**Supplemental Digital Content to:**

**Role for Anti-Cytokine Therapies in Severe Coronavirus Disease-2019**

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**Supplemental Table 1**. Pharmacology of Anti-Cytokine Therapies

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Anakinra | Canakinumab | Tocilizumab | Sarilumab | Adalimumab |
| Dose Adjustments | May consider every other day dosing in severe renal insufficiency or ESRD | No adjustments needed for renal or hepatic impairment | Based upon ALT, AST, ANC and platelet count; none required for renal impairment | Based upon ALT, AST, ANC and platelet count; none required for renal impairment | No dose adjustment required |
| Time to Maximal Concentration (Subcutaneous) | 3 to 7 hours | 7 days | 3-4.5 days | 2-4 days (SC) | 131 hrs |
| Time to Maximal Concentration (Intravenous) | 1.5 hours | End of infusion | 2 hours | Not available | Not available |
| Half-Life (Intravenous) | 2 hours | 22 days | 11-13 days for adults and 16-17 days for children | Not available | 2 weeks |
| Half-Life (Subcutaneous) | 6 hours | 26 days | 4 to 19 days for adults and 10-14 days for children | 10 days | 2 weeks |
| Pregnancy | First trimester exposure unlikely to be harmful |  | Should be stopped 3 months prior to conception; first trimester exposure unlikely to be harmful |  | May be continued through the second trimester |
| Children | Approved for pediatric indications | Approved for pediatric indications | Approved for pediatric indications | Not approved for pediatric use | Approved for pediatric indications |
| Vaccines | Avoid live vaccines | Avoid live; response to inactive vaccines may be attenuated | Avoid live vaccines | Avoid live vaccines | Avoid live vaccines |
| Drug-Drug Interactions | Avoid concomitant use with tumor necrosis factor-α blockers | Avoid concomitant use with tumor necrosis factor-α blockers | Increased metabolism of CYP450 substrates; effects may persist for several weeks | Increased metabolism of CYP450 substrates; effects may persist for several weeks | Increased metabolism of CYP450 substrates; effects may persist for several weeks |
| FDA-approved biosimilar | None | None | None | None | Adalimumab-afzb, -bwwd, adaz, -adbm, -atto |