

Tocilizumab for Cytokine Storm in COVID-19

COVID-19 Resources

TOCILIZUMAB for CYTOKINE STORM in COVID-19

tocilizumab (Actemra) - humanized monoclonal antibody targeting IL-6R

LABELED INDICATIONS

Cytokine Release Syndrome due to chimeric antigen receptor T cell (CAR-T) Cell Therapy

Arthritis, including Rheumatoid Arthritis

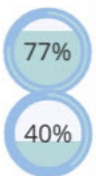
Clinical Data



Single center, retrospective
100 patients, 43 in ICU
All had lymphopenia and elevated CRP, ferritin, fibrinogen

Respiratory condition improved or stable at 10 days

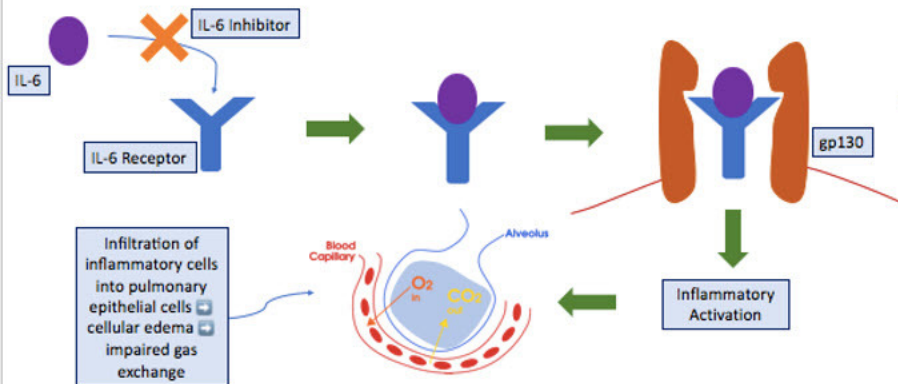
ICU patients extubated and downgraded (17/43)



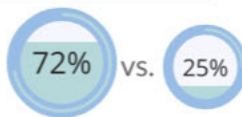
- 15 severe patients
- 4 ICU, 2 on vent
- Most got one dose
- CRP and fever ↓ in all
- ↓ O2 requirements at day 5 in 75%

- 15 mod-severe patients
- 7 ICU
- CRP ↓ in all
- 3/7 died
- ICU patients that got 2+ doses did better

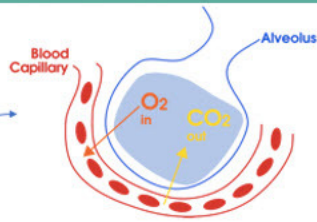
Proposed Mechanism in COVID-19



20 patients received tocilizumab vs. 25 that did not
Tocilizumab patients more severe at baseline (higher CRP, higher O₂ needs), but lower mortality:



Infiltration of inflammatory cells into pulmonary epithelial cells
cellular edema
impaired gas exchange



improvement, especially in ICU.

Pregnancy considerations: risk to fetus unknown. MAbs cross placenta.

Safety

Concerns

↑ LFTs (dose dependent)
Infections (TB, bacterial)

Other concerns reported in case reports:

- Candidemia
- "Toxic erythema" and eosinophilia
- Hypertriglyceridemia

References

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