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LETTER TO THE EDITOR

Cancer diagnosed during the COVID-19 pandemic in the Faroe Islands

Marnar Fríðheim Kristiansen[a,b,c], Maria Skaalum Petersen[a,d]* and Marin Strøm[a,e]*

[a]Centre of Health Science, Tórshavn, Faroe Islands; [b]National Hospital of the Faroe Islands, Tórshavn, Faroe Islands; [c]COVID-19 Task force, Ministry of Health, Tórshavn, Faroe Islands; [d]Department of Occupational Medicine and Public Health, The Faroese Hospital System, Tórshavn, Faroe Islands; [e]Department of Epidemiology Research, Statens Serum Institut, Copenhagen, Denmark

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Introduction

Recently Skovlund et al. compared [1] incident cancer diagnoses in Denmark during the COVID-19 pandemic with corresponding figures in the previous 4 years, showing a substantial reduction in cancer diagnoses from March to May 2020.

The Faroe Islands are a self-governing nation under the external sovereignty of the Kingdom of Denmark, with a population of 52,500 inhabitants. The first case of COVID-19 in the Faroe Islands was diagnosed on March 3, and the Faroe Islands implemented lockdown measures from March 12. The hospital system re-organized to prepare for receiving COVID-19 patients, and many planned procedures were postponed because resources were prioritized toward handling the epidemic. However, cervical, and mammographic screening was continued throughout the epidemic. During 2020, 547 cases were diagnosed with COVID-19 in the Faroe Islands, excluding cases amongst crew on foreign vessels tested in the Faroe Islands [2,3].

The Faroe Islands have managed to eliminate COVID-19, i.e., reduce the number of cases to zero several times and have been able to maintain such elimination without restrictive social distancing measures after lifting the initial lockdown measures in May and June. The Faroese strategy for handling COVID-19 has differed from neighboring countries, as the goal has been to reduce the number of cases to zero. Means to reach this goal have included massive testing freely available for everyone, testing at the borders, and thorough case and contact tracing. Until now, there has been one fatality and few intensive care unit admissions due to COVID-19 [4].

During the pandemic, many countries have reported a drop in cancer diagnoses, including Denmark, which has been relatively successful in handling COVID-19 effectively [5–9]. The health sector of the Faroes is governed locally in the Faroe Islands, but patients are sent to Denmark for specific treatments not offered in the Faroes, including radiation therapy, some chemotherapy and other cancer treatments. This does not imply that changes in health sector prioritizations in Denmark would have a direct effect on the diagnosing of cancers in the Faroe Islands. However, due to the close connection between these countries, one could imagine that any other reason for delayed cancer diagnoses in Denmark would also affect the Faroe Islands. Thus, this study aimed to investigate if COVID-19 has had a similar impact on cancer diagnoses in the Faroe Islands.

Methods

All incident cases of cancer registered with a diagnosis in the electronic health record (EHR) were included if they had not previously received a diagnose within the same cancer group in the EHR or the Faroese Cancer Registry (FCR). We present monthly incidences of cancer diagnoses from January to December and compare with corresponding cancer rates in the four years preceding the pandemic and assessed by the same method.

We present all COVID-19 cases and RT-PCR tests per 100,000 persons to illustrate the course of COVID-19 in the Faroe Islands during 2020.

The incidence was age-standardized using World Standard weights, adjusting for any population composition changes over the years in question. Incidence rate ratios (IRR) and 95% confidence intervals (CI) were calculated with cases in 2020 as observed cases and mean for 2016–2019 as expected cases to evaluate any statistically significant differences.

Additionally, cases by EHR until 2019 were compared with the FCR to evaluate how precise an EHR case signifies a cancer case.

Results

There were no statistically significant differences in the number of diagnosed cancers in the months of the COVID-19 pandemic in the Faroe Islands compared to the previous four years (Table 1). Overall, the number of incident cases during the months of lockdown was comparable to the previous four years (Figure 1). The IRR was highest during the month of March and lowest in December of 2020. When cases found in the EHR were compared with the FCR there was a high concordance, with 89% of cases found in the EHR also found in the FCR.

CONTACT Marnar Fríðheim Kristiansen marfr@ls.fo Centre of Health Science, Tórshavn, Faroe Islands; National Hospital of the Faroe Islands, Tórshavn, Faroe Islands; COVID-19 Task force, Ministry of Health, Tórshavn, Faroe Islands
*Shared last author.

Table 1. Age standardized rate comparison for cancers in 2020 and the previous 4 years.

Month	Cases 2020 (n)	Cases 2016–2019 (n)	ASR 2020	ASR 2016–2019	IRR	95% CI
January	31	96	397	315	1.26	0.84–1.89
February	23	98	285	328	0.87	0.55–1.37
March	31	81	365	259	1.41	0.93–2.13
April	28	93	355	295	1.20	0.79–1.83
May	23	101	244	329	0.74	0.47–1.17
June	27	90	352	310	1.13	0.74–1.74
July	28	81	334	264	1.26	0.82–1.94
August	25	93	355	278	1.28	0.82–1.99
September	20	103	268	319	0.84	0.52–1.36
October	33	140	392	437	0.90	0.61–1.31
November	36	122	448	404	1.11	0.76–1.62
December	17	80	215	270	0.80	0.47–1.34
Overall	322	1178	334	317	1.05	0.93–1.19

ASR: Age standardized rate per 100,000 person years; IRR: Incidence rate ratio; CI: Confidence interval.
There is no significant difference in rate, comparing the rate in 2020 to the mean rate from the previous four years. The highest IRR is in March 2020 and the lowest during in September 2020. Case numbers for 2020 and 2016–2019 are also shown here.

There were 547 confirmed COVID-19 cases in the Faroe Islands spread out over four spikes, with 192,880 PCR tests performed during 2020 (Figure 2).

Discussion

We did not observe a lower incidence of cancer diagnoses in the Faroe Islands during 2020 compared to previous years. This stands in contrast to findings in several other countries that have observed a decreased rate of incident cancers and have ascribed this decrease to the burden of the COVID-19 pandemic on the population and the health sector.

Some fluctuations in the number of cases across months were observed, e.g., the number of incident cases was higher in March and fell below the mean from previous years later. However, variations like these are to be expected in data from a small population such as the Faroe Islands, and there was no statistically significant decrease or increase in cancer incidence in 2020 compared to previous years.

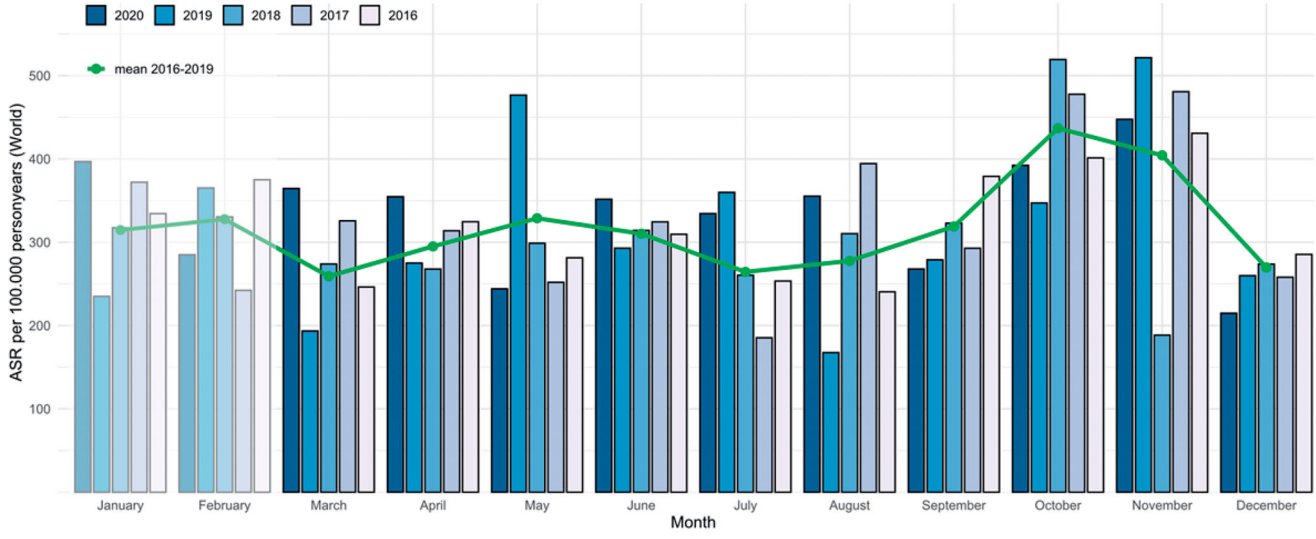

Figure 1. Monthly Age Standardized Rates for cancer incidence from 2016 to 2020. ASR: Age standardized rate per 100,000 person years. Age standardized rates for cancer is shown by month. The rate in 2020 is in dark blue. The mean for 2016–2019 is shown as the green line. The period before the pandemic (January and February) is shown with a higher opacity.

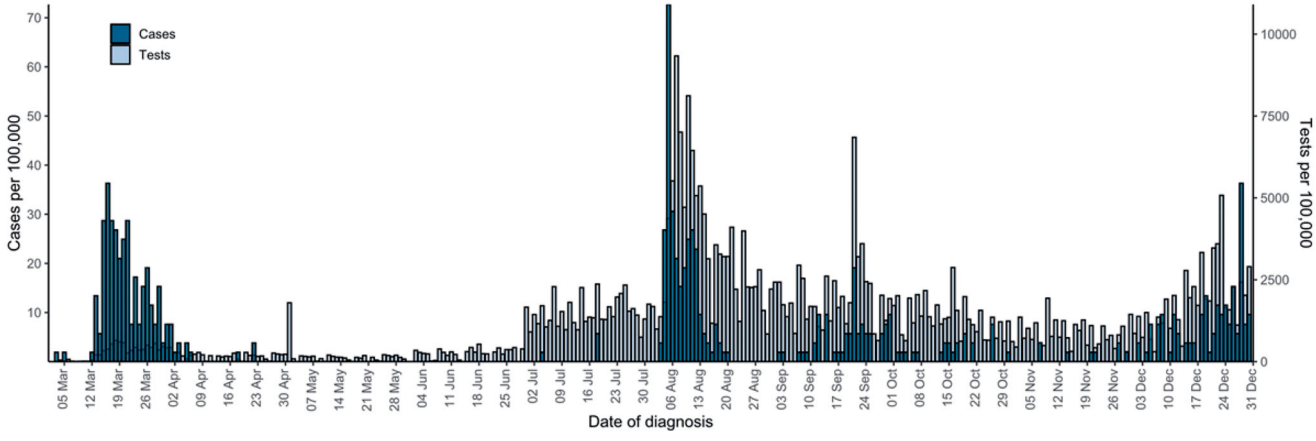

Figure 2. Overview of the COVID-19 epidemic in the Faroe Islands in 2020. All confirmed COVID-19 cases and RT-PCR tests are shown here illustrating the course of the COVID-19 epidemic in the Faroe Islands during 2020. Note, that there are two separate *y*-axes. There were four spikes of cases in all, with especially large spikes during March–April, August and December and a smaller increase in September. Testing was high during the whole epidemic but increased markedly in August and onwards as a response to a second wave.

Cases were not validated against the FCR or pathology reports, as these are not yet available for 2020. This might be considered a limitation to our findings since some diagnoses from the EHR could turn out not to be cancers. However, concordance between EHR reports and the FCR was high for previous years, and since the data for preceding years is retrieved in the same manner, and the same uncertainty pertains to those rates as for the rate during the epidemic, any misclassification would be expected to be random.

The main reason for our findings is likely to be the timely and reactive handling of the COVID-19 epidemic in the Faroe Islands, as described by Strøm, Kristiansen et al. [2,4]. Although a reprioritizing of health sector activities was carried out early in the epidemic, the massive testing regime and thorough tracing of close contacts, isolation of cases, and quarantining of close contacts have spared the hospitals from any severe burden due to COVID-19 patients. Until now, the Faroe Islands' health sector services have been able to function with few obstructions compared to other countries.

These results underline the importance of timely handling of the COVID-19 pandemic, not only on morbidity and mortality caused directly by COVID-19 but also to indirect effects on the remaining health sector, which are crucial to health and disease in the population.

Conclusion

No decrease in the incidence of cancer diagnoses in the Faroe Islands was observed during the COVID-19 pandemic, a finding that stands in contrast to observations made in several other countries.

ORCID

Marnar Fríðheim Kristiansen http://orcid.org/0000-0003-0978-5281

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