Clinical characteristics associated with increased risk of death include: older age (>65 years old), high fever at admission (>39°C), comorbidities (hypertension and/or diabetes), neutrophilia, lymphocytopenia, elevated end-organ related indices (AST, urea, and LDH), and elevated coagulation function indicators (PT and D-dimer). In patients that progressed to ARDS, clinical characteristics significantly associated with increased risk of death include: older age (>65 years old), neutrophilia, organ coagulation dysfunction, and lower fever. Additionally, treatment with methylprednisolone reduced the risk of death in patients with ARDS (HR, 0.38; 95% CI 0.20-0.72, P=0.003). This study was limited by a small sample size at a single location and potential selection bias for only severely ill patients.

Risk Factors Associated With Acute Respiratory Distress Syndrome and Death in Patients With Coronavirus Disease 2019 Pneumonia in Wuhan, China

In a retrospective cohort study of 201 patients with COVID-19 admitted to the hospital in Wuhan China researchers identified clinical characteristics associated with the development of ARDS and characteristics associated with the progression of ARDS to death. Of the 201 patients, 84 (41.8%) developed ARDS, and of those with ARDS 44 (54.2%) died. Clinical characteristics significantly associated with increased risk of progression to ARDS include: older age (>65 years old), high fever at admission (>39°C), comorbidities (hypertension and/or diabetes), neutrophilia, lymphocytopenia, elevated end-organ related indices (AST, urea, and LDH), and elevated coagulation function indicators (PT and D-dimer). In patients that progressed to ARDS, clinical characteristics significantly associated with increased risk of death include: older age (>65 years old), neutrophilia, organ coagulation dysfunction, and lower fever. Additionally, treatment with methylprednisolone reduced the risk of death in patients with ARDS (HR, 0.38; 95% CI 0.20-0.72, P=0.003). This study was limited by a small sample size at a single location and potential selection bias for only severely ill patients.

These summaries were prepared by medical and graduate students at Washington University in St. Louis. Please note that medRxiv articles have not yet been peer-reviewed.