Incidence and survival of head and neck cancer in the Faroe Islands

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Introduction

The Faroese people constitute a distinct and geographically isolated population, and research on cancer in this population is sparse. Thus, this study aimed to calculate the age-standardised incidence rate (ASIR) and 5-year survival rates in head and neck cancers (HNC) in the Faroese population from 1985 to 2017. To our knowledge, this is the first study to investigate the epidemiology of HNC in the Faroe Islands.

Materials and methods:

All patients registered with HNC in the Faroese Cancer Registry (FCR) from 1985 to 2017 were included. Information from the FCR was supplemented by data from the medical record system from 2006 to 2017. The ASIR per 100,000 (World Standard Population) and 5-year survival rates were calculated in relation to gender, anatomical site and histology. We also calculated the distribution of tobacco, alcohol consumption, cancer stages and various timelines in this population.

Results

202 patients were included in this study (62% men).

Incidence

The ASIR for all HNC was 10.0/ 100,000 persons-years and was higher among men than women. Laryngeal cancer had the highest ASIR among men while thyroid gland cancer had the highest ASIR among women.

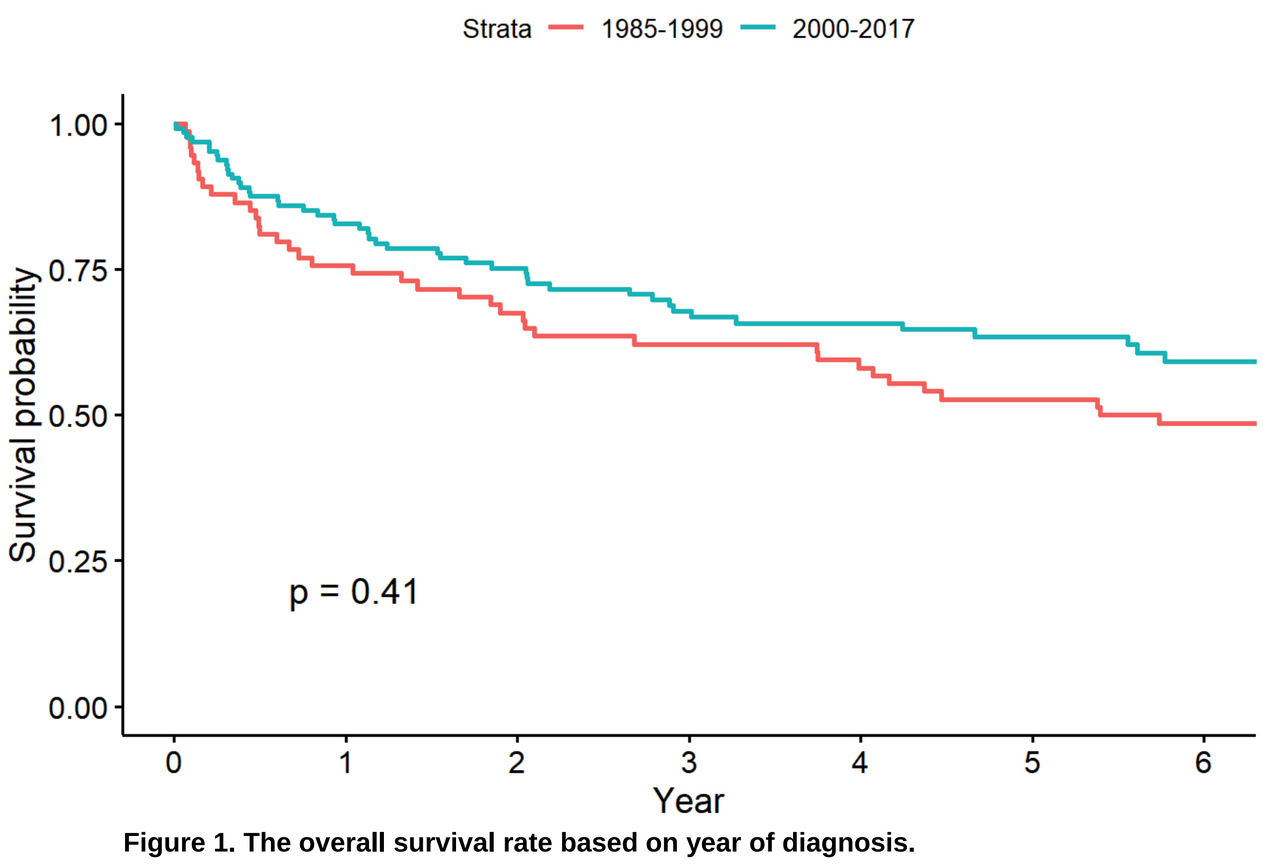

Figure 1. The overall survival rate based on year of diagnosis.

Overall survival rate

Women's survival rate was significantly higher than men's (p = 0.026). Though non-significant, the survival rate was lower in 1985-1999 than in 2000-2017 (Figure 1). The results imply that oropharyngeal cancer (OPC) had the best survival rate (Figure 2) and was diagnosed at a significantly earlier stage, while a mixed group of various HNCs had the poorest survival rate.

Cancer stage distribution

37% of the Faroese HNC patients diagnosed from 2006 to 2017 had cancer stage I–II, 37% had cancer stages III–IV, and for 26% the cancer stage was not specified in the medical record.
Hypopharyngeal cancer was discovered at a significantly later stage, stages III–IV (78%) (p = 0.05), while OPC was discovered at a significantly earlier stage, stage I–II (60%) (p = 0.02).

Discussion

This retrospective nation-wide study showed that ASIRs and 5-year survival rates for Faroese HNC patients in general resembled the ones reported for Danish HNC patients.
Our results showed a tendency towards a better 5-year HNC survival rate in 2000-2017 than in 1985-1999 (Figure 1). This is not unexpected, as the general life expectancy also rose from 76.0 years in 1985 to 82.2 years in 2017.

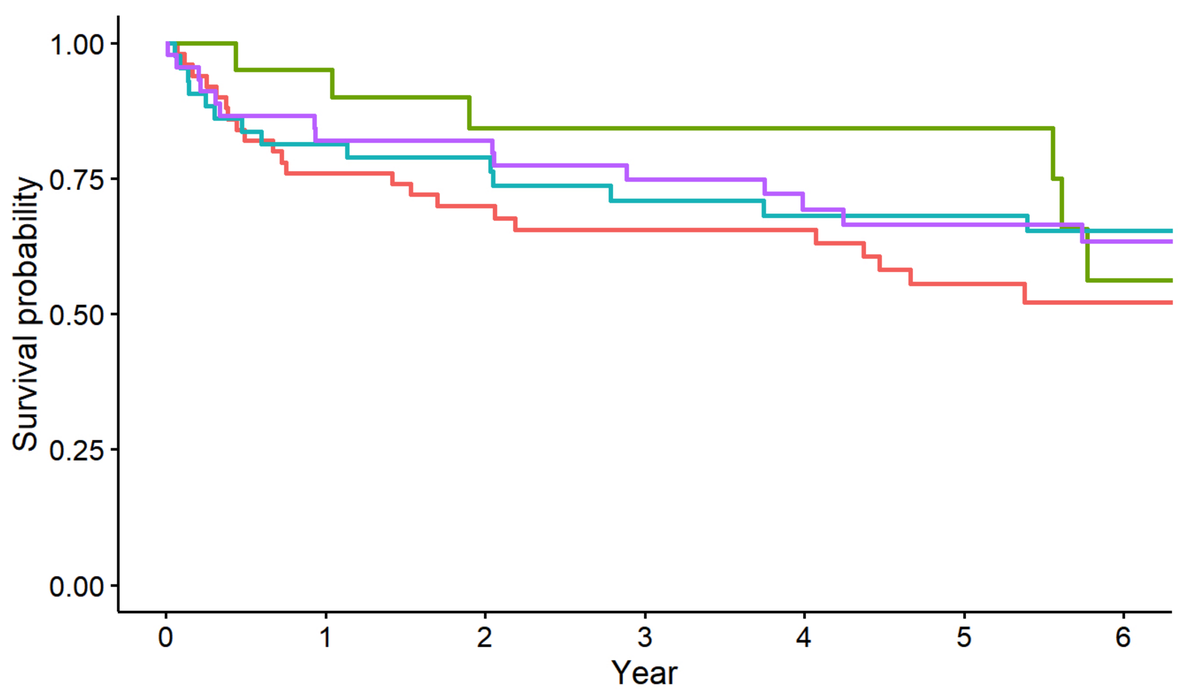

Figure 2. The overall survival rate based on anatomical site.

Based on anatomical site our results showed a tendency towards that a mixed group of various HNCs and hypopharyngeal cancer had the worst survival rate.
Hypopharyngeal cancer was also diagnosed at a significantly later stage (stages III–IV). Low survival rates among hypopharyngeal cancer are seen in other studies.
Our results suggest that thyroid cancer and laryngeal cancer had one of the highest survival rates (Figure 2). Thyroid cancer is often diagnosed at an early stage. So is glottis cancer, the most abundant form of laryngeal cancer.
According to our study, OPC had the best survival rate (Figure 2). This does not match other studies, where it has been reported that OPCs have a relatively poor prognosis. However, studies have found that the survival for OPCs is increasing and that patients with HPV-positive OPC have better survival. Our results also showed that OPC was diagnosed at a significantly earlier stage (stage I–II). These findings could, in part, explain the higher survival rate of OPC in the Faroese population, but has to be researched further.
Our study showed that 67% of the Faroese HNC patients stayed within the Danish fast-track programme's diagnostic timeline limit (from the first meeting on the investigative department to ended investigation), which is 15 calendar days.

However, 89% of the Faroese HNC patients did not stay within the fast-track programme's treatment timeline limits (from ended investigation to start of initial treatment) and 71% of the Faroese HNC patients did not stay within the fast-track programme's initial health care timeline limits (from received referral to start of initial treatment).
It has not been possible to refer HNC patients to an MRI scan in the Faroe Islands, which may facilitate early diagnosis, but, more importantly, the waiting time for a mandatory CT scan in the Faroe Islands can be up to 3 weeks.
Obviously, the fact that Faroese HNC patients have to go abroad to receive treatment requires time.
There is also only one ENT doctor at the department at the NHFI, which results in less time for each patient, and the possibility of overlooking something may, therefore, be higher.

In conclusion, to our knowledge, we present the first study on HNC in the Faroe Islands. Our study provides a presentation of trends in the ASIRs and 5-year survival rates of HNC, the division of cancer stage, and it determines various timelines for these patients. Even though these findings are satisfying and in general resembled the ones reported for Danish HNC patients, the results indicate that there is room for improvements regarding the time from first visit at the ENT doctor's office and verified histological diagnosis to first day of treatment.