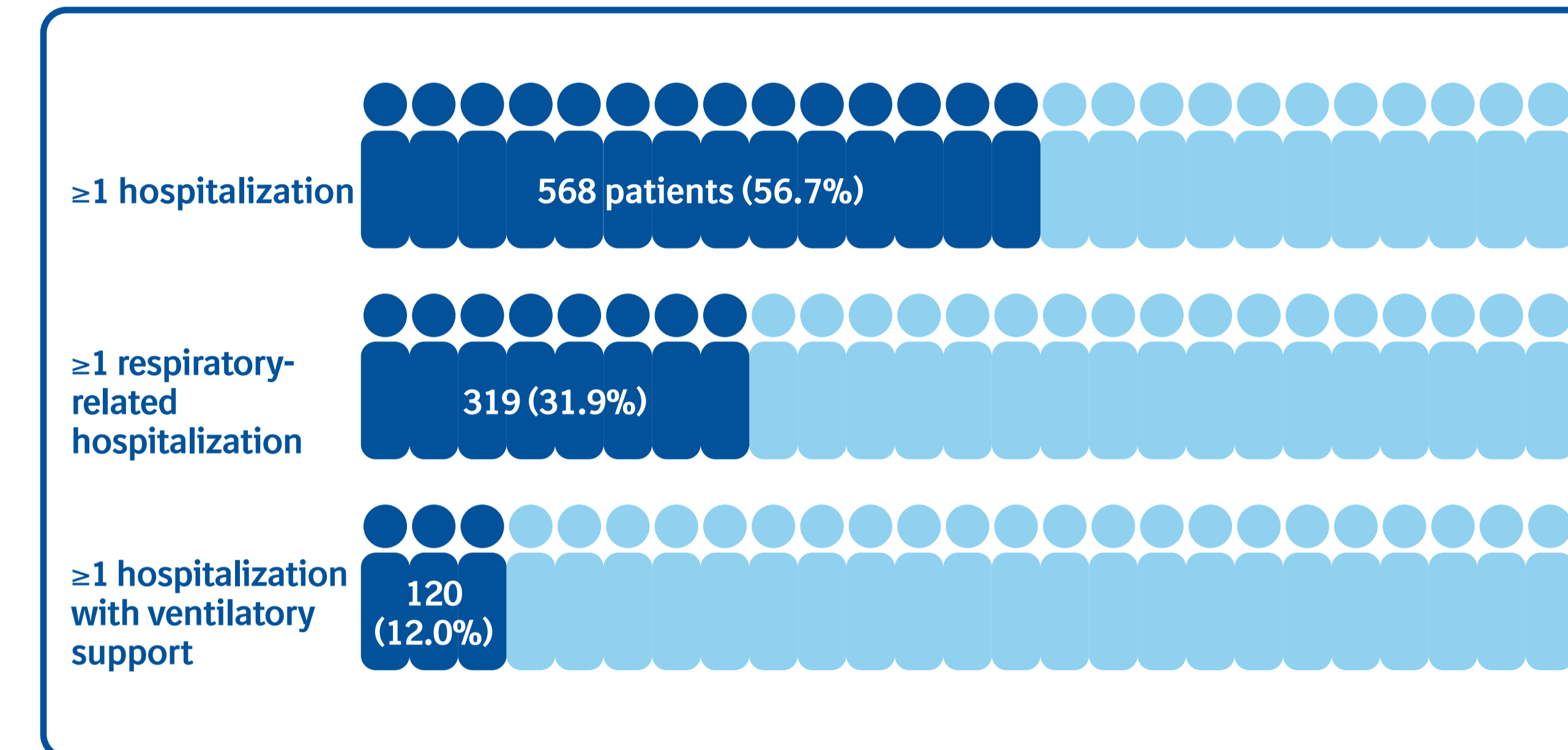
CONCLUSIONS

- Hospitalizations were common in patients with IPF in the IPF-PRO Registry.
- The risk of mortality during hospitalization or within 90 days of discharge was high, particularly among patients who were hospitalized for a respiratory cause or who received ventilatory support.

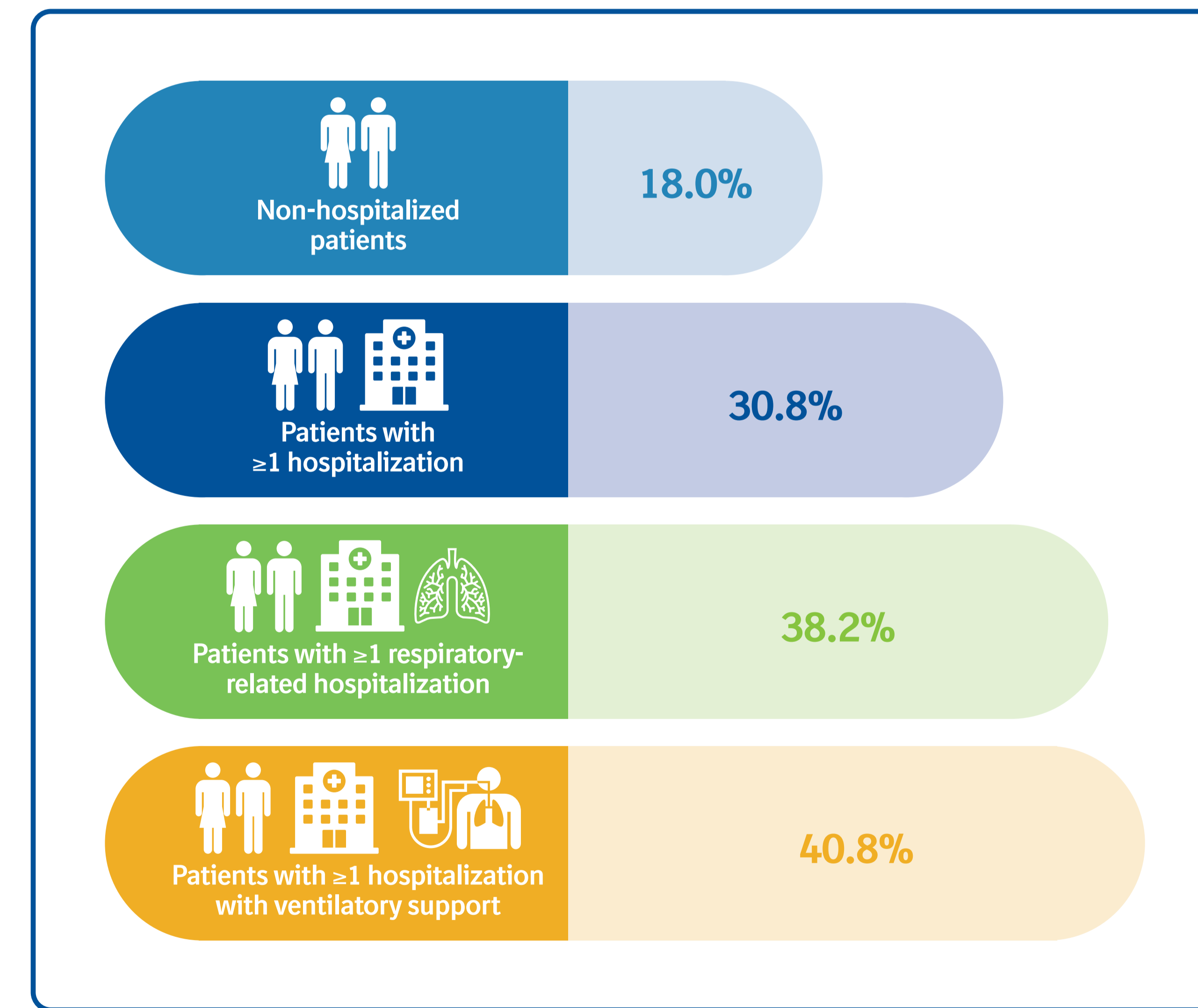
RESULTS

Hospitalizations

- The analysis cohort included 1001 patients enrolled at 46 sites. Median (Q1, Q3) follow-up time in the registry was 23.7 (15.4, 36.0) months.



Kaplan-Meier estimated rates of death at month 60



Associations between hospitalizations and mortality

Hospitalization

Univariable models

- During hospitalization or within 90 days of discharge
- During hospitalization or within 180 days of discharge
- During hospitalization or within 360 days of discharge

Multivariable models*

- During hospitalization or within 90 days of discharge
- During hospitalization or within 180 days of discharge
- During hospitalization or within 360 days of discharge

Respiratory-related hospitalization

Univariable models

- During hospitalization or within 90 days of discharge
- During hospitalization or within 180 days of discharge
- During hospitalization or within 360 days of discharge

Multivariable models*

- During hospitalization or within 90 days of discharge
- During hospitalization or within 180 days of discharge
- During hospitalization or within 360 days of discharge

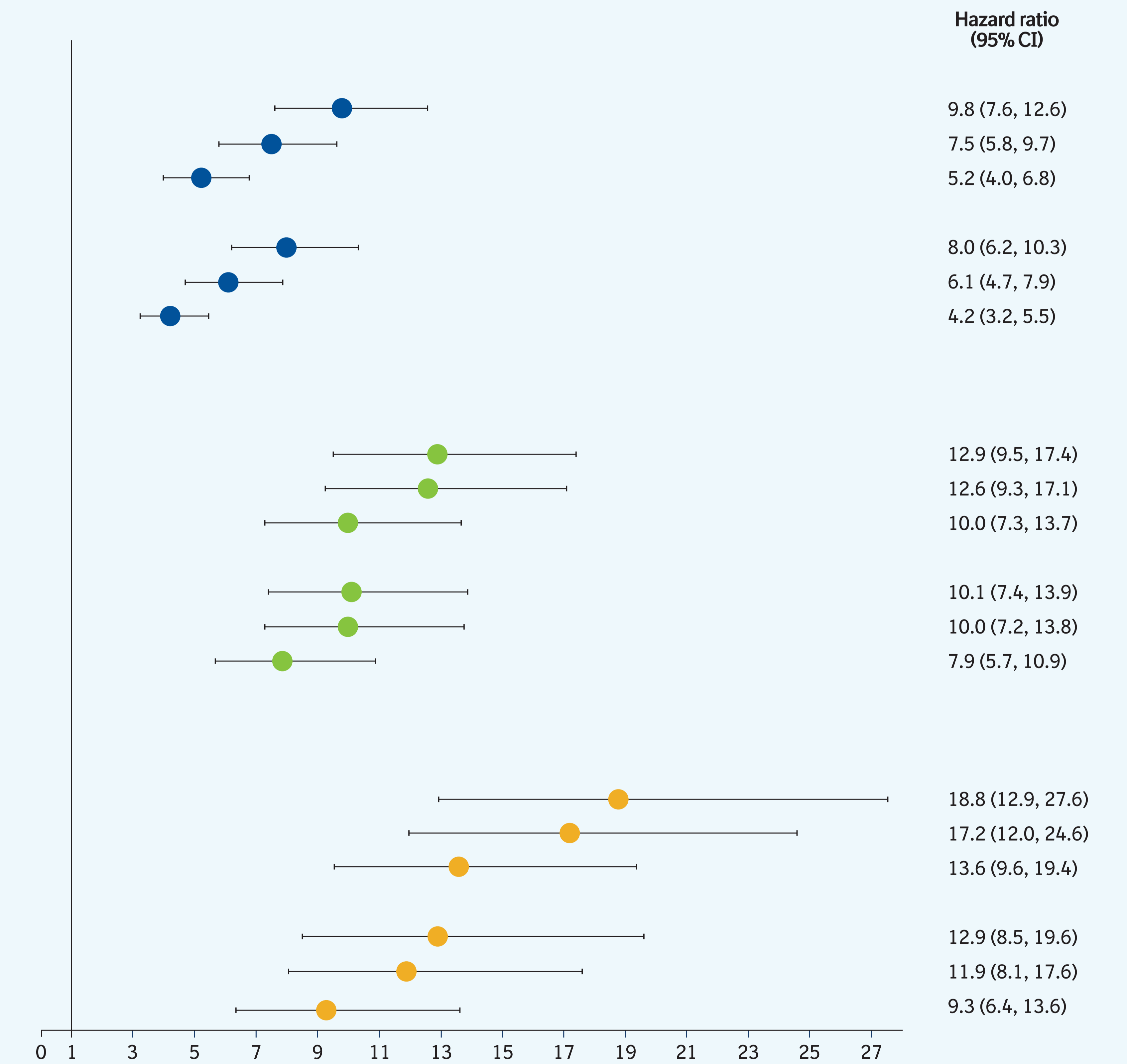
Hospitalization with ventilatory support

Univariable models

- During hospitalization or within 90 days of discharge
- During hospitalization or within 180 days of discharge
- During hospitalization or within 360 days of discharge

Multivariable models*

- During hospitalization or within 90 days of discharge
- During hospitalization or within 180 days of discharge
- During hospitalization or within 360 days of discharge



All p-values < 0.001.
 All hospitalizations were considered while the patient remained in the risk set. The 90-, 180- or 360-day window was applied to the time-dependent covariate of hospitalization.
 *Included hospitalization as a time-dependent covariate, age, BMI, FVC % predicted, DLco % predicted, oxygen use at rest and history of coronary artery disease or heart failure at enrollment.

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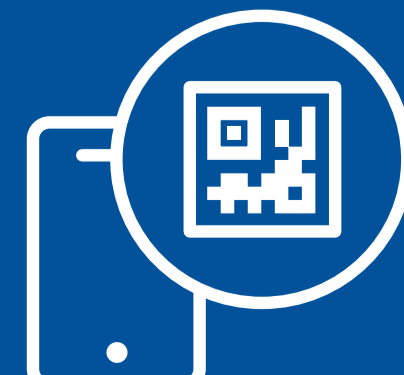
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IPF-PRO™ Registry enrolling centers: Albany Medical Center, Albany, NY; Baylor College of Medicine, Houston, TX; Baylor University Medical Center at Dallas, Dallas, TX; Cleveland Clinic, Cleveland, OH; Columbia University Medical Center/New York Presbyterian Hospital, New York, NY; Duke University Medical Center, Durham, NC; Froedtert & The Medical College of Wisconsin Community Physicians, Milwaukee, WI; Houston Methodist Lung Center, Houston, TX; Lahey Clinic, Burlington, MA; Loyola University Health System, Maywood, IL; Lynchburg Pulmonary Associates, Lynchburg, VA; Medical University of South Carolina, Charleston, SC; National Jewish Health, Denver, CO; NYU Medical Center, New York, NY; Piedmont Healthcare, Austell, GA; Pulmonary Associates of Stamford, Stamford, CT; Pulmonix LLC, Greensboro, NC; Renovatio Clinical, The Woodlands, TX; Salem Chest and Southeastern Clinical Research Center, Winston Salem, NC; South Miami Hospital, South Miami, FL; St. Joseph's Hospital, Phoenix, AZ; Stanford University, Stanford, CA; Temple University, Philadelphia, PA; The Oregon Clinic, Portland, OR; Tulane University, New Orleans, LA; UNC Chapel Hill, Chapel Hill, NC; University of Alabama at Birmingham, Birmingham, AL; University of California, Davis, Sacramento, CA; University of California Los Angeles, Los Angeles, CA; University of Chicago, Chicago, IL; University of Cincinnati Medical Center, Cincinnati, OH; University of Louisville, Louisville, KY; University of Miami, Miami, FL; University of Michigan, Ann Arbor, MI; University of Minnesota, Minneapolis, MN; University of Pennsylvania, Philadelphia, PA; University of Pittsburgh, Pittsburgh, PA; University of Virginia, Charlottesville, VA; UT Southwestern Medical Center, Dallas, TX; Vanderbilt University Medical Center, Nashville, TN; Vermont Lung Center, Colchester, VT; Wake Forest University, Winston Salem, NC; Washington University, St. Louis, MO; Weill Cornell Medical College, New York, NY; Wilmington Health and PMG Research, Wilmington, NC; Yale School of Medicine, New Haven, CT.

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