**Instruction for the HOT-COVID trial - eligibility**

**Inclusion criteria**

* **Acutely admitted to the ICU AND**
* **Aged ≥ 18 year AND**
* **Supplemental oxygen with a flow of at least 10 L oxygen per minutes in an open system including high-flow systems OR invasive or non-invasive mechanical ventilation/CPAP systems independent of the FiO2 AND**
* **Expected to receive supplemental oxygen for at least 24 hours in the ICU AND**
* **Having an arterial line for PaO2 monitoring AND**
* **Confirmed SARS-CoV-2 infection in the time leading to or during current hospital admission**

**Exclusion criteria**

* + **> 12 hours since ICU admission**

(If the patient was transferred directly from another ICU the 12 hour period starts at the time mechanical ventilation in the first ICU)

* + **Chronic mechanical ventilation**

(Invasive mechanical ventilation, continuous non-invasive ventilation or continuous mask-CPAP. Nocturnal CPAP or non-invasive ventilation due to sleep apnoea and/or obesity hypoventilation syndrome is not regarded as chronic mechanical ventilation)

* + **Use of home oxygen**

(Any daily prescribed supplementary oxygen inhalation given continuously, in daytime or nocturnally)

* + **Previous treatment with bleomycin**

(Any history of bleomycin treatment documented in the patient charts)

* + **Organ transplant during current hospital admission**

(Any kind of solid organ transplant is planned or has been conducted)

* + **Withdrawal from active therapy or brain death deemed imminent**
  + **Fertile woman with positive urine or plasma hCG**

(In all fertile woman < 50 years of age, a negative hCG-test must be present before screening)

* **Carbon monoxide poisoning**

(Confirmed by an arterial or venous blood carboxyhaemoglobin > 3% for non-smokers and > 10% for active smokers during current hospitalisation

* **Cyanide poisoning**

(If suspected by the clinicians during current hospitalisation and documented in the patient charts)

* **Paraquat poisoning**

(If suspected by the clinicians during current hospitalisation and documented in the patient charts)

* **Methaemoglobinaemia**

(A confirmed arterial or venous blood methaemoglobin > 8% during current hospitalisation)

* + **Sickle cell disease**

(Any history of sickle cell disorder documented in patient charts or the presence of haemoglobin S (HbS) in an arterial or a venous blood sample)

* **Expected use of hyperbaric oxygen treatment**

(Confirmed by an arterial or venous blood carboxyhaemoglobin > 3% for non-smokers and > 10% for active smokers during current hospitalisation

* **Consent according to national regulations not obtainable**
* **Previously randomised into the HOT-COVID trial**

(Previously screened patients are eligible if they were never randomised)