## Surviving Sepsis ··· Campaign •

## SURVIVING SEPSIS CAMPAIGN: GUIDELINES ON THE MANAGEMENT OF CRITICALLY ILL ADULTS WITH CORONAVIRUS DISEASE 2019 (COVID-19)

## **HEMODYNAMICS RECOMMENDATIONS CHART**

## **FLUID THERAPY**

| RECOMMENDATION #8  | STRENGTH &<br>QUALITY OF EVIDENCE                          |
|--|--|
| In adults with <b>COVID-19 and shock</b> , we <i>suggest</i> using dynamic parameters skin temperature, capillary refilling time, and/or serum lactate measurement over static parameters in order to assess fluid responsiveness. | <ul><li>Weak</li><li>Low-Quality of<br/>Evidence</li></ul> |
| RECOMMENDATION #9  | STRENGTH &   |

| RECOMMENDATION #9   | Strength &   |
|---|--|
|   | QUALITY OF EVIDENCE                                  |
| For the <b>acute resuscitation</b> of adults with <b>COVID-19 and shock</b> , we <b>suggest</b> using a conservative over a liberal fluid strategy. | • Weak   |
|   | <ul> <li>Very Low-Quality<br/>of Evidence</li> </ul> |

| RECOMMENDATION #10   | STRENGTH &<br>QUALITY OF EVIDENCE                    |
|--|--|
| For the acute resuscitation of adults with COVID-19 and shock, | Strong   |
| we <i>recommend</i> using crystalloids over colloids.          | <ul> <li>Moderate-Quality<br/>of Evidence</li> </ul> |



| RECOMMENDATION #11  | STRENGTH &<br>QUALITY OF EVIDENCE                             |
|---|---|
| For the <b>acute resuscitation</b> of adults with <b>COVID-19 and shock</b> , we <b>suggest</b> using buffered/ balanced crystalloids over unbalanced crystalloids. | <ul><li>Weak</li><li>Moderate-Quality of Evidence</li></ul>   |
| RECOMMENDATION #12  | STRENGTH &<br>QUALITY OF EVIDENCE                             |
| For the acute resuscitation of adults with COVID-19 and shock, we recommend against using hydroxyethyl starches.  | <ul><li>Strong</li><li>Moderate-Quality of Evidence</li></ul> |
| RECOMMENDATION #13  | STRENGTH &<br>OUAUTY OF EVIDENCE                              |
| For the acute resuscitation of adults with COVID-19 and shock, we suggest against using gelatins.   | <ul> <li>Weak</li> <li>Low-Quality of<br/>Evidence</li> </ul> |
| RECOMMENDATION #14  | STRENGTH &<br>QUALITY OF EVIDENCE                             |
| For the acute resuscitation of adults with COVID-19 and shock, we suggest against using dextrans.   | <ul> <li>Weak</li> <li>Low-Quality of Evidence</li> </ul>     |
| RECOMMENDATION #15  | STRENGTH &<br>QUALITY OF EVIDENCE                             |
| For the <b>acute resuscitation</b> of adults with <b>COVID-19 and shock</b> , we <b>suggest against</b> the routine use of albumin for initial resuscitation.       | <ul><li>Weak</li><li>Moderate-Quality of Evidence</li></ul>   |
| VASOACTIVE AGENTS   |   |

| RECOMMENDATION #16  | STRENGTH &                         |
|---|------------------------------------|
|   | QUALITY OF EVIDENCE                |
| For adults with <b>COVID-19 and shock</b> , we <i>suggest</i> using | Weak                               |
| norepinephrine as the first-line vasoactive agent, over other       | <ul> <li>Low-Quality of</li> </ul> |
| agents.   | Evidence                           |



| RECOMMENDATION #17  | STRENGTH &  |
|---|---|
|   | QUALITY OF EVIDENCE   |
| If norepinephrine is not available, we <b>suggest</b> using either vasopressin or epinephrine as the first-line vasoactive agent, over other vasoactive agents, for adults with <b>COVID-19 and shock.</b>  | <ul> <li>Weak</li> <li>Low-Quality of Evidence</li> </ul>                                     |
| RECOMMENDATION #18  | STRENGTH &  |
| For adults with <b>COVID-19 and shock</b> , we <i>recommend against</i> using dopamine if norepinephrine is available.  | <ul> <li>QUALITY OF EVIDENCE</li> <li>Strong</li> <li>High-Quality of<br/>Evidence</li> </ul> |
| RECOMMENDATION #19  | Strength &  |
| For adults with <b>COVID-19 and shock</b> , we <b>suggest</b> adding vasopressin as a second-line agent, over titrating norepinephrine dose, if target mean arterial pressure (MAP) cannot be achieved by norepinephrine alone.                                   | <ul> <li>QUALITY OF EVIDENCE</li> <li>Weak</li> <li>Moderate-Quality of Evidence</li> </ul>   |
| RECOMMENDATION #20  | Strength &  |
|   | QUALITY OF EVIDENCE   |
| For adults with <b>COVID-19 and shock</b> , we <i>suggest</i> titrating vasoactive agents to target a MAP of 60-65 mmHg, rather than higher MAP targets.  | <ul><li>Weak</li><li>Low-Quality of<br/>Evidence</li></ul>                                    |
| RECOMMENDATION #21  | Strength &  |
|   | QUALITY OF EVIDENCE   |
| For adults with <b>COVID-19 and shock with evidence of cardiac</b><br><b>dysfunction and persistent hypoperfusion despite fluid</b><br><b>resuscitation and norepinephrine</b> , we <b>suggest</b> adding<br>dobutamine, over increasing norepinephrine dose.     | <ul> <li>Weak</li> <li>Very Low-Quality of<br/>Evidence</li> </ul>                            |
| RECOMMENDATION #22  | STRENGTH &  |
| For adults with COVID 10 and refrectory shade we surrest  | QUALITY OF EVIDENCE   |
| using low-dose corticosteroid therapy ("shock-reversal"), over<br>no corticosteroid. <b>Remark:</b> A typical corticosteroid regimen in<br>septic shock is intravenous hydrocortisone 200 mg per day<br>administered either as an infusion or intermittent doses. | <ul> <li>Weak</li> <li>Low-Quality of<br/>Evidence</li> </ul>                                 |