Impact of the COVID-19 pandemic on the diagnosis of haematological malignancies in Belgium : Preliminary results from the Belgian Cancer Registry

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Objective
Health care in Belgium was affected by the corona pandemic and the measures taken by the government since March, 2020 to face the 2 waves of infection. The aim of this study is to make an estimate of the decrease in the number of new diagnoses of haematological malignancies due to the COVID-19 crisis in Belgium as already done for the main cancer categories (*https://kankerregister.org/media/docs/publications/Kanker-Impact-Coronacrisis_ENG_finaal_Nov2020.pdf).*

Methods
For its standard cancer reporting, the Belgian Cancer Registry uses two data sources :

- hospitals provide records of oncological care programs ('clinical network').
- pathology laboratories deliver structured files and reports ('pathology network')

Thanks to expedited deliveries of data by the pathology network between January 1st and September 18th, 2020, the Belgian Cancer Registry was able to make an estimation of the decline in the number of diagnoses by types of haematological malignancies.
Since estimates were only based on pathology data and to prevent bias, all results are shown as ratios between the number of new cancer diagnoses for incidence year 2020 compared to 2019. The ratios for the months January and February before the start of the COVID-19 pandemic were expected to be around 100%.

Results
The number of haematological malignancies reported by the pathology network declined by nearly 32% during the first wave (March-May 2020) when compared to March-May 2019. During the next period June-September 2020, the number of new diagnoses of hematological malignancies stabilized around normal values (ratio : 100%). The overall decrease between March 1 and September 18, 2020 when compared to the same period in 2019, was 14%. For patients aged 80 and older, the decline of 23% is the highest of all age groups (March-May decline : 35%). The decrease is smaller for patients aged 20 to 79 years old (13%, March-May decline : 32%). Although subject to a low number of cases, there was no evidence of decline in children and adolescents up to 19 years of age.
The decrease also varied according to the type of haematological malignancy. Among mature B-cell lymphoid neoplasms, the largest decrease is observed for mature B-cell leukaemias (34%, March-May decline : 44%).The decrease is smaller for plasma cell neoplasms (23%), for the other indolent lymphomas (19%) and for Hodgkin lymphomas (14%). A limited impact (3%) is seen for aggressive mature B-cell lymphomas (DLBCL and Burkitt). No evidence of decline is observed for mature T/NK cell lymphomas. The decrease was 17% for chronic myeloid neoplasms and there was no evidence of decline for acute leukaemias. However, these results should be interpreted cautiously for the latter because of the indirect estimation based on pathology data only (no reports from clinical biology and no information available yet from the clinical network).

Conclusion
This study with pathology data available until mid-September indicates that the decrease in number of new diagnoses of haematological malignancies compared to last year is greatest around the peak of the first wave, especially for indolent lymphoproliferative disorders. Nevertheless, the decrease reverted to normal values in the following months. Our results also suggest a heterogeneous impact of the COVID19 crisis on the different types of hematological malignancies with a very limited effect on the more aggressive disorders.