Seroprevalence of SARS-CoV-2 before/after case zero

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Key messages:
- From less than 2% to around 80%.
- Coronavirus was already circulating. The prevalence has risen exponentially, going from official case in Italy to 2.91 in 2019, before the first official case was highlighted. Coronavirus was already circulating in Italy in 2019.
- The results of our study show that in 2019, before the first official case in Italy was identified in February 2020, the prevalence of antibodies against SARS-CoV-2 was low, and in 2021, after the COVID-19 pandemic began in Italy at the end of 2020, the prevalence of antibodies against SARS-CoV-2 rose exponentially, going from 1.37% to 79.73%.
- The study was conducted on a representative sample of the Italian population, the prevalence of antibodies against SARS-CoV-2 against Spike protein of SARS-CoV-2. The purpose of this study was to estimate, in a representative sample of the Italian population, the prevalence of antibodies against SARS-CoV-2.

Conclusions:
- As regards the search for anti-N antibodies, one male and one female tested positive for IgG anti-spike, for a total of 291. The prevalence therefore passed from 1.37% to 79.73%.
- Five of the sera (4 males and 1 female) tested positive for anti-Spike, indicating a previous infection.
- Our preliminary data show that half of the sample for both nucleocapsid antibodies.

**Metagenomics**

**Covid-19**

- The Italian government has launched a national campaign against COVID-19.
- During October / November 2019, 365 participants were selected in the Piedmontese population among those who went to a hospital for routine blood tests.
- The population was selected on the basis of age and gender to be representative of the overall population.

**COVID-19 pandemic in Italy**

- In 2019 (before case zero, identified in Italy in February 2020), COVID-19 was circulating in Italy.
- In 2020, the COVID-19 pandemic began in Italy at the end of 2020, remaining at home and did not travel.
- In 2021, after 3 pandemic waves and a vaccination campaign, the prevalence of antibodies against SARS-CoV-2 rose exponentially.
- In Italy, the COVID-19 pandemic resulted in 161000 deaths. Meanwhile, the vaccination campaign against COVID-19 began in Italy at the end of 2020, and in 2021, after 3 pandemic waves and a vaccination campaign, the prevalence of antibodies against SARS-CoV-2 rose exponentially.

**Key messages:**
- The use of oral contraception was associated with estrogen and progesterone receptor double negative breast cancer, but not hormone receptor positive cancer.
- This is the first meta-analysis to investigate oral contraceptive use and associations with breast cancer risk by combined estrogen and progesterone receptor status.