Supplemental Online Content

Muhsen K, Maimon N, Mizrahi AY, et al. Association of BNT162b2 vaccine third dose receipt with incidence of SARS-CoV-2 infection, COVID-19–related hospitalization, and death among residents of long-term care facilities, August to October 2021. *JAMA Netw Open.* 2022;5(7):e2219940.
doi:10.1001/jamanetworkopen.2022.19940

**eTable 1.** Associations of BNT162b2 Vaccine Third Dose Vaccination and Other Co-Variates With SARS-CoV-2 Infection >7 Days Following Third Dose Administration

**eTable 2.** Associations of BNT162b2 Third Dose Vaccination With SARS-CoV-2 Infection, COVID-19 Hospitalizations, and Deaths >14 Days Following Vaccination Among Residents of Long-Term Care Facilities

This supplemental material has been provided by the authors to give readers additional information about their work.
eTable 1: Associations of BNT162b2 Vaccine Third Dose Vaccination and Other Covariates With SARS-CoV-2 Infection >7 Days Following Third Dose Administration

|                                | Unadjusted HR (95% CI) | P-value | Adjusted HR (95% CI) | P-value |
|--------------------------------|------------------------|---------|----------------------|---------|
| **BNT162b2 booster dose vaccination** |                        |         |                      |         |
| Two doses only \(^b\)            | 1.00                   | <.001   | 1.00                 | <.001   |
| third dose vaccination > 7 days  | 0.10 (0.07, 0.15)      |         | 0.11 (0.07, 0.15)   |         |
| **Age, years**                   | 1.00 (0.98, 1.01)      | 0.65    | 1.00 (0.98, 1.02)    | 0.99    |
| **Sex**                          |                        |         |                      |         |
| Female                           | 1.00                   | 0.18    | 1.00                 | 0.05    |
| Male                             | 1.18 (0.92, 1.52)      |         | 1.29 (0.99, 1.68)    |         |
| **Residential socioeconomic status** |                      | 0.87    |                      | 0.72    |
| Low                             | 1.00                   |         | 1.00                 |         |
| Intermediate                     | 1.05 (0.69, 1.59)      | 0.81    | 1.07 (0.67, 1.71)    | 0.76    |
| High                            | 0.96 (0.60, 1.51)      | 0.86    | 0.93 (0.56, 1.55)    | 0.78    |
| **Population group**            |                        | 0.76    |                      | 0.87    |
| Arab population                 | 1.00                   |         | 1.00                 |         |
| General Jewish population       | 0.97 (0.33, 2.84)      | 0.69    | 1.10 (0.38, 3.16)    | 0.85    |
| Ultraorthodox Jewish population | 1.21 (0.59, 2.51)      | 0.59    | 1.21 (0.57, 2.55)    | 0.61    |
| **Calendar epidemiological week** | 0.10 (0.04, 0.28)      | <.001   | 0.34 (0.12, 1.00)    | 0.05    |

HR: Hazard ratio; CI: Confidence intervals
\(^a\) Unadjusted Cox regression models
\(^b\) The second dose was administered ≥5 months before the follow-up starting date
\(^c\) Multivariable Cox regression model, adjusted for the variables in the table and epidemiological week
### Table 2: Associations of BNT162b2 Third Dose Vaccination With SARS-CoV-2 Infection, COVID-19 Hospitalizations, and Deaths >14 Days Following Vaccination Among Residents of Long-Term Care Facilities

|                                | Number of residents | Number of cases | Cumulative incidence | Unadjusted HR (95% CI) b | P-value b | Adjusted HR (95% CI) c | P-value c |
|--------------------------------|---------------------|----------------|----------------------|---------------------------|-----------|------------------------|-----------|
| **RT-PCR confirmed SARS-CoV-2 infection** |                     |                |                      |                           |           |                        |           |
| Two doses of BNT162b2 vaccine a | 2440                | 127            | 5.6%                 | 1.00                      | <.001     | 1.00                   | <.001     |
| Three doses of BNT162b2 vaccine | 16,020              | 67             | 0.4%                 | 0.08 (0.05, 0.13)         | <.001     | 0.09 (0.05, 0.14)      |           |
| **Mild/moderate COVID-19 hospitalization** |                     |                |                      |                           |           |                        |           |
| Two doses of BNT162b2 vaccine a | 2431                | 68             | 2.9%                 | 1.00                      | <.001     | 1.00                   | <.001     |
| Three doses of BNT162b2 vaccine | 16,019              | 19             | 0.1%                 | 0.06 (0.03, 0.12)         | <.001     | 0.05 (0.02, 0.11)      |           |
| **Severe COVID-19 hospitalization** |                     |                |                      |                           |           |                        |           |
| Two doses of BNT162b2 vaccine a | 2440                | 44             | 1.9%                 | 1.00                      | <.001     | 1.00                   | <.001     |
| Three doses of BNT162b2 vaccine | 16,020              | 9              | 0.1%                 | 0.06 (0.02, 0.16)         | <.001     | 0.06 (0.02, 0.17)      |           |
| **COVID-19 related deaths** d |                     |                |                      |                           |           |                        |           |
| Two doses of BNT162b2 vaccine a | 2440                | 14             | 0.6%                 | 1.00                      | <.001     | 1.00                   | <.001 d   |
| Three doses of BNT162b2 vaccine | 16,020              | 4              | 0.02%                | 0.04 (0.007, 0.19)        | <.001     | 0.03 (0.006, 0.20) d   |           |

a The second dose was administered ≥5 months before the follow-up start date
b Unadjusted Cox regression models
c Multivariable Cox regression model, adjusted for the variables age, sex, community-level socioeconomic status rank, population group, and epidemiological week
d Multivariable Cox regression model, adjusted for the variables age, sex, and epidemiological week
HR: hazard ratio; CI: confidence intervals