

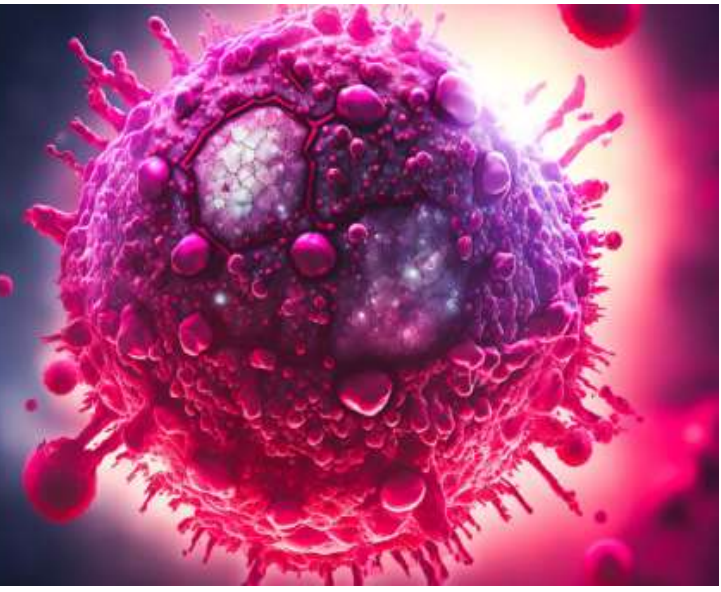
# KARADENİZ HIV SİMPOZYUMU



26-27 Mayıs 2024 Omtel Hotel, SAMSUN



**HIVÇG** KLİMİK DERNEĞİ  
HIV/AIDS ÇALIŞMA GRUBU



## HIV

# Aşılar & Bağışıklama

**Dr. Süda TEKİN**

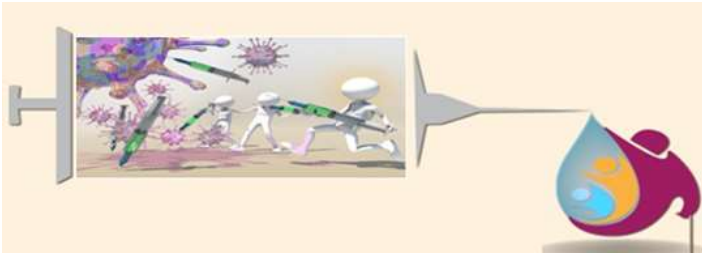
Acıbadem Ataşehir Hastanesi

İnfeksiyon Hastalıkları ve Klinik Mikrobiyoloji Anabilim Dalı

26.05.2024

# Neler KonuŖulacak?

- ❖ HIV – BaęıŖıklama
  - ✓ Genel
- ❖ İnaktif aŖıllar
- ❖ Canlı aŖıllar
- ❖ Yeni aŖıllar
- ❖ Soru & Yanıt



# Nereden geliyoruz?

Edward Jenner 1749-1823

“The Cow Pock – or – the Wonderful Effects of the New Inoculation”, 1802



*The Cow-Pock — or — the Wonderful Effects of the New Inoculation! — See the Publications of the Anti-Vaccination Society.*

■ Patient Care - June 1, 2021

## 40 Years of AIDS: A Timeline of the Epidemic

By Lisa Corvetti

January 1: Ward 86

AIDS clinic, at San Francisco General Hospital.



## AIDS epidemisinin bitirilmesi için 2025 hedefleri

95%

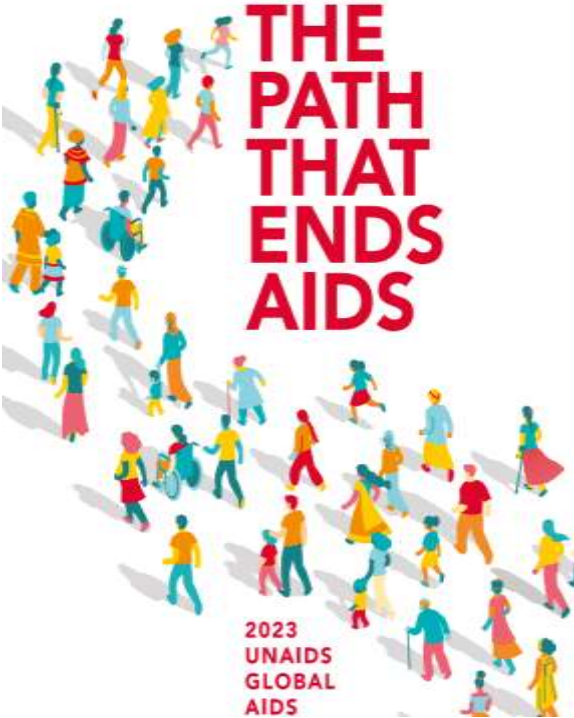
Of people within the sub-population who are living with HIV know their HIV status.

95%

Of people within the sub-population who are living with HIV who know their HIV status are *on antiretroviral therapy*.

95%

Of people within the sub-population who are on antiretroviral therapy have **suppressed viral loads**.



%95

Yaşam kalitesi;  
Bağışıklama



“...vaccination rates in patients with immune-mediated diseases treated with immunosuppressants remain suboptimal, **primarily** due to **the absence of physician recommendations.**”

Assala M, et al. *Joint Bone Spine*. 2017; 84:365-6.  
Hua C, et al. *Rheumatology (Oxford)*. 2015; 54:748-50.



## Bağıışıklığı Baskılanmış Hastalarda Aşılarla Genel Yaklaşım

### İnaktif aşılar

Birincil ve ikincil immün yetersizlik durumlarında **tüm inaktif aşılar (rekombinan, subünit, toksoid, polisakkarid, konjuge polisakkarid)** aksatılmadan, **güvenle yapılabilir.**

### Canlı aşılar

**Ağır immün baskılanması** olanlarda ve bağışıklık sistemi ile ilgili canlı viral (**KKK, OPV, suçiçeği, oral Rota, Sarı humma**) ve canlı bakteriyel aşılar (**BCG, oral tifo**) kişi remisyon evresinde olmadıkça **yapılmamalıdır**

# Table 1

## Recommended Adult Immunization Schedule by Age Group, United States, 2024

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
COVID-19	1 or more doses of updated (2023–2024 Formula) vaccine (See Notes)			
Influenza inactivated (IIV4) or Influenza recombinant (RIV4)	1 dose annually			
Influenza live, attenuated (LAIV4)	1 dose annually			
Respiratory Syncytial Virus (RSV)	Seasonal administration during pregnancy. See Notes.			≥60 years
Tetanus, diphtheria, pertussis (Tdap or Td)	1 dose Tdap, then Td or Tdap booster every 10 years			
Measles, mumps, rubella (MMR)	1 or 2 doses depending on indication (if born in 1957 or later)			For healthcare personnel, see notes
Varicella (VAR)	2 doses (if born in 1980 or later)		2 doses	
Zoster recombinant (RZV)	2 doses for immunocompromising conditions (see notes)		2 doses	
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal (PCV15, PCV20, PPSV23)				See Notes
Hepatitis A (HepA)	2, 3, or 4 doses depending on vaccine			
Hepatitis B (HepB)	2, 3, or 4 doses depending on vaccine or condition			
Meningococcal A, C, W, Y (MenACWY)	1 or 2 doses depending on indication, see notes for booster recommendations			
Meningococcal B (MenB)	19 through 23 years	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations		
Haemophilus influenzae type b (Hib)	1 or 3 doses depending on indication			
Mpox				

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of immunity

Recommended vaccination for adults with an additional risk factor or another indication

Recommended vaccination based on shared clinical decision-making

No recommendation / Not applicable



# Table 2 Recommended Adult Immunization Schedule by Medical Condition or Other Indication, United States, 2024

Always use this table in conjunction with Table 1 and the **Notes** for medical conditions or indications are often not mutually exclusive. If multiple medical conditions or indications are present, refer to guidance in all relevant columns. See Notes for medical conditions or indications not listed.

VACCINE	Pregnancy	Immunocompromised (excluding HIV infection)	HIV infection CD4 percentage and count		Men who have sex with men	Asplenia, complement deficiency	Heart or lung disease	Kidney failure, End-stage renal disease or on dialysis	Chronic liver disease; alcoholism*	Diabetes	Healthcare Personnel <sup>b</sup>
			<15% or <200mm <sup>3</sup>	≥15% and ≥200mm <sup>3</sup>							
COVID-19			See Notes								
IIV4 or RIV4					1 dose annually						
LAIV4					1 dose annually if age 19–49 years			1 dose annually if age 19–49 years			
RSV	Seasonal administration. See Notes	See Notes					See Notes				
Tdap or Td	Tdap: 1 dose each pregnancy				1 dose Tdap, then Td or Tdap booster every 10 years						
MMR	*										
VAR	*			See Notes							
RZV			See Notes								
HPV	*		3 dose series if indicated								
Pneumococcal											
HepA											
Hep B	See Notes									Age ≥ 60 years	
MenACWY											
MenB											
Hib		HSCT: 3 doses				Asplenia: 1 dose					
Mpox	See Notes				See Notes						See Notes

  Recommended for all adults who lack documentation of vaccination, OR lack evidence of immunity  
  Not recommended for all adults, but recommended for some adults based on either age OR increased risk for or severe outcomes from disease  
  Recommended based on shared clinical decision-making  
  Recommended for all adults, and additional doses may be necessary based on medical condition or other indications. See Notes.  
  Precaution: Might be indicated if benefit of protection outweighs risk of a diverse reaction  
  Contraindicated or not recommended \*Vaccinate after pregnancy, if indicated  
  No Guidance/ Not Applicable

a. Precaution for LAIV4 does not apply to alcoholism.      b. See notes for influenza; hepatitis B; measles, mumps, and rubella; and varicella vaccinations.      c. Hematopoietic







## CDC 'The Advisory Committee on Immunization Practices (ACIP)'

### ➤ **İnaktif aşılar HIV YK için normal popülasyonla benzer:**

- ✓ Hepatit A, Hepatit B
- ✓ DBT (Tdap, Td)
- ✓ HPV
- ✓ Pnömonokok aşısı
- ✓ İnfluenza aşısı
- ✓ RZV (Zona)
- ✓ Meningokok serogroup A, C, W, Y (MenACWY)
- ✓ Hib
- ✓ Men B

### • Canlı aşılar kontrendike-> CD4 T <200 h/μl veya **kontROLSÜZ HIV**

- ✓ KKK
- ✓ Suçiçeği / VZV
- ✓ Canlı atenüe tifo (Ty21a) aşısı
- ✓ Sarı humma
- ✓ Oral Polio v
- ✓ Oral Rota v
- ✓ BCG



## HIV ile YK için Baęışıklamada genel yaklaşım;

- **CD4 > 200 h/ $\mu$ L veya >%15, baskılanmış viremi ve immün rekonstitüsyon** elde ettikten sonra saęlıklı popülasyon için **ulusal kılavuzlara göre aşılayın**
- Yeterli immün düzelme elde edildiğinde **baskılanmamış** viremide gerçekleştirilen **aşıları tekrarlamayı düşünün**
- Aşı yanıtları daha düşük olabileceğinden **hızlı programlar kullanmayın**
- **Polisakkarid** temelli aşılardan kaçının
- **Canlı** aşılar için **CD4 T lenfosit sayısı** önemli
- Bu dönemde infeksiyon **riski/temas** varsa **immünoglobülin** kullanılabilir



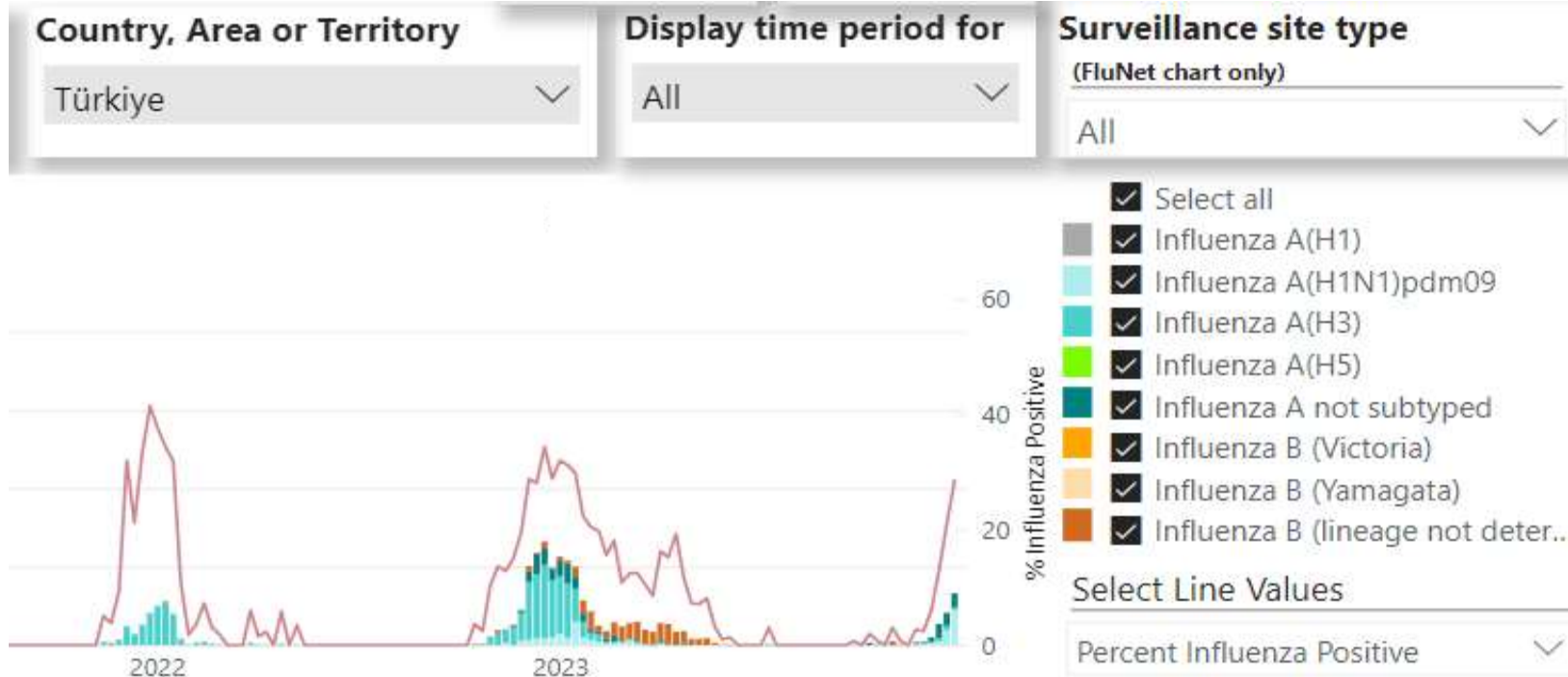
**EACS** European  
AIDS Clinical Society



**TÜRKİYE HIV/AIDS  
KONTROL PROGRAMI  
(2019-2024)**

# HIV ve İnaktif Aşılar





### Cell- or recombinant-based vaccines

- an A/Wisconsin/67/2022 (H1N1)pdm09-like virus; **(Updated)**
- an A/Darwin/6/2021 (H3N2)-like virus;
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus; and
- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

Infection	Vaccination rationale	Comment
Influenza Virus	Higher rate of pneumonia. Explicitly recommended in all persons with HIV	Yearly, use 4-valent vaccine if available

- **1977** yılından günümüze, influenza aşıları **A/H3N2, A/H1N1 ve B viruslarının** en güncel antijenik varyantlarını içerir
- Aşının antijenik içeriği **her yıl** yenilenir
- *Fluarix Quadrivalent* ≥6 ay 0.5 mL, im.

**Eylül** veya **Ekim** aylarında

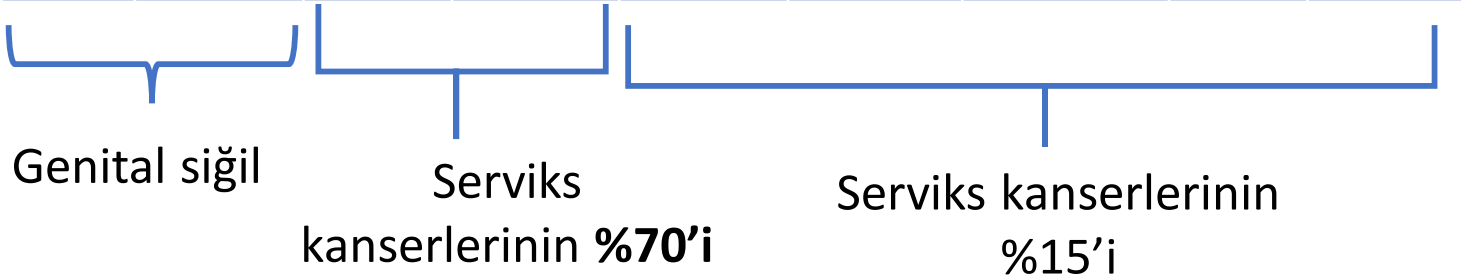
Ancak aşılamanın influenza virusu **dolaşımında olduğu** sürece yapılabilir.



ACIP. *MMWR Recomm Rep.* 2023;72.

# HPV Aşısı

HPV tipleri	6	11	16	18	31	33	45	52	58
AŞILAR									
2 değerli <b>Cervarix®4</b>			+	+					
4 değerli <b>Gardasil®4</b>	+	+	+	+					
9 değerli <b>Gardasil®</b>	+	+	+	+	+	+	+	+	+



Yaş-Cinsiyet: 26 - K  
Hekim Adı Soyadı: SÜDA TEKİN  
Gönderen Birim: ENFEKSİYON HASTALIKLARI  
TC Kimlik No: 46\*\*\*\*\*78



Klinik Bulgular: Smear.

**Örnek Tipi:**

Sıvı bazlı sitoloji otomatik cihaz ile yapılmıştır.

**Alındığı Bölge:**

Anal bölge

**Örnek Yeterliliği:**

Değerlendirme için yeterli

**Sonuç:**

**NEGATİF/ İntraepitelyal lezyon ya da malignite görülmedi**

**SONUÇ:**

**YÜKSEK RİSKLİ HPV GENOTİPLENDİRMESİ:**

**POZİTİF - Yüksek riskli HPV Tip 16 ve 56/59/66 saptandı.**

Yaş-Cinsiyet: 21 - E  
Hekim Adı Soyadı: SÜDA TEKİN  
Gönderen Birim: ENFEKSİYON HASTALIKLARI  
TC Kimlik No: 47\*\*\*\*\*28

Klinik Bulgular: Anal kanal sürüntü - HPV?

**Örnek Tipi:**

Sıvı bazlı sitoloji otomatik cihaz ile yapılmıştır.

**Alındığı Bölge:**

Anal bölge

**Örnek Yeterliliği:**

Değerlendirme için yeterli

**Sonuç:**

**DÜŞÜK DERECELİ SKUAMÖZ İNTRAEPİTELYAL LEZYON (LSIL)**

Klinik Bulgular: Anal kanal sürüntü - HPV? HPV istemi.

**SONUÇ:**

**YÜKSEK RİSKLİ HPV GENOTİPLENDİRMESİ:**

**POZİTİF - Yüksek riskli HPV Tip 31 ve 56/59/66 saptandı.**

# HPV Vaccination: Does It Have a Role in Preventing Penile Cancer and Other Preneoplastic Lesions?

*Seminars in Oncology Nursing*. 2022;38: 151284

Laura Elst, MD, Maarten Albersen, MD, PhD\*

**HPV** is responsible for **50.8%** of **penile cancers** globally, and **90%** of **genital warts**.

**Q HPV vaccine** for use in males, with a potential efficacy of **90%** and **77.5%** to reduce **genital warts** and anal **intraepithelial neoplasia**, respectively.

Review > *Cancer Treat Rev*. 2022 Dec;111:102467. doi: 10.1016/j.ctrv.2022.102467.

Epub 2022 Oct 5.

## **HPV vaccination and HPV-related malignancies: impact, strategies and optimizations toward global immunization coverage**

Gaia Giannone <sup>1</sup>, Anna R Giuliano <sup>2</sup>, Marco Bandini <sup>3</sup>, Laura Marandino <sup>4</sup>, Daniele Raggi <sup>4</sup>, Wayne Earle <sup>5</sup>, Benjamin Ayres <sup>6</sup>, Curtis A Pettaway <sup>7</sup>, Iain A McNeish <sup>8</sup>, Philippe E Spiess <sup>9</sup>, Andrea Necchi <sup>4</sup>

In conclusion, **HPV vaccination is safe and effective** and can lead to the first case of **cancer elimination** worldwide.



# HPV Aşısı

Human Papilloma Virus (HPV)

Shared risk with HIV of contracting infection. Higher rate of cervical and anal cancer

Vaccinate with 3 doses between ages 9 and 45 (health insurance coverage differs by country according to age, sex, sexual orientation).

Use 9-valent vaccine if available.

Persons treated for high grade dysplasia could benefit from a full course vaccination for secondary prevention

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HIV/AIDS  
KİTAPÇIĞI  
EL KİTABI

9-45 Yaş arası



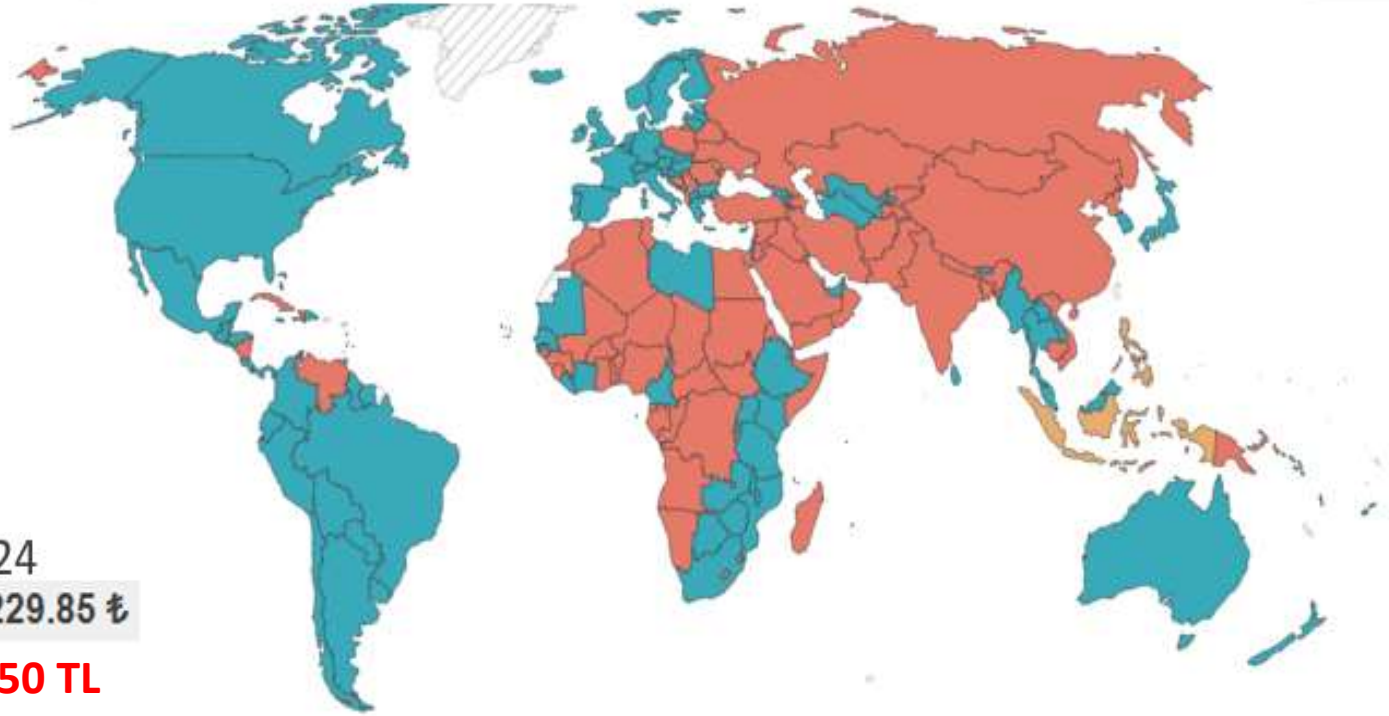
# Which countries include human papillomavirus (HPV) vaccines in their vaccination schedules? 2021

This shows which countries provide and recommend HPV vaccines through routine services. People may still be able to receive the vaccine if it's not in the routine schedule – it might be optional or available commercially.

Table

Map

World



19 Ocak 2024

GARDASIL 9 IM | 3229.85 ₺

**3750 TL**

Entire country

Not routinely administered

Regions of the country

No data

# HPV Aşısı

16.05.2024



**İstanbul Büyükşehir Belediyesi, ücretsiz HPV aşı uygulamasına başladı. Aşı ilk etapta sosyoekonomik yoksunluk çeken bireylere uygulanacak. 9 – 26 yaş aralığındaki bireylere ücretsiz uygulanacak aşı için <https://forms.ibb.gov.tr/saglik/ibb-hpv-formu/> web adresi üzerinden randevu alınabilecek. HPV aşısı alınan randevu sırasına göre uygulanacak. Aşılar İBB'ye ait Şehzadebaşı Tıp Merkezi ve Darülaceze Tıp Merkezi'nde yapılacak.**



**'48 SAATTE 70 BİNİ GEÇEN BAŞVURU VAR'**

<https://saglik.ibb.istanbul/ucretsiz-hpv-asi-uygulamasi-basladi/>

# Hepatit B Aşısı

Hepatitis B Virus (HBV)	Shared risk with HIV of contracting infection. Untreated HIV accelerates progression of liver disease	Vaccinate if seronegative. Repeat doses until anti-HBs antibodies $\geq 10$ IU/L / $\geq 100$ IU/L according to national Guidelines. In order to reach $\geq 100$ IU/L in non-responders repeat 3 doses if anti-HBs $< 10$ IU/L, 1 dose if anti-HBs $< 100$ IU, <sup>(ii)</sup> consider double dose (40 $\mu$ g) or use more immunogenic vaccines in particular with low CD4 count and high HIV VL. No benefit for intradermal application. See page 127
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- Seronegatifse aşılaysın.
- **Anti-HBs  $\geq 10$  IU/L /  $\geq 100$  IU/L** olana kadar dozları tekrarlayın  
(Ulusal Yönergelere göre yanıt vermeyenlerde)
- **Düşük CD4** sayısı ile **yüksek viral yük** çift doz (**40  $\mu$ g**) düşünün
- Ya da daha immünojenik aşılar kullanın
- İntradermal uygulamada yanıt yok.

# Hepatit A Aşısı

Hepatitis A Virus (HAV)	According to risk profile (travel, close contact with children, MSM, IVDU, active hepatitis B or C infection, chronic liver disease)	Vaccinate if seronegative. Consider checking antibody titres in persons at high risk. Weaker immune response expected with HAV/HBV co-vaccine. See page 127
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- **HAV** endemik olan ülkelere seyahat
- **ESE** ve **biseksüel** erkeklere
- HAV'a duyarlı **kronik karaciğer** hastalarına
- **ilaç bağımlılarına** önerilmekte

## Preferred

Hepatitis A vaccine 1 mL IM x 2 doses at 0 and 6–12 months (**All**).

IgG antibody response should be assessed 1 month after vaccination; non-responders should be revaccinated when CD4 count >200 cells/ $\mu$ L (**BIII**).

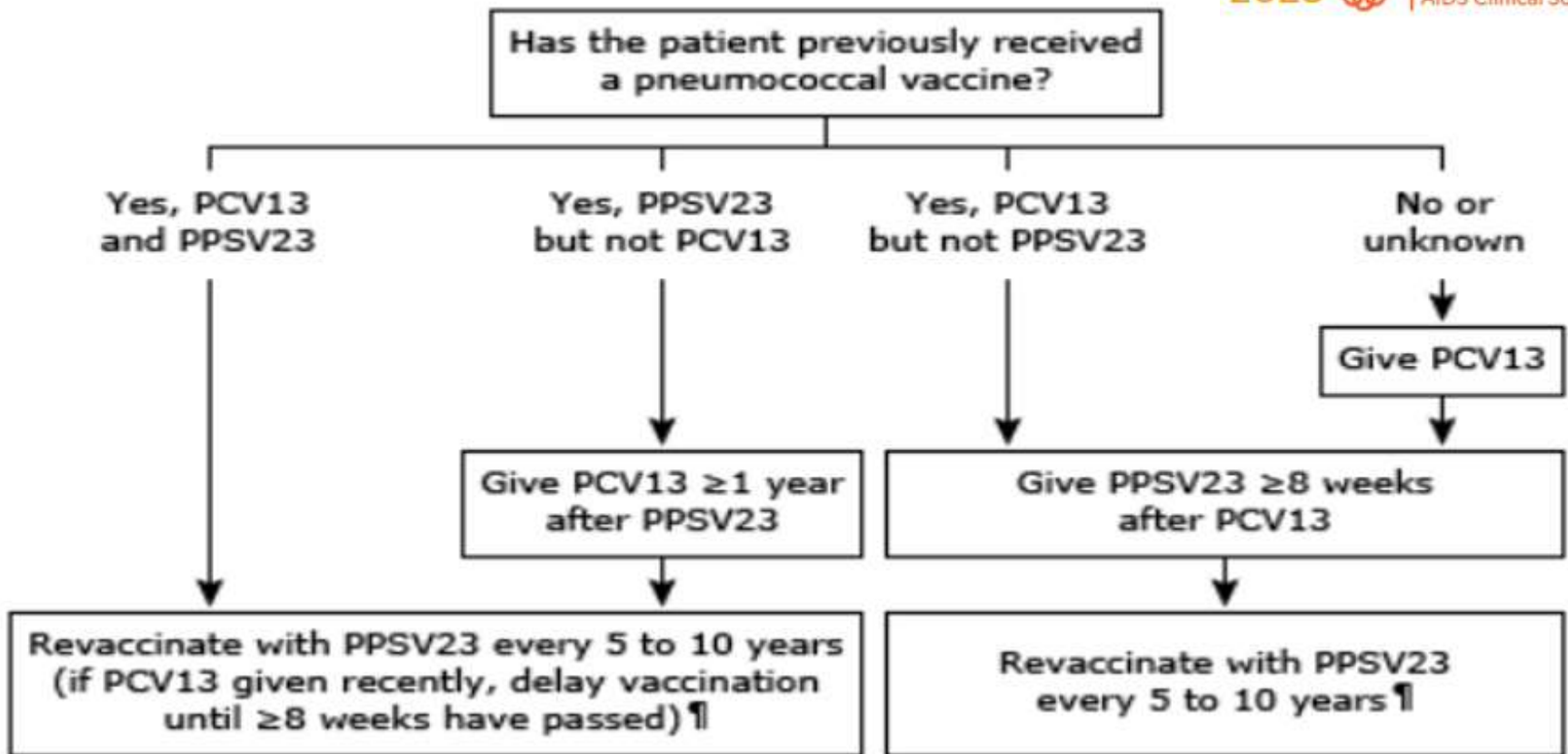
# Pnömonok Aşısı

*Streptococcus pneumoniae*

Higher rate and severity of invasive disease. Vaccine explicitly recommended for all persons with HIV

One dose of a conjugated vaccine: PCV-13, PCV-15 or PCV-20a for all persons according to availability and national guidelines, also if pre-vaccinated with PPV-23 polysaccharide vaccine. For patients vaccinated with PCV-13 or PCV-15, one dose of PPV-23 at least 2 months after the conjugate vaccine may be considered in some national guidelines for all persons with HIV

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# Pnömonokok Aşısı

## PPV23'ün Yeniden Aşılınması:

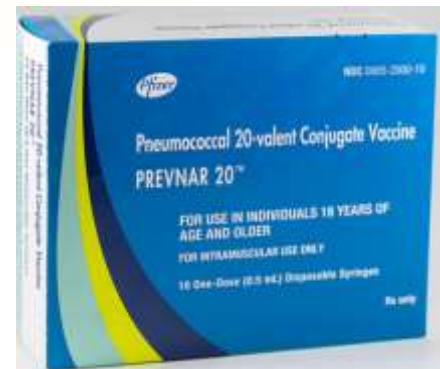
- İlk PPV dozunun üzerinden **≥5 yıl** geçmişse, **19-64** yaş arasındaki bireyler için bir doz PPV23 önerilir (**BII**)
- Önceki **PPV23**'lerinin üzerinden **≥5 yıl** geçtikten sonra, **≥65** yaşındaki bireyler için **son bir PPV23** dozu önerilir (**BII**)
- Tipik olarak, bir **yaşam boyunca 3 dozdan fazla PPV23** verilmez

Conjugate vaccines					Polysaccharide vaccine
PCV7 (Pevnar 7)	PCV10* (Synflorix)	PCV13 (Pevnar 13)	PCV15 (Vaxneuvance)	PCV20 (Pevnar 20)	PPSV23 (Pneumovax 23)



Pnevnar 20 is a vaccine approved for:

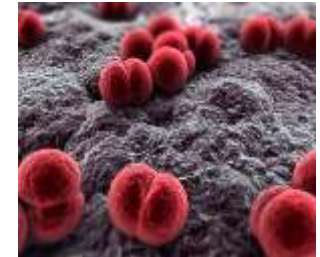
- the prevention of invasive disease caused by 20 *Streptococcus pneumoniae* strains (1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 10A, 11A, 12F, 14, 15B, 18C, 19A, 19F, 22F, 23F, and 33F) in individuals 6 weeks and older.





**Table 1** Possible risk factors for invasive meningococcal disease and/or meningococcal pneumonia

- Age (older individuals)
- Smoking
- Close contact with persons with meningococcal infection
- People living in close quarters (e.g. military recruits, university students, Hajj)
- Chronic respiratory conditions (asthma, COPD)
- Coronary artery disease (or CABG)
- Diabetes mellitus
- Cirrhosis
- HIV infection
- Systemic lupus erythematosus
- Sickle cell anaemia (or asplenia)
- Deficiencies in mannose-binding lectin and other genetic abnormalities
- Preceding viral infection (especially influenza)
- Preceding bacterial infection (including *S. pneumoniae* and *H. influenzae*)
- Meningococcal serogroups Y, W-135, B
- Immunoglobulin and complement deficiencies
- Haematological malignancies (lymphoma, myeloma)



### ECULIZUMAB

Ecilizumab is licensed for the treatment of paroxysmal nocturnal hemoglobinuria, atypical hemolytic uremic syndrome, and generalized myasthenia gravis. By blocking C5, ecilizumab inhibits meningococcal serum bactericidal activity (SBA), leaving patients at an approximately 2000-fold higher risk of meningococcal disease than the general population.<sup>1</sup> This increased risk includes invasive disease caused by unencapsulated (non-groupable, NG) strains,<sup>1,2</sup> which rarely cause invasive disease in normal hosts.<sup>3</sup>

# Meningokok Aşısı

<i>Neisseria meningitidis</i>	According to risk profile (travel, close contact with children, MSM)	Use conjugated 4-valent vaccine (for serotypes A, C, W-135, Y; 2 doses 1-2 months apart) if available. Booster every five years if exposure continues. Polysaccharide vaccine no longer recommended. Vaccinate against Meningococcus serotype B according to national guidelines
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## ➤ Meningokok serogrup A, C, W, Y (MenACWY)

- Quadrivalan (**MenACWY**) aşı **8 hafta** ara ile **iki kez** önerilir (**AII**).
- Menveyo® (ACYW1 35) Türkiye'de mevcut.
- Daha önce aşılanmış ve **>7 yaş** ise her **5 yılda bir** aşı tekrar edilir (**BIII**)

➤ **Serogrup B (MenB, Bexero®)** aşısı risk durumu (**Aspleni vb.**) ve ulusal rehberlere göre önerilir.

Eşdeğer İlaç Adı	Barkodu	İlaç Fiyatı
<a href="#">MENQUADEFI</a>	8699625770027	1,974.76TL
<a href="#">MENVEO</a>	8699504960259	6367.99 TL [ 8 Ocak 2024 ]
<a href="#">NIMENRIX</a>	8681308964144	1,659.00TL

### Tetanos- Difteri-Boğmaca Ařısı

- ✓ HIV'li kiři  $\geq 11$  yařta **ařılanmamıřsa** => **Tdap** tek doz ve ardından her **10 yılda bir tetanos ve difteri toksoid ařısı (Td)** veya **Tdap (All)**
- ✓ Hamile HIV YK için **her hamilelikte**, tercihen **27-36. hafta arasında** bir doz **Tdap** uygulayın (**Alll**).
- ✓ TDB için **birincil aři serisi almamıř** ergen ve yetiřkin HIV YB için: **Tdap'tan en az 4 hafta sonra** bir doz **Tdap /Td** ve ardından **bir doz Tdap/Td 6 ay ile 12 ay sonra** uygulayın (**0, 1, 6 veya 12**) (**Alll**).

# People of all ages need WHOOPING COUGH VACCINES



## **DTaP** for young children

- ✓ 2, 4, and 6 months
- ✓ 15 through 18 months
- ✓ 4 through 6 years

## **Tdap** for preteens

- ✓ 11 through 12 years

## **Tdap** for pregnant women

- ✓ During the 27-36th week of each pregnancy

## **Tdap** for adults


- ✓ Anytime for those who have never received it

[www.cdc.gov/whoopingcough](http://www.cdc.gov/whoopingcough)





COVID-19 vaccines



COVID-19 is  
not over. It's  
still circulating.



Get  
vaccinated.

For adults who never  
received a COVID-19  
vaccine, at least one  
dose is recommended.



# Coronavirus (COVID-19) Vaccinations

May 15, 2024

[Home](#) > [Coronavirus](#) > [Vaccinations](#)

**70.6%** of the world population has received at least one dose of a COVID-19 vaccine.

**13.58 billion doses** have been administered globally, and **5,352** are now administered each day.

**32.8%** of people in low-income countries have received at least one dose.

# Updated (2023–2024 Formula) COVID-19 Vaccine

Interim 2023-2024 COVID-19 Immunization Schedule  
for Persons 6 Months of Age and Older



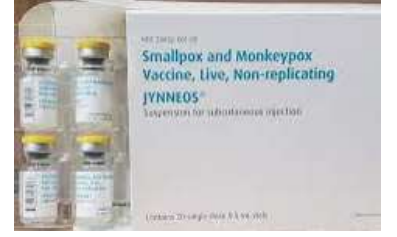
**Table 2b.** For people who **ARE** moderately or severely immunocompromised *Continued*

## 2023-24 Pfizer-BioNTech COVID-19 Vaccine - CONTINUED

Vaccine type: mRNA - Do **NOT** use any previously available Pfizer-BioNTech COVID-19 vaccine products.

Age	COVID-19 Vaccination History* (regardless of COVID-19 vaccine formula)	2023-24 Vaccine Schedule	Administer
12 years and older	Unvaccinated: 0 doses	Give a 3-dose initial series. Administer: <ul style="list-style-type: none"> <li>• Dose 1 now</li> <li>• Dose 2 at least 3 weeks after Dose 1</li> <li>• Dose 3 at least 4 weeks after Dose 2</li> </ul>	0.3 mL/30 µg  From gray-capped vial with gray label or manufacturer-filled syringe with gray box on label  Intramuscular (IM) injection
	1 previous dose of any Pfizer-BioNTech COVID-19 Vaccine (Dose 1) <sup>†</sup>	Complete series. Administer: <ul style="list-style-type: none"> <li>• Dose 2 at least 3 weeks after Dose 1</li> <li>• Dose 3 at least 4 weeks after Dose 2</li> </ul>	
	2 doses of any Pfizer-BioNTech COVID-19 Vaccine (Doses 1 and 2) <sup>†</sup>	Complete series. Administer: <ul style="list-style-type: none"> <li>• Dose 3 at least 4 weeks after Dose 2</li> </ul>	
	3 or more doses of Pfizer-BioNTech COVID-19 Vaccine, <b>NOT</b> including at least 1 dose of 2023–24 COVID-19 vaccine <sup>†</sup>	Give 1 dose at least 8 weeks (2 months) after the last dose	
	3 or more doses of Pfizer-BioNTech COVID-19 Vaccine, <b>INCLUDING</b> at least 1 dose of 2023–24 COVID-19 vaccine <sup>†</sup>	People who are moderately or severely immunocompromised have the <b>option to receive 1 additional dose at least 8 weeks (2 months) following</b> the last recommended dose. Further additional dose(s) may be administered, <b>informed by the clinical judgement</b> of a healthcare provider and personal preference and circumstances. Any further additional doses should be administered at <b>least 8 weeks (2 months) after the last COVID-19 vaccine dose.</b>	

## Mpox (eski ismi monkeypox) Aşısı



### CDC aşılama endikasyonları;

- Mpox'lu birine maruz kalınması veya bundan şüphelenilmesi
- Son **2 hafta** içinde mpox tanısı konan bir **seks partneri** varlığı
- **Erkeklerle seks yapan eşcinsel, biseksüel** veya başka bir erkeksiniz

Son **6 ay içinde mpox virusunun** bulaştığı bir coğrafi bölgede **korunmasız cinsel ilişki**

- **HIV** veya bağışıklık sisteminin baskılanmasına neden olan başka nedenlere sahip olma
- Mpox'a maruz kalabileceğiniz ortamlarda (Laboratuvarda) **ortopoksviruslarla çalışıyor** olmak

**JYNNEOS®** aşısı, **4 hafta arayla uygulanan iki dozluk** bir seri **0,5 mL'lik subkütan** FDA 9 Ağustos **2022'**de onayladı.



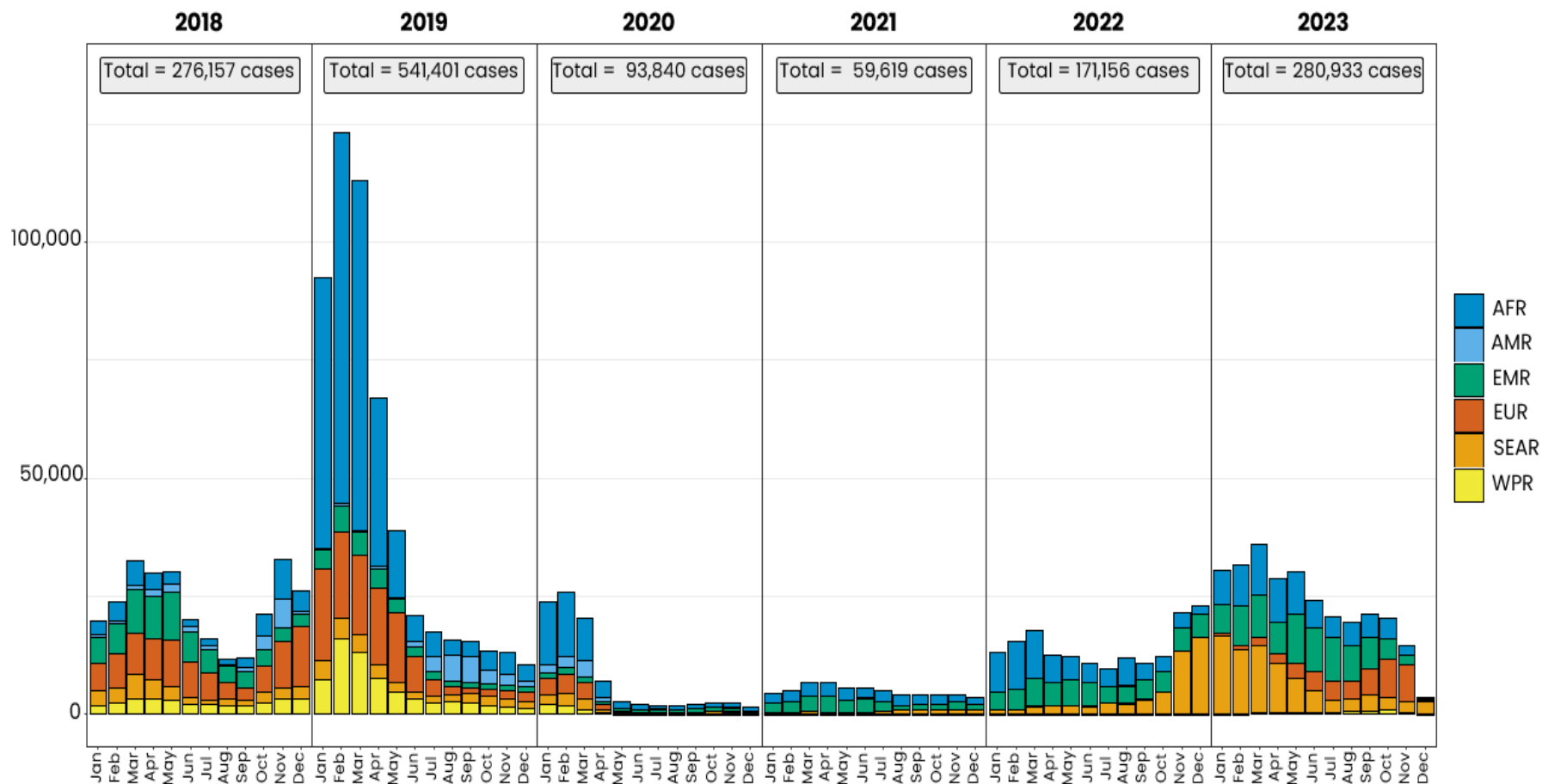
# HIV ve Canlı Aşılar





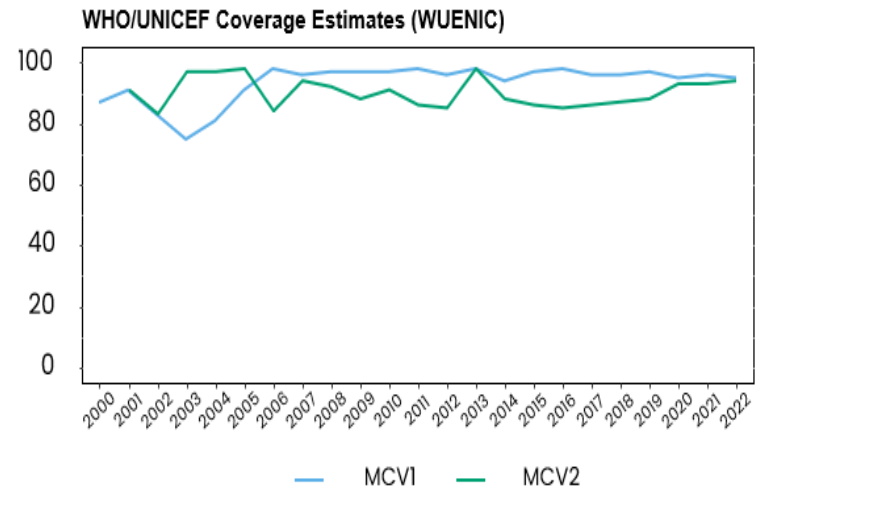
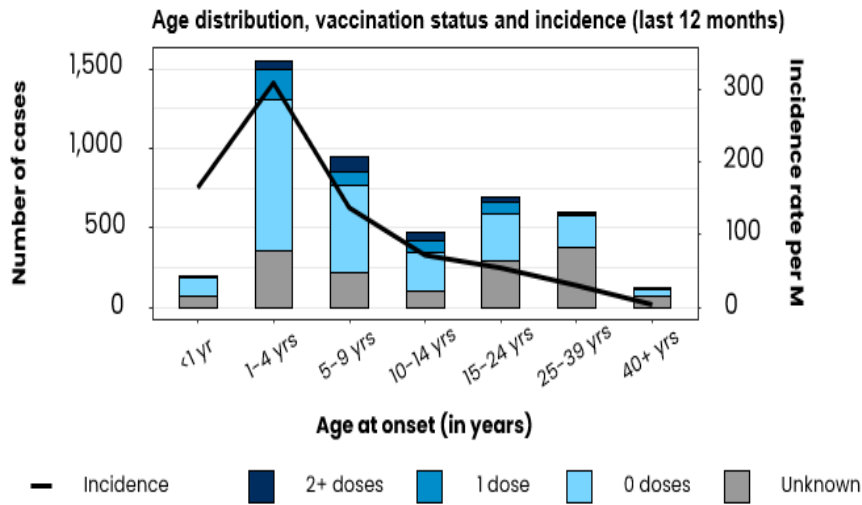
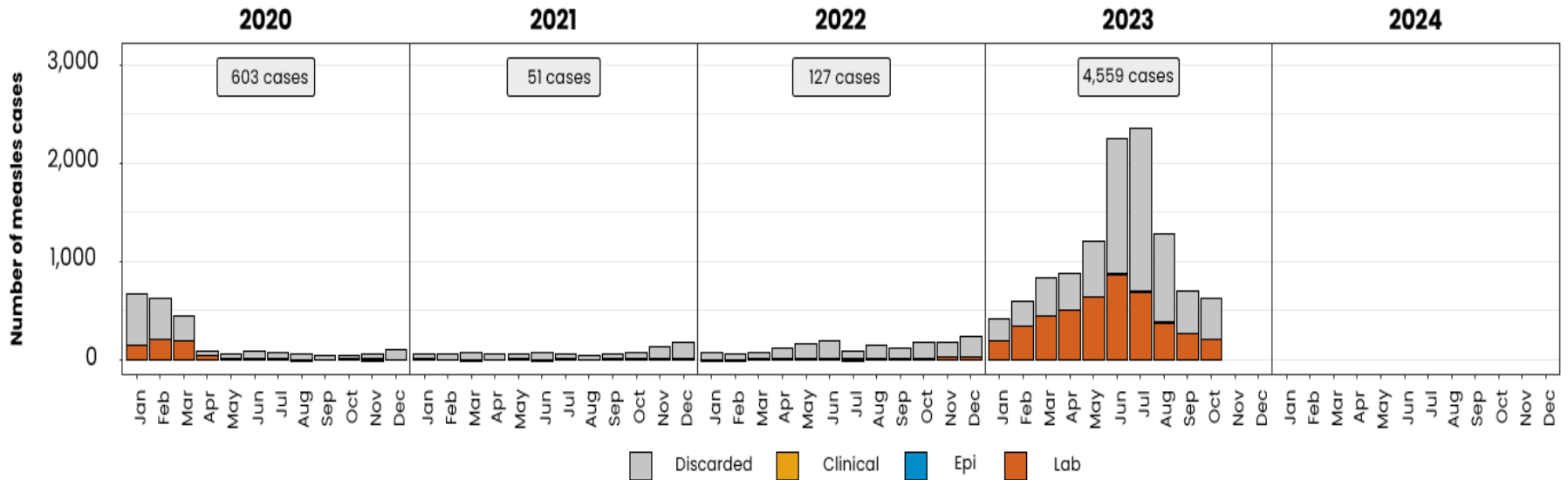
# Kızamık

## Measles case distribution by month and WHO Region (2018-2023)



Notes: Based on data received 2024-01 - Data Source: IVB Database - This is surveillance data, hence for the last month(s), the data may be incomplete.

# Measles cases: Türkiye



Based on data received 2024-01 - Data Source: IVB Database. Main epi curve was built using case-based surveillance data. Age distribution curve was built using case-based surveillance data. Coverage data from WHO/UNICEF Estimates of National Immunization Coverage (WUENIC)

# A 30-fold rise of measles cases in 2023 in the WHO European Region warrants urgent action

14 December 2023 | News release | Reading time: 2 min (675 words)

The WHO European Region is experiencing an alarming rise in measles cases. Over 30 000 measles cases were reported by 40 of the Region's 53 Member States between January and October 2023. Compared to 941 cases reported in all of 2022, this represents a more than 30-fold rise. The rise in cases has accelerated in recent months, and this trend is expected to continue if urgent measures are not taken across the Region to prevent further spread.

## **Where vaccinations are missed, outbreaks can follow – affecting both young and old**

In **2023** measles has affected **all age groups**, with significant differences in the age distribution of cases among countries. Overall, 2 in 5 cases were among children 1 to 4 years of age, and **1 in 5 cases** were among adults **20 years and older**. From the beginning of the year through to October, **20 918 hospitalized** cases were reported, and **5 measles-related deaths** were reported by 2 countries.

<https://www.who.int/europe/news/item/14-12-2023-a-30-fold-rise-of-measles-cases-in-2023-in-the-who-european-region-warrants-urgent-action>



## Kızamık, Kızamıkçık, Kabakulak Aşısı

- **CD4 sayısı  $\geq 200$  hücre/mm<sup>3</sup>** olan ve KKK bağışıklığı kanıtı olmayan kişilere en az 1 ay arayla **iki doz** (bağışıklık kanıtı: hasta 1957'den önce doğmuş ve/veya KKK aldığına dair belgelere sahip) **(AIII)**
- KKK **gebelikte kontraindike**
- Gebelik planlayan kişilerde en az **4 hafta önce KKK** uygulanabilir
- Gebelerde doğum sonrasına ertelenmeli (2 doz KKK, CD4  $\geq 200$  h/mm<sup>3</sup> **AIII**)
- İki doz KKK aşısından sonra herhangi bir serolojik **bağışıklık kanıtı yoksa, iki doz KKK serisini tekrarlayın**, özellikle virolojik baskılanmadıysa **(CIII)**
- **CD4  $< 200$  h/mm<sup>3</sup>** ise KKK aşısı **uygulanmaz (AIII)**

## Herpes zoster Aşısı

Su çiçeği

Latent

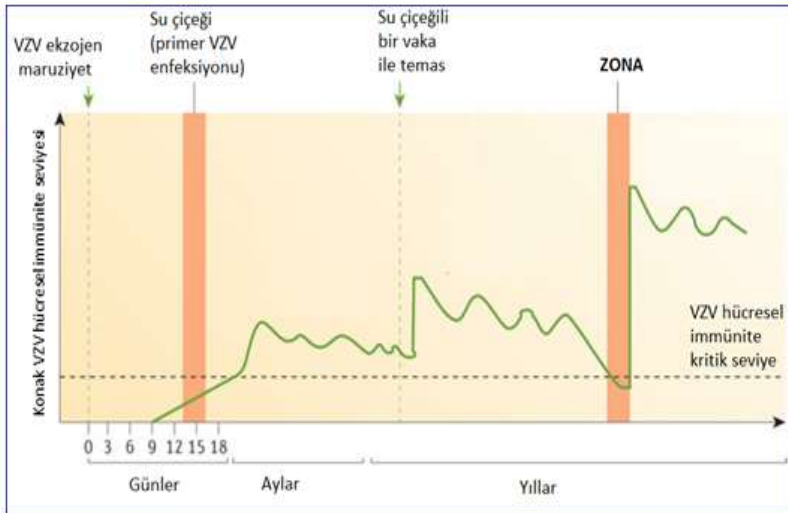
ZONA

Primer enfeksiyonun kontrolü

Yetersiz immün kontrol, virus reaktivasyonu

Yaşlı hastaların  
~ %15

Postherpetik  
neuralji



Komplikasyonlar döküntü olmasa da oluşabilir

**Akut komplikasyonlar**  
Meningoensefalit  
Miyelit  
Kranial sinir paralizi  
Vaskülopati  
Gastrointestinal ülserler  
Pankreatit  
Hepatit



BRIEF REPORT

## Long-term Protection Against Herpes Zoster by the Adjuvanted Recombinant Zoster Vaccine: Interim Efficacy, Immunogenicity, and Safety Results up to 10 Years After Initial Vaccination

Ana Strezova,<sup>1</sup> Javier Diez-Domingo,<sup>2</sup> Kamal Al Shawafi,<sup>3</sup> Juan Carlos Tinoco,<sup>4</sup> Meng Shi,<sup>5</sup> Paola Pirrotta,<sup>6</sup> and Agnes Mwakingwe-Omari<sup>5</sup> on behalf of the Zoster-049 Study Group<sup>a</sup>

<sup>1</sup>GSK, Rixensart, Belgium, <sup>2</sup>FISABIO Fundación para el Fomento Investigación Sanitaria y Biomédica de la Comunitat Valenciana, Valencia, Spain, <sup>3</sup>Modis, Belgium c/o GSK, Wavre, Belgium, <sup>4</sup>Hospital General de Durango, Durango, Mexico, <sup>5</sup>GSK, Rockville, Maryland, USA, and <sup>6</sup>GSK, Wavre, Belgium

Approximately 10 years after vaccination with the recombinant zoster vaccine (RZV), an interim analysis of this follow-up study of the ZOE-50/70 trials demonstrated that efficacy against herpes zoster remained high. Moreover, the safety profile remained clinically acceptable, suggesting that the clinical benefit of the RZV in  $\geq 50$ -year-olds is sustained up to 10 years.

In the 2 pivotal prelicensure phase III randomized clinical trials (**ZOE-50** and **ZOE-70**), RZV demonstrated **97%** and **90% efficacy** against HZ in adults aged  **$\geq 50$**  and  **$\geq 70$  years** over a median follow-up of **3.1** and **3.7 years**, respectively

RZV long-term efficacy. *OFID*. 2022.

<https://www.klimik.org.tr/>



## 1000 Kişide 3-4 Vaka

Yıllık zona insidansı 1000 kişide 3-4 vaka olarak bildirilmiştir. Her yaşta görülebilmekle birlikte, 50 yaş üstünde hastalığın insidansı artmaktadır. Bir kişinin zona geçirme riski 60 yaşına kadar %25 iken, 85 yaşına kadar bu risk %50'ye yükselmektedir. Hastalığın komplikasyonları da yaşla birlikte artmaktadır.

- ✓ **≥18** yaşındaki HIV YK için, **0 ve 2. ayda iki doz** rekombinant zoster aşısını (**RZV: Shingrix®**) uygulayın (**AIII**)
- ✓ ART altında virolojik baskılanana kadar ve **CD4 ≥ 200 h/mm<sup>3</sup>** bekleyin (**CIII**)



S. Tekin arşivi



## HIV ile yaşıyan Kişilerde Aşılama Önerileri

Vaccines associated with travel	Cholera	2 doses
	Japanese encephalitis	2 doses
	Tick-borne encephalitis	3-4 doses
	Tetanus	1 dose
	Diphtheria	1 dose
	Polio	1 dose
	Rabies	3 doses
	Typhoid	1 dose
	Yellow fever	1 dose

CD4 <200 h/mm<sup>3</sup> ise veya hamilelik / emzirme döneminde önerilmez.

# Sarihumma Aşısı

Yellow fever vaccine  
and who are traveling  
in [Africa](#) and [South A](#)



Yellow fever vaccine vials (Brazil)



o are **9 months old or older**  
/yellow fever virus



Vaccine description	
Target	Yellow fever
Vaccine type	Attenuated
Clinical data	
Trade names	YF-Vax, Stamaril
Other names	17D vaccine
AHFS/Drugs.com	Monograph <a href="#">↗</a>
MedlinePlus	a607030 <a href="#">↗</a>
Pregnancy category	AU: B2 <sup>[1]</sup>
Routes of administration	Subcutaneous injection



**Amaç: Hastalıkları  
oluşmadan  
Önlemek!!!!**



**Ebola virüsü kötü bir şey  
değil, bulaşınca öldürüyor**

# Ebola vaccines

\*Ebola virus disease (EVD), is the most lethal, with case **fatality rates** of **70–90%** if left untreated.



There are **2 licensed Ebola vaccines**

➤ **Ervebo®** was licensed in **November 2019** by the European **Medicines Agency**

**FDA** licensed the vaccine in **December 2019**.

Since then, **Burundi, Central African Republic, the Democratic Republic of the Congo, Ghana, Guinea, Rwanda, Uganda** and **Zambia** have also approved the vaccine.

**May 2020**, the EMA new vaccine delivered in **2 doses** called **Zabdeno®** (Ad26.ZEBOV) and **Mvabea®** (MVA-BN-Filo) for individuals **1 year** and older. The vaccine is delivered in **2 doses**: Zabdeno is administered first and Mvabea is given approximately 8 weeks later as a second dose.

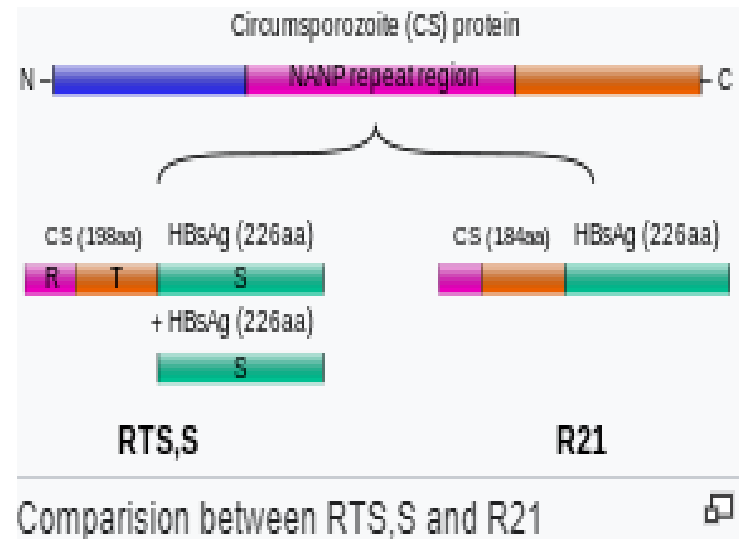
# Malaria vaccines

- ✓ The first vaccine for malaria is **RTS,S** -> **Mosquirix®**.
- ✓ As of **April 2023**, the vaccine has been given
- ✓ It requires **at least three doses** in infants by **age 2**, and a fourth dose extends the protection for another **1–2** years.

**Similarity of R21 and RTS,S vaccines:** The two WHO-recommended vaccines, R21 and RTS,S, have not been tested in a head-to-head trial. There is **no evidence to date showing one vaccine performs better than the other.**

Vaccine description	
Target	Malaria
Vaccine type	Protein subunit
Clinical data	
Trade names	Mosquirix
Routes of administration	Intramuscular <sup>[1]</sup>
ATC code	J07XA01 (WHO <a href="#">↗</a> )
Legal status	
Legal status	EU: Rx-only <sup>[1]</sup> Approved in Ghana, Nigeria

## Kenya and Malawi



WHO. Malaria vaccine.

*Weekly Epidemiological Record*. 2022; 97 (9): 60-78.

Rabies		For PLWH with CD4 count < 200 cells/ $\mu$ L or unsuppressed viremia consider pre-exposure vaccination with 3 doses (0, 7, 28 days) and titre control 14 days later. In case of exposure: full post-exposure prophylaxis including rabies immunoglobulins (RIG). If pre-exposure rabies vaccination administered when CD4 > 200 cells/ $\mu$ L: Post-exposure prophylaxis as for immunocompetent (one dose day 0 and day 3, without RIG)
<b>Kuduz aşısı</b>		

### **Temas öncesi aşılama;**

**CD4 sayısı < 200 h/ $\mu$ L veya baskılanmamış viremi 3 doz (0, 7, 28 gün) ve 14 gün sonra titre kontrolü**

### **Maruz kalma durumunda:**

**Tam profilaksi (5 doz aşılama) ve kuduz immünoglobulini (RIG)**

**Temas öncesi kuduz aşısı varsa CD4 > 200 h/ $\mu$ L ise 0-3. gün aşılama yeterli **Ig gerek yok****



## HIV ve BCG Aşısı

TB'nin önlenmesinde etkili iki strateji:

- ✓ Doğumda **BCG aşısı**
- ✓ Akciğer TB vakalarının temaslılarında **latent TB** infeksiyonunun tedavisi

❖ Doğumda HIV ile infekte olan çocuklar BCG ile aşılandığında BCG ile aşılandığında '**disemine**' **BCG hastalığı** riski çok yüksektir.

❖ Ancak HIV ile infekte bireyler;

✓ **ART** alıyorsa,

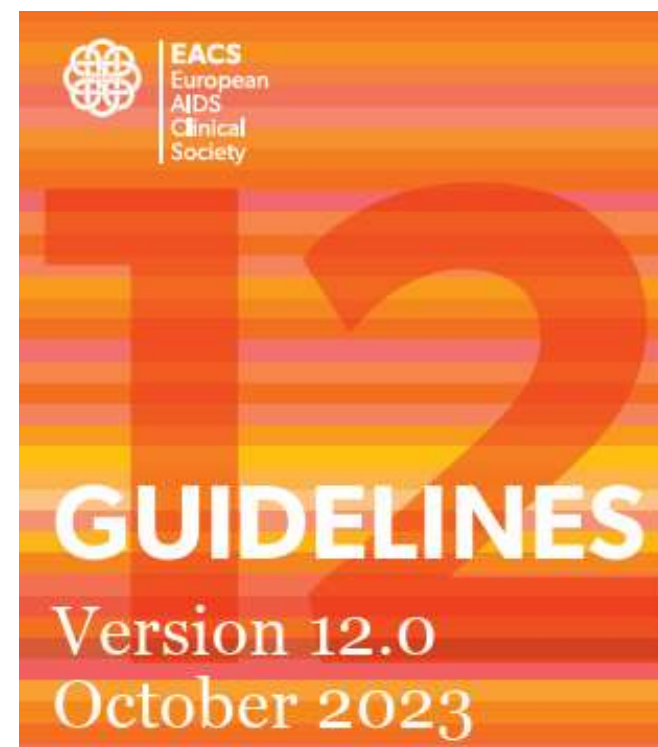
✓ **linik** olarak iyi

✓ **immünolojik** olarak stabil (<5 yaşındaki çocuklar için

**CD4 % >%25 veya >5 yaşındaysa CD4 sayısı  $\geq 200$ ) BCG ile aşılanabilir.**

Infection
Influenza Virus
Human Papilloma Virus (HPV)
Hepatitis B Virus (HBV)
Hepatitis A Virus (HAV)
<i>Neisseria meningitidis</i>
<i>Streptococcus pneumoniae</i>
Varicella Zoster Virus (VZV)
Yellow Fever Virus
Rabies

Infection
Severe Acute Respiratory Syndrome 2 (SARS-CoV-2)
Mpox, See <a href="#">Management of Mpox in persons with HIV</a>





# HIV İle Yaşayanlarda Kaliteli Yaşam için Öneriler

- ✓ **Tütün** ve ürünlerinden uzak durun
- ✓ **Alkol** alımını sınırlayın
- ✓ **Bağışıklama uygulamaları**
- ✓ **KHB** ve **KHC** tedavisi
- ✓ Dengeli **beslenme**
- ✓ Düzenli **aktiviteler** / spor
- ✓ **HIV erken tanı** ve **ART** devamı
- ✓ Düzenli kanser **taramaları**



Hasta özellikle reddetmediği sürece;

COVID-19, HBV, HAV, pnömokok, meningokok, Td ve influenza aşılarını **Sağlık Bakanlığı karşılıyor.**

HPV, zona, suçiçeği, PPSV23 ve Tdap aşılarını hastaya öner (ücretli).

# Sonuç olarak;

HIV ile infekte kişilerin aşılanması birkaç detay dışında **genel yetişkin popülasyona** benzer

**CD4 T < 200 h/mm<sup>3</sup>** ise canlı aşı uygulanmaz, inaktive aşıları yarar-zarar hesabına (risk faktörü yok ise bekle) göre yap.

CD4 T > 350 h/mm<sup>3</sup> ise aşılaraya yanıt daha iyi

**İki canlı aşı** aynı anda **yapılmaz**

HBV, HAV, kızamık, su çiçeği gibi serumda antikor yanıtının test edildiği tüm aşılar için serum antikor düzeyine bakılmalı





Ramize Erer

**Doğal olanla sağlıklı yaşamak dileğimle...**

