Gebelikte COVID-19

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06

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mRNA aşı güvenliği, meta-analiz verileri, CDC/WHO rehberleri ve Türkiye perspektifi.

Gebelik Fizyolojisi

Normal gebelik süreci ve fizyolojik adaptasyonlar

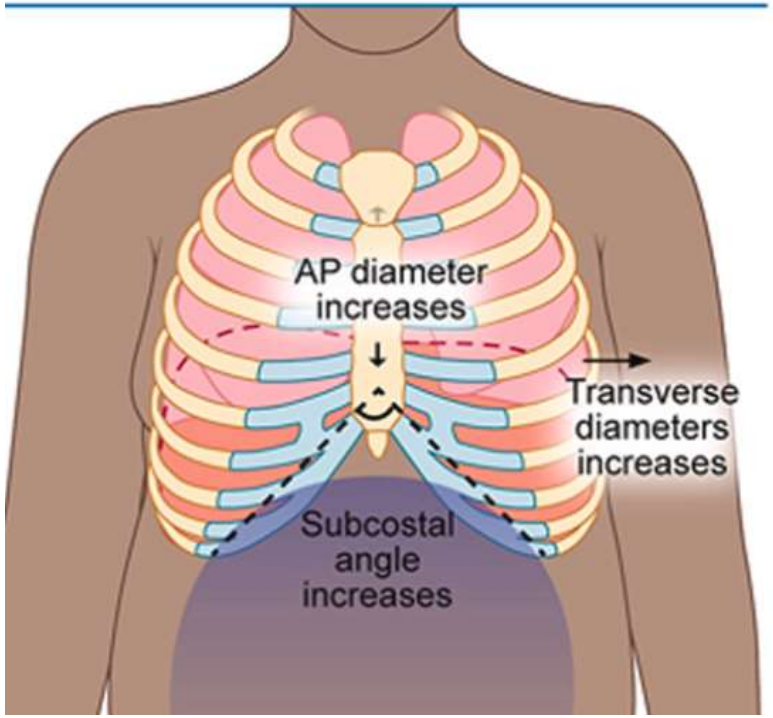
Normal Gebelikte Fizyolojik Değişiklikler

- Gebelik, artan fizyolojik stres ve metabolik talebin olduğu eşsiz bir durumdur
- Anne sistemleri, fetüs ve plasenta gelişiminin taleplerini karşılamak için önemli değişimler gösterir
- Gebelikteki tıbbi bozuklukları anlamak için gebelikte beklenen fizyolojik değişiklikleri ayırt edebilmek gerekir

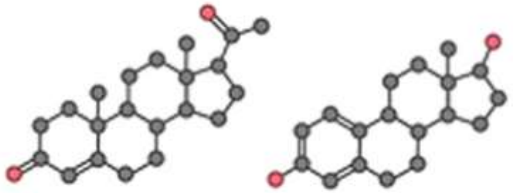
Siad F, et al. Canadian Journal of General Internal Medicine. 2025

Gebelikte Solunum Sistemi Fizyolojik Değişiklikleri

Anatomical Changes



Hormonal Changes



Progesterone & Estrogen

Increases minute ventilation and reduces arterial $PaCO_2$

Relaxin

Loosens ligaments and cartilage to allow for ribcage expansion

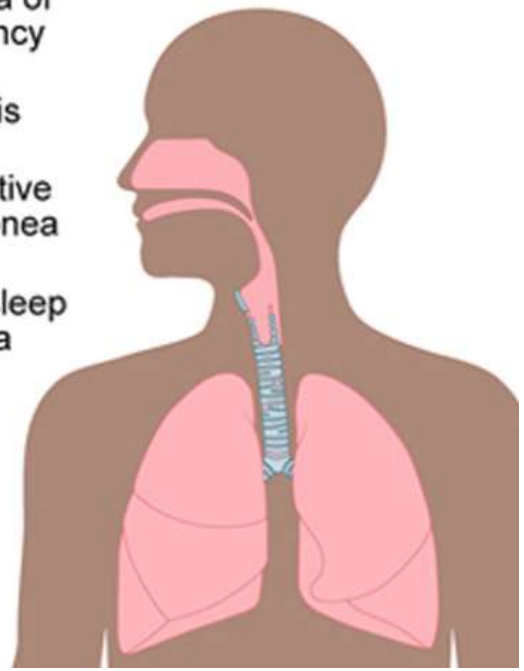
Physiological Changes

Dyspnea of pregnancy

Rhinitis

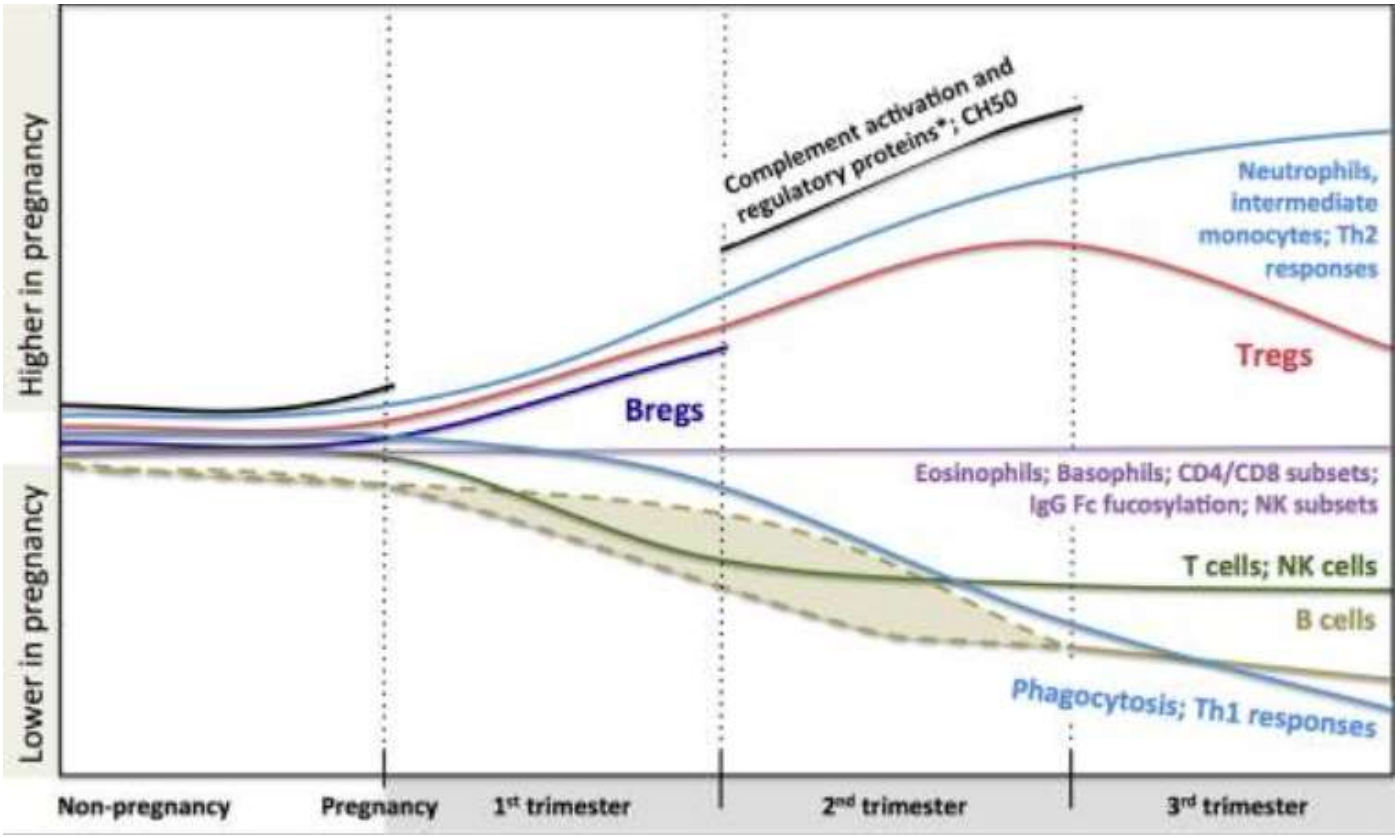
Obstructive sleep apnea

Central sleep apnea



Ejikeme C, et al. Respiratory Medicine. 2025

Gebelik Sırasında Anneye Ait İmmünolojik Adaptasyon



Abu-Raya B, et al. Front Immunol. 2020

Gebelikte Laboratuvar Parametrelerinin Referans Aralıkları

- Gebelikteki laboratuvar parametrelerinin referans değerleri, gebe olmayan kadınların referans değerlerinden farklıdır

Šupak-Smolčić V, et al. Diagnostics (Basel). 2025

Gebeliğin Erken Döneminde Laboratuvar Parametreleri için Referans Aralıkları

Analyte (Unit) *	Lower Limit for Pregnancy (90% CI)	Upper Limit for Pregnancy (90% CI)	Lower Limit Non-Pregnant	Upper Limit Non-Pregnant	RCV	%Difference Lower Reference Limit	%Difference Upper Reference Limit
RBC ($\times 10^{12}$/L)	3.69 (3.64–3.80)	4.89 (4.82–5.07)	3.86	5.08	8.34	4.46	3.68
Hemoglobin (Hb) (g/L)	109 (107–112)	141 (138–147)	119	157	7.73	**8.40**	**10.51**
Hematocrit (Hct) (L/L)	0.339 (0.332–0.341)	0.429 (0.423–0.437)	0.356	0.470	8.68	4.78	**8.72**
MCV (fL)	79.0 (73.7–80.7)	96.6 (95.4–98.0)	83.0	97.2	4.23	**4.88**	0.67
MCH (pg)	24.9 (22.5–25.7)	31.8 (31.5–32.7)	27.4	33.9	3.16	**9.31**	**6.19**
WBC ($\times 10^{9}$/L)	5.4 (5.1–5.7)	13.4 (12.8–15.1)	3.4	9.7	31.01	**58.82**	**38.14**
Neutrophile granulocytes ($\times 10^{9}$/L)	3.47 (3.06–3.81)	10.23 (9.94–10.97)	2.06	6.49	39.33	**68.45**	**57.55**
Lymphocytes ($\times 10^{9}$/L)	0.98 (0.88–1.07)	2.74 (2.56–2.83)	1.19	3.35	31.22	17.65	18.36
Monocytes ($\times 10^{9}$/L)	0.29 (0.27–0.31)	0.99 (0.88–1.19)	0.12	0.84	40.22	**141.67**	17.26
Eosinophile granulocytes ($\times 10^{9}$/L)		0.39 (0.33–0.45)		0.43	40.12		10.47
Basophile granulocytes ($\times 10^{9}$/L)		0.09 (0.09–0.11)		0.06	77.26		41.67
ESR	5 (4–5)	40 (39–50)	4	24	95.49	25.00	66.67
Urea (mmol/L)	2.0 (1.7–2.0)	5.2 (4.8–5.5)	2.8	8.3	37.24	28.57	**37.95**
Creatinine (µmol/L)	35 (34–37)	65 (62–67)	49	90	14.46	**28.57**	**27.78**
Uric acid (µmol/L)	107 (94–115)	279 (265–297)	134	337	23.06	20.15	17.21
Albumin (g/L)	38.1 (37.6–38.6)	46.2 (45.7–47.3)	40.6	51.4	8.70	6.16	**10.21**
Total protein (g/L)	63 (62–63)	75 (74–76)	66	81	8.32	4.55	7.41
CRP (mg/L)		17.2 (14.2–22.5)		5.0	78.87		**244.00**
Ferritin (µg/L)	9 (8–12)	138 (121–245)	10	120	37.69	15.00	14.58
Total cholesterol (mmol/L)		6.4 (6.2–6.6)		5.0	13.36		**28.00**
Triglycerides (mmol/L)		2.6 (2.4–2.9)		1.7	46.34		**50.00**
HDL cholesterol (mmol/L)	1.3 (1.2–1.3)		1.2		16.38	8.33	
LDL cholesterol (mmol/L)		3.5 (3.4–3.9)		3.0	19.28		16.67
LD (U/L)		183 (178–204)		241	10.85		**24.07**
CK (U/L)		142 (120–218		153	33.09		7.09
AST (U/L)	10 (9–10)	24 (22–34)	8	30	24.30	**25.00**	20.00
ALT (U/L)	6 (4–7)	33 (26–37)	10	36	32.18	**40.00**	8.33
AP (U/L)	34 (31–35)	90 (80–98)	54	119	18.02	**37.04**	**24.37**

COVID-19 Pandemisi

Küresel salgının seyri ve temel epidemiyoloji

COVID-19 Pandemisi



- Çin'in Wuhan şehrinde Aralık 2019'da ilk olgular görüldü
- SARS-CoV-2 (yeni bir koronavirüs) etken olarak tespit edildi
- WHO tarafından Mart 2020'de pandemi ilanı yapıldı
- 5 Mayıs 2023'te PHEIC statüsü kaldırıldı
- Yaklaşık 7 milyon doğrulanmış ölüme sebep oldu

https://ourworldindata.org/grapher/cumulative-deaths-and-cases-covid-19?time=earliest..latest

COVID-19 Pandemisi



https://ourworldindata.org/grapher/cumulative-deaths-and-cases-covid-19?time=earliest..latest

COVID-19 ve Diğer Solunum Yolu Virüsleri

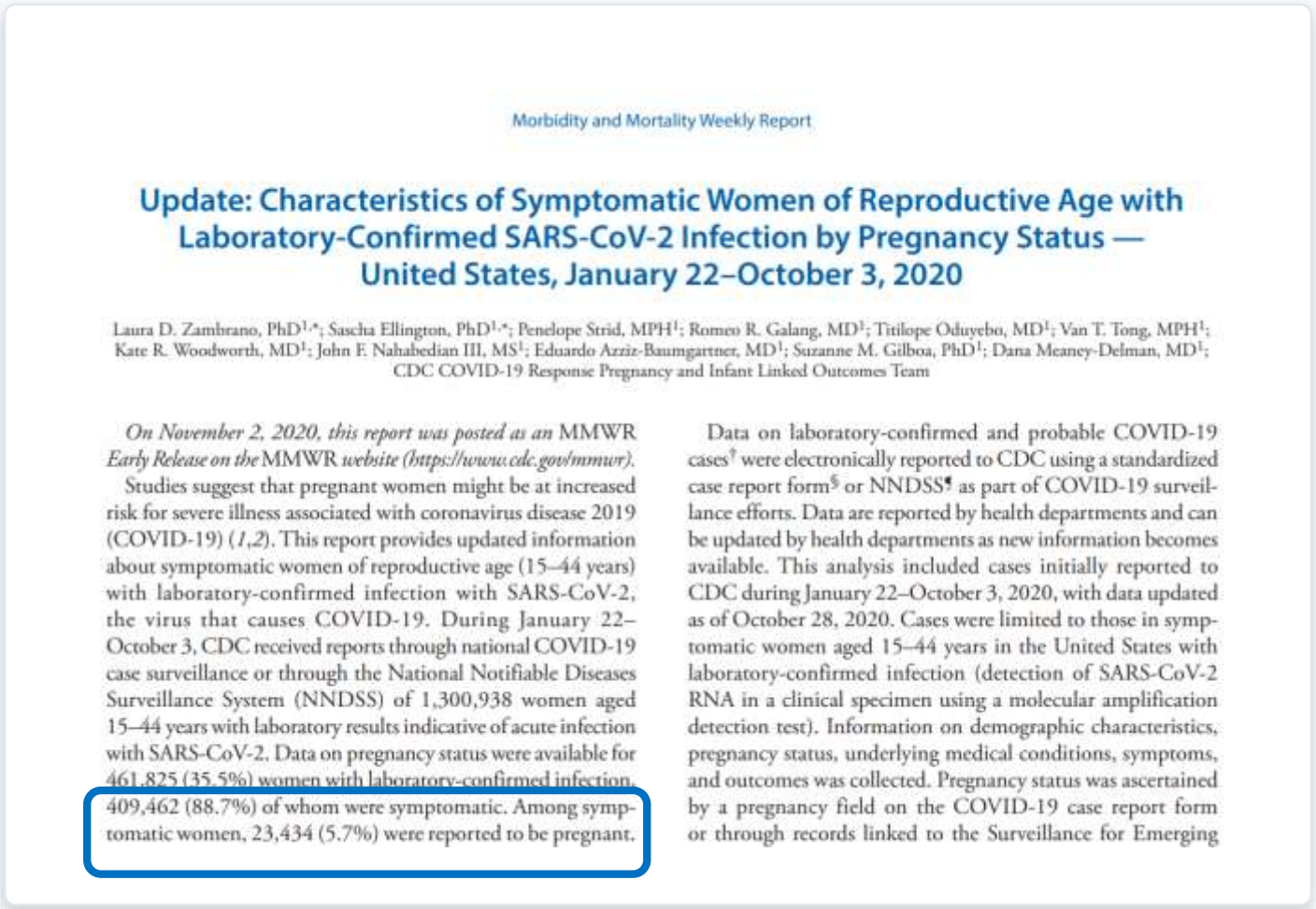
	2026/37. Hafta (6 - 13 Eylül 2026)		2025/2026 Sezonu (29 Eylül 2025 - 13 Eylül 2026)	
	Sayı	Yüzde	Sayı	Yüzde
İnfluenza pozitif numune	**0**	**0,0**	**527**	**13,0**
İnfluenza A	**0**	0,0	**470**	**89,4**
Tiplendirilmeyen İnfluenza A	0	0,0	6	1,3
İnfluenza A(H1N1)	0	0,0	81	17,2
İnfluenza A(H3N2)	0	0,0	383	81,5
İnfluenza B	**0**	0,0	**56**	**10,6**
Birden Fazla İnfluenza	**0**	0,0	**1**	**0,2**
Diğer Solunum Yolu Virüsleri (DSYV) pozitif numune	**13**	**56,5**	**1717**	**42,3**
Adenovirus	0	0,0	20	1,2
Birden fazla DSYV	0	0,0	151	8,8
Coronavirus (HCoV-229E, HCoV-OC43, HCoV-NL63 ve HKU1-CoV)	3	23,1	287	16,7
SARS-CoV-2	1	7,7	109	6,3
Enterovirus	0	0,0	44	2,6
H. bocavirüs	0	0,0	11	0,6
H. metapneumovirus	0	0,0	55	3,2
Parainfluenzavirus	3	23,1	86	5,0
Parechovirus	0	0,0	3	0,2
Rhinovirus	6	46,2	822	47,9
Respiratuar Sinsityal Virüs	0	0,0	129	7,5
Diğer	0	0,0	0	0,0
İnfluenza ve DSYV pozitif numune	**0**	**0,0**	**97**	**2,4**
Negatif numune	**10**	**43,5**	**1719**	**42,3**
Çalışılan numune	**23**	**100,0**	**4060**	**100,0**

Patofizyoloji

Gebelikte COVID-19: Genel bakış ve hastalık mekanizması

PATOFIZYOLOJI

Gebelik ve COVID-19: Genel Bakış



Morbidity and Mortality Weekly Report

Update: Characteristics of Symptomatic Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status — United States, January 22–October 3, 2020

Laura D. Zambrano, PhD[1,*]; Sascha Ellington, PhD[1,*]; Penelope Strid, MPH[1]; Romeo R. Galang, MD[1]; Titilope Oduyebo, MD[1]; Van T. Tong, MPH[1]; Kate R. Woodworth, MD[1]; John F. Nahabedian III, MS[1]; Eduardo Azziz-Baumgartner, MD[1]; Suzanne M. Gilboa, PhD[1]; Dana Meaney-Delman, MD[1]; CDC COVID-19 Response Pregnancy and Infant Linked Outcomes Team

On November 2, 2020, this report was posted as an MMWR *Early Release on the* MMWR *website (https://www.cdc.gov/mmwr).*

Studies suggest that pregnant women might be at increased risk for severe illness associated with coronavirus disease 2019 (COVID-19) (*1*,*2*). This report provides updated information about symptomatic women of reproductive age (15–44 years) with laboratory-confirmed infection with SARS-CoV-2, the virus that causes COVID-19. During January 22–October 3, CDC received reports through national COVID-19 case surveillance or through the National Notifiable Diseases Surveillance System (NNDSS) of 1,300,938 women aged 15–44 years with laboratory results indicative of acute infection with SARS-CoV-2. Data on pregnancy status were available for 461,825 (35.5%) women with laboratory-confirmed infection, 409,462 (88.7%) of whom were symptomatic. Among symptomatic women, 23,434 (5.7%) were reported to be pregnant.

Data on laboratory-confirmed and probable COVID-19 cases[†] were electronically reported to CDC using a standardized case report form[§] or NNDSS[¶] as part of COVID-19 surveillance efforts. Data are reported by health departments and can be updated by health departments as new information becomes available. This analysis included cases initially reported to CDC during January 22–October 3, 2020, with data updated as of October 28, 2020. Cases were limited to those in symptomatic women aged 15–44 years in the United States with laboratory-confirmed infection (detection of SARS-CoV-2 RNA in a clinical specimen using a molecular amplification detection test). Information on demographic characteristics, pregnancy status, underlying medical conditions, symptoms, and outcomes was collected. Pregnancy status was ascertained by a pregnancy field on the COVID-19 case report form or through records linked to the Surveillance for Emerging

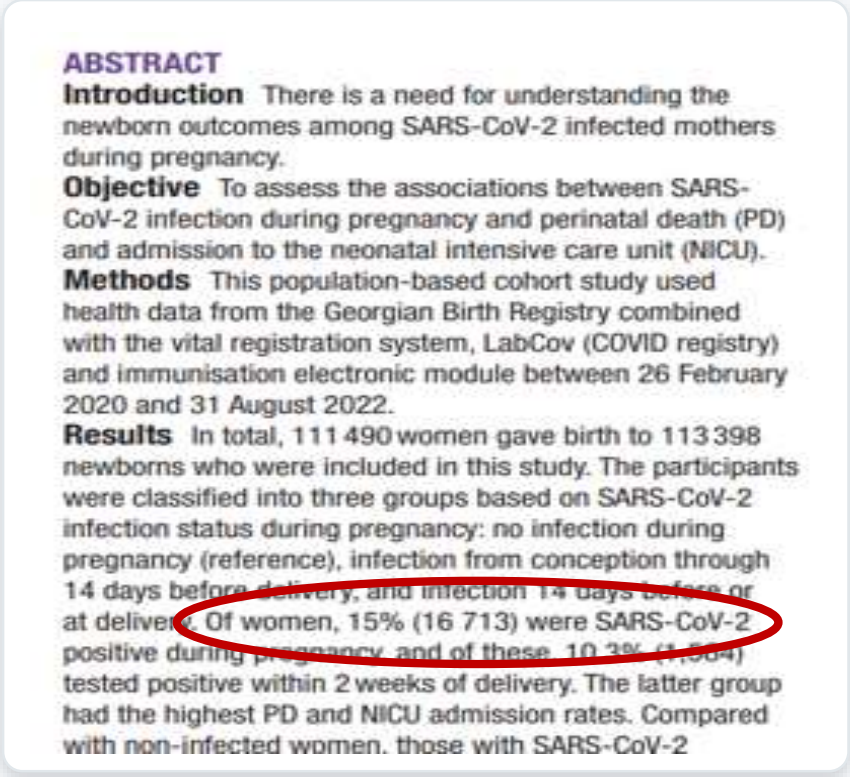


Open access Original research

BMJ Paediatrics Open

Infection with SARS-CoV-2 during pregnancy and perinatal death or neonatal intensive care admission: population-based cohort study

Tinatin Manjavidze ,[1,2,3] Ingvild Hersoug Nedberg[4]



ABSTRACT

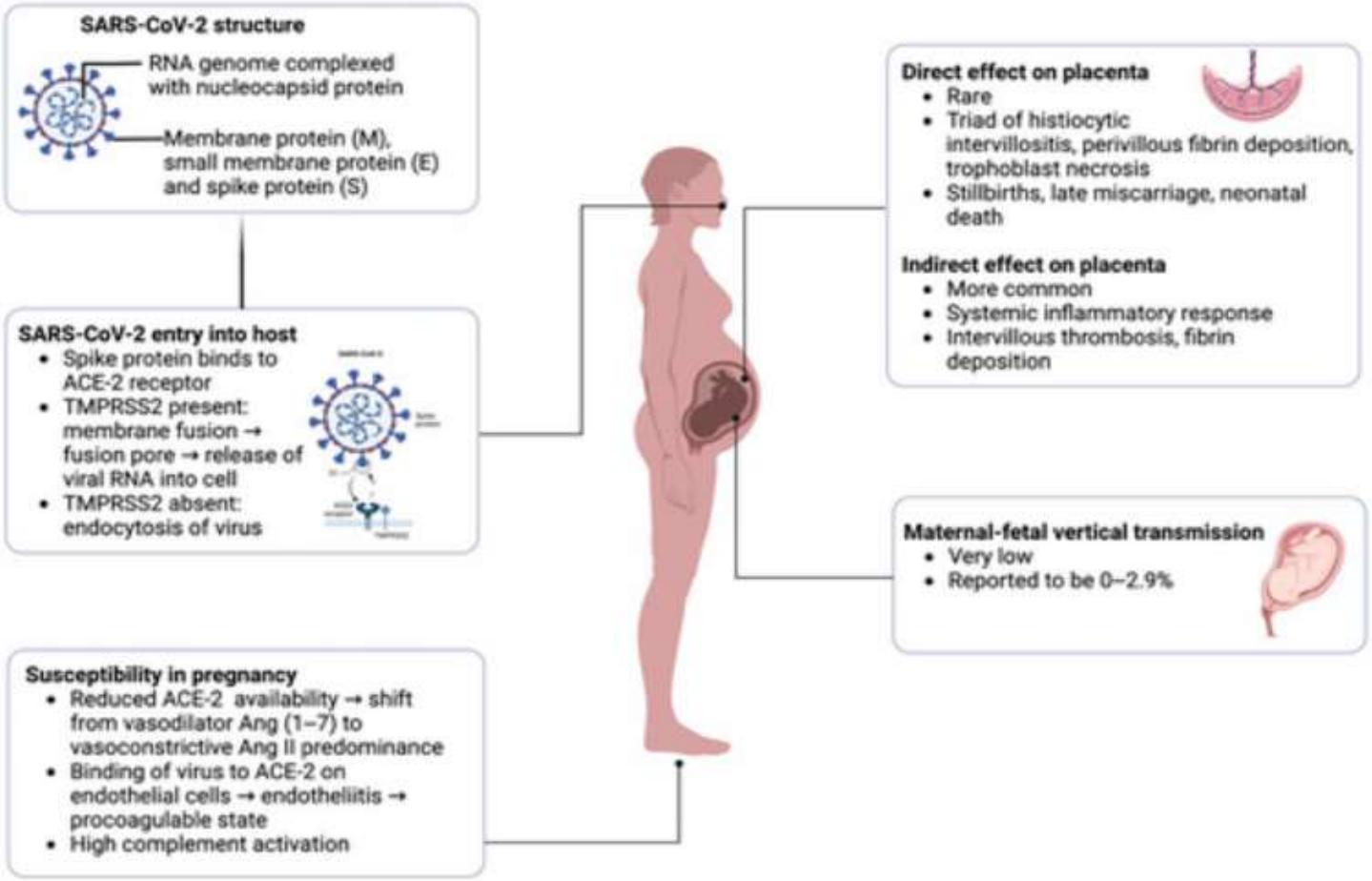
Introduction There is a need for understanding the newborn outcomes among SARS-CoV-2 infected mothers during pregnancy.

Objective To assess the associations between SARS-CoV-2 infection during pregnancy and perinatal death (PD) and admission to the neonatal intensive care unit (NICU).

Methods This population-based cohort study used health data from the Georgian Birth Registry combined with the vital registration system, LabCov (COVID registry) and immunisation electronic module between 26 February 2020 and 31 August 2022.

Results In total, 111 490 women gave birth to 113 398 newborns who were included in this study. The participants were classified into three groups based on SARS-CoV-2 infection status during pregnancy: no infection during pregnancy (reference), infection from conception through 14 days before delivery, and infection 14 days before or at delivery. Of women, 15% (16 713) were SARS-CoV-2 positive during pregnancy, and of these, 10.3% (1 584) tested positive within 2 weeks of delivery. The latter group had the highest PD and NICU admission rates. Compared with non-infected women, those with SARS-CoV-2

Patofizyoloji



Greer O, et al. The Obstetrician and Gynaecologist. 2025

Klinik Belirtiler

Semptom profili, varyantlara göre değişim ve risk faktörleri

Klinik Belirtiler

- COVID-19 enfeksiyonu, genel popülasyondaki farklı varyantlar arasında gelişen semptom profilleriyle ilişkilidir
- Belirli varyantlar baskın hale geldikçe, COVID-19'un şiddeti dalgalanmalar göstermiştir
- Semptom yaygınlığındaki ve hastalık şiddetindeki bu değişiklikler, hamile kadınlar arasında da belirgin görünmektedir

Klinik Belirtiler: Semptom Profili

Contents lists available at ScienceDirect

International Journal of Infectious Diseases

journal homepage: www.elsevier.com/locate/ijid

Variability in COVID-19 symptom presentation during pregnancy and its impact on maternal and infant outcomes across the pandemic

Julia Günther[a,#], Yvonne Ziert[b,#], Kristin Andresen[c], Ulrich Pecks[d,e], Frauke von Versen-Höynck[a,*], on behalf of the CRONOS Network

Symptoms in pregnant patients with COVID-19 depending on the SARS-CoV-2 virus variant.

	Wild-type/Alpha	Delta	Omicron		Delta vs. Wild-type/Alpha		Omicron vs. Wild-type/ Alpha	
	n = 1841	n = 1171	n = 2419	P value	OR	95% CI	OR	95% CI
Respiratory tract								
Dyspnea	531/1715 (31·0)	346/1110 (31·2)	371/2295 (16·2)	< 0·001	1·01	0·86–1·19	0·43	0·37–0·50
Cough	1038/1702 (61·0)	838/1049 (79·9)	1522/2080 (73·2)	< 0·001	2·54	2·12–3·04	1·75	1·52–2·00
Nasal obstruction	697/1668 (41·8)	498/935 (53·3)	1203/1927 (62·4)	< 0·001	1·59	1·35–1·87	2·32	2·02–2·65
Expectorations	153/1552 (9·9)	136/877 (15·5)	302/1768 (17·1)	< 0·001	1·68	1·31–2·15	1·88	1·53–2·32
Gastrointestinal tract								
Diarrhea	139/1662 (8·4)	93/923 (10·1)	141/1791 (7·9)	0·14	1·23	0·92–1·61	0·94	0·73–1·20
Nausea/vomiting	205/1558 (13·2)	139/885 (15·7)	257/1779 (14·4)	0·21	1·23	0·97–1·55	1·11	0·92–1·36
Neurological symptoms								
Headache	707/1672 (42·3)	466/952 (48·9)	1058/1913 (55·3)	< 0·001	1·31	1·12–1·54	1·69	1·48–1·93
Dizziness/drowsiness	210/1559 (13·5)	145/875 (16·6)	260/1765 (14·7)	0·12	1·28	1·01–1·61	1·11	0·91–1·35
Changes in smell/taste	891/1680 (53·0)	510/939 (54·3)	446/1811 (24·6)	< 0·001	1·05	0·90–1·24	0·29	0·25–0·33
General feeling of sickness								
Fever	619/1692 (36·6)	444/994 (44·7)	746/1953 (38·2)	< 0·001	1·40	1·19–1·64	1·07	0·94–1·23
Myalgia	651/1671 (39·0)	445/941 (47·3)	964/1927 (50·0)	< 0·001	1·41	1·20–1·65	1·57	1·37–1·79
Fatigue	922/1678 (54·9)	562/942 (59·7)	1182/1927 (61·3)	< 0·001	1·21	1·03–1·42	1·30	1·14–1·49
Malaise	1030/1680 (61·3)	636/974 (65·3)	1133/1927 (58·8)	0·003	1·19	1·01–1·40	0·90	0·79–1·03

Klinik Belirtiler

Table 4
Maternal and neonatal outcomes depending on the SARS-CoV-2 virus variant.

	Wild-type/Alpha $n = 1841$	Delta $n = 1171$	Omicron $n = 2419$	*P* value
Maternal outcomes				
COVID-19 associated need for inpatient treatment[a]	299/1804 (16·6)	249/1132 (22·0)	180/2336 (7·7)	< 0·001
Pneumonia	105/1762 (6·0)	120/1125 (10·7)	15/2322 (0·6)	< 0·001
ICU admission	88/1799 (4·9)	90/1128 (8·0)	15/2330 (0·6)	< 0·001
Mortality	4/1799 (0·2)	5/1123 (0·4)	0/2330 (0·0)	0·01
Extreme critical illness	48/1798 (2·7)	60/1126 (5·3)	5/2329 (0·2)	< 0·001
Invasive ventilation	36/1798 (2·0)	52/1128 (4·6)	2/2329 (0·1)	< 0·001
COVID-19 associated indication for cesarean section	44/1643 (2·7)	79/1021 (7·7)	12/1989 (0·6)	< 0·001
COVID-19 associated reason for pregnancy termination	31/1632 (1·9)	58/1020 (5·7)	4/2061 (0·2)	< 0·001
Neonatal outcomes				
Delivery within 2 weeks after onset of COVID-19 symptoms	997/1656 (60·2)	698/1032 (67·6)	1645/2133 (77·1)	< 0·001
Stillbirth[b]	16/1645 (1·0)	10/1008 (1·0)	7/2118 (0·3)	< 0·001
NICU admission	226/1621 (13·9)	171/987 (17·3)	238/2103 (11·3)	< 0·001
Neonatal death	4/1624 (0·2)	3/1002 (0·3)	7/2095 (0·3)	0·89
Gestational age (weeks) at birth	38·18 ± 2·97	37·57 ± 3·91	38·43 ± 2·55	< 0·001
Preterm birth[c]	212/1649 (12·9)	163/1015 (16·1)	226/2130 (10·6)	< 0·001
Fetal growth restriction	48/1695 (2·8)	49/1069 (4·6)	93/2199 (4·2)	0·03
Birth weight percentiles				0·25
<10th percentile	111/1401 (7·9)	93/947 (9·8)	205/2035 (10·1)	
10th to 90th percentiles	1161/1401 (82·9)	776/947 (81·9)	1658/2035 (81·5)	
>90th percentile	129/1401 (9·2)	78/947 (8·2)	172/2035 (8·5)	
5 min Apgar	9·32 ± 1·55	9·07 ± 1·94	9·51 ± 1·18	< 0·001
5 min Apgar < 7	59/1639 (3·6)	66/1014 (6·5)	49/2122 (2·3)	< 0·001
Congenital malformations	39/1641 (2·4)	32/999 (3·2)	40/2095 (1·9)	0·84
Respiratory support	132/1621 (8·1)	106/987 (10·7)	115/2103 (5·4)	0·04

KLINIK BELIRTILER

Ciddi COVID-19 için Risk Faktörleri

- Beyaz olmayan etnik köken
- İleri anne yaşı
- Yüksek vücut kitle indeksi
- Önceden var olan komorbiditeler
- Gebeliğe özgü komplikasyonlar



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Clinical manifestations, risk factors, and maternal and perinatal outcomes of coronavirus disease 2019 in pregnancy: living systematic review and meta-analysis

John Allotey,[1] Silvia Fernandez,[2] Mercedes Bonet,[3] Elena Stallings,[2,4] Magnus Yap,[5] Tania Kew,[5] Dengyi Zhou,[5] Dyuti Coomar,[1] Jameela Sheikh,[5] Heidi Lawson,[5] Kehkashan Ansari,[1] Shruti Attarde,[5] Megan Littmoden,[5] Adeolu Banjoko,[5] Kathryn Barry,[5] Oluwadamilola Akande,[5] Dharshini Sambamoorthi,[5] Madelon van Wely,[6] Elisabeth van Leeuwen,[7] Elena Kostova,[6] Heinke Kunst,[8,9] Asma Khalil,[10] Simon Tiberi,[8,9] Vanessa Brizuela,[3] Nathalie Broutet,[3] Edna Kara,[3] Caron Rahn Kim,[3] Anna Thorson,[3] Ramón Escuriet,[11] Sami Gottlieb,[3] Van T Tong,[12] Sascha Ellington,[12] Olufemi T Oladapo,[3] Lynne Mofenson,[13] Javier Zamora,[1,2,4] Shakila Thangaratinam,[1,14] on behalf of the PregCOV-19 Living Systematic Review Consortium

SONUÇ

Ciddi komplikasyonlarla (şiddetli Covid-19, yoğun bakım ünitesine yatış, invaziv ventilasyon ve anne ölümü) ilişkilidir

Yönetim

Tanı, izlem kriterleri ve tedavi yaklaşımları

YÖNETIM

Ulusal Tanı ve Tedavi Rehberi



YÖNETIM

Risk Değerlendirmesi

Tablo 2. Ağır COVID-19 Gelişme Riskini Orta Düzeyde Arttıran Hastalık ve Durumlar

Durum	İmmünosupresif İlaçlar
– Yaş 65–74 – Kalp ve damar hastalıkları (kalp yetmezliği, koroner arter hastalığı, miyokart enfarktüsü, kardiyomyopatiler, hipertansiyon, vb.) – Diabetes mellitus (Tip1 veya Tip 2) – Obezite (Vücut kitle indeksi≥30 kg/m^2) – Kronik akciğer hastalıkları – Kronik karaciğer hastalıkları – Kronik böbrek yetmezliği ve diyalize giren hastalar – Nörolojik hastalıklar (multipl skleroz, motor nöron hastalıkları, myastenia gravis, huntington hastalığı, Alzheimer/demans, parkinson gibi beyin ve sinirleri etkileyen hastalıklar, vb.) – Serebrovasküler hastalık – Tüberküloz – HIV enfeksiyonu (CD4 sayısı > 200 hücre/mm^3) – İnfl[illegible] bağırsak hastalığı – Şizofreni spektrum bozukluğu – Gebelik (özellikle 3. trimester) veya yeni doğum yapmış olmak – Orak hücr[illegible] – Sigara/madde kullanım öyküsü – >12 ay önce tanı almış solid tümör – Down sendromu	– Anti-IL-6 – Anti-IL-12 ve 23 – Kortikosteroidler 10–20 mg (≥4 hafta)

YÖNETIM

Hastaneye Yatırılarak İzlem Gerektiren Durumlar

- SpO_2 <%92 olması (oda havasında) - gebelerde <%95
- Solunum sayısı ≥30/dk
- Hipotansiyon (OAKB<65 mmHg) veya taşikardi (Nabız>100/dk)
- Ağır solunum sıkıntısı
- Ağır pnömoni bulguları
- PaO2 /FiO2<300 mmHg
- Akciğer görüntülemesinde bilateral yaygın tutulumun olması
- Sepsis veya septik şok
- ARDS, MODS gibi komplikasyonların varlığı
- Oral alım bozukluğu veya bilinç bulanıklığı

YÖNETIM

Yoğun Bakım Ünitesine Yatırılarak İzlem Gerektiren Durumlar

- Oksijen tedavisine rağmen düzelmeyen hipoksemi (SpO_2<%90 veya solunum sayısı ≥30/dk)
- Hiperkapni
- İnvaziv/non-invaziv mekanik ventilasyon gerektiren ağır solunum sıkıntısı
- ARDS, MODS gibi komplikasyonların varlığı
- Septik şok

YÖNETIM

Ağır COVID-19 Düşündürebilecek Laboratuvar Bulguları

Tetkik	Eşik Değer*
D-dimer	>1000 ng/mL (normal değer: <500 ng/mL)
CRP	≥75 mg/L (normal değer: <8,0 mg/L)
LDH	>245 ünite/L (normal aralık: 110 – 210 ünite/L)
Troponin	>2x normal üst sınır (Troponin T kadınlar 0–9 ng/L, erkekler 0–14 ng/L)
Ferritin	>500 mcg/L (normal aralık: kadınlar 10–200 mcg/L, erkekler 30–300 mcg/L)
Mutlak lenfosit sayısı	<800/mikroL (≥21 yaş için normal aralık: 1000–4800/mikroL)

YÖNETIM

COVID-19 Tedavisinde Kullanılan Antiviraller

Tedavi Adı±	Endikasyon	Erişkinde Dozu / Süresi	Kontrendikasyon	Gebelikte Kullanım	Böbrek Yetmezliğinde Kullanım
Nirmatrelvir / Ritonavir	Hafif-orta COVID-19'u olan yüksek riskli hastalar*	300 mg nirmatrelvir + 100 mg ritonavir, PO tablet, 2x1, 5 gün	Ciddi karaciğer yetmezliği (Child-Pugh C)	Güvenli	eGFR <60 doz azaltılır.
Remdesivir	Hafif-orta COVID-19'u olan yüksek riskli hastalar*	200 mg, IV (1. gün), sonra 100 mg/gün IV (2.-3. gün)	ALT veya AST >10xNÜS	Risk ve faydaları gözetilerek kullanılabilir.	CrCl <30 dikkatli kullanım gerektirir.
	Orta şiddette pnömonisi olan hastalar (Yüksek akımlı oksijen ihtiyacı olmayan)	200 mg, IV (1. gün), sonraki günler 100 mg/gün IV (toplam 5-10 gün)			
Molnupiravir	Hafif-orta COVID-19'u olan yüksek riskli hastalar*	800 mg/gün (4x200 mg), PO, 5 gün	<18 yaş	Önerilmez.**	Doz kısıtlaması yok ama veriler sınırlı
Monoklonal Antikorlar	Dolaşımdaki varyantın duyarlılığına*** bağlıdır.	Doz, varyant ve antikor türüne göre belirlenir.	Yok	Veriler sınırlı	Belirsiz
Yüksek titreli konvelasan plazma	İmmünosüprese olup, standart tedavilerin kullanılamadığı hastalarda	200–250 mL, IV, 1–2 doz (klinik yanıta göre)	Etkinliği belirsiz, rutin kullanım önerilmez	Veriler sınırlı, önerilmez.	Doz ayarlaması gerekmez

YÖNETIM

Nirmatrelvir/Ritonavir: Farmakokinetik Kanıt

ARTICLE OPEN ACCESS

A Phase 1 Multiple-Dose, Open-Label, Pharmacokinetic Study of Nirmatrelvir/Ritonavir in Healthy Lactating Women

Jacqueline Gerhart[1,*] | Narayan Cheruvu[1,*] | Kathleen Pelletier[2] | Kyle Matschke[1] | Haihong Shi[2] | Josué Kunjom Mfopou[3] | Jennifer Hammond[1] | Ravi Shankar P. Singh[4]

[1]Pfizer Research and Development, Pfizer Inc, Collegeville, Pennsylvania, USA | [2]Pfizer Research and Development, Pfizer Inc, Groton, Connecticut, USA | [3]Pfizer Clinical Research Unit, Pfizer S.A./N.V., Brussels, Belgium | [4]Pfizer Research and Development, Pfizer Inc, Cambridge, Massachusetts, USA

ABSTRACT

In accordance with the Centers for Disease Control and Prevention recommendations, pregnant women and those with a recent pregnancy (i.e., lactating) are considered at high risk of developing severe COVID-19 and qualify for treatment with nirmatrelvir/ritonavir. However, clinical data are lacking in this population because breastfeeding women were excluded from the nirmatrelvir/ritonavir clinical development program and pivotal Phase 2/3 studies. We report findings from a prospective Phase 1 trial (NCT05441215) designed and conducted in accordance with the US Food and Drug Administration guidance on clinical lactation studies that evaluated the pharmacokinetics and safety of multiple oral doses of nirmatrelvir/ritonavir in healthy lactating women using paired breast milk and maternal plasma data. Eight participants were enrolled and completed the study. After administration of nirmatrelvir/ritonavir 300 mg/100 mg to steady-state, the concentrations of both nirmatrelvir and ritonavir in breast milk were consistently lower than maternal plasma. Based on standard infant breast milk consumption (150 mL/kg/day), the mean absolute [illegible] and ritonavir that an infant would receive were 0.1595 and 0.0057 mg/kg/day, respectively, representing 1.8% and 0.19% of the [illegible]odyweight-normalized maternal dose. All treatment-emergent adverse events were mild to moderate in severity. No deaths, serious or severe adverse events, dose reductions, interruptions, or discontinuations were reported. In conclusion, nirmatrelvir/ritonavir 300 mg/100 mg was safe and well tolerated in healthy lactating women, with infant exposure considered to be low and well within the acceptability criteria of < 10% of the body weight-normalized maternal dose.

YÖNETIM

Remdesivir: Gebelik Kayıt Verileri

İlaçla ilişkili tutarlı bir risk sinyali saptanmamıştır

Journal of Pregnancy

WILEY

RESEARCH ARTICLE OPEN ACCESS

Remdesivir Use During Pregnancy: Findings From the Prospective COVID-19 International Drug Pregnancy Registry and Narrative Literature Review

Diego F. Wyszynski[1] | Cheryl Renz[2] | Aprille Espinueva[3] | Lee P. Shulman[4] | EunYoung Lee[3] | Andrew Fitzgibbon[1] | Gina Brown[3]

ABSTRACT

Background and Aims: Remdesivir (RDV), an inhibitor of coronavirus replication including SARS-CoV-2, has been approved for the treatment of COVID-19. Nevertheless, its use during pregnancy lacks specific efficacy and safety data due to the exclusion of pregnant patients from clinical trials. Authorization for compassionate use in pregnant women was granted during the conduct of the Phase 3 clinical trials in adult patients hospitalized with moderate or severe COVID-19. Available evidence from prior studies suggests that no consistent safety concern has been identified, although available data remain limited. The most commonly reported adverse event (AE) is transaminitis, which rarely necessitates treatment discontinuation.

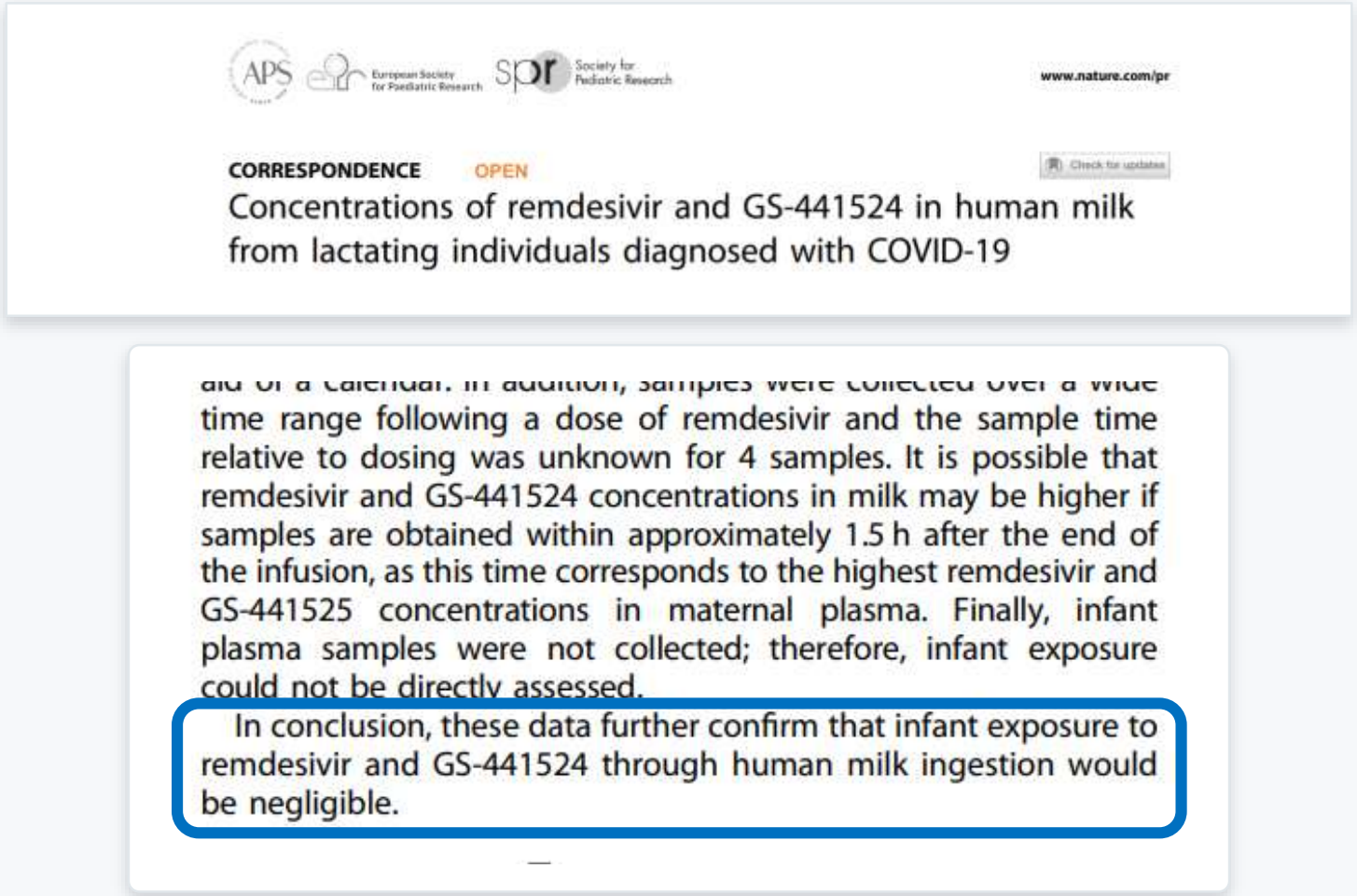
Methods: Safety data for RDV exposure during pregnancy were collected by the COVID-19 International Drug Pregnancy Registry (COVID-PR) between December 2021 and November 2023. Information was obtained through self-administered online questionnaires completed during pregnancy and up to 1 year after live birth, with medical record corroboration when available.

Results: Nine women reported a total of 15 AEs, with an additional seven AEs reported in three infants. Ten of these AEs were considered serious and included a life-threatening hypersensitivity episode. No consistent pattern of AEs suggestive of a specific safety concern was identified.

Conclusions: This study contributes additional observational safety data regarding RDV use during pregnancy. However, due to the small size of the study population and various study limitations, definitive conclusions about the safety of this treatment in pregnant populations cannot be drawn.

YÖNETIM

Remdesivir: Anne Sütü Geçişi



APS European Society for Paediatric Research SPR Society for Pediatric Research

www.nature.com/pr

CORRESPONDENCE OPEN

Check for updates

Concentrations of remdesivir and GS-441524 in human milk from lactating individuals diagnosed with COVID-19

aid of a calendar. In addition, samples were collected over a wide time range following a dose of remdesivir and the sample time relative to dosing was unknown for 4 samples. It is possible that remdesivir and GS-441524 concentrations in milk may be higher if samples are obtained within approximately 1.5 h after the end of the infusion, as this time corresponds to the highest remdesivir and GS-441525 concentrations in maternal plasma. Finally, infant plasma samples were not collected; therefore, infant exposure could not be directly assessed.

In conclusion, these data further confirm that infant exposure to remdesivir and GS-441524 through human milk ingestion would be negligible.

YÖNETIM

Ağır COVID-19'un Tedavisinde Kullanılan Ajanlar

Tedavi Adı	Endikasyon	Doz / Süre	Kontrendikasyon	Gebelikte Kullanım	Böbrek Yetmezliğinde Kullanım
Deksametazon	Orta/ağır pnömonide veya kritik hastalarda	6 mg/gün, IV/PO, 10 gün veya taburculuğa kadar	Aktif enfeksiyonlarda dikkatli kullanım gerektirir.	Risk ve faydaları gözetilerek kullanılabilir.	Doz ayarlaması gerekmez
Tocilizumab (IL-6 inh.)	Ağır pnömoni ve yüksek inflamasyon belirteçleri olan hastalarda	8 mg/kg, IV tek doz (maks. 800 mg)	AST veya ALT >5xNÜS, Nötrofil <2000, Trombosit <100.000	Riskler belirsiz	Doz ayarlaması gerekmez
Baricitinib (JAK inh.)	Ağır pnömoni ve yüksek inflamasyon belirteçleri olan hastalarda	4 mg/gün, PO, 1x1, 14 gün	Lenfosit <500, Nötrofil <1000, Hgb <8 g/dL	Önerilmez	eGFR <60 doz azaltılır, eGFR <15 önerilmez
Anakinra* (IL-1 inh.)	Ağır pnömoni ve yüksek inflamasyon belirteçleri olan hastalarda	200 mg/gün, IV, 3x1, 10 gün	Aktif enfeksiyonlarda dikkatli kullanım gerektirir	Önerilmez	eGFR <30 doz azaltılır

YÖNETIM

İlaç Güvenlik Rehberleri

Rheumatology, 2023, **62**, e48–e88
https://doi.org/10.1093/rheumatology/keac551
Advance access publication 2 November 2022
Guidelines

British Society for Rheumatology RHEUMATOLOGY OXFORD

Guidelines

British Society for Rheumatology guideline on prescribing drugs in pregnancy and breastfeeding: immunomodulatory anti-rheumatic drugs and corticosteroids

	Peri-conception	First trimester	Second/third trimester	Breastfeeding	Paternal exposure
Corticosteroids					
Prednisolone	Yes	Yes	Yes	Yes	Yes
Antimalarials					
Hydroxychloroquine (≤400 mg/day)	Yes	Yes	Yes	Yes	Yes
Conventional synthetic DMARDs					
Methotrexate (≤25 mg/week)	Stop ≥1 month pre-conception	No	No	No	Yes
Sulfasalazine (with folic acid 5 mg/day in first trimester)	Yes	Yes	Yes	Yes[a]	Yes[b]
Leflunomide	No: Cholestyramine washout	No	No	No	Yes
Azathioprine	Yes	Yes	Yes	Yes	Yes
Ciclosporin	Yes	Yes[c]	Yes[c]	Yes	Yes
Tacrolimus	Yes	Yes[c]	Yes[c]	Yes	Yes
Cyclophosphamide	Exceptional circumstances[d]	Exceptional circumstances[d]	Exceptional circumstances[d]	No	No
Mycophenolate mofetil	Stop ≥6 weeks pre-conception	No	No	No	Yes
Intravenous immunoglobulin	Yes	Yes	Yes	Yes	Yes
Anti-TNFα medications					
Infliximab	Yes	Yes	Yes[e]	Yes	Yes
Etanercept	Yes	Yes	Yes[f]	Yes	Yes
Adalimumab	Yes	Yes	Yes[g]	Yes	Yes
Certolizumab	Yes	Yes	Yes	Yes	Yes
Golimumab	Yes	Yes	Yes[g]	Yes	Yes
Other biologic DMARDs					
Rituximab	Consider stopping at conception[h]	Severe disease if no alternatives[h]	Severe disease if no alternatives[i]	Yes[j]	Yes[j]
IL-6 inhibitors	Consider stopping at conception[h]	Severe disease if no alternatives[h]	Severe disease if no alternatives[i]	Yes[j]	Yes[j]
IL-1 inhibitors	Consider stopping at conception[h]	Severe disease if no alternatives[h]	Severe disease if no alternatives[i]	Yes[j]	Yes[j]
Abatacept	Consider stopping at conception[h]	Severe disease if no alternatives[h]	Severe disease if no alternatives[i]	Yes[j]	Yes[j]
Belimumab	Consider stopping at conception[h]	Severe disease if no alternatives[h]	Severe disease if no alternatives[i]	Yes[j]	Yes[j]
IL-17 inhibitors	Consider stopping at conception[h]	Severe disease if no alternatives[h]	Severe disease if no alternatives[i]	Yes[j]	Yes[j]
IL-12/23 inhibitors	Consider stopping at conception[h]	Severe disease if no alternatives[h]	Severe disease if no alternatives[i]	Yes[j]	Yes[j]
Targeted synthetic DMARDs					
JAK-inhibitors	Stop ≥2 weeks pre-conception	No	No	No	Yes[j]

YÖNETIM

COVID-19 Tedavisinde Kullanılan Antikoagülan Ajanlar

Tedavi Adı	Endikasyon	Doz / Süre	Kontrendikasyon	Gebelikte Kullanım	Böbrek Yetmezliğinde Kullanım
DMAH+, (Profilaktik doz)	Yatan tüm hastalar	<120 kg ise Enoksaparin 40mg, 1x1, SC; ≥120 kg ise Enoksaparin 40mg, 2x1, SC	Aktif kanama, ciddi trombositopeni	Risk-fayda değerlendirilerek kullanılabilir.	Böbrek yetmezliğinde (eGFR <30) doz azaltılır**
DMAH+ (Tedavi dozu)	Yatan ve tromboz riski yüksek olan* hastalar	Enoksaparin 2x1mg/kg/gün, SC			
Standart+ Heparin	Yatan eGFR ≤15 (enoksaparin kullanılamayan) hastalarda	VKİ ≤50/kg/m2 ise Heparin 5000 U***, 3x1, SC; VKİ >50/kg/m2 ise Heparin 7500 U***, 3x1, SC	Aktif kanama, ciddi trombositopeni	Risk-fayda değerlendirilerek kullanılabilir.	Doz ayarı gerektirmez

YÖNETIM

IDSA Kılavuzu

Clinical Infectious Diseases

IDSA GUIDELINES

2025 Clinical Practice Guideline Update by the Infectious Diseases Society of America on the Treatment and Management of COVID-19: Antiviral Treatment for Mild to Moderate COVID-19 in Adults

Amy Hirsch Shumaker,[1,2,a] Adarsh Bhimraj,[3,a] Roger Bedimo,[4] Vincent Chi-Chung Cheng,[5] Kara W. Chew,[6] Eric S. Daar,[7] David V. Glidden,[8] Robert W. Shafer,[9] Phyllis C. Tien,[10] Lindsey R. Baden,[11,12] Kelly Cawcutt,[13] Kathleen Chiotos,[14] Amy L. Dzierba,[15] Erica J. Hardy,[16] Steven Johnson,[17] Arthur Y. Kim,[11,18] Christine MacBrayne,[19] Greg S. Martin,[20] Nandita Nadig,[21] Mari M. Nakamura,[22,23] Carlos R. Oliveira,[24] Jeffrey C. Pearson,[25] Laura Riley,[26,27] Shmuel Shoham,[28] Pablo Tebas,[29] Zachary Willis,[30] Joshua Wolf,[31] Jennifer Loveless,[32] Rebecca L. Morgan,[1,33] Yngve Falck-Ytter,[1,2,b] and Rajesh T. Gandhi[11,18,b]

YÖNETIM

IDSA Kılavuzu

Table 2. Examples of Factors Associated With Increased But Not High Risk of Progression[a]

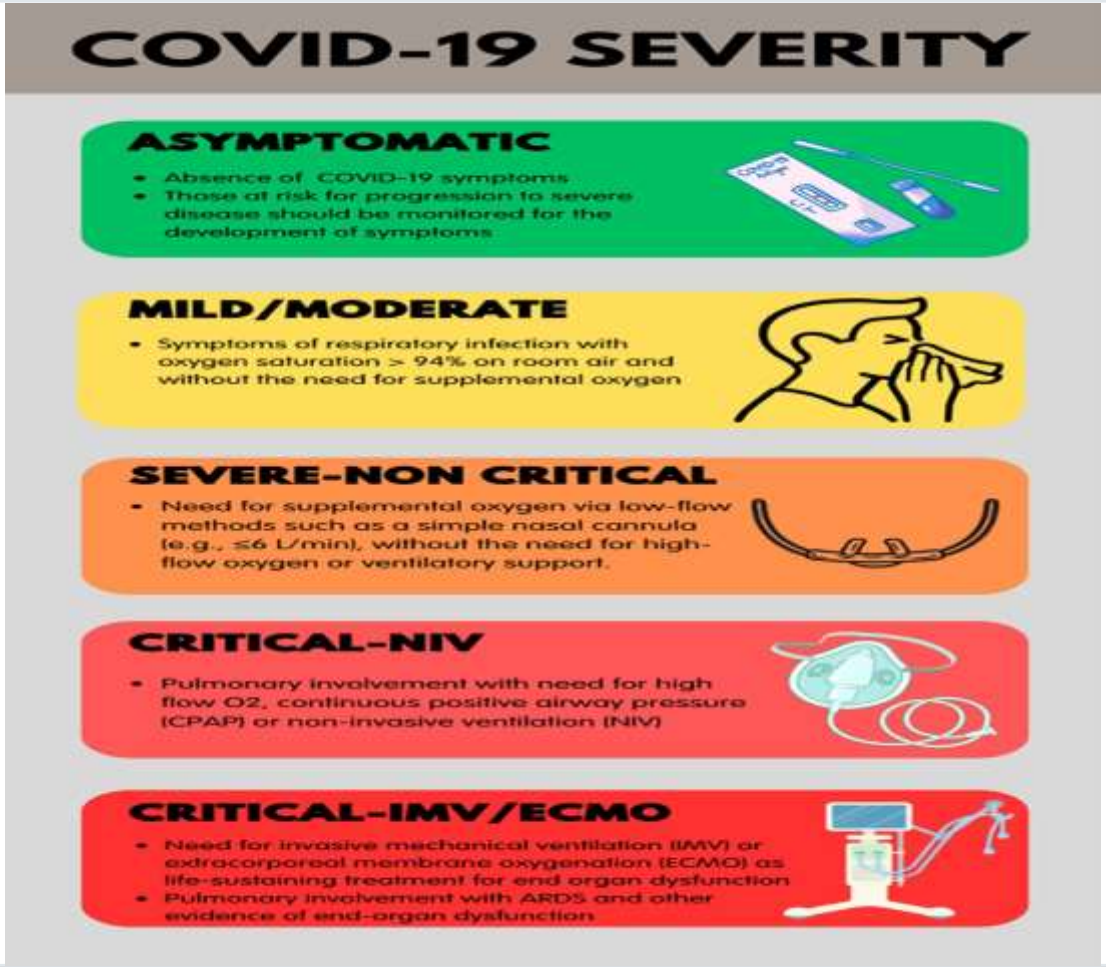
Example Health Condition	Example Therapeutics[b]
• Age 65–74 y • Atherosclerotic cardiovascular disease • Asthma • Cardiomyopathy • Cerebral vascular disease • Chronic liver diseases • Chronic lung diseases • Cirrhosis • Dementia • Diabetes mellitus • Disabilities including Down syndrome • End-stage renal disease • Heart failure • HIV with CD4 >200 cells/mm^3 • Inflammatory bowel disease • Mental health conditions • Obesity • Parkinson's disease • Physical inactivity • Pregnancy (current or within 6 wks of pregnancy) • Smoking history • Solid tumor (on immunosuppressive therapy >12 m prior) • Tuberculosis	• Anti-IL-6 • Anti-IL-12 and 23 • Corticosteroids 10–20 mg for ≥4 wks

[a]These factors vary in the degree of risk they confer. For those that confer less risk, the benefit of antiviral therapy will likely be lower.

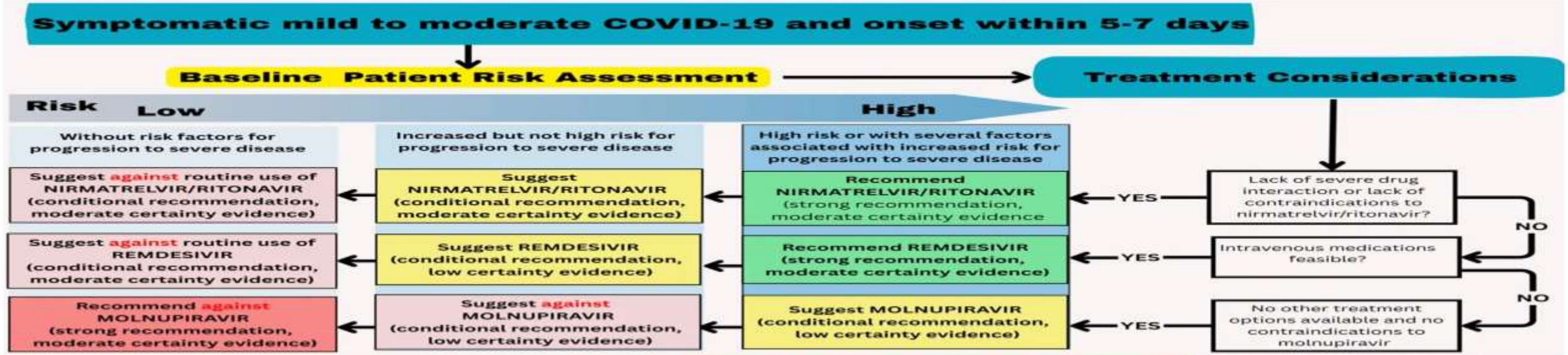
[b]Example therapeutics that are less likely to predispose to substantial immunosuppression

YÖNETIM

IDSA COVID-19 Şiddet Sınıflaması



IDSA Tedavi Algoritması



Example of increased but not high-risk factors for progression

Example health condition

- Age 65-74 years
- ASCVD
- Asthma
- Cardiomyopathy
- Cerebral Vascular Disease
- Chronic liver diseases
- Chronic lung diseases
- Cirrhosis
- Dementia
- Diabetes Mellitus
- Disabilities including Down Syndrome
- End stage renal disease
- Heart failure
- HIV with CD4 > 200
- Inflammatory bowel disease
- Mental health conditions
- Obesity
- Parkinson's Disease
- Physical inactivity
- Pregnancy (current or recent)
- Smoking history
- Solid tumor (> 12 months prior)
- Tuberculosis

Example therapeutics[1]

- Anti-IL-6
- Anti-IL-12 and 23
- Corticosteroids 10-20 mg for ≥4 weeks

Note: [1] Example therapeutics that are less likely to predispose to substantial immunosuppression

Example of high-risk factors for progression

Example health condition

- Age ≥ 75 years
- Fewer than 1% peripheral B-cells assessed in past 6 months
- Congenital agamma-globulinemia
- Hematopoietic stem cell transplant (HSCT) <2 years or active graft versus host disease
- Hematological malignancy on therapy
- HIV infection with CD4 <200
- Other severe primary immunodeficiency
- Solid organ transplant
- Solid tumor on treatment

Example therapeutics[2]

- B-cell depleting agents in past 12 months (e.g., rituximab, ofatumumab, ocrelizumab, others)
- CAR-T therapy in past 12 months
- Abatacept
- Tyrosine kinase inhibitor (e.g., ibrutinib, acalabrutinib, others)
- High-dose corticosteroids (≥20 mg prednisone or equivalent for ≥4 weeks)
- Anthracycline derivates

Note: [2] Example therapeutics that predispose to substantial immunosuppression

Oral nirmatrelvir/ritonavir *(Paxlovid)*

- eGFR ≥ 60 mL/min: 300 mg (2 x 150 mg tablets), plus ritonavir 100 mg (1 tablet) every 12 hours x 5 days
- eGFR ≥ 30 to < 60 mL/min: 150 mg (1 tablet) plus ritonavir 100 mg (1 tablet) every 12 hours for 5 days
- eGFR < 30 mL/min or HD: 300 mg (2 x 150 mg tablets), plus ritonavir 100 mg (1 tablet) daily x 1 day, then 150 mg (1 tablet) plus ritonavir 100 mg (1 tablet) daily for 4 days
- Within 5 days of symptom onset

Intravenous remdesivir *(Veklury)*

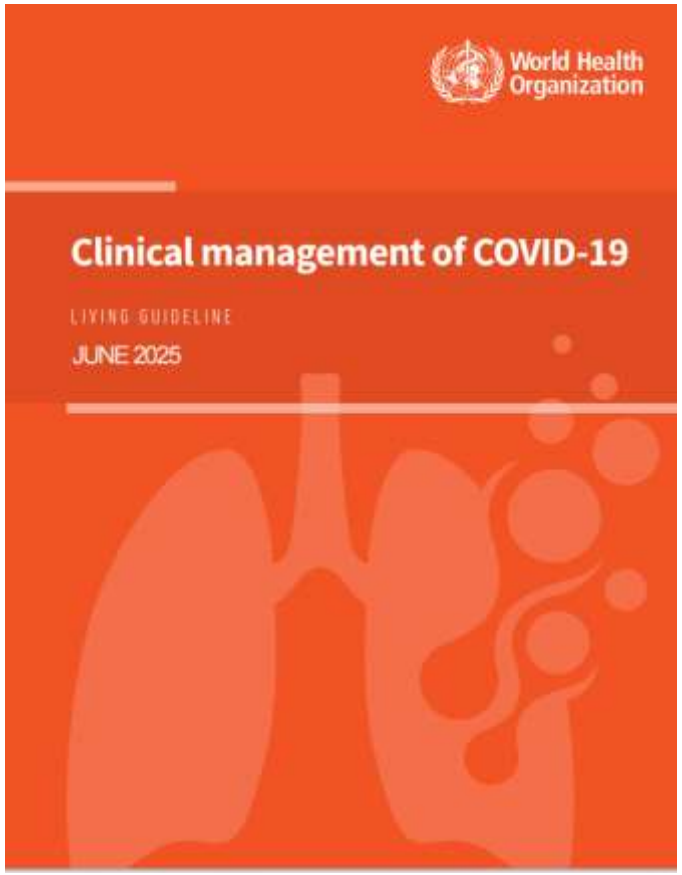
- Day 1: 200 mg i.v. once
- Day 2 and 3: 100 mg i.v. daily
- No renal or hepatic adjustments
- Within 7 days of symptom onset

Oral molnupiravir *(Lagevrio)*

- 800 mg (4 x 200 mg capsules) every 12 hours for 5 days
- No renal or hepatic adjustments
- Avoid pregnancy
- Within 5 days of symptom onset

YÖNETIM

WHO Klinik Yönetim Rehberi



YÖNETIM

Antibiyotik Kullanımı

3.6.1 Use of antibiotics in non-severe COVID-19

New

Strong recommendation against

For patients with *non-severe COVID-19* and a low clinical suspicion of a concurrent bacterial infection, we recommend no antibiotics *[Strong recommendation, low/moderate certainty evidence]*.

3.6.2 Use of antibiotics in severe COVID-19

New

Conditional recommendation against

For patients with *severe COVID-19* and a low clinical suspicion of a concurrent bacterial infection, we suggest no antibiotics *[Conditional recommendation, low certainty evidence]*.

YÖNETIM

İzolasyon Süresi

3.1.5 Infectious period and isolation

Conditional recommendation for

We suggest 10 days of isolation for individuals who are symptomatic due to SARS-CoV-2 infection *[Conditional recommendation, very low certainty evidence].*

We suggest 5 days of isolation for individuals who are asymptomatic with SARS-CoV-2 infection *[Conditional recommendation, very low certainty evidence].*

YÖNETIM

Hasta Eğitimi ve Destek

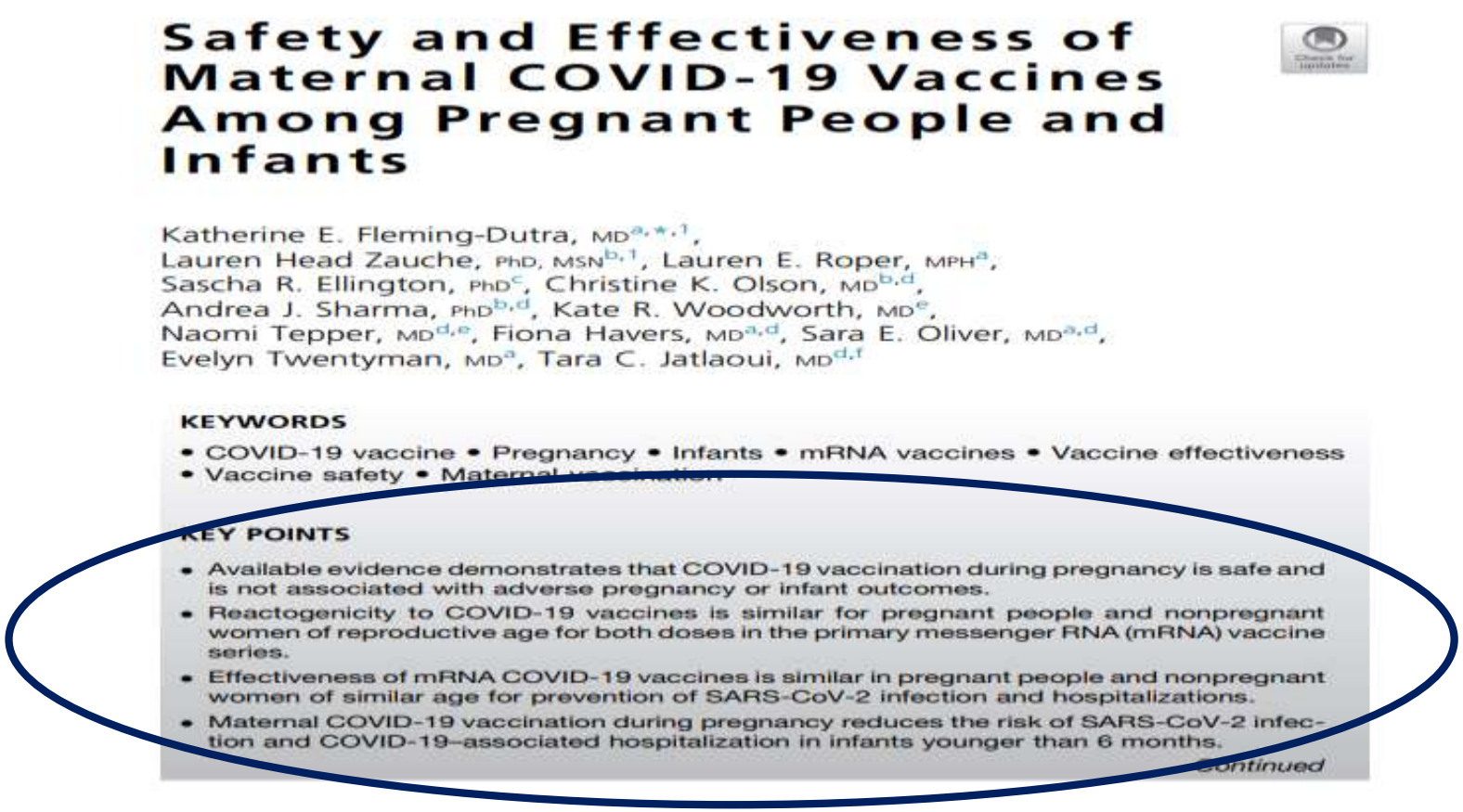
COVID-19 hastalarına nefes darlığının kendi kendine yönetimi ve günlük aktivitelere yeniden başlama konularında eğitim ve destek sağlanmalıdır

Aşılar

Gebelikte COVID-19 aşılaması: Kanıtlar ve güncel öneriler

AŞILAR

Aşı Güvenliği ve Etkinliği



Safety and Effectiveness of Maternal COVID-19 Vaccines Among Pregnant People and Infants

Katherine E. Fleming-Dutra, MD[a,*,1], Lauren Head Zauche, PhD, MSN[b,1], Lauren E. Roper, MPH[a], Sascha R. Ellington, PhD[c], Christine K. Olson, MD[b,d], Andrea J. Sharma, PhD[b,d], Kate R. Woodworth, MD[e], Naomi Tepper, MD[d,e], Fiona Havers, MD[a,d], Sara E. Oliver, MD[a,d], Evelyn Twentyman, MD[a], Tara C. Jatlaoui, MD[d,f]

KEYWORDS

• COVID-19 vaccine • Pregnancy • Infants • mRNA vaccines • Vaccine effectiveness • Vaccine safety • Maternal vaccination

KEY POINTS

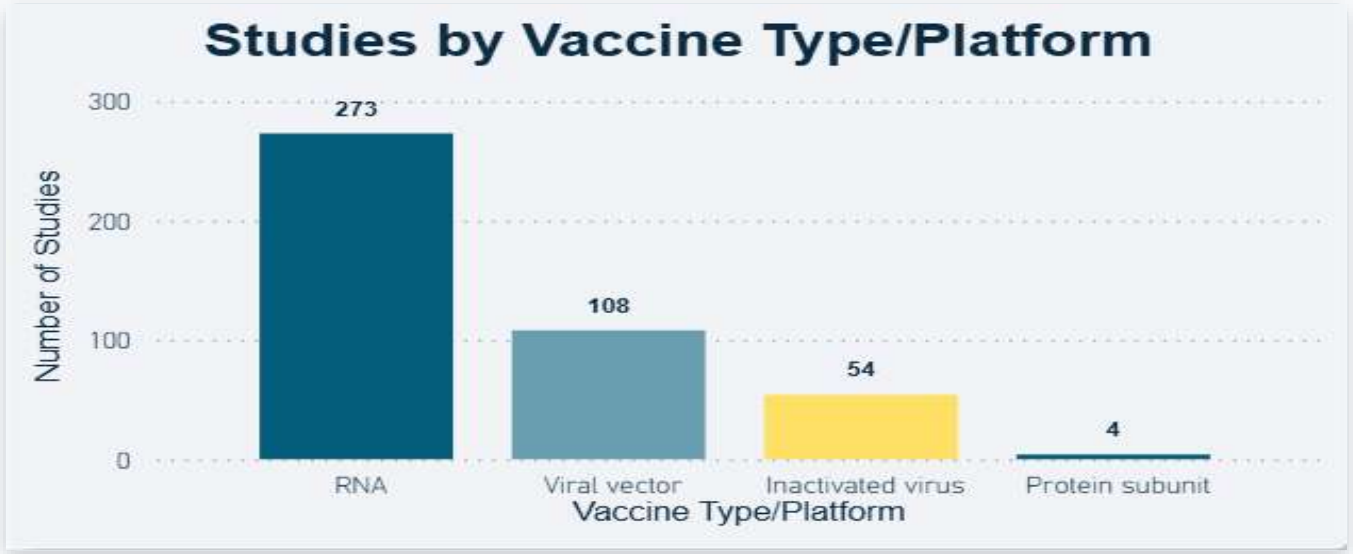
- Available evidence demonstrates that COVID-19 vaccination during pregnancy is safe and is not associated with adverse pregnancy or infant outcomes.
- Reactogenicity to COVID-19 vaccines is similar for pregnant people and nonpregnant women of reproductive age for both doses in the primary messenger RNA (mRNA) vaccine series.
- Effectiveness of mRNA COVID-19 vaccines is similar in pregnant people and nonpregnant women of similar age for prevention of SARS-CoV-2 infection and hospitalizations.
- Maternal COVID-19 vaccination during pregnancy reduces the risk of SARS-CoV-2 infection and COVID-19–associated hospitalization in infants younger than 6 months.

Continued

AŞILAR

Sistematik Derleme ve Meta-Analiz





AŞILAR

Maternal ve Perinatal Sonuçlar

Original research

BMJ Global Health

Effectiveness and safety of COVID-19 vaccines on maternal and perinatal outcomes: a systematic review and meta-analysis

included women vaccinated with mRNA vaccine only (281 030 women), four studies included inactivated virus (3088 women), one study viral vector vaccine (247 women), 14 studies mRNA and/or viral vector vaccines (436 453 women), one mRNA, viral vector and inactivated virus vaccines (2886 women) and two did not report the type of vaccine (284 women). Most of the studies included in the primary analysis were adjusted by maternal age (88%, 21/24), followed by diabetes (42%, 10/24), hypertension (33%, 8/24), BMI (33%, 8/24), gestational age (17%, 4/24) and education (4%, 1/24). Three of the eight studies performing adjusted analysis for SARS-CoV-2 infection-related outcomes were from the Delta and Omicron periods (134 779 women), one study was from the Delta period (464 women), one from

Results Sixty-seven studies (1 813 947 women) were included. Overall, in test-negative design studies, pregnant women fully vaccinated with any COVID-19 vaccine had 61% reduced odds of SARS-CoV-2 infection during pregnancy (OR 0.39, 95% CI 0.21 to 0.75; 4 studies, 23 927 women; I^2=87.2%) and 94% reduced odds of hospital admission (OR 0.06, 95% CI 0.01 to 0.71; 2 studies, 868 women; I^2=92%). In adjusted cohort studies, the risk of hypertensive disorders in pregnancy was reduced by 12% (RR 0.88, 95% CI 0.82 to 0.92; 2 studies; 115 085 women), while caesarean section was reduced by 9% (OR 0.91, 95% CI 0.85 to 0.98; 6 studies; 30 192 women). We observed an 8% reduction in the risk of neonatal intensive care unit admission (RR 0.92, 95% CI 0.87 to 0.97; 2 studies; 54 569 women) in babies born to vaccinated versus not vaccinated women. In general, vaccination during pregnancy was not associated with increased risk of adverse pregnancy or perinatal outcomes. Pain at the injection site was the most common side effect reported (77%, 95% CI 52% to 94%; 11 studies; 27 195 women).

AŞILAR

Güncel Aşı İçerik Bileşimi

COVID-19 Vaccines (2026-2027 Formula) for Use in the United States Beginning in Fall 2026

FDA's Vaccines and Related Biological Products Advisory Committee (VRBPAC) met on May 28, 2026, to discuss and make recommendations on the selection of the 2026-2027 Formula for COVID-19 vaccines for use in the United States beginning in the fall of 2026.

The committee recommended that the composition of the COVID-19 vaccines (2026-2027 Formula) include the JN.1-lineage XFG as the preferred SARS CoV-2 virus variant for an updated monovalent vaccine.

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World Health Organization

FDA U.S. FOOD & DRUG ADMINISTRATION

AŞILAR

CDC Aşılama Önerileri

COVID-19 vaccination history before 2026-2027 COVID-19 vaccine**	Number of 2026-2027 COVID-19 vaccine doses indicated	Recommended 2026-2027 COVID-19 vaccine† and interval between doses
Unvaccinated: • Administer 1 dose of 2026-2027 COVID-19 vaccine		
Unvaccinated	1	**2026-2027 COVID-19 vaccine dose 1** (Moderna, Novavax, or Pfizer-BioNTech): Day 0
Previously vaccinated before 2026-2027 COVID-19 vaccine: • Administer 1 dose of 2026-2027 COVID-19 vaccine		
1 or more doses any COVID-19 vaccine (Moderna, Novavax, or Pfizer-BioNTech)	1	**2026-2027 COVID-19 vaccine dose 1** (Moderna [Spikevax], Novavax, or Pfizer-BioNTech): At least 8 weeks after last dose; (Moderna [mNexspike]): At least 3 months after last dose‡

Türkiye Perspektifi

Türkiye Perspektifi

Türkiye'de pandemi sürecinde hem inaktif hem de mRNA aşıları aktif olarak kullanılmış ve pandeminin kontrol altına alınmasına önemli katkı sağlamıştır. Ancak varyantlara göre güncellenmiş aşıların temin edilmemesi nedeniyle 2024 yılının ikinci yarısından itibaren risk gruplarına yönelik güncel COVID-19 bağışıklaması uygulanamamaktadır. Endemik dönemde özellikle yüksek riskli gruplar için güncellenmiş aşıya erişimin sağlanması, halk sağlığı açısından önemini korumaktadır.

klimik aşı platformu

Teşekkür ederim

Gebelikte COVID-19: Güncel Yaklaşım