

Project title:***Early diagnosis of comorbidity and assessment of the effective immunization in COVID-19 patients*****Acronym/working title:****No-more COVID-19****Principal Investigator**Dott. Mattia Bellan, DIMET UPO; SC Medicina Interna 1, AOU Maggiore della Carità, 28100 Novara
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Comitato Etico Interaziendale di Novara N° 117/20

Project summary

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is the pathogen responsible of Coronavirus Disease 2019 (Covid-19); the severity of the clinical picture is highly variable, ranging from asymptomatic to severe and potentially fatal disease.

Italy was the first Western country facing the pandemic; Italian clinicians and researchers already had a central role in the description of the acute phase of the disease. However, less is known about the long-term consequences of the infection. Previous coronaviruses outbreaks (i.e. SARS and MERS) were associated with persistent symptoms and functional impairment over time; it is therefore reasonable to postulate that SARS-CoV-2 infection may be associated to mid-term or even long-term sequelae. We previously described the persistence of respiratory functional alterations in a not negligible proportion of subjects 4 months after Covid-19 hospitalization.

In the present study, we aim to assess whether respiratory, radiological, motor and psychological sequelae may persist after 1 year from hospital discharge.

We will collect data from a prospective cohort of survivors to Covid-19 pneumonia; all the patients will undergo to: clinical assessment, chest computed tomography, pulmonary function tests, motor function assessment, psychiatric assessment, blood sampling, endpoints of the study:

1- Evaluation of mortality and morbidity one year after Covid-19 pneumonia; 2- Evaluation of the proportion of patients with persistent lung function impairment (defined by a reduction of diffusing capacity for CO, DLCO < 80% and < 60%); identification of long-term impairment predictors; 3- Evaluation of the proportion of patients with persistent motor function impairment; identification of long-term impairment predictors; 4- Evaluation of the proportion of patients with persistent psychological impairment; identification of long-term impairment predictors;

Duration of Study*Total duration of the study: 1 year**Study start: 15th March 2021**Study end: 15th March 2022***Total number of participants involved:**

280

Biological samples collected:

- | | |
|-------------------------|--------------------------|
| ✓ serum | ✓ plasma lithium-heparin |
| ✓ plasma sodium-citrate | ✓ saliva |
| ✓ buffy coat | ✓ urine |
| ✓ plasma EDTA | |