The quantification of HLA eplet mismatch (eMM) has demonstrated its superiority as a biomarker for the immunological risk stratification in kidney, heart and lung transplantation. The aim of this study is to evaluate the association between HLA eMM and the development of biopsy-proven acute rejection (BPAR).
Patients that received liver transplant between 2018 and 2020 were included and prospectively followed for 9 months. Recipients and donor pairs were HLA typed by NGS and the number of eMM was quantified. Risk loci for BPAR were identified by Cox regression models. ROC analysis was performed to identify specific eMM thresholds for BPAR development and Kaplan-meier curves for the BPAR-free survival according to high or low eMM load were constructed.
Thirteen of our 37 patients included in the study developed BPAR during follow up. The number of antibody verified (ab) eMM in HLA-A (HR: 1.10, CI95% 1.00-1.20; p= 0.045) and HLA-DQ (HR: 1.21, CI95% 0.99-1.47; p= 0.063) were significantly associated with BPAR. Having ≥ 2 ab HLA-DQ eMM and ≥ 9 ab HLA-A eMM were considered as high loads. At 9 months post-transplant, the BPAR-free survival for patients with low and high ab HLA-DQ eMM load was 81.0% (CI95% 65.8-99.6) and 43.8% (CI95% 25.1-76.3), respectively, while for patients with low and high ab HLA-A eMM load was 75.0% (CI95% 60.6-92.9) and 33.3% (CI95% 13.2-84.0), respectively.
The measurement of the ab eMM load for the loci HLA-A and HLA-DQ between donor and recipient prior liver transplantation could identify those at risk of developing BPAR. Individualized immunosuppression protocols and closer surveillance could be performed if the immunological risk is assessed precisely. Further studies in our population are being performed to confirm these results.

285. (528) DYNAMICS OF SOLUBLE IMMUNE MEDIATORS IN COVID-19 PATIENTS FROM AN ARGENTINEAN COHORT WITH MODERATE AND SEVERE SYMPTOMS

Laura Almada*, Sofia C Angiolini*, Nicolás Dho N*, Jeremias Dutto J*, Yamila Gazzoni Y*, Clarisa Manzone C*, Constanza Marín *, Nicolás E Ponce, Pablo Iribarren, Fabio Cerbán, Gabriel Morón, Carolina Amezcua Vesely, Yamile Ana, Laura Cervi, Laura Chiapello, Laura Fozzatti L, Paula Icely, Mariana Maccioni, Cristian Mena, Carolina Montes, Cristina Motrán , Cecilia Rodríguez Galán, Cinthia Stempin, María Estefania Viano, M Bertone#, Claudio Abiega#, Daiana Escudero#, Adrian Kahn#, Juan Pablo Caeiro#, Daniela Arroyo, Belkys Maletto , Eva Acosta Rodríguez, Adriana Gruppi, Claudia E Sotomayor. Grupo ImmunoCovidCBA.
*All these authors contributed equally.
Departamento de Bioquímica Clínica, CIBICI-CONICET, Facultad de Ciencias Químicas, Universidad Nacional de Córdoba. #Hospital Privado Universitario de Córdoba, IUCBC.

The cytokine storm, a form of systemic inflammatory response syndrome, is one of the most dreadful complications that can occur during COVID-19. In this work, we aimed at studying the occurrence of a cytokine storm in a cohort of COVID-19 patients (Cpts) from Córdoba (Argentine). During first wave, we collected sera from individuals with RT-PCR+ for SARS-CoV2 hospitalized in Hospital Privado with moderate (MOD) and severe (SEV) disease (n=62, aged 21-80 years) as well as healthy controls (HC n=24, age matched), to determine the concentrations of IL-1β, IL-6, IL-8, IL-10, IL-12, IL-28A/B, IL-29, TNF, IP-10, IFNα2, IFNβ, IFNγ and GM-CSF by LEGENDplexTM. Males represented 74% of MOD and 67% of SEV Cpts. Hypertension (HT, 48%), obesity (31%), dyslipidemia (DL, 24%), and diabetes (24%) were the most frequent comorbidities. All cytokines, except IL-28A/B, were significantly increased in total Cpts in comparison with HC ($p<0.01$). Elevated levels of IL-6 and CRP ($p<0.01$) between 4-7 day after hospitalization were found in all Cpts who died, but the cytokine profiles were different in deceased SEV than in MOD Cpts. Mortality in SEV group was associated with high levels of IL-6 ($p<0.001$), GM-CSF ($p<0.01$), IL-8, CRP, leukocytosis and decreased platelets ($p<0.0001$ for all). Comorbidities were linked to particular patterns of immune mediators on admission but not afterwards during infection, with HT Cpts exhibiting increased IP-10 levels but DL Cpts showing lower concentration of IL-1β, GM-CSF and IL-10 compared to no-HT and no-DL Cpts, respectively ($p<0.05$). The frequency of Cpts who required O2 support was higher in HT (84%) vs DL (67%). Although our data have similarities with those in international reports, the complete profiling of different parameters (cytokine/chemokines, risk factors, epidemiological and clinical characteristics) in the local cases add value by identifying particularities that may be relevant for the management and prognosis during SARS-CoV2 infection.

286. (533) ALTERATIONS OF BLOOD IMMUNE CELLS IN COVID-19 ELDERLY PATIENTS WITH OR WITHOUT TYPE 2 DIABETES

Susana Salva [1 a], Yanina Kolling [2 a], Nicolás Argañaraz [2 a], María Pía Rocchia Novillo [3], María del Milagro Rocchia Novillo [3], Leonardo Albarracin [1], Jacqueline Charubi[4], Alejandra Casen[3], Nadia Gobbato [2], Mirta Rachid [2], Susana Alvarez [1], Julio Villena [1 *], Juan Carlos Valdez [2 **]
[1] Laboratory of Immunobiotechnology, Reference Centre for Lactobacilli (CERELA-CONICET), Tucuman, Argentina.
[2] Laboratory of Immunology, Faculty of Biochemistry, Chemistry and Pharmacy, National University of Tucuman, Tucuman, Argentina.
[3] Hospital Centro de Salud "Zenon Santillan", Tucuman, Argentina.
[4] Instituto de Maternidad "Ntra. Sra. De las Mercedes", Tucuman, Argentina.
[a] Contributed equally
** jcvillena@cerela.org.ar, ** pumavaldez@hotmail.com*

Elderly individuals, especially those with pre-existing conditions like diabetes mellitus (DM), have a high risk for developing severe cases of COVID-19. The aim of this work was to characterize the alterations of blood immune cells (BIC) in patients with symptomatic COVID-19 and confirmed SARS-CoV-2 infection, ≥ 60 years and who needed hospitalization in the Centro de Salud Hospital of Tucuman during the second peak of the pandemic. Blood samples were taken at the time of admission (d0) and five days after (d5) for routine laboratory tests and the characterization of BIC by flow cytometry. Most of the patients were men (70%) aged between 60 and 78 years. The 70% of patients had DM while 50% had arterial hypertension. At d0, all the patients had increased neutrophils and inflammatory markers (C reactive protein and D-dimers) and reduced numbers of lymphocytes, HLA-DR^{hi} monocytes, CD16$^+$CD56$^+$ NK cells, CD3$^+$HLA-DR$^+$CD25$^+$ cells, CD4$^+$ and CD8$^+$ T cells in blood. Patients received a standard treatment for COVID-19 care (O_2, corticosteroids and antibiotics). The treatment normalized the levels of BIC (d5) in 30% of patients who were those with no comorbidities. In patients with DM, BIC recovery was variable. In DM patients who required administration of plasma (30%), prolonged O_2 therapy (40%) or referral to the intensive care unit (10%) significant reductions of CD16$^+$CD56$^+$, CD3$^+$HLA-DR$^+$CD25$^+$, CD4$^+$ and CD8$^+$ cells were observed between d0 and d5. In line with previous studies, our results shows that absolute counts of major lymphocyte subsets in blood are significantly and substantially decreased during the course of severe COVID-19 disease in elderly patients. These BIC alterations may persist despite clinical care in elderly patients with DM. Further studies are needed to investigate the utility of early lymphocyte subset measurements as prognostic biomarkers of disease severity, mortality, and response to treatment in COVID-19 elderly patients with DM.

287. (543) MOLECULAR DETECTION OF *CLOSTRIDIOIDES DIFFICILE* BY DIRECT PCR: NEW TOOLS FOR THE DIAGNOSIS OF *C. DIFFICILE* INFECTION

Lorenzo Sebastián Morro[1], Laureano Ángel Español[1], Angela María Barbero[1,2], Sabina Palma[1,2], María Gracia Balbi[3], Mónica Machaín[3], Carlos Altamiranda[3,4], Gabriel Erbiti[4,5], Mauricio Fiori[6], Martina Calvo Zarlenga[6], Rodrigo Emanuel Hernández Del Pino[1,2], Virginia Pasquinelli[1,2].
[1]Centro de Investigaciones Básicas y Aplicadas (CIBA), Universidad Nacional del Noroeste de la Provincia de Buenos Aires (UNNOBA), Buenos Aires,