COVID-19 Aşıları:

Son durum

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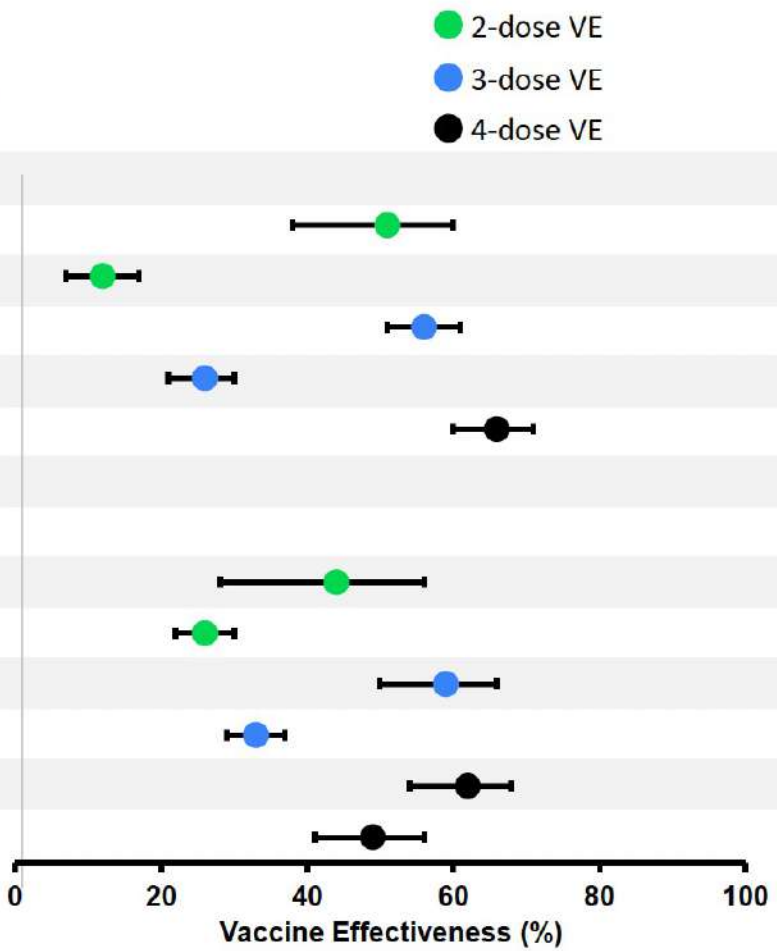
Hatırlatma dozları gerekli mi?

VISION: mRNA VE for ED/UC visits among immunocompetent adults ≥18 years by number of doses and time since last dose receipt, late-Mar–late-Jul 2022

Vaccination status (days since most recent dose)	Total	CLI cases	Days since most recent dose, median (IQR)	Adjusted VE % (95% CI)
BA.2/BA.2.12.1 period				
Unvaccinated	27,907	3,501		Ref.
2 doses (14-149)	1,774	110	104 (71, 128)	51 (38 - 60)
2 doses (≥150)	20,883	2,584	352 (278, 398)	12 (7 - 17)
3 doses (7-119)	9,142	441	94 (72, 108)	56 (51 - 61)
3 doses (≥120)	26,654	3,186	166 (145, 190)	26 (21 - 30)
4 doses (7-59)*	4,092	355	28 (17-42)	66 (60 - 71)
BA.4/BA.5 period				
Unvaccinated	22,867	6,717		Ref.
2 doses (14-149)	540	82	106 (70, 133)	44 (28 - 56)
2 doses (≥150)	15,614	3,686	420 (321, 465)	26 (22 - 30)
3 doses (7-119)	1,280	154	77 (45, 100)	59 (50 - 66)
3 doses (≥120)	18,803	4,063	223 (193, 252)	33 (29 - 37)
4 doses (7-59)*	2,169	259	39 (24, 49)	62 (54 - 68)
4 doses (60-119)*	3,741	617	85 (74, 91)	49 (41 - 56)



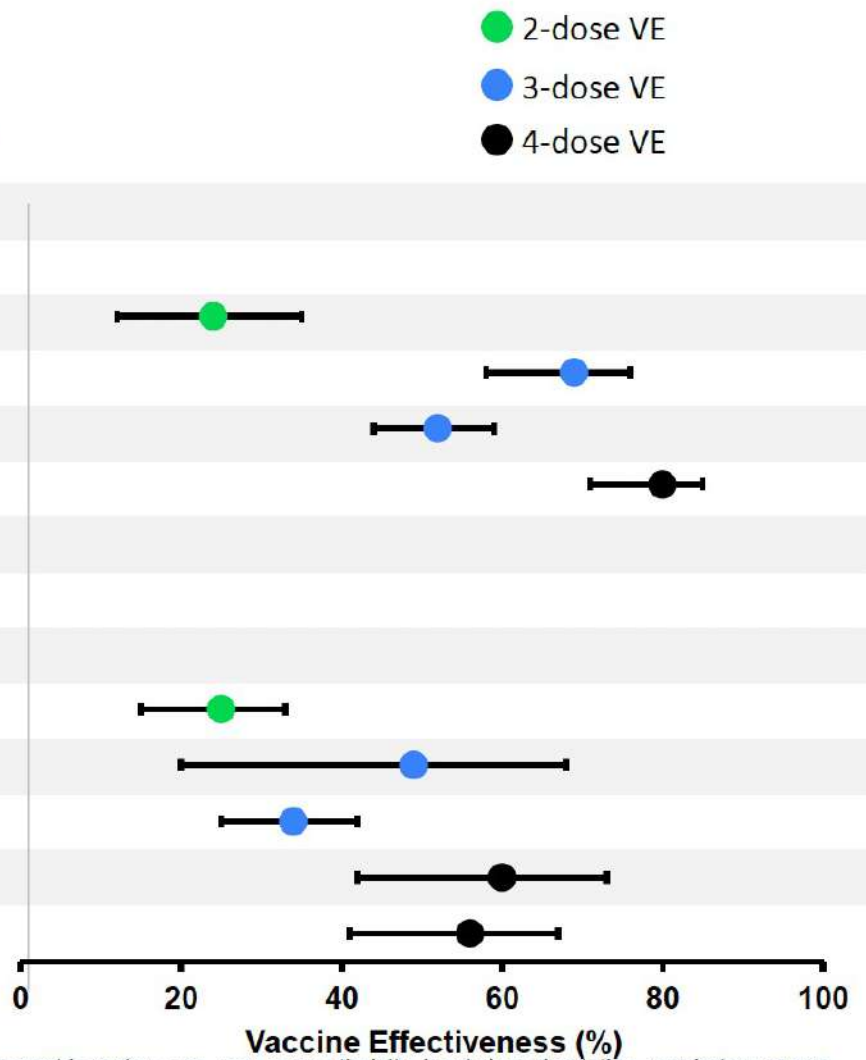
* Only estimated among adults ≥50 years of age

BA.2/BA.2.12.1 estimates: Link-Gelles et al. MMWR: https://www.cdc.gov/mmwr/volumes/71/wr/mm7129e1.htm

BA.4/BA.5 estimates: CDC, preliminary unpublished data. Individuals with prior infections excluded. Adjusted for calendar time, geographic region, age, sex, race, ethnicity, local virus circulation, respiratory or non-respiratory underlying medical conditions, and propensity to be vaccinated.

VISION: mRNA VE for hospitalizations among immunocompetent adults ≥18 years by number of doses and time since last dose receipt, late-Mar–late-Jul 2022

Vaccination status (days since most recent dose)	Total	CLI cases	Days since most recent dose, median (IQR)	Adjusted VE % (95% CI)
BA.2/BA.2.12.1 period				
Unvaccinated	6,682	494		Ref.
2 doses (14-149)	*	*	*	*
2 doses (≥150)	5,118	393	371 (308, 413)	24 (12 - 35)
3 doses (7-119)	2,350	72	94 (74, 108)	69 (58 - 76)
3 doses (≥120)	7,686	519	168 (146, 191)	52 (44 - 59)
4 doses (7-59)**	1,204	74	27 (17, 41)	80 (71 - 85)
BA.4/BA.5 period				
Unvaccinated	4,578	913		Ref.
2 doses (14-149)	*	*	*	*
2 doses (≥150)	3,592	619	445 (369, 484)	25 (15 - 33)
3 doses (7-119)	335	32	76 (46, 100)	49 (20 - 68)
3 doses (≥120)	5,030	869	229 (199, 256)	34 (25 - 42)
4 doses (7-59)**	717	81	38 (23, 49)	60 (42 - 73)
4 doses (60-119)**	1,146	157	84 (73, 97)	56 (41 - 67)



* Estimates with confidence intervals >50 percentage points are not shown.

** Only estimated among adults ≥50 years of age

BA.2/BA.2.12.1 estimates: Link-Gelles et al. MMWR: https://www.cdc.gov/mmwr/volumes/71/wr/mm7129e1.htm

BA.4/BA.5 estimates: CDC, preliminary unpublished data. Individuals with prior infections excluded. Adjusted for calendar time, geographic region, age, sex, race, ethnicity, local virus circulation, respiratory or non-respiratory underlying medical conditions, and propensity to be vaccinated.

UPDATED VERSION, Feb. 15, 2023

Research

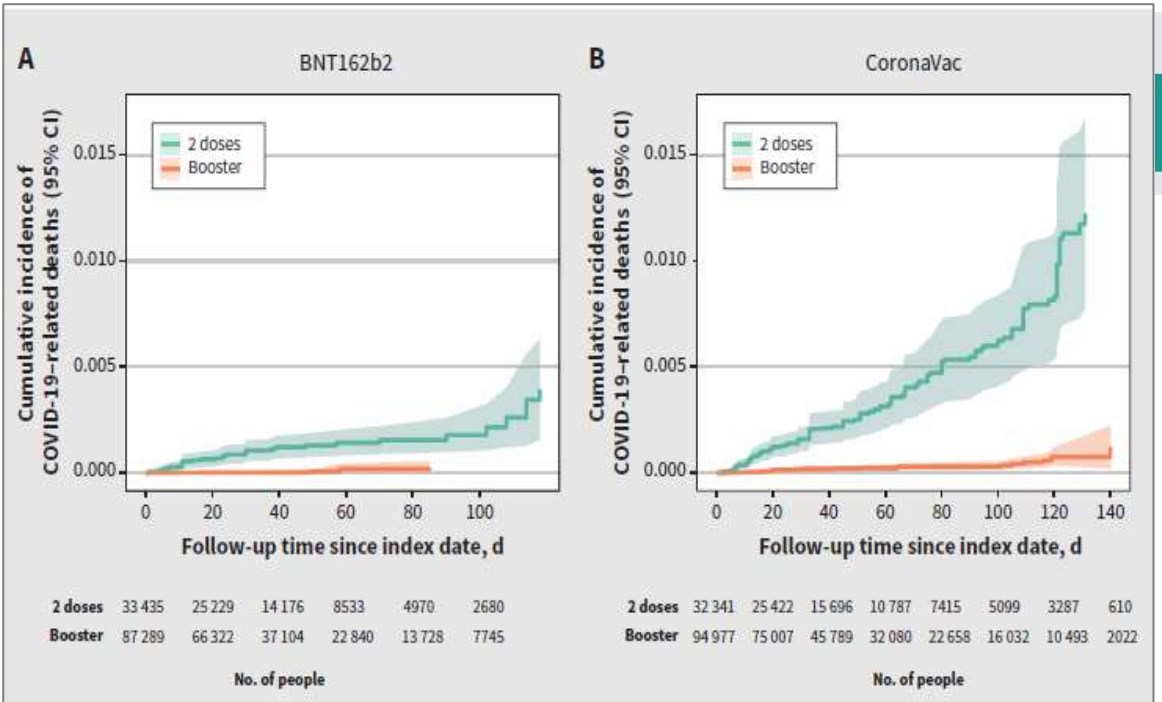
CMAJ, 2023; 195;4:E143-52

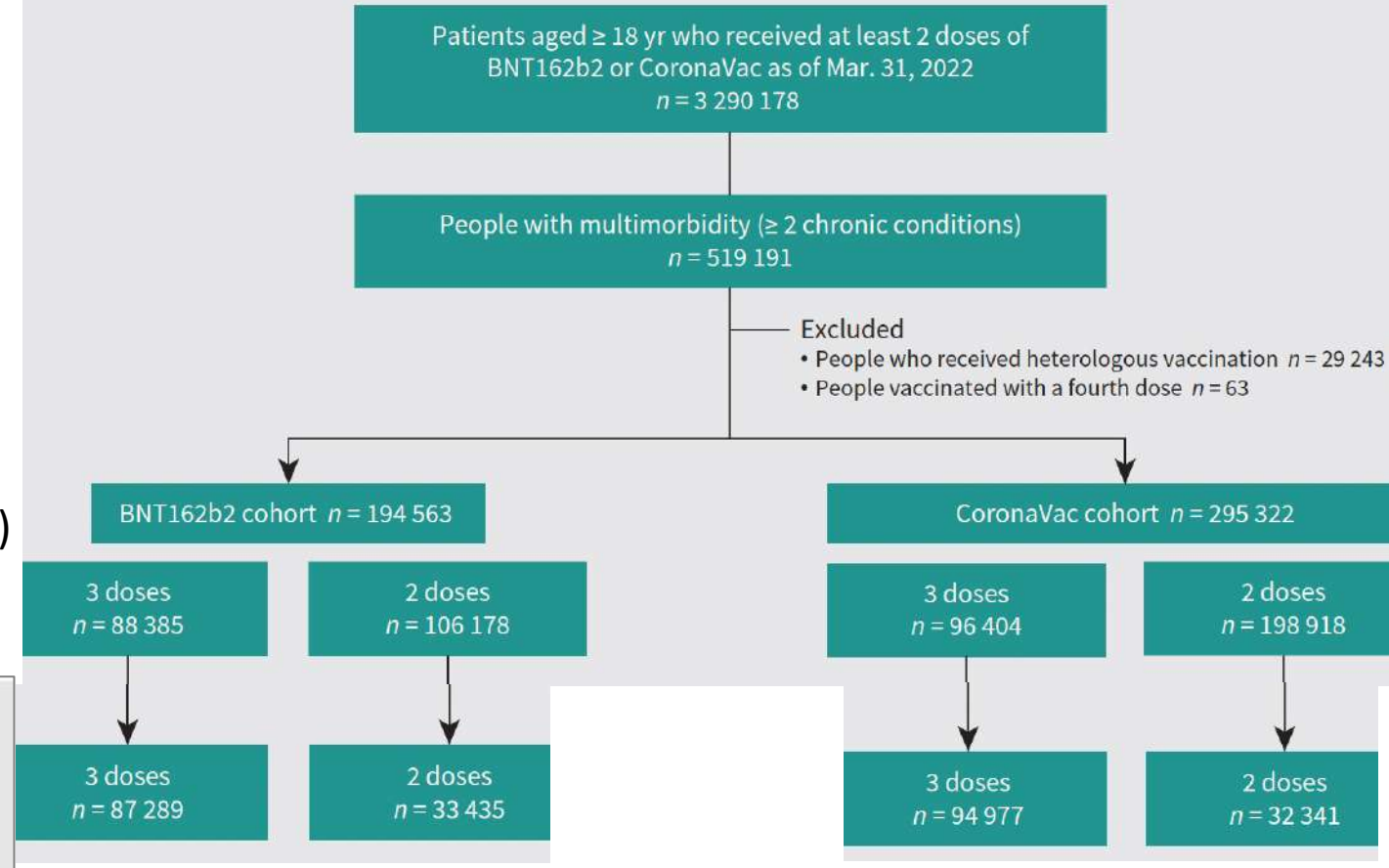
Booster vaccination with inactivated whole-virus or mRNA vaccines and COVID-19–related deaths among people with multimorbidity: a cohort study

Francisco Tsz Tsun Lai PhD, Vincent Ka Chun Yan BPharm, Xuxiao Ye MSc, Tiantian Ma PhD, Xiwen Qin PhD,

HongKong, En az iki komorbidite (HT %80-84, DM %62-64)

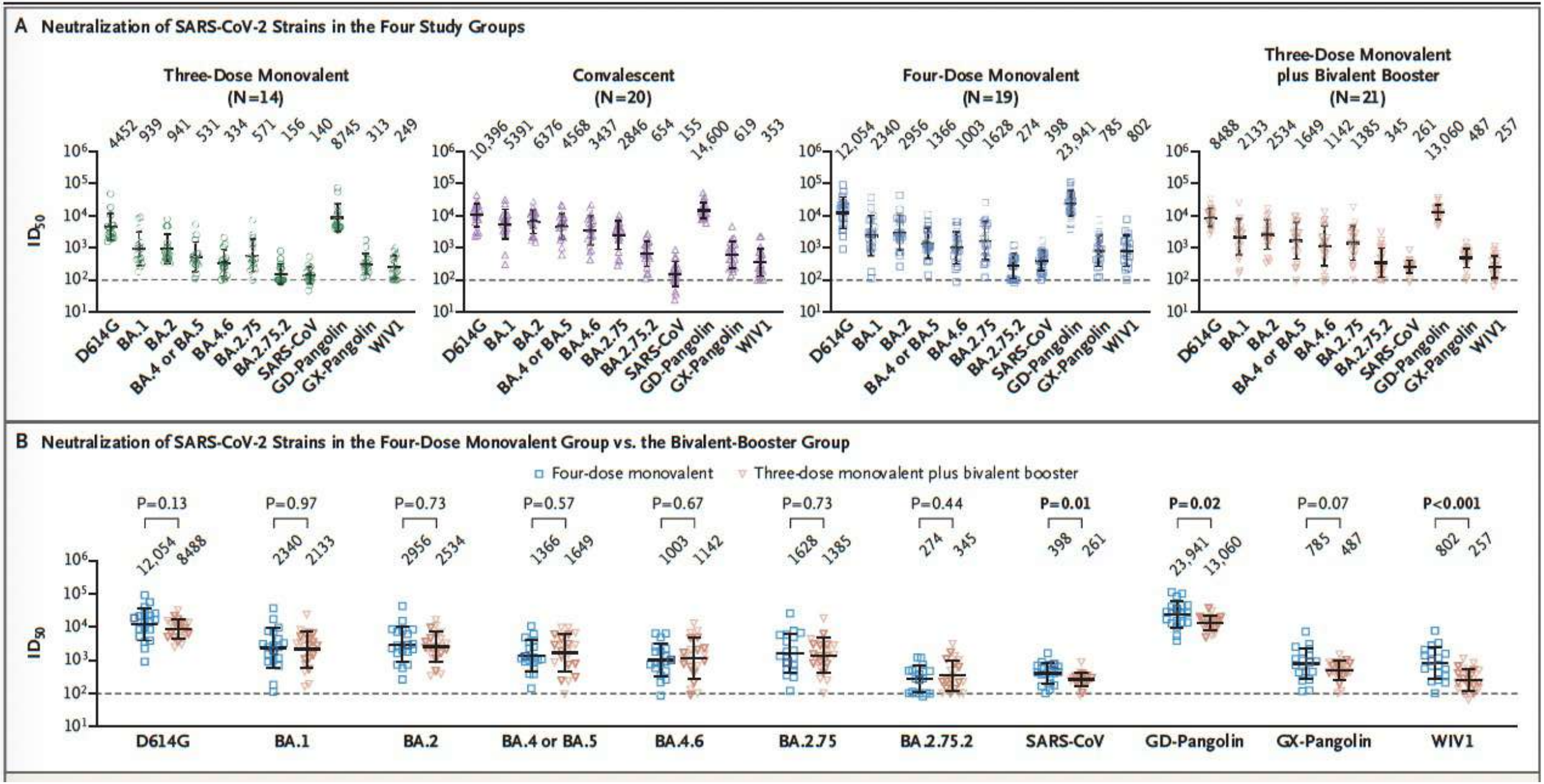
Yaş ortalaması: BioNTech 64, Coronavac 67





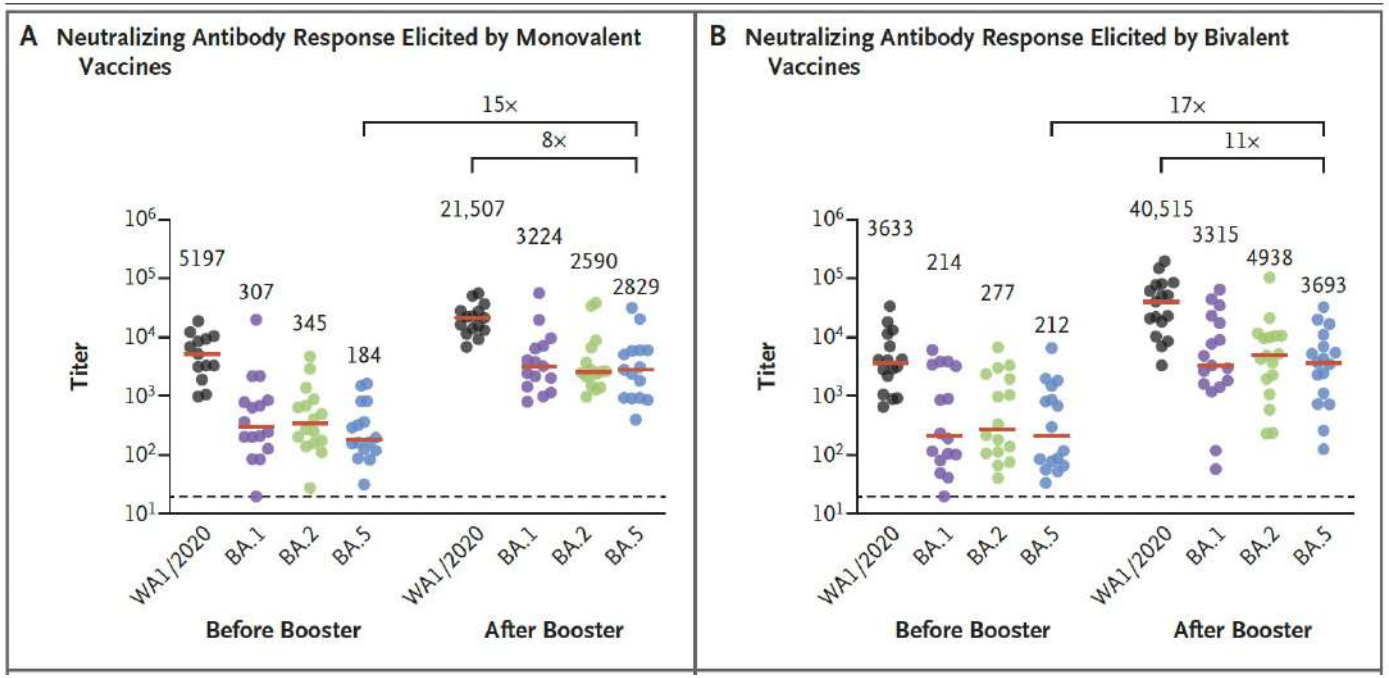
Vaccination	No. of people	No. of COVID-19–related deaths	No. of person-days	No. of events per 1 million person-days	Unweighted IRR (95% CI)*	Weighted IRR (95% CI)*
BNT162b2						
2 doses	33 435	34	1 454 857	23.4	1.00	1.00
Booster	87 289	5	3 860 900	1.3	0.06 (0.02–0.13)	0.05 (0.02–0.16)
CoronaVac						
2 doses	32 341	88	1 657 144	53.1	1.00	1.00
Booster	94 977	26	4 931 857	5.3	0.10 (0.06–0.15)	0.08 (0.05–0.12)

Hatırlatma dozu Monovalan vs Bivalan



Wang Q, N Engl J Med 2023; 388:567-569

Hatırlatma dozu Monovalan vs Bivalan



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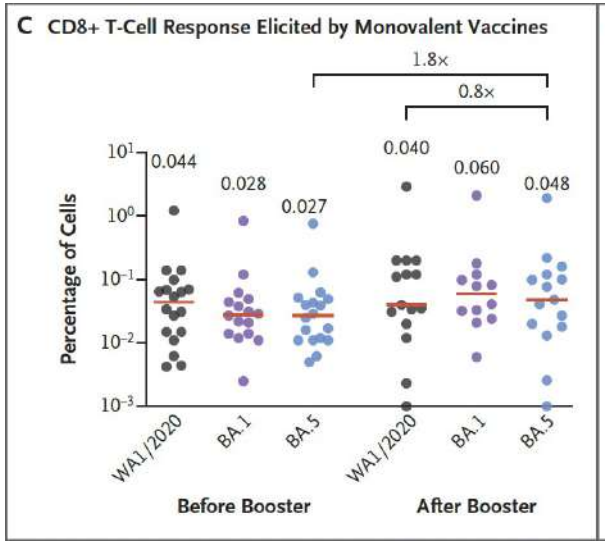
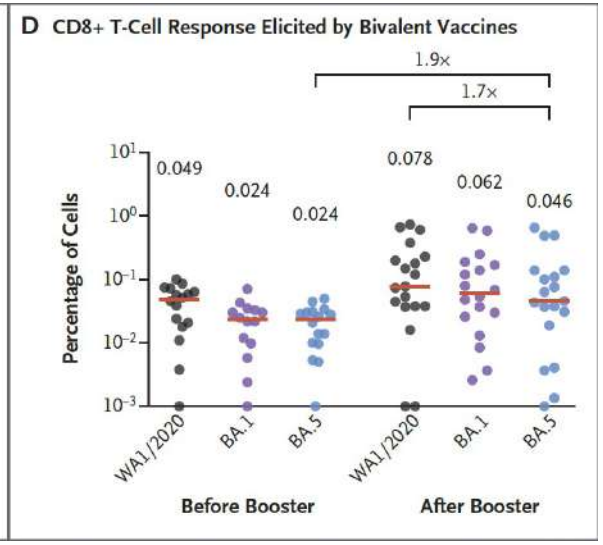
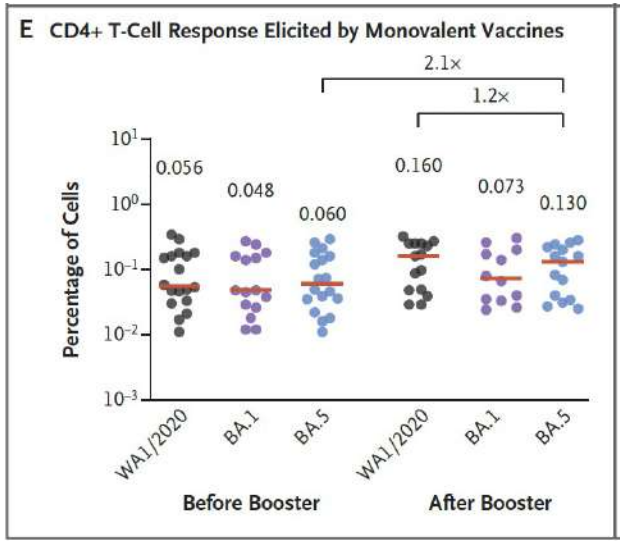
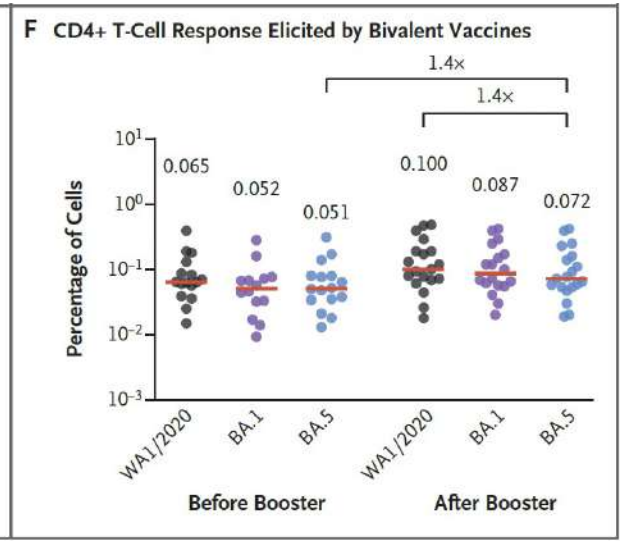






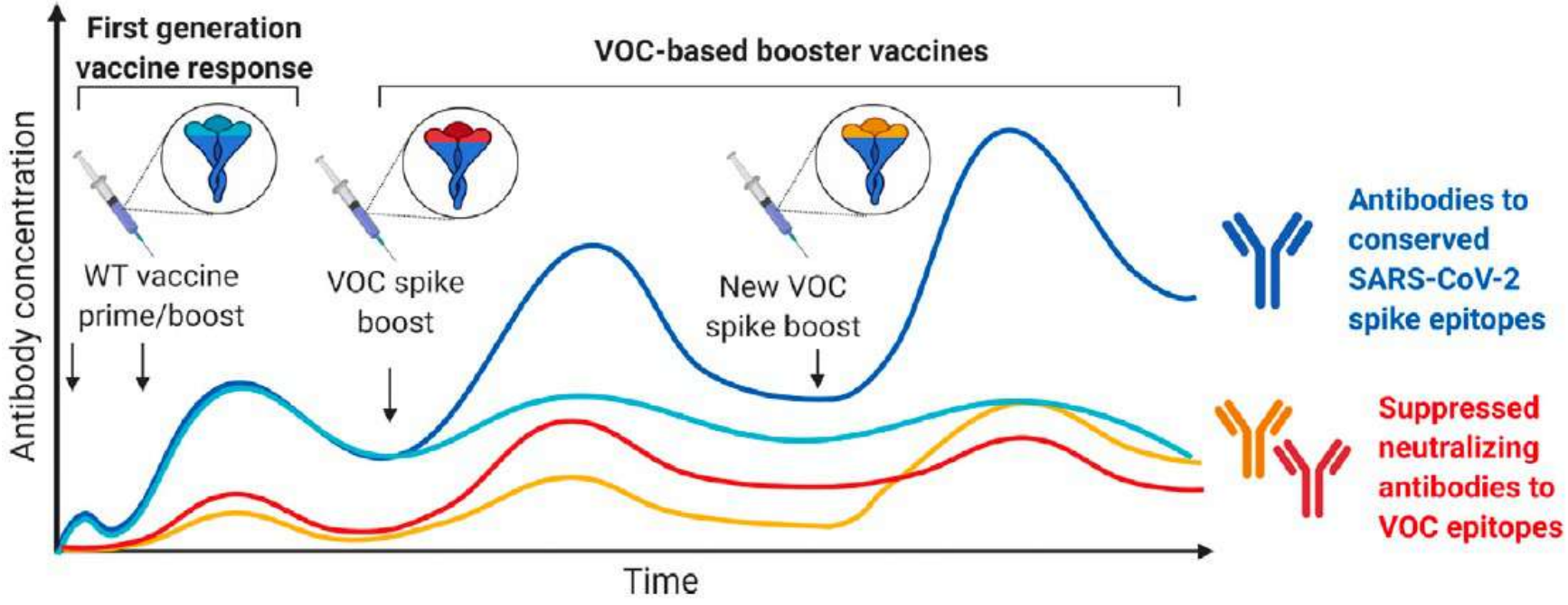


Collier A, N Engl J Med 2023; 388:565-567

Immune imprinting and SARS-CoV-2 vaccine design

Adam K. Wheatley, [1]

Trends in Immunology, 2021;42 (11):956-59



Concluding remarks

We hypothesize that updated vaccines against SARS-CoV-2 variants might primarily boost 'imprinted' immune responses to conserved regions of the Spike protein to the detriment of new neutralizing responses to antigenically altered sites within new variants. We argue that this 'updated strain' vaccine strategy can still yield partial efficacy against the new variants, particularly for vaccines that induce potent neutralizing responses. However, robust long-term control of COVID-19 may require the development of strategies that avoid primarily boosting imprinted immune responses and instead focus neutralizing antibody immunity on the novel RBD epitopes evolving in emerging VOC.

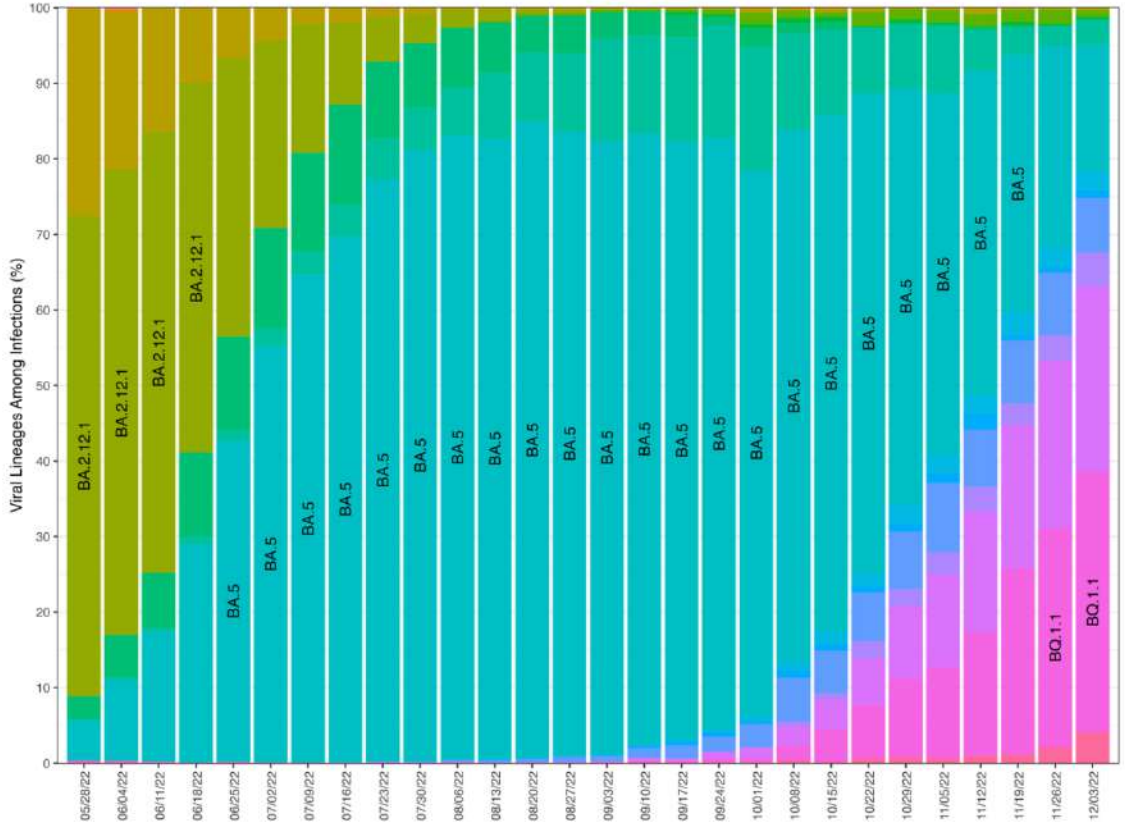
Klinik yansıması???

Effectiveness of Bivalent Boosters against Severe Omicron Infection

D Lin et al. N Engl J Med 2023;388:764-766.

ABD »North Caroline»
1 Eylül-08 Aralık 2022: Bivalan dönem
25 Mayıs-31 Ağustos 2022: Monovalan dönem

	Monovalent Booster Period			Bivalent Booster Period		
	No. of Persons	No. of Hosp.[a]	No. of Death[a]	No. of Persons	No. of Hosp.[a]	No. of Death[a]
All Persons						
Non-booster	5,949,600	1,807	667	5,213,347	954	497
Booster	292,659	61	23	1,070,136	57	17
Age ⩾18 yrs						
Non-booster	5,637,586	1,801	667	4,899,816	948	496
Booster	274,386	61	23	1,037,458	57	17
Age ⩾65 yrs						
Non-booster	1,609,068	1,336	573	1,232,527	717	437
Booster	130,200	55	22	508,378	53	14



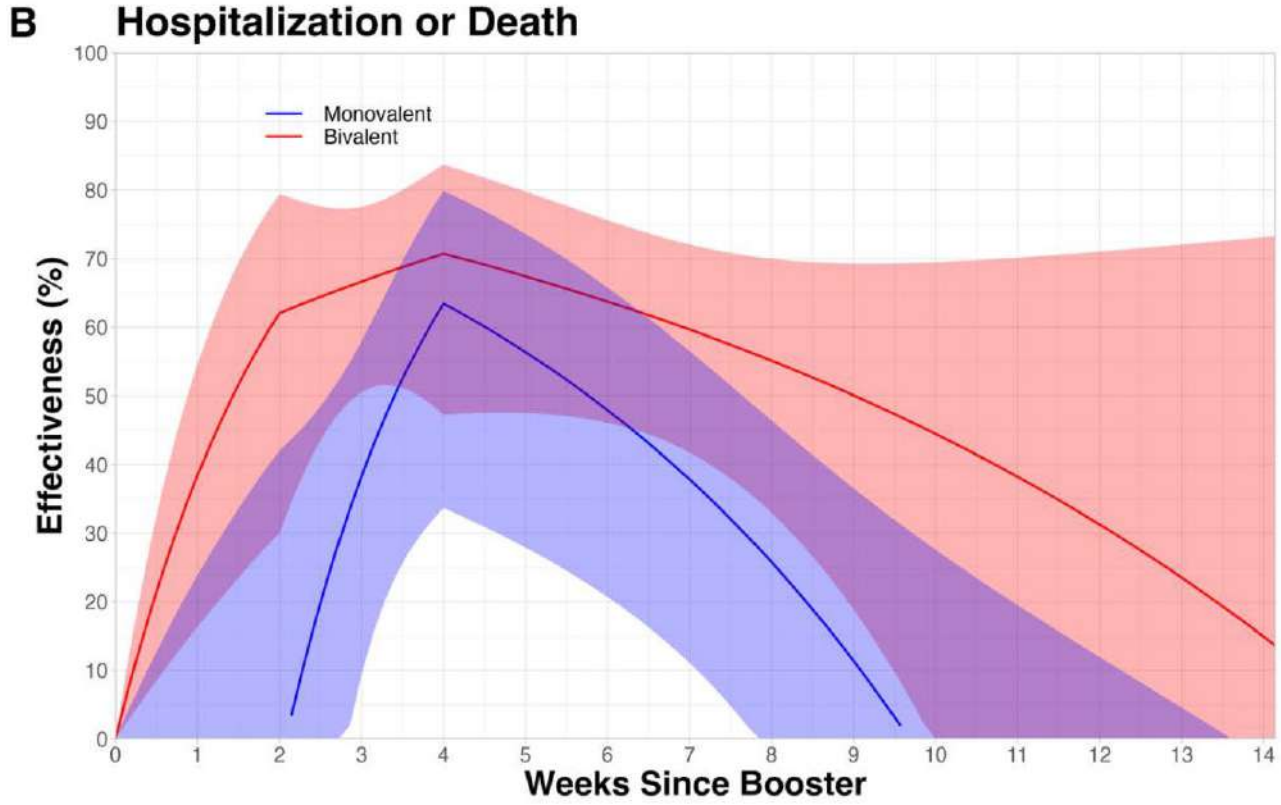


Table 1. Estimates of Effectiveness of One Monovalent or Bivalent Booster Dose against Severe Omicron Infection.*

Group	Vaccine Effectiveness against Hospitalization (95% CI)			Vaccine Effectiveness against Hospitalization or Death (95% CI)		
	Monovalent Booster	Bivalent Booster	Difference	Monovalent Booster	Bivalent Booster	Difference
	percent		*percentage points*	*percent*		*percentage points*
All participants	25.2 (–0.2 to 44.2)	58.7 (43.7 to 69.8)	33.5 (2.9 to 62.1)	24.9 (1.4 to 42.8)	61.8 (48.2 to 71.8)	36.9 (12.6 to 64.3)
Age group						
≥18 yr	27.3 (2.6 to 45.8)	59.5 (44.7 to 70.3)	32.2 (2.5 to 60.1)	27.0 (4.2 to 44.4)	62.4 (49.0 to 72.3)	35.4 (11.8 to 62.1)
≥65 yr	21.0 (–7.7 to 42.1)	58.8 (43.0 to 70.2)	37.8 (3.2 to 69.9)	20.3 (–6.0 to 40.1)	61.5 (47.1 to 71.9)	41.2 (9.9 to 71.7)
Primary vaccination with mRNA vaccine	28.0 (2.9 to 46.7)	58.8 (43.8 to 69.9)	30.8 (1.0 to 61.1)	27.2 (4.0 to 44.9)	61.9 (48.3 to 71.9)	34.7 (11.4 to 62.2)
No previous infection	26.3 (–0.3 to 45.8)	61.0 (45.4 to 72.2)	34.7 (6.2 to 69.2)	24.5 (–0.3 to 43.2)	63.1 (48.8 to 73.4)	38.6 (14.8 to 67.3)
Booster vaccine received						
Moderna	28.1 (–8.8 to 52.5)	58.8 (33.8 to 74.3)	30.7 (–17.0 to 79.1)	25.2 (–9.2 to 48.8)	63.8 (41.8 to 77.5)	38.6 (4.2 to 75.8)
Pfizer–BioNTech	22.2 (–16.8 to 48.1)	58.7 (38.7 to 72.2)	36.5 (–1.7 to 78.5)	24.5 (–10.7 to 48.5)	60.4 (42.1 to 73.0)	35.9 (3.7 to 75.5)
Booster dose received						
First	15.8 (–39.5 to 49.1)	54.0 (–6.3 to 80.1)	38.2 (–36.9 to 99.4)	4.2 (–50.1 to 38.8)	54.0 (–0.3 to 78.9)	49.8 (–37.5 to 125.8)
Second	28.0 (–3.2 to 49.8)	61.9 (43.6 to 74.3)	33.9 (0.2 to 68.4)	32.2 (4.5 to 51.8)	64.0 (47.0 to 75.5)	31.8 (7.3 to 71.1)
Third	—	55.7 (12.0 to 77.7)	—	—	63.1 (27.3 to 81.2)	—

* Vaccine effectiveness was defined as (1 – hazard ratio) × 100 and was evaluated for the period from day 15 to day 99 after receipt of the booster dose. CI denotes confidence interval.

D Lin et al. N Engl J Med 2023;388:764-766.

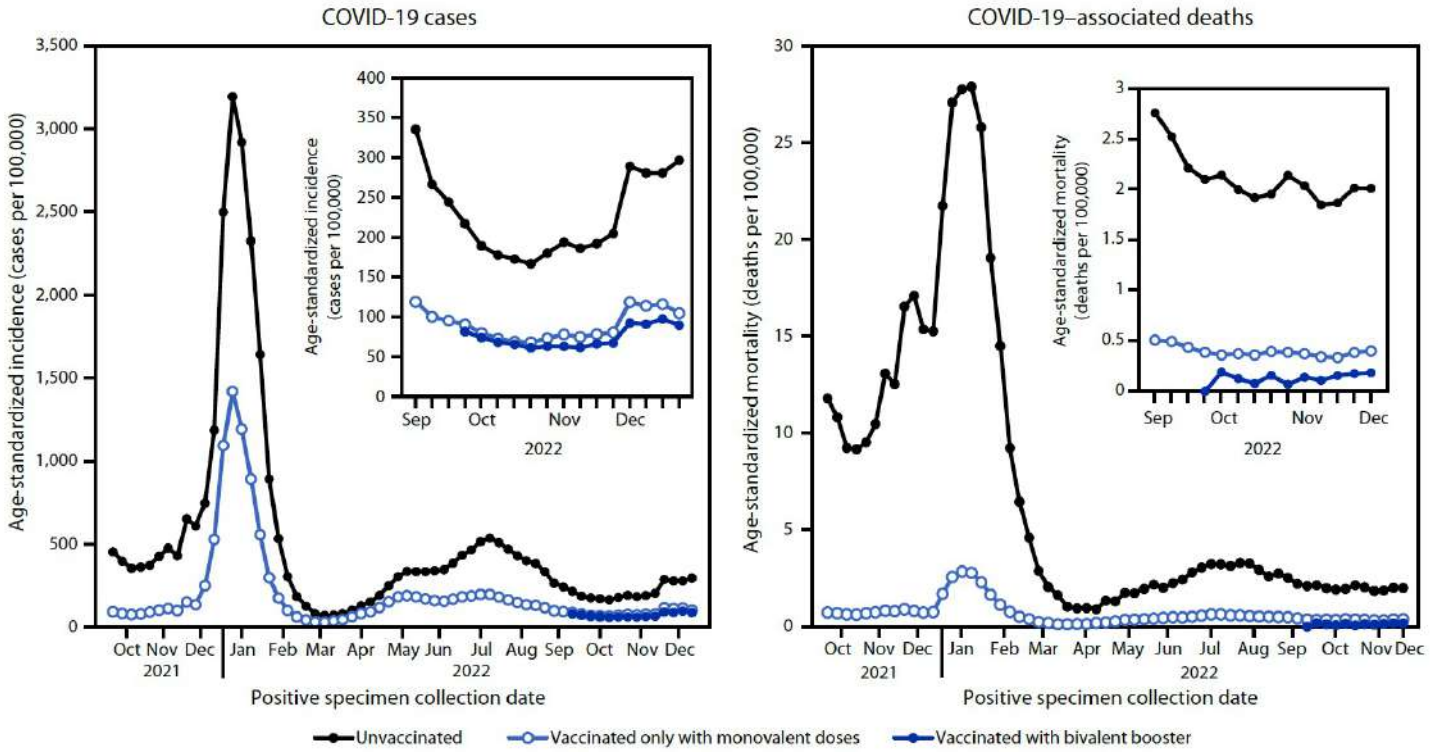
Morbidity and Mortality Weekly Report

MMWR / February 10, 2023 / Vol. 72 / No. 6 pp:145

COVID-19 Incidence and Mortality Among Unvaccinated and Vaccinated Persons Aged ≥12 Years by Receipt of Bivalent Booster Doses and Time Since Vaccination — 24 U.S. Jurisdictions, October 3, 2021–December 24, 2022

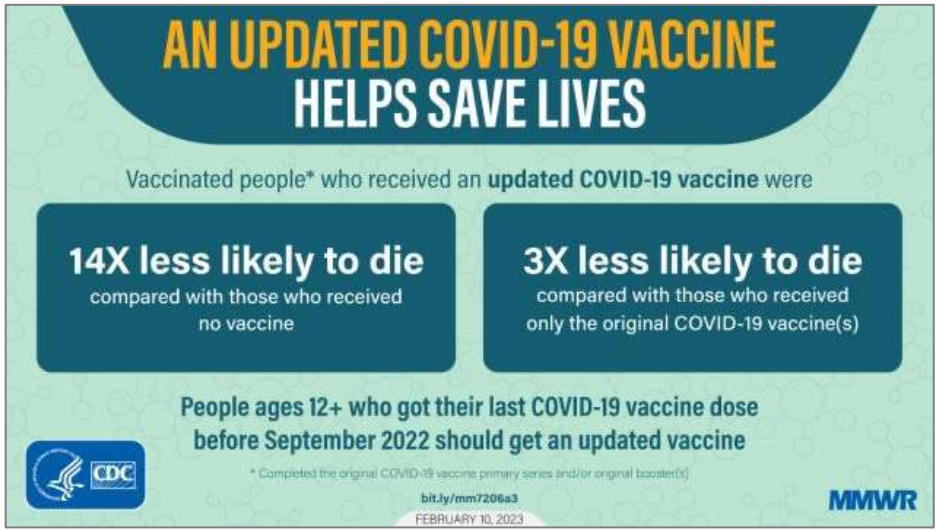
Amelia G. Johnson, DrPH[1]; Lauren Linde, MPH[1]; Akilah R. Ali, MPH[1]; Allison DeSantis[2]; Minchan Shi, MS[1]; Carolyn Adam, MPH[3,4];

Ekim 2021-Aralık 2022, ABD nüfusunun %52'sini temsil eden 23 eyalet + DC
21 296 326 COVID-19 olgusu 115 078 ölüm



Şubat 2023 itibariyle >12y bivalan booster uygulanma oranı: %17,5

Ölüm için RR (aşısızlara kıyasla)	Monovalan	Bivalan
Tüm yaş grupları	5.4	14.1
65-79 yaş	8.3	23.7
>80 yaş	4.2	10.3



What are the implications for public health practice?

Bivalent COVID-19 booster doses protected against infection and death during BA.4/BA.5 circulation. All eligible persons should get 1 bivalent booster dose ≥2 months after their COVID-19 primary series or last monovalent booster dose.

Morbidity and Mortality Weekly Report

MMWR / February 17, 2023 / Vol. 72 / No. 7 / pp: 190

COVID-19 Bivalent Booster Vaccination Coverage and Intent to Receive Booster Vaccination Among Adolescents and Adults — United States, November–December 2022

Peng-jun Lu, MD, PhD[1]; Tianyi Zhou, MPH[1,2]; Tammy A. Santibanez, PhD[1]; Anurag Jain, MS[1,2]; Carla L. Black, PhD[1]; Anup Srivastav, PhD[1,2]; Mei-Chuan Hung, PhD[1,2]; Jennifer L. Kriss, PhD[1]; Susanne Schorpp, PhD[1,3]; David Yankey, PhD[1]; Natalie Sterrett, MPH[1,4]; Hannah E. Fast, MPH[1]; Hilda Razzaghi, PhD[1]; Laurie D. Elam-Evans, PhD[1]; James A. Singleton, PhD[1]

Bivalan hatırlatma dozu olma oranı:
>18y: %27, 12-18 y: %18.5
18-49y: %17.7, 50-64y: %30.1, >65y: %43.3

Kırsalda yaşayanlarda
Erkeklerde
Afro-Amerikalı, Hispaniklerde daha düşük

TABLE 2. COVID-19 primary vaccination series completion and up-to-date COVID-19 vaccination status* and bivalent booster vaccination coverage among adults aged ≥18 years who had completed the primary COVID-19 vaccination series, by demographic and behavioral characteristics — National Immunization Survey–Adult COVID Module, United States, October 30–December 31, 2022

		%† (95% CI)		Adults who completed primary series				
					%† (95% CI)			
						Intention to get a booster		
Characteristic	Total no.	Completed primary COVID-19 vaccination series	Up to date with COVID-19 vaccination*	No.	Bivalent booster coverage among those with completed primary series	Definitely or probably will	Unsure	Definitely or probably will not
Total	**99,056**	**84.2 (83.7–84.7)**	**23.2 (22.6–23.8)**	**83,462**	**27.1 (26.4–27.7)**	**39.4 (38.7–40.2)**	**12.4 (11.9–13.0)**	**21.1 (20.4–21.7)**
Month of interview								
Nov§	**40,495**	84.3 (83.6–85.1)	21.0 (20.2–21.9)	34,227	24.4 (23.4–25.4)	41.9 (40.7–43.1)	12.7 (11.9–13.5)	21.0 (20.0–22.0)
Dec	**58,561**	84.1 (83.4–84.8)	25.4 (24.6–26.2)¶	49,235	29.7 (28.8–30.6)¶	36.9 (36.0–37.9)¶	12.2 (11.5–12.9)	21.2 (20.3–22.0)
Age group, yrs								
18–49§	**44,936**	77.5 (76.6–78.3)	14.1 (13.5–14.8)	35,973	17.7 (17.0–18.5)	42.7 (41.6–43.8)	14.1 (13.4–14.9)	25.4 (24.4–26.4)
50–64	**26,919**	88.9 (88.0–89.7)¶	27.2 (26.0–28.5)¶	22,998	30.1 (28.8–31.6)¶	38.5 (37.0–40.1)¶	11.9 (10.9–13.1)¶	19.4 (18.2–20.7)¶
≥65	**25,572**	96.4 (95.7–96.9)¶	42.1 (40.5–43.6)¶	23,276	43.3 (41.7–44.9)¶	34.0 (32.5–35.6)¶	9.0 (8.1–10.0)¶	13.8 (12.7–14.9)¶
Sex								
Female	**51,060**	86.5 (85.8–87.2)¶	25.7 (24.8–26.5)¶	43,914	29.1 (28.2–30.1)¶	39.4 (38.3–40.5)	12.5 (11.8–13.3)	19.0 (18.1–19.8)¶
Male§	**47,031**	82.0 (81.2–82.8)	20.8 (20.0–21.6)	38,869	24.9 (24.0–25.9)	39.5 (38.4–40.6)	12.1 (11.4–12.9)	23.5 (22.5–24.5)

TABLE 3. Barriers to receiving COVID-19 booster vaccination among adults and attitudinal and social factors regarding COVID-19 vaccination among adults and adolescents, by bivalent booster vaccination and booster vaccination intent* among those who completed a COVID-19 vaccine primary series — National Immunization Survey–Adult COVID Module and National Immunization Survey–Child COVID Module, United States, October 30–December 31, 2022

Characteristic	%† (95% CI) Overall	Received COVID-19 bivalent booster vaccination	Definitely or probably will get booster	Unsure will get booster	Definitely or probably will not get booster
Adults who completed primary COVID-19 vaccination series					
Total no.	83,462	27,340	31,240	8,944	15,938
Reported barriers in getting a booster vaccination among adults aged ≥18 years					
Difficulty getting a booster vaccine (very or somewhat difficult)§	5.2 (4.9–5.6)	3.6 (3.1–4.2)	4.4 (3.9–4.9)¶	6.6 (5.6–7.8)¶,**	8.2 (7.2–9.2)¶,**
Difficulty getting an appointment	5.5 (5.1–5.8)	6.2 (5.5–6.9)	5.7 (5.2–6.3)	6.1 (5.0–7.3)	3.8 (3.1–4.6)¶,**
Difficulty knowing where to get vaccinated	3.8 (3.5–4.1)	2.5 (2.1–3.0)	4.0 (3.5–4.4)¶	5.7 (4.7–6.9)¶,**	4.1 (3.4–4.9)¶
Difficulty getting to vaccination sites	3.0 (2.7–3.3)	1.8 (1.5–2.2)	3.1 (2.7–3.6)¶	4.4 (3.5–5.5)¶,**	3.4 (2.7–4.4)¶
Vaccination sites not open at convenient times	3.8 (3.5–4.2)	2.6 (2.2–3.1)	3.9 (3.5–4.5)¶	5.2 (4.3–6.3)¶,**	4.4 (3.6–5.2)¶
Did not know whether eligible for a booster vaccine	3.1 (2.8–3.4)	2.5 (2.1–3.0)	3.5 (3.1–4.0)¶	3.4 (2.7–4.2)	2.8 (2.3–3.5)
Had a reaction to a previous dose of the COVID-19 vaccine	3.1 (2.9–3.4)	1.5 (1.2–1.8)	2.1 (1.8–2.4)¶	5.6 (4.5–6.9)¶,**	5.9 (5.0–6.8)¶,**
Difficulty with cost of getting a booster vaccine	2.8 (2.6–3.1)	0.8 (0.6–1.1)	3.1 (2.7–3.6)¶	4.3 (3.6–5.2)¶,**	4.0 (3.3–4.8)¶,**
Attitudinal and social factors regarding COVID-19 vaccination among adults aged ≥18 years					
Concerned about getting COVID-19 (very or moderately)††	42.1 (41.3–42.9)	56.4 (55.0–57.8)	47.1 (45.9–48.4)¶	34.1 (31.9–36.4)¶,**	19.0 (17.6–20.4)¶,**
Thinks a COVID-19 vaccine is important (very or somewhat)††	86.7 (86.1–87.2)	97.6 (97.1–98.0)	96.4 (95.9–96.9)¶	85.4 (83.7–86.9)¶,**	54.4 (52.6–56.1)¶,**
Thinks COVID-19 vaccine is safe (completely or very)††	71.0 (70.2–71.7)	87.4 (86.4–88.4)	83.1 (82.1–84.0)¶	54.5 (52.0–56.9)¶,**	33.5 (31.8–35.2)¶,**
Friends and family vaccinated (almost all or many)††	83.2 (82.6–83.8)	89.6 (88.6–90.5)	87.2 (86.3–88.0)¶	80.4 (78.5–82.2)¶,**	69.0 (67.3–70.7)¶,**
Provider recommendation of the COVID-19 booster vaccine	38.4 (37.6–39.1)	49.5 (48.0–50.9)	41.1 (39.9–42.4)¶	28.7 (26.6–30.8)¶,**	24.6 (23.1–26.1)¶,**
Attitudinal and social factors regarding COVID-19 vaccination among parents of adolescents aged 12–17 years					
Total no.	2,900	591	1,536	392	381
Concerned about getting COVID-19 vaccine for child (very or moderately)††	39.5 (36.4–42.7)	49.7 (43.1–56.3)	43.2 (38.8–47.8)	32.1 (25.3–39.9)¶,**	20.7 (14.6–28.5)¶,**
Thinks a COVID-19 vaccine is important for child (very or somewhat)††	90.0 (87.9–91.8)	97.6 (94.2–99.0)	97.2 (95.6–98.2)	83.9 (77.0–88.9)¶,**	60.5 (51.4–68.9)¶,**
Thinks COVID-19 vaccine is safe for child (completely or very)††	76.7 (73.9–79.2)	87.1 (82.1–90.9)	88.2 (85.3–90.6)	54.4 (46.4–62.2)¶,**	41.5 (32.5–51.0)¶,**
Friends and family had similar-aged children vaccinated (almost all or many)††	73.3 (70.3–76.1)	82.1 (76.1–86.8)	79.0 (75.2–82.3)	61.6 (53.2–69.4)¶,**	53.5 (44.2–62.6)¶,**
Received provider recommendation for the COVID-19 vaccine††	65.6 (62.4–68.7)	76.3 (70.2–81.4)	67.6 (63.3–71.7)¶	54.8 (46	

* For adolescents, booster vaccination intent represents reported parental intent to get a booster vaccine for their child.
† Weighted percentage.
§ Respondents who had received a booster dose were asked, "How difficult was it for you to get a COVID-19 booster vaccine?" R
a booster dose were asked, "How difficult would it be for you to get a COVID-19 vaccine booster?"
¶ p<0.05 by T-test for comparisons with those who received bivalent booster vaccination as the reference level.
** p<0.05 by T-test for comparisons with those who have not received bivalent booster but will definitely or probably get bivalen
†† Questions were asked about COVID-19 vaccination generally and not specifically about COVID-19 booster dose vaccination.

Hatırlatma dozu olabilirim diyenler;
%58.9 doktor önermemiş
%16.9 güvenli mi emin değil

Çocuğuma aşı yaptırabilirim diyenler;
%32.4 doktor önermemiş
%11.8 güvenli mi emin değil

What are the implications for public health practice?

Health care provider recommendations for booster vaccination, dissemination of information about the safety of vaccine by trusted messengers, and reducing barriers to vaccination could improve COVID-19 booster vaccination coverage.

Perspective > CDC Expert Commentary

COMMENTARY

Few Americans Have Received an Updated COVID Booster, but Healthcare Providers Can Help

Evelyn Twentyman, MD, MPH

DISCLOSURES | February 16, 2023

EDITORIAL COLLABORATION Medscape & CDC

Add to Email Alerts

At Least One Dose	Completed Primary Series	Updated (Bivalent) Booster Dose

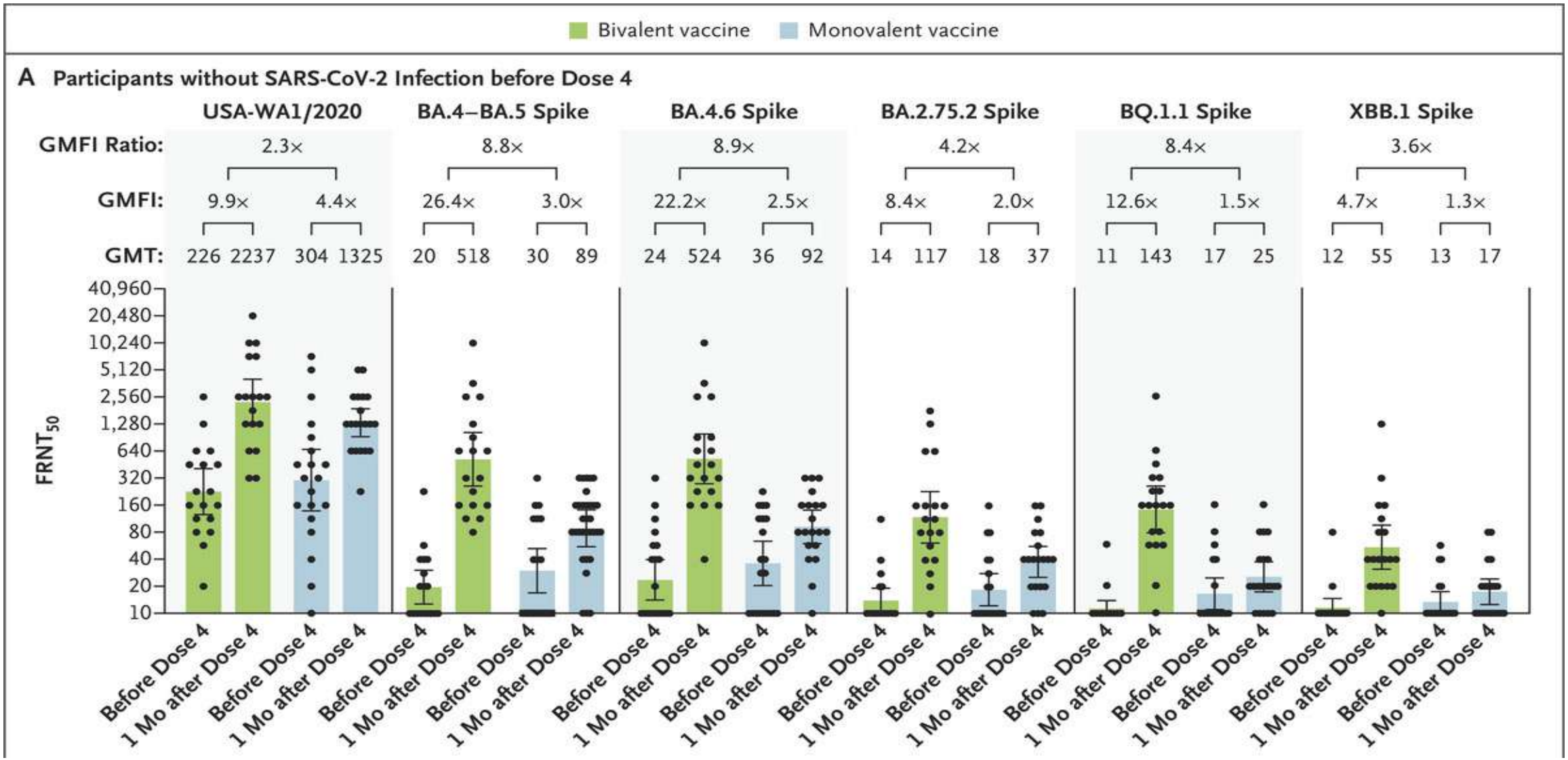
People with an Updated (Bivalent) Booster Dose‡	Count	Percent of US Population
Total	53,980,763	16.3%
Population ≥ 5 Years of Age	53,910,391	17.3%
Population ≥ 12 Years of Age	52,668,775	18.6%
Population ≥ 18 Years of Age	50,821,425	19.7%
Population ≥ 65 Years of Age	22,796,124	41.6%

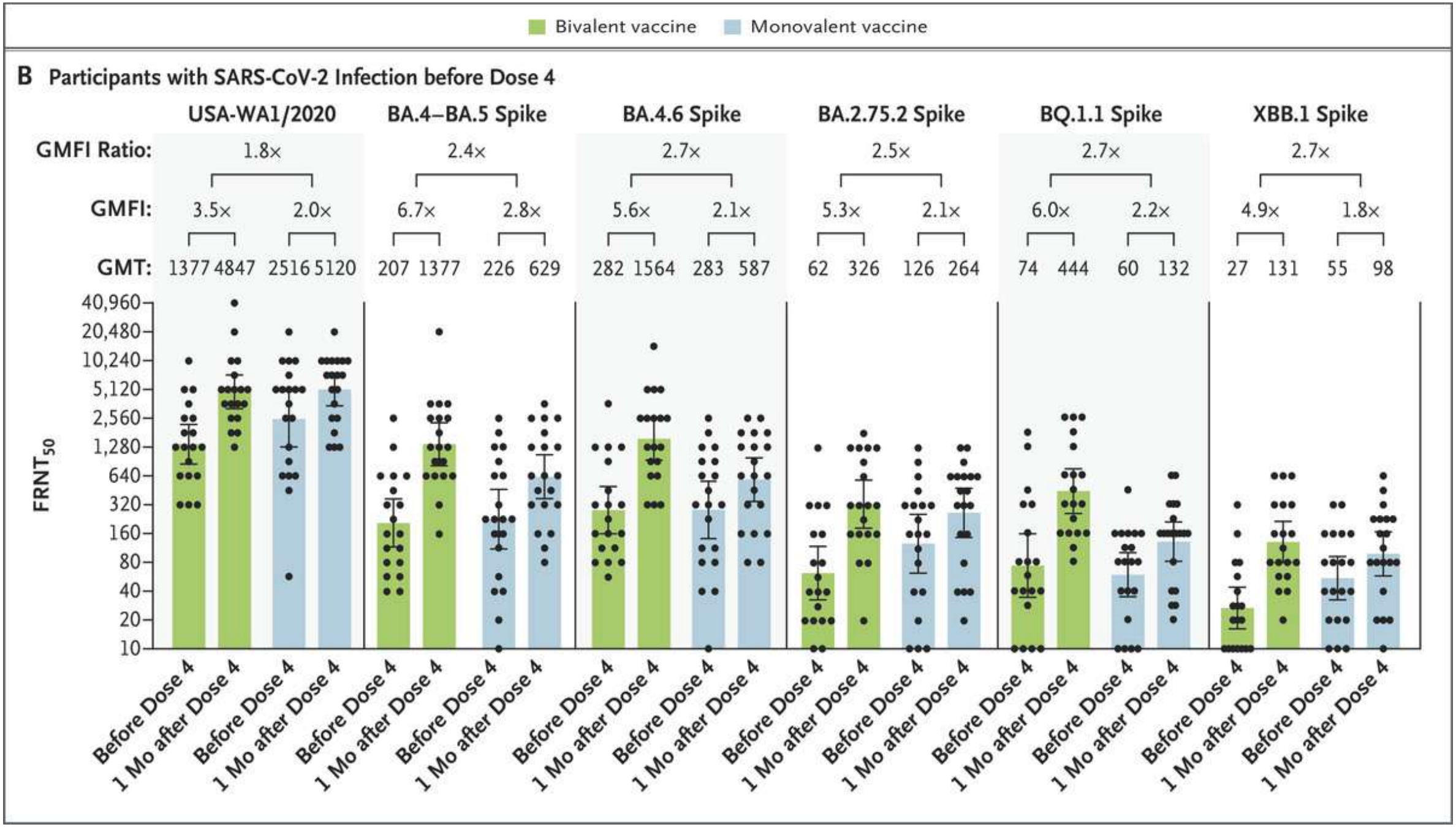
https://covid.cdc.gov/covid-data-tracker/#vaccinations

1. Hastalara aşı zamanını hatırlatın (telefon, mesaj, e posta vb)
2. Nerede aşı olabileceklerini anlatın
3. CDC'nin sosyal medya hesaplarını paylaşarak cesaretlendirin
4. Hekimlerin aşı sorgulaması yapmasını motive edin
5. Hatırlatma dozlarının ne kadar koruyucu olduğunu anlatın
6. Hastaların aşılarla ilgili olası sorularına hazırlıklı olun
7. Hastanelere, eczanelere aşıyı hatırlatan posterler, videolar yerleştirin
8. Sadece aşı için randevu oluşturun
9. Diğer aşılar için başvuranlara COVID-19 aşısını da önerin
10. Hastanın kendi durumuna göre ağır COVID-19 ve uzamış COVID-19 riskini anlatın

Neutralization of BA.4–BA.5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent Vaccine

N Engl J Med 2023; 388:854-857




Bivalent vaccine
Monovalent vaccine
B Participants with SARS-CoV-2 Infection before Dose 4
USA-WA1/2020
BA.4–BA.5 Spike
BA.4.6 Spike
BA.2.75.2 Spike
BQ.1.1 Spike
XBB.1 Spike
GMFI Ratio: 1.8× 2.4× 2.7× 2.5× 2.7× 2.7×
GMFI: 3.5× 2.0× 6.7× 2.8× 5.6× 2.1× 5.3× 2.1× 6.0× 2.2× 4.9× 1.8×
GMT: 1377 4847 2516 5120 207 1377 226 629 282 1564 283 587 62 326 126 264 74 444 60 132 27 131 55 98
FRNT50
40,960
20,480
10,240
5,120
2,560
1,280
640
320
160
80
40
20
10
Before Dose 4
1 Mo after Dose 4

Not Enough Data to Support Multiple Annual COVID Boosters, CDC Advisers Say

By Aditya Samal

February 27, 2023

(Reuters) - There is not sufficient evidence to recommend more than one COVID-19 booster shot a year for older people and those with weakened immune systems, an expert advisory group to the U.S. Centers for Disease Control and Prevention (CDC) said on Friday.

The COVID-19 working group of the CDC's Advisory Committee For Immunization Practices (ACIP) supported an annual booster campaign, likely in the fall, especially for populations considered at high risk, Dr. Sara Oliver, a CDC official who heads the group, said during a meeting of the agency's outside advisers.

FDA 26 Ocak'ta yaptığı son toplantısında yeni aşılanacak olan kişilerin ve hatırlatma dozlarının, dolaşımda olan BQ.1.1 ve XBB.1.5 varyantlarına da daha etkili olan, ikili (bivalan) aşı ile yapılması kararı almıştır. Aynı toplantıda bundan sonra hatırlatma dozlarının kış sezonu başında yapılması ve sezon başında uygulanacak aşının içeriğini her yıl Haziran ayında toplanan bir bilimsel komisyonun belirlemesi kararlaştırılmıştır. Mevcut bilimsel verilere dayanılarak alınan bu kararlara göre; COVID-19 aşısının, tıpkı grip aşıları gibi, yenilenmiş içeriği ile her kış sezonu başında uygulanacağı beklenmektedir.

DUYURULAR »

COVID-19: SALGINDA SON DURUM, AŞILAR VE HATIRLATICI DOZLAR

1. 12-50 yaş arasındaki sağlıklı kişiler; bir ay arayla iki doz mRNA aşısından oluşan primer şemayı tamamladıktan 3 ay sonra birinci hatırlatma dozlarını (3. aşılarını) yaptırmış olmalıdır. **(Temel Aşılama: 2 doz + Hatırlatma 1 doz = Toplam 3 doz)**

2. 50 yaşının üstünde olan kişiler (sağlıklı dahi olsalar) **veya 12 yaş üzerinde olup altta yatan ciddi hastalığı** (diyaliz gerektiren böbrek yetmezliği, kalp yetmezliği, ileri akciğer yetmezliği ve siroz) **bulunanlar;** hatırlatma dozundan 3-6 ay sonra 2. hatırlatma dozlarını (4. aşılarını) olmalıdır.

(Temel Aşılama: 2 doz + Hatırlatma 2 doz = Toplam 4 doz)

3. Yüksek miktarda virüsle karşılaşma riski olan kişiler (sağlık çalışanları); 1. hatırlatma dozundan 3-6 ay sonra 2. hatırlatma dozlarını (4. aşılarını) olmalıdır.

(Temel Aşılama: 2 doz + Hatırlatma 2 doz = Toplam 4 doz)

4. Bağışıklığı baskılanmış kişiler;1 ay arayla 3 dozdan oluşan primer aşı şemasını tamamladıktan 3 ay sonra birinci hatırlatma dozlarını (4. aşılarını), bundan en az 4 ay sonra da ikinci hatırlatma dozlarını (5. aşılarını) olmalıdırlar.

(Temel Aşılama: 3 doz + Hatırlatma 2 doz = Toplam 5 doz)

5. Ne yazık ki ülkemizde <12 yaş çocuklarda uygulanmak üzere, daha düşük miktarda mRNA içeren onaylanmış aşı bulunmamaktadır. Ama bu yaş grubuna uygun aşıların bulunduğu ülkelerde önerilen aşılama şeması şu şekildedir:

a. 5 -11 yaş arasındaki çocuklarda primer aşılama için 3 hafta arayla 2 doz tekli (monovalan)10 mikrogramlık aşı yapılması önerilmektedir. Bu yaş grubunda, sadece bağışıklığı baskılanmış olanlarda primer aşılamada, 2 doz aşılamadan en az 28 gün sonra olmak üzere aynı aşıyla 3. bir dozun daha yapılması önerilmektedir.

b. 6 ay-4 yaş arasındaki çocukların primer aşılamasındaysa; 3-8 hafta arayla yapılan tekli (monovalan) 3 mikrogramlık 2 dozu takiben, 2.dozdan en az 8 hafta sonra olmak üzere 3.doz olarak ikili (bivalan) 3 mikrogramlık bir doz aşı daha önerilmektedir.

FDA NEWS RELEASE

Coronavirus (COVID-19) Update: FDA Authorizes Moderna and Pfizer-BioNTech COVID-19 Vaccines for Children Down to 6 Months of Age

Share Tweet Linkedin Email Print

For Immediate Release: June 17, 2022

FDA Temmuz 2022'den itibaren >6ay bebek ve çocuklara COVID aşısı önerdi. BioNTech 3 doz, Moderna 2 doz.

FDA NEWS RELEASE

Coronavirus (COVID-19) Update: FDA Authorizes Updated (Bivalent) COVID-19 Vaccines for Children Down to 6 Months of Age

Share Tweet Linkedin Email Print

For Immediate Release: December 08, 2022

< 6ay ????

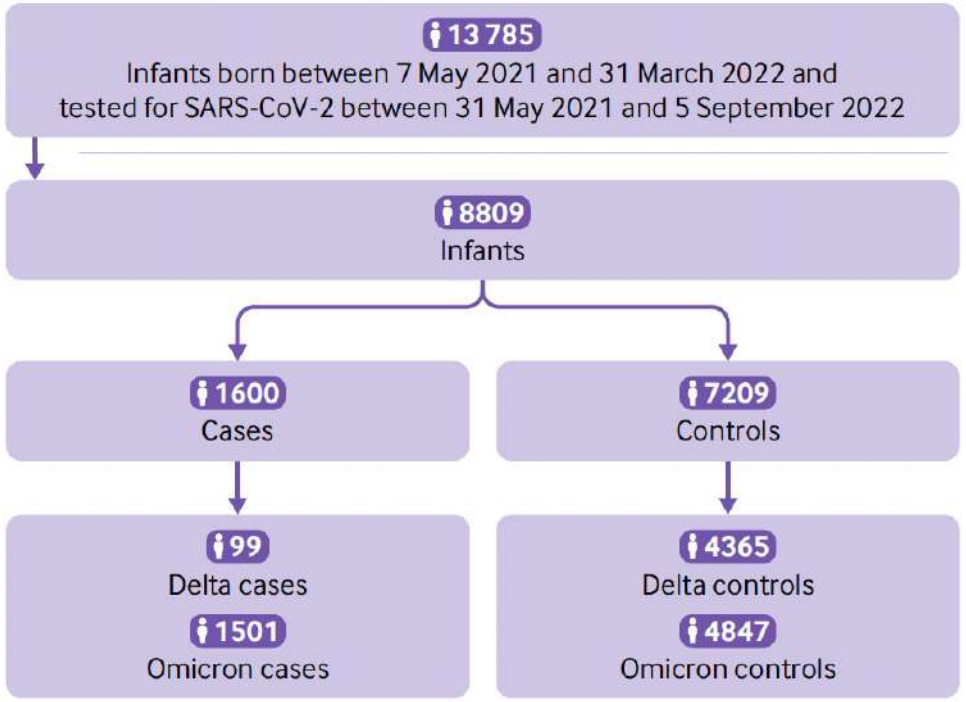
Aralık 2022'de aynı yaş grubu için bivalan aşı onaylandı

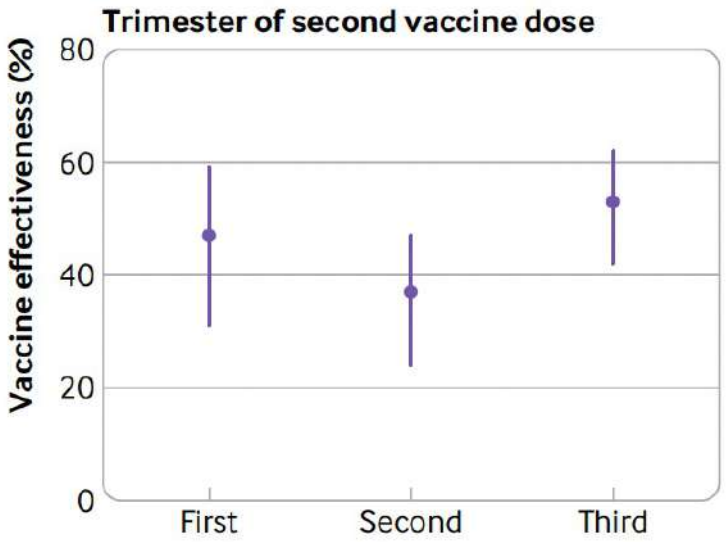
Maternal mRNA covid-19 vaccination during pregnancy and delta or omicron infection or hospital admission in infants: test negative design study

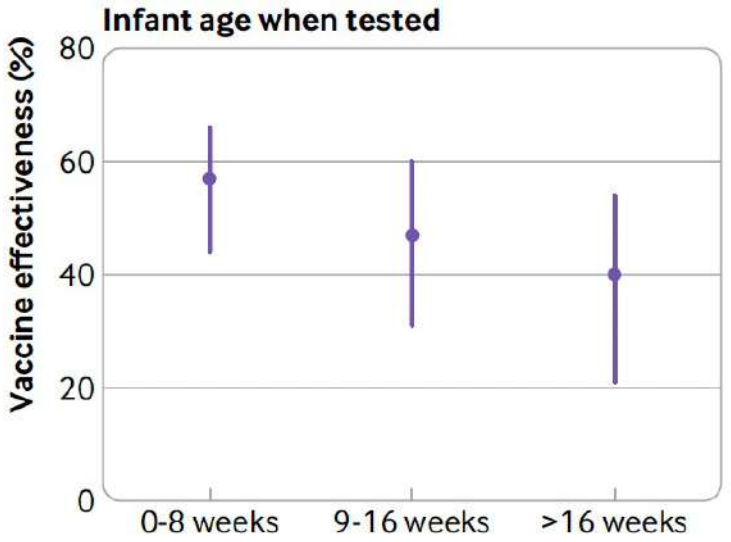
BMJ 2023;380:e074035

Sarah C J Jorgensen,[1] Alejandro Hernandez,[2] Deshayne B Fell,[2,4] Peter C Austin,[2,5]

	Effectiveness
Infection	
Delta variant, primary vaccine series*†	95 (88 to 98)
Omicron variant, primary vaccine series*‡	45 (37 to 53)
Omicron variant, primary+booster vaccine series‡§	73 (61 to 80)
Admission to hospital	
Delta variant, primary vaccine series*†	97 (73 to 100)
Omicron variant, primary vaccine series*‡	53 (39 to 64)
Omicron variant, primary+booster vaccine series‡§	80 (64 to 89)







Halasa NB, N Engl J Med2022;387:109-19:

Carlsen EO, JAMA Intern Med2022;182:825-31

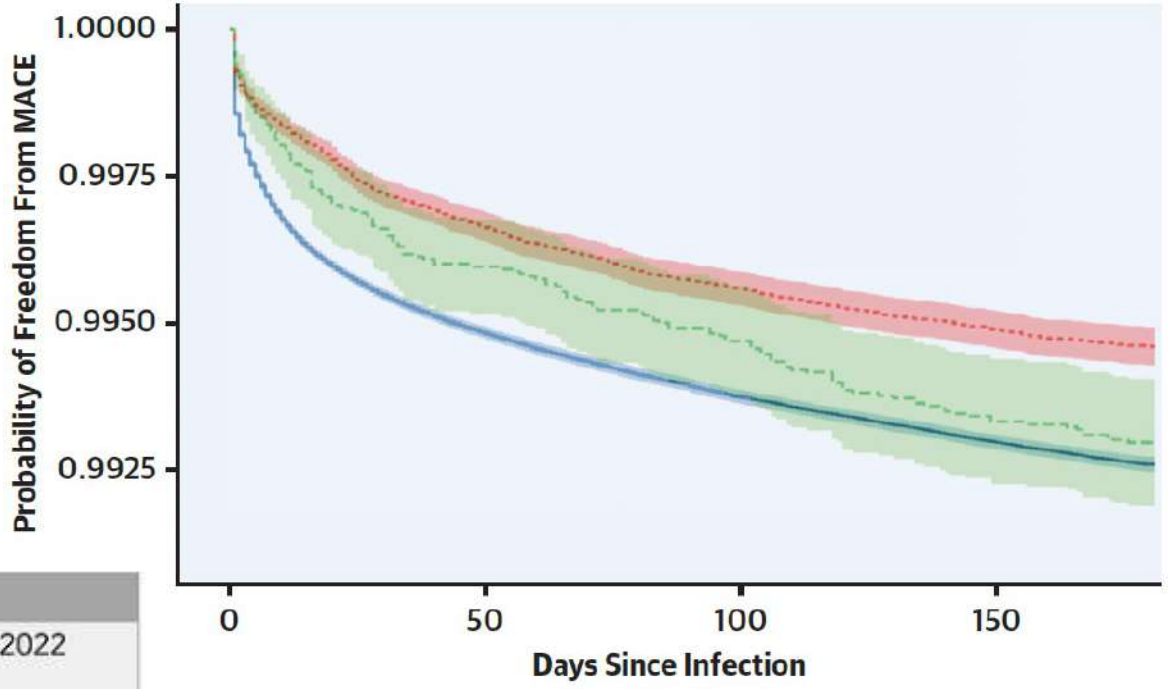
Danino D. J Pediatr 2022;S0022-3476(22)00896-4.

Benzer sonuçlar

XBB.1.5 'e ve yeni varyantlara karşı koruyuculuk?
Bivalan aşının koruyuculuğu?
Optimal aşılanma zamanı?

Impact of Vaccination on Major Adverse Cardiovascular Events in Patients With COVID-19 Infection

J Am Coll Cardiol 2023;81(9):928



ABD verileri
1,934,294 kişi
1 Mart 2020- 1 Şubat 2022
180 gün takip

Study	Characteristics	CV outcomes at follow-up	Citation
Veterans Administration	90% males, mean age 61	1.7-fold risk of heart attack; 1.6-fold risk of stroke	Xie et al, Nature Medicine 2022
TriNetX Network	Unvaccinated, mean age 44	2-fold risk of heart attack; 1.6-fold risk of stroke	Wang et al, E Clinical Medicine, 2022
US Insurance Claims Database	Unvaccinated, mean age 50	2-fold risk of stroke, PE, DVT, all-cause death	Devries et al, JAMA Health Forum, 2023
US pandemic through March 2022	US population across 5 Covid waves	4.9% more cardiovascular deaths than expected (2 years)	Han, Nature Cardiovascular Research, 2023
Korea National Database	>62,000 unvaccinated >168,000 vaccinated Mean age ~50	>2-fold risk of heart attack and stroke for unvaccinated vs vaccinated	Kim Y-E, JAMA, 2022
NCATS (US Consortium, NIH)	Mean age 45 >1.9 million patients	2-fold risk of heart attack and stroke for unvaccinated vs vaccinated	Jiang, JACC, 2023

Korea and NCATS studies compare vaccinated vs unvaccinated

@erictopol

Kalp krizi ve felçten koruyan aşılar:

- ✓ İnfluenza
- ✓ Pnömokok
- ✓ COVID-19

Uzamış COID-19 ve Aşı???

Trajectory of long covid symptoms after covid-19 vaccination: community based cohort study

BMJ 2022;377:e069676

Daniel Ayoubkhani,[1,2] Charlotte Bermingham,[1] Koen B Pouwels,[3,4] Myer Glickman,[1]

İngiltere, 28 356 kişilik kohort, 6729 uzamış COVID-19 olgusu

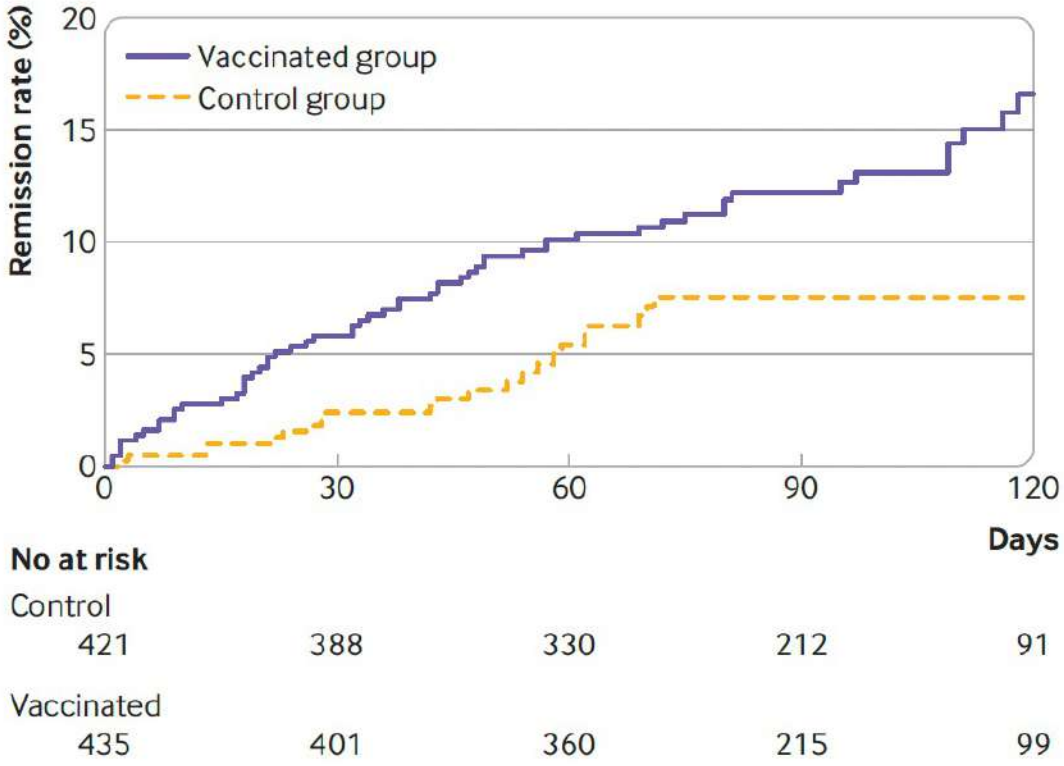
Bir doz aşıdan sonra yakınmalarda %12.8 azalma, İkinci dozdan sonra %8.8 azalma

Efficacy of first dose of covid-19 vaccine versus no vaccination on symptoms of patients with long covid: target trial emulation based on ComPaRe e-cohort

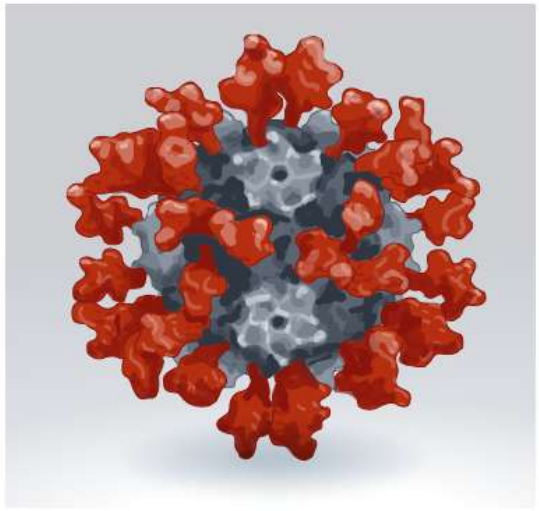
Viet-Thi Tran ,[1,2] Elodie Perrodeau,[2] Julia Saldanha,[3] Isabelle Pane,[2] Philippe Ravaud[2,3,4]

Fransa «long COVID-19» kohort , aşılılar (455) vs aşısızlar (455) tek doz aşı sonrası 120 gün içinde belirtilerde iyileşme

BMJMED 2023;2:e000229.



Koronavirus Aşılarının Geleceği



A nanoparticle vaccine from South Korean firm SK bioscience, approved in 2022.

THE NEXT GENERATION OF CORONAVIRUS VACCINES

New technologies might provide more potent or broader immunity – but will have to fight for market share.

By Ewen Callaway

Vaccines against the coronavirus SARS-CoV-2 have been given to billions of people to protect them from COVID-19, and have saved more than 20 million lives. But viral variants can evade some of the immunity provided by the original vaccines. As a result, vaccine developers around the world are working on dozens of 'next-generation' COVID-19 vaccines: not just updates of the first versions, but ones that use new technologies and platforms.

These vaccines are a diverse group, but the overarching aim is to deliver long-lasting protection that is resilient to viral change. Some could protect against broader classes of coronavirus, including ones that have yet to emerge. Others might provide more potent immunity, might do so at lower doses, or might be better at preventing infection or transmission of the virus.

Here's what to expect of this next generation of vaccines.

Why do we need more vaccines?

In a word: evolution. The first approved COVID-19 vaccines were tested for protection against versions of SARS-CoV-2 that had not changed much since the virus was first identified. These vaccines come in different types – some are composed of messenger RNA, others are inactivated versions of the coronavirus itself or some of its proteins – but all work by exposing the body to antigens (portions of the virus) to provoke an immune response without causing disease.

Broadly speaking, this immune response comes from B cells, which produce antibodies that can block SARS-CoV-2 from infecting cells, and from T cells, which can destroy infected cells (and support other immune responses).

The vaccinations also generate a pool of 'memory cells' for prolonged immunity, even after initial antibody levels dwindle. On subsequent infection, memory B cells begin proliferating and differentiating into cells that churn out more antibodies (see 'How coronavirus vaccines protect against SARS-CoV-2').

Although these vaccines provide long-lasting protection against severe disease, the protection they offer against viral infection dwindles in months. And variants of SARS-CoV-2, such as Omicron, have since evolved with mutations that allow them to escape some of this immunity. For instance, memory responses generated by the initial vaccines produce antibodies that don't latch onto Omicron as easily. That contributes to the reduced protection against infection (see 'Coronavirus variants avoid immunity').

A second generation of vaccines has already been introduced to boost immunity against the Omicron variant. It's likely that further, variant-specific updates to vaccines will follow, to try to keep up with viral evolution – although it's not clear whether the protection they offer will be particularly long-lasting as immunity wanes and SARS-CoV-2 evolves further.

As a result, research teams are taking several approaches to develop new vaccines.

Updated vaccines

To tackle SARS-CoV-2 variants, the vaccine developers Pfizer–BioNTech and Moderna introduced updated mRNA vaccines last year. These are called bivalent, because they encode molecules of the spike protein from the original virus and from Omicron. (The spike protein is what SARS-CoV-2 uses to bind to cells.)

The bivalent vaccines work in several ways. Like other COVID-19 booster shots, they stimulate the memory B cells already established by previous vaccines; some of this cellular response leads to antibodies that can recognize Omicron. Their potency can strengthen over time, too: when presented with Omicron's spike, memory B cells go through an evolutionary 'training' process of mutation and selection, producing a pool of B cells that encode antibodies that bind more tightly to Omicron's spike. Finally, the Omicron components of bivalent vaccines also recruit new B cells that produce their own antibodies (see 'Updated vaccines').

These effects might mean that a bivalent booster provides better protection against Omicron than does a booster dose of the original vaccine. But it's still unclear how substantial that advantage is in practice.

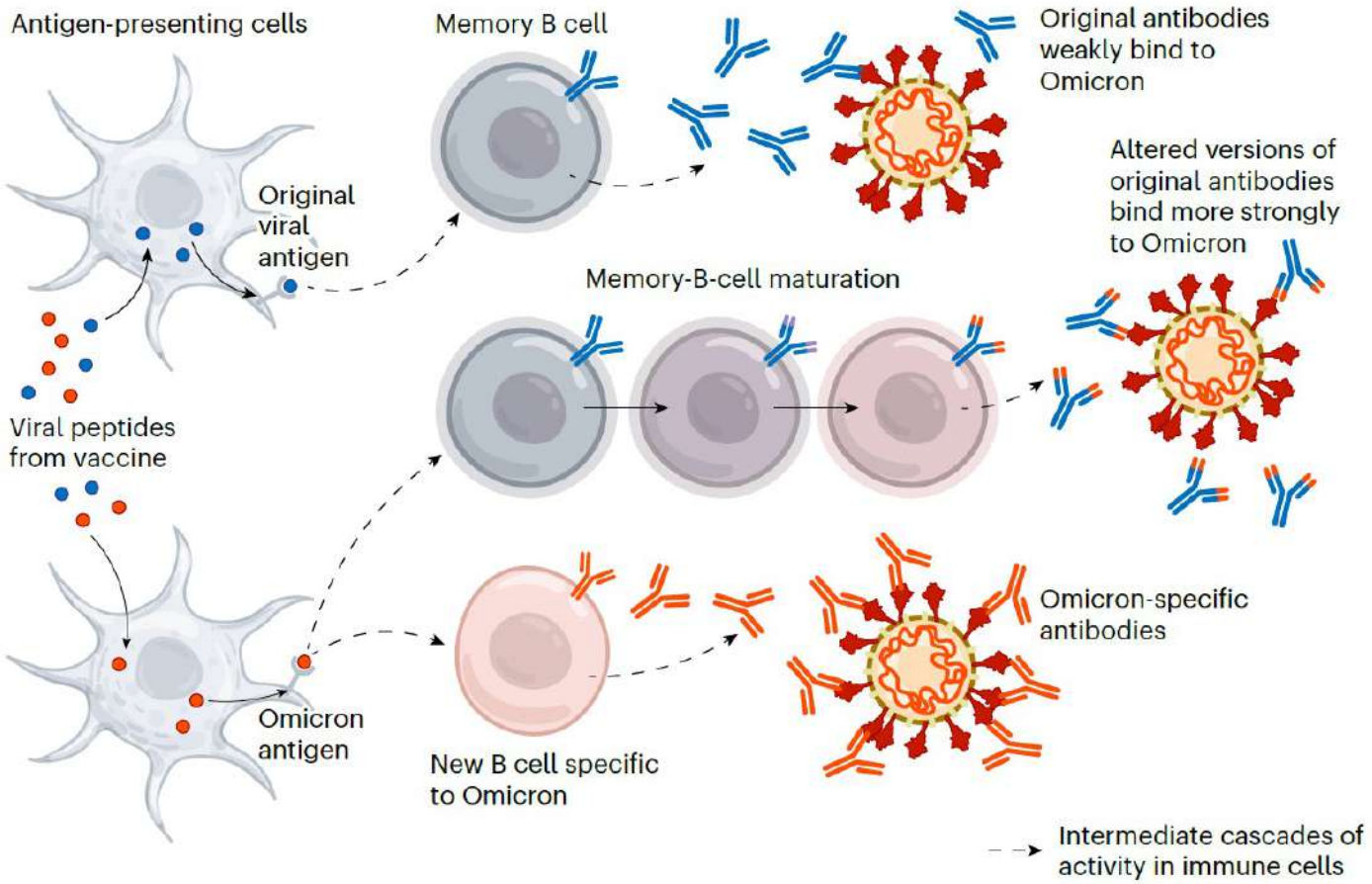
Some developers, including Pfizer–BioNTech, are also working on combination vaccines to protect people against COVID-19 and other diseases – most commonly influenza. Nearly all are in the early stages of development.

Broadly protective vaccines

Updates to COVID-19 vaccines will always be a step or two behind the evolving virus. Scientists hope to develop 'broadly protective'

3 UPDATED VACCINES

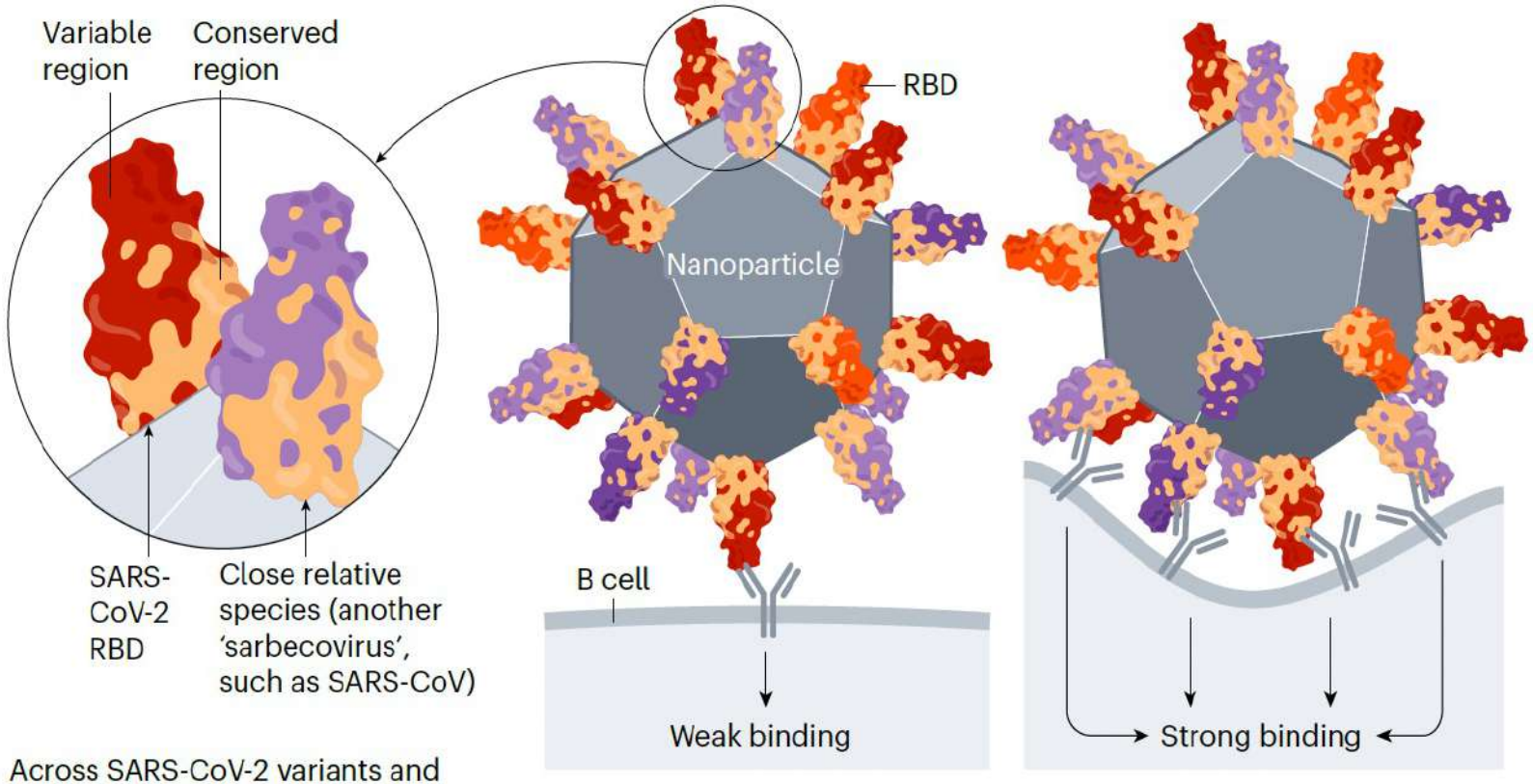
'Bivalent' vaccines present portions of both the original virus and its variants (such as Omicron), to try to keep up with the evolving virus. In response to a booster dose of this vaccine, some existing memory B cells spark off the production of more antibodies; others mature, leading to cells able to make antibodies that bind to Omicron more strongly; and some new B cells make Omicron-specific antibodies.



Geniş spektrumlu «mozaik» nanopertikül aşılar

4 BROADER PROTECTION?

Some vaccines might be able to target many future SARS-CoV-2 variants. 'Mosaic' vaccines stud nanoparticles with receptor-binding domains (RBDs) from multiple coronaviruses. They might be able to produce antibodies that can bind to — and so protect against — many related coronaviruses.



Across SARS-CoV-2 variants and closely related species, some regions of the RBD vary, but others are conserved*.

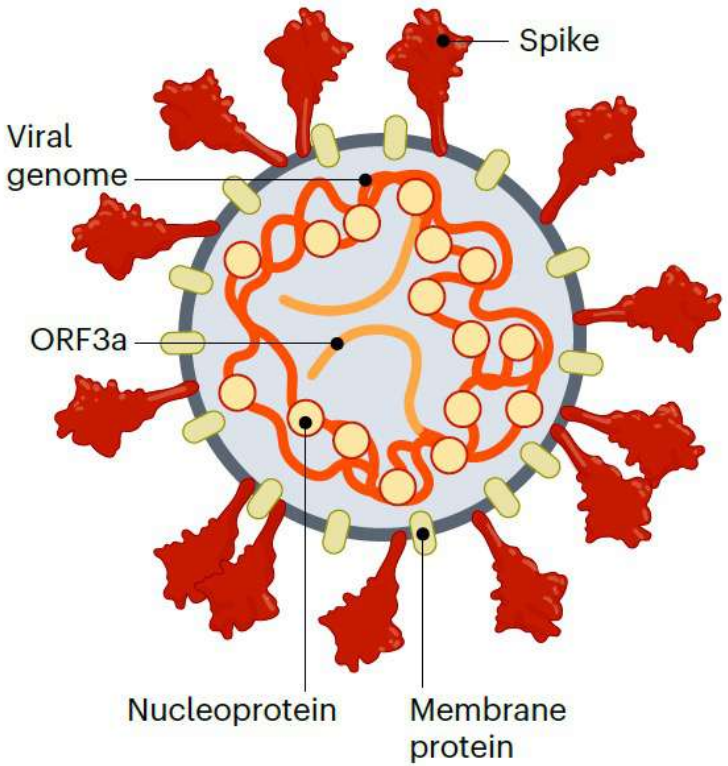
*At the resolution shown here, the RBDs for different sarbecoviruses look the same.

A B cell that binds weakly to a mosaic nanoparticle — perhaps because it recognizes only one RBD — will not divide and flourish.

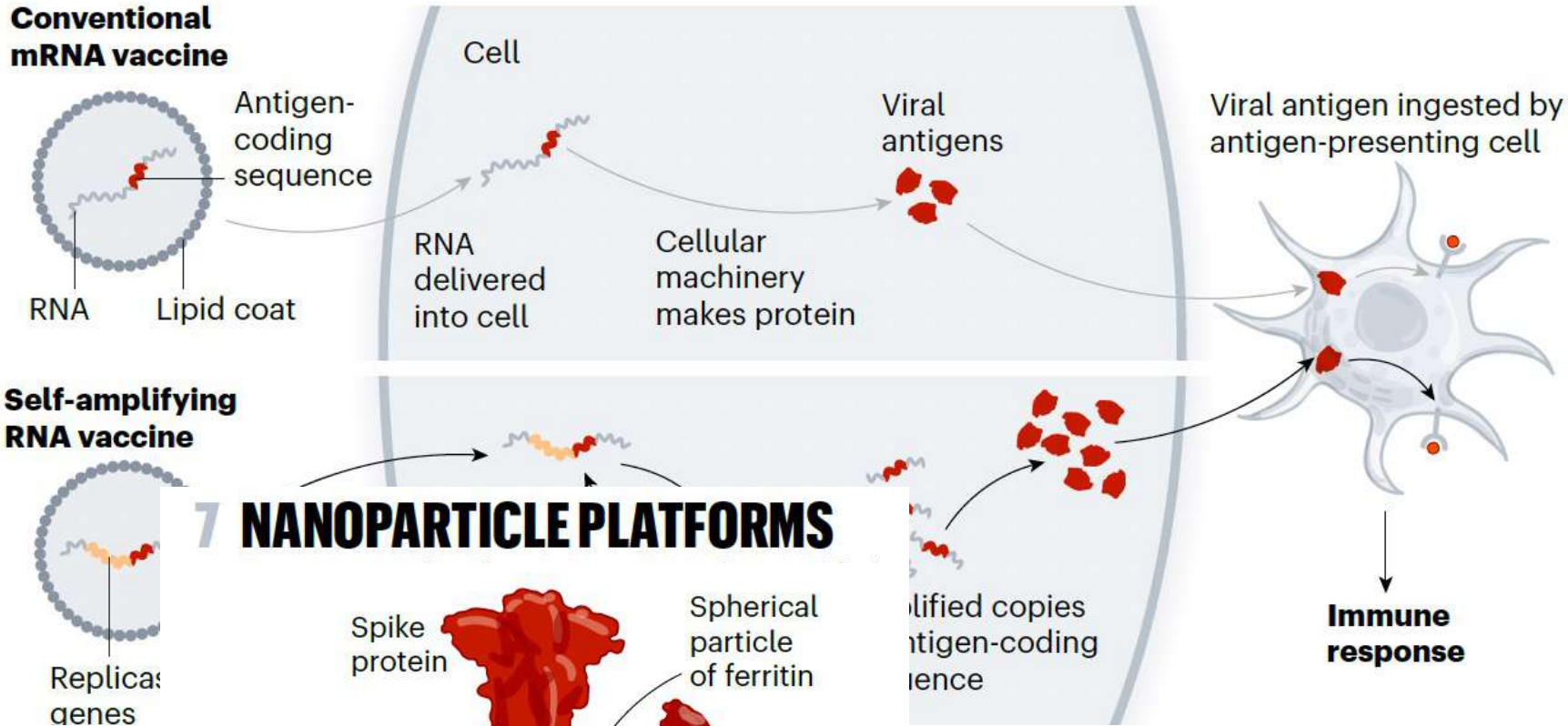
A B cell that binds strongly — because it can lock on to the conserved regions of many RBDs — will divide and produce more antibodies and B cells.

5 TARGETING OTHER VIRAL PROTEINS

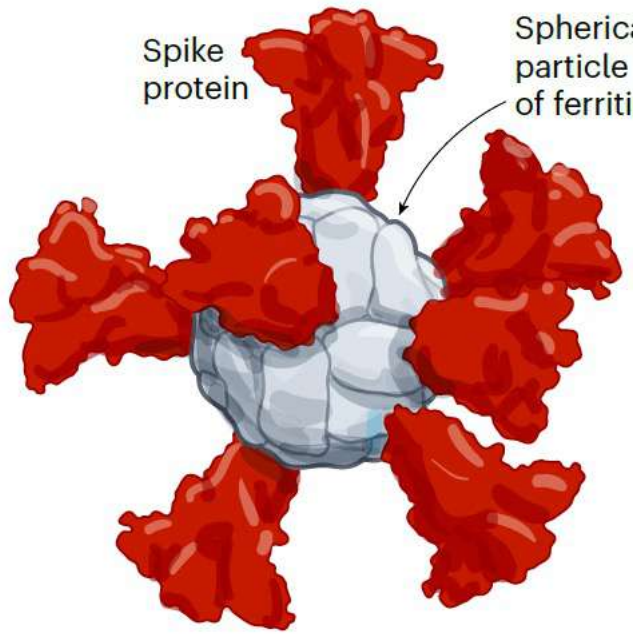
The coronavirus's spike protein is just one of many that T cells could recognize. Some future vaccines aim to present the body with other proteins.



6 SELF-AMPLIFYING RNA

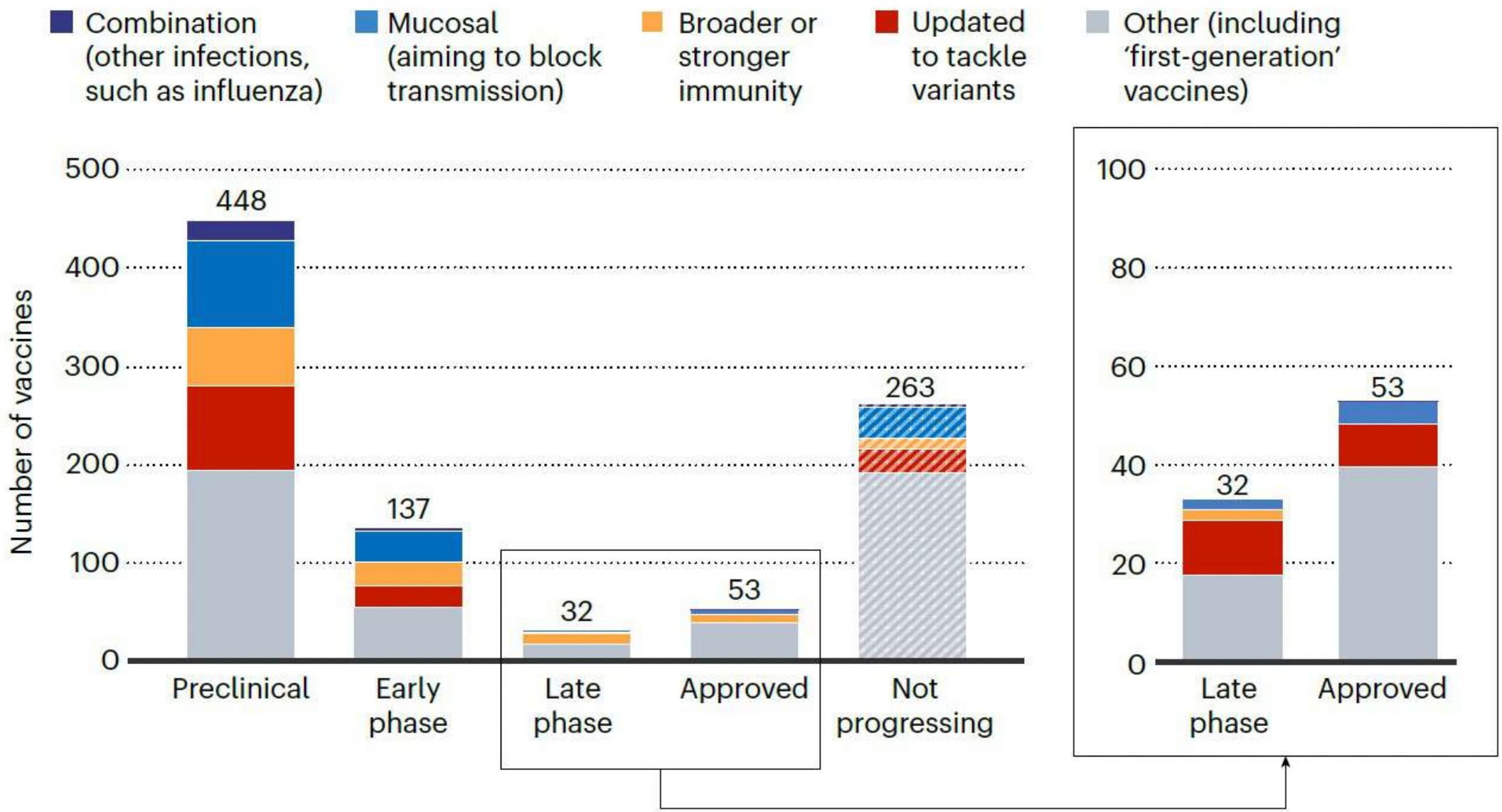


7 NANOPARTICLE PLATFORMS



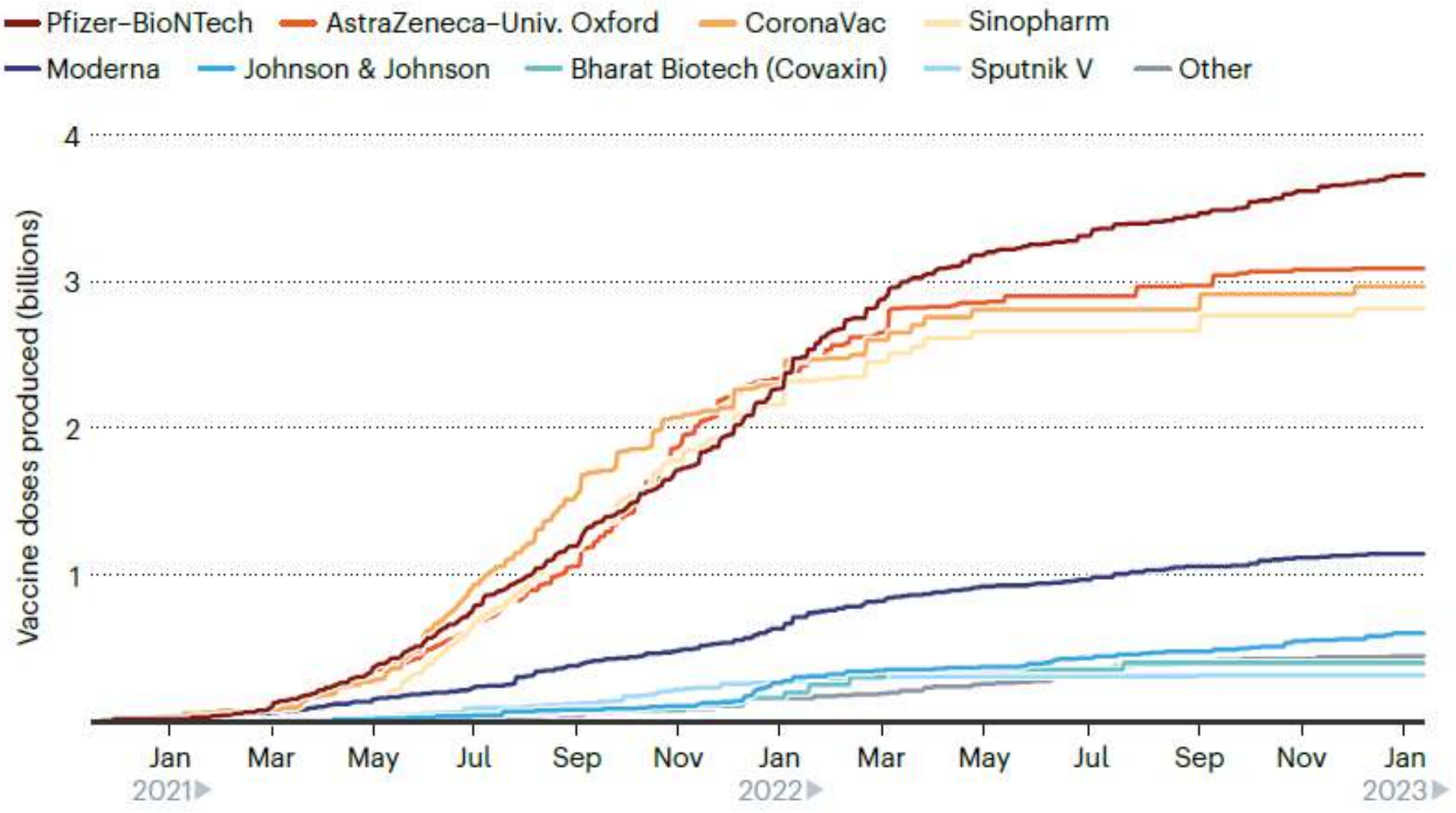
8 A LIVELY MARKET

All these next-generation vaccines will be fighting for market share. More than 50 vaccines have already been approved, yet there are hundreds in clinical trials. Hundreds more have been abandoned.



9 LEADING PLAYERS

Eight vaccines make up almost all of the 16 billion doses produced so far, of which more than 13 billion have been administered.



Coronavirus (COVID-19) Vaccinations

Home > Coronavirus > Vaccinations

69.7% of the world population has received at least one dose of a COVID-19 vaccine.

13.32 billion doses have been administered globally, and **213,316** are now administered each day.

28% of people in low-income countries have received at least one dose.

13 Mart 2023

EN AZ İKİ DOZ AŞI OLMUŞ 18 YAŞ VE ÜSTÜ NÜFUS (%)

2.DOZ AŞI YAPILMA ORANI	
% 85,69	
1.DOZ AŞI YAPILMA ORANI: % 93,37	
1.,2. VE 3.DOZ TOPLAMI	
152.703.836	
1.DOZ UYGULANAN	57.954.952
2.DOZ UYGULANAN	53.191.093
3.DOZ UYGULANAN	28.234.273


KLİMİK 2023
HAKKINDA
PROGRAM
KAYIT
Teşekkürler..
CUMHURİYET'İN 100. YILI
13-16 MART 2023