medicines
patent
pool

UPDATE ON PROGRESS OF MPP SUBLICENSEES

TILL DECEMBER 2023

MEDICINESPATENTPOOL.ORG

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SUMMARY

- This presentation showcases the progress made by MPP licensees (generic pharmaceutical companies).
- To date, MPP has signed agreements with 21 patent holders for 13 HIV antiretrovirals, 1 HIV technology platform, 3 hepatitis C direct-acting antivirals, 1 tuberculosis treatment, 4 long-acting technologies, 1 cancer treatment, 3 oral antiviral treatments for COVID-19 and 16 Covid-19 technologies.
- Licensed products are developed by multiple MPP licensees, with an aim of encouraging competition, reducing market prices and providing faster access to medicines for people living in low- and middle-income countries (LMICs).
- Generic medicines are developed and filed with stringent regulatory authorities such as the U.S. Food and Drug Administration (USFDA) and the World Health Organization prequalification (WHO-PQ), ensuring availability of quality assured products in LMICs.
- This presentation gives a snapshot of the development of each licensed product and when the product may be filed with regulators. It also shows which countries the local filing is taking place in and when – thereby providing a clearer picture of availability of new formulations in each country.

medicines patent pool

MPP PARTNERSHIPS WITH INNOVATORS

Hepatitis C

Abbvie
glecaprevir/pibrentasvir

Bristol-Myers Squibb
daclatasvir

Pharco Corporation
ravidasvir

HIV

Abbvie
lopinavir, ritonavir (adults)
lopinavir, ritonavir (paediatric)

Boehringer Ingelheim
nevirapine (non-assert)

Bristol-Myers Squibb
atazanavir

Gilead
bictegravir
cobicistat
elvitegravir
emtricitabine
tenofovir alafenamide
tenofovir disoproxil fumarate

Janssen
darunavir (paediatric; non-assert)

MSD
raltegravir (paediatric)

NIH
darunavir related

ViiV Healthcare
abacavir (paediatric)
dolutegravir (paediatric)
dolutegravir (adults)
dolutegravir (adults, for AZ, BY, KZ, MY)

Tuberculosis

Johns Hopkins University
sutezolid

Pfizer
sutezolid

Technologies (e.g., long-acting, diagnostics)

CSIC
ELISA antibody technology (COVID-19)
MVA- S(3P) (Vaccine candidate) (COVID-19)

Medigen Vaccine Biologics Corp
Vaccine MVC-COV1901

Medincell
LA technology for Malaria vector control

NIH
serological antibody diagnostic test (COVID-19)

S D Biosensor
Rapid Diagnostic Testing (RDT)

Tandem Nano Ltd
LA technologies for HCV, TB and Malaria treatment

University of Liverpool
solid drug nanoparticles technology (disease agnostic)
ETFD LAI (TB, malaria, HCV)

University of Chile
Technology to detect bNAbs against sars-cov-2

University of Washington
TLD LAI (HIV)

ViiV Healthcare
Cabotegravir LA for HIV Prep

COVID-19

MSD
molnupiravir

Pfizer
nirmatrelvir

Shionogi
ensitrelvir

Cancer

Novartis
nilotinib

medicines patent pool

MPP PARTNERSHIPS WITH GENERICS

Hepatitis C

daclatasavir
Beximco
Cipla
Hetero
Laurus Labs
Mylan
Natco
Zydus

glecaprevir/pibrentasvir
Arene
Mylan
Remington
USV

HIV

abacavir (paed)
Aurobindo

atazanavir
Aurobindo
Cipla
Desano
Emcure
Mylan

bictegravir
Adcock Ingram
Arene
Aurobindo
Desano
Emcure
Laurus Labs
Lupin
Macleods

cobicistat
Adcock Ingram
Arene
Emcure
Lupin

dolutegravir
Adcock Ingram**
Celltrion**
Cipla **
Desano **
Emcure **
Hetero **
Laurus Labs **
Lupin **
Macleods **
Mangalam
Micro Labs **
Mylan **
Strides**
Sun Pharma **

elvitegravir
Adcock Ingram
Arene

emtricitabine
Adcock Ingram
Arene
Aurobindo
Biochem
Desano
Emcure
Laurus Labs
Lupin
MacLeods
Micro Labs
Natco

lopinavir,

ritonavir
Adcock Ingram
Arene
Aurobindo
Cipla*
Desano
Emcure
Hetero#
Lupin
Sun Pharma

raltegravir / Paed
Lupin

tenofovir alafenamide
Adcock Ingram
Aurobindo
Desano
Emcure
Langhua
Laurus Labs
Lupin
Macleods
Micro Labs
Natco

Tenofovir disoproxil fumarate
Adcock Ingram
Arene

COVID-19

molnupiravir
Arene
Beximco
Biophore
CPT
Desano
Dongbang
Fosun
Hikma
Incepta
Kimia Farma
Laurus Labs
MSN
Remington
SMS Pharma
Stellapharm
Strides
UCL

nirmatrelvir
Amneal
Apeloa
Arene
Aurisco
Aurobindo
Biocon
Cadila
Celltrion
Cipla
Darnitsa
Desano
Divis
Dr. Reddy's
Dongbang
Emcure
Fosun Pharma
Glenmark
Granules
Hetero
Hikma
Huahai
Jiuzhou
Laurus Labs
Macleods
Magnachem
MSN
Mylan
Neolpharma
Remington
SMS Pharma
Strides
Sun Pharma
Torrent
FHI Zdravlje

ensitrelvir
Charioteer
Fosun
Hetero
Laurus Labs
Lekhim
Lepu
Stellapharm

Tuberculosis

sutezolid / John Hopkins University
TB Alliance

sutezolid / Pfizer
Bill & Melinda Gates Foundation

Cancer

nilotinib
BrightGene
Dr. Reddy's
Eugia
Hetero

* Only LPV/r paed licence #Also has LPV/r paed licence ** Also have DTG paed licence

MPP'S NETWORK OF GENERIC MANUFACTURERS AND PRODUCT DEVELOPERS ARE IN 14 COUNTRIES

57 generic manufacturers and product developers

Bangladesh
Beximco
Incepta

China
Apeloa
Aurisco
BrightGene
Charioteer
Desano
Fosun
Jiuzhou
Huahai
Langhua
Lepu

Dominican Republic
Magnachem

India
Amneal
Arene
Aurobindo
Biocon
Biophore
Cadila
Cipla
Divi's
Dr Reddy's
Emcure
Eugia
Glenmark
Granules
Hetero
Laurus
Lupin
Macleods
Mangalam
Micro Labs
MSN
Natco
SMS Pharma
Strides
Sun
Torrent
USV
Viatris
Zydus Cadila

Indonesia
Kimia Farma

Jordan
Hikma

Kenya
UCL

Mexico
Neolpharma

Pakistan
Remington

Serbia
FHI Zdravlje

South Africa
Adcock Ingram
CPT

South Korea
Celltrion
Dongbang

Ukraine
Darnitsa
Lekhim

Vietnam
Stellapharm

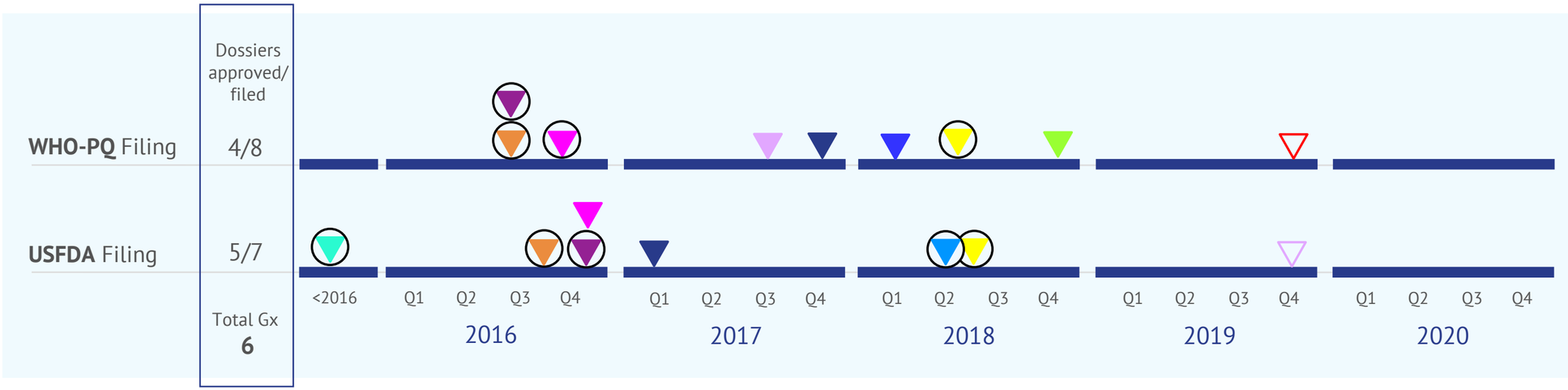
Product developers*
TB Alliance
Gates MRI
Biotech Africa

*Not generic manufacturers

TRIANGLE CHARTS

Triangle charts represent a comparative analysis of each MPP licensee's filings with WHO-PQ and/or USFDA for each product country

TRIANGLE CHARTS: A SNAPSHOT

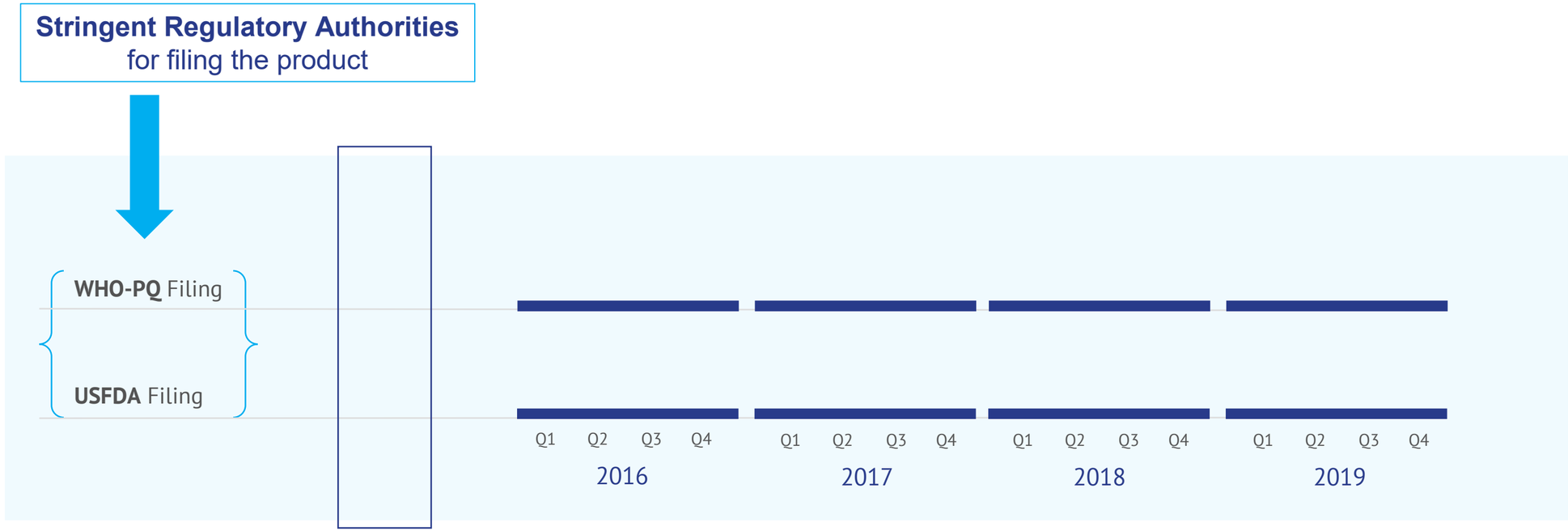


Companies approved ▼ Companies filed ▽ Companies planning to file

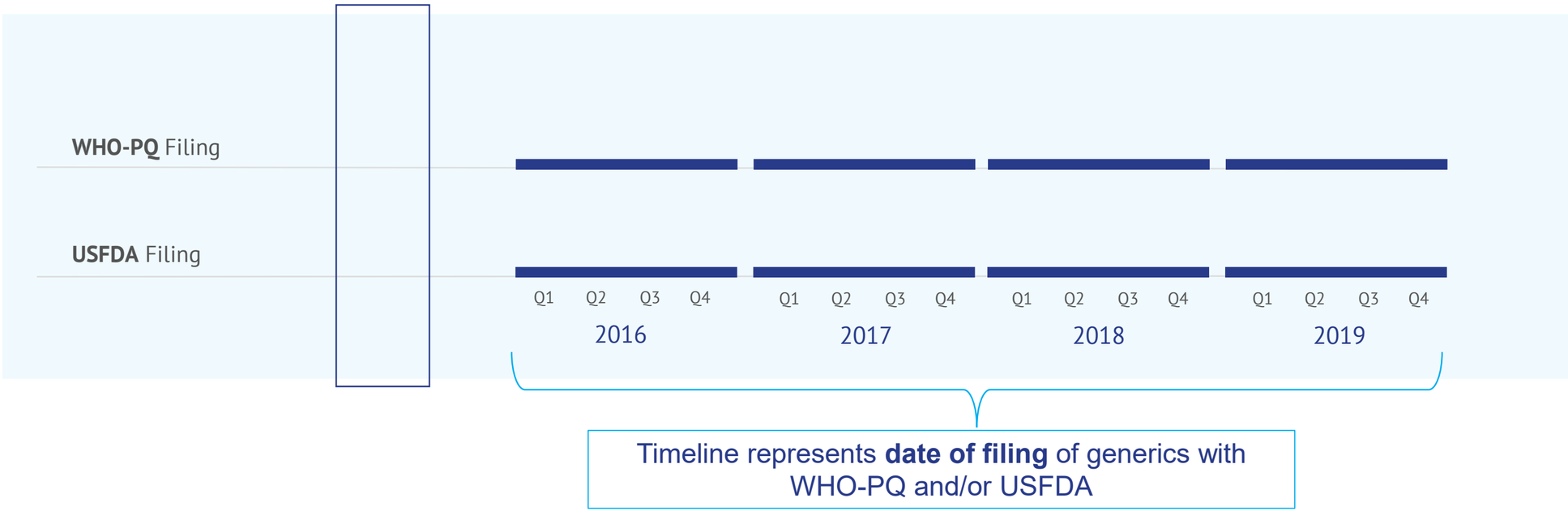
Note: *Each triangle represents a manufacturer and timelines represent date of filing*

See following slides for explanation

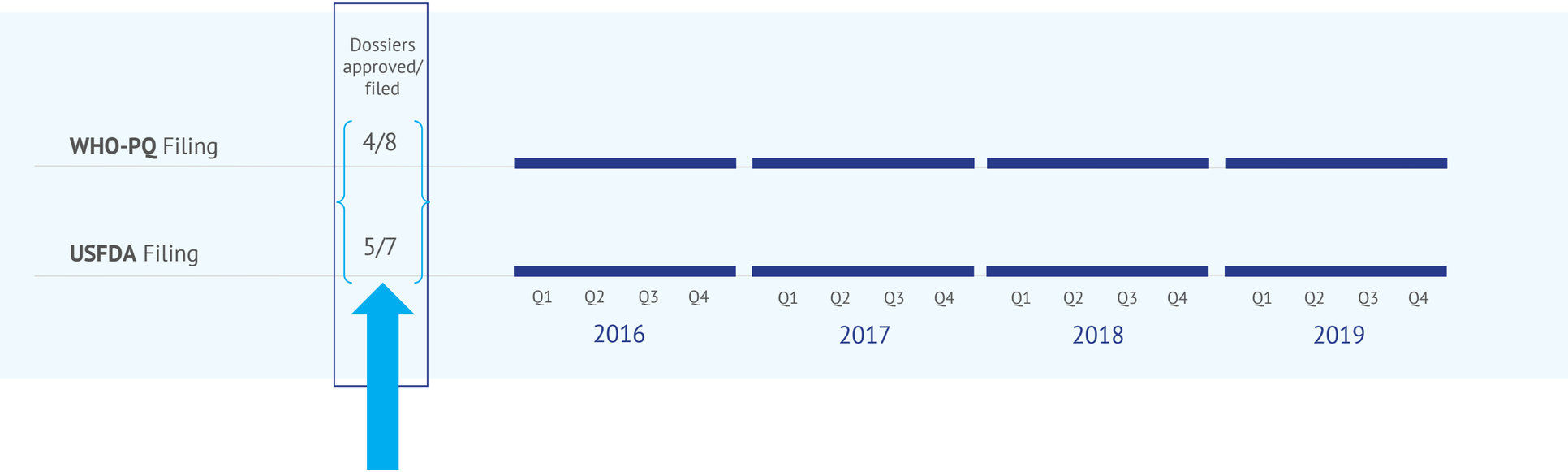
TRIANGLE CHARTS EXPLAINED (1/7)



TRIANGLE CHARTS EXPLAINED (2/7)

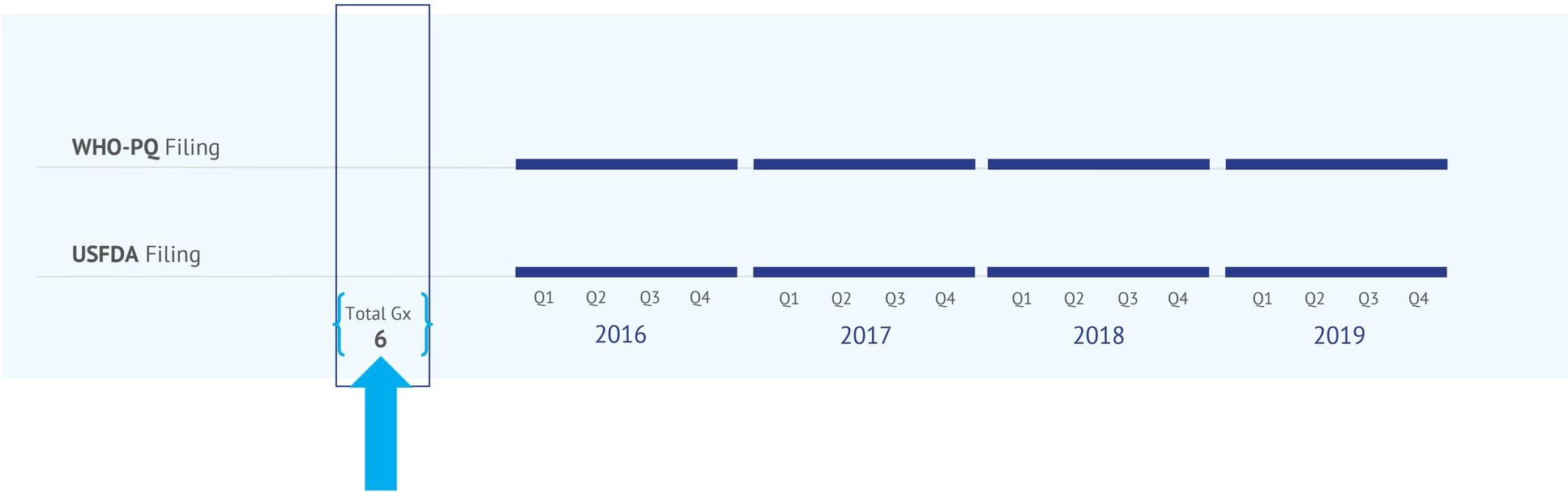


TRIANGLE CHARTS EXPLAINED (3/7)



No. of companies that have **received approval out of total companies filed** with WHO-PQ/USFDA

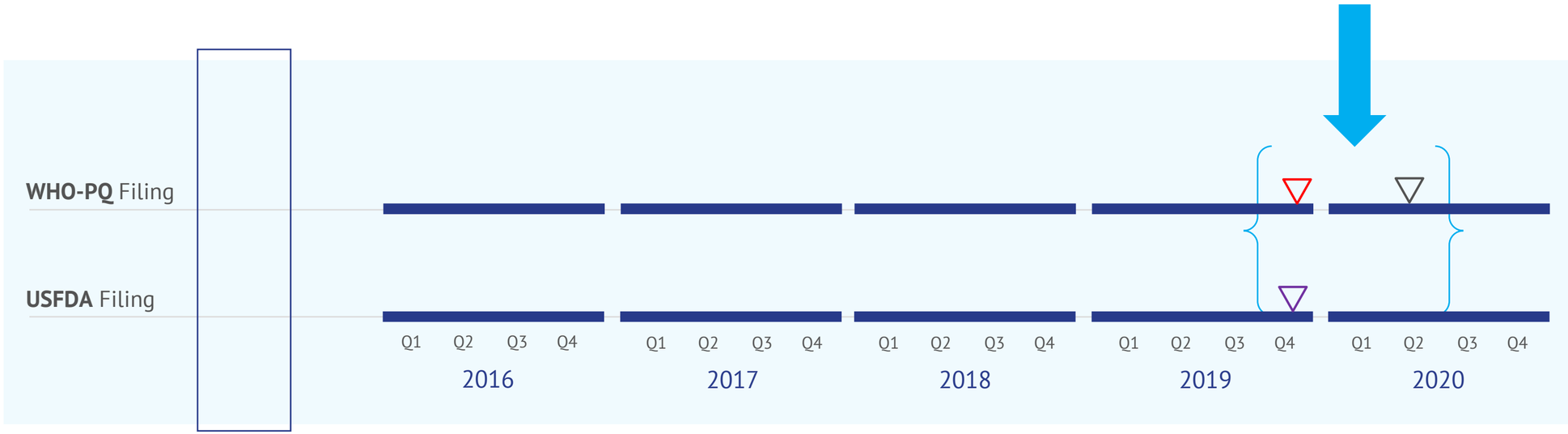
TRIANGLE CHARTS EXPLAINED (4/7)



Total no. of **companies** that **have been approved by** WHO-PQ/USFDA

TRIANGLE CHARTS EXPLAINED (5/7)

Outlined triangles (▽) represent companies **developing the product** and **planning to file** with WHO-PQ and/or USFDA

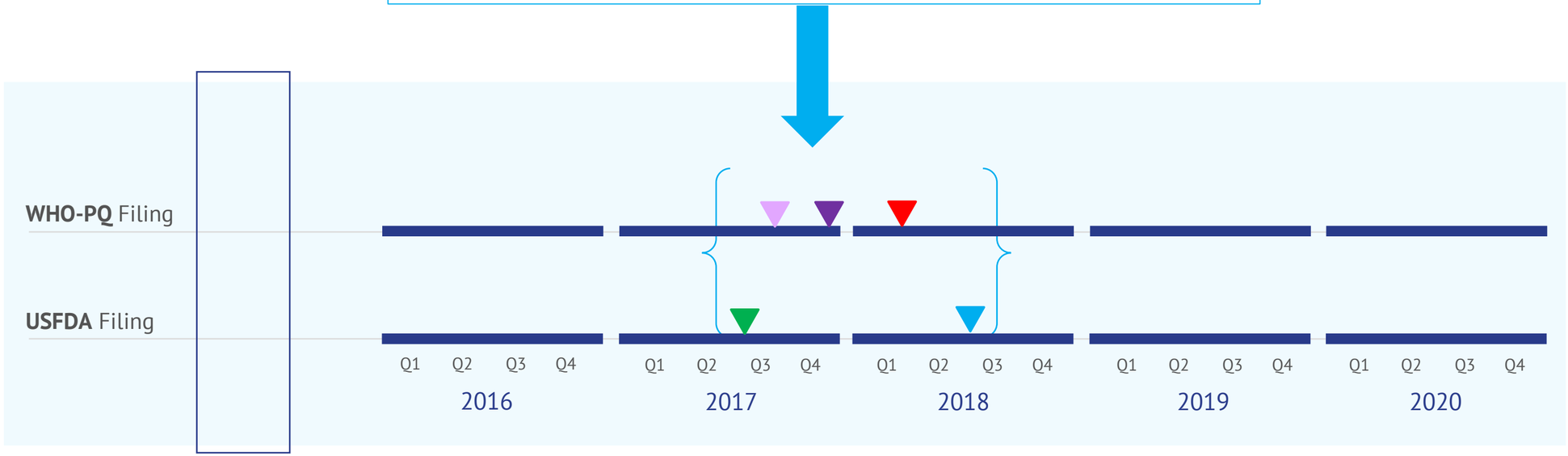


▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

TRIANGLE CHARTS EXPLAINED (6/7)

Filled triangles (▼) represent companies who have **completed the product development** and have **filed** with WHO-PQ and/or USFDA

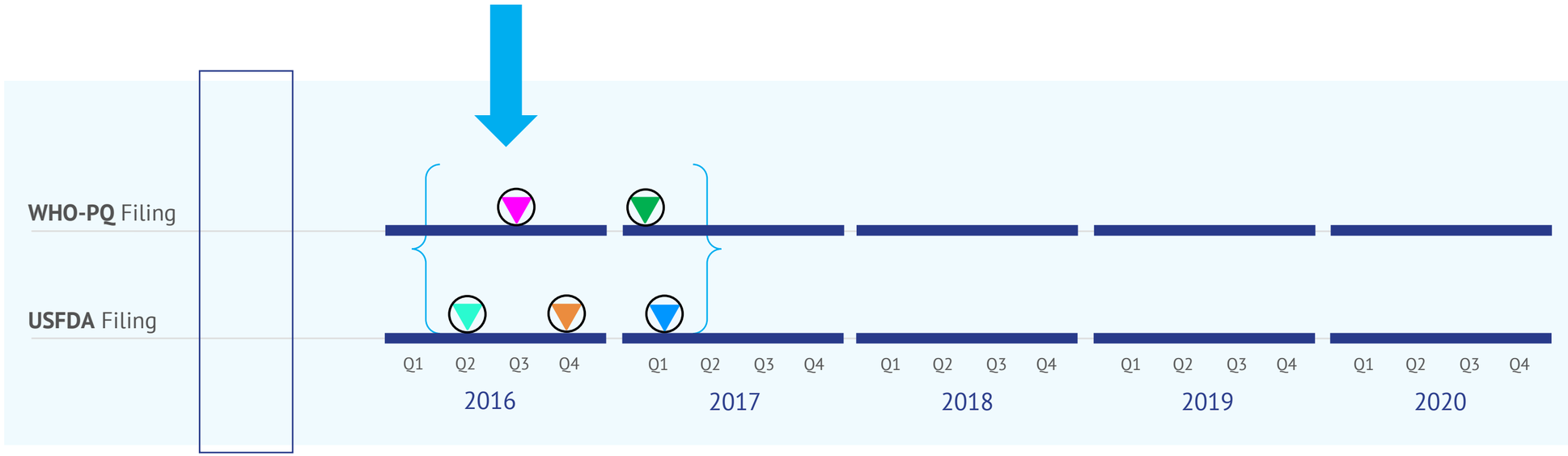


▼ Companies filed

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

TRIANGLE CHARTS EXPLAINED (7/7)

Circled triangles ▼ represent companies who have **completed the product development** and have **received approvals** from WHO-PQ and/or USFDA



▼ **Companies approved**

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

medicines patent pool

DOLUTEGRAVIR

CURRENT SUBLICENSEES FOR VIIV-MPP DOLUTEGRAVIR LICENCE

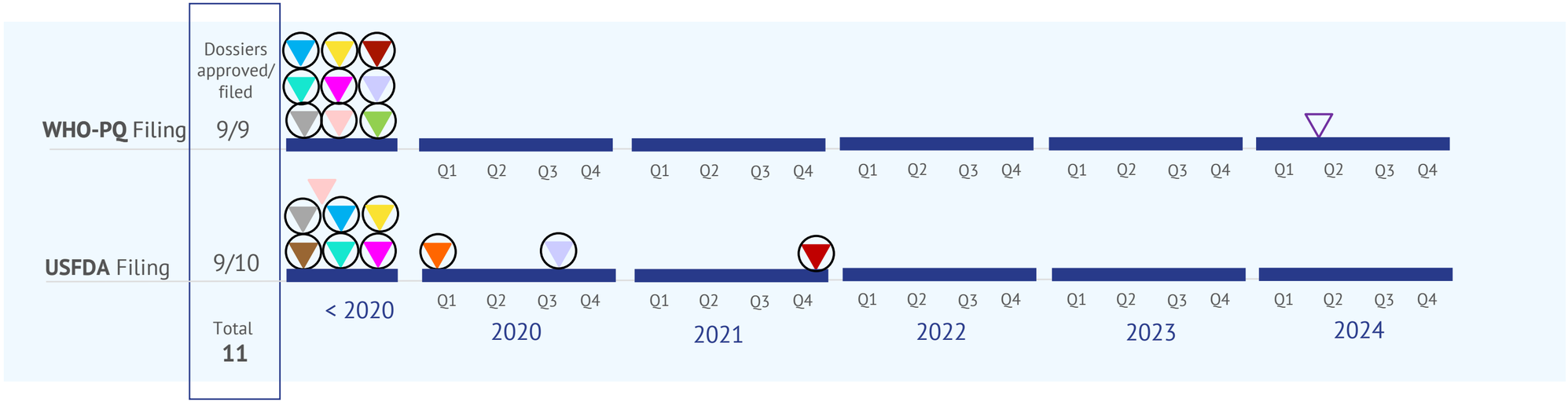
14 Dolutegravir Sub-licensee Agreements

adcock ingram
Cipla
CELLTRION
DESANO
Emcure
SUCCESS THROUGH INNOVATION
HETERO
LAURUS Labs
Knowledge . Innovation . Excellence
LUPIN
MACLEODS
MANGALAM
MICRO LABS
MICRO LABS LIMITED
Mylan
Strides
SUN PHARMA

*Aurobindo is a direct licensee of ViiV. A tripartite agreement Aurobindo-ViiV-MPP has been signed. For the purposes of this presentation only, data from Aurobindo will be included in the presentation.

Note: the following presentation contains updates as of December 2023, however approvals through March 2024 are included.

DTG 50MG:
FORMULATION DEVELOPMENT TIMELINES



11 MPP LICENSEES HAVE DEVELOPED DTG 50MG AND ALL ARE READY TO COMMERCIALIZE THE PRODUCT

Licensees Approved*: Aurobindo, Cipla, Desano, Emcure, Hetero, Laurus, Macleods, Micro Labs, Mylan, Strides, Sun Pharma

1 licensee awaiting USFDA approval | 1 additional licensee developing

*USFDA and/or WHO-PQ

Data as of December 2023

medicines patent pool

DTG 50MG: COUNTRY WISE FILING STATUS

Generic DTG 50mg has been filed in 74 countries, which contribute to an effective coverage of 92.6% PLHIV^

APPROVED (62) 90.4% PLHIV						
Anguilla*	Botswana	Costa Rica*	Indonesia	Montserrat*	Peru*	Turkmenistan
Antigua and Barbuda*	Burkina Faso	Côte d'Ivoire	Iran*	Mozambique	Philippines	Turks and Caicos Islands*
Armenia	Burundi	Dominica*	Kazakhstan	Myanmar	Rwanda	Uganda
Azerbaijan	Cambodia	Ethiopia	Kenya	Namibia	Saint Lucia*	Ukraine
Bahamas*	Cameroon	Ghana	Kyrgyzstan	Nicaragua	Saint Vincent and the Grenadines*	Uruguay*
Barbados*	Chad	Grenada	Malawi	Niger	South Africa	Uzbekistan
Belarus	Chile*	Guatemala	Malaysia	Nigeria	Tajikistan	Zambia
Benin	Congo	Honduras	Mauritius	Pakistan	Tanzania	Zimbabwe
Bhutan	Congo, DR	India	Moldova	Panama*	Thailand*	

FILED (12) 2.3% PLHIV		
Bolivia	Guyana	Morocco
Dominican Republic*	Jamaica	Senegal
Ecuador	Madagascar	Sri Lanka
El Salvador	Mali	Viet Nam

- New filings and approvals in green *vis-à-vis last update (Q2-23)*
- Countries where DTG has been sold indicated in **bold type**

* Countries not included in DTG Adult licence but supply by MPP licensees permitted if no patent is being infringed in that country
^ People living with HIV in the licensed territory (refer MPP-ViiV DTG licence agreement) and countries with no patent infringements
Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of December 2023

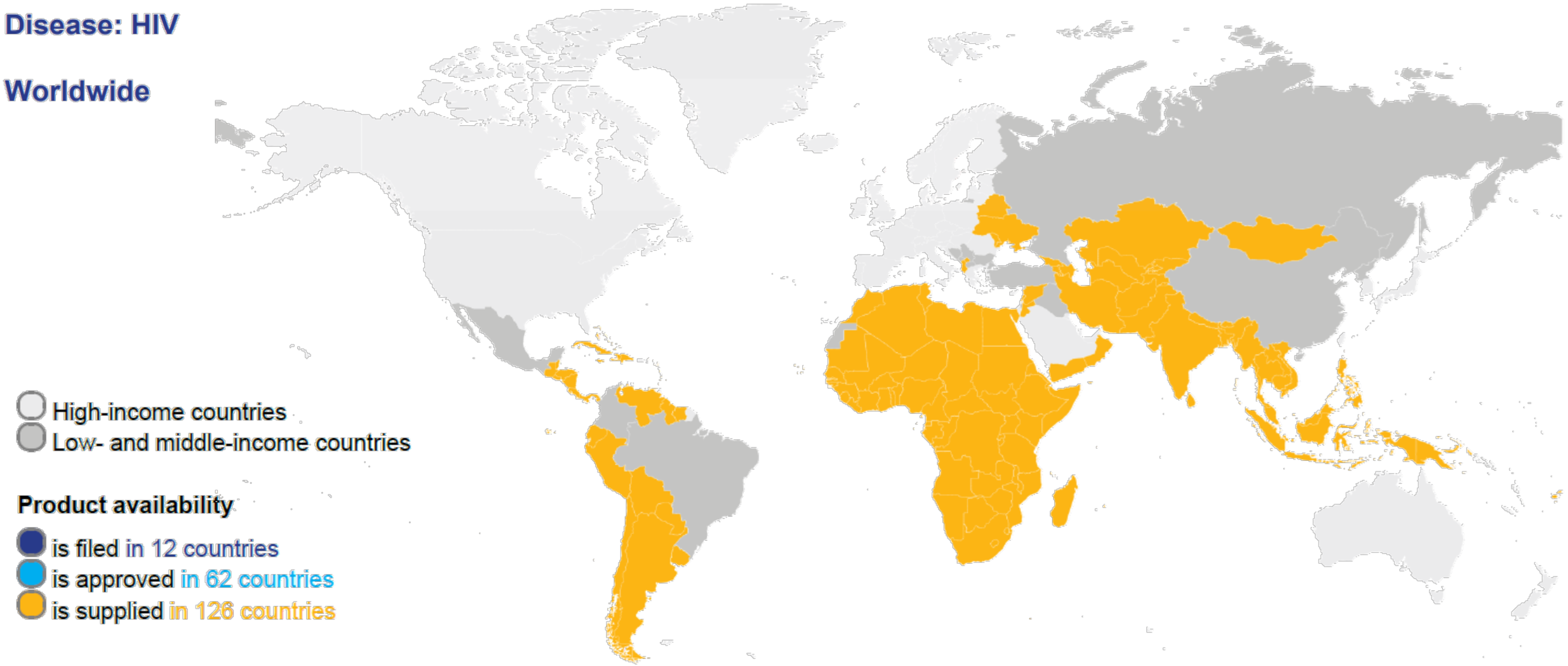
DTG IMPACT MAP

DTG 50MG sales have occurred in **126** countries in which **99.9%** of PLHIV^ reside

DTG adult (50 mg)

Disease: HIV

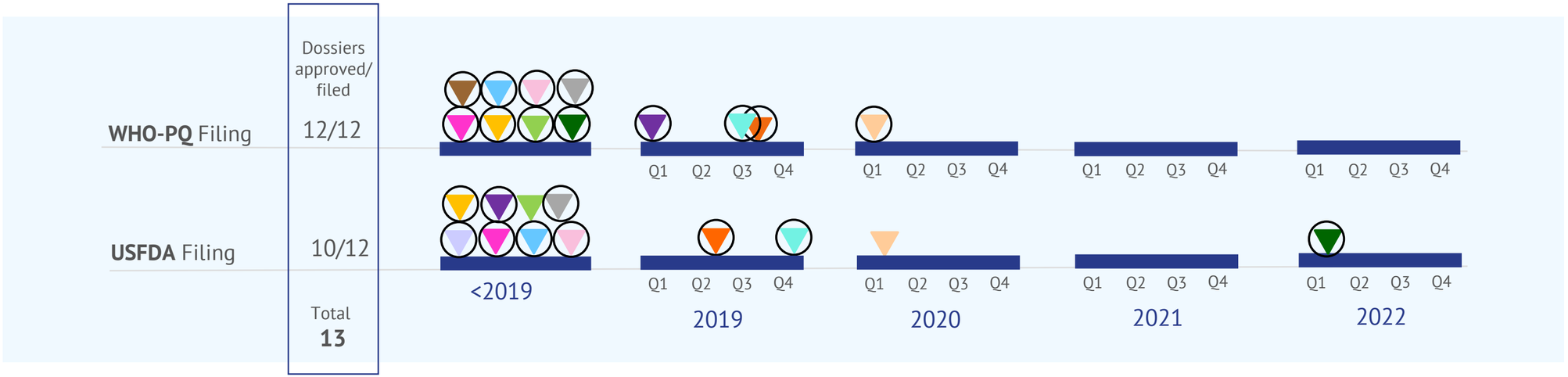
Worldwide



Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions
^ People living with HIV
# MPP-ViiV DTG licence agreement

Data as of December 2023

TDF/3TC/DTG (TLD): FORMULATION DEVELOPMENT TIMELINES



Companies approved Companies filed

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

13 MPP LICENSEES HAVE DEVELOPED TDF/3TC/DTG AND ALL ARE READY TO COMMERCIALIZE THE PRODUCT

Licensees Approved*: Aurobindo, Celltrion, Cipla, Desano, Emcure, Hetero, Laurus, Lupin, Macleods, Micro Labs, Mylan, Strides, Sun Pharma

2 licensees awaiting USFDA approval

*USFDA and/or WHO-PQ

Data as of December 2023

medicines patent pool

TDF/3TC/DTG has been filed in 82 countries which contribute to an effective coverage of 93.9% PLHIV^

TDF/3TC/DTG (TLD): COUNTRY WISE FILING STATUS

APPROVED (69)
91.6% PLHIV

Anguilla*	**Bhutan**	**Congo, DR**	**Haiti**	**Malaysia**	**Nepal**	Saint Vincent and the Grenadines*	**Uganda**
Antigua and Barbuda*	**Botswana**	**Côte d'Ivoire**	**India**	**Mali**	**Niger**	**Senegal**	**Ukraine**
Armenia	**Burkina Faso**	Dominica*	**Indonesia**	**Mauritania**	**Nigeria**	**South Africa**	**Uzbekistan**
Azerbaijan	**Burundi**	**Ethiopia**	**Jamaica**	Mauritius	**Panama**	**Suriname**	**Viet Nam**
Bahamas*	**Cambodia**	**Gabon**	**Kazakhstan**	**Moldova**	**Peru***	**Tajikistan**	**Zambia**
Barbados*	**Cameroon**	**Gambia**	**Kenya**	Montserrat*	**Philippines**	**Tanzania**	**Zimbabwe**
Belarus	**Chad**	**Ghana**	**Kyrgyzstan**	**Mozambique**	**Rwanda**	**Thailand**	
Belize	**Chile***	Grenada*	**Madagascar**	**Myanmar**	Saint Kitts and Nevis	**Turkmenistan**	
Benin	**Congo**	**Guyana**	**Malawi**	**Namibia**	Saint Lucia*	**Turks and Caicos Islands***	

FILED (13)
2.3% PLHIV

Costa Rica*	**Guinea**	**Sierra Leone**	Uruguay*
Dominican Republic	**Lebanon**	Sri Lanka	
El Salvador	**Morocco**	**Sudan**	
Guatemala	**Pakistan**	**Togo**	

Countries where TLD has been sold indicated in **bold type**
* Countries not included in DTG Adult licence but supply by MPP licensees permitted if no patent is being infringed in that country
^ People living with HIV in the licensed territory (refer MPP-ViiV DTG licence agreement) and countries with no patent infringements
Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of December 2023

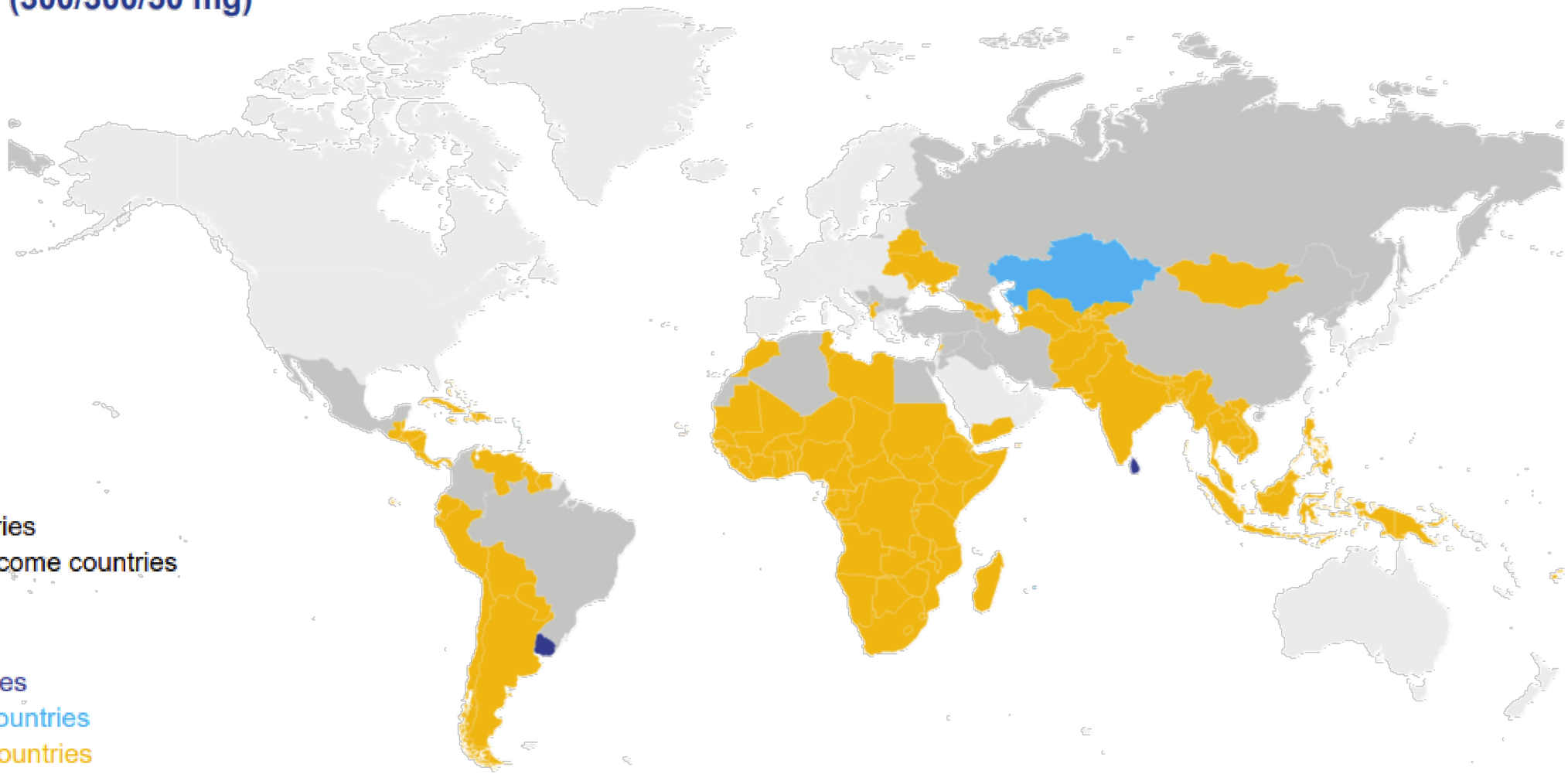
TDF/3TC/DTG (TLD) IMPACT MAP

TDF/3TC/DTG sales have occurred in **107** countries in which **99.4%** of PLHIV^ reside

TLD - TDF/3TC/DTG (300/300/50 mg)

Disease: HIV

Worldwide



Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions
^ People living with HIV in the licensed territory (refer MPP-ViiV DTG licence agreement) and countries with no patent infringements

Data as of December 2023

DTG 50MG & TDF/3TC/DTG (TLD): COUNTRIES OF SALE- (2017 TO Dec 2023)

Countries of Sale (128) covered by the licence#, where 99.9% of PLHIV^ reside								
Afghanistan	Bermuda	Costa Rica	Gambia (the)	Kazakhstan	Micronesia	Papua New Guinea	Sri Lanka	Uruguay
Albania	Bhutan	Côte d'Ivoire	Georgia	Kenya	Moldova, Republic of	Paraguay	State of Palestine	Uzbekistan
Algeria	Bolivia	Cuba	Ghana	Kosovo	Mongolia	Peru	Sudan	Venezuela
Angola	Botswana	Djibouti	Grenada	Kyrgyzstan	Montserrat	Philippines	Suriname	Viet Nam
Anguilla	Burkina Faso	Dominica	Guatemala	Lao People's Democratic Republic (the)	Morocco	Rwanda	Syrian Arab Republic	Virgin Islands (British)
Antigua and Barbuda	Burundi	Dominican Republic	Guinea	Lebanon	Mozambique	Saint Kitts and Nevis	Tajikistan	Yemen
Argentina	Cabo Verde	Ecuador	Guinea-Bissau	Lesotho	Myanmar	Saint Lucia	Tanzania	Zambia
Armenia	Cambodia	Egypt	Guyana	Liberia	Namibia	Saint Vincent and the Grenadines	Thailand	Zimbabwe
Azerbaijan	Cameroon	El Salvador	Haiti	Libya	Nepal	Sao Tome and Principe	Timor-Leste	
Bahamas	Central African Republic	Equatorial Guinea	Honduras	Madagascar	Nicaragua	Senegal	Togo	
Bangladesh	Chad	Eritrea	India	Malawi	Niger	Seychelles	Tunisia	
Barbados	Chile	Eswatini	Indonesia	Malaysia	Nigeria	Sierra Leone	Turkmenistan	
Belarus	Comoros	Ethiopia	Iran	Mali	Oman	Somalia	Turks and Caicos Islands	
Belize	Congo	Fiji	Jamaica	Mauritania	Pakistan	South Africa	Uganda	
Benin	Congo, DR	Gabon	Jordan	Mauritius	Panama	South Sudan	Ukraine	

Analysis include sales of DTG 50mg and TDF/3TC/DTG:

Sales of DTG 50mg only (n=21) Sales of TLD only (n=2)

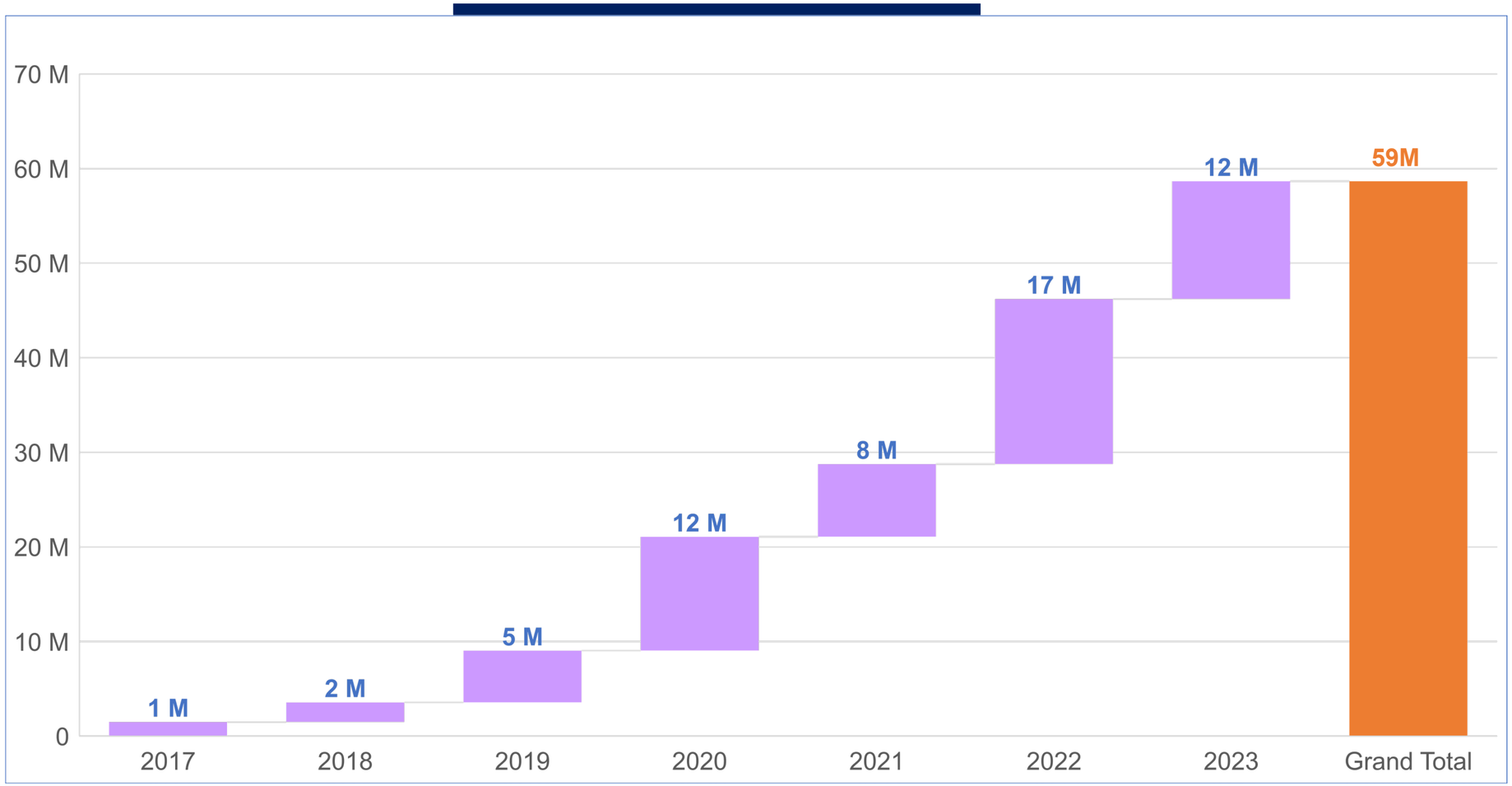
^ People living with HIV

MPP-ViiV DTG licence agreement

Data as of December 2023

CUMULATIVE PACKS SOLD: DTG 50MG (2017 - 2023)

59 million packs of DTG 50mg sold till December 2023



Source: confidential sales data by MPP licensees

DTG 50mg Total Packs

Note: Packs of 28's, 90's & 180's converted to 30's for this analysis

Data as of December 2023

CUMULATIVE PACKS SOLD: TLD (2018 - 2023)

1.05 billion packs of TLD sold till December 2023

Source: confidential sales data by MPP licensees

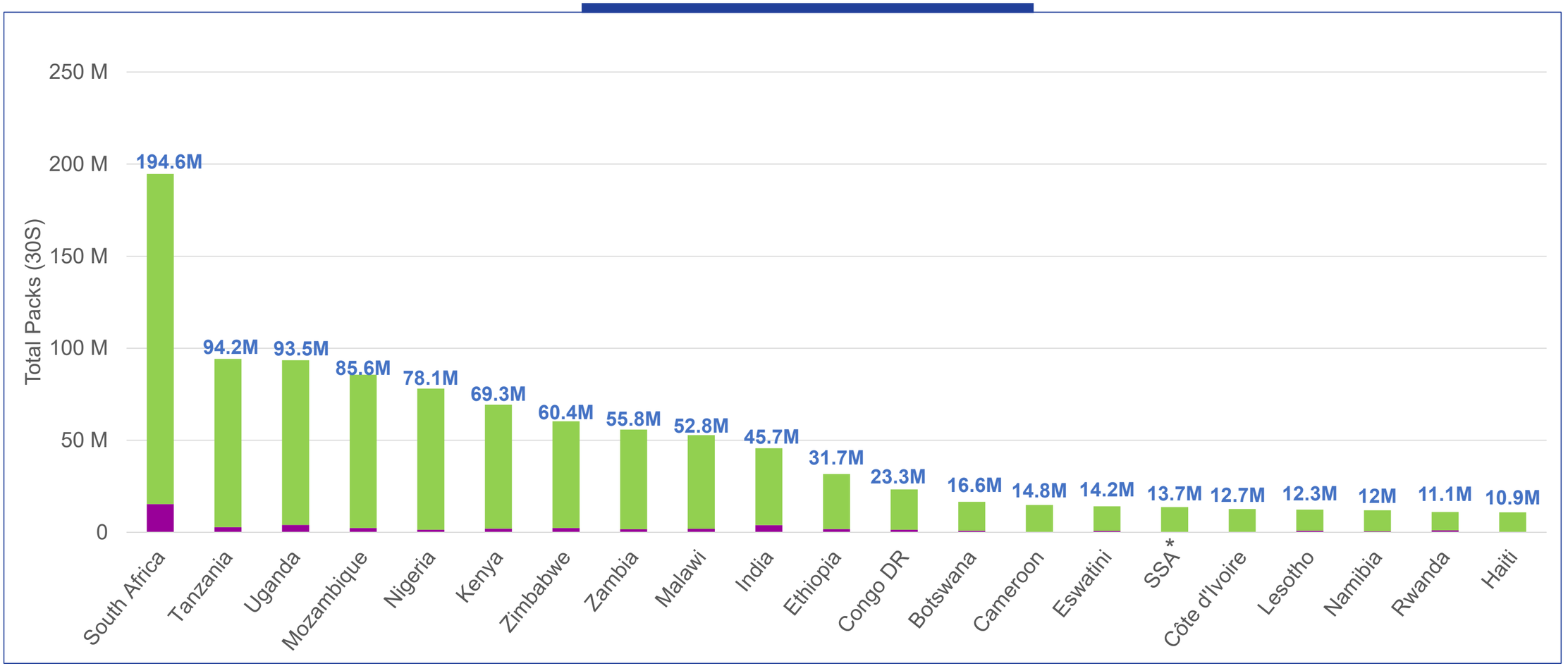
Note: Packs of 28's, 90's & 180's converted to 30's for this analysis

TLD Total Packs

Data as of December 2023

TOP COUNTRY RECIPIENTS OF DTG & TLD (2018 - 2023)

Top 20 countries receiving DTG 50mg and TLD



Source: confidential sales data by MPP licensees

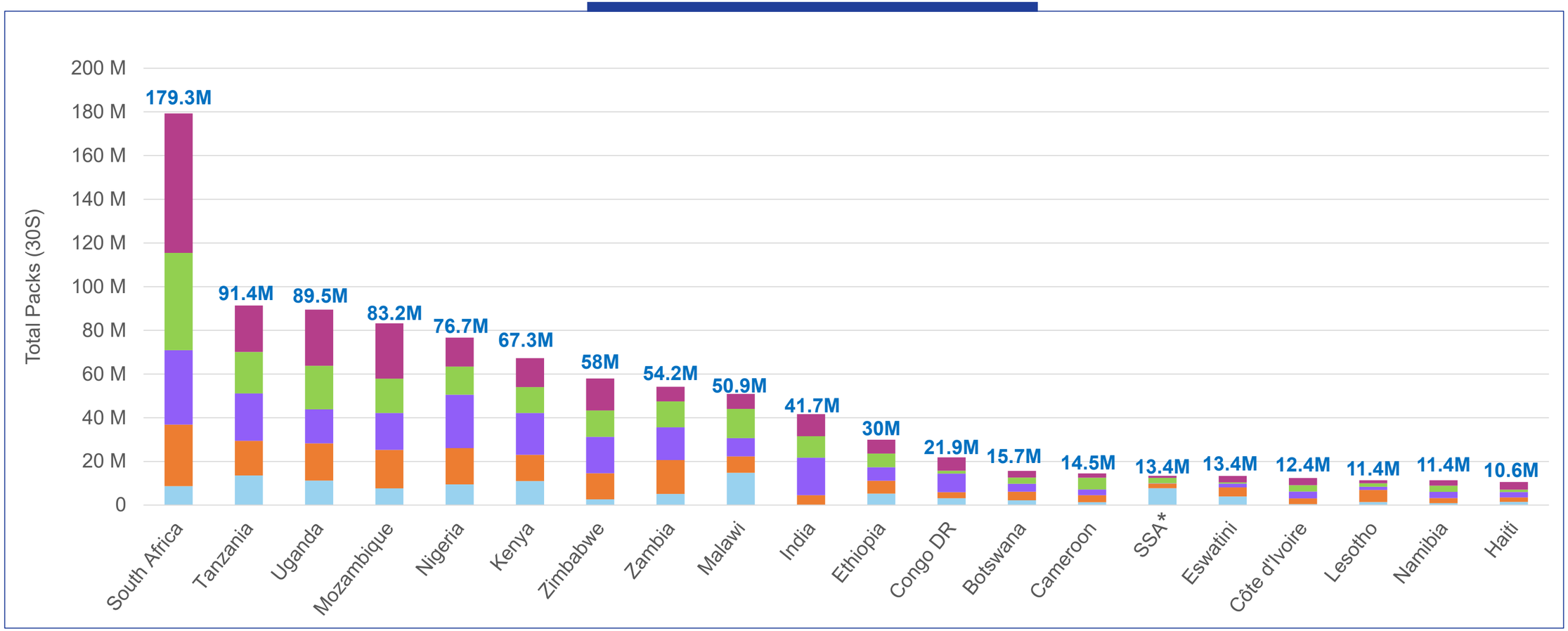
Note: Packs of 28's, 90's & 180's converted to 30's for this analysis

* Undistributed sales in Sub-Saharan Africa

Data as of December 2023

RAPID SCALE-UP OF TLD (2018 - 2023)

As of December 2023, TLD was supplied in 107 countries by 13 of MPP Partners



Source: confidential sales data by MPP licensees

Note: Packs of 28's, 90's & 180's converted to 30's for this analysis

* Undistributed sales in Sub-Saharan Africa

Data as of December 2023

ABC/3TC/DTG ADULT (ALD): FORMULATION DEVELOPMENT TIMELINES

Companies approved ▼ Companies filed

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

6 MPP LICENSEES HAVE DEVELOPED ABC/3TC/DTG ADULT FORMULATION, OF WHICH: 2 ARE READY TO COMMERCIALIZE

Licensees Approved: Aurobindo, Laurus

4 licensees awaiting USFDA approval

Data as of December 2023

ABC/3TC/DTG (ALD): COUNTRY WISE FILING STATUS

ABC/3TC/DTG has been filed in 37 countries

APPROVED (20)

Botswana	Ghana	Malawi	**South Africa**	Uruguay*
Cambodia	**India**	Mozambique	Tanzania	Uzbekistan
Congo, DR	Kazakhstan	Myanmar	**Uganda**	Zambia
Gabon	**Kenya**	**Namibia**	**Ukraine**	Zimbabwe

FILED (17)

Benin	Guatemala	Pakistan	Thailand
Burkina Faso	Guyana	Philippines	Viet Nam
Costa Rica*	Jamaica	Rwanda	
El Salvador	**Mali**	Senegal	
Ethiopia	Moldova	Sri Lanka	

New filings and approvals in green *vis-à-vis last update (Q2-23)*
Countries where ALD has been sold indicated in **bold type**
* Countries not included in DTG Adult licence but supply by MPP licensees permitted if no patent is being infringed in that country
Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of December 2023

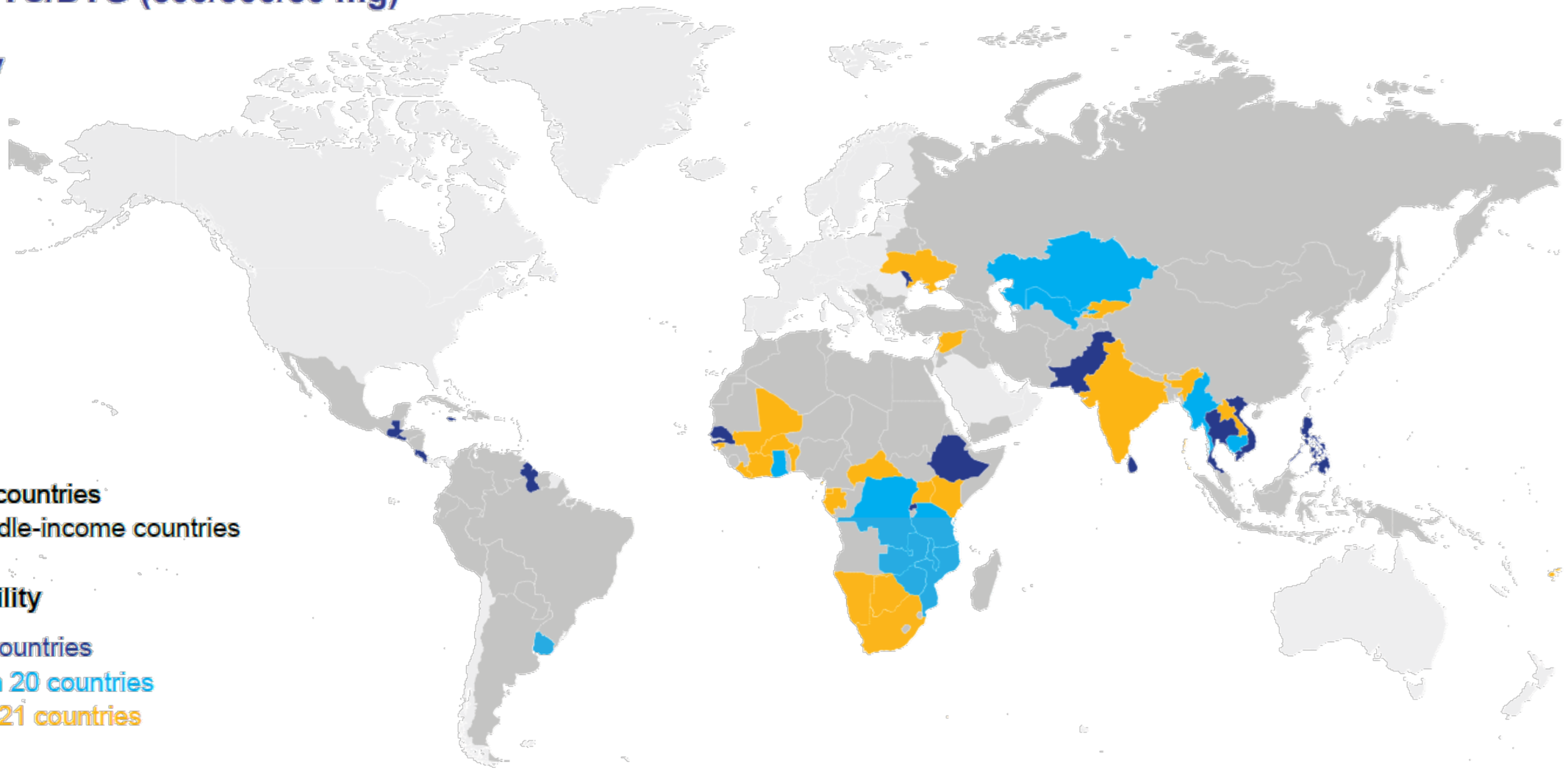
ABC/3TC/DTG (ALD) IMPACT MAP

ABC/3TC/DTG (ALD) sales have occurred in **21** countries

ALD - ABC/3TC/DTG (600/300/50 mg)

Disease: HIV

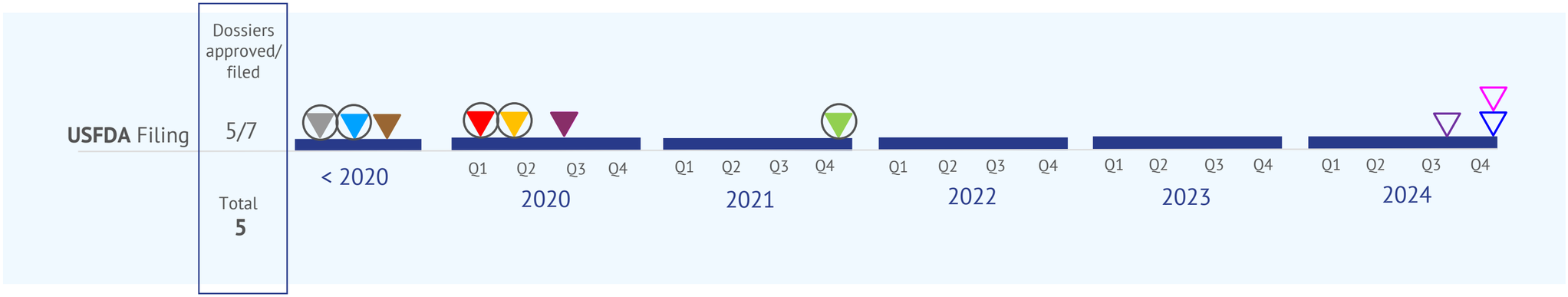
Worldwide



Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of December 2023

TAF/FTC/DTG (TAF-ED): FORMULATION DEVELOPMENT TIMELINES



7 MPP LICENSEES HAVE DEVELOPED TAF/FTC/DTG FORMULATION, OF WHICH: 5 ARE READY TO COMMERCIALIZE

Licensees Approved: Aurobindo, Hetero, Laurus, Lupin, Mylan

2 licensees awaiting USFDA approval | 3 additional licensee developing

Data as of December 2023

TAF/FTC/DTG has been filed in 42 countries which contribute to an effective coverage of 92.1% of PLHIV^

TAF/FTC/DTG (TAF-ED): COUNTRY WISE FILING STATUS

APPROVED (26) 85% PLHIV	
Botswana	Malawi
Burkina Faso	Mozambique
Cambodia	**Myanmar**
Cameroon	**Namibia**
Congo	Nigeria
Congo, DR	**Philippines**
Ethiopia	**South Africa**
Ghana	Tanzania
Guatemala	**Thailand**
India	**Uganda**
Kazakhstan	**Ukraine**
Kenya	**Zambia**
Kyrgyzstan	**Zimbabwe**

FILED (16) 7.1% PLHIV		
Benin	Indonesia	Rwanda
Côte d'Ivoire	Jamaica	**Senegal**
Dominican Republic	Malaysia	**Sri Lanka**
El Salvador	**Mali**	Viet Nam
Gabon	**Moldova**	
Guyana	Pakistan	

New filings and approvals in green *vis-à-vis last update (Q2-23)*
Countries where TAF-ED has been sold indicated in **bold type**
^ People living with HIV in the licensed territory (refer MPP-Gilead TAF licence agreement)
Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of December 2023

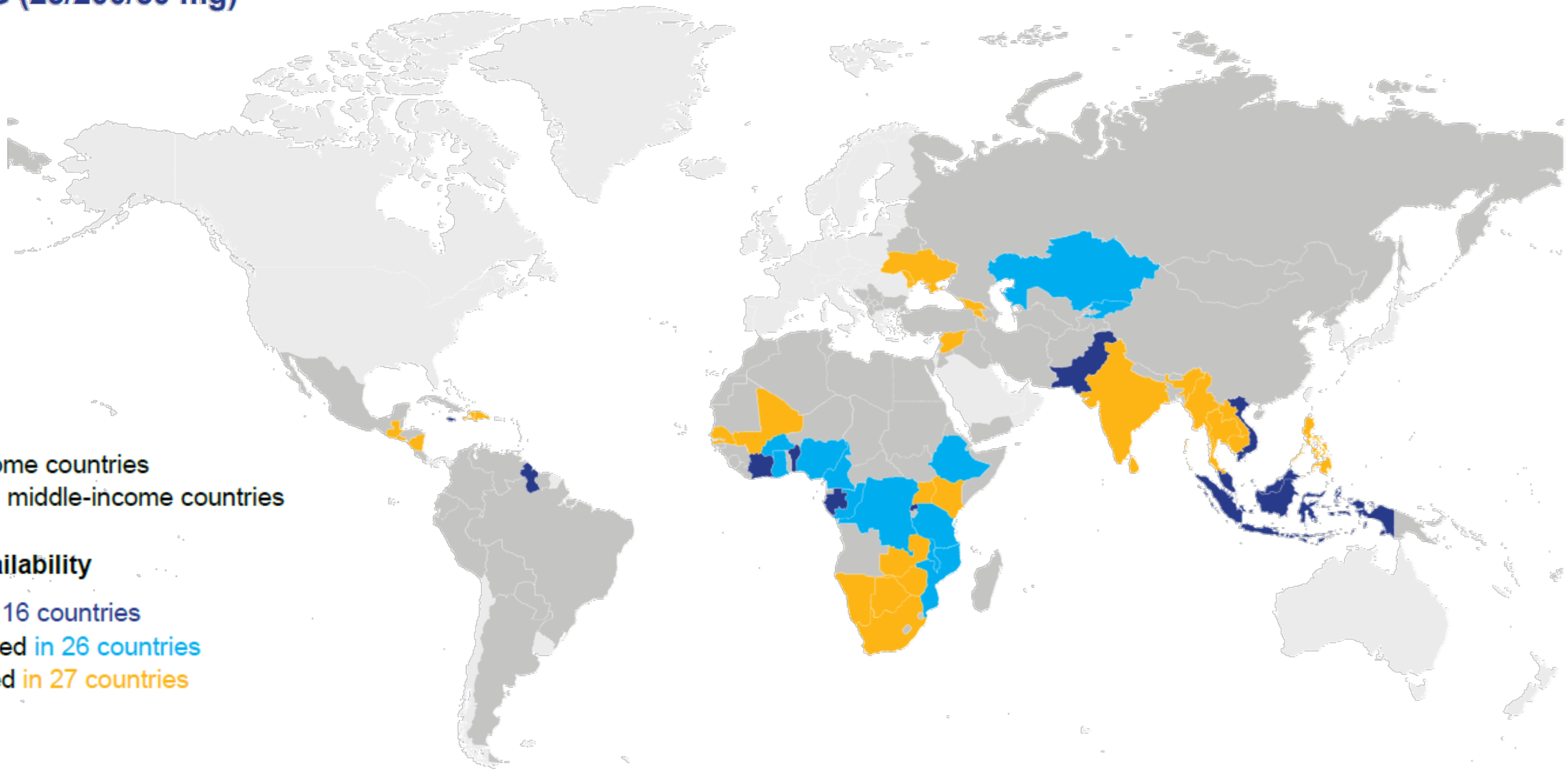
TAF/FTC/DTG (TAF-ED) IMPACT MAP

TAF/FTC/DTG sales have occurred in **27** countries in which **57.6%** of PLHIV^ reside

TAF/FTC/DTG (25/200/50 mg)

Disease: HIV

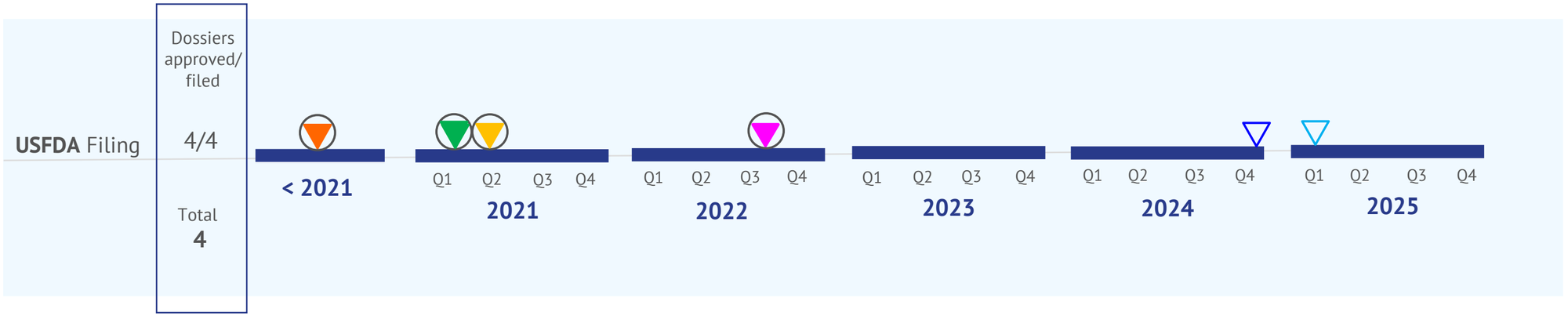
Worldwide



Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions
^ People living with HIV in the licensed territory (refer MPP-Gilead TAF licence agreement)

Data as of December 2023

TAF/3TC/DTG (TAF-LD): FORMULATION DEVELOPMENT TIMELINES



Companies approved ▼ Companies filed ▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

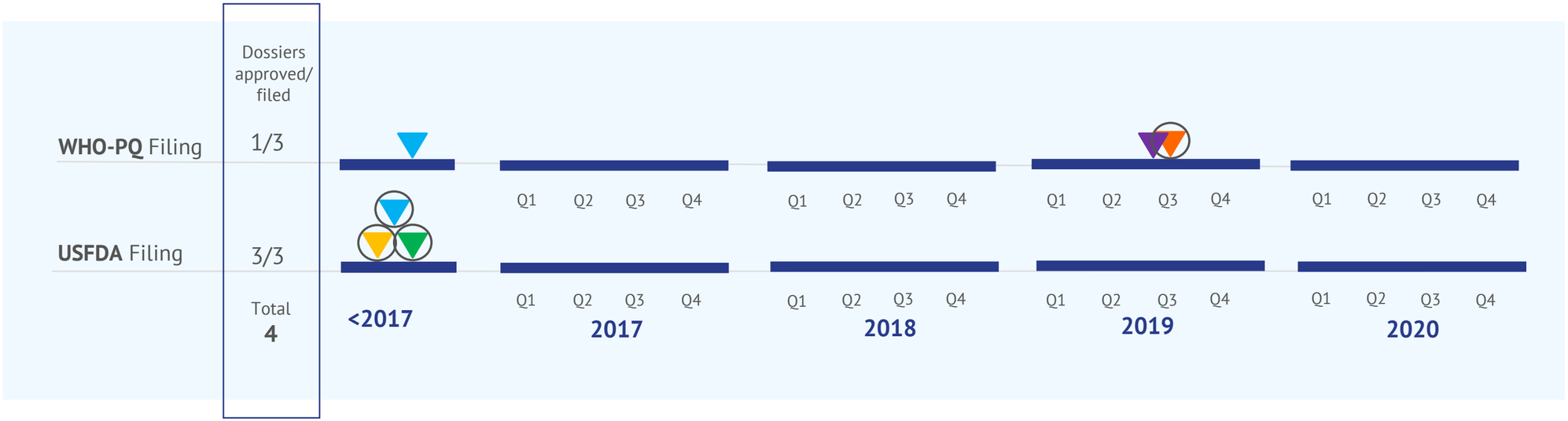
4 MPP LICENSEES HAVE DEVELOPED TAF/3TC/DTG ADULT FORMULATION AND ALL ARE READY TO COMMERCIALIZE

Licensees Approved: Cipla, Laurus, Lupin, Mylan

2 additional licensees developing

Data as of December 2023

ATV/r: FORMULATION DEVELOPMENT TIMELINES



5 MPP LICENSEES HAVE DEVELOPED ATV/R FORMULATION, OF WHICH: 4 ARE READY TO COMMERCIALIZE

Licensees Approved*: Cipla, Desano, Emcure, Mylan

2 licensees awaiting WHO-PQ approval

*USFDA and/or WHO-PQ

Data as of December 2023

medicines patent pool

ATV/R: COUNTRY WISE FILING STATUS

Generic ATV/r has been filed in **51** countries which contribute to an effective coverage of **91.7%** PLHIV^

APPROVED (36) 85.4% PLHIV				
Armenia	**Congo DR**	**Kenya**	**Namibia**	**Ukraine**
Belarus	**Dominican Republic**	**Kyrgyzstan**	**Nigeria**	**Uzbekistan**
Botswana	**Ethiopia**	**Madagascar**	Philippines	**Zambia**
Burkina Faso	**Ghana**	**Malawi**	**Rwanda**	**Zimbabwe**
Cambodia	Guatemala	**Mali**	**South Africa**	
Cameroon	Guyana	Mauritius	**Tanzania**	
Colombia*	**India**	**Mozambique**	**Trinidad and Tobago***	
Congo	**Jamaica**	**Myanmar**	**Uganda**	

FILED (15) 6.3% PLHIV			
Benin	**Côte d'Ivoire**	**Moldova**	**Senegal**
Bolivia	El Salvador	**Niger**	**Sri Lanka**
Burundi	Indonesia	**Pakistan**	Viet Nam
Costa Rica	**Malaysia**	**Peru***	

New approvals in green *vis-à-vis last update (Q2-23)*
Countries where ATV/r has been sold indicated in **bold type**
* Countries not included in ATV licence but supply by MPP licensees permitted if no patent is being infringed in that country
^ People living with HIV in the licensed territory (refer MPP-BMS ATV licence agreement) and countries with no patent infringements
Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of December 2023

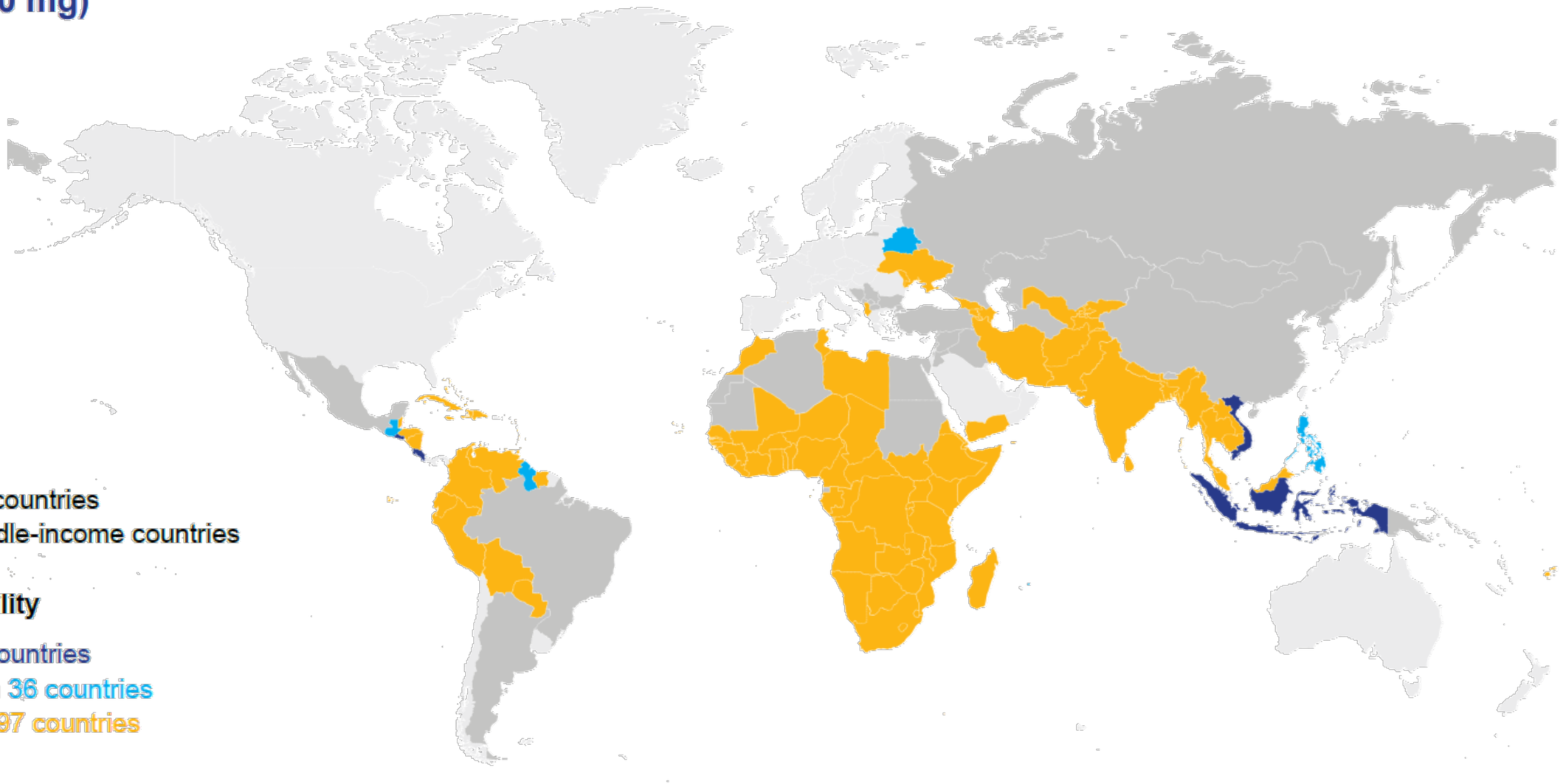
ATV/r IMPACT MAP

ATV/r sales have occurred in **97** countries in which **95.1%** of PLHIV^ reside

ATV/r (300/100 mg)

Disease: HIV

Worldwide



Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions
^ People living with HIV in the licensed territory (refer MPP-BMS ATV licence agreement) and countries with no patent infringements

Data as of December 2023

DTG/3TC: FORMULATION DEVELOPMENT TIMELINES

Companies approved ▼ Companies filed ▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

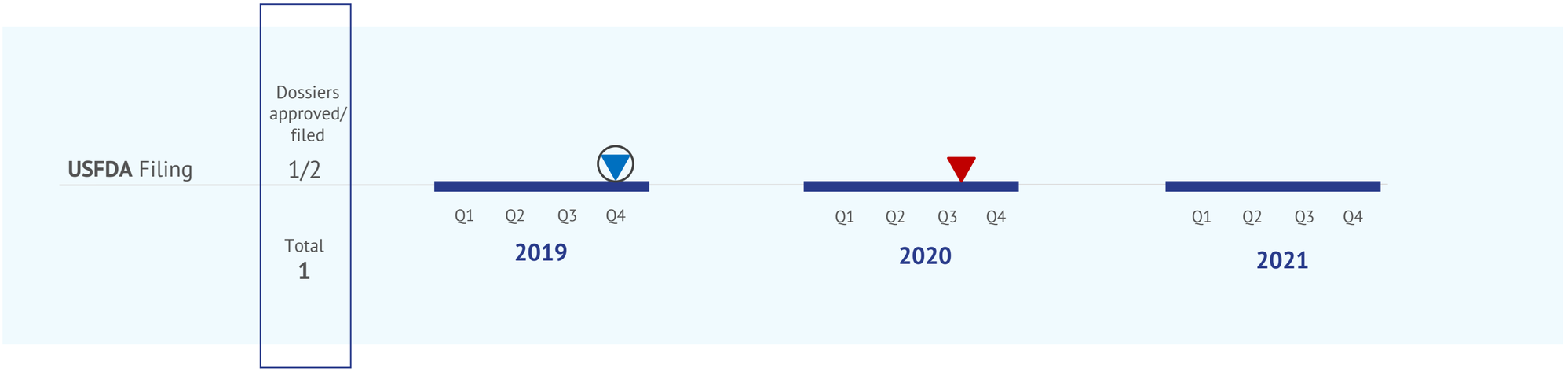
3 MPP LICENSEES HAVE DEVELOPED DTG/3TC DUAL FORMULATION

Licensee Approved: Cipla

2 licensees awaiting USFDA approval | 2 additional licensees developing

Data as of December 2023

DTG/RPV: FORMULATION DEVELOPMENT TIMELINES



Companies approved ▼ Companies filed

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

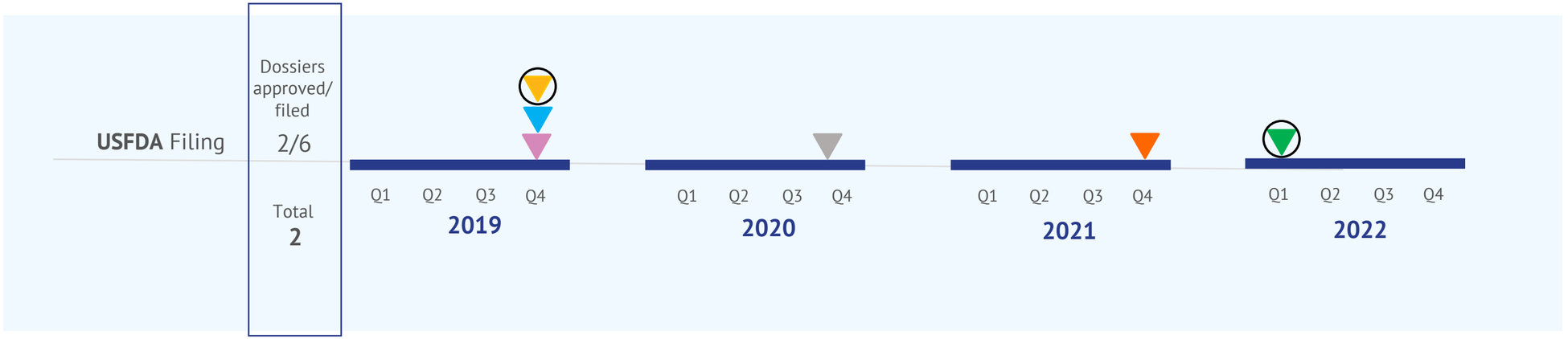
2 MPP LICENSEES HAVE DEVELOPED DTG/RPV DUAL FORMULATION

Licensee Approved: Lupin

1 licensee awaiting USFDA approval

Data as of December 2023

TAF/FTC:
FORMULATION DEVELOPMENT TIMELINES



Note: *Each triangle represents a manufacturer and timelines represent date of filing*

6 MPP LICENSEES HAVE DEVELOPED TAF/FTC DUAL FORMULATION

Licensee Approved: Aurobindo, Laurus

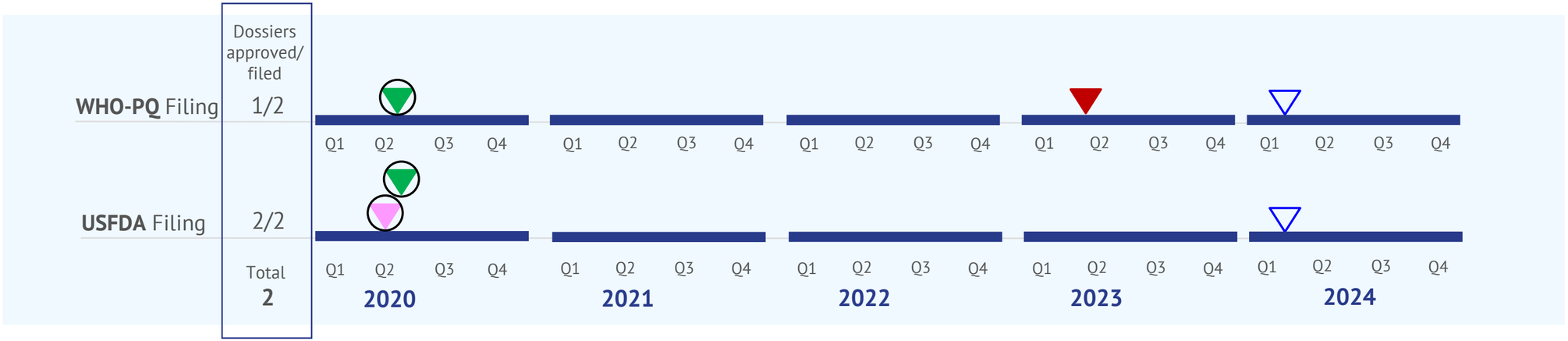
4 licensees awaiting USFDA approval

Data as of December 2023

PAEDIATRIC HIV

MEDICINESPATENTPOOL.ORG

DTG DT PAED (10MG SCORED): FORMULATION DEVELOPMENT TIMELINES



Companies approved ▼ Companies filed ▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

3 MPP LICENSEES HAVE DEVELOPED DTG DT PAED FORMULATION

Licensees Approved*: Macleods, Mylan

1 licensee awaiting WHO approval | 1 additional licensee developing

*USFDA and/or WHO-PQ

Data as of December 2023

DTG DT PAED (10MG SCORED): COUNTRY WISE FILING STATUS

Generic DTG DT 10mg has been filed in 36 countries which contribute to an effective coverage of 89.2% of CLHIV^

APPROVED (22) 71.8% CLHIV	
Botswana	Myanmar
Cameroon	Namibia
Chad	Rwanda
Congo	South Africa
Congo, DR	Tanzania
Ethiopia	Thailand
Ghana	Togo
India	Uganda
Kenya	Uzbekistan
Malawi	Zambia
Mozambique	Zimbabwe

FILED (14) 17.4% CLHIV		
Benin	Guatemala	Nigeria
Burkina Faso	Guinea-Bissau	Philippines
Burundi	Indonesia	Senegal
Côte d'Ivoire	Mali	Viet Nam
Gabon	Niger	

New filings and approvals in green *vis-à-vis last update (Q2-23)*
Countries where DTG DT 10MG has been sold indicated in **bold type**
^ Children living with HIV in the licensed territory (refer MPP-ViiV DTG Paed licence agreement) and countries with no patent infringements
Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of December 2023

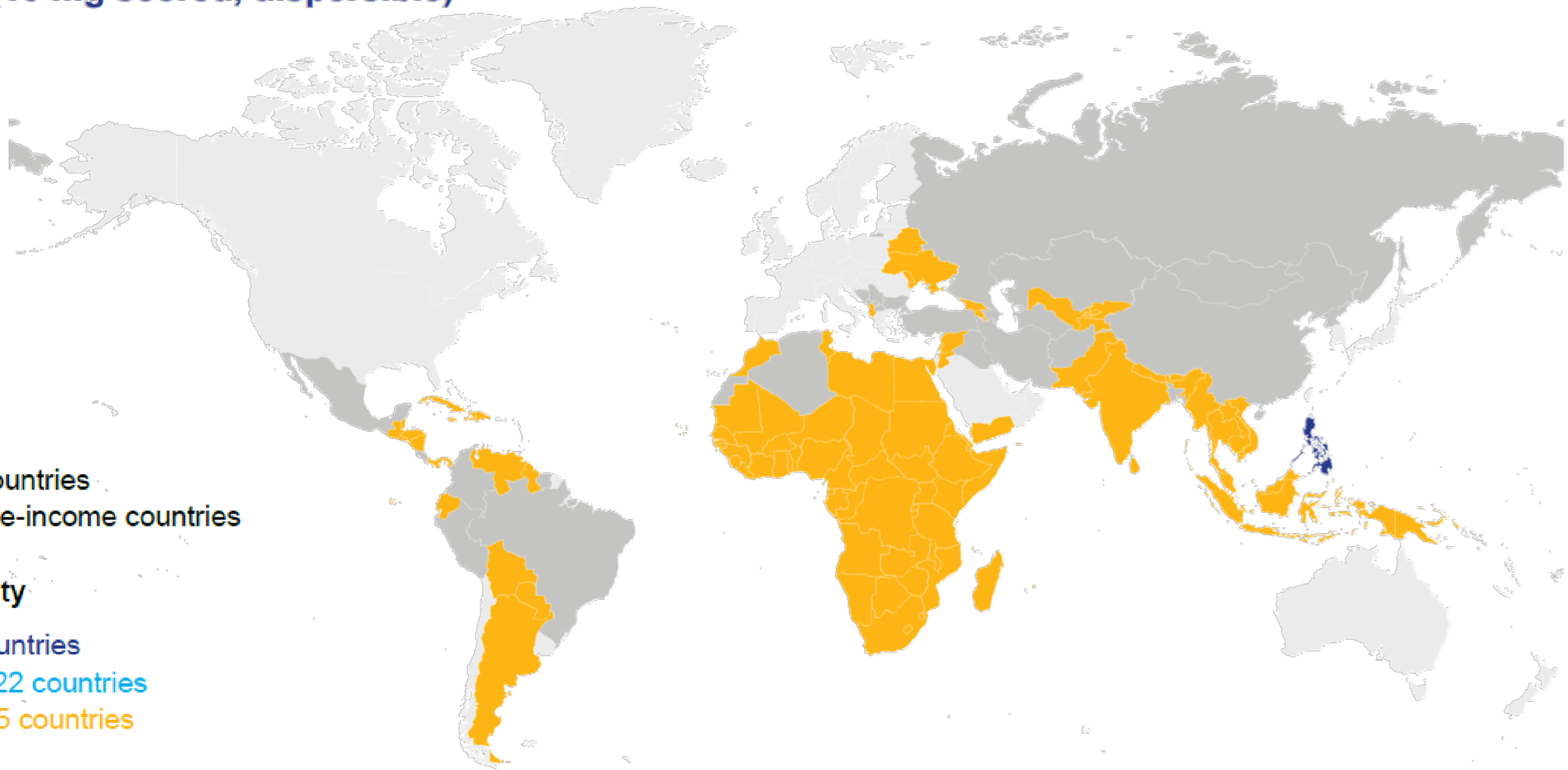
DTG DT 10MG IMPACT MAP

DTG DT 10mg sales have occurred in **95** countries in which **99.3%** of CLHIV^ reside

DTG paediatric (10 mg scored, dispersible)

Disease: HIV

Worldwide

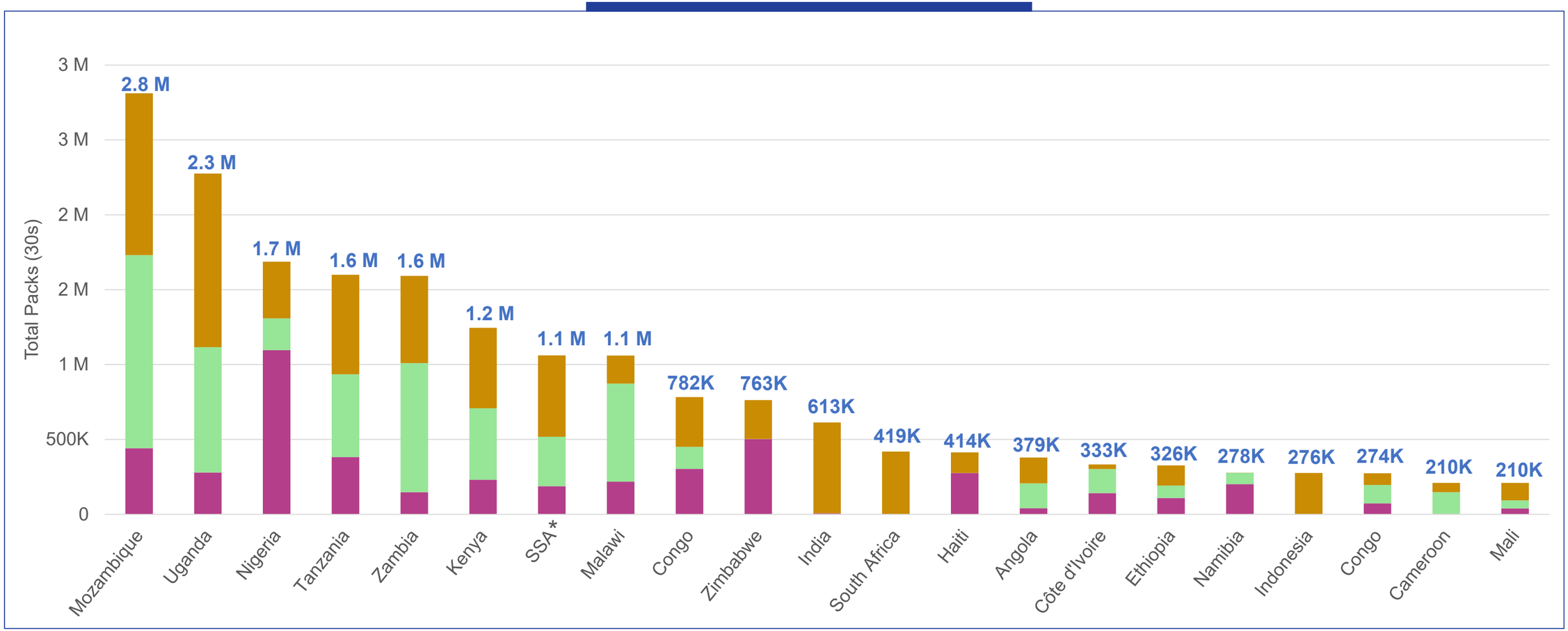


Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions
^ Children living with HIV in the licensed territory (refer MPP-ViiV DTG Paed licence agreement) and countries with no patent infringements

Data as of December 2023

RAPID SCALE-UP OF DTG DT 10MG (2021 - 2023)

As of 2023, DTG DT 10mg was supplied in 95 countries by 2 of MPP Partners



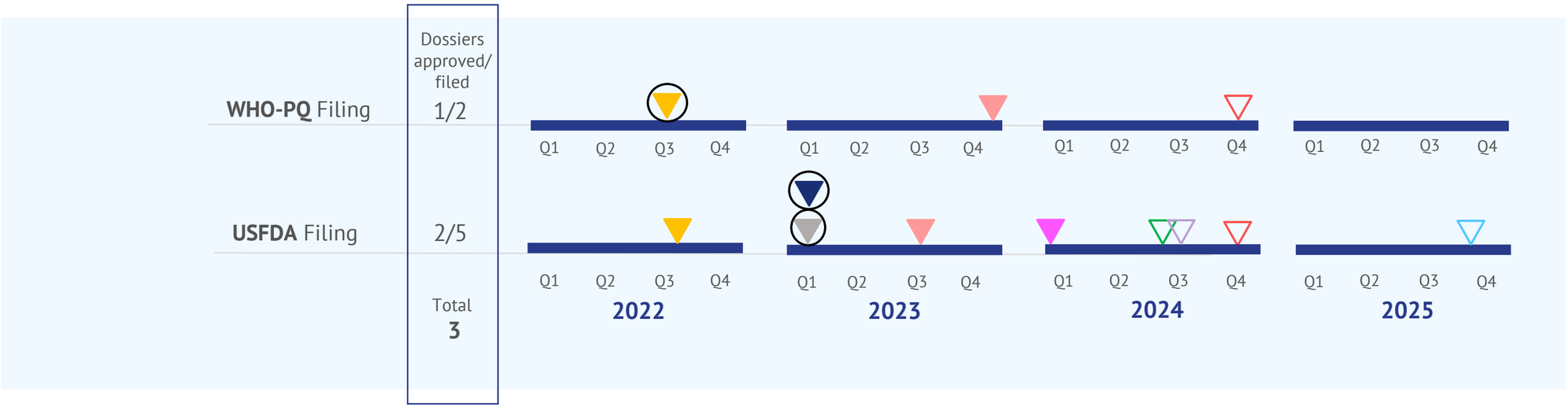
Source: confidential sales data by MPP licensees

Note: Packs of 30's & 90's converted to 30's for this analysis

* Undistributed sales in Sub-Saharan Africa

Data as of December 2023

ABC/3TC/DTG PAED (ALD): FORMULATION DEVELOPMENT TIMELINES



3 MPP LICENSEES HAVE DEVELOPED ABC/3TC/DTG PAED FORMULATION

Licensees Approved*: Aurobindo, Cipla, Mylan

1 licensee awaiting WHO approval | 3 licensees awaiting USFDA approval | 4 additional licensees developing

*USFDA and/or WHO-PQ

Data as of December2023

HEPATITIS

CURRENT SUBLICENSEES FOR BMS-MPP DACLATASVIR LICENCE

7 Daclatasvir Sub-licensee Agreements

BEXIMCO PHARMA here's to life

Cipla

HETERO

LAURUS Labs
Knowledge . Innovation . Excellence

Mylan

NATCO

zydus
Dedicated To Life

DAC 30MG & 60MG: FORMULATION DEVELOPMENT TIMELINES

Companies approved

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

4 MPP LICENSEES HAVE DEVELOPED DAC 30/60 MG FORMULATION AND ALL ARE READY TO COMMERCIALIZE

Licensees Approved: Cipla, Hetero, Laurus, Mylan

Data as of December 2023

DAC 30 & 60MG: COUNTRY WISE FILING STATUS

Generic DAC 30/60 mg has been filed in 49 countries which contribute to an effective coverage of 60.3% PLHCV^

APPROVED (42) 58.5% PLHCV				
Azerbaijan	Congo, DR	Kenya	**Pakistan**	Uganda
Belarus	Côte d'Ivoire	**Kyrgyzstan**	**Paraguay**	**Ukraine**
Benin	Ethiopia	Liberia	**Philippines**	**Uzbekistan**
Burkina Faso	Gabon	Malawi	**Rwanda**	**Viet Nam**
Burundi	Ghana	**Malaysia**	Senegal	Zambia
Cambodia	Guyana	Mozambique	Suriname	**Zimbabwe**
Cameroon	**India**	**Myanmar**	**Tanzania**	
Chad	**Indonesia**	Nicaragua	Thailand	
Congo	**Kazakhstan**	**Nigeria**	**Turkmenistan**	

FILED (7) 1.8% PLHCV		
Bolivia	**Mongolia**	Togo
Haiti	Namibia	
Mali	**Nepal**	

Countries where either DAC 30mg or DAC 60mg have been sold indicated in **bold type**

^ People living with Hepatitis C in the licensed territory (refer MPP-BMS DAC licence agreement) and countries with no patent enforcements

 # Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of December 2023

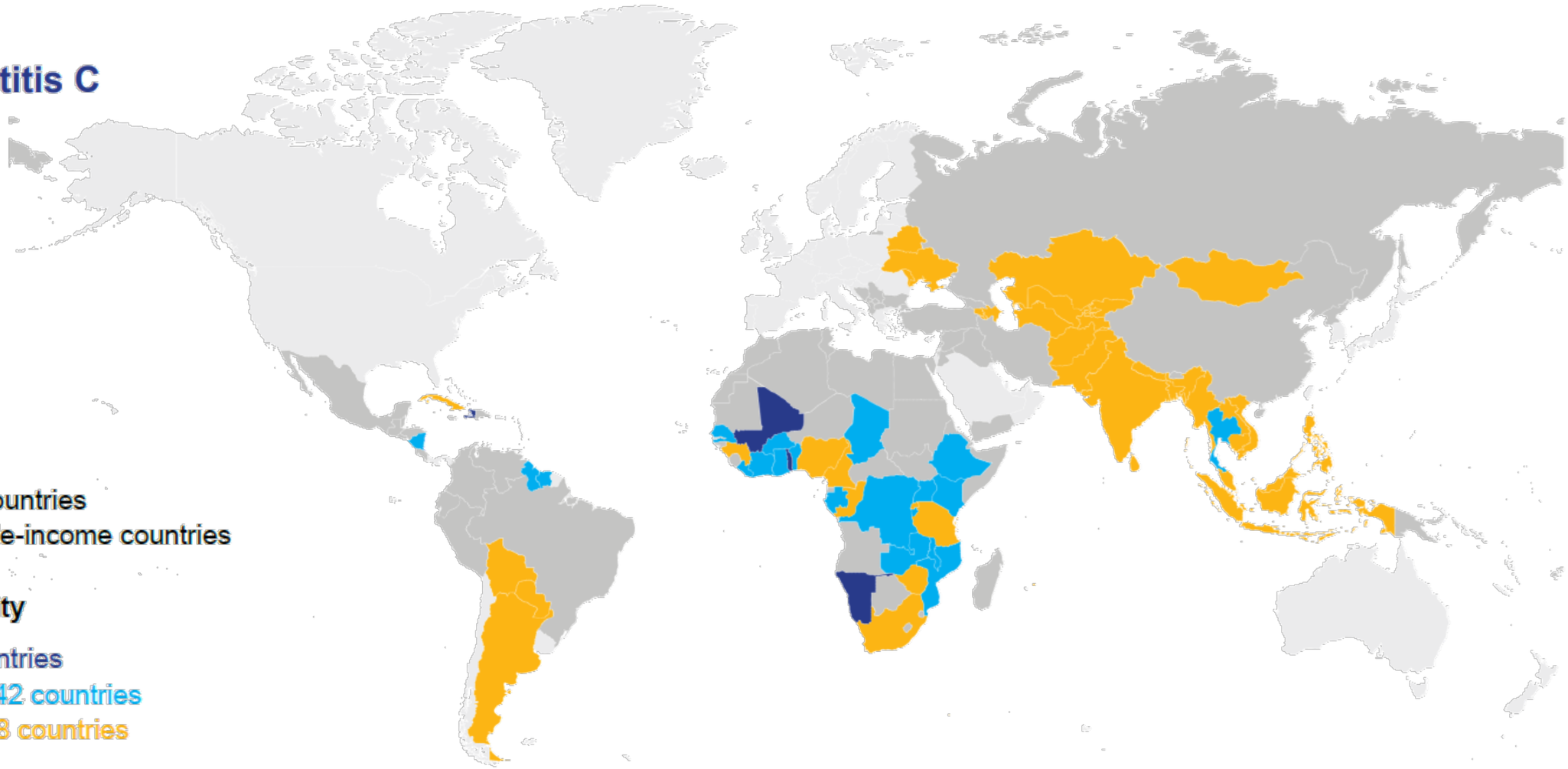
DAC 60MG IMPACT MAP

DAC 60mg sales have occurred in **38** countries in which **55.9%** of PLHCV^ reside and where MPP licensees have supplied more than **~1.43 million treatments***

DAC (60 mg)

Disease: Hepatitis C

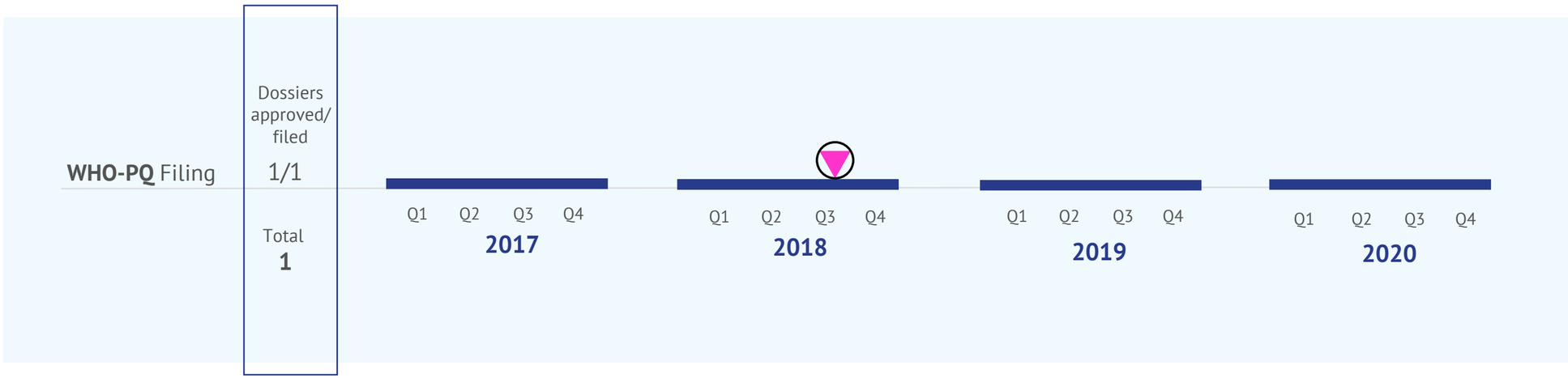
Worldwide



Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions
^ People living with Hepatitis C in the licensed territory (refer MPP-BMS DAC licence agreement) and countries with no patent enforcements
**Note: 1 HCV treatment = 12 weeks therapy (3 packs)*

Data as of December 2023

DAC/SOF: FORMULATION DEVELOPMENT TIMELINES



Companies approved

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

1 MPP LICENSEE HAS DEVELOPED DAC/SOF FORMULATION

Licensee Approved: Mylan

Data as of December 2023

DAC/SOF: COUNTRY WISE FILING STATUS

DAC/SOF has been filed in **20** countries, out of which approval has been received in **17** countries

APPROVED (17)		
Belarus*	Kenya	Tanzania
Côte d'Ivoire	Malawi	**Turkmenistan**
Ethiopia	**Myanmar**	**Uganda**
Ghana	**Nigeria**	**Ukraine***
India	Paraguay	Zimbabwe
Indonesia	Suriname	

Countries where DAC/SOF has been sold indicated in **bold type**
* Countries not included in DAC licence but supply by MPP licensees permitted if no patent is being infringed in that country
Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of December 2023

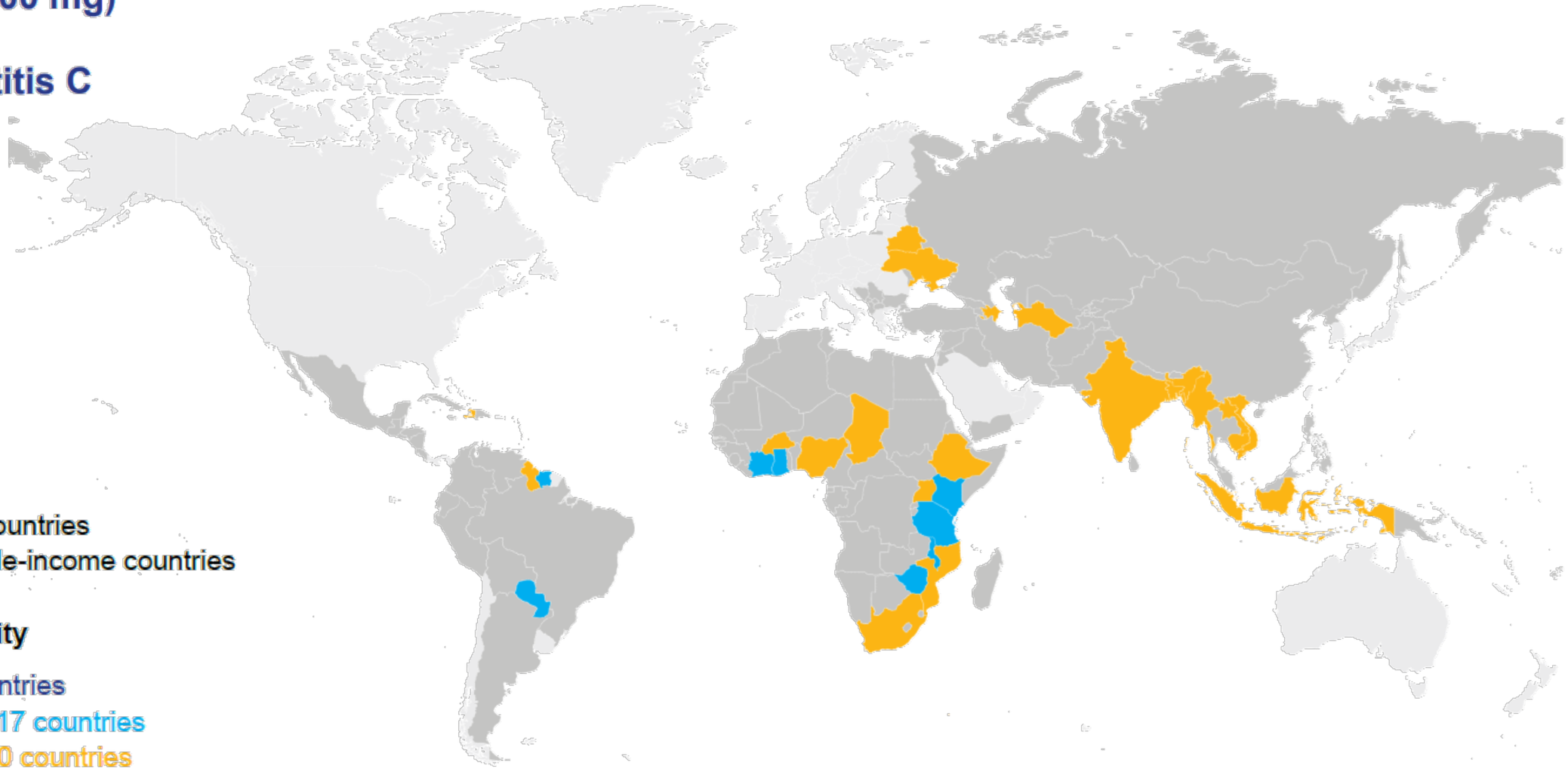
DAC/SOF IMPACT MAP

MPP licensees have supplied **~392,634** packs* of generic DAC/SOF across **20** countries

DAC/SOF (60/400 mg)

Disease: Hepatitis C

Worldwide



*Packs of 28

Data as of December 2023

CURRENT SUBLICENSEES FOR GILEAD-MPP TENOFOVIR ALAFENAMIDE LICENCE

10 Tenofovir Alafenamide Sub-licensee Agreements

adcock ingram
AUROBINDO
DESANO
Emcure
SUCCESS THROUGH INNOVATION
LANGHUA 朗华制药
LAURUS Labs
Knowledge . Innovation . Excellence
LUPIN
MACLEODS
MICRO LABS LIMITED
NATCO

TAF 25MG:
FORMULATION DEVELOPMENT TIMELINES

2 MPP LICENSEES HAVE DEVELOPED TAF 25MG FORMULATION

Licensees Approved: Laurus, Lupin

1 additional licensee developing

Data as of December 2023

medicines patent pool

TAF 25MG: COUNTRY WISE FILING STATUS

Generic TAF 25mg has been filed in 22 countries, of which approval has been received in 14 countries

APPROVED (14)

India	**Lao**	**Thailand**	**Vietnam**
Indonesia	**Myanmar**	Uganda	Zimbabwe
Kazakhstan	**Philippines**	Ukraine	
Kyrgyzstan	**Tanzania**	**Uzbekistan**	

FILED (8)

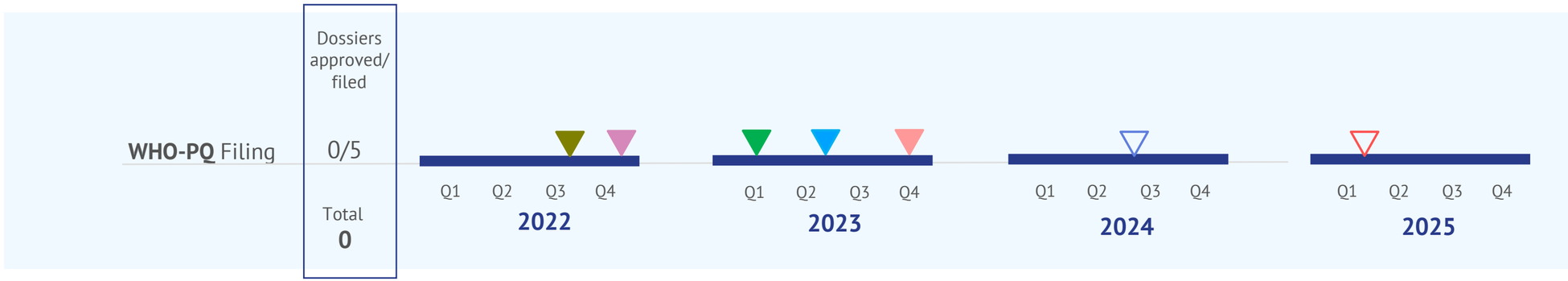
Azerbaijan	Malawi	Nigeria
Ethiopia	Malaysia	Zambia
Kenya	Mongolia	

New filings and approvals in green *vis-à-vis last update (Q2-23)*
Countries where TAF 25mg has been sold indicated in **bold type**
Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of December 2023


medicines
patent
pool
COVID-19
MEDICINESPATENTPOOL.ORG

MOLNUPIRAVIR:
FORMULATION DEVELOPMENT TIMELINES



▼ Companies filed ▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

5 MPP LICENSEES HAVE DEVELOPED MOL 200MG AND ARE AWAITING WHO-PQ APPROVAL

2 additional licensees developing

Data as of December 2023

NIRMATRELVIR+RITONAVIR (CO-PACK): FORMULATION DEVELOPMENT TIMELINES

9 MPP LICENSEES HAVE DEVELOPED NIR+RTV CO-PACK, OF WHICH: 4 ARE READY TO COMMERCIALIZE

Licensee approved: Apeloa, Celltrion, Hetero, Huahai

3 additional licensees developing

Data as of December 2023

medicines
patent
pool

NILOTINIB

MEDICINESPATENTPOOL.ORG

CURRENT SUBLICENSEES FOR NOVARTIS-MPP NILOTINIB LICENCE

4 Nilotinib Sub-licensee Agreements

BrightGene 博瑞医药

Dr.Reddy's

eugia

HETERO

medicines patent pool

NILOTINIB:

FORMULATION DEVELOPMENT TIMELINES

Two MPP licensees have developed NTB 50mg*, 150mg and 200 mg and filed with SRA

Two more MPP licensees are developing NTB 150mg and 200 mg and plan SRA filings

*Only 1 MPP licensee has filed 50mg strength

Data as of December 2023

THANK YOU