CLINICAL OUTCOMES IN PATIENTS AGED 80 YEARS AND OLDER RECEIVING NONINVASIVE RESPIRATORY SUPPORT FOR COVID-19 PNEUMONIA

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Background

Clinical outcomes of **octogenarian patients** hospitalized for **COVID-19** are very poor. Purpose of this study is to describe the **characteristics and the outcomes** of patients aged 80 year or older hospitalized for acute respiratory failure (ARF) consequent to COVID-19, receiving **noninvasive respiratory support** (NIRS) in intermediate respiratory care unit (IRCU).

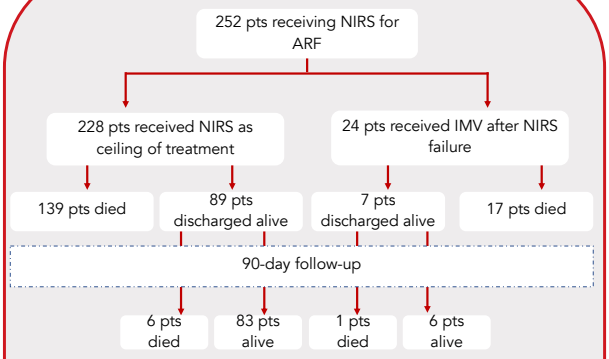
Methods

- **Multicenter, retrospective,** observational study
- **Seven** hospitals in Northern Italy

Inclusion criteria

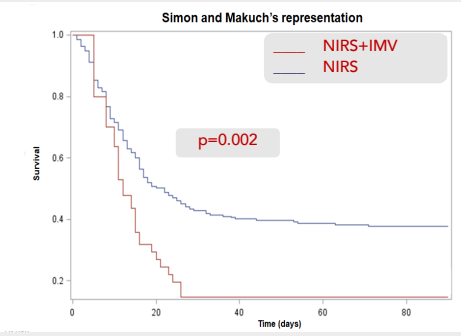
- Patients ≥ 80 years with COVID-19 ARF
- Noninvasive respiratory support
- From February 24th, 2020, to March 31st, 2021

Results



Patients' characteristics

	Overall (n=252)	NIRS (n=228)	NIRS+IMV (n=24)	*p*-value
Age, years	84 (82-87)	84 (82-87)	82(81-84)	**0.0183**
Female, n (%)	92 (37)	86 (38)	6 (25)	0.2183
Body mass index, kg/m2	26 (23–29)	26 (23–29)	24 (22–29)	0.1536
Level of dependence, n (%) Low Moderate High	 74 (42) 27 (15) 77 (43)	 68 (42) 26 (16) 67 (42)	 6 (35) 1 (6) 10 (59)	0.3167
PaO_2 mmHg	56 (45–69)	56 (46–69)	53 (41–73)	0.4886
$PaCO_2$ mmHg	34 (30–38)	34 (31–38)	32 (28–37)	**0.0449**
Serum C-reactive protein, mg/dL	11 (6–16)	11 (6–15)	15 (10–25)	**0.0280**
SOFA score	4 (3–5)	3 (3–4)	5 (3–6)	**0.0003**



Hazard Ratio respiratory support *vs.* 90-day mortality

	Univariable model HR (95%CI)	Multivariable model HR (95%CI)
NIRS+IMV *vs.* NIRS	**2.174 (1.326-3.563)**	1.757 (0.857-3.600)
Age		1.106 (1.050-1.165)
CCI		1.105 (1.032-1.183)
C-reactive protein		1.045 (1.018-1.072)
SOFA score		1.156 (1.063-1.257)
SaO_2		0.973 (0.954-0.992)

Conclusions

The clinical outcomes of patients aged 80 years and older with COVID-19-ARF is very poor. Given the extremely poor prognosis of intubated patients failing NIRS, caution should be used in considering transition from NIRS to IMV.