## BACC Bay Tocilizumab – Stone, JH; et al. *NEJM* 2020 (Published: Oct 21, 2020)

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|---|---|
| **Study Design** | Multicenter, double-blind, placebo, RCT – **Severe COVID-19 – (2:1)** |
| **Location** | USA (Boston) – 7 hospitals |
| **Inclusion** | Severe COVID-19 pneumonia + hyperinflammatory states #, and at least two signs (fever, pulmonary infiltrates, or need for $O_2$ to keep $SpO_2$ > 92% |
| **Exclusion** | If $O_2$ requirement >10L/min |
| **Intervention** | Tocilizumab 8 mg/kg IV (up to 800 mg) |
| **Control** | Placebo |

| | Tocilizumab n=161 | Control n=81 |
|---|---|---|
| **Primary Outcomes** | | |
| Death/Need MV at day 28 | 17 (10.6%) | 10 (12.5%) |
| Clinical worsening at day 28 ** | 31 (19.3%) | 14 (17.4%) |
| MV or death at day 14 | 10% | 10% |
| MV at day 14 | 7% | 10% |
| MV at day 28 | 7% | 10% |
| Death at day 14 | 4% | 1% |
| Death at day 28 | 6% | 4% |

**Comments:**
# CRP >50 mg/L; Ferritin > 500 ng/mL; D-dimer > 1000 ng/mL; LDH >250 U per L
** Clinical worsening defined on the basis of a 7-level ordinal improvement scale.
Corticosteroid treatment occurred in 11% in the toci arm and 6% in the control arm.

**Abbreviations:**
MV, mechanical ventilation; $O_2$, oxygen; RCT, randomized controlled trial