

## Interferon beta vs Standard treatment for COVID-19

**Author(s):** Cruciani F, De Crescenzo F, Vecchi S, Saulle R, Mitrova Z, Amato L, Davoli M.

**Question:** Should Interferon beta-1a vs Standard treatment be used for COVID-19?

**Setting:** Inpatient

Certainty assessment							№ of patients		Effect		Certainty
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interferon beta 1a	Trattamento standard	Relative (95% CI)	Absolute (95% CI)	

### Mortality from all causes end of treatment (14 days)

1 <sup>1</sup>	randomised trials	very serious <sup>a</sup>	not serious	not serious	serious <sup>b</sup>	none	4/46 (8.7%)	14/46 (30.4%)	<b>RR 0.29</b> (0.10 to 0.80)	<b>216 fewer per 1.000</b> (from 274 fewer to 61 fewer)	⊕○○○ VERY LOW
----------------	-------------------	---------------------------	-------------	-------------	----------------------	------	-------------	---------------	----------------------------------	--	------------------

### Number discharged at the end of treatment (14 days)

1 <sup>1</sup>	randomised trials	very serious <sup>a</sup>	not serious	not serious	serious <sup>b</sup>	none	28/46 (60.9%)	17/46 (37.0%)	<b>RR 1.65</b> (1.06 to 2.56)	<b>240 more per 1.000</b> (from 22 more to 577 more)	⊕○○○ VERY LOW
----------------	-------------------	---------------------------	-------------	-------------	----------------------	------	---------------	---------------	----------------------------------	---	------------------

### Number of patients with adverse events

1 <sup>1</sup>	randomised trials	very serious <sup>a</sup>	not serious	not serious	serious <sup>b</sup>	none	14/46 (30.4%)	1/46 (2.2%)	<b>RR 14.00</b> (1.92 to 102.13)	<b>283 more per 1.000</b> (from 20 more to 1.000 more)	⊕○○○ VERY LOW
----------------	-------------------	---------------------------	-------------	-------------	----------------------	------	---------------	-------------	-------------------------------------	---	------------------

### Duration of ICU admission

1 <sup>1</sup>	randomised trials	very serious <sup>a</sup>	not serious	not serious	serious <sup>b</sup>	none	46	46	-	<b>SMD 0.1 lower</b> (0.51 lower to 0.31 higher)	⊕○○○ VERY LOW
----------------	-------------------	---------------------------	-------------	-------------	----------------------	------	----	----	---	---	------------------

Certainty assessment							№ of patients		Effect		Certainty
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interferon beta 1a	Trattamento standard	Relative (95% CI)	Absolute (95% CI)	

#### Duration of hospitalization

1 <sup>1</sup>	randomised trials	very serious <sup>a</sup>	not serious	not serious	serious <sup>b</sup>	none	46	46	-	SMD <b>0.32 higher</b> (0.09 lower to 0.73 higher)	⊕○○○ VERY LOW
----------------	-------------------	---------------------------	-------------	-------------	----------------------	------	----	----	---	--	------------------

CI: Confidence interval; RR: Risk ratio; SMD: Standardised mean difference

#### Explanations

a. Downgraded of two levels for high risk of performance and attrition bias and unclear risk for selection and reporting bias

b. Downgraded of one level for small sample size

#### References

1. Davoudi-Monfared E, Rahmani H, Khalili H al. et. Efficacy and safety of interferon beta-1a in treatment of severe COVID-19: A randomized clinical trial. medRxiv. doi: <https://doi.org/10.1101/2020.05.28.20116467>