

## PHARMACIST TIP SHEET

## **COVID-19 MEDICATIONS**

Medication	MOA	Dosing	Restrictions	ADE	Storage	Preparations
Hydroxychloroquine  + either 1. colchicine OR 2. azithromycin OR 3. doxycycline	Antimalarial & anti-inflammatory  Interferes SARS CoV-2 viral fusion to prevent entry into ACE2 via endosomal acidification <sup>1,2,4</sup>	600 mg twice daily x 1 day then 400 mg once daily x 4 days	Rule-Out: Medium or highrisk patients with respiratory symptoms (cough, shortness of breath, hypoxemia, etc. +/- Fevers +/- Exposure)  COVID Positive: Symptomatic	QTc prolongation Cardiomyopathy Hypoglycemia Retinopathy Myelosuppression <sup>4</sup>	Pharmogistics (200 mg VC2-07-06-02)	200 mg tablet 25 mg/mL susp
Colchicine  Do not use if the following:  • CrCl < 50 ml/min  • Hepatic Dysfunction • Concomitant CYP3A4 inhibitors • Pregnancy  → Go to Azithromycin box	Anti-inflammatory  Reduces release of IL-1b, IL-18 & IL-6 by non- selective inhibition of NLRP3* inflammasomes <sup>16</sup>	0.6 mg twice daily until discharge	Given in combination with hydroxychloroquine for some indications above	Abdominal pain Diarrhea DIC* Myelosuppression Neuromyopathy <sup>18</sup>	Pharmogistics (0.6 mg VC1-1909-02)	0.6 mg tablet
Azithromycin  Do not use if the following:  •QTC > 500 ms  → Go to Doxycycline box	Macrolide antibiotic  Reduces SARS CoV-2 viral replication in combination with hydroxychloroquine and inflammation <sup>1,2</sup>	500 mg x 1 day then 250 mg daily x 4 days 5 days total	Given in combination with hydroxychloroquine for some indications above	N/V/D* QTc prolongation	Pharmogistics (100mg/ 5mL VC1-09-03-02, 200mg/5mL VC-09-01-01, 250mg VC1-07-08-02, 500mg Inj. VC3-06-01-02)	250 mg IV & tablet, 500 mg IV & tablet, 100 mg/5mL susp 200 mg/5mL susp IV on shortage
Doxycycline	Tetracycline antibiotic  Inhibition of RNA replication on positive- sense single stranded RNA and inhibition of virus' own serine protease as well as concentration dependent decrease in viral replication <sup>22</sup>	100 mg BID 5 days total	Given in combination with hydroxychloroquine for some indications above	N/V/D* Neutropenia Photosensitivity Thrombocytopenia Teratogenicity <sup>20</sup>	Pharmogistics (100 mg tabs VC1 20-06-03; 100 mg IV inj. VC3-10-04-01)	100 mg tablets 100 mg IV Injection

Medication	MOA	Dosing	Restrictions	ADE	Storage	Preparations	Consent
Tocilizumab	IL-6 receptor antagonist  Humanized monoclonal antibody targeting IL-6 receptors, blocking downstream pro-inflammatory effects and may ameliorate severe damage to lung tissue caused by cytokine release in severe COVID-19 infections <sup>1,5</sup> At BMC, recommended for use when increasing O2 requirements and increased inflammatory markers (See Biologics Protocol)	400 mg IV x 1  Consider redosing >12H  later if still febrile or >24H if CRP still elevated	ID approval is required for each dose <sup>+</sup> If approved, COVID-ID RPh will enter AST → Restriction iVent and note  Once approval is entered, any pharmacist can verify the order (no need to page Heme/Onc RPh)	Infection risk Transaminitis GI perforation Thrombocytopenia Neutropenia Infusion-related reactions 5,6	Pharmogistics REF (200 mg REF-07-03-01; 400 mg REF-07-04-01-01; 80 mg REF-07-01-03-01)  Additional supply available in Moakley Pharmacy IV room fridge for outpatient use <sup>++</sup>	Solution for Inj.  80mg/4mL, 200 mg/10 mL, 400 mg/20 mL; used to make IVPB*  Compounded IV 400mg/100mL NS; Infuse over 1H  Stability8 24H at room temp or 2°C to 8°C Protect from light	Informed written consent required for use  Exception: doses administered for emergency care  Consented use or emergent use documentation always required +++
Sarilumab	IL-6 receptor antagonist  Humanized monoclonal antibody targeting IL-6 receptors, blocking downstream pro-inflammatory effects and may ameliorate severe damage to lung tissue caused by cytokine release in severe COVID-19 infections <sup>1,5</sup> At BMC, recommended for use when increasing O2 requirements and increased inflammatory markers (See Biologics Protocol)	200 mg IV x1  Consider repeat dose > 12H later if still febrile or > 24H if CRP still elevated	ID approval is required for each dose <sup>†</sup> If approved, COVID-ID RPh will enter AST → Restriction iVent and note  Once approval is entered, any pharmacist can verify the order (no need to page Heme/Onc RPh)	Infection risk Transaminitis GI perforation Thrombocytopenia Neutropenia <sup>13</sup>	Pharmogistics REF (200 mg/1.14 mL REF 04-01-03-01)	Subcutaneous Inj. 100mg/1.14 mL syringe; PFS* used to make IVPB*  Compounded IV 200mg/100mL NS; Infuse over 1H  Stability 4H at room temp Protect from light	Informed written consent required for use  Exception: doses administered for emergency care  Consented use or Emergent use documentation always required +++
Anakinra	IL-1 antagonist; Targets IL-1, a key cytokine produced in "cytokine storm" in COVID-19; Resembles sHLH* (a lifethreatening, hyper-inflammatory syndrome) characterized by increased inflammatory markers & associated with high mortality <sup>9,10</sup>	200 mg IV every 12H for 72H CrCl < 30 ml/min or HD: 100 mg IV every 12H for 72H	ID approval is required for each dose <sup>+</sup> If approved, COVID-ID RPh will enter AST → Restriction iVent and note  Once approval is entered, any pharmacist can verify the order (no need to page Heme/Onc RPh)	N/V/D* Infection risk Headache Fever Neutropenia <sup>12</sup>	Pharmogistics REF (REF-01-05-02)  Additional supply available in Moakley Pharmacy IV room fridge for outpatient use <sup>++</sup>	Subcutaneous Inj. 100 mg/0.67mL syringe; PFS* used to make IVPB*  Compounded IV 200mg/100mL NS, 100mg/100mL NS; Infuse over 1H  Stability <sup>13</sup> 8H at room temp Protect from light	Informed written consent required for use  Exception: doses administered for emergency care  Consented use or Emergent use documentation always required +++

\*ACE2= Angiotensin-converting enzyme 2; N/V/D= nausea, vomiting, diarrhea; sHLH=Secondary Hemophagocytic lymphohistiocytosis; PFS= Pre-Filled Syringe; IVPB=IV Piggyback; NLRP3= Nod-Like Receptor Protein 3; DIC= disseminated intravascular coagulation

- + After hours: ID Fellow to call Central for approval → Central RPh to enter iVent and note
- ++ Central PIC: must follow loan/borrow policy from additional supply located at Moakley
- ++++ Consent to be performed by providers... see Patient Consent Policy (03.02.000)

## References

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