nature portfolio

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Last updated by author(s): Jan 16, 2023

Reporting Summary

Nature Portfolio wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Portfolio policies, see our Editorial Policies and the Editorial Policy Checklist.

Statistics

For all statistical analyses, confirm that the following items are present in the figure legend, table legend, main text, or Methods section.

n/a	Confirmed
☐	☒ The exact sample size (*n*) for each experimental group/condition, given as a discrete number and unit of measurement
☒	☐ A statement on whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
☐	☒ The statistical test(s) used AND whether they are one- or two-sided *Only common tests should be described solely by name; describe more complex techniques in the Methods section.*
☐	☒ A description of all covariates tested
☐	☒ A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons
☐	☒ A full description of the statistical parameters including central tendency (e.g. means) or other basic estimates (e.g. regression coefficient) AND variation (e.g. standard deviation) or associated estimates of uncertainty (e.g. confidence intervals)
☐	☒ For null hypothesis testing, the test statistic (e.g. *F*, *t*, *r*) with confidence intervals, effect sizes, degrees of freedom and *P* value noted *Give P values as exact values whenever suitable.*
☒	☐ For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings
☒	☐ For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes
☒	☐ Estimates of effect sizes (e.g. Cohen's *d*, Pearson's *r*), indicating how they were calculated

Our web collection on statistics for biologists contains articles on many of the points above.

Software and code

Policy information about availability of computer code

Data collection	Data was collected from CHS databases using SQL V18.6
Data analysis	R statistical software version 4.0.1 (R Project for Statistical Computing) was used for the univariate and multivariate survival analysis with time-dependent covariates. The following R packages were used: survival (3.2-13), ggplot2 (3.3.5), ggpubr (0.4.0), survminer (0.4.9), table1 (1.4.2). All R packages are freely available.

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors and reviewers. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Portfolio guidelines for submitting code & software for further information.

Data

Policy information about availability of data

All manuscripts must include a data availability statement. This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A description of any restrictions on data availability
- For clinical datasets or third party data, please ensure that the statement adheres to our policy

Due to Clalit Health Services data privacy regulations ans as per the institutional Helsinki and data utilization committee apptovals for this study, the patient-level data used for this study cannot be shared.

Field-specific reporting

Please select the one below that is the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

☒ Life sciences ☐ Behavioural & social sciences ☐ Ecological, evolutionary & environmental sciences

For a reference copy of the document with all sections, see nature.com/documents/nr-reporting-summary-flat.pdf

Life sciences study design

All studies must disclose on these points even when the disclosure is negative.

Sample size	All eligible subjects in Clalit Health Services were included in the study
Data exclusions	Subjects who were infected with MPXV prior to the study period were excluded. Additionally, participants vaccinated after October 21, 2022 were excluded to allow a minimal follow-up time of 25 days after vaccination.
Replication	Replication is not feasible for this study due to the limited number of subjects eligible for the study cohort and their unique characteristics
Randomization	Randomization was not applicable in this study, as this an observational cohort study, based on electronic medical records
Blinding	Blinding was not applicable in this study, as this an observational cohort study, based on electronic medical records

Reporting for specific materials, systems and methods

We require information from authors about some types of materials, experimental systems and methods used in many studies. Here, indicate whether each material, system or method listed is relevant to your study. If you are not sure if a list item applies to your research, read the appropriate section before selecting a response.

Materials & experimental systems

n/a	Involved in the study
☒	☐ Antibodies
☒	☐ Eukaryotic cell lines
☒	☐ Palaeontology and archaeology
☒	☐ Animals and other organisms
☐	☒ Human research participants
☒	☐ Clinical data
☒	☐ Dual use research of concern

Methods

n/a	Involved in the study
☒	☐ ChIP-seq
☒	☐ Flow cytometry
☒	☐ MRI-based neuroimaging

Human research participants

Policy information about studies involving human research participants

Population characteristics	All eligible subjects in Clalit Health Services were included in the study. The mean age of the study participants was 34 (SD 5.3). All participants were males.
Recruitment	Participants were not recruited: data for all eligible participants was extracted retrospectively from Clalit Health Services database. Participants' sex was also extracted from Clalit Health Services database, as registered in participants' medical records.
Ethics oversight	The study was approved by CHS's Community Institutional Review Board Committee and the Clalit Health Services Data Utilization Committee. The study was exempt from the requirement to obtain informed consent owing to the retrospective design.

Note that full information on the approval of the study protocol must also be provided in the manuscript.