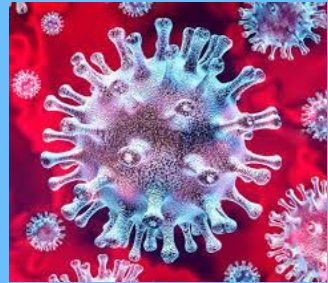


HLA and ABO polymorphisms may influence SARS-CoV-2 infection and COVID-19 severity: a retrospective analysis performed on an Italian cohort composed of subjects who received organ transplantation and candidates in waiting list in a January 2002-March 2020 time frame

COVID-19 outbreak March 22



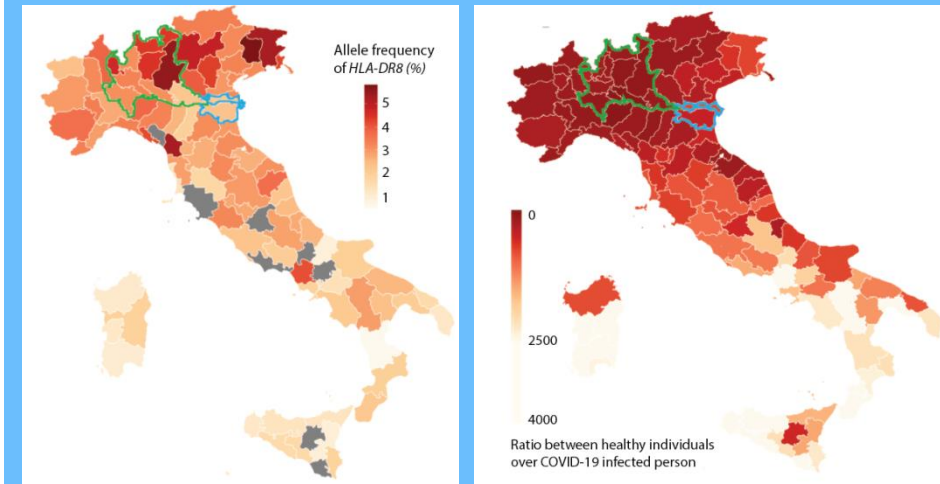
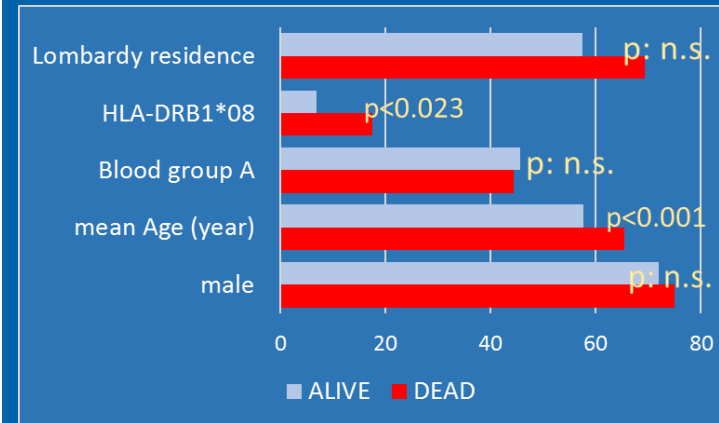
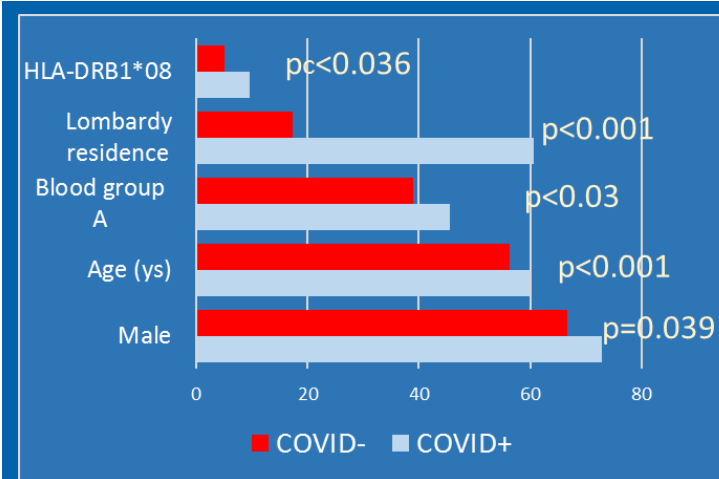
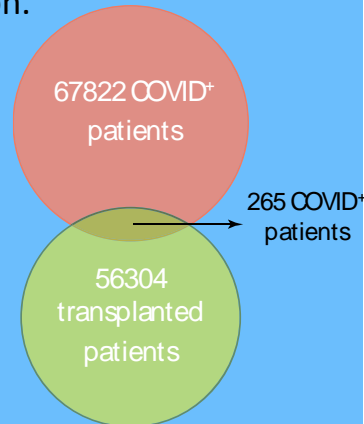
QUESTION:

❖ Are immune responses to SARS-CoV-2 infection influenced by genetic factors?

HLA-A, B, DRB1 and ABO frequencies were compared in organ transplant recipients and in waitlisted patients according to the presence or absence of SARS-CoV-2 infection.

67822 SARS-Cov-2 positive (COVID+) subjects were registered in the database of the Italian Ministry of Health (COVID Registry)

The National Transplant database contained 56304 patients: 47648 transplanted patients and 8656 patients awaiting organ transplantation.



CONCLUSIONS

- ❖ HLA antigens can influence SARS-CoV-2 infection and clinical evolution of COVID-19.
- ❖ Blood group A subjects are at greater risk of infection.
- ❖ Overall, this study provides clues on the different spread of the disease and indications about infection prognosis and vaccination strategies

Amoroso A. et al. *Transplantation*. January 2021

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