

# Congenital CMV infection in France: maternal and neonatal treatments, data from the French “congenital CMV declaration platform” of the National Reference Center for Herpesviruses

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## Introduction

In the absence of screening, while antiviral treatments administered during pregnancy have recently shown their effectiveness to prevent congenital CMV infection (cCMV)(1, 2), the heterogeneity of diagnosis time points impairs cCMV prevention.

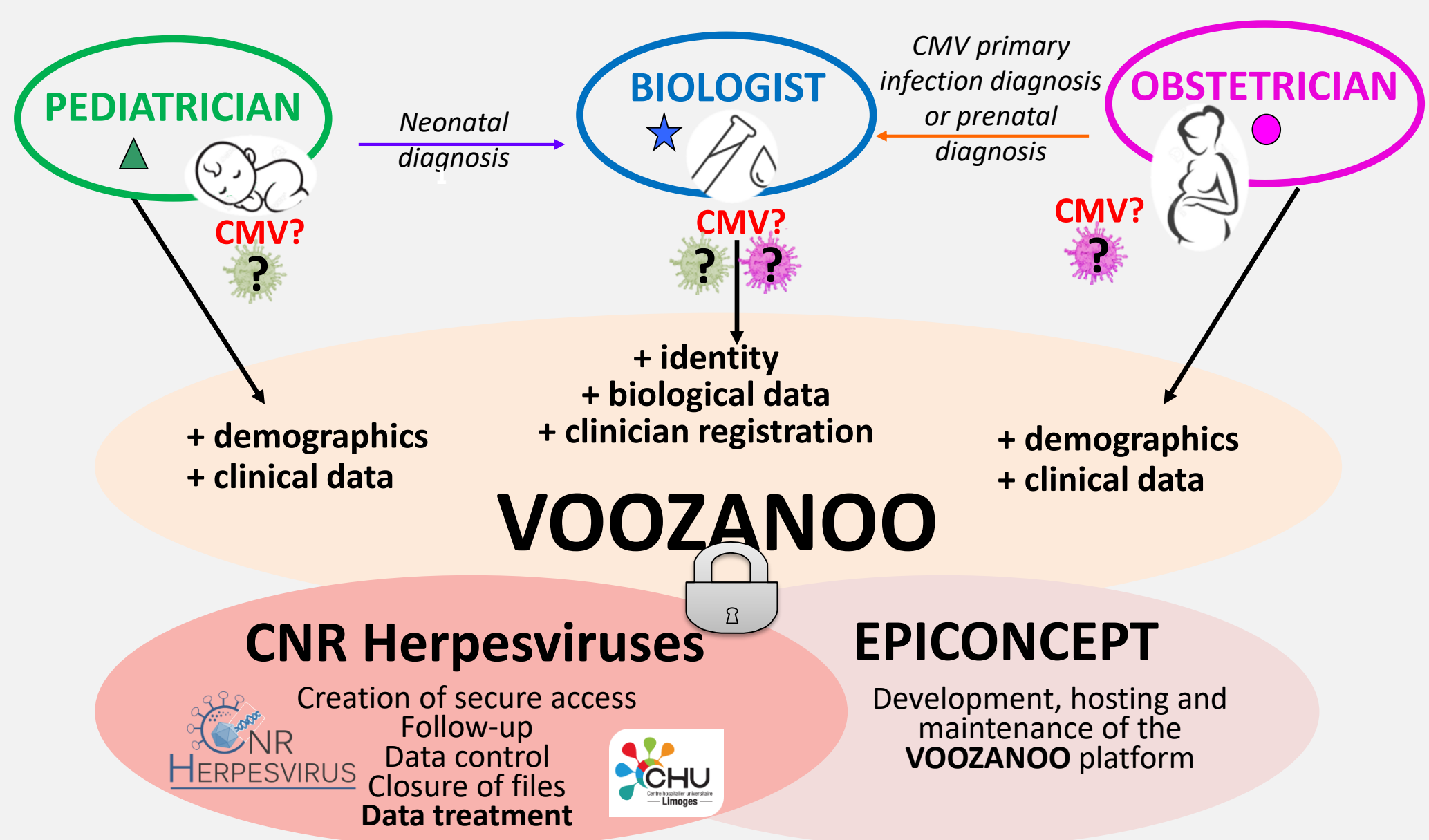
## Objectives

From cases declared by practitioners in the French database since 2017, we analyzed the burden of cCMV in real life with a focus on severe cases, maternal and newborn treatments.

## Methods

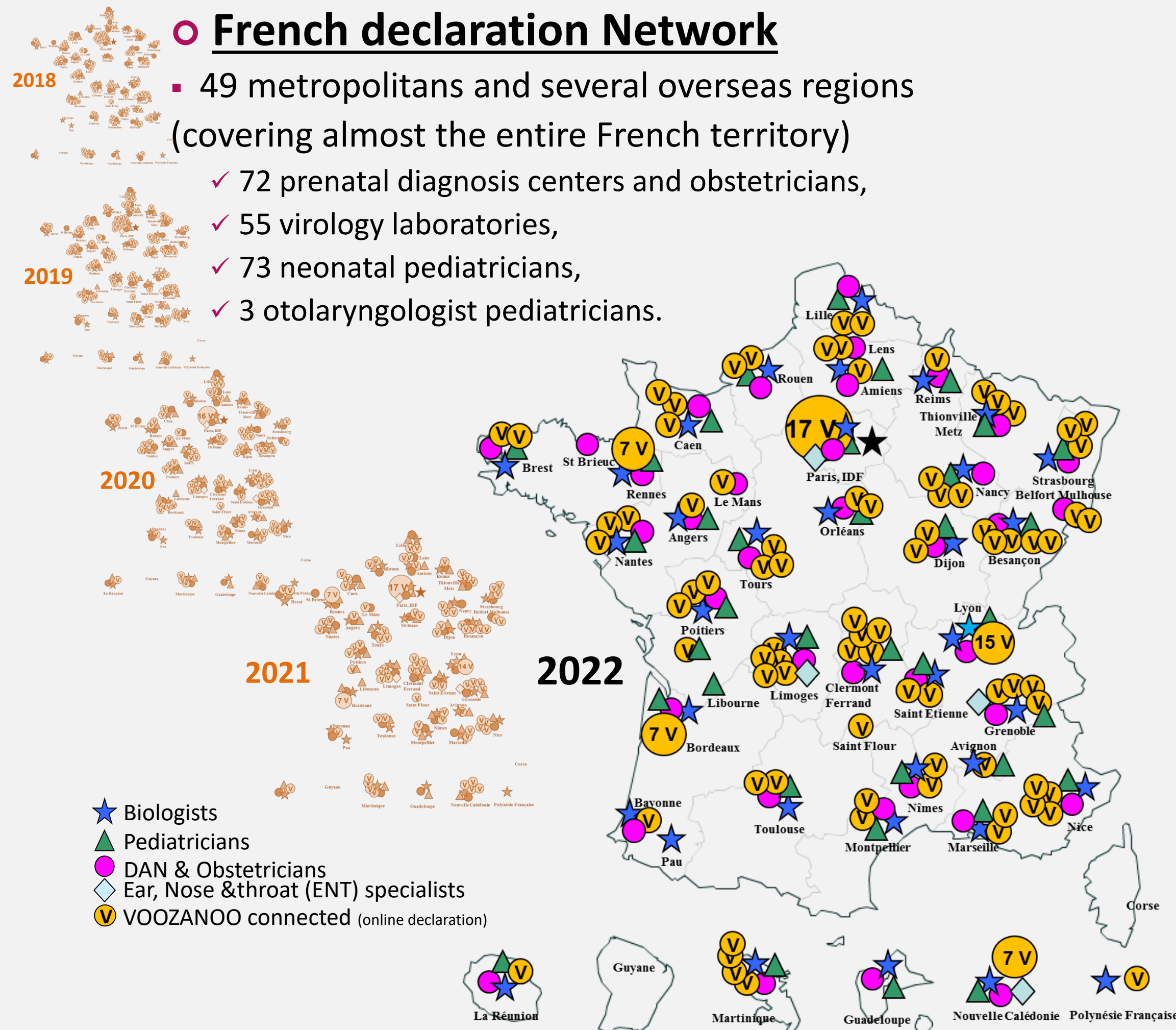
### French cCMV database :

- declaration since 2006
- online declaration since 2016
- French “cCMV declaration platform” VOOZANOO



### French declaration Network

- 49 metropolitans and several overseas regions (covering almost the entire French territory)
- 72 prenatal diagnosis centers and obstetricians,
- 55 virology laboratories,
- 73 neonatal pediatricians,
- 3 otolaryngologist pediatricians.



### 1660 cCMV cases since 2006

667 cCMV cases declared online since 2017 to 2022

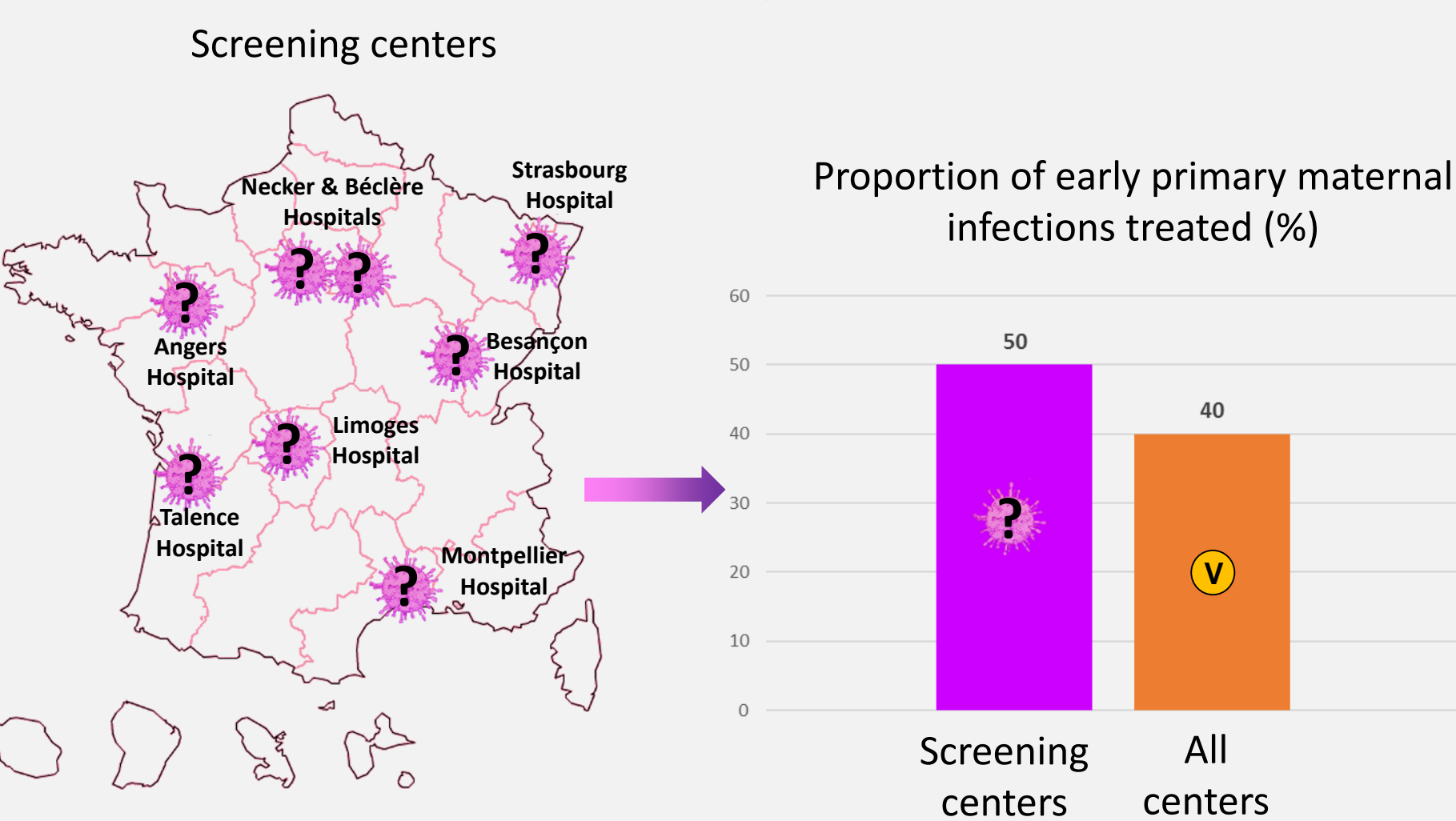


Analysis of 667 cCMV cases declared online between 2017 and 2022

Real-life clinical practices in France

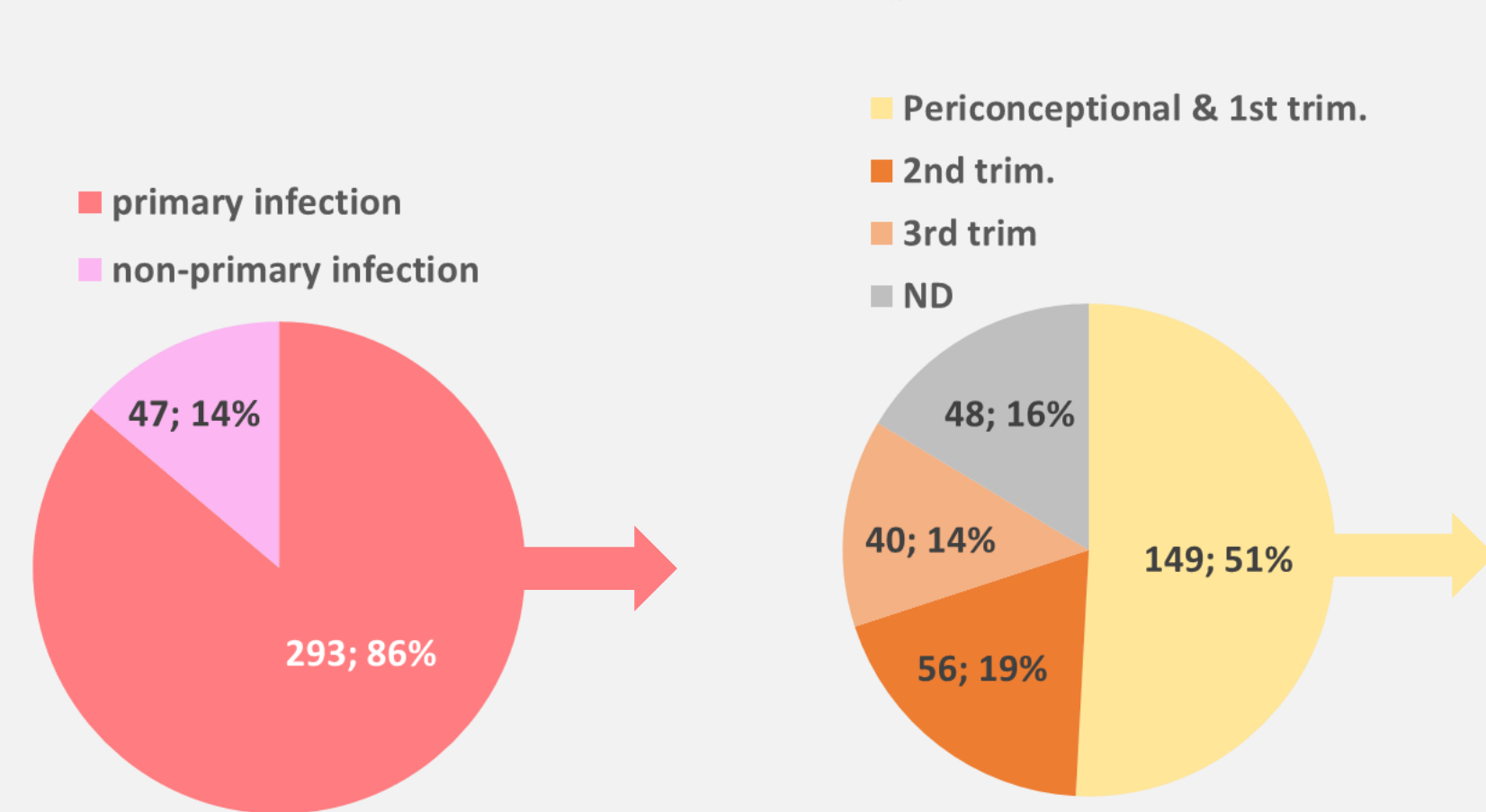
## Results

### Maternal screening



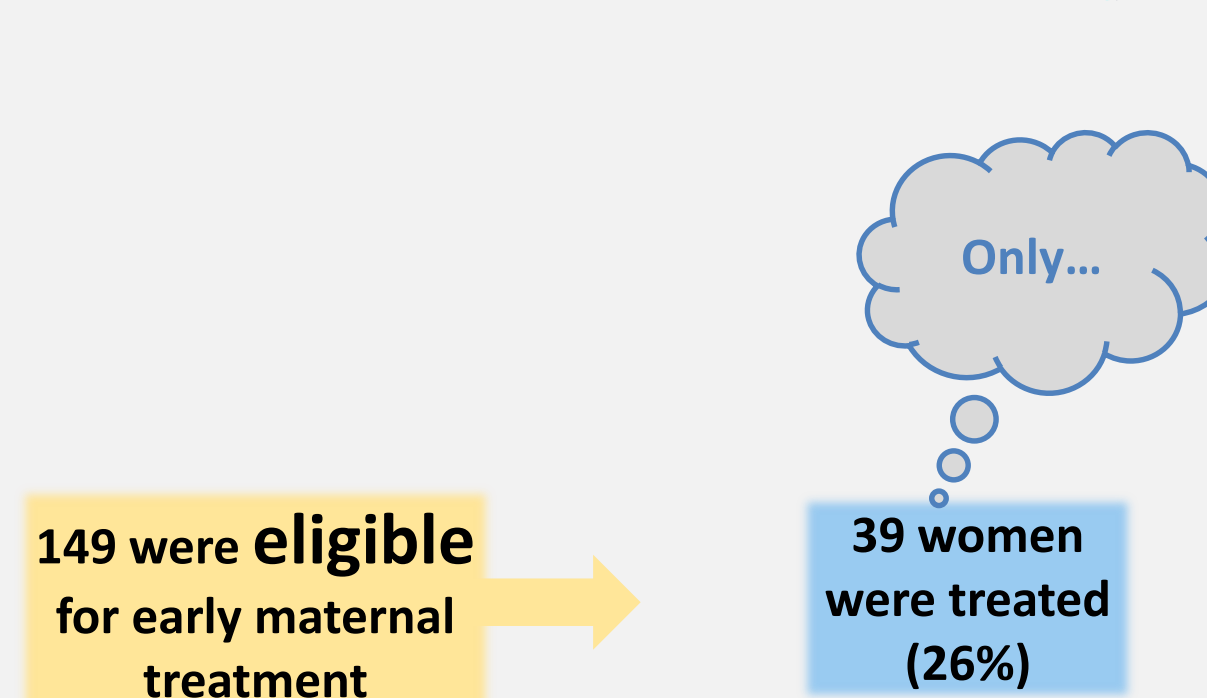
8 centers in France offer systematic screening in early pregnancy  
In screening centers, 50% of early primary maternal infection declared were treated with valaciclovir, against 40% for all centers.

### Maternal infections



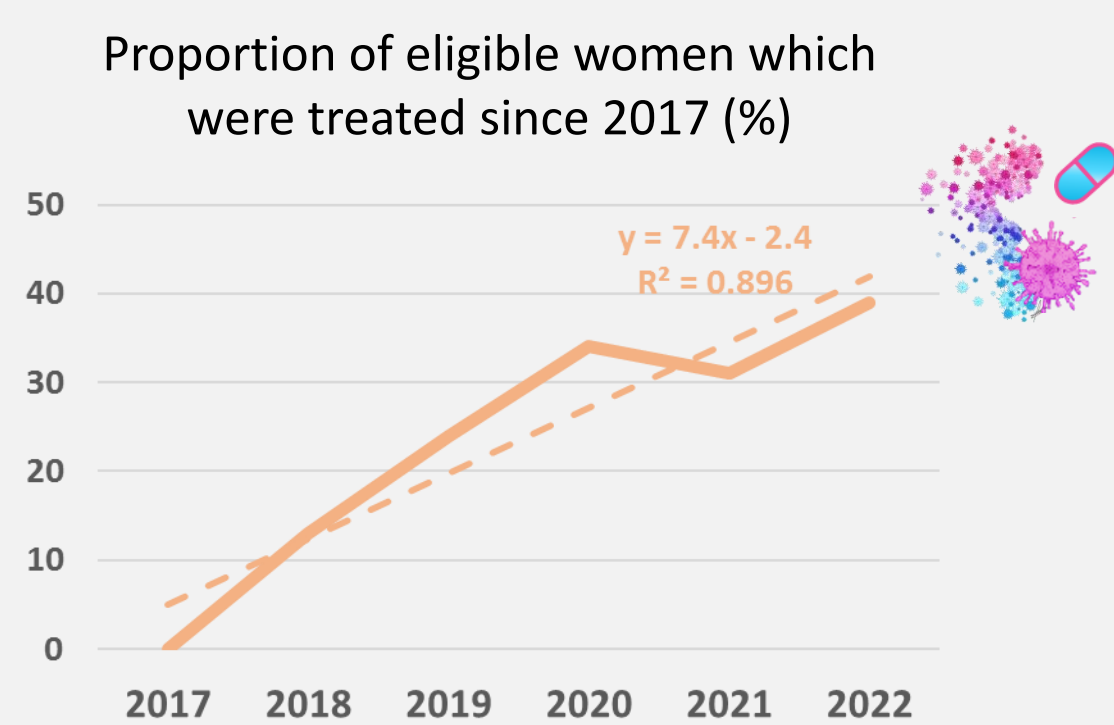
340 maternal status and 293 primary infections were documented.

### Early maternal treatment



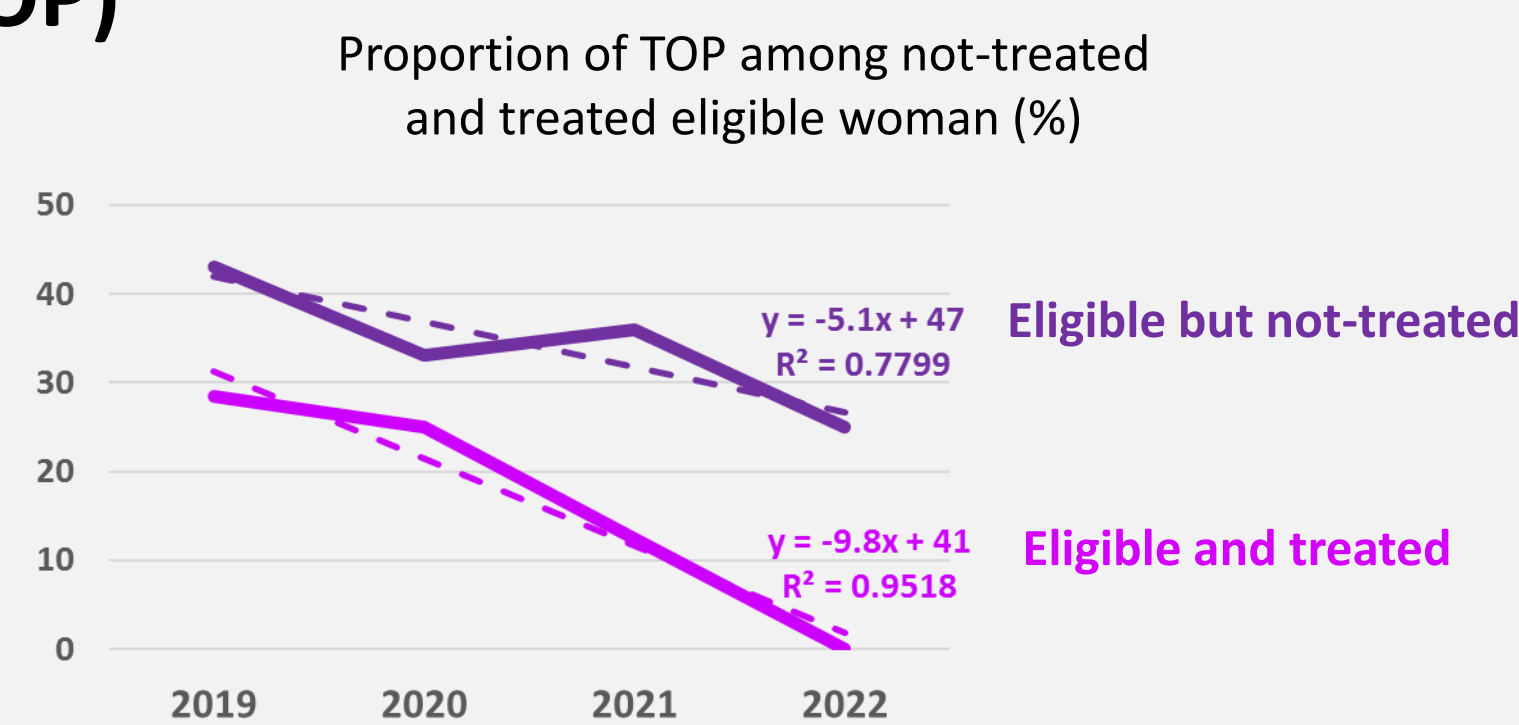
We recorded 149 infections during periconceptional/first trimester period (51%) which is the eligibility condition for maternal treatment.. Only 39 eligible pregnant women were treated (26%).

### Evolution of eligible treated women



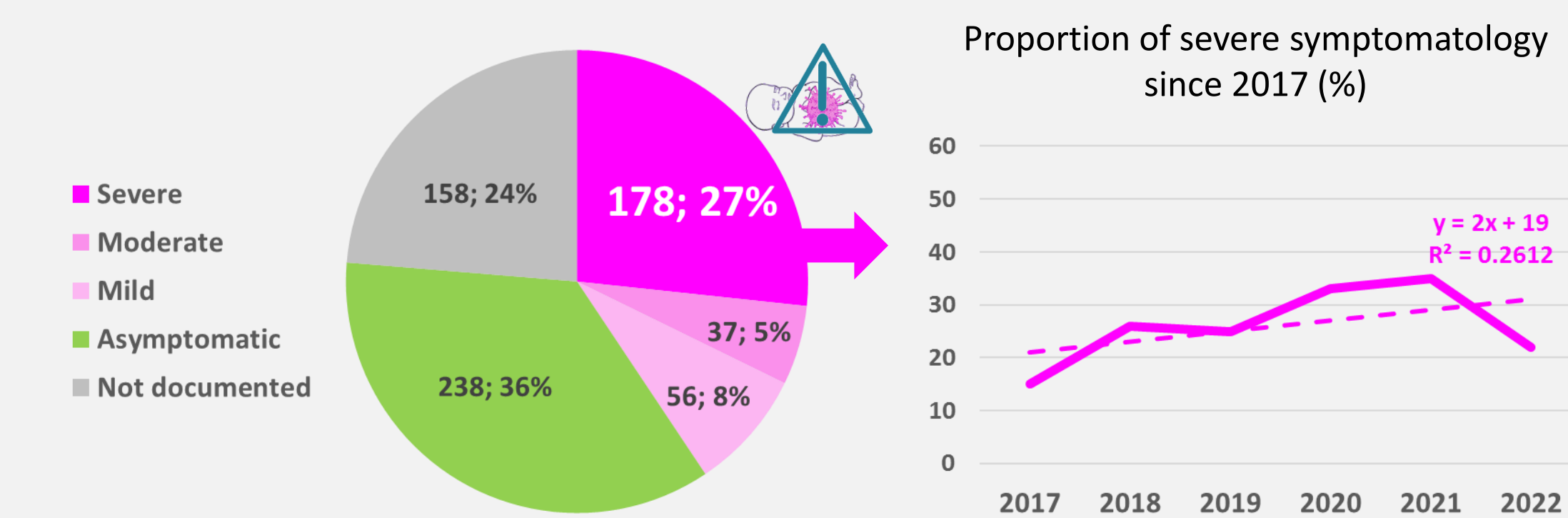
However, since 2017 we reported a clear increase in the proportion of eligible women treated (0% in 2017, 13% in 2018, 24% in 2019, 34% in 2020, 31% in 2021 and 39% in 2022).

### Evolution of medical termination of pregnancy (TOP)



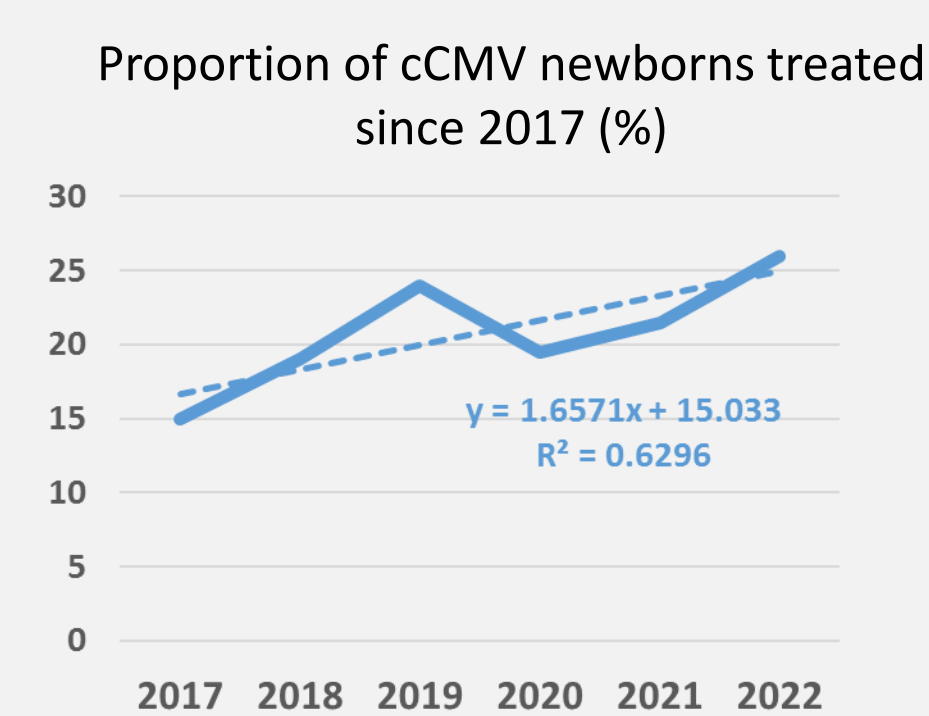
Conversely, the proportion of medical TOP recently decreased.  
For eligible and treated women, proportion of medical TOP decreased by 9.8%/year since 2019 (28.5% in 2019 and 0% in 2022) while it decreased meanly by 5.1%/year for eligible but not treated woman (43% in 2019 and 25% in 2022).

### cCMV fetus/newborns symptomatology



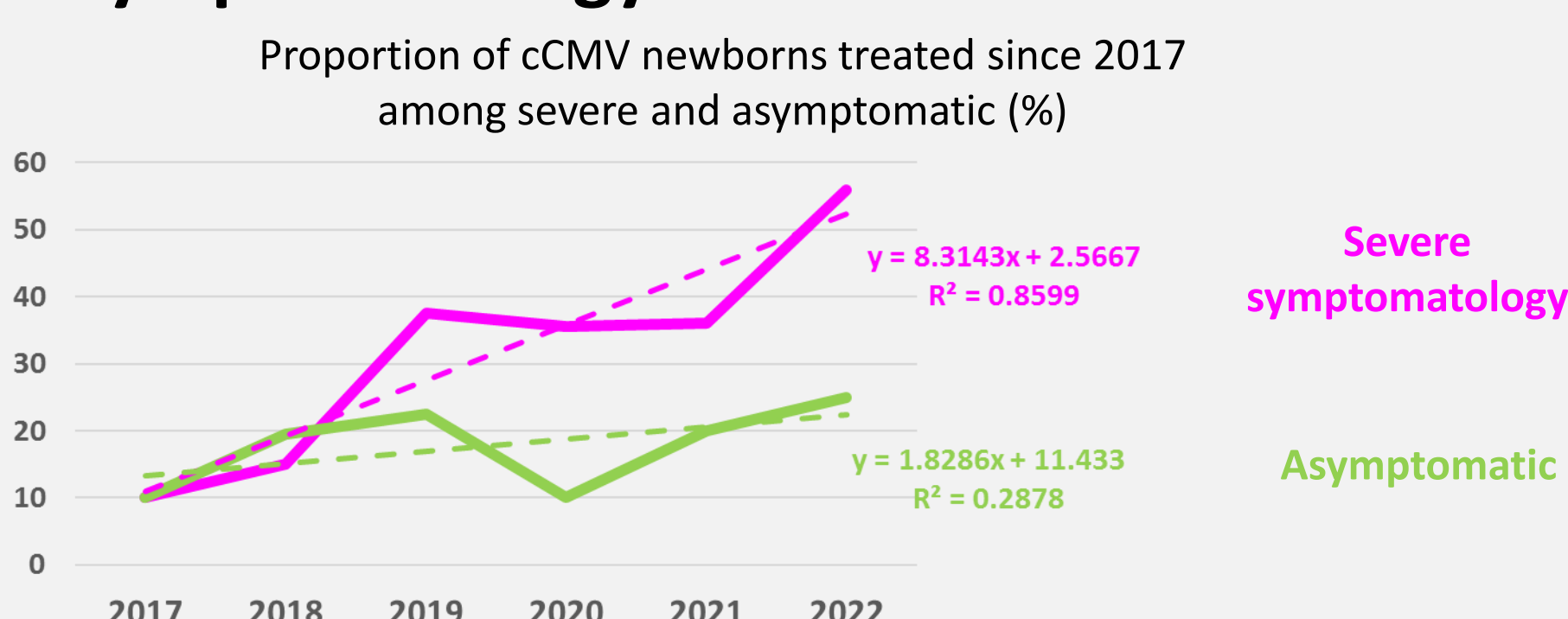
From the 667 cCMV cases, 178 presented severe symptomatology at birth (26.5%)(Rawlinson et al. classification (3)).  
This percentage was relatively stable each year since 2017.

### cCMV newborns treatment



Since 2017, we recorded a slow increase of newborns treated for cCMV (15% in 2017, 19% in 2018, 24% in 2019, 19.5% in 2020, 21% in 2021 and 26% in 2022).

### cCMV newborns treatment according to symptomatology



Likewise, the proportion of severe cCMV cases treated increased: 10% in 2017, 15% in 2018, 37.5% in 2019, 36% in 2020, 36% in 2021 and 56% in 2022, while asymptomatic newborns treatment was relatively stable.

## Conclusion

Despite the steady occurrence of severe cCMV, the increase in maternal treatment and decrease in TOP are encouraging. The publication of guidelines in the scientific literature and on the CNR herpes virus website could be a factor in this improvement. Likewise, the care of newborns is improving with treatment more specifically intended for severe cases. However progress still needs to be made through communication and well-organized screening.

### Bibliography:

- (1) Shahr-Nissan et al. The Lancet 2020
- (2) Kagan et al. Ultrasound in Obstetrics & Gynecology 2021
- (3) Rawlinson et al. Lancet Infect Dis 2017

Aknowlegments: we thank the cCMV French National Declaration Network