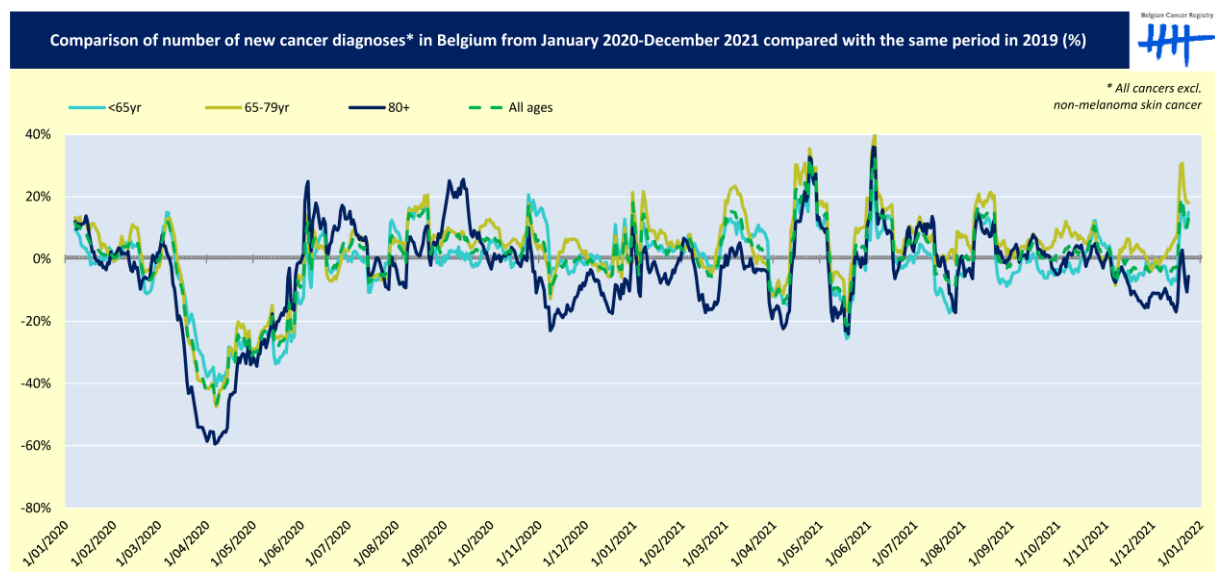


Approximately 2700 missing cancer diagnoses in first two years of the COVID-19 pandemic in Belgium

The Belgian Cancer Registry has been closely following the number of cancer diagnoses during the first two years of the COVID-19 pandemic in Belgium, thanks to accelerated reporting from the pathology laboratories. In the first peak of the COVID-19 pandemic in April 2020, a 43%¹ decline in diagnoses of invasive cancers² compared to April 2019 was observed. Following this first peak, cancer diagnoses nearly recovered to normal levels for the rest of 2020. The number of diagnoses in 2021 are beginning to reflect pre-pandemic trends, however, there is still a persistent 2% decline in diagnoses over the two-year period compared to 2019³, equivalent to about 2700 missing cancer diagnoses.

While for younger age groups and certain cancer types, the missing diagnoses appear to have recovered, for older patients and most cancer types, the decline in diagnosis persists. Given that an earlier diagnosis of cancer is the best predictor of a good outcome, the main message continues to be the importance of timely consultation with a physician when (persistent) symptoms are noticed.

The first wave of the pandemic had the largest impact on cancer diagnoses, while the 80+ age group was also impacted by subsequent waves



The daily results of the number of new cancer diagnoses were calculated based on a 14-day moving average.

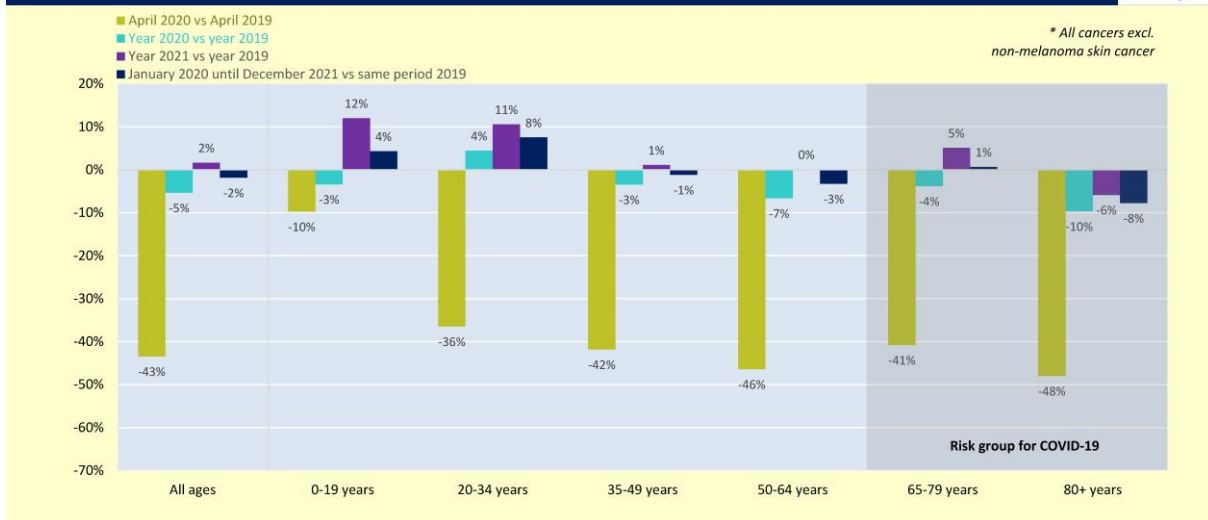
The first wave of the pandemic in April 2020 resulted in a conspicuous drop in cancer diagnoses while the number of diagnoses recovered to 2019 levels by mid-June of 2020. In the subsequent peaks of the pandemic, in late 2020, mainly the 80+ age group was impacted, with diagnoses dropping to 20% below 2019 levels for those periods while other age groups remained around 2019 levels. In spring 2021, the 80+ age group had a comparable evolution in diagnoses to the younger ages. However, in late 2021, the 80+ age group again had substantial drops in diagnosis compared to 2019 levels, which is not observed for the younger age groups.

¹ This was previously reported as a 44% decline. As more data become available, subtle shifts in results are observed.

² Excluding non-melanoma skin cancer

³ The two-year period 2020-2021 was compared to the number of diagnoses in 2019 doubled

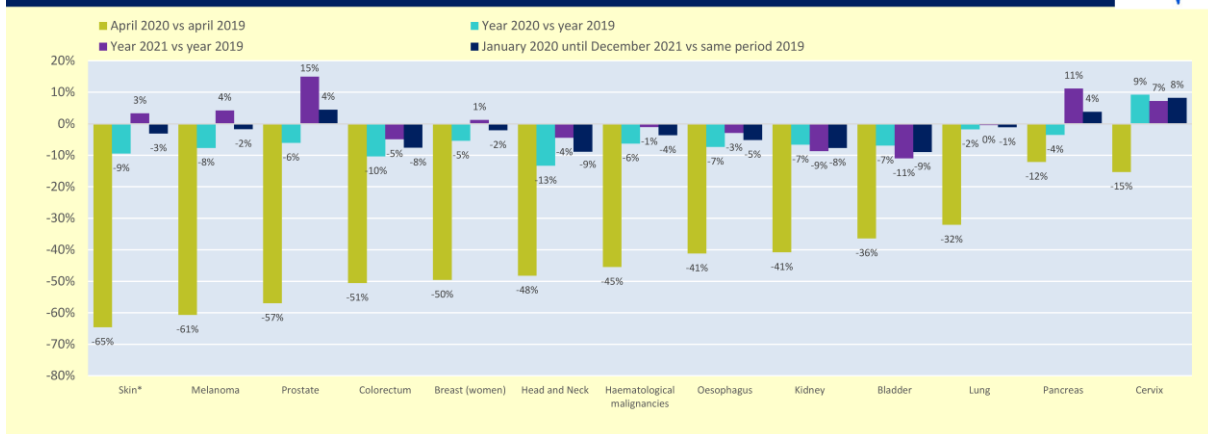
Decline in the number of new cancer diagnoses* in Belgium by age group in 2020 and 2021 relative to the same period in 2019 (%)



For all age groups, the number of new diagnoses of invasive cancers⁴ remains 2% lower than 2019 levels after 2 years of the pandemic, whereas an increase of 2.3% would have been expected over these two years⁵ due to the growing and aging population and evolution in cancer incidence risk. While other age groups had declines in diagnosis in 2020 (partially) compensated by increases in diagnoses in 2021, the 80+ age group continued to show a decline in 2021, resulting in an 8% decline in diagnosis over 2 years and accounting for about 80% of the missing diagnoses for all ages. While excess mortality from COVID-19 was highest in this age group, it explains fewer than 200 of the more than 2200 missing diagnoses in this age group. An increase in diagnoses was observed for the two youngest age groups, which cannot immediately be explained, though given the small absolute numbers of diagnoses in these age groups, these trends should be interpreted with caution. This increase will be further examined as more data become available.

Missing diagnoses persist for most tumor types after 2 years of the pandemic

Decline in the number of new cancer diagnoses* in Belgium by tumour type in 2020 and 2021 relative to the same period in 2019 (%)



⁴ Excluding non-melanoma skin cancer

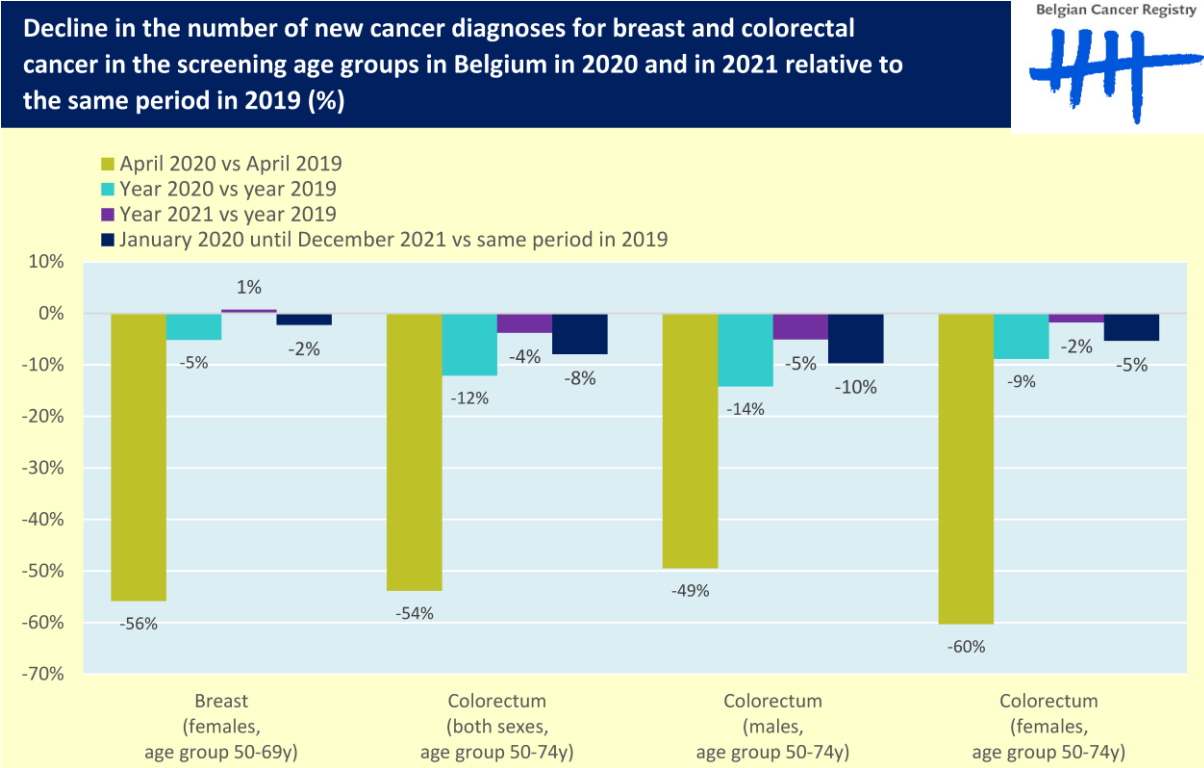
⁵ [Cancer Incidence Projections in Belgium, 2015 to 2025](#)

By absolute numbers, the largest estimated numbers of missing diagnoses were for colorectal cancer (~900 cases), followed by hematological malignancies (~560 cases), head and neck cancer (~490 cases), and female breast cancer (~450 cases). Colorectal cancer and head and neck cancers also had the largest persistent decline in diagnosis at the end of 2020 and the decline in diagnosis continued into 2021, with 8% and 9% missing diagnoses, respectively, over the first two years of the pandemic. For colorectal cancer, a slight decline had been observed in previous years, though not to this degree. Hematological malignancies as a group had a persistent 4% decline, however previous analyses have indicated that the different entities were diversely impacted by the COVID-19 pandemic⁶.

For kidney and bladder cancer, the declines in diagnosis were larger in 2021 than in 2020, resulting in a greater decline in diagnosis at the end of two years of the pandemic, equivalent to about 300 and 440 missing diagnoses, respectively. Lung cancer showed no further decline in 2021, but the 1% remaining decline (~190 cases) at the end of two years conflicts with the 3.4% predicted increase.

The diagnosis of prostate and pancreatic cancer increased over the two years of the pandemic. This is in line with or slightly less than the observed increases in both these cancer types during the last 5-10 years. Melanoma and non-melanoma skin cancer also showed slight increases in diagnosis in 2021. Over the entire 2-year period, a small decline in diagnosis of skin cancer remains, however, specifically for melanoma, an increase of 6% over the two years would have been expected.

Declines in the target age groups for breast and colorectal cancer screening are comparable to the general population



⁶ Peacock, H. M., et al. (2021). "Decline and incomplete recovery in cancer diagnoses during the COVID-19 pandemic in Belgium: a year-long, population-level analysis." ESMO Open 6(4): 100197.

While the temporary suspension of the organized screening programs may have contributed to larger initial drops in diagnosis during the first wave of the pandemic in the target age groups for breast and colorectal cancer screening (50-69 years and 50-74 years, respectively), after two years, the declines are comparable to those seen in the total population. For colorectal cancer, the persistent decline for men in the screening age group was double that observed for women (10% vs. 5%); however, prior to the pandemic, the observed mild decline in colorectal cancer diagnoses (incidence) was also more pronounced for men.

Note that screening programs aim to detect pre-cancerous lesions while these data pertain to diagnoses of invasive cancers. Additionally, screening programs are organized at the regional level, which means that the impact may differ by region. This question will be explored in more detail in the future.