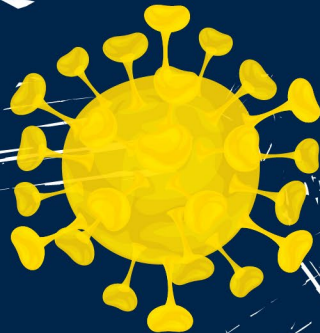


CROI ICAR

CROI Affiliated Event for
Italian Young Investigators

AWARDS 2024



CHAIRS:

F. Kirchhoff

(Ulm, Germany, EU)

D. Margolis

(Chapel Hill, North Carolina, USA)



Denver, Colorado

March 4th, 2024

h 06.00 - 07.30 pm

CROI 31st CONFERENCE ON
Retroviruses and Opportunistic Infections
MARCH 3-6 2024 DENVER, COLORADO

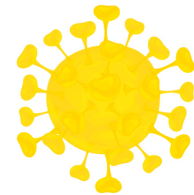
ICAR 16th NATIONAL CONGRESS
Italian Conference on AIDS and Antiviral Research
JUNE 19-21 ROME, ITALY



CROI ICAR AWARDS 2024

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Italian Young Investigators

CHAIRS: **F. Kirchhoff** (Ulm, Germany, EU), **D. Margolis** (Chapel Hill, North Carolina, USA)



Seroprevalence of Monkeypox (MPX) IgG antibodies in a cohort of PLWH in Rome, during the 2022 outbreak

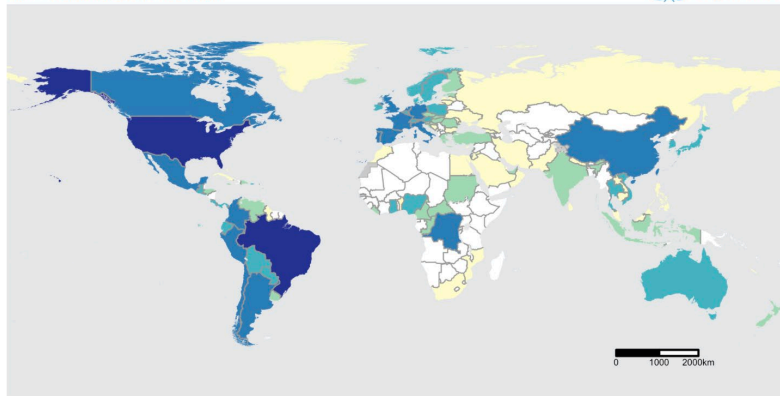
Pierluigi Francesco Salvo

*Medical Resident – Università Cattolica del Sacro Cuore,
Rome*

BACKGROUND

Total mpox cases

from 1 Jan 2022, as of 31 Jan 2024



The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: WHO Health Emergencies Programme
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93 921

Confirmed cases

179

Deaths

117

Countries reporting cases

MPX in Italy

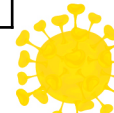
Confirmed cases	1015
Cases connected to travel abroad	259
Age (Median, IQR)	37 (14–71)
Gender	1000 M; 15 F

MPX by Region

Abruzzo	5	Piemonte	37
Campania	48	Puglia	21
Emilia Romagna	89	Sardegna	6
Friuli Venezia Giulia	18	Sicilia	16
Lazio	167	Toscana	60
Liguria	29	PA Bolzano	2
Lombardia	437	PA Trento	3
Marche	9	Veneto	68



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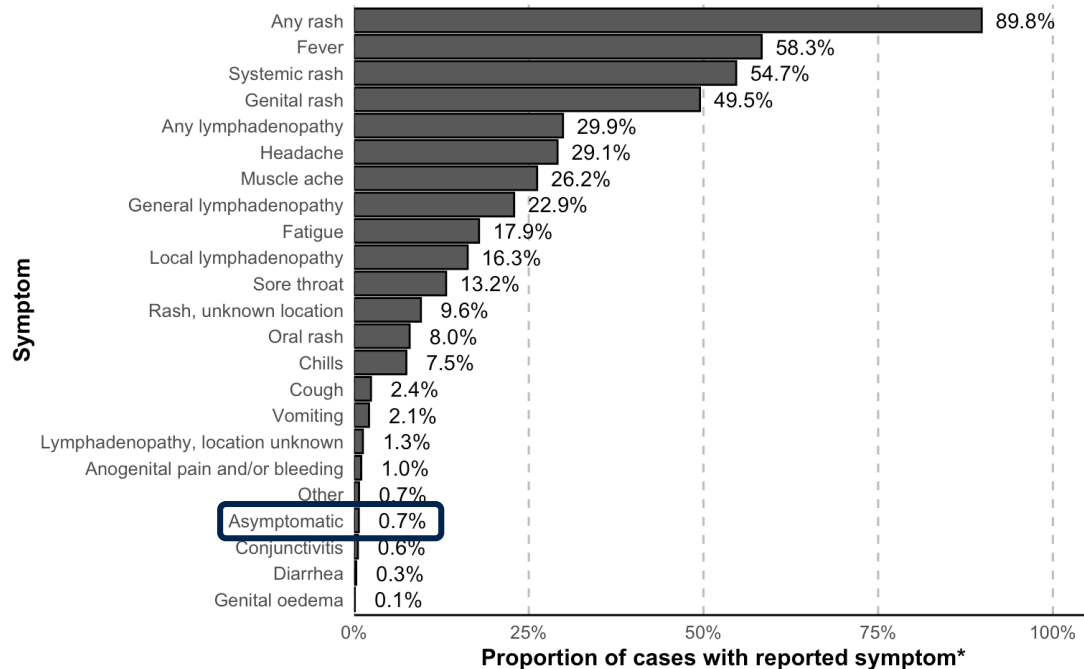
BACKGROUND

On **May 10th 2023** the WHO declared that MPOX is no longer a public health emergency of international concern.

All countries worldwide should integrate **MPOX prevention and care** into national health programs to avoid future spreads.



BACKGROUND



Source: WHO

*35,735 cases with at least one reported symptom from a country where at least two unique symptoms reported used as denominator

The clinical presentation of MPOX can range from mild to severe.

The high incidence rate suggest that asymptomatic infections may play an important role in the transmission of the virus.



AIMS OF THE STUDY

To assess the **prevalence** of IgG anti-MPV positive individuals in a cohort of PLWH

To analyse the actual size of the phenomenon of **asymptomatic infections** in clinical practice in this group of individuals.



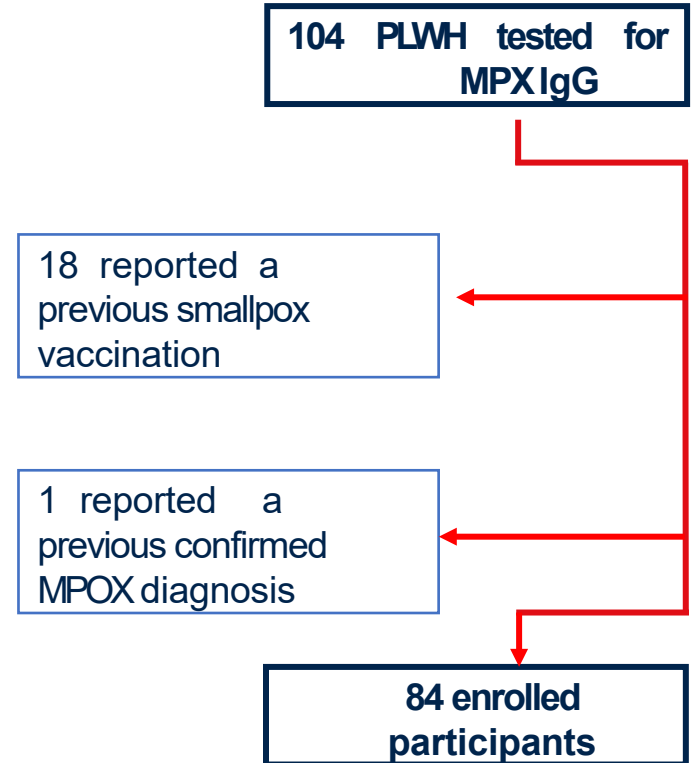
STUDY DESIGN AND METHODS

From **October 2022** to **February 2023** we serially collected serum samples from PLWH attending our outpatient clinic;

IgG against **MPV** have been assessed on stored cryopreserved serum samples with an enzyme-linked immunosorbent assay (**ELISA**);

No significant cross-reactivity or interference between anti-MPX IgG and analogues were reported for the test used for this study;

Only people with no previous reported vaccine against Smallpox nor previous reported clinical manifestations consistent with a MPOX diagnosis were included



CHARACTERISTICS OF THE POPULATION

Variables	N tot = 84 (100%)
Gender	
- Male	68 (81.0%)
- Female	16 (19.0%)
Age (Median, IQR)	43 (38 – 46)
Ethnicity (n, %)	
- Caucasian	72 (85.7%)
- Afroamerican	6 (7.1%)
- Latinoamerican	6 (7.1%)
Risk factor for HIV-1 infection (n,%)	
- MSM	56 (66.7%)
- Heterosexuals	27 (32.1%)
- PWID	1 (1.2%)
CDC stage C (n, %)	19 (22.6%)
Time since HIV diagnosis, years (Median – IQR)	10 (6 – 14)
Time of exposure to ART, years (Median – IQR)	9 (6 – 12)
Zenith HIV-RNA, log10 cp/mL (Median – IQR)	5.04 (4.52 – 5.53)
Nadir CD4 cells count, cells/mmc (Median – IQR)	251 (102 – 409)



RESULTS

Our analysis revealed a total of **6** participants who tested positive for IgG anti-MPV

Seroprevalence in this population was equal to **7.1%**

Variables	PLWH with positive anti MPV IgG= 6 (7.1%)
Gender	
- Male	6 (100%)
- Female	0 (0%)
Age (Median, IQR)	44 (37.5 – 48.3)
Ethnicity (n, %)	
- Caucasian	6 (100%)
- Afroamerican	0 (0%)
- Latinoamerican	0 (0%)
Risk factor for HIV-1 infection (n,%)	
- MSM	4 (66.7%)
- Heterosexuals	1 (16.7%)
- PWID	1 (16.7%)
CDC stage C (n, %)	3 (50.0%)
Time since HIV diagnosis, years (Median – IQR)	12 (8 – 19)
Time of exposure to ART, years (Median – IQR)	11 (8 – 13.25)
Zenith HIV-RNA, log10 cp/mL (Median – IQR)	4.85 (4.73 – 5.27)
Nadir CD4 cells count, cells/mm³ (Median – IQR)	60.5 (9.2 – 279.3)



CONCLUSIONS

Our findings from this setting showed a **mildly high** IgG-MPX prevalence among PLWH attending our outpatient clinic, with **no previous clinical manifestations**, suggesting the possibility of an **asymptomatic course** of the MPV infection.

Early detection and subsequent appropriate management of MPX infected people are of great importance for **global public health** and appropriate clinical management.



ACKNOWLEDGMENTS

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THANK YOU FOR YOUR ATTENTION

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