

Actualización COVID-19 & Perfil Epidemiológico de Cáncer en Puerto Rico

Melissa Marzán Rodríguez, DrPH, MPH, CPH
Principal Oficial de Epidemiología
22 de junio de 2023

DEPARTAMENTO DE
SALUD



Agenda

- Actualización de la situación de COVID-19.
- Presentar la epidemiología del cáncer en Puerto Rico (años 2015-2019).



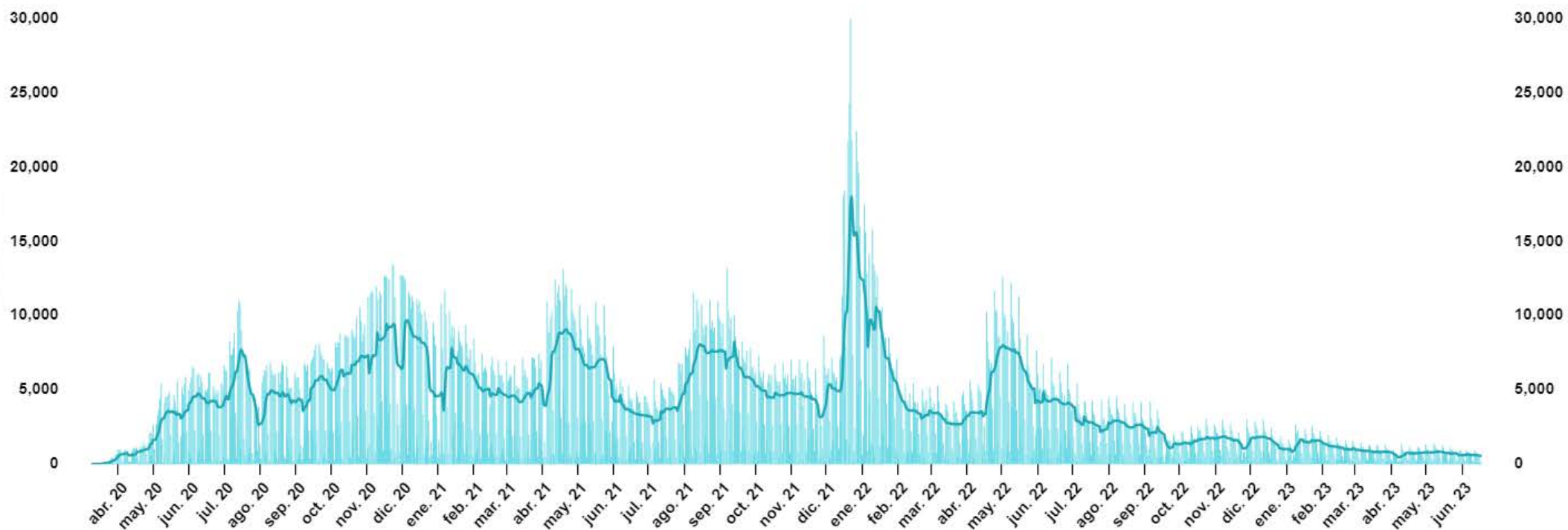
COVID-19

DEPARTAMENTO DE
SALUD



Pruebas diagnósticas de COVID-19 (2020-2023)

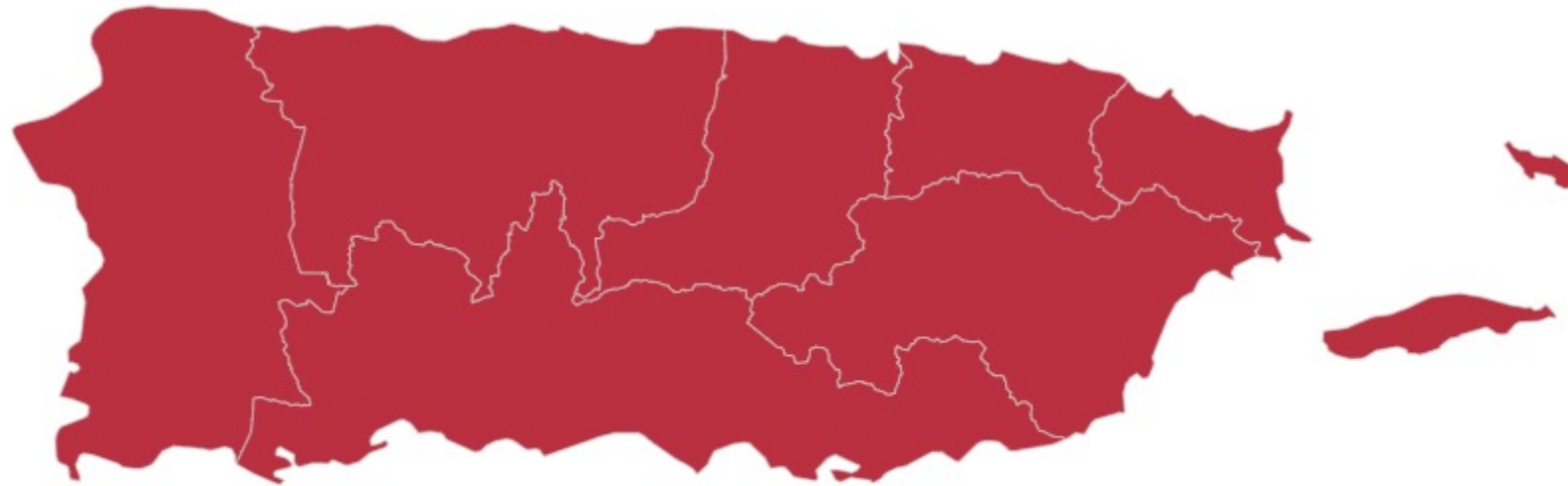
Conteo diario de pruebas moleculares (PCR) para COVID-19 notificadas por fecha de toma de muestra



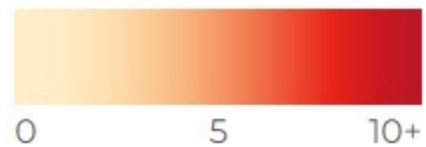
Fuente: DSPR (2023). https://www.salud.gov.pr/estadisticas_v2#pruebas
Periodo 20 de marzo de 2020 a 17 de junio de 2023-- . Datos preliminares.



Nivel de transmisión comunitaria de COVID-19 basado en la Positividad

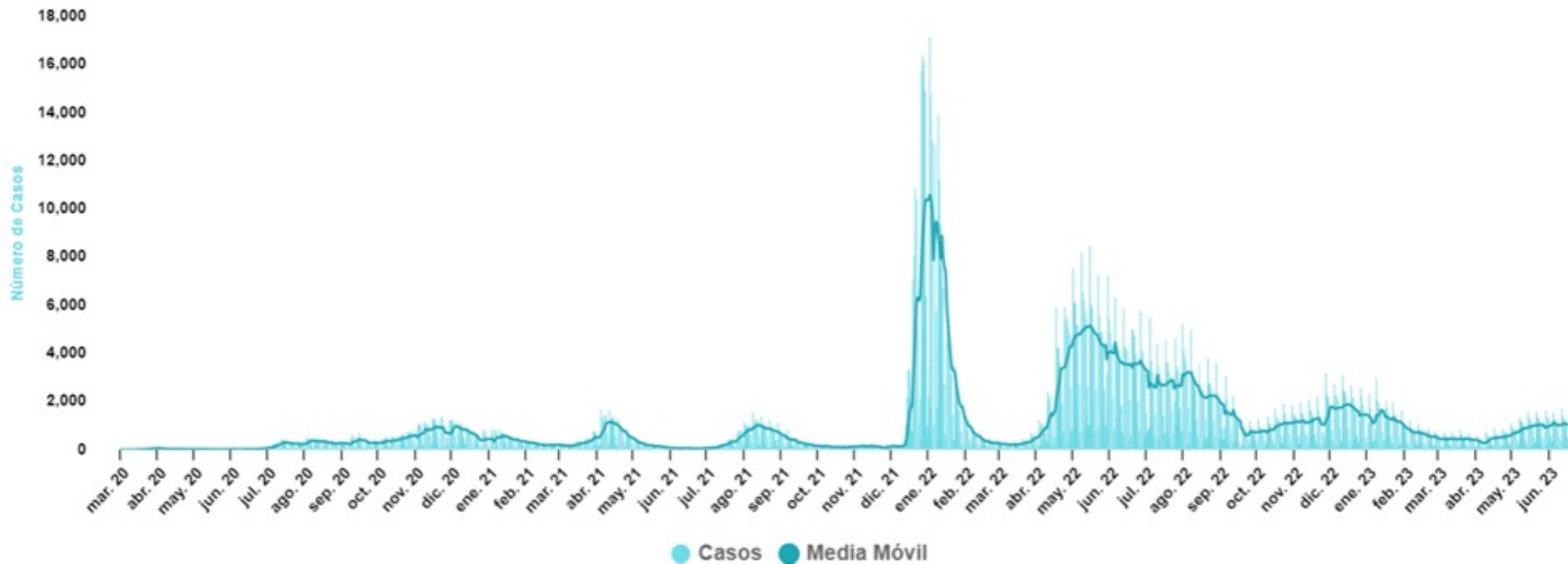


Nivel de transmisión comunitaria de COVID-19 basado en la Positividad:



Casos confirmados y probables de COVID-19 (2020-2023)

Conteo diario de casos totales (molecular y antígeno) para COVID-19 notificadas por fecha de toma de muestra



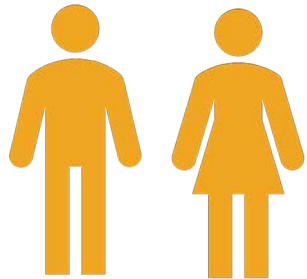
Fuente: DSPR (2023). https://www.salud.gov.pr/estadisticas_v2#pruebas
Periodo 20 de marzo de 2020 a 17 de junio de 2023-- . Datos preliminares.



Positividad, basada en pruebas moleculares, por grupos de edad Puerto Rico, Periodo: 7 al 20 de junio de 2023.



Grupo de edad	0-9	10-19
Tasa Casos por 100,000	281.7	230.8



Grupo de edad	20-29	30-39	40-49	50-59
Tasa Casos por 100,000	374.0	484.1	530.7	527.6

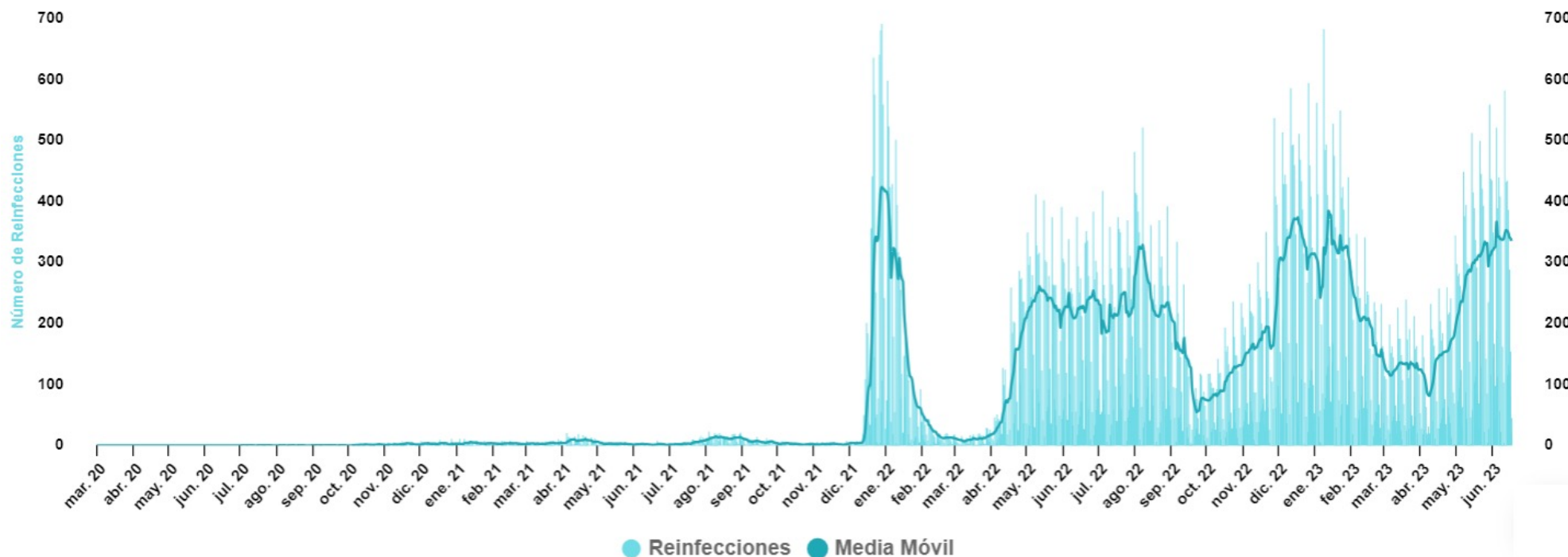


Grupo de edad	60-69	70-79	80+
Tasa Casos por 100,000	514.0	539.5	353.9



Reinfecciones por COVID-19 (2020-2023)

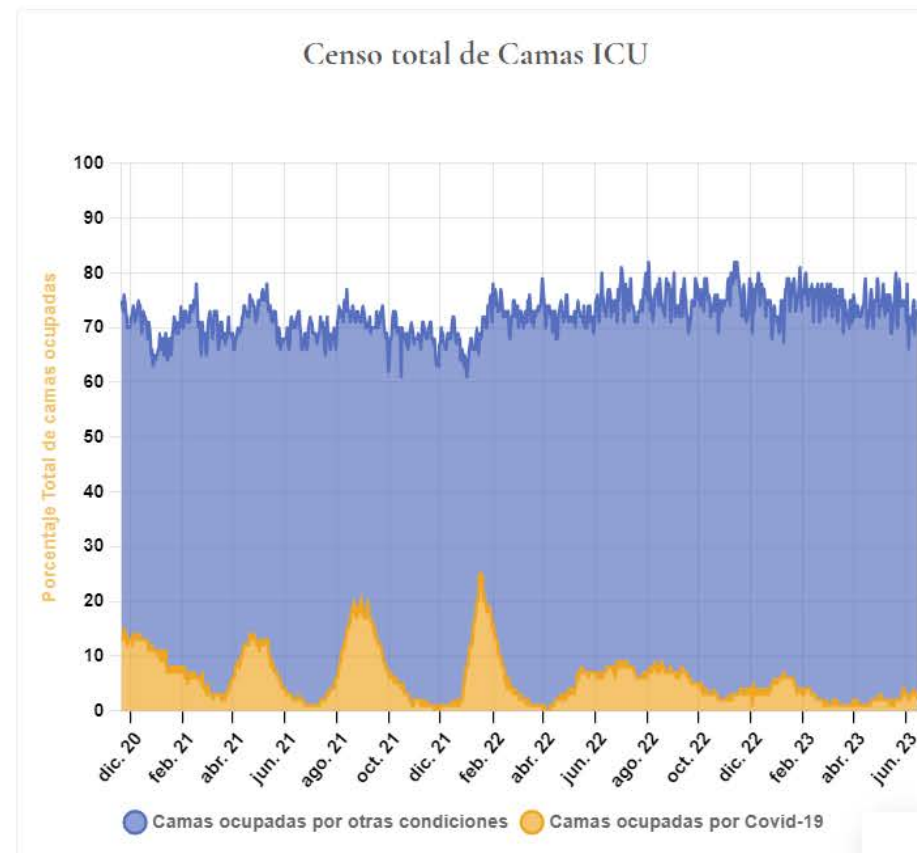
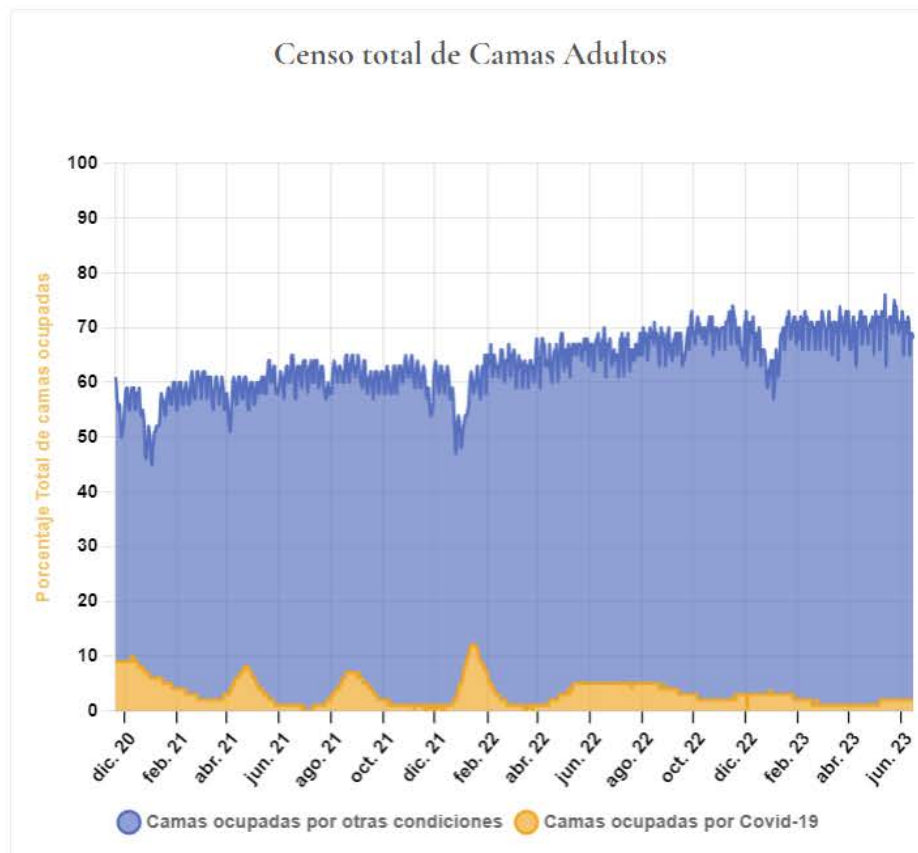
Conteo diario de reinfecciones (molecular y antígeno) para COVID-19 notificadas por fecha de toma de muestra



Fuente: DSPR (2023). https://www.salud.gov.pr/estadisticas_v2#pruebas
Periodo 20 de marzo de 2020 a 17 de junio de 2023-- . Datos preliminares.



Hospitalizaciones COVID-19 en Puerto Rico Adultos, Años 2020-2023



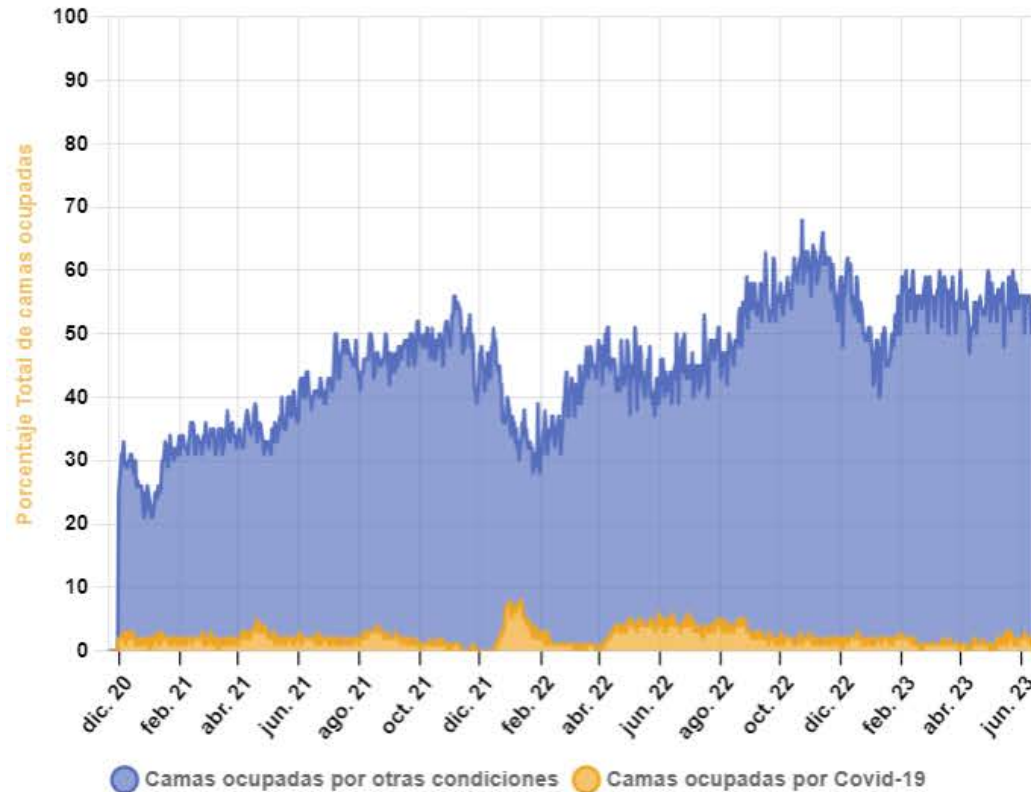
Fuente: DSPR (2023). https://www.salud.gov.pr/estadisticas_v2#pruebas
Periodo 20 de marzo de 2020 a 17 de junio de 2023-- . Datos preliminares.



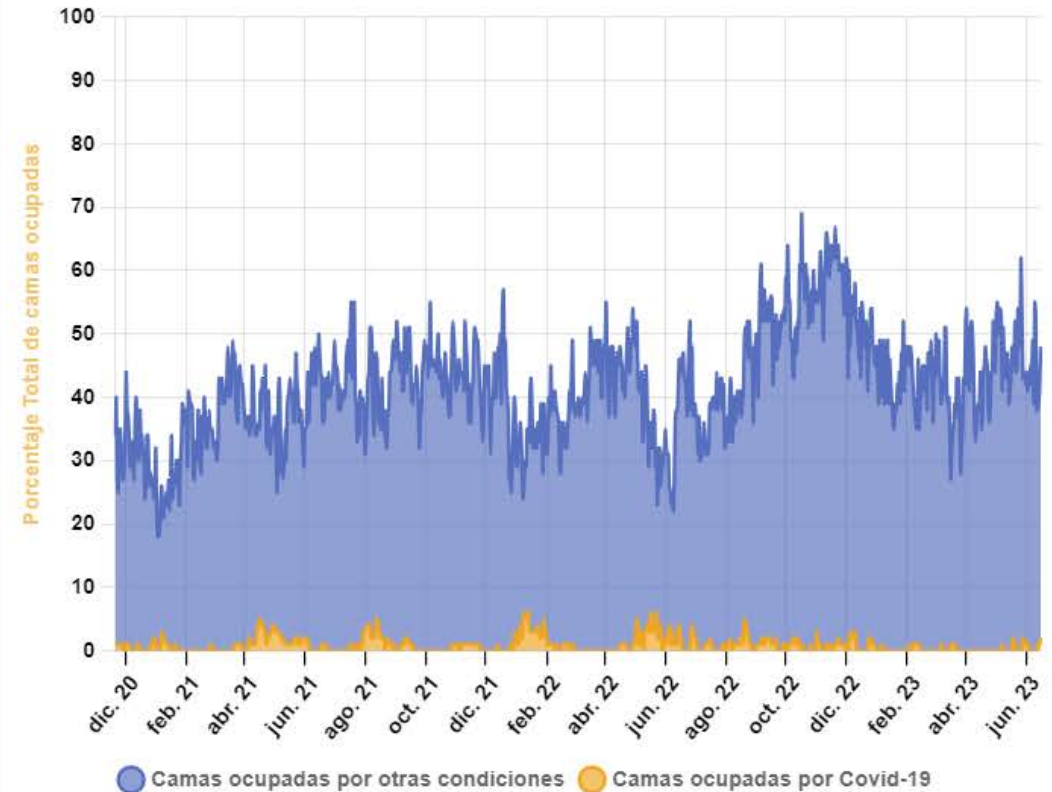
Hospitalizaciones COVID-19 en Puerto Rico Pediátricos, Años 2020-2023



Censo total de Camas Pediátricas

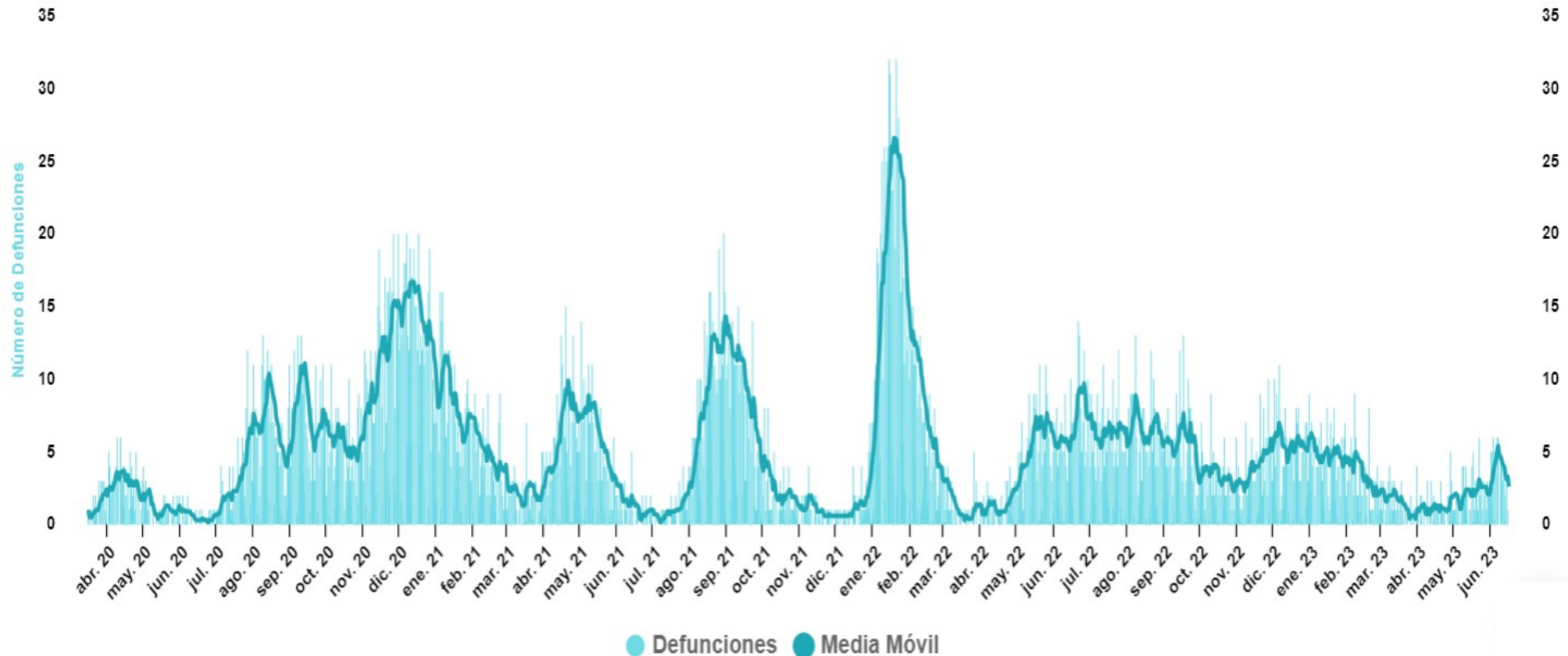


Censo total de Camas PICU



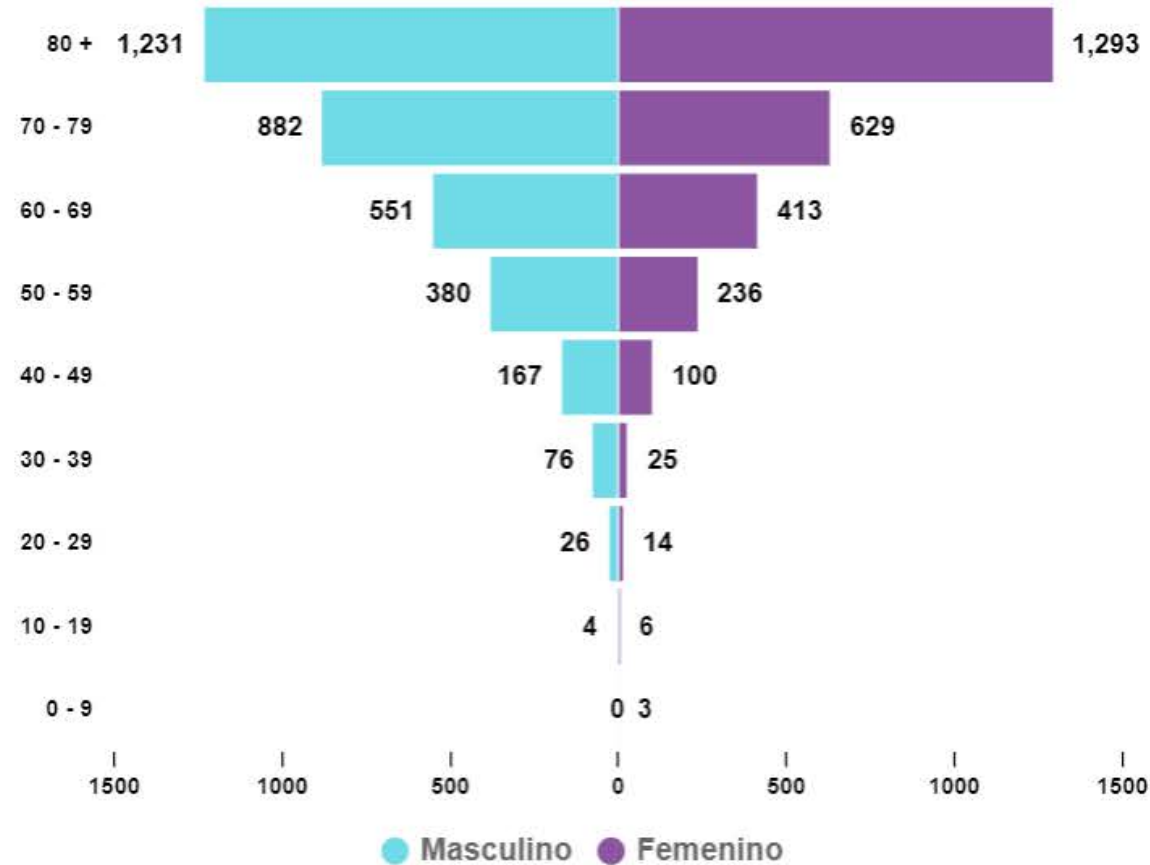
Defunciones COVID-19 (2020-2023)

Conteo diario de defunciones por COVID-19 notificadas por fecha de defunción



Fuente: DSPR (2023). https://www.salud.gov.pr/estadisticas_v2#pruebas
Periodo 20 de marzo de 2020 a 17 de junio de 2023. . Datos preliminares.

Pirámide de defunciones por COVID-19 por grupos de edad y sexo en Puerto Rico



Fuente: DSPR (2023). https://www.salud.gov.pr/estadisticas_v2#pruebas
Periodo 20 de marzo de 2020 a 17 de junio de 2023. . Datos preliminares.



Defunciones COVID-19 (2020-2023)

Tasas de mortalidad de COVID-19 por estatus de vacunación

Datos del 06/01/2022 al 06/19/2023
(Últimos 12 meses)

90.2

**DEFUNCIONES
NO VACUNADAS**

por cada 100,000
personas no vacunadas
(**411** defunciones
de una población de
455,438
personas no vacunadas)

37.4

**DEFUNCIONES
SIN VACUNAS AL DÍA**

por cada 100,000
personas sin sus vacunas al día
(**923** defunciones
de una población de
2,467,851
personas sin sus vacunas al día)

26.4

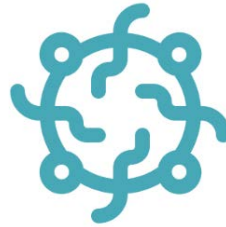
**DEFUNCIONES
CON VACUNAS AL DÍA**

por cada 100,000
personas con sus vacunas al día
(**90** defunciones
de una población de
340,295
personas con sus vacunas al día)

Distribución de causas más frecuentes de mortalidad en Puerto Rico. Año 2022



18.3%
enfermedades
del corazón



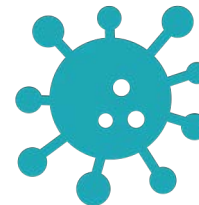
15.2%
tumores malignos



8.7%
diabetes mellitus



8.4%
enfermedad
de Alzheimer



5.7%
COVID-19

Nota: Estos datos presentan solo la distribución de las causas más frecuentes de muerte en Puerto Rico para el año 2022. No son tasas de mortalidad ajustadas.

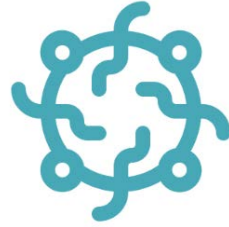


Principales cinco causas de muerte, año 2022

Sexo femenino.



18.3%
enfermedades
del corazón



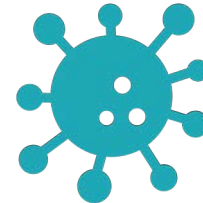
15.0%
tumores malignos



11.7%
diabetes mellitus



8.9%
enfermedad
de Alzheimer



5.7%
COVID-19

Nota: Estos datos presentan solo la distribución de las causas más frecuentes de muerte en personas del sexo femenino en Puerto Rico para el año 2022. No son tasas de mortalidad ajustadas.

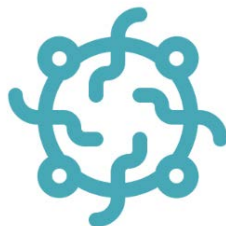


Principales cinco causas de muerte, año 2022

Sexo masculino.



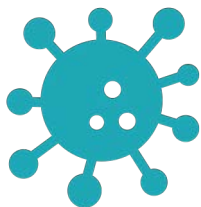
18.3%
enfermedades
del corazón



15.3%
tumores malignos



8.6%
diabetes mellitus



5.8%
COVID-19



5.5%
enfermedad
de Alzheimer

Nota: Estos datos presentan solo la distribución de las causas más frecuentes de muerte en personas del sexo masculino en Puerto Rico para el año 2022. No son tasas de mortalidad ajustadas.



Epidemiología del cáncer en Puerto Rico, Años 2015-2019

DEPARTAMENTO DE
SALUD



Objetivos

1. Presentar la tasa de incidencia de cáncer Puerto Rico para el periodo 2015-2019.
2. Presentar la tasa de mortalidad de cáncer Puerto Rico para el periodo 2015-2019.



Incidencia de cáncer en Puerto Rico

DEPARTAMENTO DE
SALUD





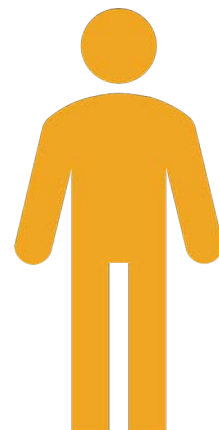
Incidencia de Cáncer en Puerto Rico, Año 2019

16,628

Casos nuevos de
cáncer reportados.

368

Casos de cáncer
reportados
por cada 100,000
habitantes.



52.8%

hombres
(8,780 casos)



47.1%

mujeres
(7,848 casos)



Top Ten Cancer Sites (Incidence) by Sex Puerto Rico, 2015-2019 and APC[¥] 2000-2019

♂ Male (N = 38,750)	%	APC ²⁰⁰⁰⁻²⁰¹⁹
Prostate	38.3	-0.1
Colon and rectum	11.7	0.0
Lung and bronchus	5.4	↓ -1.0*
Urinary bladder	4.2	0.1
Non-Hodgkin Lymphoma	3.9	↑ 2.2*
Oral cavity and pharynx	3.6	↓ -0.7*
Liver and bile duct	3.4	↑ 1.7*
Kidney and renal pelvis	3.1	↑ 4.2*
Leukemia	2.8	↑ 2.1*
Pancreas	2.4	↑ 3.4*
Other sites	21.2	

Data Source: Puerto Rico Central Cancer Registry Incidence Case File (Feb. 2, 2022). Incidence cases file population of 2017 are restricted to the first 6 months of the year (January to June). Cases from July to December were excluded due to the population change after hurricanes Irma and María. [¥]APC= Annual Percent Change *p<0.05



Top Ten Cancer Sites (Incidence) by Sex Puerto Rico, 2015-2019 and APC[¥] 2000-2019

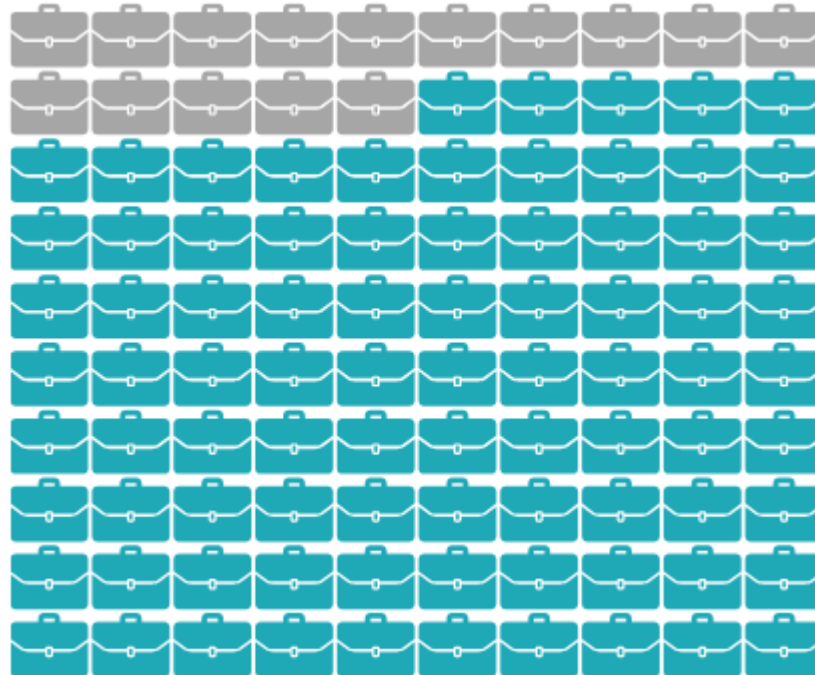
♀ Female (N = 35,288)	%	APC ²⁰⁰⁰⁻²⁰¹⁹
Breast	29.7	↑ 1.6*
Colon and rectum	10.8	-0.2
Thyroid	10.5	↑ 9.0*
Corpus and uterus, NOS	9.2	↑ 4.6*
Lung and bronchus	3.9	0.4
Non-Hodgkin Lymphoma	3.9	↑ 2.2*
Cervix uteri	2.9	↑ 1.6*
Pancreas	2.5	↑ 3.0*
Leukemia	2.5	↑ 2.7*
Ovary	2.3	↑ 0.8*
Other sites	21.9	

Data Source: Puerto Rico Central Cancer Registry Incidence Case File (Feb. 2, 2022). Incidence cases file population of 2017 are restricted to the first 6 months of the year (January to June). Cases from July to December were excluded due to the population change after hurricanes Irma and María. [¥]APC= Annual Percent Change *p<0.05





Porcentaje de personas con diagnóstico de cáncer en la fuerza laboral, Puerto Rico, 2017-2021

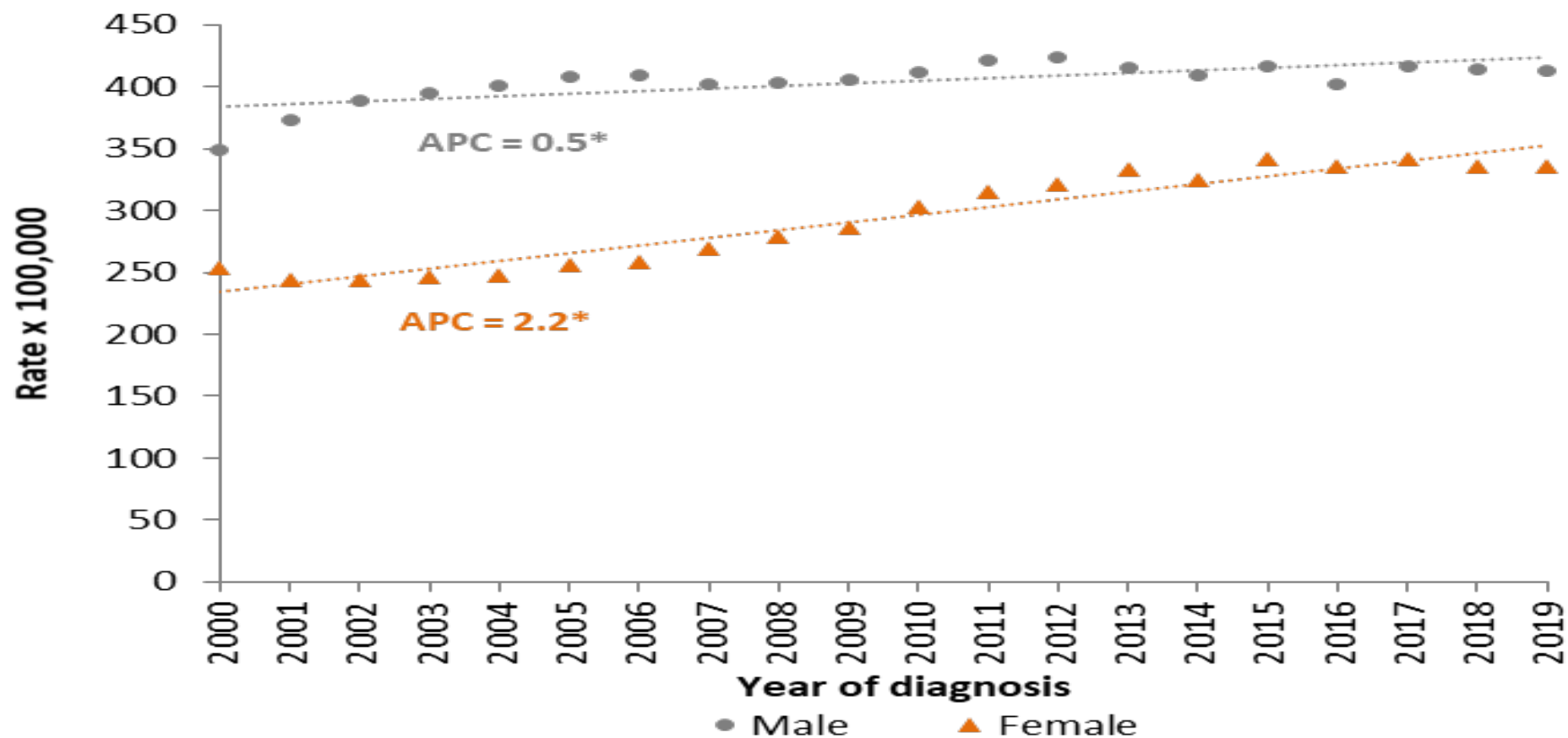


14.6%

De las personas de 16 años o más con un diagnóstico de cáncer no tienen empleo



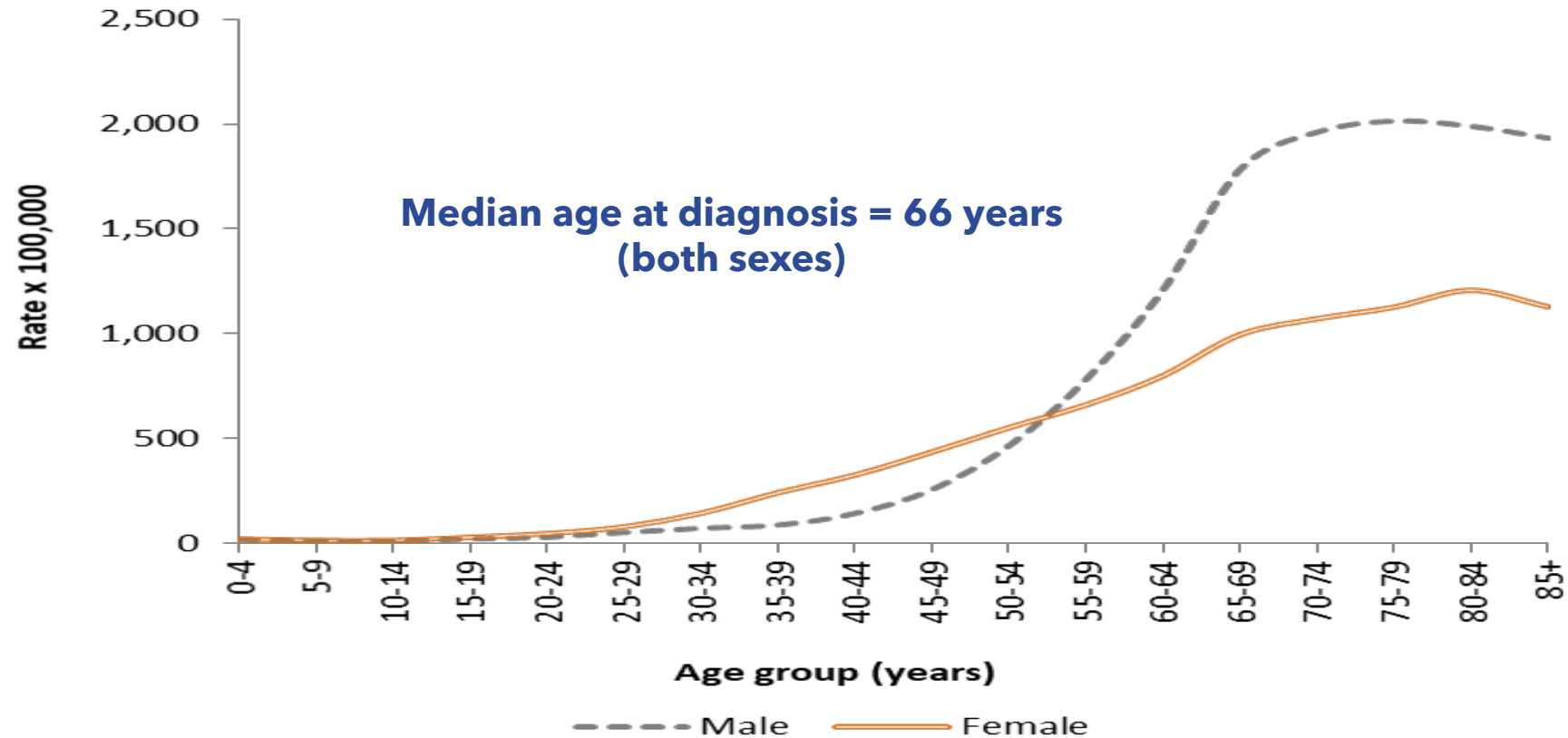
Age-adjusted Incidence Rates for All Cancer Sites by Sex Puerto Rico, 2000 - 2019



Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard.
 Data Source: Incidence Case File of Puerto Rico from the Puerto Rico Central Cancer Registry (February 2, 2022).
 Population Source: Vintage 2020 estimates series from the Population Division of the United States Census Bureau.
 Incidence cases file population of 2017 are restricted to the first 6 months of the year (January to June).
 Cases from July to December were excluded due to the population change after hurricanes Irma and María.



Age-specific Incidence Rates for All Cancer Sites by Sex Puerto Rico, 2015 - 2019



Rates are per 100,000.

Data Source: Incidence Case File of Puerto Rico from the Puerto Rico Central Cancer Registry (February 2, 2022).

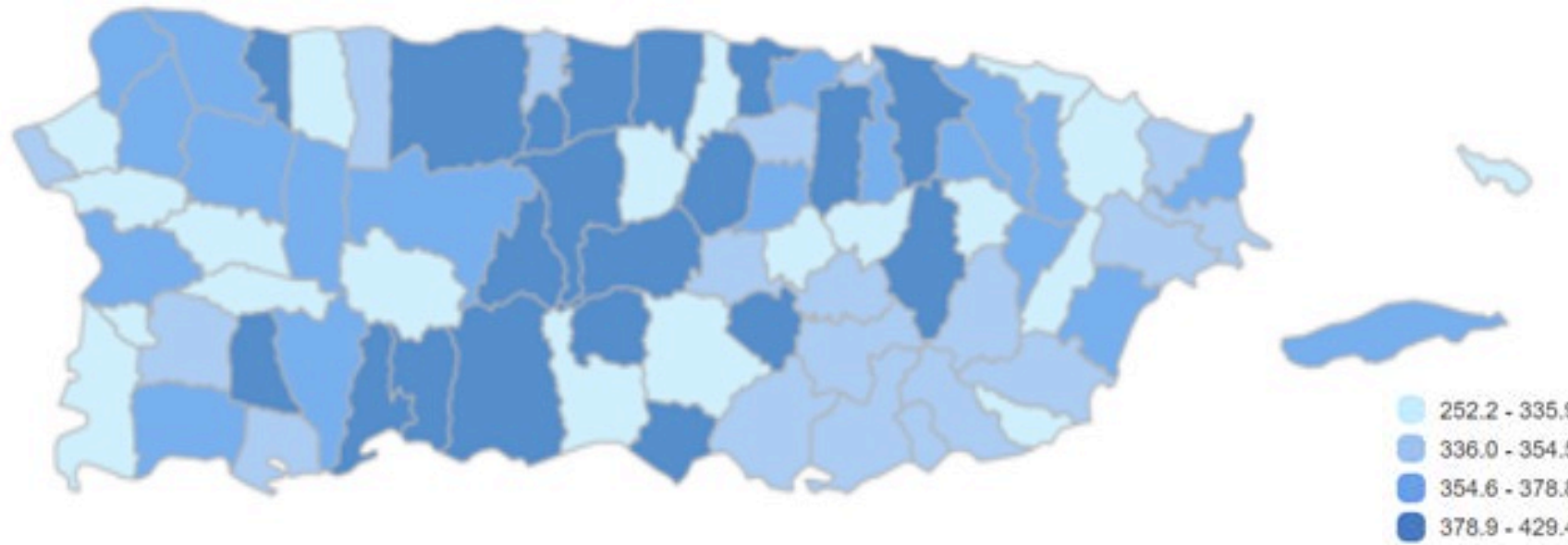
Population Source: Vintage 2020 estimates series from the Population Division of the United States Census Bureau.

Incidence cases file population of 2017 are restricted to the first 6 months of the year (January to June).

Cases from July to December were excluded due to the population change after hurricanes Irma and María.



Age-adjusted Incidence Rates for All Cancer Sites by Municipality Puerto Rico, 2015-2019



368.2
per 100,000
PR Incidence Rate

Rates are per 100,000.

Data Source: Incidence Case File of Puerto Rico from the Puerto Rico Central Cancer Registry (February 2, 2022).

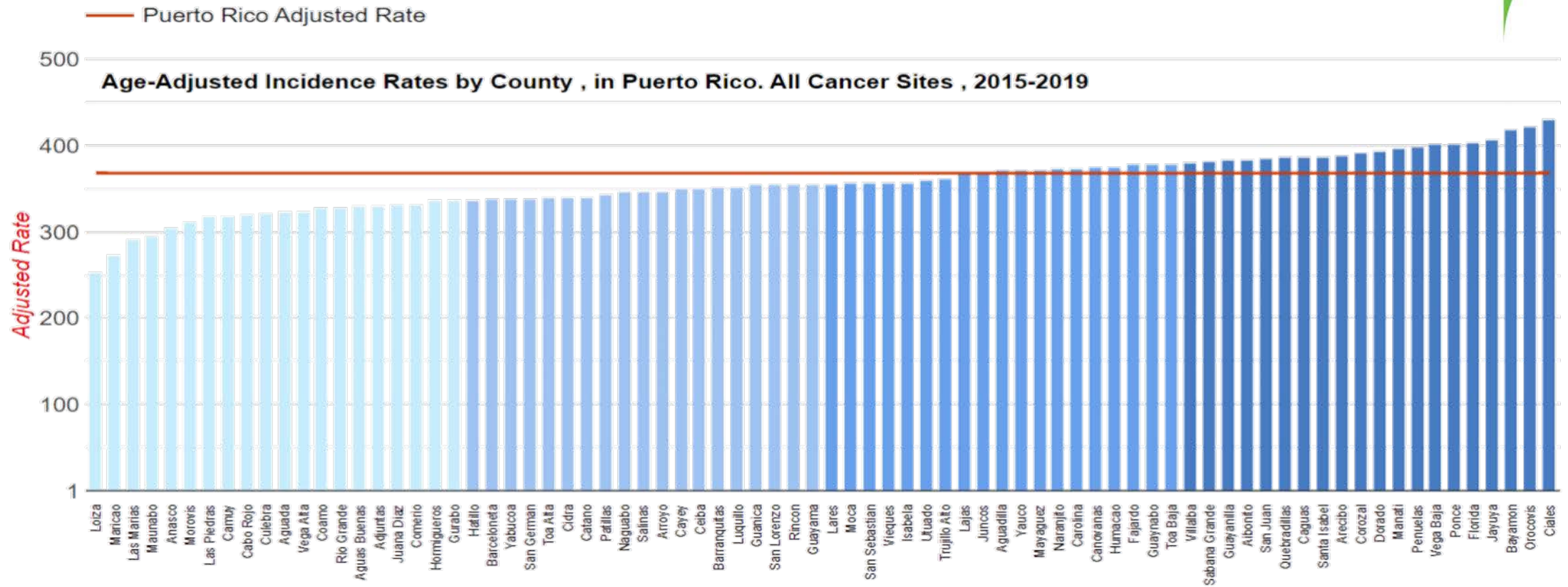
Population Source: Vintage 2020 estimates series from the Population Division of the United States Census Bureau.

Incidence cases file population of 2017 are restricted to the first 6 months of the year (January to June).

Cases from July to December were excluded due to the population change after hurricanes Irma and María.



Age-adjusted Incidence Rates for All Cancer Sites by Municipality Puerto Rico, 2015-2019



Rates are per 100,000.

Data Source: Incidence Case File of Puerto Rico from the Puerto Rico Central Cancer Registry (February 2, 2022).

Population Source: Vintage 2020 estimates series from the Population Division of the United States Census Bureau.

Mortalidad por cáncer en Puerto Rico

DEPARTAMENTO DE
SALUD

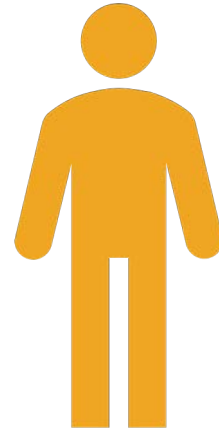




Mortalidad por cáncer en Puerto Rico, Año 2019

5,095
Personas
fallecieron por cáncer.

104
Personas
fallecidas por cada
100,000 habitantes.



53.2%
hombres
(2,713 casos)



46.7%
mujeres
(2,382 casos)



Top Ten Cancer Sites (Mortality) by Sex Puerto Rico, 2015-2019 and APC[‡]

♂ Male (N = 14,175)	%	APC ²⁰⁰⁰⁻²⁰¹⁹
Prostate	16.4	↓ -3.4*
Colon and rectum	13.1	↓ -0.9*
Lung and bronchus	11.7	↓ -2.6*
Liver and bile duct	8.0	0.2
Pancreas	6.0	↑ 1.4*
Leukemia	3.7	↓ -1.3*
Stomach	3.7	↓ -4.9*
Oral cavity and pharynx	3.5	↓ -2.9*
Non-Hodgkin Lymphoma	3.2	↓ -1.3*
Esophagus	3.0	↓ -4.3*
Other sites	27.7	

Data Source: Mortality File provided by the Demographic Registry of Puerto Rico (Oct, 2021).
*p<0.05 ‡APC= Annual Percent Change



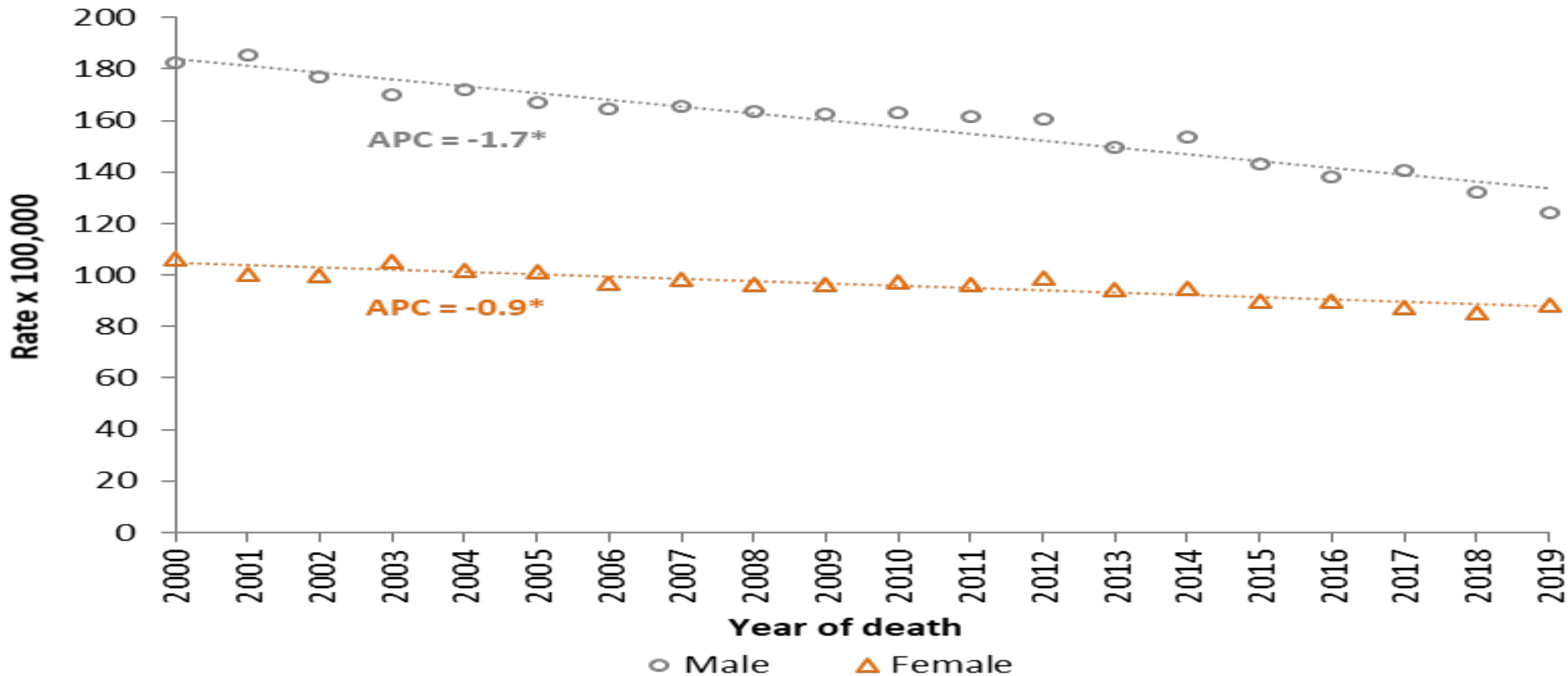
Top Ten Cancer Sites (Mortality) by Sex Puerto Rico, 2015-2019 and APC[‡]

♀ Female (N = 11,526)	%	APC ²⁰⁰⁰⁻²⁰¹⁹
Breast	18.7	↓ -0.4*
Colon and rectum	13.0	↓ -1.3*
Lung and bronchus	8.9	↓ -1.7*
Pancreas	6.4	↑ 1.0*
Corpus and uterus, NOS	5.5	0.9
Liver and bile duct	4.7	↓ -1.7*
Ovary	4.4	-0.4
Leukemia	3.9	↓ -1.1*
Stomach	3.3	↓ -4.2*
Non-Hodgkin Lymphoma	3.0	↓ -1.9*
Other sites	28.3	

Data Source: Mortality File provided by the Demographic Registry of Puerto Rico (Oct, 2021).
*p<0.05 ‡APC= Annual Percent Change

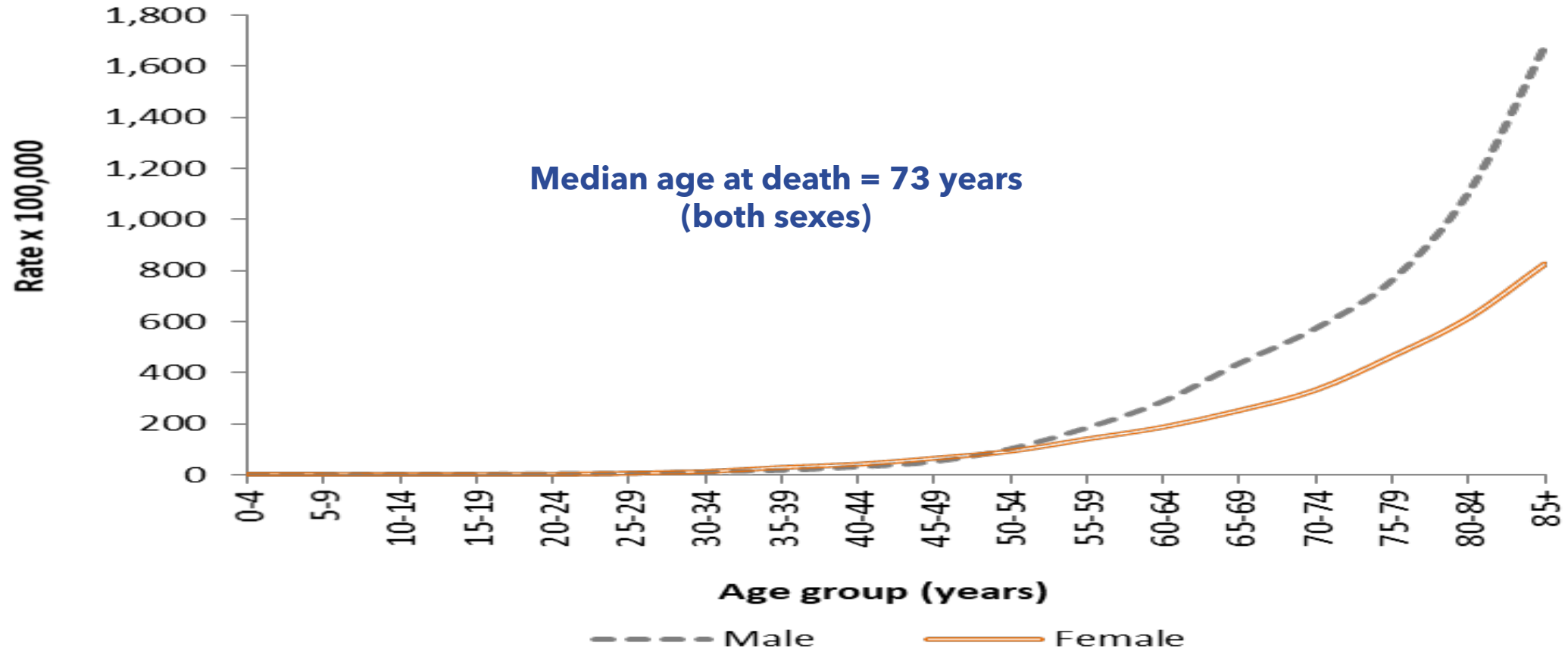


Age-adjusted Mortality Rates for All Cancer Sites by Sex Puerto Rico, 2000 - 2019



Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard.
Data Source: Mortality Case File provided by the Demographic Registry of Puerto Rico (Oct, 2021).
Population Source: Vintage 2020 estimates series from the Population Division of the United States Census Bureau.

Age-specific Mortality Rates for All Cancer Sites by Sex, Puerto Rico, 2015 - 2019

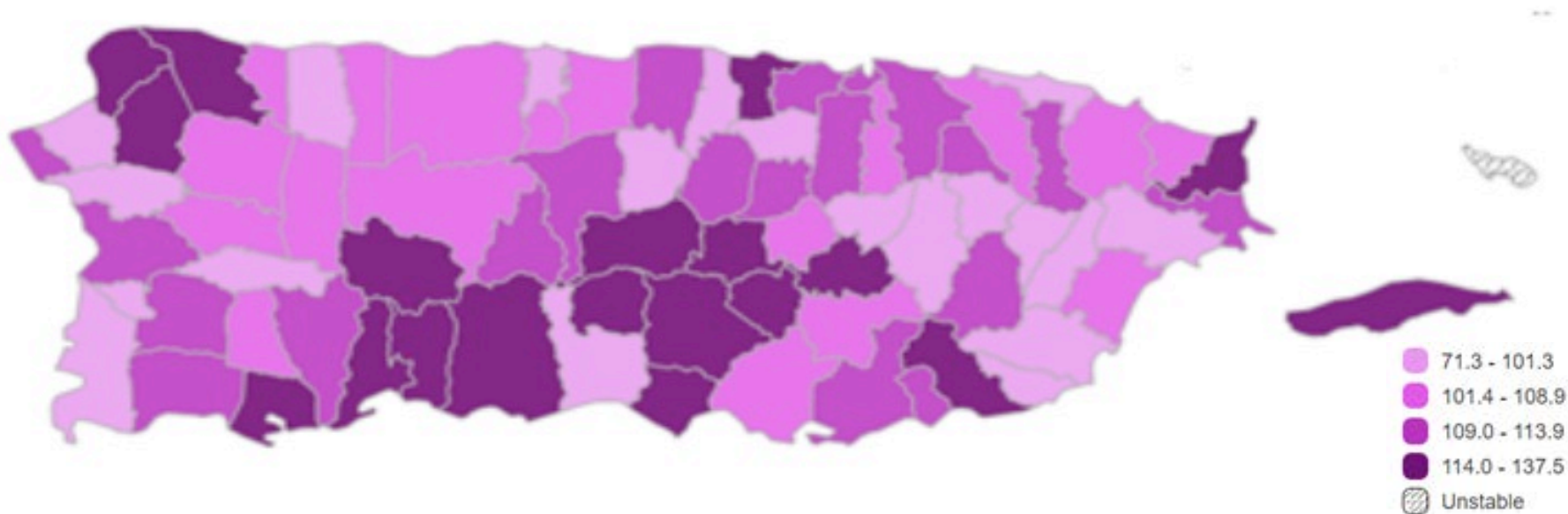


Rates are per 100,000.

Data Source: Mortality Case File provided by the Demographic Registry of Puerto Rico (Oct, 2021).

Population Source: Vintage 2020 estimates series from the Population Division of the United States Census Bureau.

Age-adjusted Mortality Rates for All Cancer Sites by Municipality Puerto Rico, 2015-2019

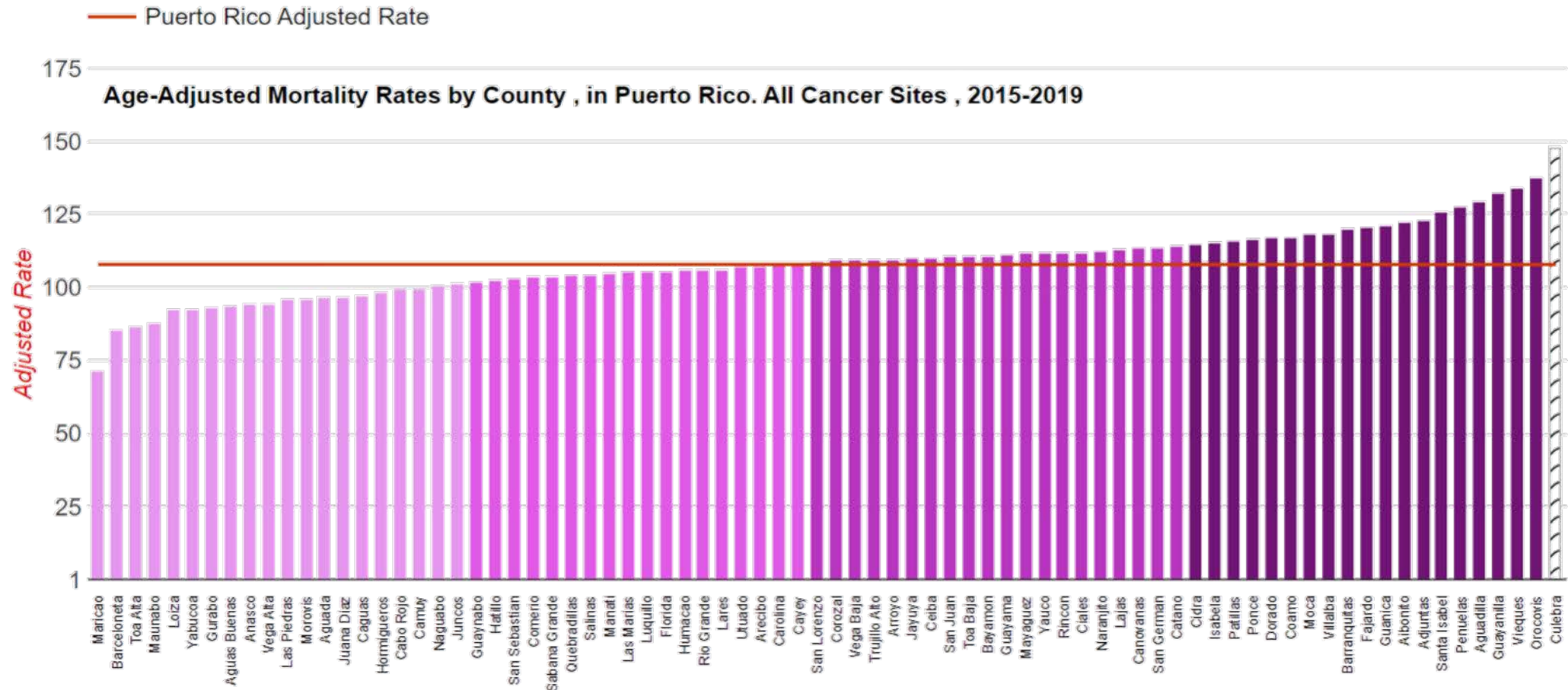


108.0
per 100,000
PR Mortality Rate



Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups – Census P25-1130) standard.
Data Source: Mortality Case File provided by the Demographic Registry of Puerto Rico (Oct, 2021).
Population Source: Vintage 2020 estimates series from the Population Division of the United States Census Bureau.

Age-adjusted mortality rates for all cancer sites by municipality Puerto Rico, 2015-2019



Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups – Census P25-1130) standard.

Data Source: Mortality Case File provided by the Demographic Registry of Puerto Rico (Oct, 2021).

Population Source: Vintage 2020 estimates series from the Population Division of the United States Census Bureau.

Lifetime Risk of Developing Cancer in Puerto Rico

Based on data for the period 2015-2019, the risk of a person developing cancer over their lifetime in Puerto Rico was:



1 in 2
(41.4%)



Cancer disparities in Puerto Rico

Social Determinants of Health

DEPARTAMENTO DE
SALUD



Cancer disparities in Puerto Rico

Structural barriers



The level of **education and the lack of information** about the best ways to access health care contribute to worse health outcomes in cancer.



Health disparities are also observed between Puerto Ricans living in Puerto Rico and H/L living in the continental US, mainly associated with **poverty and unemployment.**



Inequalities rooted in structural problems within the **PR health care system** are reflected in worse health outcomes and higher rates of disability in PR residents compared to US residents.

Cancer disparities in Puerto Rico

Fragmented Health System



- **Fragmented** health system are associated with poor quality care, worse health outcomes, medical errors, duplication of services, higher costs, preventable deaths, and health care inequalities.
- This scenario contribute to the fragmentation of health services generating **unsustainable public spending**.
- Therefore, **developing and implementing strategies adjusted to the socioeconomic context in PR** that respond to the gap generated by inequities in health care for cancer services is imperative.



Data Sources

- Incidence: Incidence file of the Central Cancer Registry of Puerto Rico (February 2, 2022)
- Mortality: Mortality file provided by the Puerto Rico Demographic Registry (October 2021)
- Population: 'Vintage 2020' estimates from the United States Census Bureau Population Division



¡Gracias!

Melissa Marzán-Rodríguez
melissa.marzan@salud.pr.gov

DEPARTAMENTO DE
SALUD

