



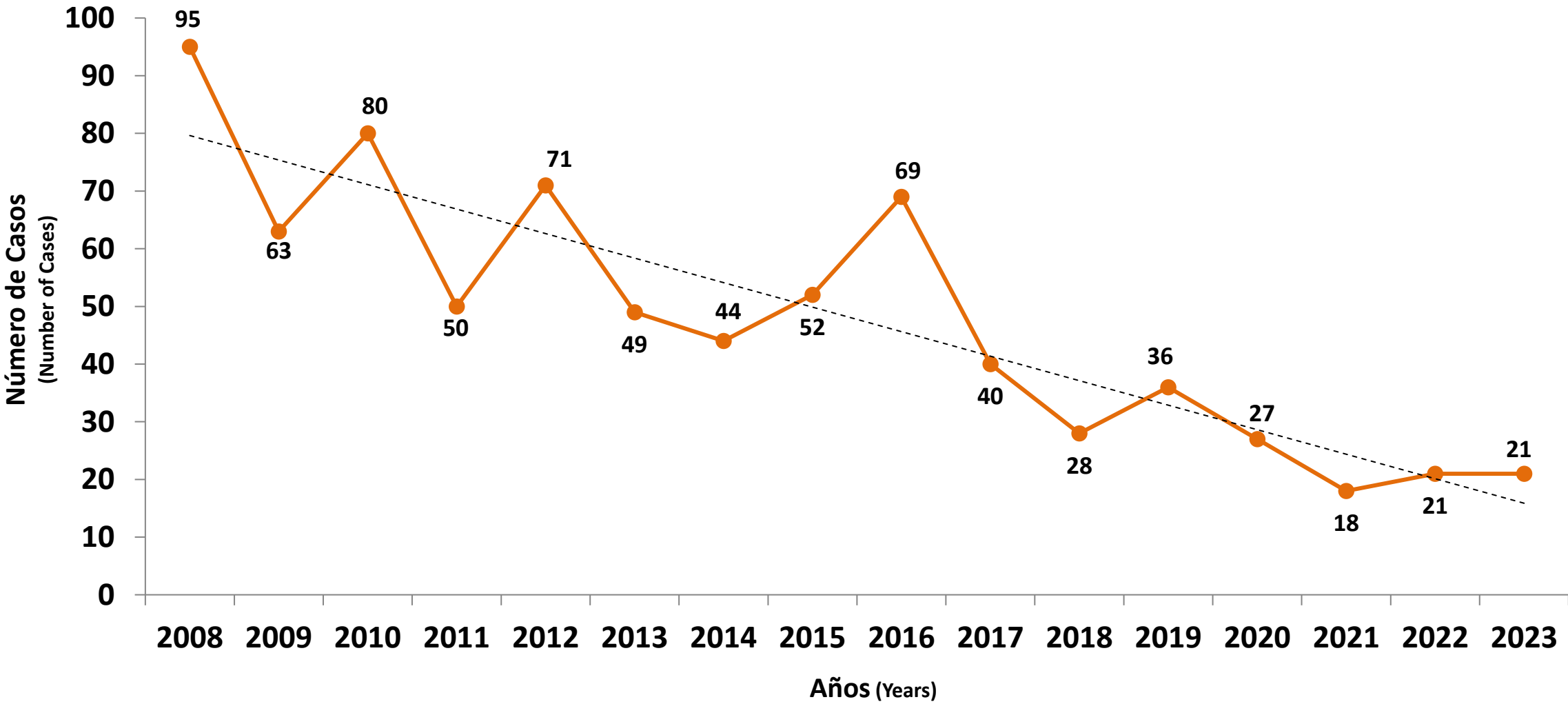
Informe Preliminar Epidemiología de la Tuberculosis en Puerto Rico, 2019-2023

(Preliminary Report: Epidemiology of Tuberculosis in
Puerto Rico, 2019-2023)

Programa Control Tuberculosis
Departamento de Salud de Puerto Rico
(Tuberculosis Control Program, Puerto Rico Department of Health)

Casos de Tuberculosis (TB) Reportados, Puerto Rico 2008-2023

(TB Cases Reported, Puerto Rico 2008-2023)



Source: CDC NTIP TB Incidence Rates 2014 to 2023; CDC NCHHSTP AtlasPlus, Tuberculosis Tables 2000 to 2022. <https://www.cdc.gov/nchhstp/atlas/index.htm>

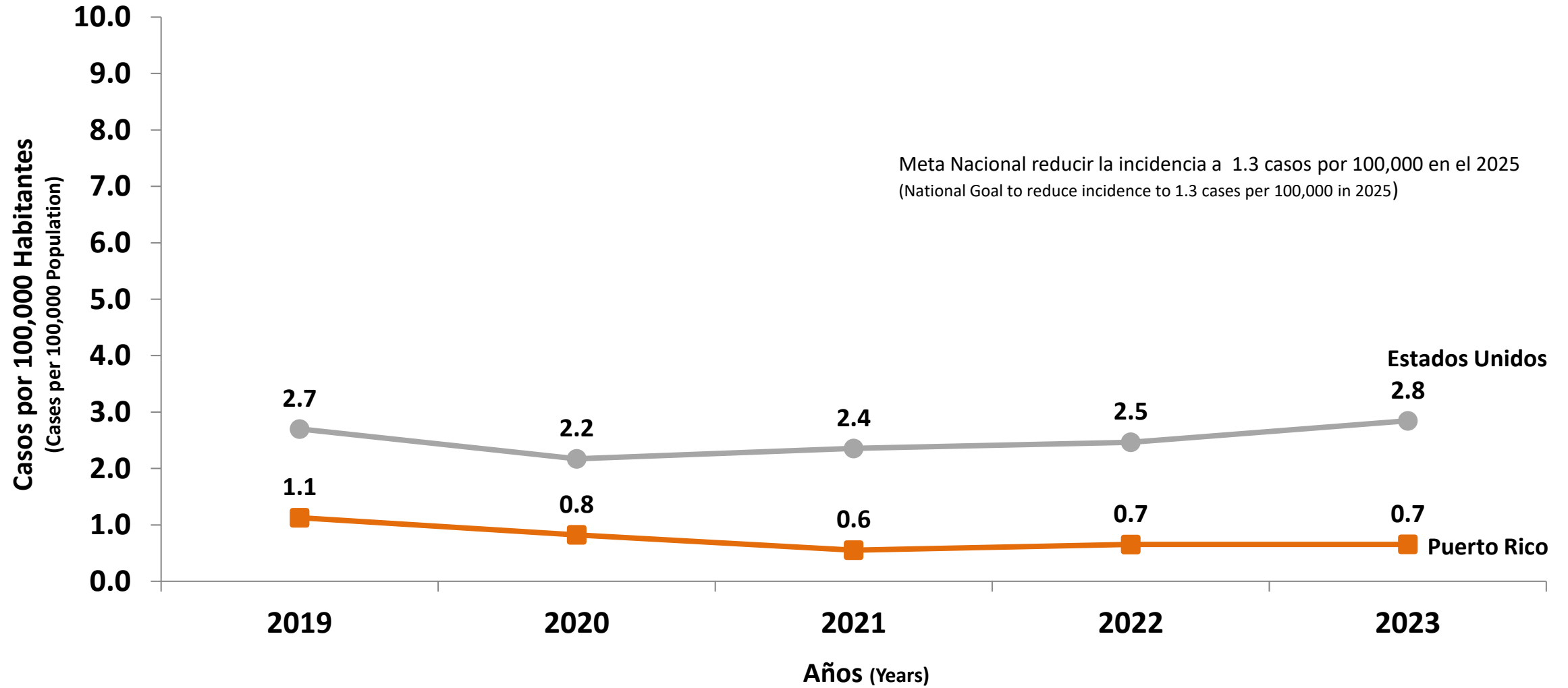
Casos de TB y Tasa* de Incidencia, Puerto Rico 2019-2023
(TB Cases and Case Rate, Puerto Rico 2019-2023)

Años (Years)	Número de Casos (Number of cases)	Tasa* (Rate)
2019	36	1.1
2020	27	0.8
2021	18	0.6
2022	21	0.7
2023	21	0.7

*Rate: Cases per 100,000. Source: U.S. Census Bureau; Annual Estimates of the Resident Population for Puerto Rico
Municipios: April 1, 2010 to July 1, 2020, & April 1, 2020 to July 1, 2023, Table PRM-EST2020-ANNRES, PRM-EST2023-POP.

Tasa* de Incidencia de TB, Puerto Rico vs Estados Unidos, 2019-2023

(TB Case Rate, Puerto Rico vs United States 2019-2023)



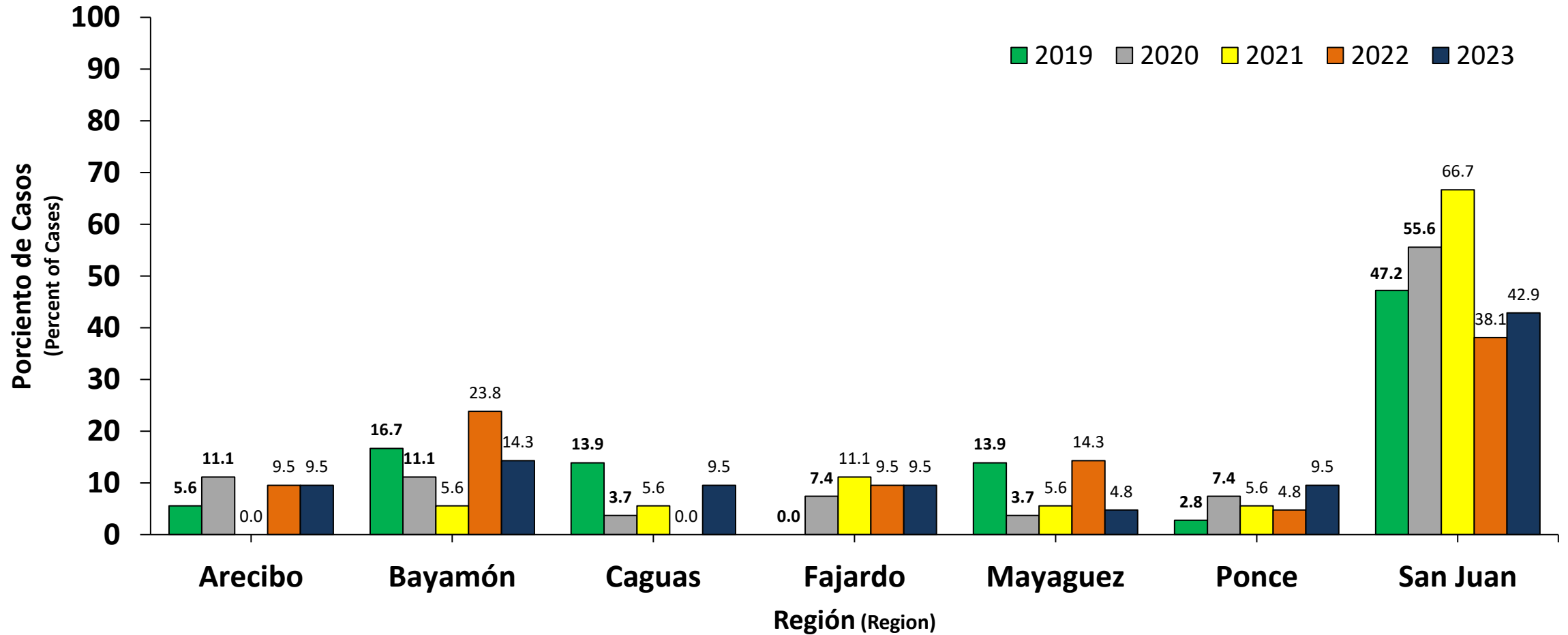
*Rate: Cases per 100,000). Source: CDC NTIP TB Incidence Rates 2019 to 2023; U.S. Census Bureau, Annual Estimates of the Resident Population for Puerto Rico Municipios: April 1, 2010 to July 1, 2020, & April 1, 2020 to July 1, 2023 ; Table PRM-EST2020-ANNRES, PRM-EST2023-POP.

Características Sociodemográficas

(Sociodemographics Characteristics)

Porciento de Casos de TB por Región de Clínicas Pulmonares, Puerto Rico 2019-2023

(Percent of TB Cases by Regional Pulmonary Clinics, Puerto Rico 2019-2023)



Source: CDC NTSSCR TB County (National Tuberculosis Surveillance System Case Reporting)

Tasa* de Incidencia de TB por Región de Clínicas Pulmonares, Puerto Rico 2019-2023

(TB Case Rate by Regional Pulmonary Clinics, Puerto Rico 2019-2023)

Región (Region)	Años (Years)				
	2019	2020	2021	2022	2023
Puerto Rico	1.1	0.8	0.6	0.7	0.7
Arecibo	0.5	0.7	0.0	0.5	0.5
Bayamón	1.1	0.5	0.2	0.9	0.6
Caguas	1.3	0.3	0.3	0.0	0.5
Fajardo	0.0	0.8	0.8	0.8	0.8
Mayaguez	1.1	0.2	0.2	0.6	0.2
Ponce	0.2	0.4	0.2	0.2	0.4
San Juan	2.5	2.1	1.7	1.1	1.3

*Rate: Cases per 100,000; Source: CDC NTIP TB Incidence Rates 2019 to 2023; U.S. Census Bureau; Annual Estimates of the Resident Population for Puerto Rico Municipios: April 1, 2010 to July 1, 2020, & April 1, 2020 to July 1, 2023 ; Table PRM-EST2020-ANNRES, PRM-EST2023-POP.

Casos de TB por Región de Clínicas Pulmonares, Puerto Rico 2019-2023

(TB Cases by Regional Pulmonary Clinics, Puerto Rico 2019-2023)

Región (Region)	Años (Years)				
	2019	2020	2021	2022	2023
Puerto Rico	36	27	18	21	21
Arecibo	2	3	0	2	2
Bayamón	6	3	1	5	3
Caguas	5	1	1	0	2
Fajardo	0	2	2	2	2
Mayaguez	5	1	1	3	1
Ponce	1	2	1	1	2
San Juan	17	15	12	8	9

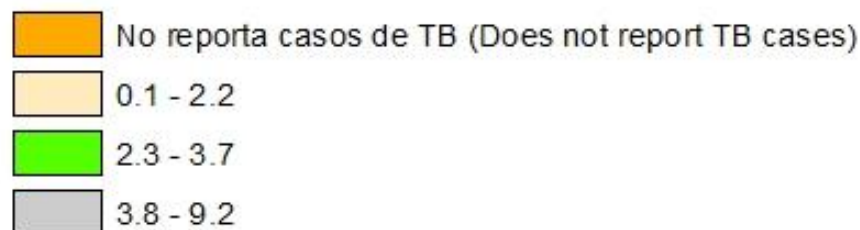
Source: CDC NTIP TB Incidence Rates 2019 to 2023.

Tasa* de Incidencia de TB por Municipios, Puerto Rico 2023

(TB Cases Rates by Municipalities, Puerto Rico 2023)



Tasa Incidencia de TB



Durante el año 2023 se reportaron 21 casos de TB, distribuidos en 13 municipios de Puerto Rico.

(In the year 2023 were reported 21 cases of TB, distributed in 13 county of Puerto Rico.)

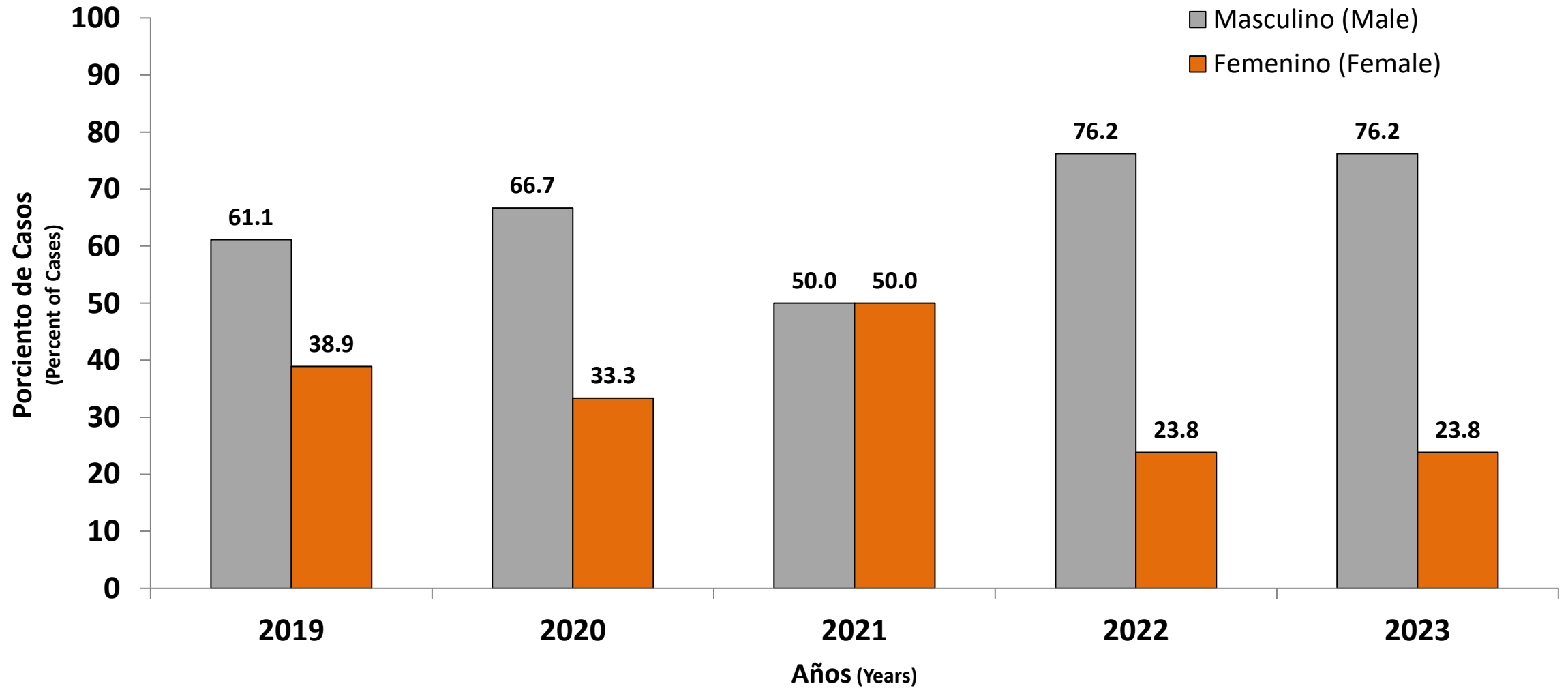
*Tasa: Casos por 100,000 habitantes (Rate: Cases per 100,000)

Negociado del Censo de los E.U., Estimados Anuales de la Población Residente de Puerto Rico: Abril 1, 2020 a Julio 1, 2023

(U.S. Census Bureau; Annual Estimates of the Resident Population for Puerto Rico: April 1, 2020 to July 1, 2023), Table PRM-EST2023-POP

Porcentaje de Casos de TB por Sexo, Puerto Rico 2019-2023

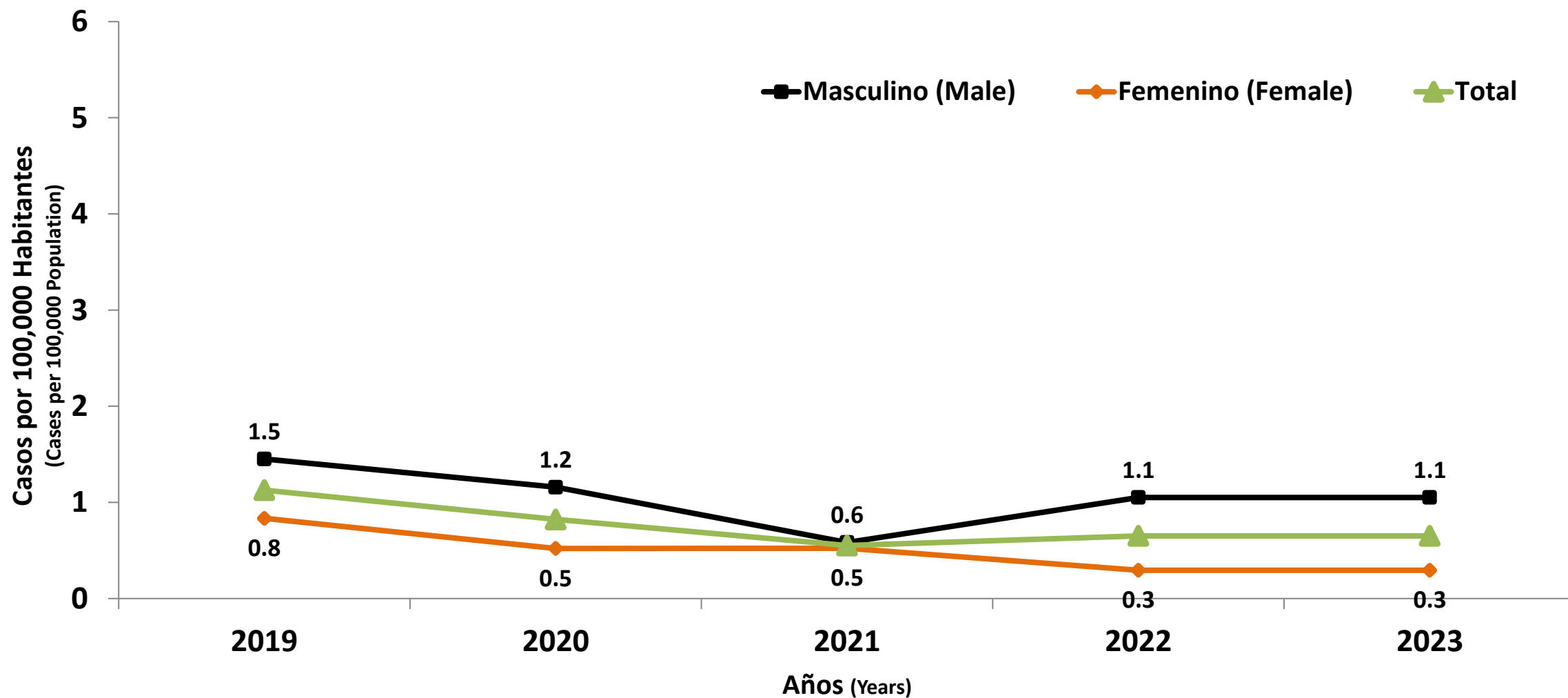
(Percent of TB Cases by Sex, Puerto Rico 2019-2023)



Source: CDC NTSS TB Sex (National Tuberculosis Surveillance System Report)

Tasa* de Incidencia de Casos de TB por Sexo, Puerto Rico 2019-2023

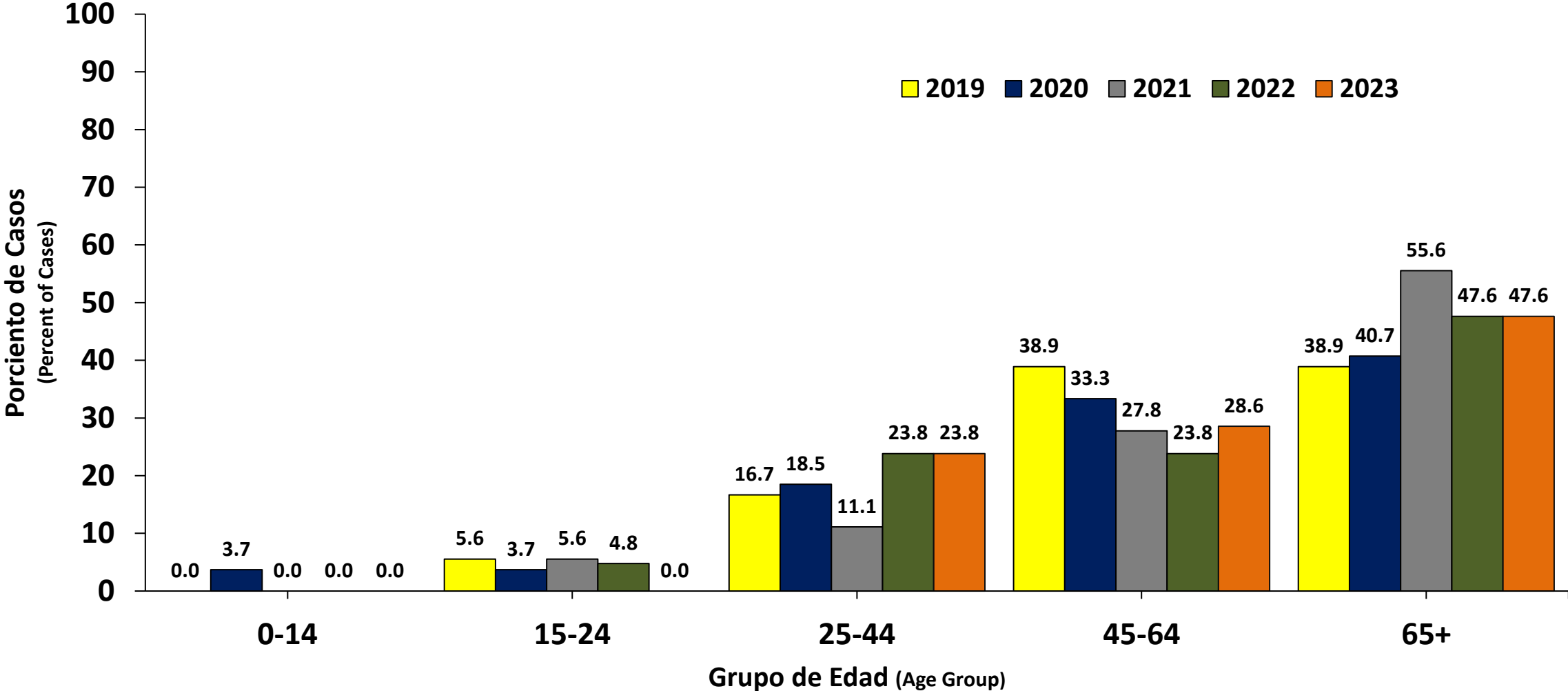
(TB Case Rate by Sex, Puerto Rico 2019-2023)



*Rate: Cases per 100,000. Source: CDC NTSS TB Sex (National Tuberculosis Surveillance System Report); U.S. Census Bureau Annual Estimates of the Resident Population for Selected Age Groups by Sex for Puerto Rico Commonwealth: April 1, 2010 to July 1, 2020 & April 1, 2020 a July 1, 2022), Tabla PRC-EST2020-AGESEX, PRC-EST2022-AGESEX.

Porciento de Casos de TB por Grupo de Edad, Puerto Rico 2019-2023

(Percent of TB Cases by Age Group, Puerto Rico 2019-2023)



Source: CDC NTSS TB Age (National Tuberculosis Surveillance System Report)

Distribución de los casos de TB por Grupo de Edad, Puerto Rico 2019-2023

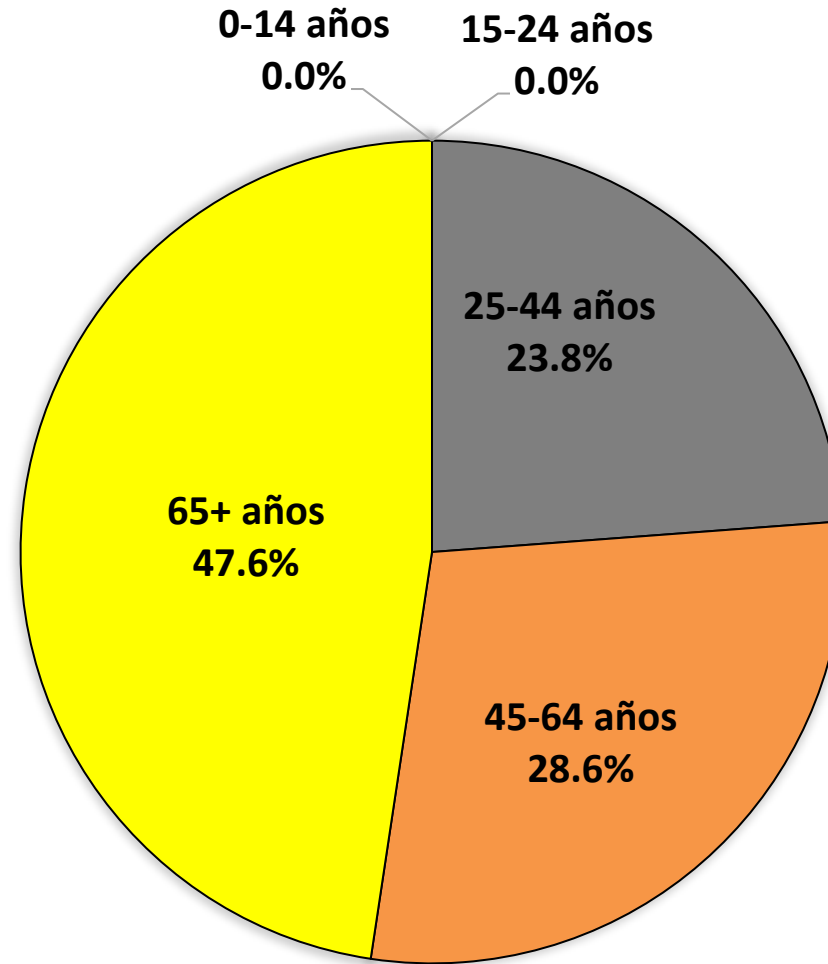
(Distribution of TB Cases by Age Group, Puerto Rico 2019-2023)

	2019		2020		2021		2022		2023	
Casos Confirmados (Confirmed Cases)	36		27		18		21		21	
Media de Edad (Mean Age)	56.4		57.6		62.7		56.7		58.6	
Grupo de Edad (Age group)	N	%	N	%	N	%	N	%	N	%
0-4	0	0.0	1	3.7	0	0.0	0	0.0	0	0.0
5-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-24	2	5.6	1	3.7	1	5.6	1	4.8	0	0.0
25-44	6	16.7	5	18.5	2	11.1	5	23.8	5	23.8
45-64	14	38.9	9	33.3	5	27.8	5	23.8	6	28.6
65 and Older	14	38.9	11	40.7	10	55.6	10	47.6	10	47.6
Sexo (Sex)										
Mujer (Female)	14	38.9	9	33.3	9	50.0	5	23.8	5	23.8
Hombre (Male)	22	61.1	18	66.7	9	50.0	16	76.2	16	76.2

Source: CDC NTSS TB Age (National Tuberculosis Surveillance System Report).

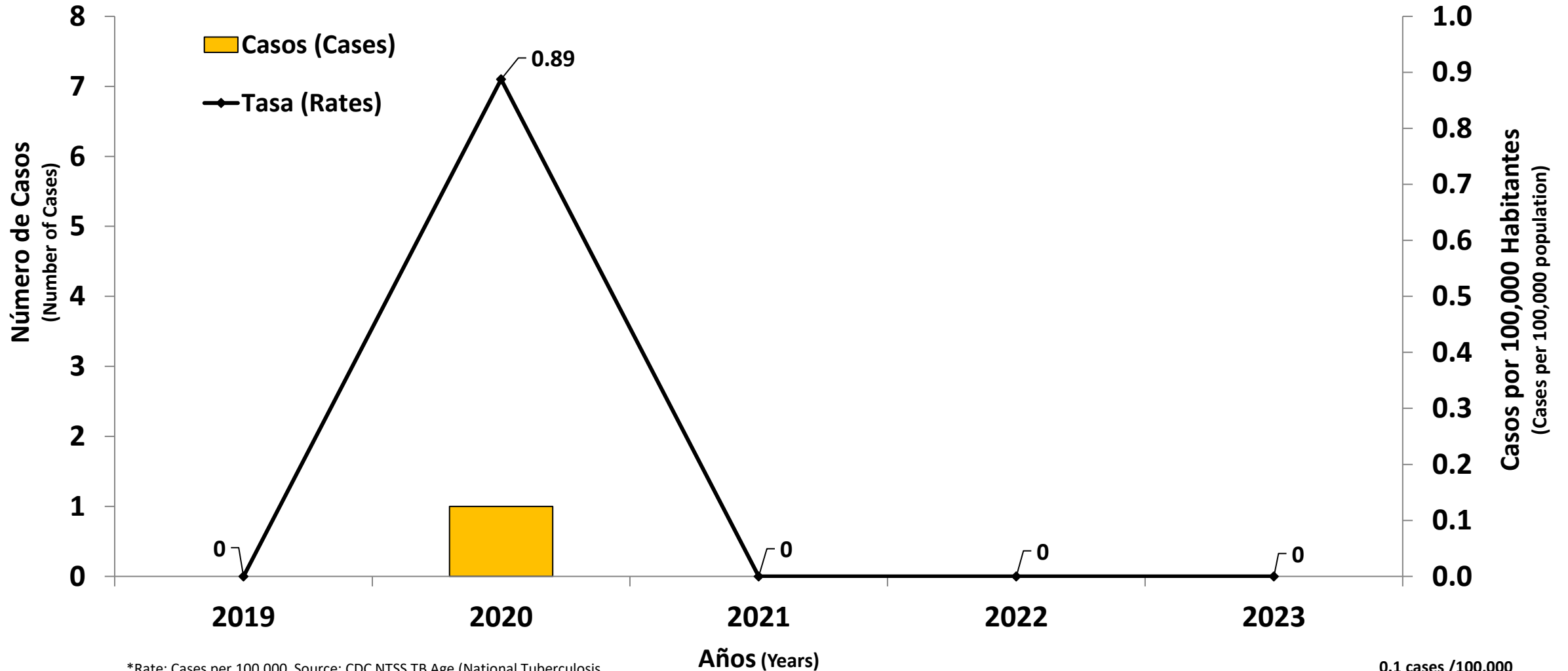
Porcentaje de Casos de TB por Grupo de Edad, Puerto Rico 2023

(Percent of TB Cases by Age Group, Puerto Rico 2023)



Tasa* de Incidencia de Casos de TB en Niños entre 0 y 4 años, Puerto Rico 2019-2023

(TB Case Rates in Children between 0 and 4 Years Old, Puerto Rico 2019-2023)

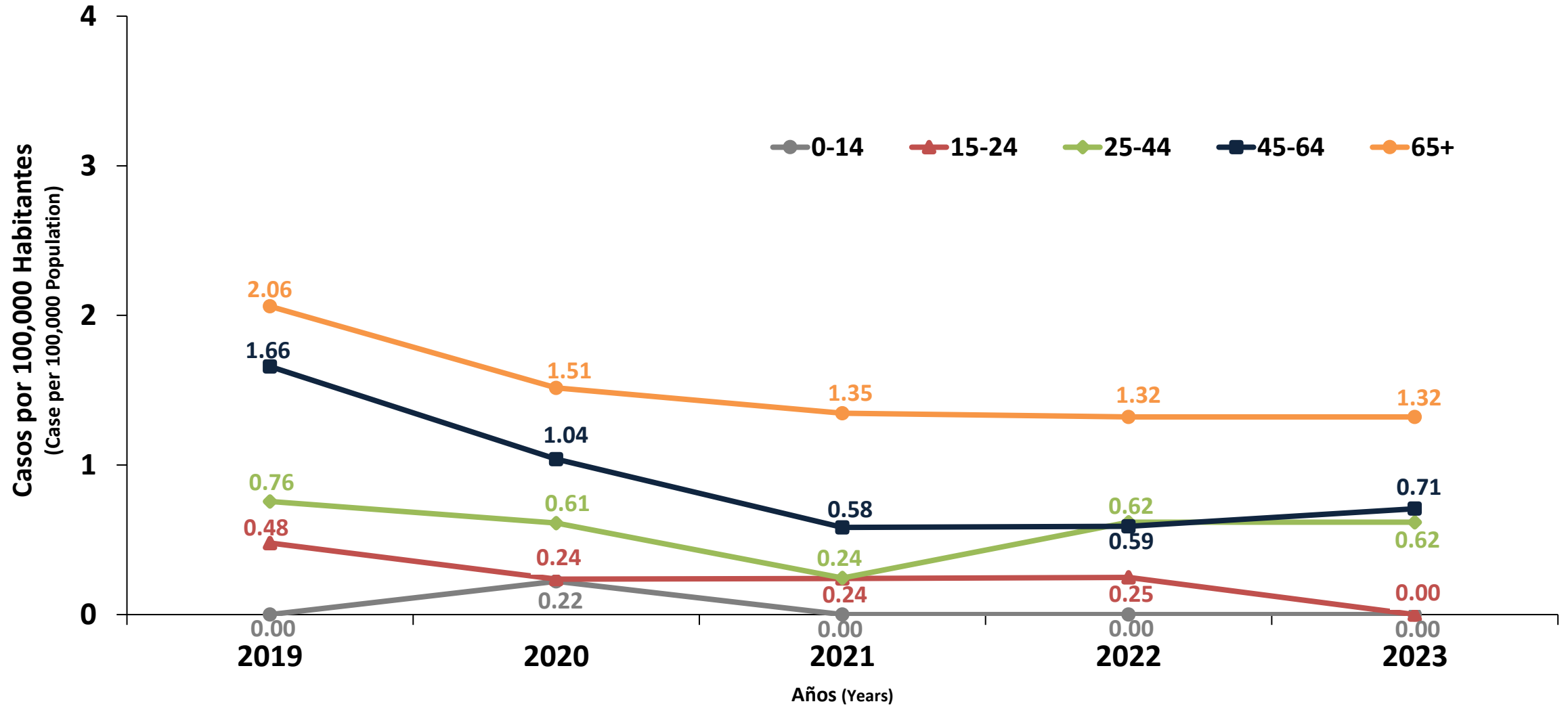


*Rate: Cases per 100,000. Source: CDC NTSS TB Age (National Tuberculosis Surveillance System Report); U.S. Census Bureau Annual Estimates of the Resident Population for Selected Age Groups by Sex for Puerto Rico Commonwealth: April 1, 2010 to July 1, 2020 & Abril 1, 2020 a Julio 1, 2022), Table PRC-EST2020-AGESEX, PRC-EST2022-AGESEX.

0.1 cases /100,000
Meta Nacional E.U. 2025
(U.S. National Target)

Tasa* de Incidencia por Grupo de Edad, Puerto Rico 2019-2023

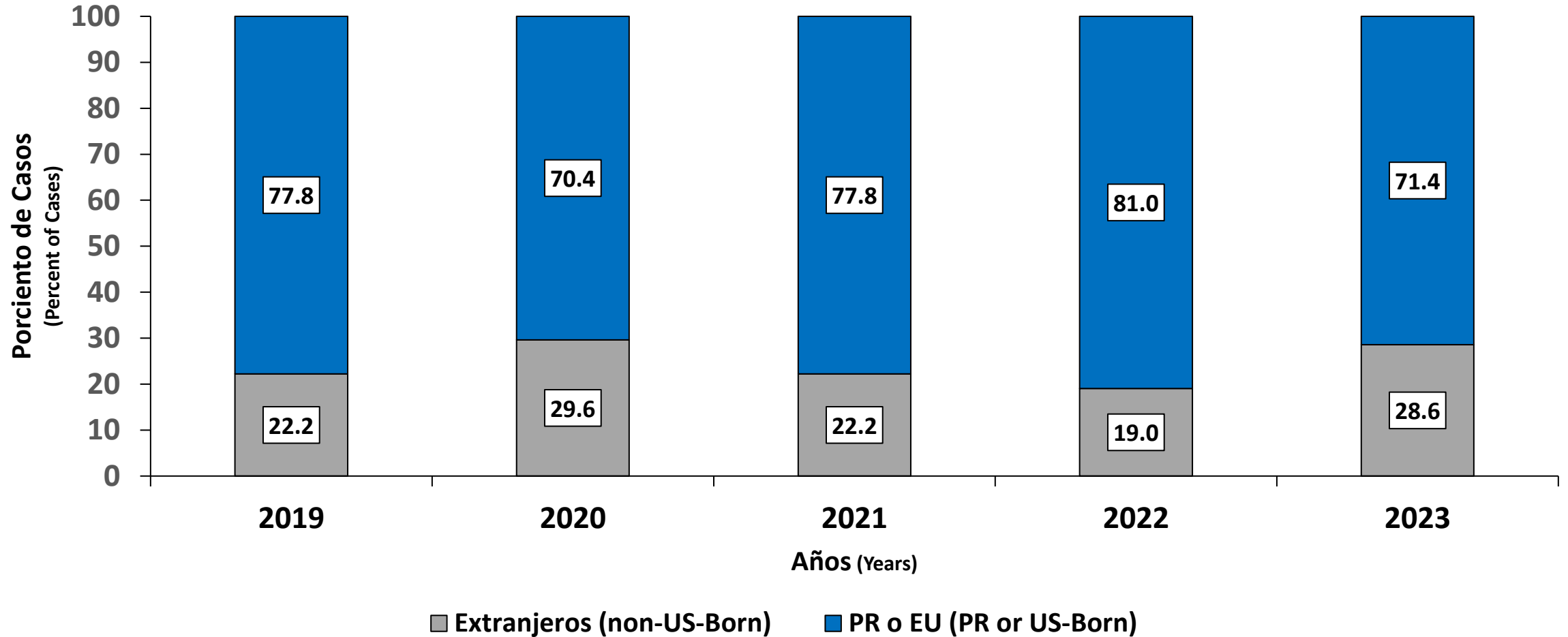
(TB Cases Rates by Age Group, Puerto Rico 2019-2023)



*Rate: Cases per 100,000. Source: CDC NTSS TB Age (National Tuberculosis Surveillance System Report); U.S. Census Bureau Annual Estimates of the Resident Population for Selected Age Groups by Sex for Puerto Rico Commonwealth: April 1, 2010 to July 1, 2020 & Abril 1, 2020 a Julio 1, 2022, Table PRC-EST2020-AGESEX, PRC-EST2022-AGESEX.

Porcentaje de Casos de TB por Lugar de Nacimiento, Puerto Rico 2019-2023

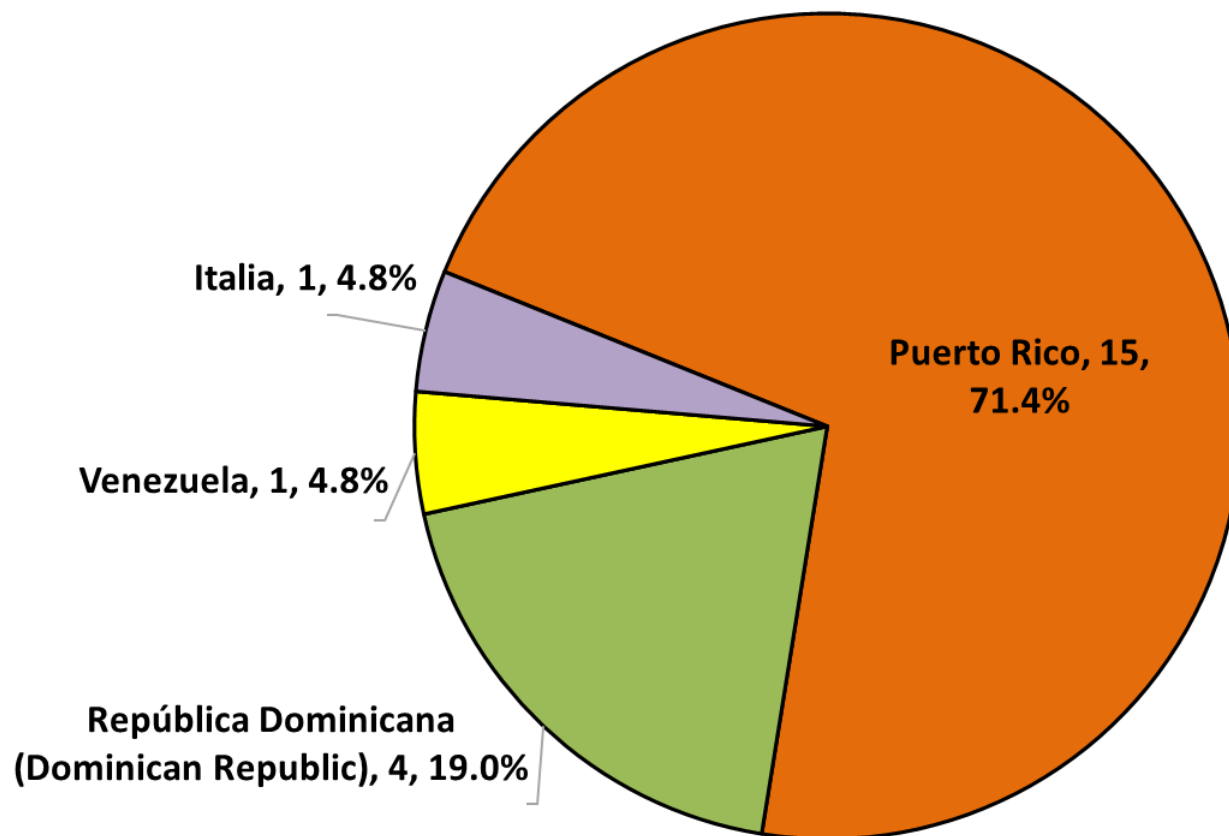
(Percent of TB Cases by Place of Birth, Puerto Rico 2019-2023)



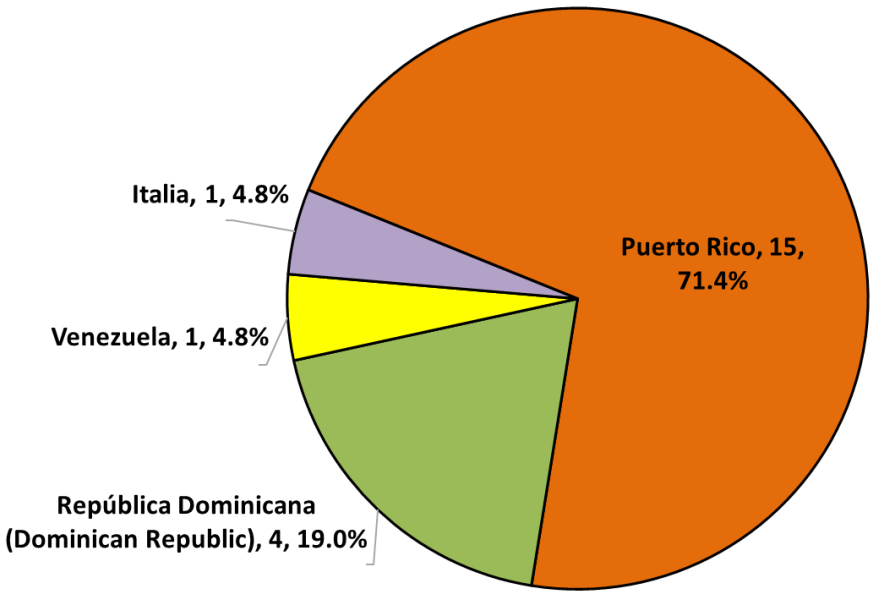
Source: CDC NTSS TB Origin of Birth (National Tuberculosis Surveillance System Report)

Porcentaje de Casos de TB por País de nacimiento, Puerto Rico 2023

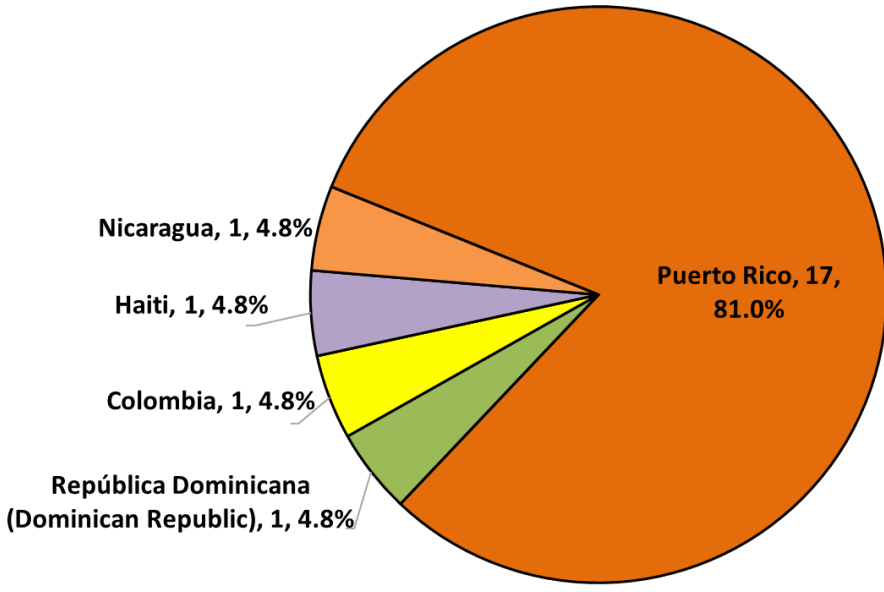
(Percent TB Cases by Country of Birth, Puerto Rico 2023)



**Por ciento de Casos de TB por País de nacimiento,
Puerto Rico 2023**
(Percent TB Cases by Country of Birth, Puerto Rico 2023)



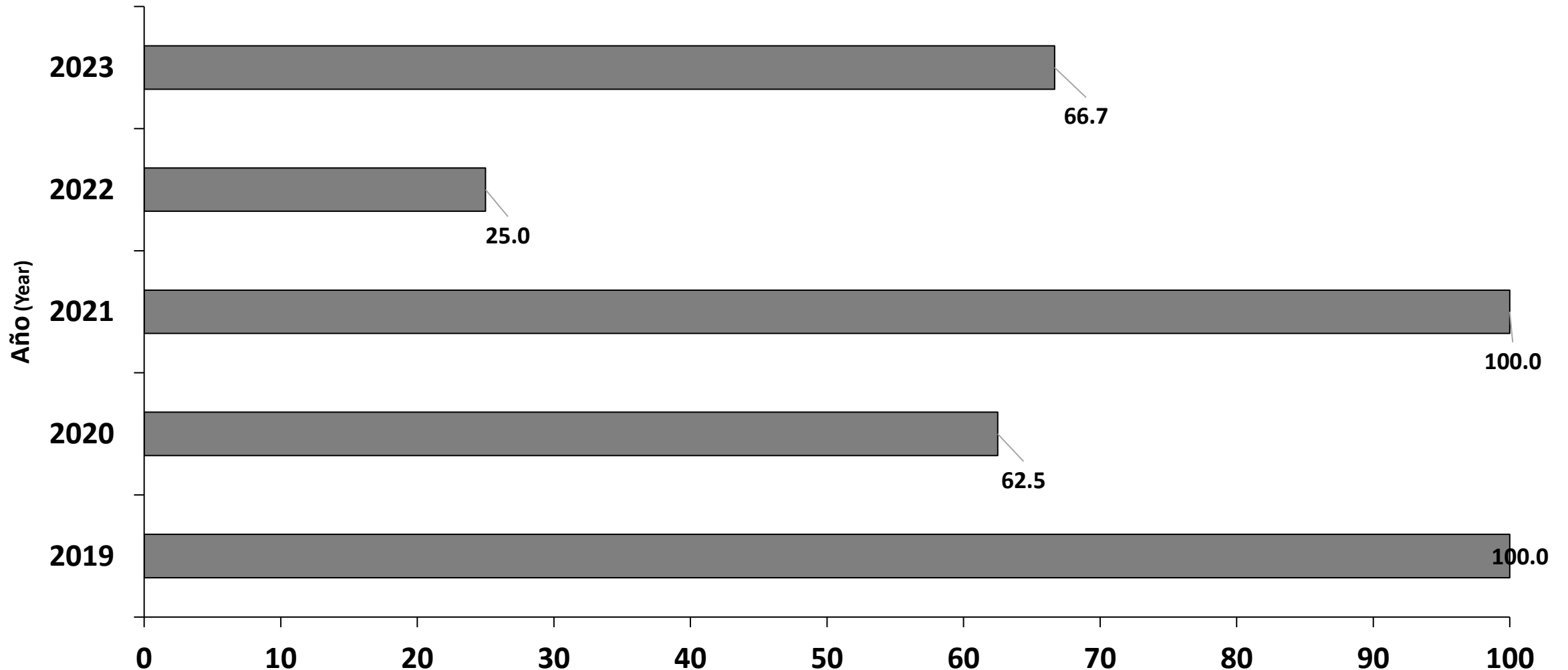
**Por ciento de Casos de TB por País de nacimiento,
Puerto Rico 2022**
(Percent TB Cases by Country of Birth, Puerto Rico 2022)



Source: CDC NTSS TB Country of Birth (National Tuberculosis Surveillance System Report)

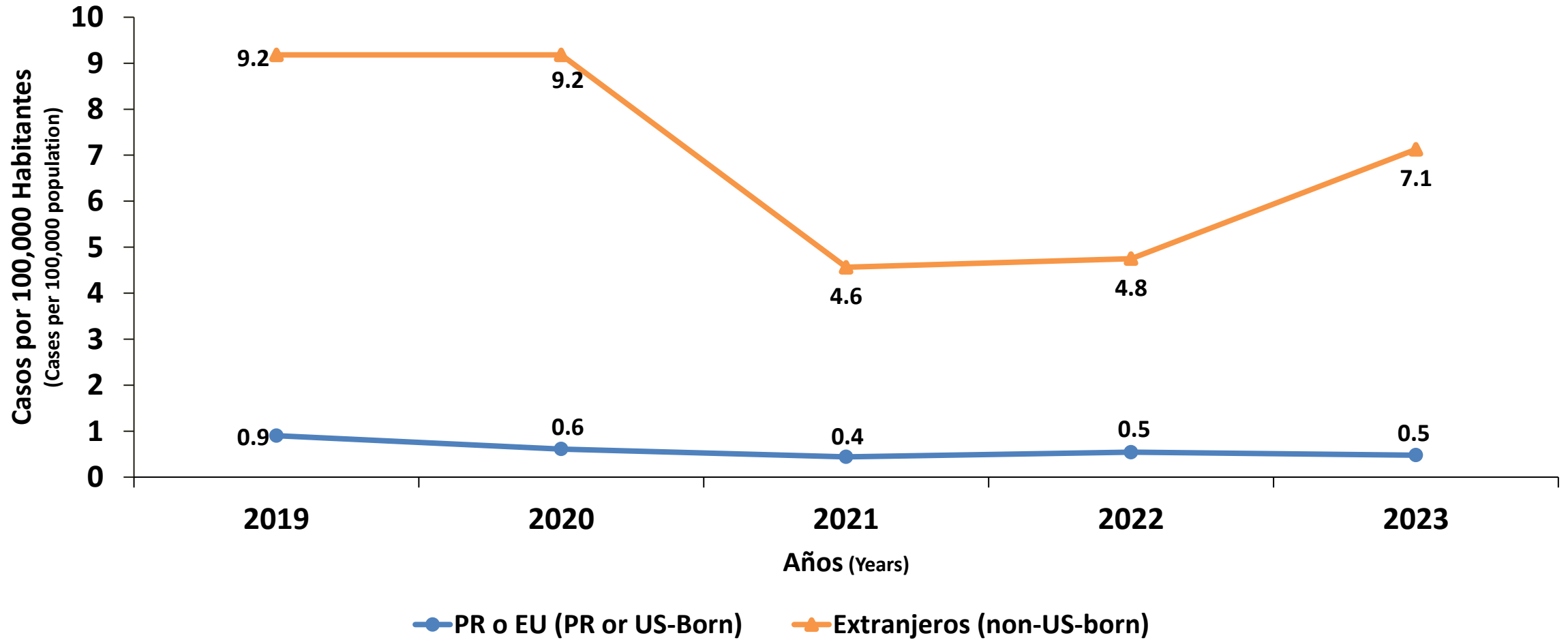
Porciento de Casos Extranjeros nacidos en República Dominicana, Puerto Rico 2019-2023

(Percent of Foreign-Born TB Cases from Dominican Republic, Puerto Rico 2019-2023)



Tasa* de Incidenciade Casos TB por Lugar de Nacimiento, Puerto Rico 2019-2023

(TB Cases Rates by Place of Birth, Puerto Rico 2019-2023)

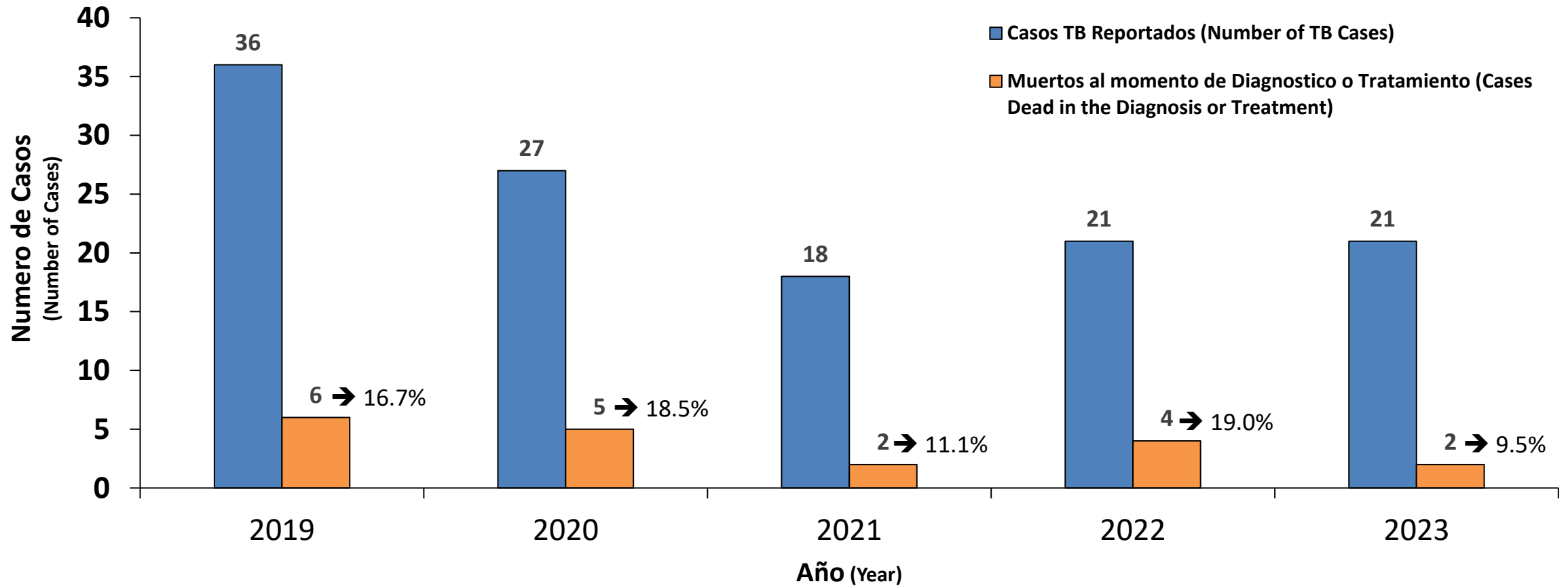


Características Clínicas

(Clinical Characteristics)

Casos de TB Reportados y Casos de TB Muertos al Momento del Diagnostico (Dx) o Tratamiento (Tx), Puerto Rico 2019-2023

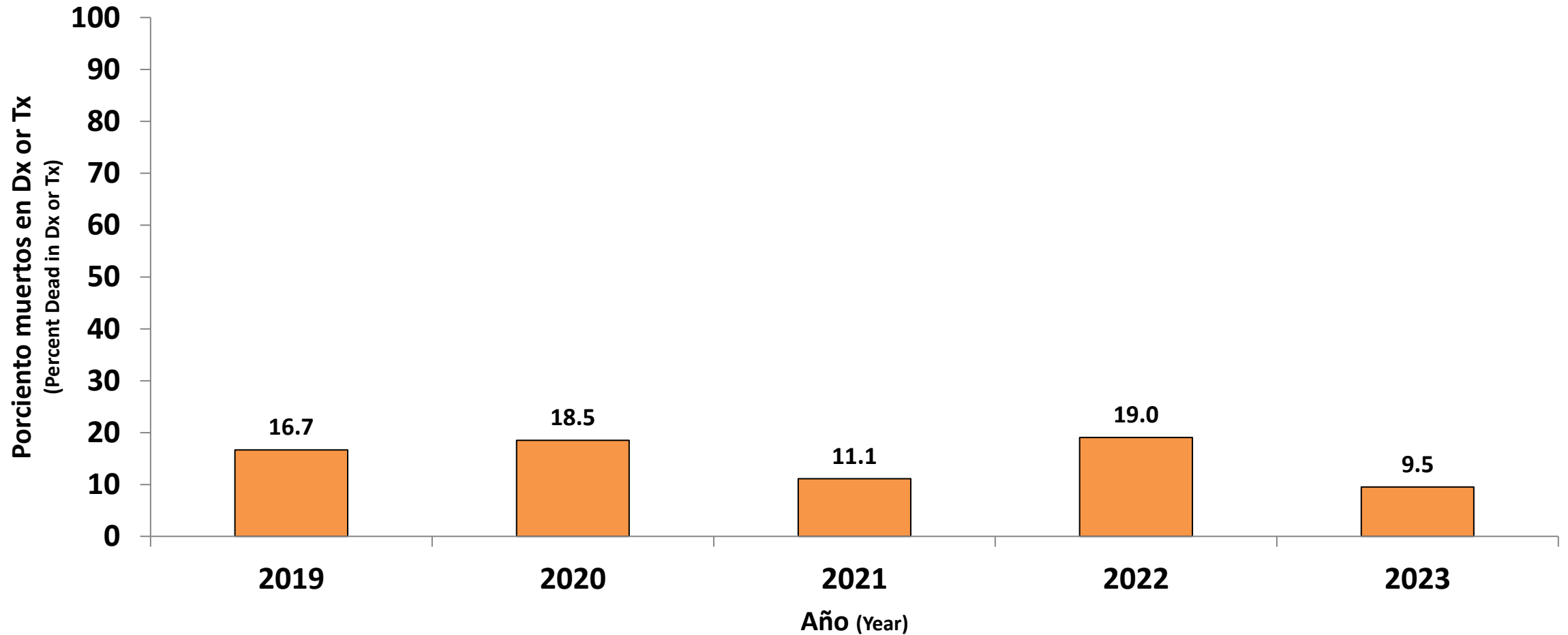
(TB Cases Reported and TB Related Deaths at Diagnosis or During Treatment, Puerto Rico 2019-2023)



Source: CDC NTSS TB Status Dx/ Reason to finish Tx (National Tuberculosis Surveillance System Report)

Porciento de casos de TB Muertos al Momento del Diagnostico (Dx) o Tratamiento (Tx), Puerto Rico 2019-2023

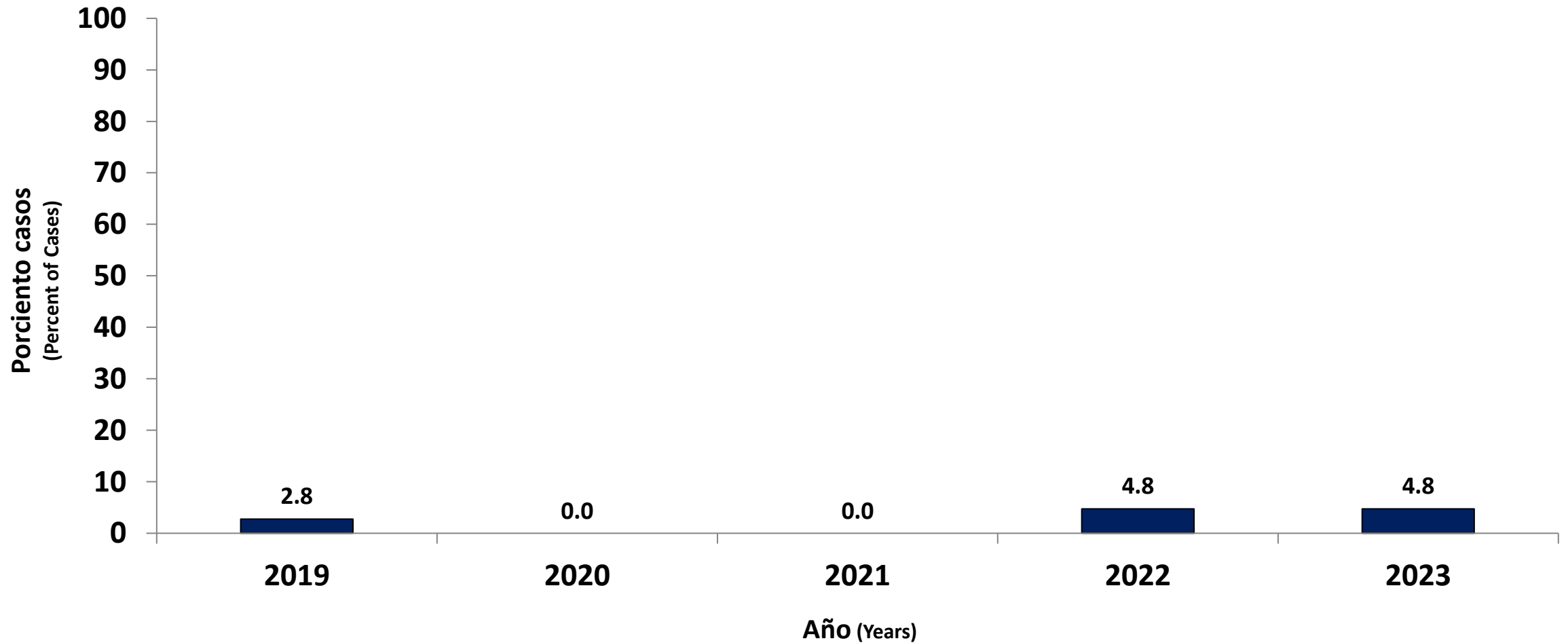
(Percent of TB Cases Deaths at Diagnosis or During Treatment, Puerto Rico 2019-2023)



Source: CDC NTSS TB Status Dx/ Reason to finish Tx (National Tuberculosis Surveillance System Report)

Porciento de Casos de TB Muertos al Momento del Diagnóstico, Puerto Rico 2019-2023

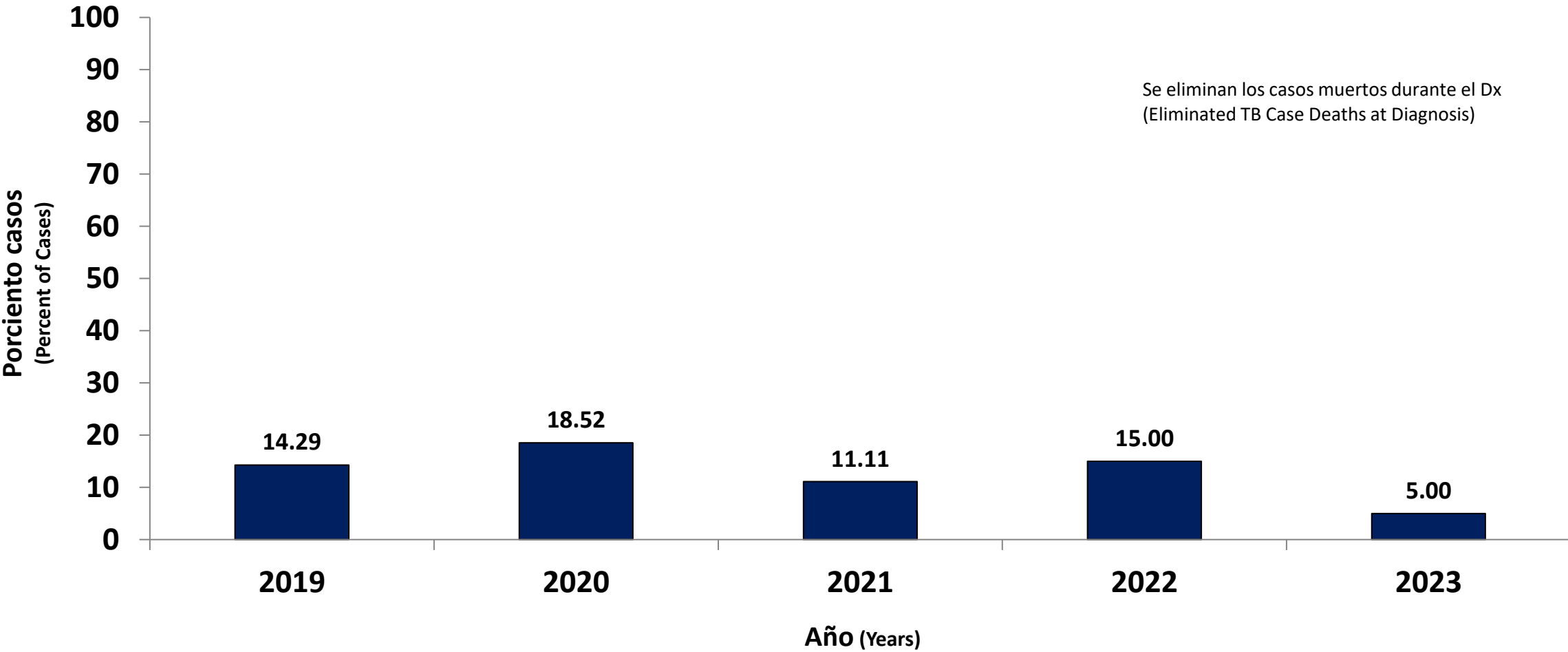
(Percent of TB Case Deaths at Diagnosis, Puerto Rico 2019-2023)



Source: CDC NTSS TB Status Dx/ Reason to finish Tx (National Tuberculosis Surveillance System Report)

Porciento de Casos de TB Muertos durante el Tratamiento, Puerto Rico 2019-2023

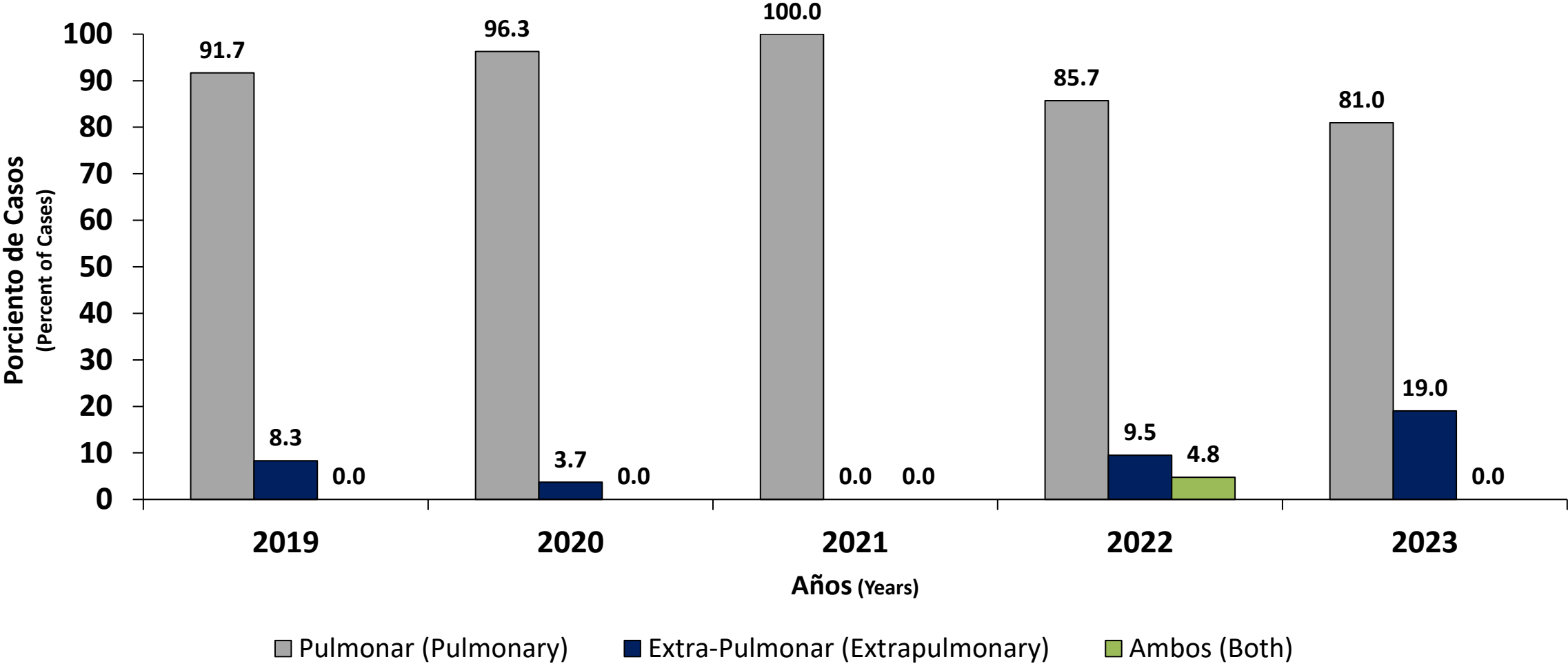
(Percent of TB Case Deaths during Treatment, Puerto Rico 2019-2023)



Source: CDC NTSS TB Status Dx/ Reason to finish Tx (National Tuberculosis Surveillance System Report)

Porcentaje de Casos de TB por Localización de la Enfermedad, Puerto Rico 2019-2023

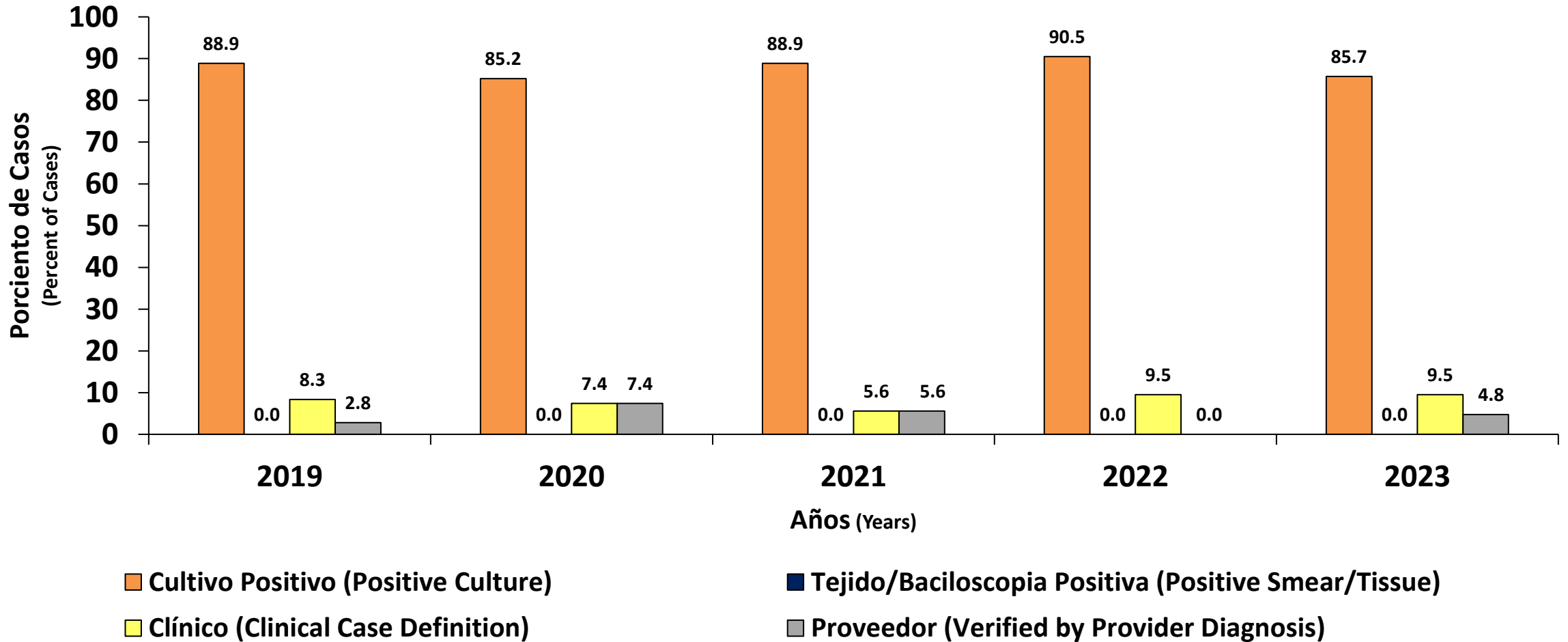
(Percent of TB Cases by Site of Disease, Puerto Rico 2019-2023)



Source: CDC NTSS TB Disease Site (National Tuberculosis Surveillance System Report)

Porcentaje de Casos TB por Criterio de Verificación, Puerto Rico 2019-2023

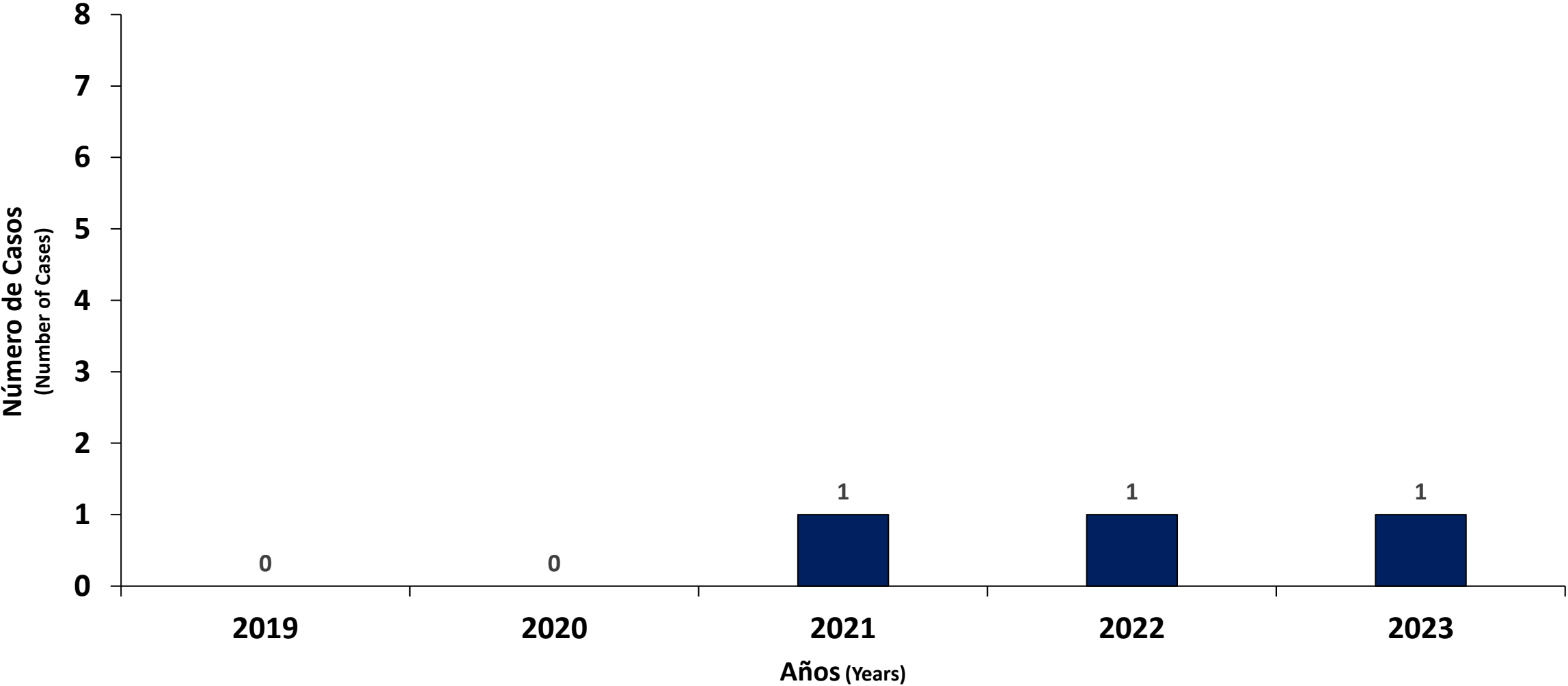
(Percent of TB Cases by Verification Criteria, Puerto Rico 2019-2023)



Source: CDC NTSS TB verification criteria (National Tuberculosis Surveillance System Report).

Casos de TB con Diagnóstico de TB Previa, Puerto Rico 2019-2023

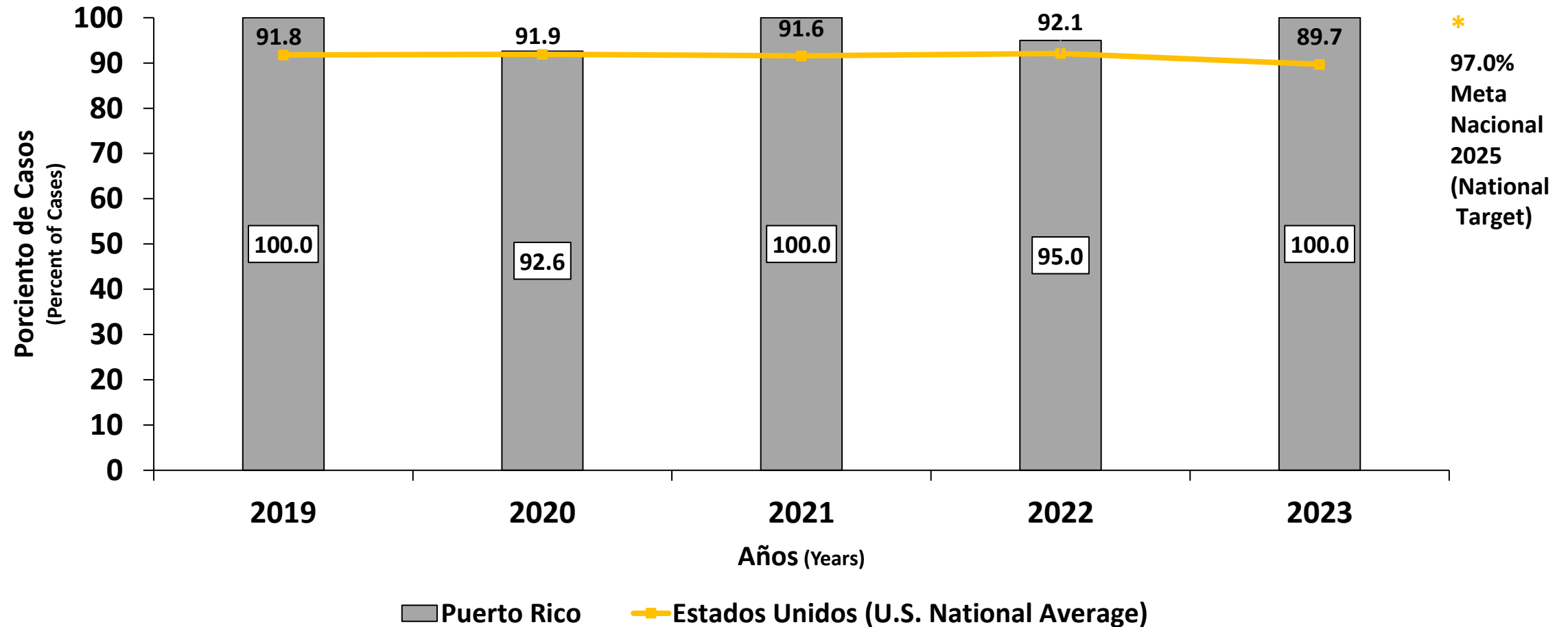
(TB Cases with Previous TB Diagnosis, Puerto Rico 2019-2023)



Source: CDC NTSS TB verification criteria (National Tuberculosis Surveillance System Report).

Porcentaje de Casos* de TB que Inició en Cuatro Drogas, Puerto Rico 2019-2023

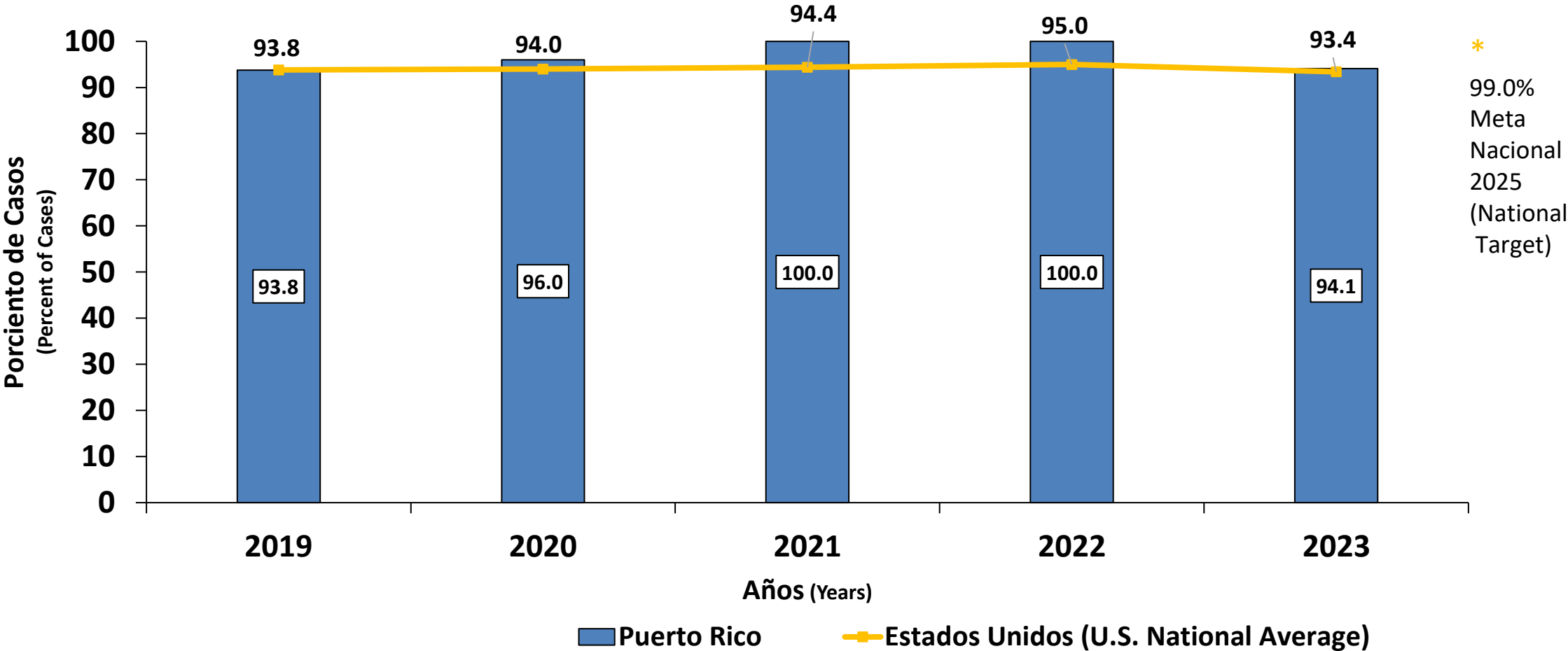
(Percent of TB Cases that Started in Four Drugs Regimen, Puerto Rico 2019-2023)



*Patients having reported taken initial 4-drug regimen-IRZE, and alive at diagnosis;
Source: CDC NTIP Recommended Initial Therapy (National Tuberculosis Indicators Project).

Porcentaje de Casos* de TB con Cultivo de Esputo Reportado, Puerto Rico 2019-2023

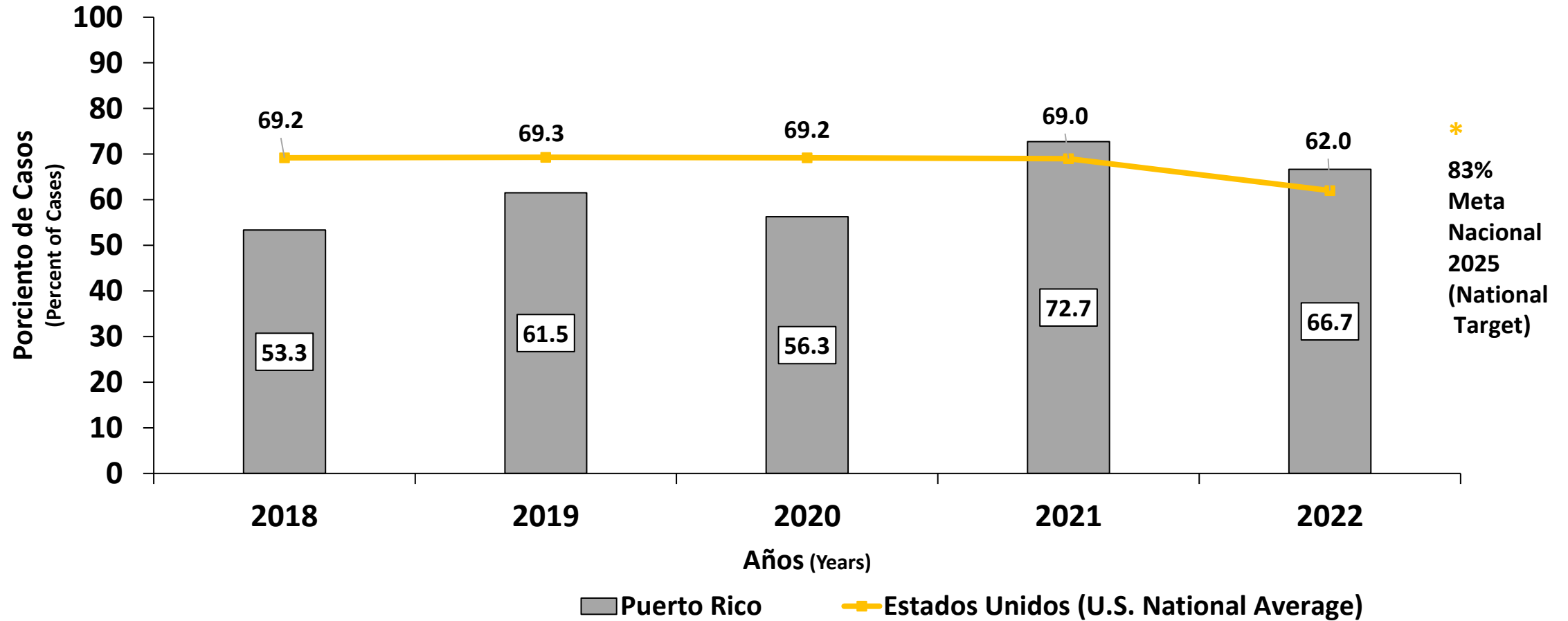
(Percent of TB with Sputum Culture Reported, Puerto Rico 2019-2023)



*TB Cases 12 years or older with pleural o respiratory site of diseases alive at diagnosis).
Source: CDC NTIP Sputum Culture Result Reported (National Tuberculosis Indicators Project).

Porcentaje de Casos* de TB con Conversión dentro 60 Días de Iniciar Tratamiento, Puerto Rico 2018-2022

(Percent of TB Cases with Conversion within 60 days of Treatment Initiation, Puerto Rico 2018-2022)



*Includes TB cases with sputum culture positive with treatment initiated, alive at diagnosis).

Source: CDC NTIP Sputum Culture Conversion Within 60 Days (National Tuberculosis Indicators Project).

Casos de TB con Prueba de Susceptibilidad Realizada, Puerto Rico, 2019-2023

(TB Cases with Susceptibility Results Reported, Puerto Rico 2019-2023)

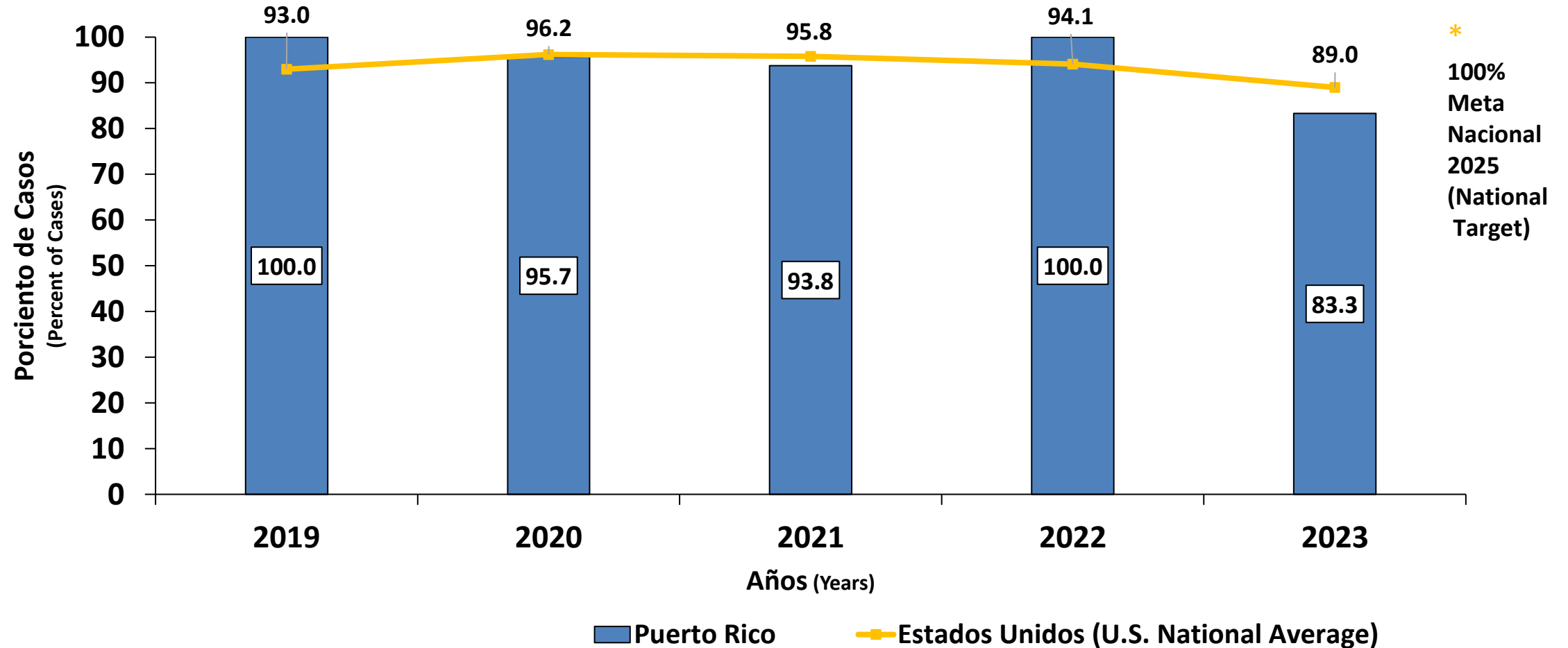
	Años (Years)				
Casos de TB (TB Cases)	2019	2020	2021	2022	2023
Casos Reportados (Reported Cases)	36	27	18	21	21
Cultivo Positivo (Positive Culture)	32	23	16	19	18
Susceptibilidad Realizada* (Susceptibility Results Reported)	32	22	15	19	15

*Indicator: Total cases of TB patients with a positive culture who have initial drug-susceptibility results reported. This is defined as initial drug susceptibility results reported as done in the RVCT and the susceptibility results for Isoniazid, Rifampin and Ethambutol reported as either resistant or susceptible.

Source: CDC NTIP Drug-Susceptibility Results (National Tuberculosis Indicators Project).

Porcentaje de Casos* de TB con Prueba Inicial de Susceptibilidad a Medicamentos Realizada, Puerto Rico 2019-2023

(% of TB Cases with Initial Drug-Susceptibility Results Reported, PR 2019-2023)

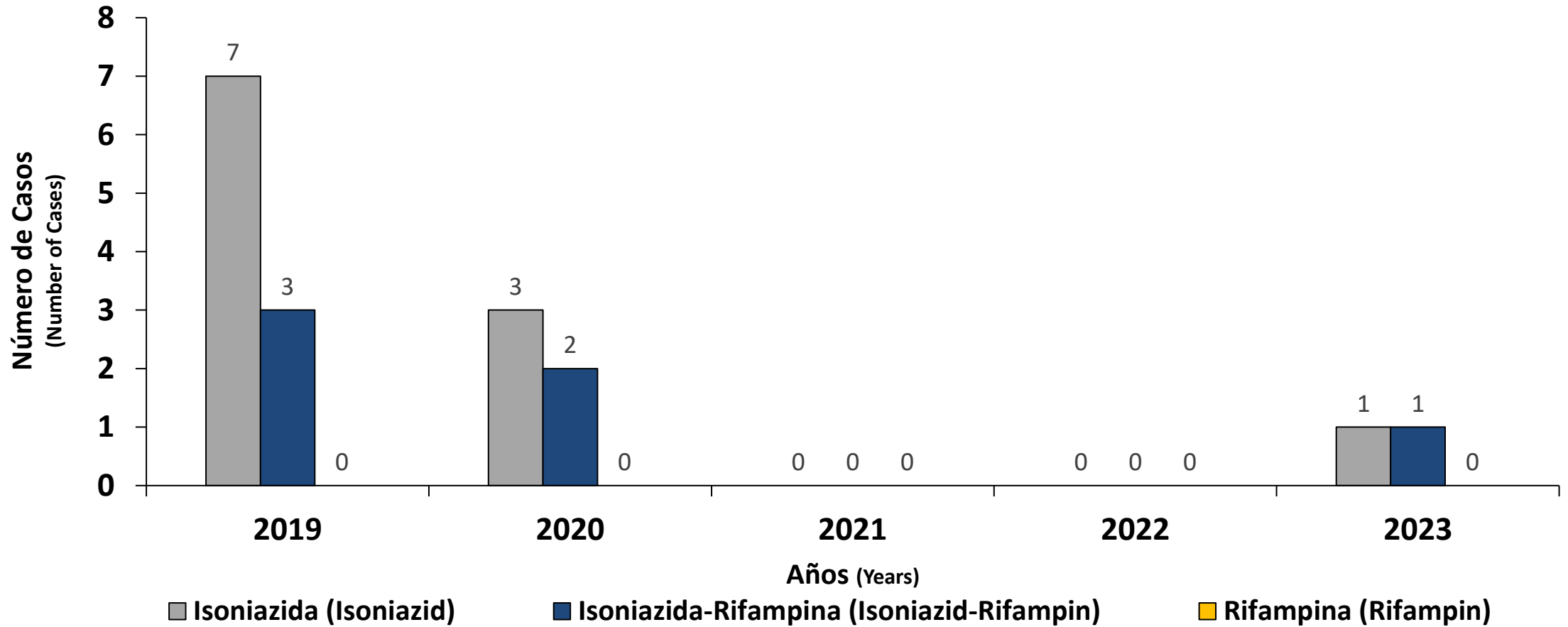


*TB cases with a positive culture; Indicator: Total cases of TB patients with a positive culture who have initial drug-susceptibility results reported.

Source: CDC NTIP Initial Drug-Susceptibility Results (National Tuberculosis Indicators Project).

Casos de TB con Resistencia a Drogas Primarias, Puerto Rico 2019-2023

(TB Cases with Primary Anti-Drug Resistance, Puerto Rico 2019-2023)

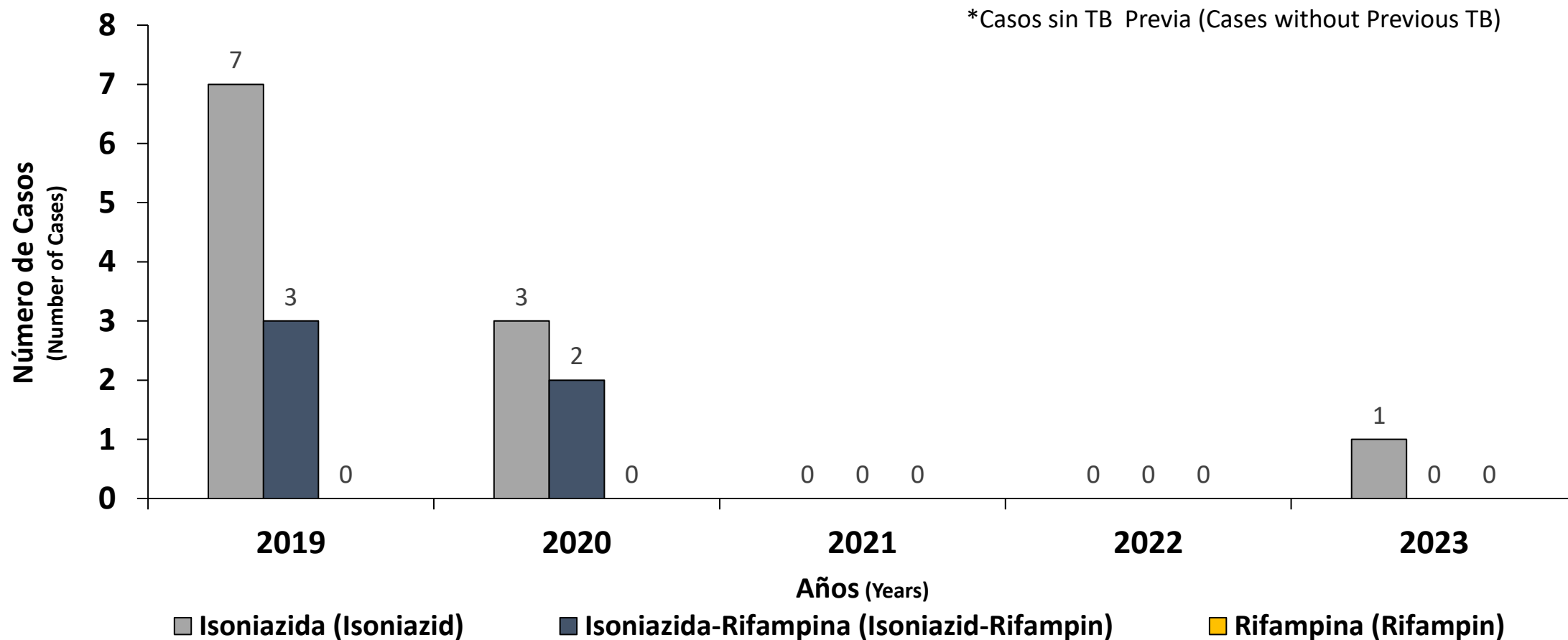


MDR-TB(Multi Drug Resistant TB): Isoniazid-Rifampin

Source: CDC NTSS TB Initial Drug-Susceptibility Results (National Tuberculosis Surveillance System Report).

Casos de TB con Resistencia a Drogas Primarias, Puerto Rico 2019-2023

(TB Cases with Primary Anti-Drug Resistance, Puerto Rico 2019-2023)

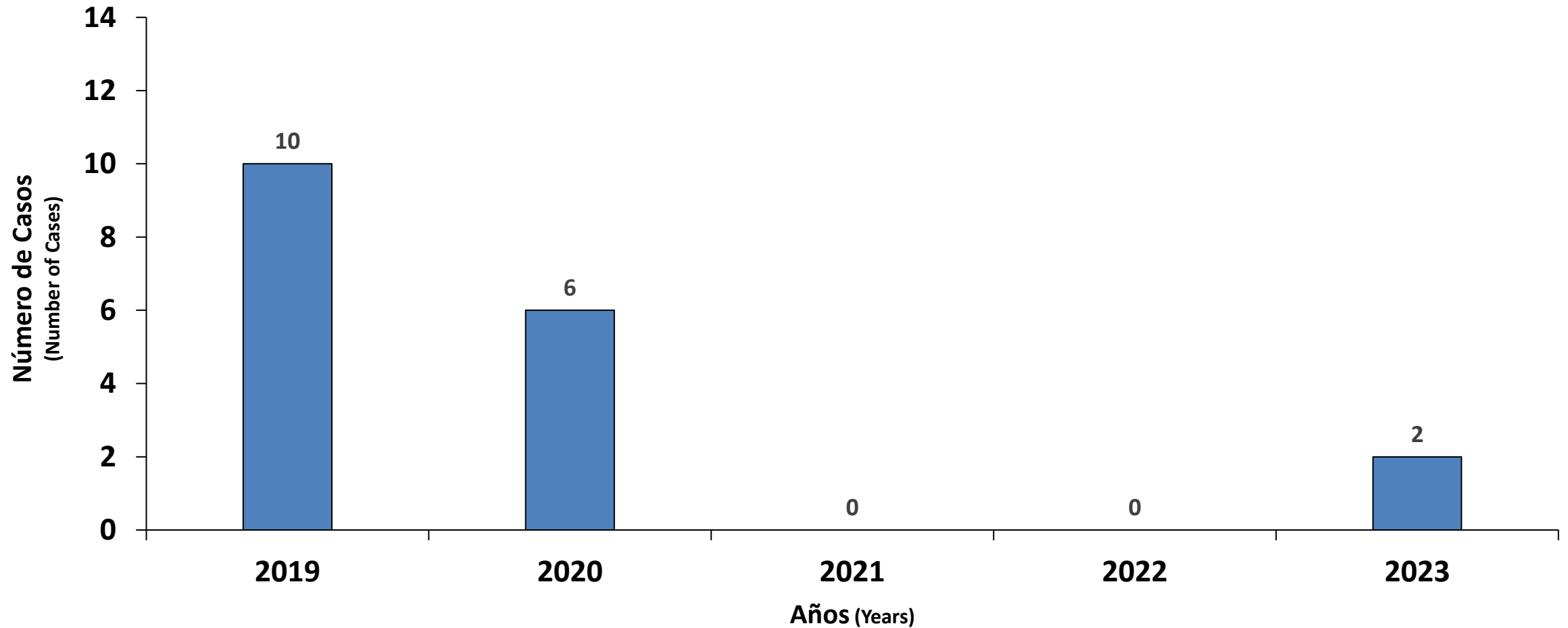


MDR-TB(Multi Drug Resistant TB): Isoniazid-Rifampin

Source: CDC NTSS TB Initial Drug-Susceptibility Results (National Tuberculosis Surveillance System Report).

Casos de TB Resistentes al Menos a Una Droga de Primera Línea*, Puerto Rico 2019-2023

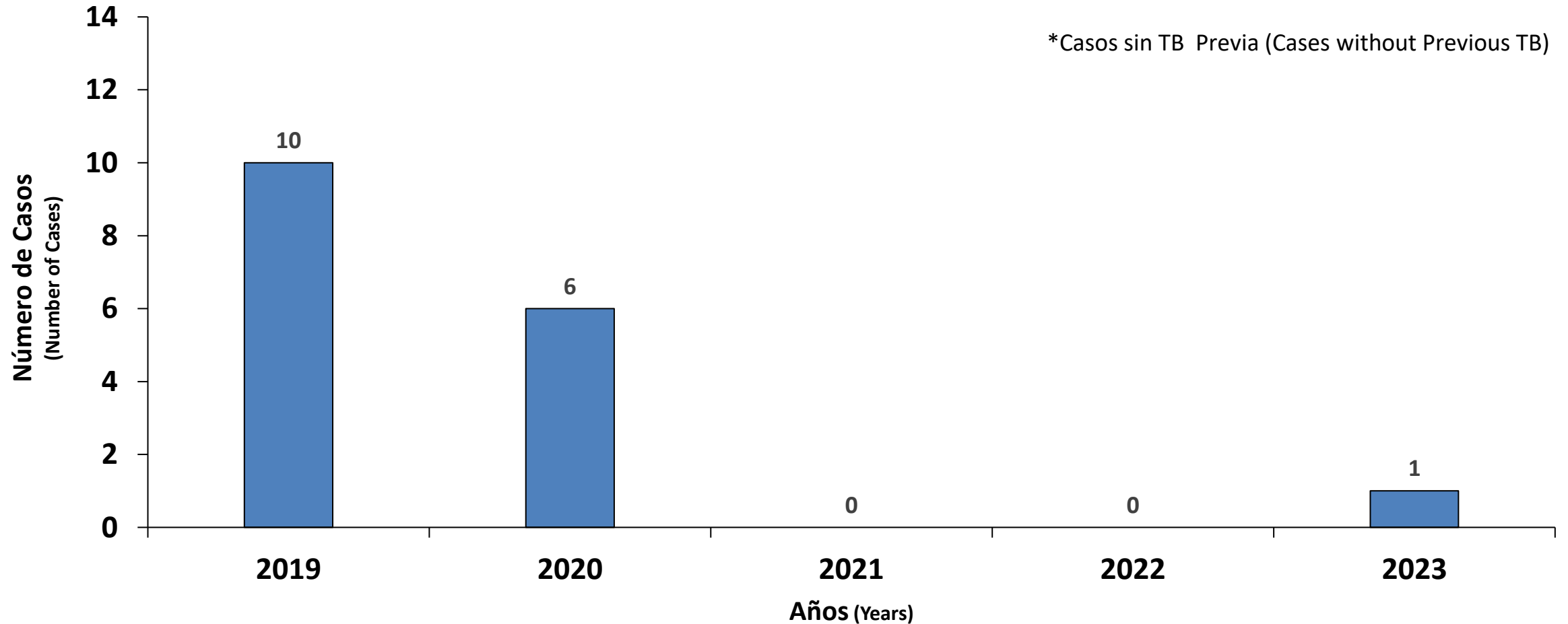
(TB Cases Resistant at Least One Drug of First Line, Puerto Rico 2019-2023)



*Drug of first line: Isoniazid, Rifampin, Ethambutol, Pyrazinamide. MDR-TB(Multi Drug Resistant TB): Isoniazid-Rifampin
Source: CDC NTSS TB Initial Drug-Susceptibility Results (National Tuberculosis Surveillance System Report).

Casos de TB Resistentes al Menos a Una Droga de Primera Línea*, Puerto Rico 2019-2023

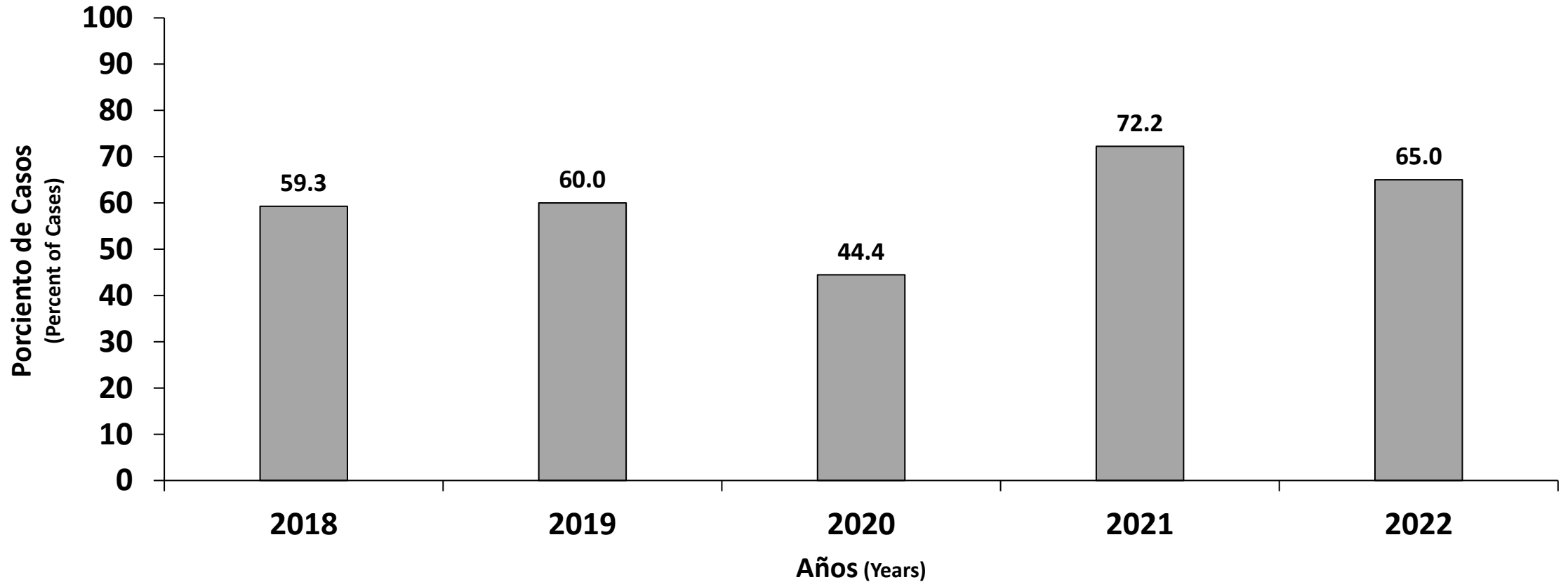
(TB Cases Resistant at Least One Drug of First Line, Puerto Rico 2019-2023)



*Drug of first line: Isoniazid, Rifampin, Ethambutol, Pyrazinamide. MDR-TB(Multi Drug Resistant TB): Isoniazid-Rifampin
Source: CDC NTSS TB Initial Drug-Susceptibility Results (National Tuberculosis Surveillance System Report).

Porciento de Casos* de TB en Terapia Observada Directa, Puerto Rico 2018-2022

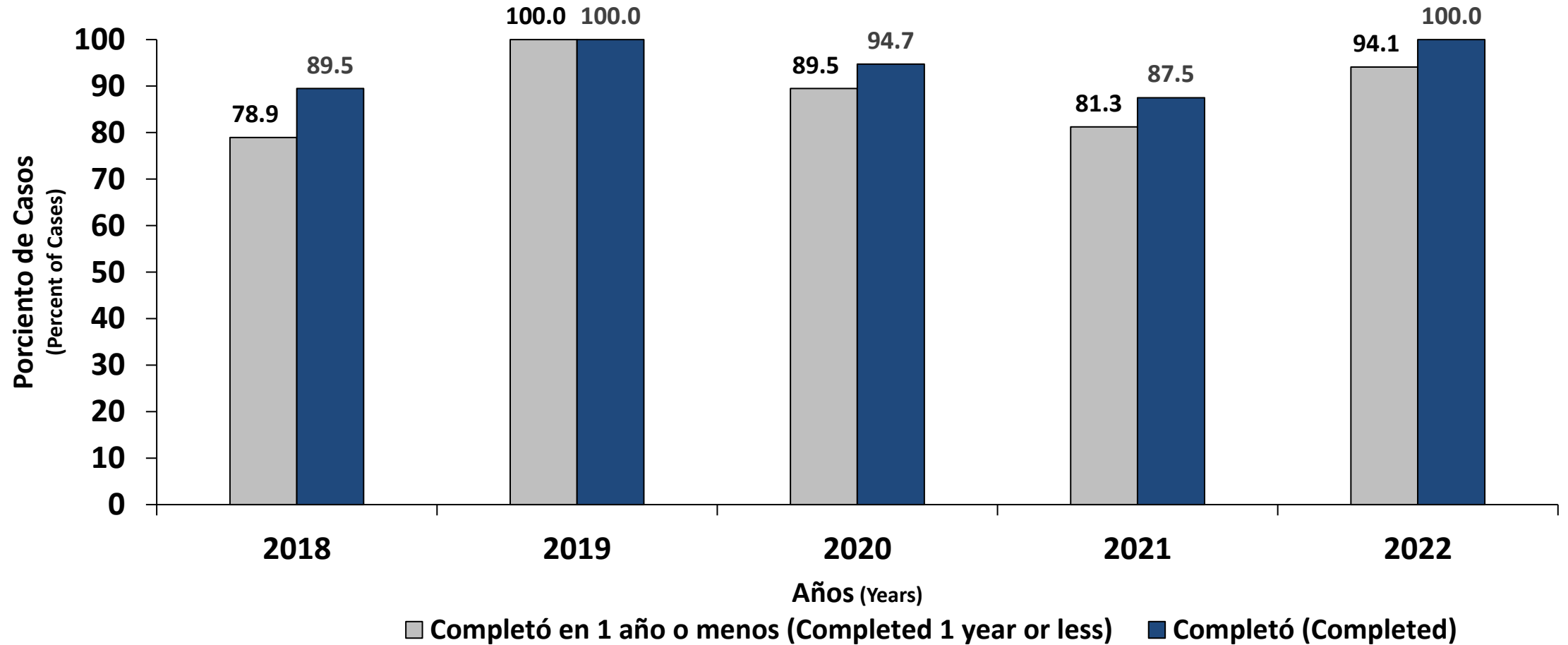
(Percent of TB Cases in Directly Observed Therapy, Puerto Rico 2018-2022)



*Includes persons alive at diagnosis with initial drug regimen of one or more drugs prescribed.
Source: CDC RVCT Treatment Administered (Report of Verified Case of Tuberculosis).

Porcentaje de Casos* de TB que Completaron el Tratamiento, Puerto Rico 2018-2022

(Percent of TB Cases that Completed the TB Tx, Puerto Rico 2018-2022)



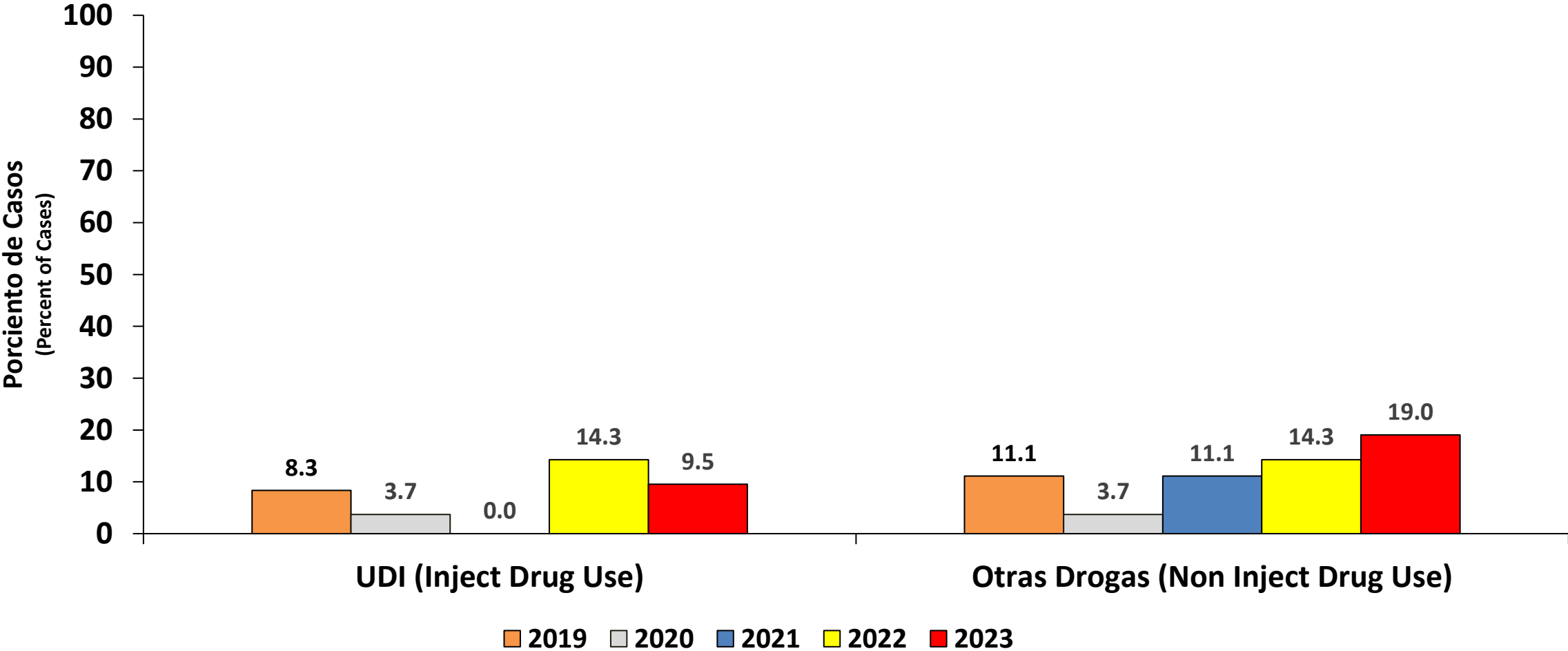
*TB patients, for whom 12 months of treatment or less is recommended, alive at diagnosis, and initiated treatment;
Source: CDC NTIP Completion of Therapy (National Tuberculosis Indicators Project).

Factores de Riesgo

(Risk Factors)

Porciento de Casos de TB por Usuarios de Drogas, Puerto Rico 2019-2023

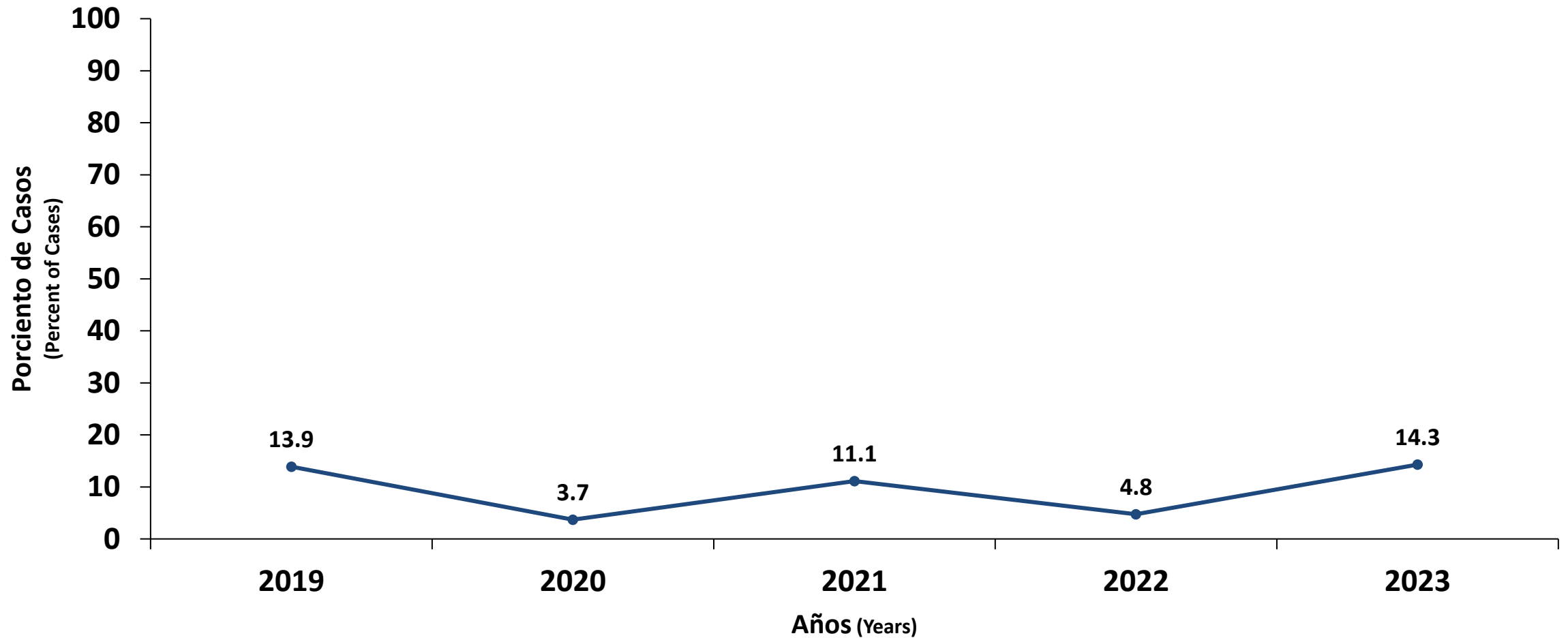
(Percent of TB Cases by Drug Users, Puerto Rico 2019-2023)



UDI: Usuarios de drogas inyectables
Source: CDC NTSS TB Injecting Drug Use & Non-Injecting Drug Use (National Tuberculosis Surveillance System Report).

Porcentaje de Casos de TB que Reportaron Consumir Alcohol en Exceso, Puerto Rico 2019-2023

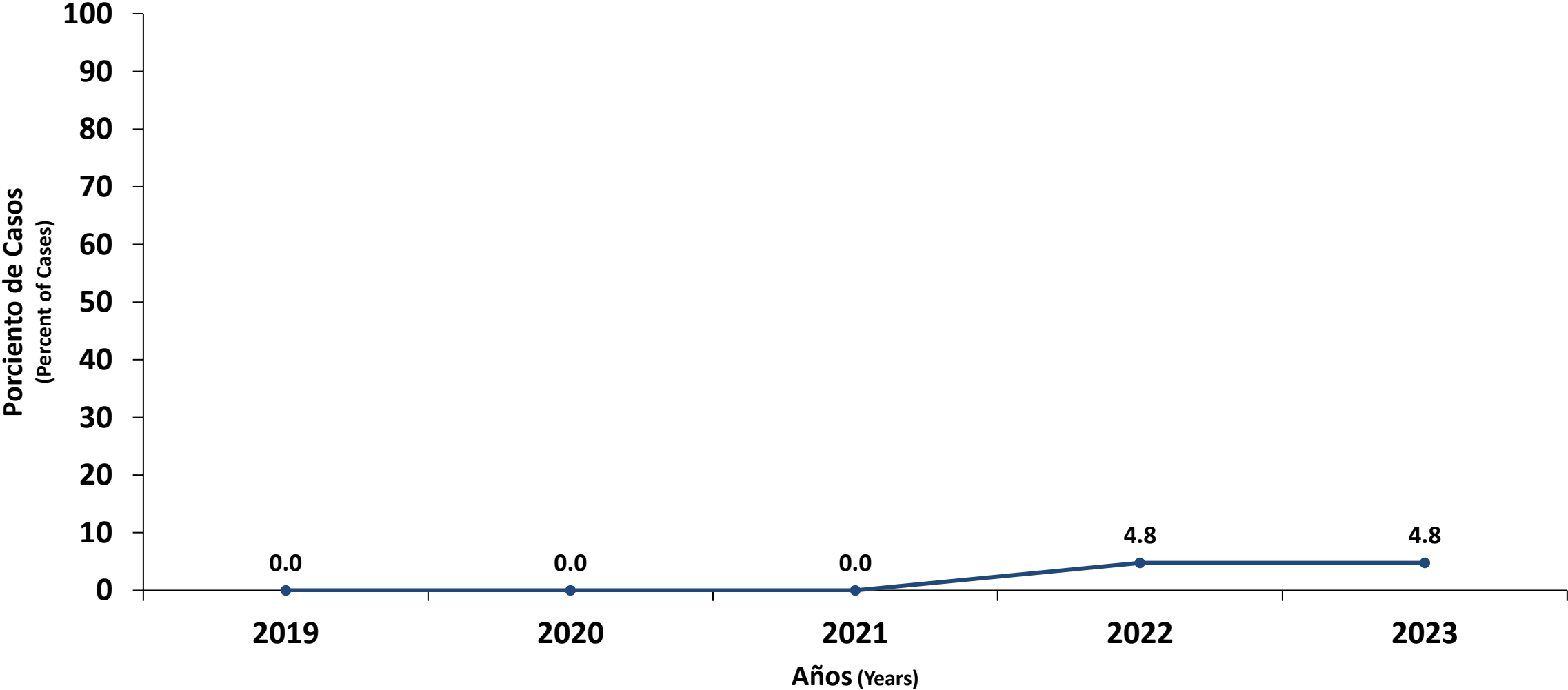
(Percent of TB Cases that Reported Alcohol Consumption in Excess, Puerto Rico 2019-2023)



Source: CDC NTSS TB Alcohol Consumption in Excess (National Tuberculosis Surveillance System Report).

Porcentaje de Casos de TB por Deambulantes, Puerto Rico 2019-2023

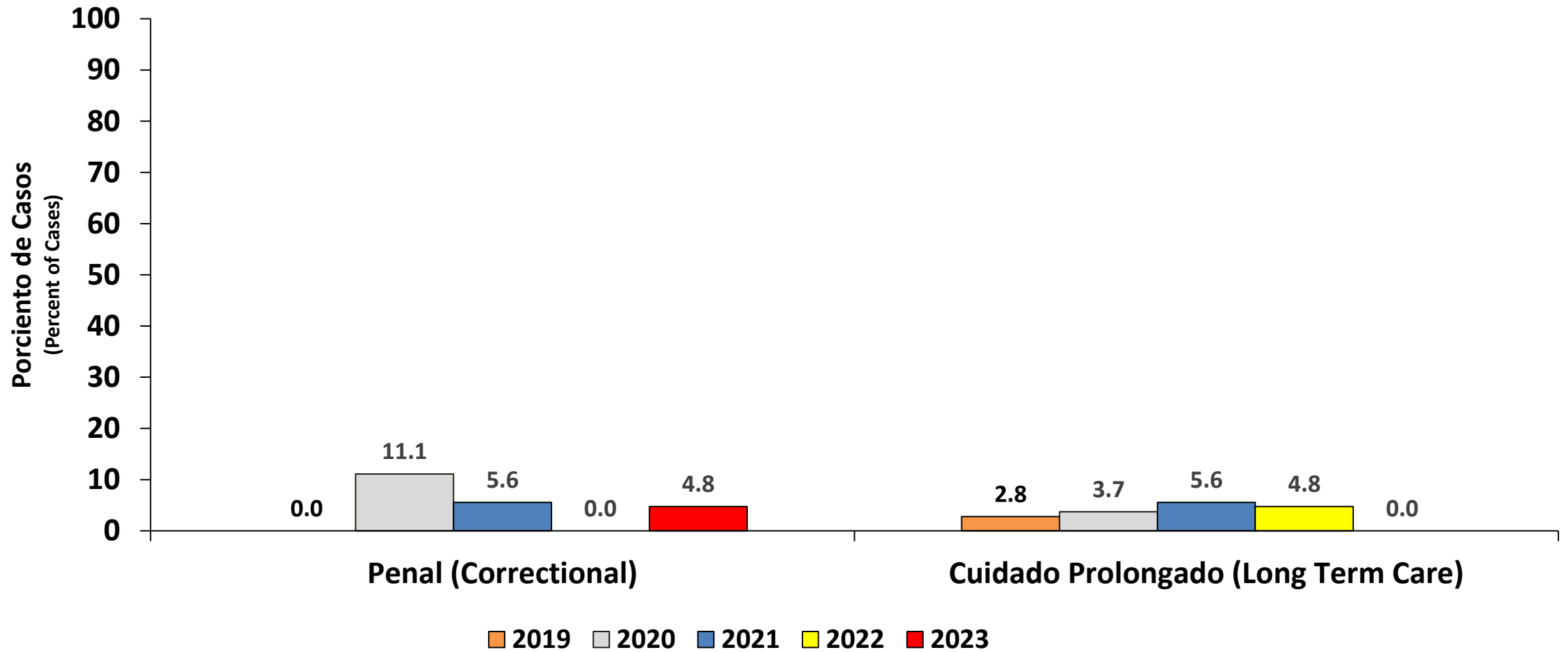
(Percent of TB Cases by Homeless, Puerto Rico 2019-2023)



Source: CDC NTSS TB Homeless Within Past Year (National Tuberculosis Surveillance System Report).

Porciento de Casos de TB con Residencia en Facilidades de Alto Riesgo, Puerto Rico 2019-2023

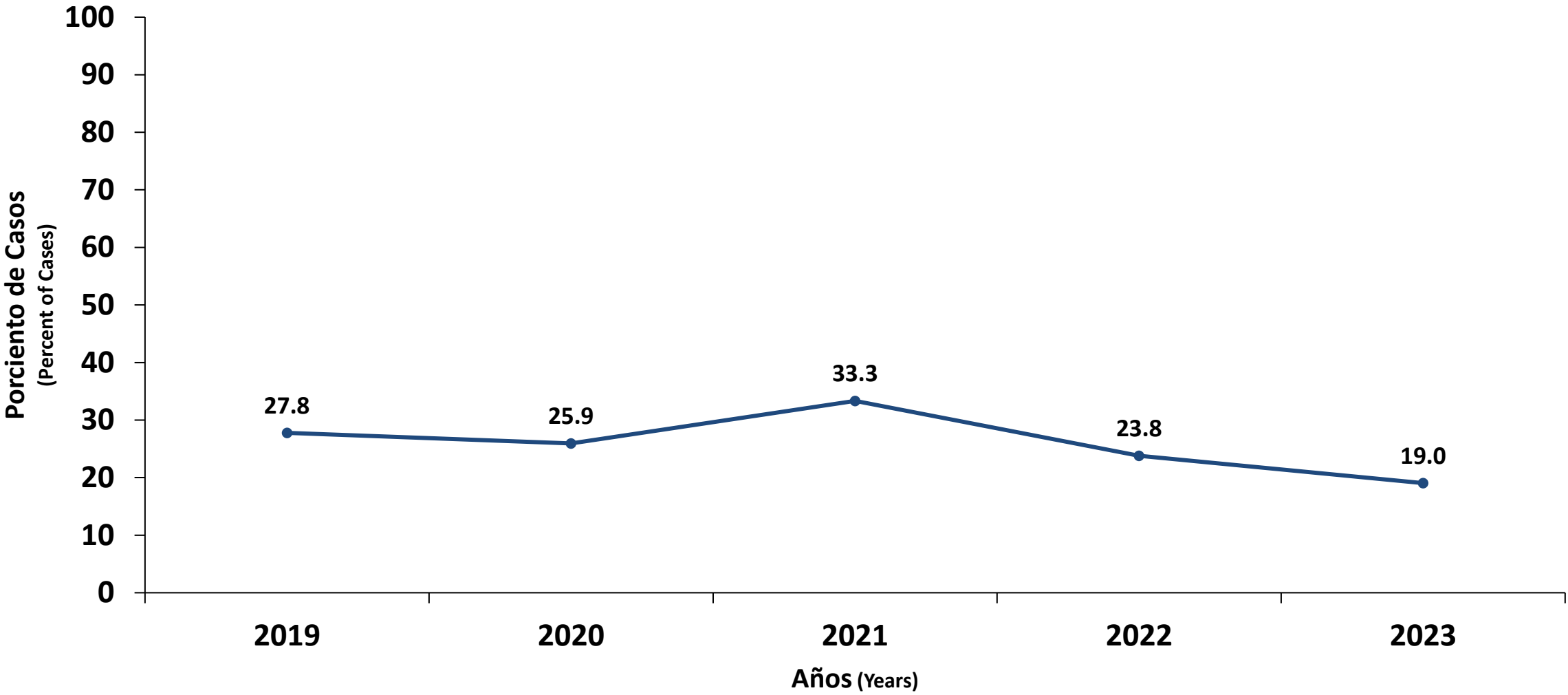
(Percent of TB Cases with Residency in High Risk Facilities, Puerto Rico 2019-2023)



Source: CDC NTSS TB Longterm Care at Dx & Correctional Facility at Dx (National Tuberculosis Surveillance System Report).

Porcentaje de Casos de TB con Diabetes, Puerto Rico 2019-2023

(Percent of TB Cases with Diabetes, Puerto Rico 2019-2023)



Source: CDC NTSS TB Diabetes mellitus (National Tuberculosis Surveillance System Report).

Porciento de Factores Riesgo asociados a los casos de TB, Puerto Rico 2019-2023

(Risk Factor Associated with TB Cases, Puerto Rico 2019-2023)

Factores de Riesgo	2019	2020	2021	2022	2023
Casos nacieron en el Extranjero (Born Outside US)	22.2%	29.6%	22.2%	19.0%	28.6%
Diabetes	27.8%	25.9%	33.3%	23.8%	19.0%
Consumo excesivo de Alcohol (Excess Alcohol Use)	13.9%	3.7%	11.1%	4.8%	14.3%
Deambulantes (Homeless)	0%	0%	0%	4.8%	4.8%
Uso de Drogas No Inyectables (Non Inject Drug Use)	11.1%	0%	11.1%	14.3%	19.0%
Uso de Drogas Inyectables (Inject Drug Use)	8.3%	0%	0%	14.3%	9.5%
Residente facilidad de cuidado prolongado (Residency in High Risk Facilities)	2.8%	3.7%	5.6%	4.8%	0%
Residente en Facilidat Correccional (Correctional Facility Resident)	0%	11.1%	5.6%	0%	4.8%
Co-infección con el VIH (HIV Coinfection)*	8.3%	11.1%	5.6%	14.3%	4.8%

*All TB cases alive or dead at diagnosis. Source: CDC NTSS & NTIP TB Risk Variables (National Tuberculosis Surveillance System Report & National Tuberculosis Indicators Project).

Porciento de Casos* TB/VIH al momento del diagnóstico (vivos), Puerto Rico, 2019-2023 **(Percent of TB/HIV Cases at time of diagnosis (alive), Puerto Rico 2019-2023)**

	Casos de TB (TB Cases)	2019	2020	2021	2022	2023
Puerto Rico	Negativo (HIV-)	88.6	88.9	94.4	85.0	95.0
	Positivo (HIV+)	8.6	11.1	5.6	15.0	5.0
Estados Unidos (United States)	Negativo (HIV-)	87.0	86.2	86.9	86.9	84.7
	Positivo (HIV+)	4.2	4.3	3.8	4.1	4.3

Source: CDC NTIP Know HIV Status (National Tuberculosis Indicators Project).

Indicator: Percent of TB patients with HIV test result reported as Positive or Negative

Cohort: All TB cases counted in the year of interest, ***alive at diagnosis**. Records with missing or incomplete data where exclusion criteria cannot be assessed are included in the analytic cohort.

Data Sources: **RVCT field: Status at TB Diagnosis, HIV Status.**

Calculation: [Number of cases with HIV test result reported as Positive or Negative / Cohort] X 100

Resultados de Pruebas de VIH en Casos* con TB, Puerto Rico 2018-2022

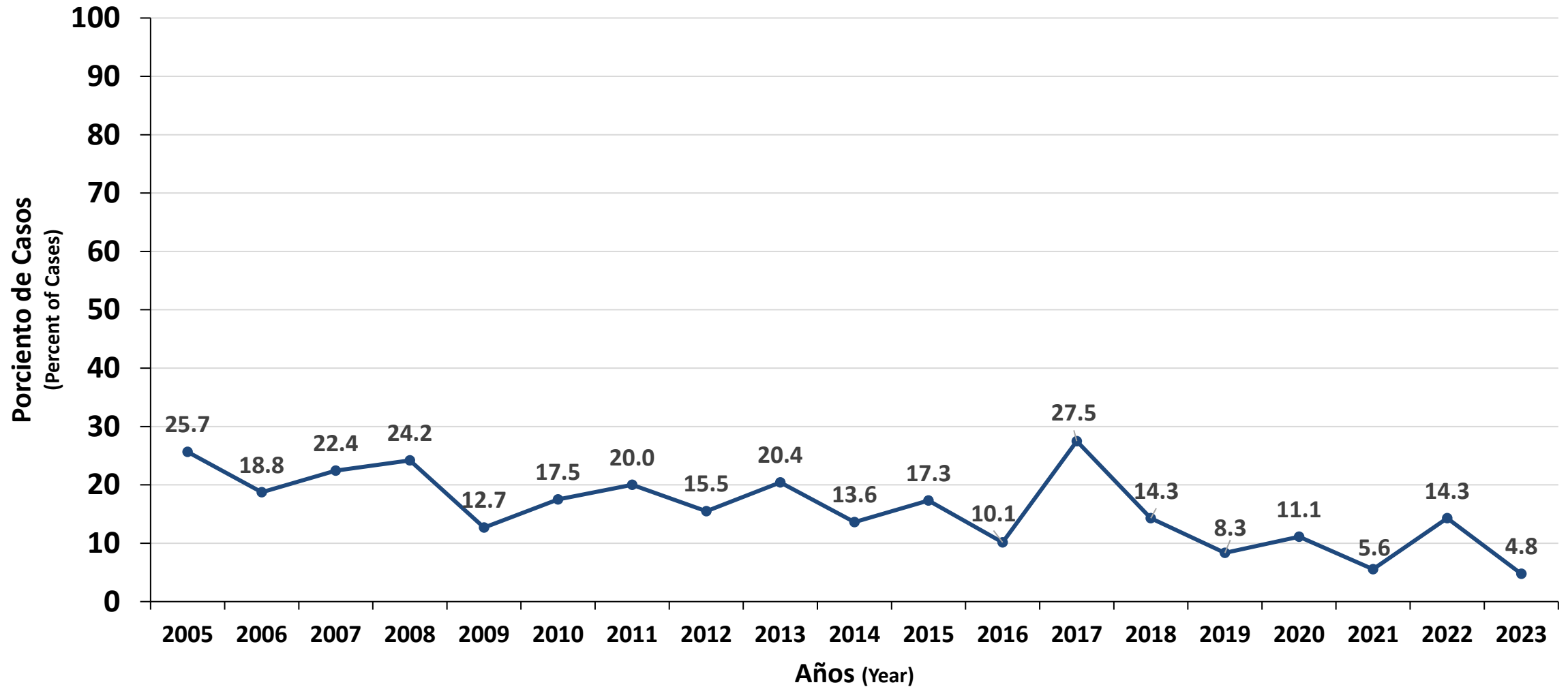
(HIV Testing Results in TB Cases, Puerto Rico 2018-2022)

	Años (Years)				
Casos de TB (TB Cases)	2019	2020	2021	2022	2023
Casos Reportados (Reported Cases)	36	27	18	21	21
Negativo (VIH-)	31	24	17	18	19
Positivo (VIH+)	3	3	1	3	1
No ofrecido (Not offered)	2	0	0	0	1
Rehusó (Refused)	0	0	0	0	0

*All TB cases alive or dead at diagnosis. Source: CDC NTIP Know HIV Status (National Tuberculosis Indicators Project).

Por ciento de Casos* TB/VIH, Puerto Rico, 2005-2023

(Percent of TB/HIV Cases, Puerto Rico 2005-2023)

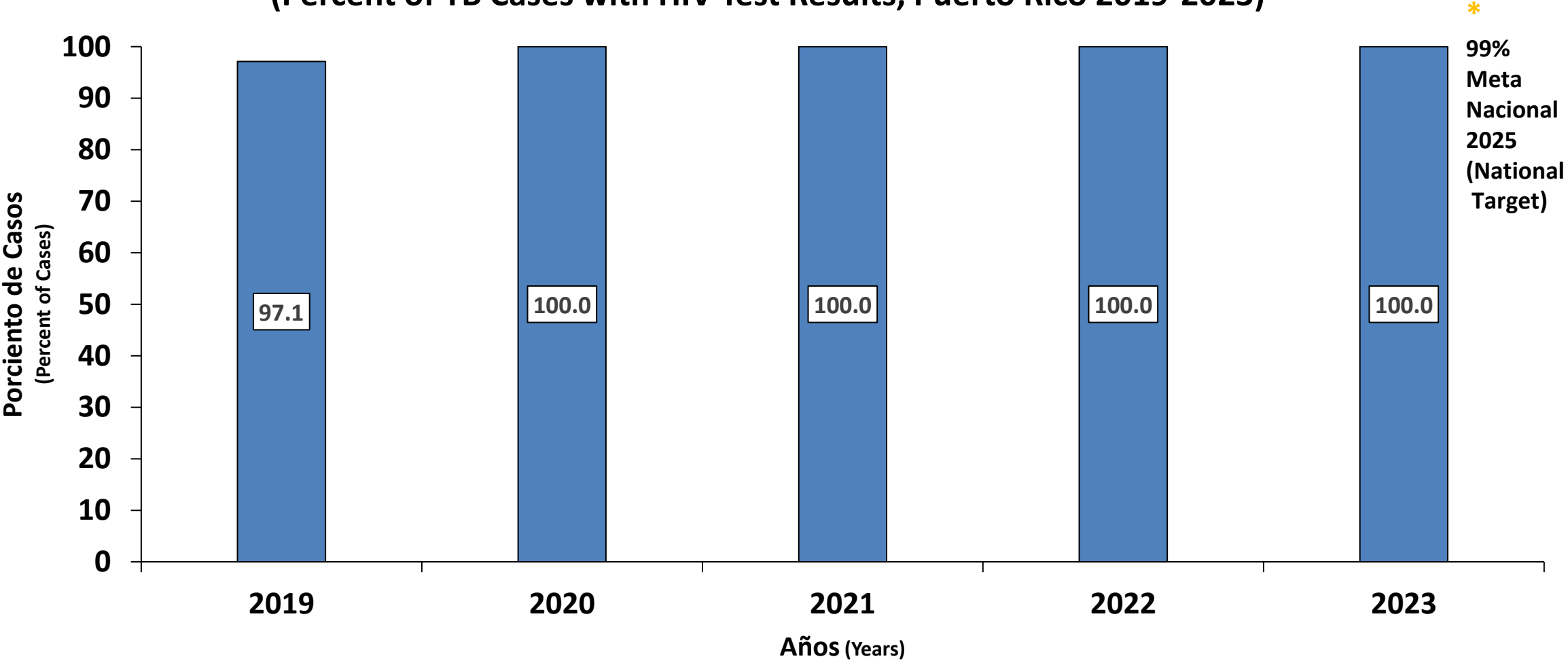


*All TB cases alive or dead at diagnosis.

Source: CDC NTIP Know HIV Status (National Tuberculosis Indicators Project).

Porciento de Casos TB con Resultados de Prueba de VIH, Puerto Rico 2019-2023

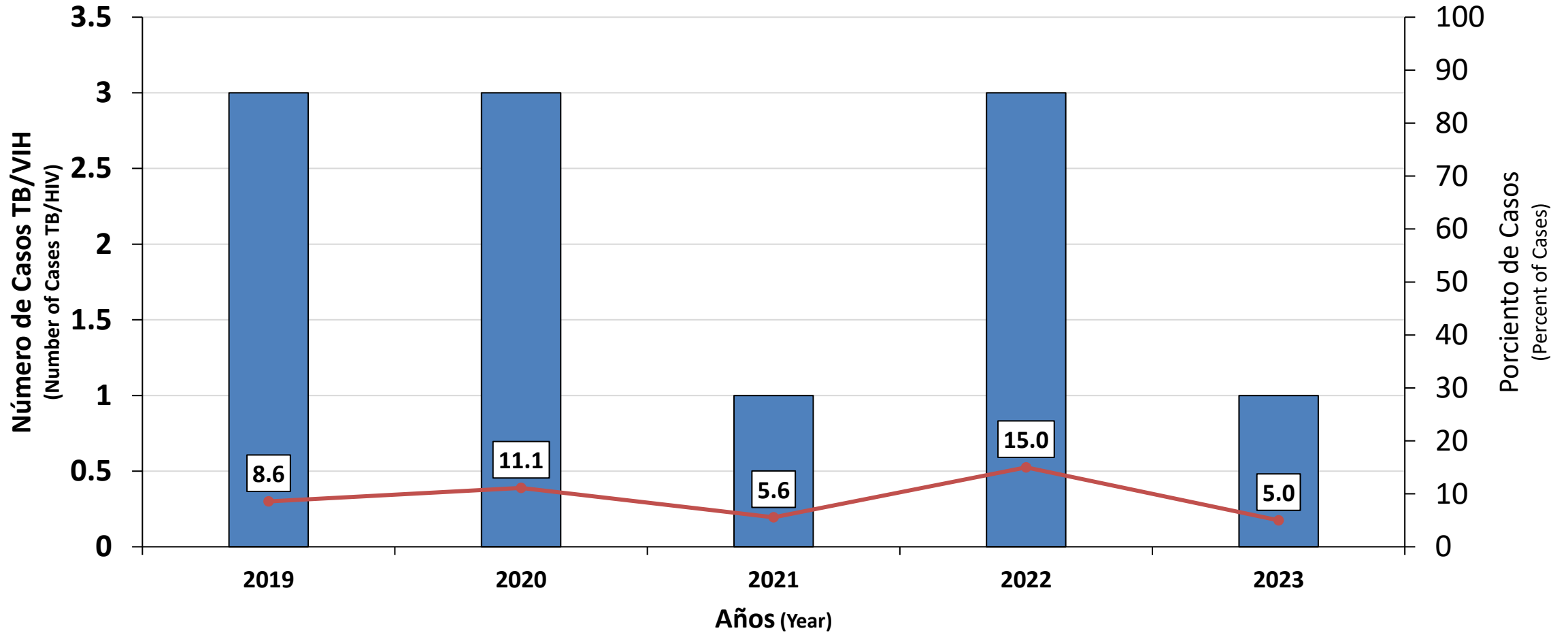
(Percent of TB Cases with HIV Test Results, Puerto Rico 2019-2023)



*All TB cases alive at diagnosis.
Source: CDC NTIP Know HIV Status (National Tuberculosis Indicators Project).

Porciento de Casos TB/VIH vivos al momento del diagnostico, Puerto Rico 2019-2023

(Percent of TB/HIV Cases alive at time of diagnosis, Puerto Rico 2019-2023)



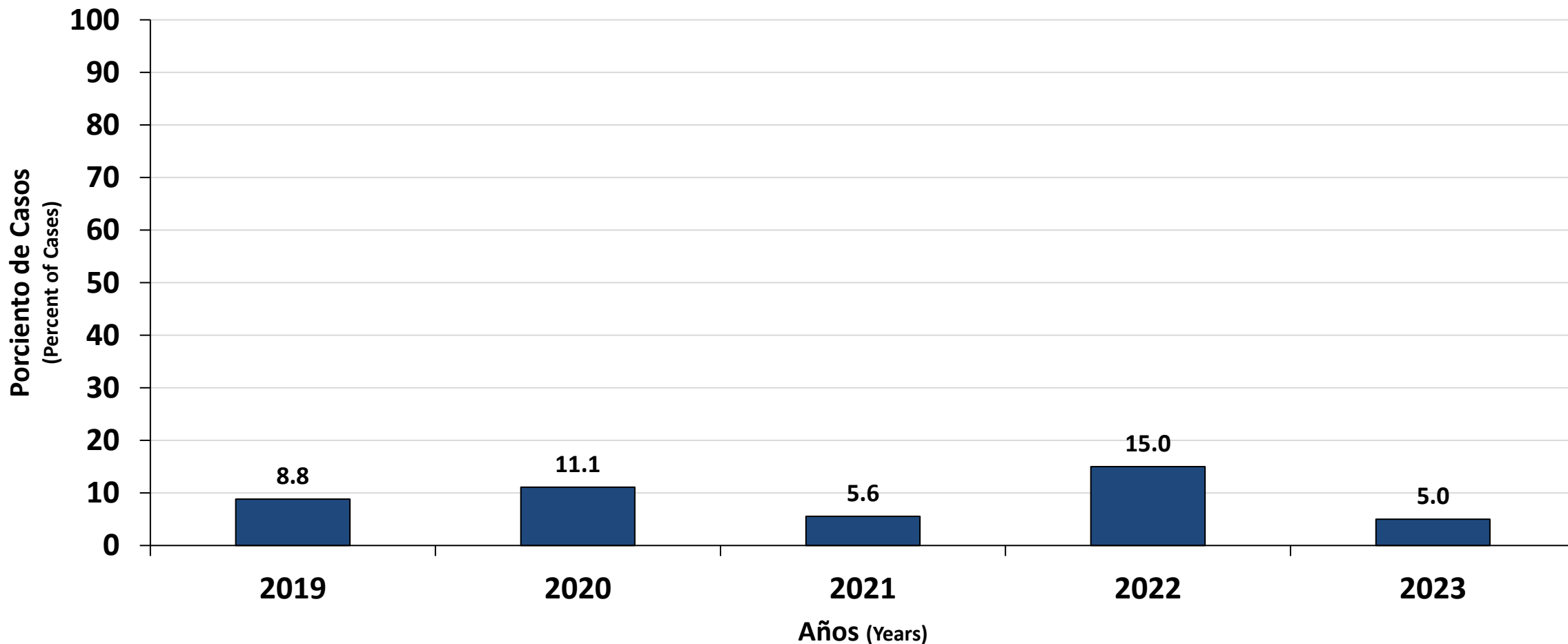
Casos Reportados* (Reported Cases)	35	27	18	20	20
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*All TB cases alive at diagnosis.

Source: CDC NTIP Know HIV Status (National Tuberculosis Indicators Project).

Porciento de Co-infección TB/VIH en *Casos que se Realizaron la Prueba de VIH, Puerto Rico 2019-2023

(Percent of TB/HIV Co-Infection in Cases with HIV Test Done, Puerto Rico 2019-2023)



*All TB cases alive at diagnosis.

Source: CDC NTIP Know HIV Status (National Tuberculosis Indicators Project).



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