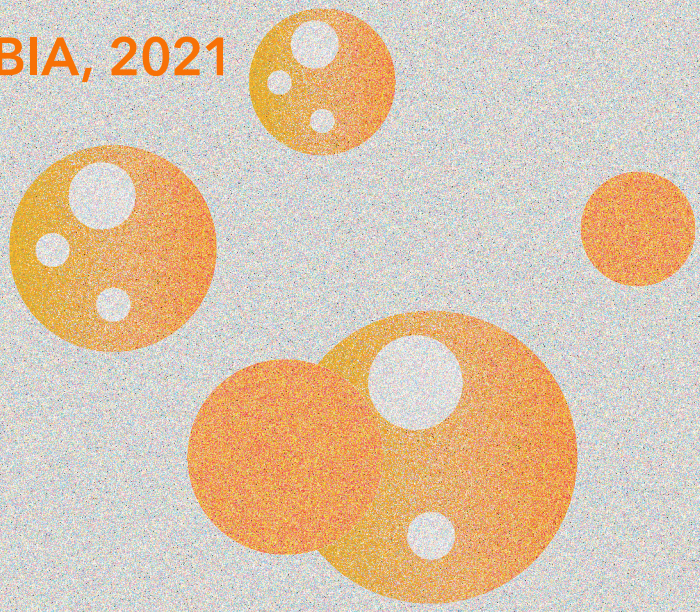
A BRIEF OF CHILDHOOD CANCER SITUATION

WITHIN THE FRAMEWORK OF HEALTH INSURANCE IN COLOMBIA, 2021



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A brief of childhood cancer situation within the framework of health insurance in colombia, 2021

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Colombian High-Cost Diseases Fund

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A brief of childhood cancer situation within the framework of health insurance in colombia, 2021

Colombian High-Cost Diseases Fund
Cuenta de Alto Costo (CAC)

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The full textbook in Spanish of the situation of cancer in Colombia is available HERE

Abbreviations

ALL: acute lymphoblastic leukemia.

AML: acute myeloid leukemia.

CI: confidence interval.

CNS: central nervous system.

IQR: interquartile range.

HL: Hodgkin lymphoma.

NHL: non-Hodgkin lymphoma.

PNCR: proportion of new cases reported. For the purpose of this document and a better understanding, it can be interpreted as an equivalent of the incidence.

US: urinary system.

1. Cancer overview



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Abstract

Cancer overview

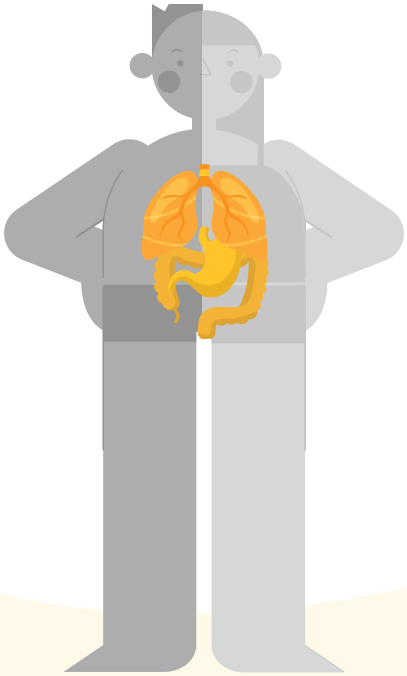
Period analyzed: January 2nd, 2020 to January 1st, 2021

General characterization of cases

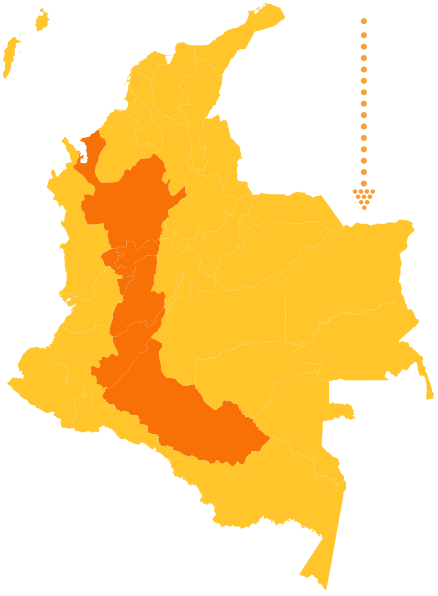
7,769 prevalent cases of childhood cancer were notified.

- The number of new cases was up to 876.
- 50% of prevalent cases were hematologic malignancies.
- From solid tumors, 99% were invasive.

The median age of new cancer cases was **9 years** (IQR: 4-14).



- 54% of new cancer cases were men.
- 50% of prevalent cases were insured by the third payer and most of them (25%) lived in the Central region.



The most frequent types of new cases of cancer among women were

- ALL (32%)
- CNS tumors (18%)
- NHL and LMA (6%)

In men:

- ALL (29%)
- CNS tumors (18%)
- HL (7%) and NHL (7%)

were the most frequent types of cancer among new cases.

Crude PNCR decreased by 5% compared to 2020.

Period analyzed: January 2nd, 2020 to January 1st, 2021

Morbidity and mortality of childhood cancer

- Age-standardized PNCR was 61 new cases (95% CI: 57-65) per 1,000,000 people under 18 years of age.
- The highest age-standardized PNCR were observed in ALL, CNS tumors, and NHL with 19, 8 y 4 new cases per 1,000,000 people under 18 years, respectively.
- Age-standardized prevalence was 543 cases (95% CI: 531-555) per 1,000,000 people under 18 years.

Crude prevalence increased by 51% compared with 2020.

- Crude mortality increased by 0.5% compared with 2020.
- Age-standardized mortality was 28 deaths (95% CI: 25-31) per 1,000,000 people under 18 years.
- Age-standardized PNCR, prevalence and mortality were higher in children under third payer insurance than in those under state insurance.

- In women, most deaths were observed in those with ALL (32%), CNS tumors (22%), and bone neoplasms (12%).
- In men, the highest proportion of deaths was observed in ALL (33%), CNS tumors (21%), and AML (8%).
- ALL, CNS tumors, and AML had the highest mortality rates with 9, 5 y 2 deaths per 1,000,000 people under 18 years.
- In AML, the mortality and the PNCR had the lowest difference among all cancer types.

Bogotá, C. D. was the Colombian region with the highest PNCR, prevalence, and mortality.



Period analyzed: January 2nd, 2020 to January 1st, 2021

Clinical characterization of new cases

- 47% of new cases were solid tumors, 36% were acute leukemia and 13% were lymphoma.
- 41% of solid tumors and 76% of lymphomas were correctly staged at diagnosis.
- 40% of solid tumors were diagnosed at early stages.
- Risk classification was reported in 78% of acute leukemia cases and 61% of lymphomas.

56% of lymphomas were diagnosed in advanced stages.

- Systemic therapy was the most frequent type of treatment (79%), followed by surgery (26%).
- The longest waiting time to treatment initiation was observed in CNS tumors with a median of 22 days (IQR: 8-33).

Diagnosis and treatment

were shortly provided in ALL with medians of 4 (IQR: 2-8) and 1 (IQR: 0-7) days, respectively.

- 47% of children with acute leukemia were classified as intermediate risk cases.
- At the national level, the median waiting time to diagnosis was 12 days (IQR: 4-26) and to the first treatment was 5 days (IQR: 0-20).
- HL had the longest median waiting time to diagnosis with 21 days (IQR: 10-40).

2. Acute lymphoblastic leukemia (ALL)

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Childhood acute lymphoblastic leukemia (ALL)

Period analyzed: January 2nd, 2020 to January 1st, 2021

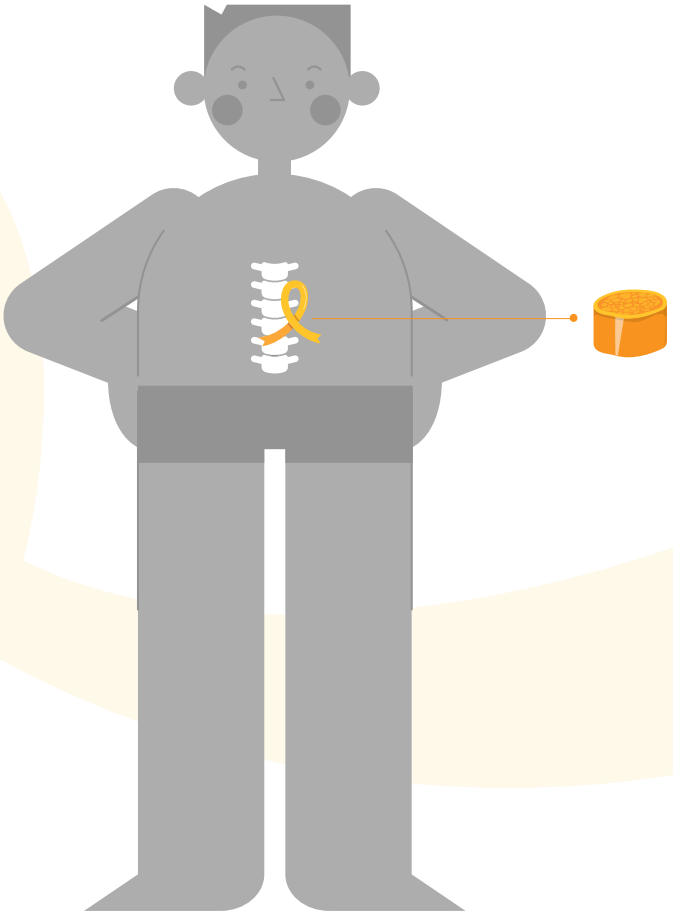
Morbidity and mortality of ALL

Age-standardized prevalence was

163 cases

(95% CI: 157-170)

per 1,000,000 people under 18 years of age.



It was the most frequent among pediatric population, accounting for 30% (n=2,335) of total cases notified.

There were 265 new cases, 2,335 prevalent cases, and 130 deaths during the period analyzed.

Age-standardized PNCR was 19 new cases (95% CI: 16-21) per 1,000,000 people under 18 years of age.

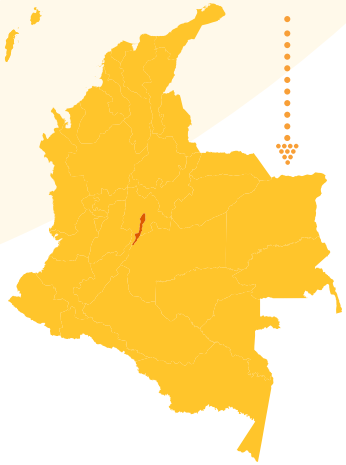
Age-standardized mortality was

9 deaths

(95% CI: 8-11)

per 1,000,000 people under 18 years of age.

The highest age-adjusted PNCR, prevalence and mortality were observed in Bogotá, C. D.



PNCR and mortality estimations were higher in children under the third payer insurance than in those with state insurance.

The prevalence and the mortality

increased by

1% compared to 2020,

while the PNCR decreased by 7%.

Period analyzed: January 2nd, 2020 to January 1st, 2021

Characterization of new cases of ALL

- Median age was 8 years (IQR: 4-12).
- 52% were males.
- 57% were under the third payer insurance, and most of the new cases (28%) lived in the Central region.

Systemic therapy was provided to most of the new cases (92%), followed by radiotherapy (2%).

At the national level, 78% had risk stratification at diagnosis and this proportion was higher in children under third payer insurance (77%).

- Diagnosis and treatment were shortly provided in children under the third payer insurance with a median of 3 days.
- 41% of the new cases were classified at intermediate risk, being higher in those under third payer insurance (44%).
- At the national level, the median waiting time to diagnosis was 4 days (IQR: 2-8) and to the first treatment was 1 day (IQR: 0-7).

Quality measures in ALL

- In the country, the goal for the waiting time to access treatment (≤ 5 days) was not reached with an average of 11 days.
- The average waiting time for treatment initiation was higher in children under state insurance (15 days) than in those under the third payer (9 days).

Mortality

during the period analyzed, at the national level, was 5%.

- At the national level and all insurance groups, the indicator related to treatment abandonment had a high performance, being 5% nationally.
- The goal for the proportion of cases that reached complete remission was not met neither at the national level nor in all insurance groups.

3. Acute myeloid leukemia (AML)

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Childhood acute myeloid leukemia (AML)

Period analyzed: January 2nd, 2020 to January 1st, 2021

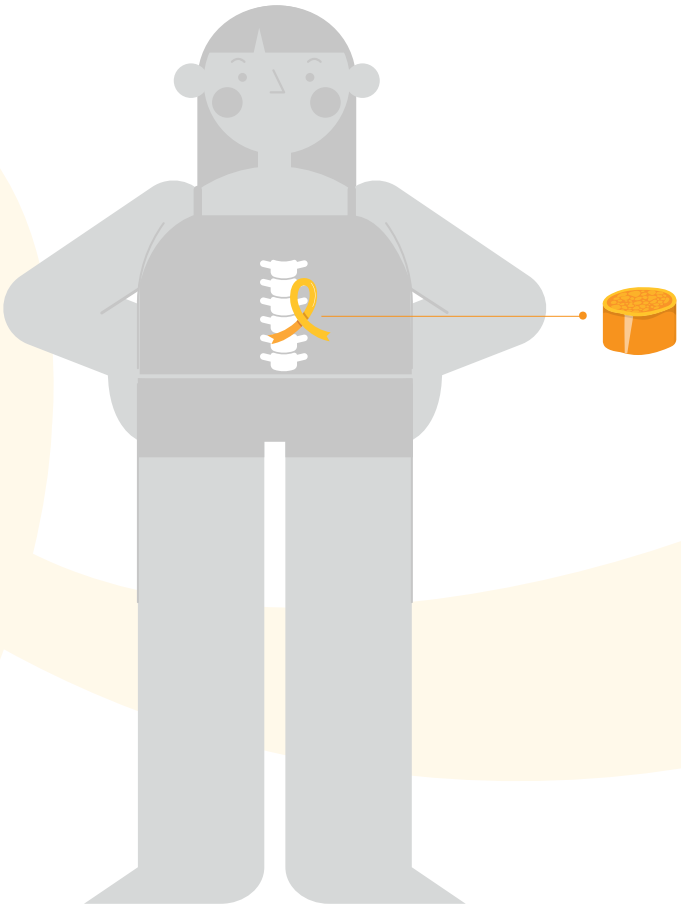
Morbidity and mortality of AML

Age-standardized prevalence was

20 cases

(95% CI: 18-23)

per 1,000,000 people under 18 years of age.



- It was the fifth most frequent type of cancer in terms of PNCR.
- There were 52 new cases, 288 prevalent cases, and 30 deaths during the period analyzed.
- Age-standardized PNCR was 4 new cases (95% CI: 3-5) per 1,000,000 people under 18 years of age.

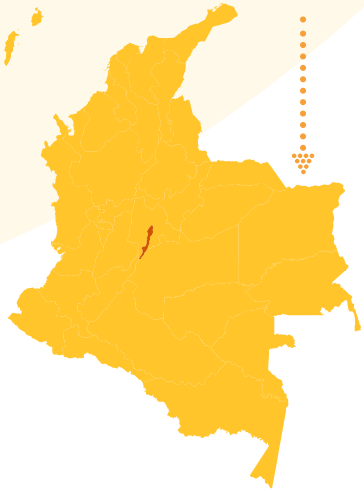
Age-standardized mortality was

2 deaths

(95% CI: 1-3)

per 1,000,000 people under 18 years of age.

- Bogotá, C.D. as a region had the highest PNCR, prevalence and mortality estimations.



- Morbidity and mortality estimations were higher in children under the third payer insurance compared to the other insurance groups.

Compared to **2020** the mortality decreased by **7%.**

Systemic therapy

was the most frequent treatment (96%), followed by hematopoietic cell transplant (21%).

Period analyzed: January 2nd, 2020 to January 1st, 2021

Characterization of new cases of AML

The median age was 8 years (IQR: 4-15).

52% were males.

60% had third payer insurance, and most new cases (35%) lived in the Central region.

At the national level, 75% had risk stratification. This proportion was higher in children under third payer insurance (81%).

Diagnosis and treatment were shortly provided in children with third payer insurance with a median time of 4 and 1 days, respectively.

51% of new cases were classified at high risk; this proportion was higher in those under the state insurance (54%).

At the national level, the median waiting time to diagnosis was 5 days (IQR: 3-12) and to the first treatment was 1 day (IQR: 0-5).

Quality measures in AML

In the country, the goal for treatment initiation (≤ 5 days) was not reached, with an average waiting time of 14 days.

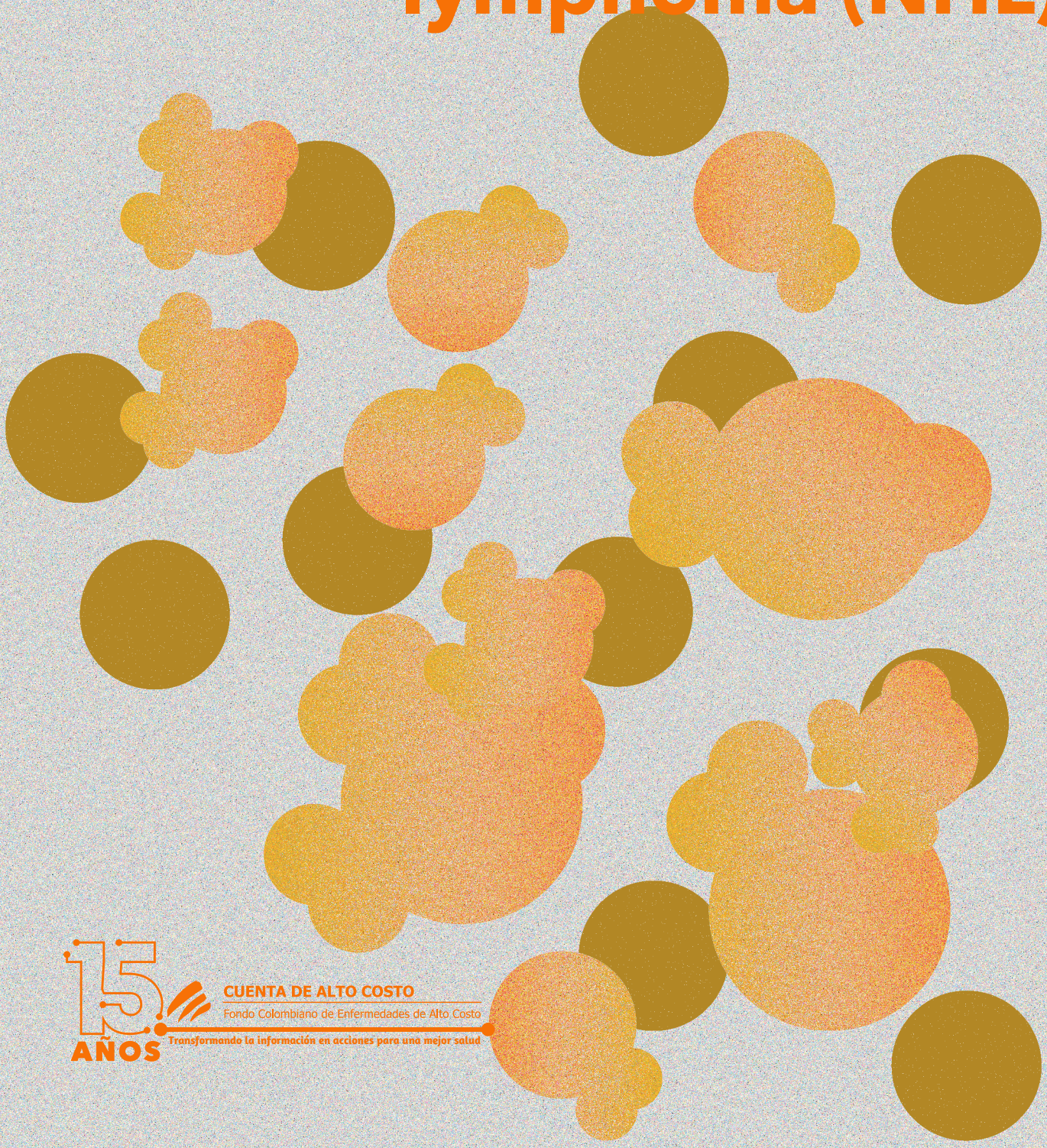
The average waiting time for treatment initiation was higher in children with state insurance (25 days) than in those under the third payer (8 days).

The average waiting time for diagnosis from the first attention at management center was higher in children with state insurance (7 days) than in those under the third payer (3 days).

At the national level and all insurance groups, the indicator related to treatment abandonment had a high performance, being 8% nationally.

The goal for complete remission at the end of induction treatment was not reached, neither at the national level (24%), nor in the third payer (29%), state (19%), and exception (0%) insurance groups.

4. Non-Hodgkin lymphoma (NHL)



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Abstract

Non-Hodgkin lymphoma (NHL)

Period analyzed: January 2nd, 2020 to January 1st, 2021

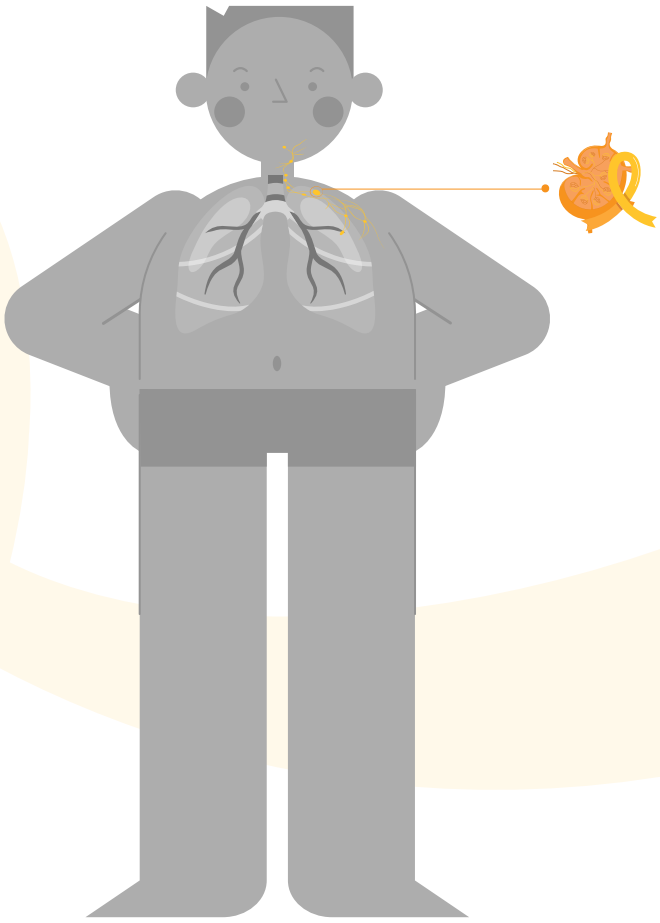
Morbidity and mortality of NHL

Age-standardized prevalence was

41 cases

(95% CI: 38-45)

per 1,000,000 people under 18 years of age.



- It was the third most frequent type of cancer in terms of PNCR.
- There were 58 new cases, 589 prevalent cases, and 17 deaths during the period analyzed.
- Age-standardized PNCR was 4 new cases (95% CI: 3-5) per 1,000,000 people under 18 years of age.

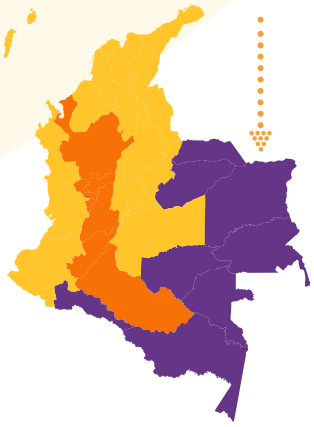
Age-standardized mortality was

1 death

(95% CI: 0.7- 2)

per 1,000,000 people under 18 years of age.

- The highest age-standardized PNCR and mortality were estimated in the Amazon-Orinoco region. The Central region had the highest age-standardized prevalence.



- The third payer insurance group registered the highest age-standardized mortality, while the exception insurance group had the highest age-adjusted prevalence and PNCR.

Compared to

2020

the mortality increased by 112%

while the PNCR decreased by 11%.

Period analyzed: January 2nd, 2020 to January 1st, 2021

Characterization of new cases of NHL

The median age was 10 years (IQR: 5-15).

57% were males.

52% were under the third payer insurance and most new cases (28%) lived in Central region.

At the national level, 67% were staged at diagnosis; this proportion was higher in children under the state insurance (73%).

26% of the cases were classified at intermediate risk, and this proportion was higher in children under the third payer (33%) than in those with state insurance (20%).

In the country and all insurance groups, most cases were diagnosed at stage III.

The longest waiting time to diagnosis was registered in the state insurance group (median: 12 days; IQR: 6-20).

The waiting times for diagnosis and treatment were higher in children diagnosed at stage I and II.

Systemic therapy was the most frequent treatment (90%).

Risk classification was documented in 53% of new cases at a national level.

In the country, the median waiting time to diagnosis was 13 days (IQR: 6-29) and to the first treatment was 3 days (IQR: 0-14).

The waiting time for treatment initiation was similar among the state (median: 3 days, IQR: 0-11) and the third payer (median: 3 days, IQR: 1-17) insurance groups.

5. Hodgkin lymphoma (HL)

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Abstract

Hodgkin lymphoma (HL)

Period analyzed: January 2nd, 2020 to January 1st, 2021

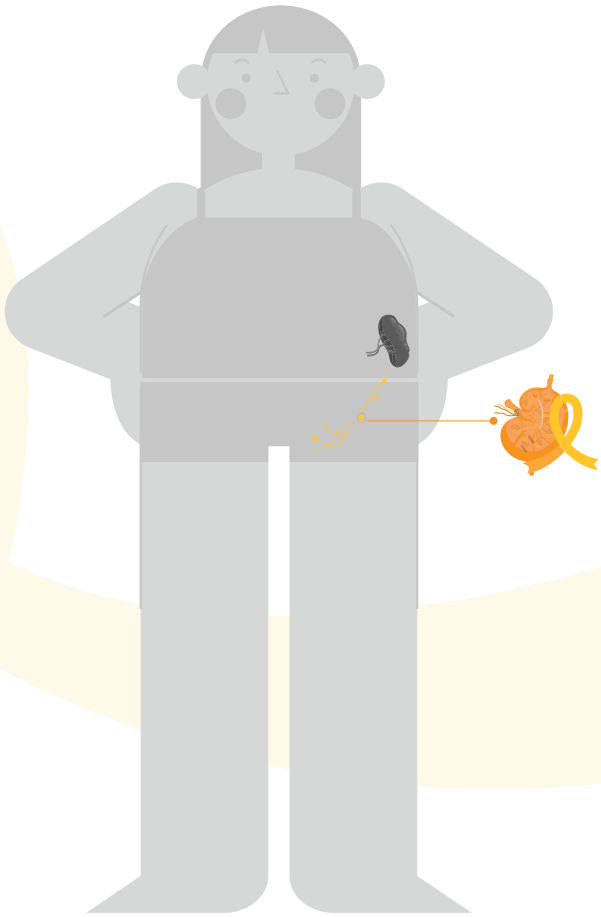
Morbidity and mortality of HL

Age-standardized prevalence was

30 cases

(95% CI: 27-33)

per 1,000,000 people under 18 years of age.



- It was the fourth most frequent type of cancer in terms of PNCR.
- There were 56 new cases, 424 prevalent cases, and 5 deaths reported during the period analyzed.
- Age-standardized PNCR was 4 new cases (95% CI: 3-5) per 1,000,000 people under 18 years of age.

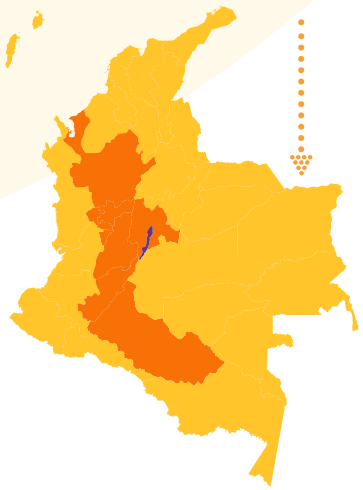
Age-standardized mortality was

0.4 deaths

(95% CI: 0.1-0.8)

per 1,000,000 people under 18 years of age.

- The highest age-standardized mortality and prevalence were estimated in Bogotá, C. D., while PNCR was higher in the Central region.



- Children under third payer insurance had the highest PNCR.

Compared to **2020**

the PNCR decreased by **10%**
and the prevalence by **2%.**

Period analyzed: January 2nd, 2020 to January 1st, 2021

Characterization of new cases of HL

Systemic therapy

was the most frequent treatment administered (93%).

The median age was 11 years (IQR: 8-15).

57% were males.

52% had the third payer insurance and most new cases (30%) lived in the Central region.

At the national level, 86% were staged at diagnosis; this proportion was higher in children under third payer (90%).

Nationally, risk classification was documented in 63% of new cases.

42% of the cases were classified at high risk.

In the country, the median waiting time to diagnosis was 21 days (IQR: 10-40) and to the first treatment was 10 days (IQR: 3-24).

In the country, most cases were diagnosed at stage II (46%), as in the third payer (35%) and the state (59%) insurance.

Children under the third payer insurance had the lowest waiting times to diagnosis (median: 21 days) and treatment initiation (median: 8 days).

The waiting times to diagnosis were higher in cases diagnosed at stage I and II; on the other hand, the time to treatment initiation was lower in cases at stage II and IV.

6. Urinary system (US) tumors

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Abstract

Urinary system (US) tumors

Period analyzed: January 2nd, 2020 to January 1st, 2021

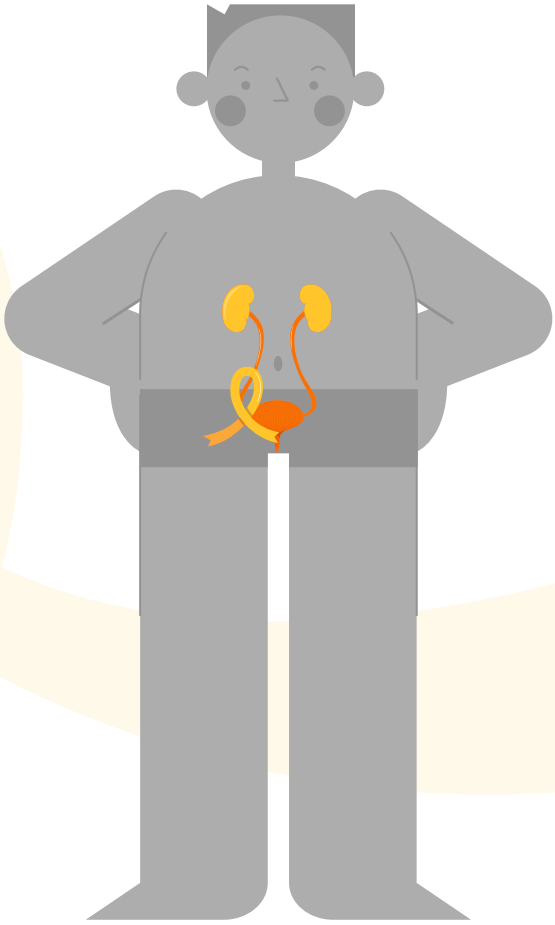
Morbidity and mortality of US tumors

Age-standardized prevalence was

31 cases

(95% CI: 28-34)

per 1,000,000 people under 18 years of age.



- It was the seventh most frequent type of cancer in terms of PNCR.
- There were 37 new cases, 442 prevalent cases, and 13 deaths during the period analyzed.
- Age-standardized PNCR was 3 new cases (95% CI: 2-4) per 1,000,000 people under 18 years.

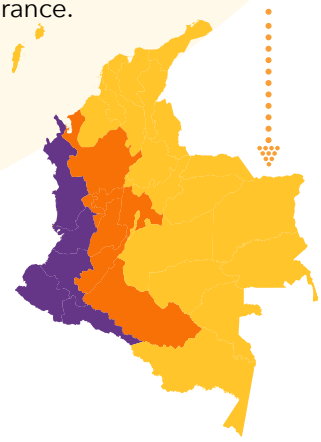
Age-standardized mortality was

0.9 deaths

(95% CI: 0.5-2)

per 1,000,000 people under 18 years of age.

- The highest PNCR was registered in the Central region and in the third payer group; in contrast, the highest mortality was observed in the Pacific region and in the state insurance.



Compared to **2020**

the mortality increased by **63%** while the PNCR decreased by **18%.**

Period analyzed: January 2nd, 2020 to January 1st, 2021

Characterization of US tumors

- Median age was 5 years (IQR: 3-7).
- 51% were males.
- 65% were under the third payer insurance and most new cases (43%) lived in the Central region.

Systemic therapy was the most frequent treatment (92%), followed by surgery (51%).

At the national level, 59% were staged at diagnosis; this proportion was similar among insurance groups.

- Nationally, most cases were diagnosed at stage III (45%).
- In children under third payer insurance, diagnosis and treatment were shortly provided with medians of 13 and 7 days, respectively.
- Most cases under third payer insurance (79%) were diagnosed at stages III and IV; this proportion was higher in the state insurance group (71%).
- In the country, the median waiting time to diagnosis was 15 days (IQR: 7-26) and to the first treatment was 16 days (IQR: 1-41).

7. Central nervous system (CNS) tumors



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Abstract

Central nervous system (CNS) tumors

Period analyzed: January 2nd, 2020 to January 1st, 2021

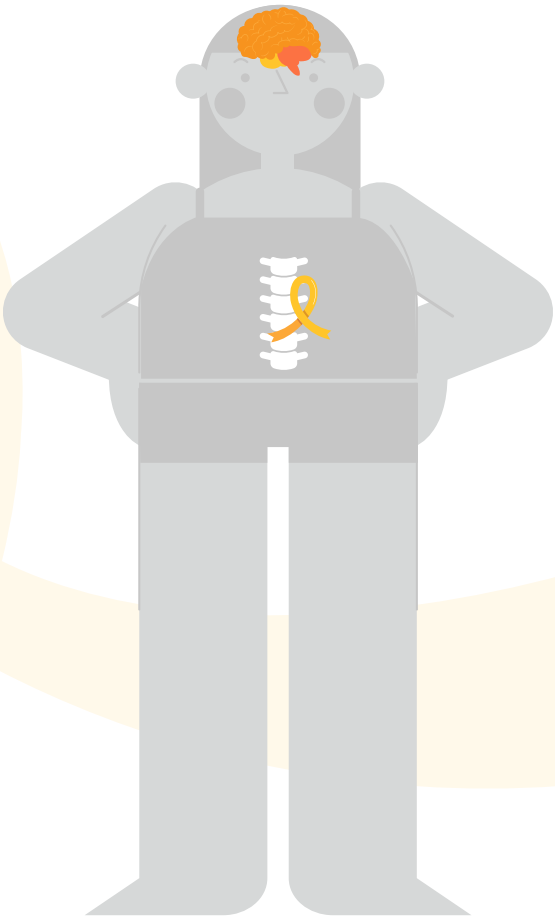
Morbidity and mortality of CNS tumors

Age-standardized prevalence was

61 cases

(95% CI: 57-65)

per 1,000,000 people under 18 years of age.



- It was the second most frequent type of cancer in terms of PNCR.
- There were 121 new cases, 865 prevalent cases, and 78 deaths during the period analyzed.
- Age-standardized PNCR was 9 new cases (95% CI: 7-10) per 1,000,000 people under 18 years of age.

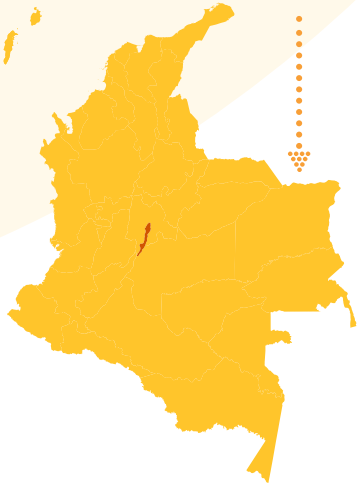
Age-standardized mortality was

6 deaths

(95% CI: 4-7)

per 1,000,000 people under 18 years of age.

- The highest morbidity and mortality estimations were observed in Bogotá, C. D.



- The highest prevalence and PNCR were registered in the third payer insurance group.

Compared to **2020**

the mortality and the prevalence increased by 5% and 9%, respectively while the PNCR decreased by 10%.

Systemic therapy

was the most frequent treatment (54%), followed by surgery (51%).

The longest waiting time to diagnosis was observed in children under the exception insurance (median: 36 days, IQR: 27-42).

Treatment was shortly provided in children under the third payer insurance (median: 15 days; IQR: 8-25).

Period analyzed: January 2nd, 2020 to January 1st, 2021

Characterization of CNS tumors

Median age was 10 years (IQR: 6-13).

60% were males.

54% were under the third payer insurance and most of the new cases (26%) lived in the Central region.

Histologic classification was not available in 10% of new cases and it was higher in children under state insurance (9%).

Excluding new cases with unknown and non-specified classification, the most frequent histology types were medulloblastoma (26%) and astrocytoma (16%).

At the national level, the median waiting time to diagnosis was 20 days (IQR: 12-31) and to the first treatment was 22 days (IQR: 8-33).

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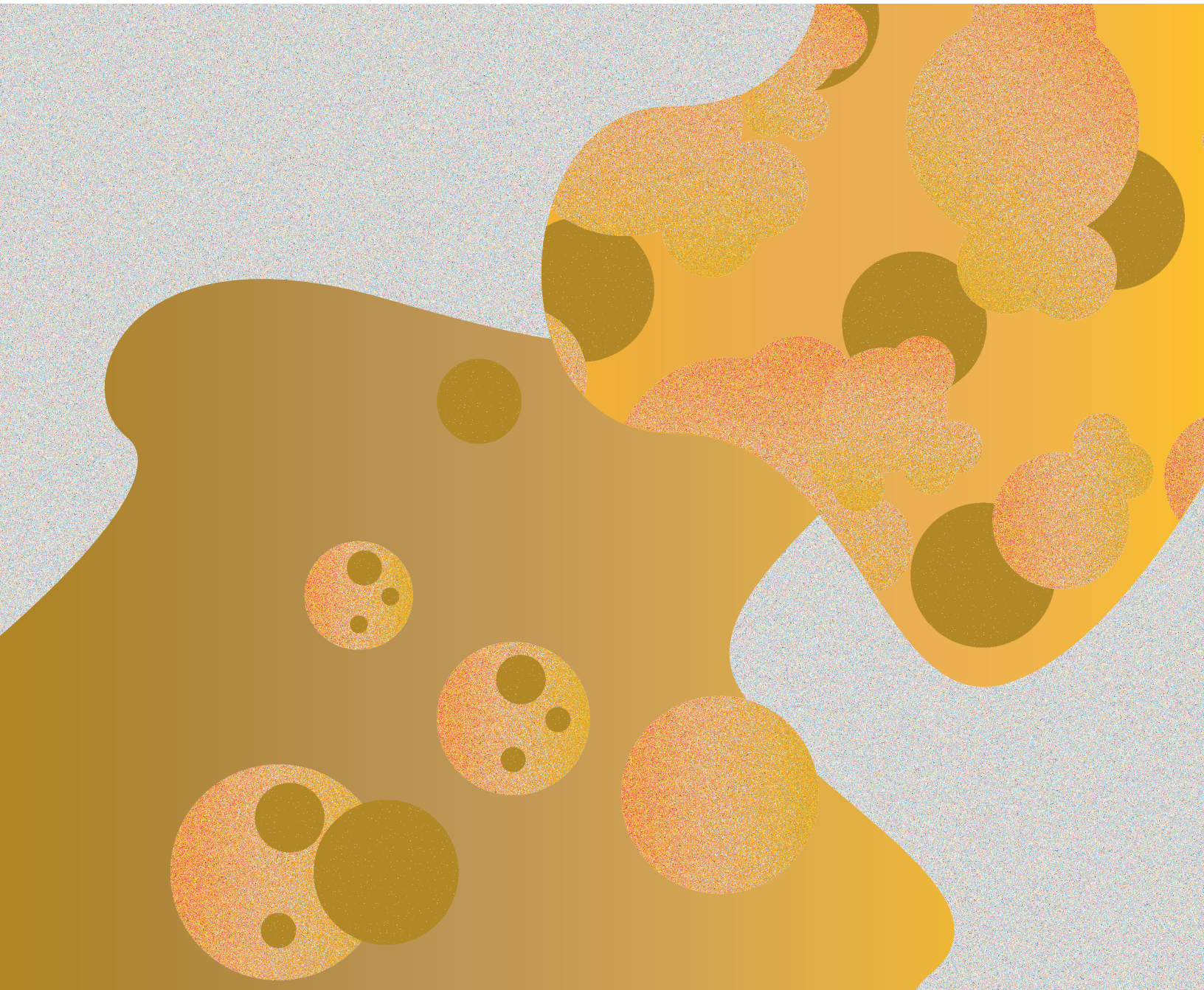

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