

Supplementary Materials for

Comparing results from a traditional multivariable model and seven propensity score-based models for estimating COVID-19 vaccine effectiveness

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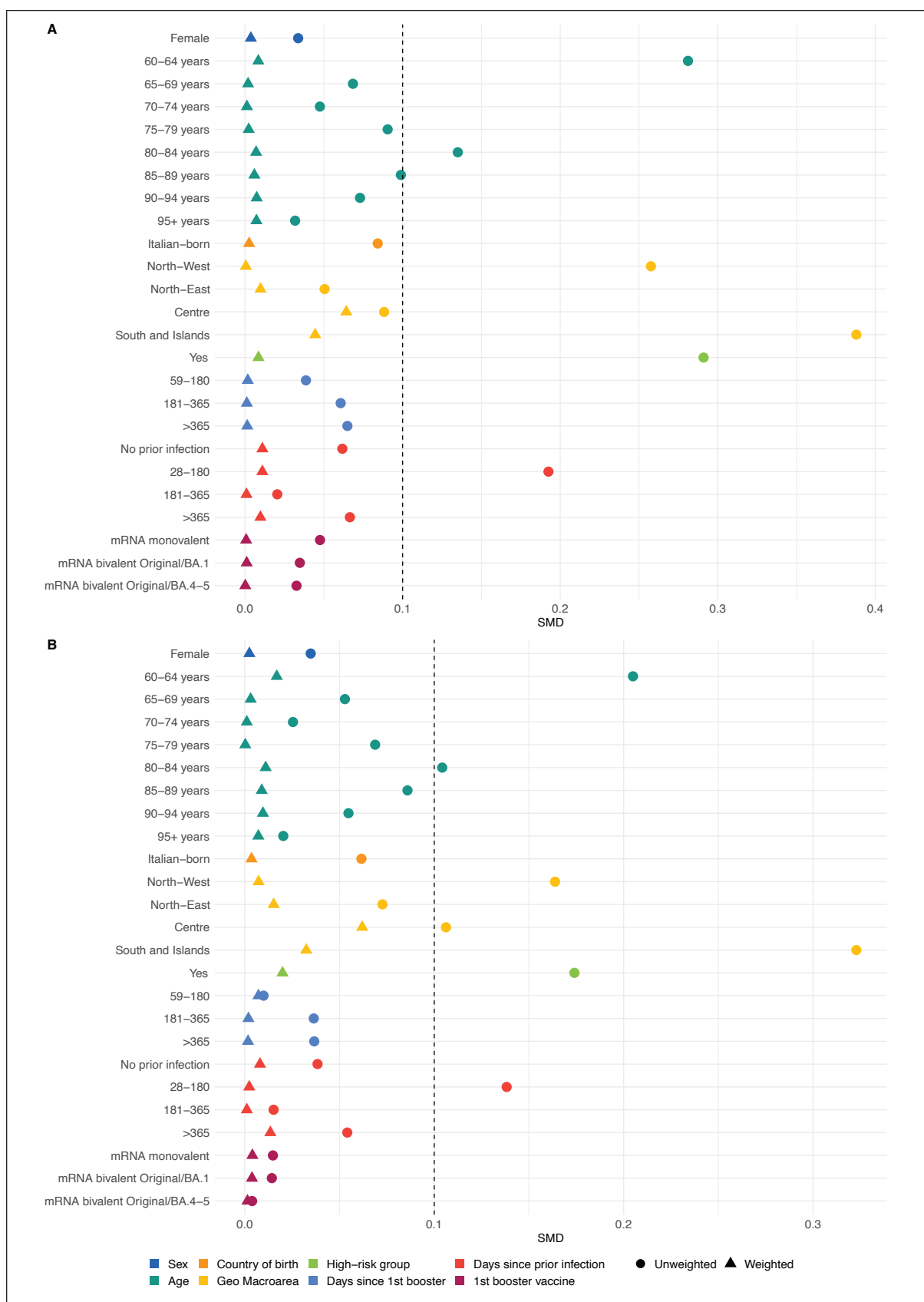
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This PDF file includes:

Supplementary Figure S1. Standardized mean differences for covariates used in the models before and after the weighting with STIPW at 1% level (A) and 5% level (B).

Supplementary Figure S2. Point estimation and 95% confidence interval of overall rVE against severe COVID-19 of a second or third booster of the bivalent Original/Omicron BA.4-5 mRNA vaccine relative to a first booster of an mRNA vaccine received at least 120 days earlier, Italy, 3 April-4 June 2023.

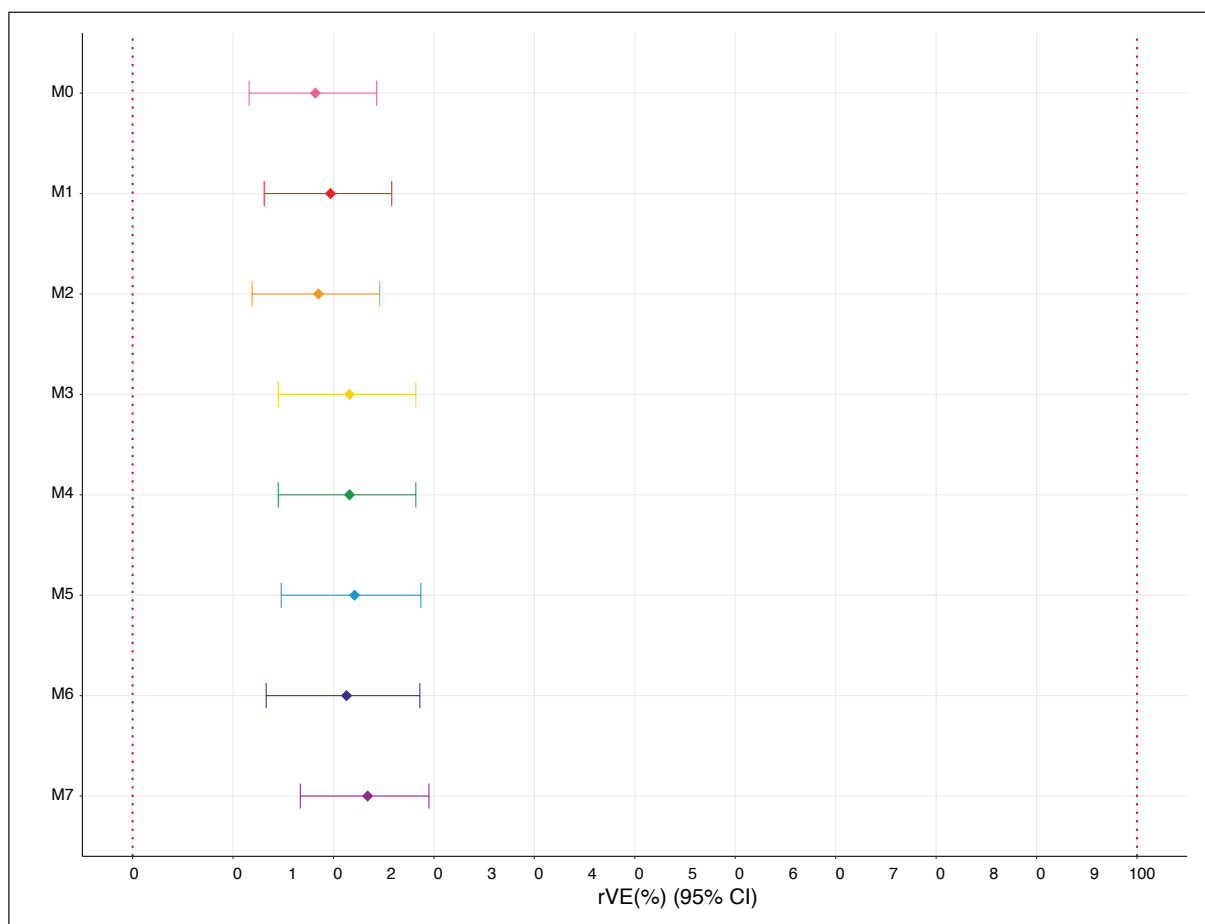
Table S1. Health-risk conditions recorded into the national vaccination registry.



Supplementary Figure S1

Standardized mean differences for covariates used in the models before and after the weighting with STIPW at 1% level (A) and 5% level (B).

In the analysis we considered the Regions or Autonomous Provinces (NUTS 2) but for graphical reasons we represented the macroarea (NUTS 1). In both cases the covariates are balanced. STIPW: stabilized truncated inverse probability weights.



Supplementary Figure S2

Point estimation and 95% confidence interval of overall rVE against severe COVID-19 of a second or third booster of the bivalent Original/Omicron BA.4-5 mRNA vaccine relative to a first booster of an mRNA vaccine received at least 120 days earlier, Italy, 3 April-4 June 2023. rVE: relative vaccine effectiveness.

Table S1
 Health-risk conditions recorded into the national vaccination registry

Description
Cystic fibrosis
Defects of the complement system. Other specified disorders involving the immune mechanism; deficiency or dysfunction of a single component (C1-C9)
Human immunodeficiency virus (HIV) disease, human immunodeficiency virus, type 2 (HIV-2), asymptomatic human immunodeficiency virus (HIV) infection status
Disorders involving the immune mechanism
Chronic alcohol misuse
Functional or anatomic asplenia
COPD
Chemotherapy or radiotherapy
Coagulopathies
Diabetes mellitus and other endocrinopathies
Patients in hemodialysis or with chronic kidney diseases expected to start dialysis
Hemoglobinopathy such as sickle cell anemia or thalassemia
Chronic liver disease
Cochlear implant
Chronic kidney Disease
Chronic eczema or psoriasis
Diseases associated with a high risk of aspiration pneumonia
Chronic cardiovascular disease
Chronic respiratory disease
Motor neuron diseases
Chronic inflammatory diseases and malabsorption syndromes
Blood cancers (leukemia, lymphoma and myeloma)
Solid tumors
Obesity
Bone marrow transplant
Drug misuse
Solid organ transplant
Patients with CSF leak from trauma or intervention
Patients in immunosuppressive treatment
Metabolic diseases
Hematopoietic diseases
Pathologies that require important surgical interventions
Neurological diseases
Cerebrovascular diseases
Down syndrome
Disabilities (physical, sensorial, learning or psychic)

COPD: chronic obstructive pulmonary disease; CSF: chronic fatigue syndrome.