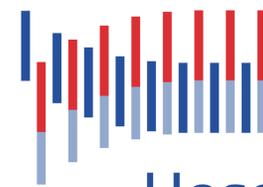


# Impact of the Covid-19 pandemic on cancer care in Hessian hospitals – a population-based analysis



Hessisches Krebsregister

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## BACKGROUND

During the Covid-19 (Cov19) pandemic, hospitals were assigned to four levels according to their resources to manage the increased demand of intensive care treatments. **Level I hospitals** comprised university hospitals and hospitals providing sophisticated respiratory protective devices in intensive care as well as NO inhalation and/or ECMO, **level II hospitals** had intensive care under medical attendance all the time. Cov19 patients should be primarily treated in hospitals of levels I, II.

## AIM OF THE STUDY

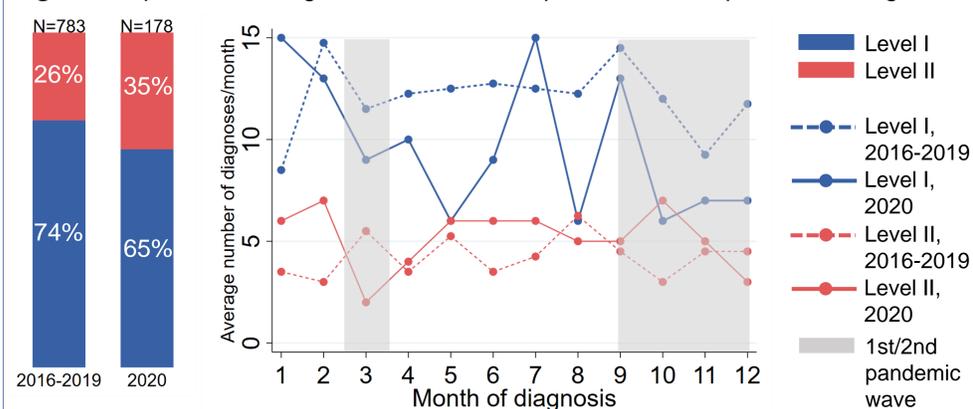
To contribute towards quantifying the impact of the Cov19 pandemic on cancer care of patients with cervical cancer in Germany by investigating the diagnoses and treatments in Hessian hospitals of Cov19 levels I, II.

## METHODS

- Data of patients with cervical cancer (C53) diagnosed from 2016 to 2020 were extracted from the database of the Hessian cancer registry (data status: 14.10.2022). With regard to a continuously stable registration activity, eleven hospitals were included in the analysis. Seven hospitals met the criteria for Cov19 level I (highest requirements) and four hospitals for level II (classification provided by Hesse Trade & Invest GmbH).
- Data on diagnosis and primary treatment in 2020 were compared to the average of corresponding data in 2016-2019 to account for yearly variations.

## RESULTS

**Fig. 1** Comparison of diagnoses between hospital levels and periods of diagnosis

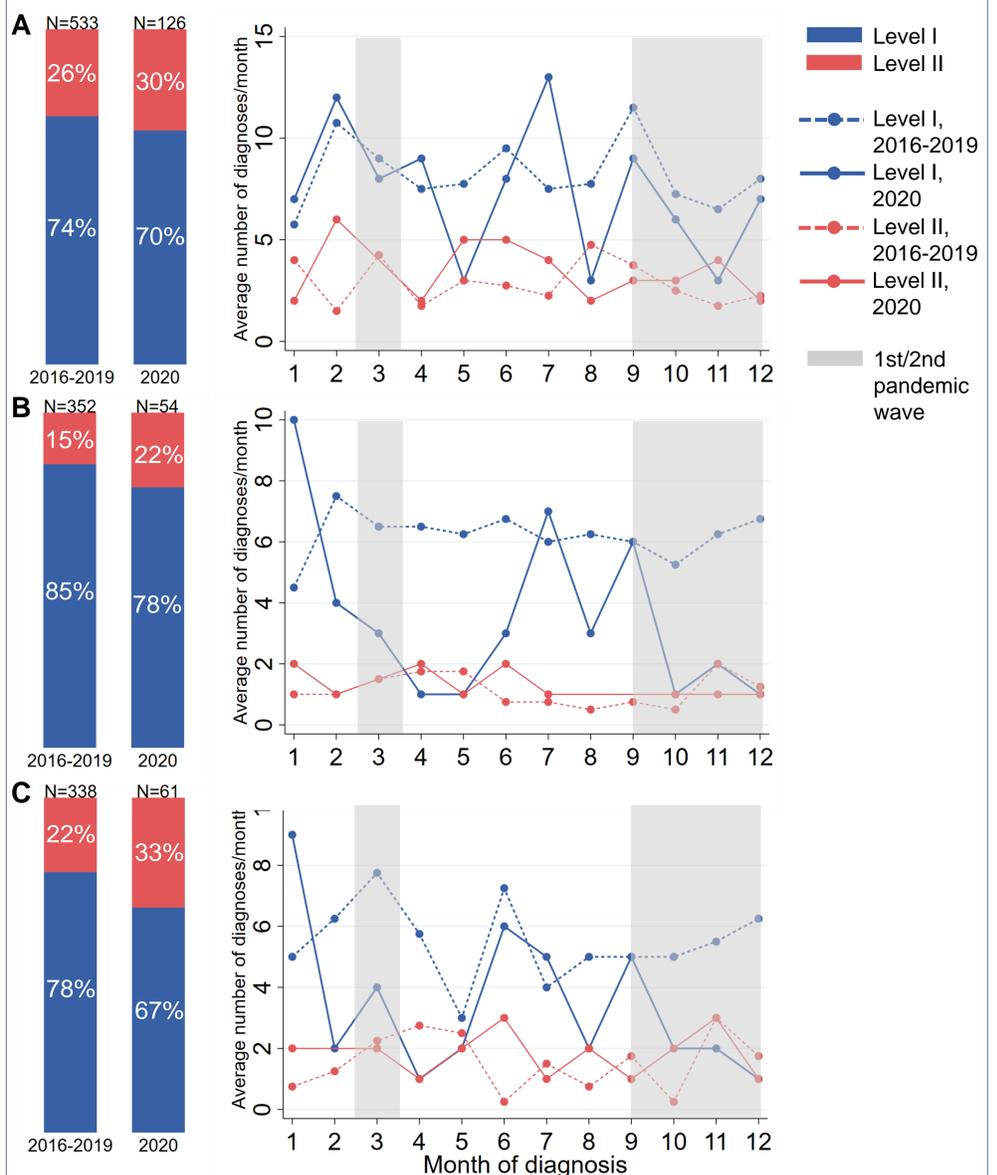


- In 2020, about 9 % less patients were diagnosed with C53 compared to the average number per year between 2016 and 2019 (196 vs. 178 in 2020)
- Decline in diagnoses was especially observed during the 1st and 2nd wave in March and from September to December 2020.
- In 2020, the number of diagnoses in level I hospitals decreased about 20 % compared to the average yearly number from 2016-2019 (116 vs. 144,5 (578/4)), whereas their number increased about 21 % in level II hospitals (62 vs. 51,25 (205/4)).
- While in level I hospitals 74 % of cases were diagnosed in 2016-2019, the percentage dropped to 65 % in 2020 corresponding to 35 % of cases diagnosed in level II hospitals.

Reference: [https://www.hkg-online.de/fileadmin/Oeffentl\\_Bereich/Corona/Rechtliche\\_Grundlagen/HMSI/31.10.2020\\_Allgemein\\_verfuegung\\_Status\\_der\\_koordinierenden\\_Krankenhaeuser.pdf](https://www.hkg-online.de/fileadmin/Oeffentl_Bereich/Corona/Rechtliche_Grundlagen/HMSI/31.10.2020_Allgemein_verfuegung_Status_der_koordinierenden_Krankenhaeuser.pdf)

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**Fig. 2** Comparison of (A) tumour resections, (B) radiotherapies, and (C) chemotherapies between hospital levels and periods of diagnosis



- Analogous shifts from level I to level II hospitals as observed for diagnosis also occurred for treatment, differently pronounced with the highest shift of > 10 % in chemotherapeutic treatments.
- In 2020, primary tumour resections were reduced by 5 % compared to the average number in 2016-2019, no difference could be detected in their relative frequency with regard to the number of diagnoses or timespan from diagnosis. The patient cohort was similar w.r.t. age but had a higher percentage with early stage tumours I-II (64 % vs. 58 %).

## CONCLUSION

- Reorganisation of hospitals according to Cov19 levels was an important tool to enable treatment of Cov19 patients while maintaining cancer care by shifting treatment from level I to level II hospitals.
- Overall reduction in diagnosis and therapy of cervical cancer patients in 2020 could be detected.
- The reduction in level I hospitals was mitigated by level II hospitals that could even increase the number of patients in comparison to the average number in 2016-2019 (except for radiotherapy).
- The relative amount of patients diagnosed with cervical cancer and undergoing resection did not drop in 2020.
- Validity of results is limited by incompleteness of cancer registration, reflecting documentation at the given cut-off date.