

Relative survival rates for head and neck cancers in England



MF Roche¹, AM Watters¹, R Wight²

¹Oxford Cancer Intelligence Unit; ²Chair of the Head and Neck Cancers Site Specific Clinical Reference Group

Introduction

The purpose of this analysis is to compare the survival of patients whose data are recorded in two separate databases, and identify whether one cohort of patients experiences better survival than the other. The two databases are:

1. The Data for Head and Neck Oncology system (DAHNO) which supports the National Head and Neck Cancer Audit and includes cases diagnosed in 2004 to 2008.

The DAHNO database began a phased roll out and started receiving cases in 2004 on larynx and oral cavity cancers. Initially restricted to English cancer networks and subsequently eligible to Wales, all cancer networks in England and Wales now submit data to the audit, but not all eligible networks and trusts participated in the timeframe studied.

Some organisations submitted a broader range of tumour site groups (in addition to larynx and oral cavity) at inception whilst others have retrospectively populated the DAHNO database in these site group areas. Formal national collection on pharynx and major salivary gland cancer began in 2008.

The number of cases of head and neck cancer submitted to the National Head and Neck Cancer Audit has improved considerably since the first report was published in 2005, as has the number of participating trusts.

2. The National Cancer Data Repository (NCDR) which holds merged data from the eight English cancer registries for cases diagnosed in 1990 to 2006.

Objective

Calculate and compare the relative survival rates for two cohorts:

1. Patients recorded in the DAHNO database (DAHNO).
2. Patients recorded in the NCDR database that were not included in the DAHNO database (unmatched NCDR).

Method

For both cohorts, one year and three year relative survival rates were estimated for patients diagnosed with a head and neck cancer in the years 2004 to 2006. The analysis was restricted to this period because these were the only years data common to both datasets. All cases were followed up for at least three years after diagnosis or until death.

The data were analysed by tumour site, stage and age at diagnosis. Stage was analysed for the DAHNO cohort only. The level of recording of stage information in the NCDR database was insufficient for analysis*.

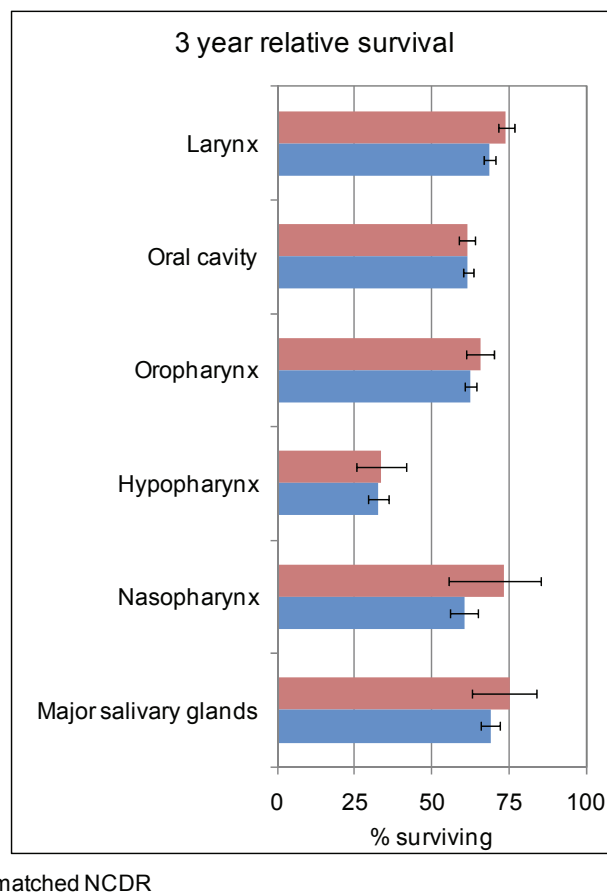
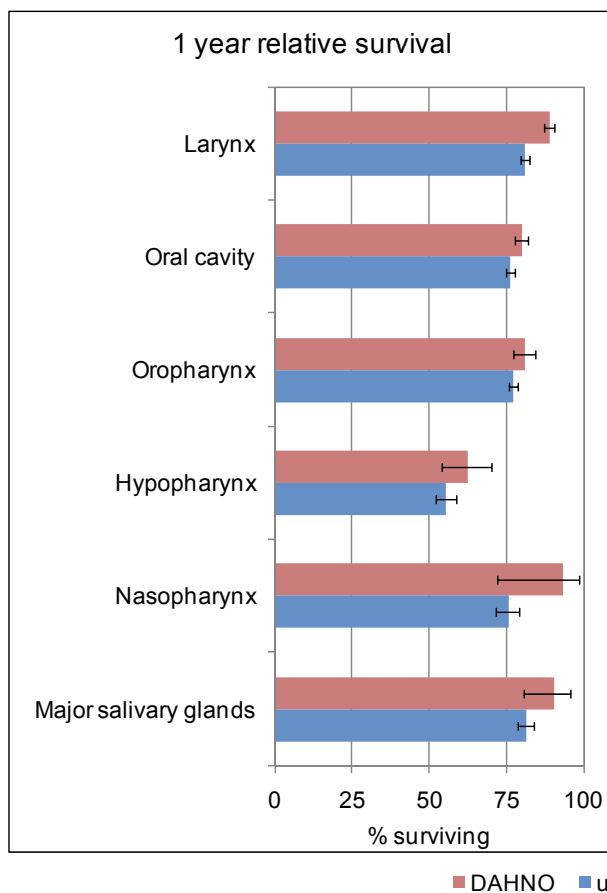
Conclusion

In the early years of the DAHNO audit when case ascertainment was relatively poor and very variable geographically, there is some evidence to suggest that the patients included in the DAHNO audit survived longer than those patients who were not included.

Survival rates by tumour site

Overall, patients included in the DAHNO audit have significantly higher relative survival rates than the NCDR patients that are not included in the DAHNO audit (the unmatched NCDR cohort). Analysis of subsets of the data suggest that survival rates for the DAHNO data are generally higher than for the unmatched NCDR data, but the differences are not always statistically significant.

Tumour group	Number of cases		One year relative survival rates		Three year relative survival rates	
	DAHNO cohort	Unmatched NCDR cohort	DAHNO cohort	Unmatched NCDR cohort	DAHNO cohort	Unmatched NCDR cohort
Larynx	1552	3706	88.9	81.1	74.1	68.7
Oral cavity	1592	4348	79.9	76.4	61.4	61.7
Oropharynx	519	3207	80.9	77.4	65.9	62.5
Hypopharynx	150	894	62.7	55.5	33.6	32.7
Nasopharynx	47	539	93.4	75.7	73.5	60.6
Major salivary glands	98	1203	90.7	81.5	75.2	69.0

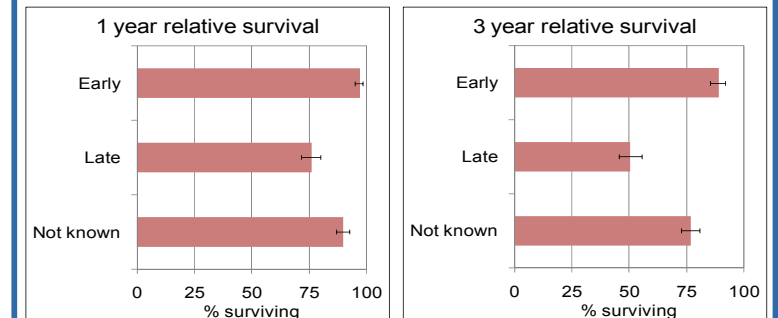


Larynx

Survival rates by stage at diagnosis

The paucity of information on stage on NCDR means it is not possible to compare survival by stage between the two cohorts.

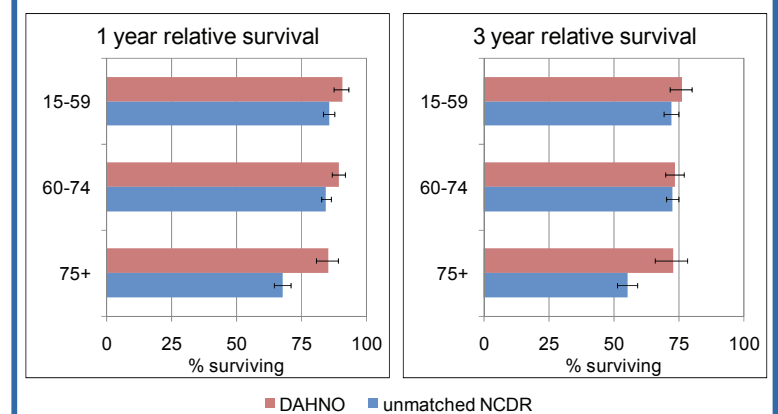
Survival rates are significantly better for patients diagnosed at an early stage in the cancer.



Survival rates by age group

Survival rates fall with increasing age but not significantly, except for the 75 years plus age group of the unmatched NCDR cohort. Both the one year and three year survival rates for patients aged 75 years and over in the unmatched NCDR cohort are significantly lower than the younger age groups in the same cohort.

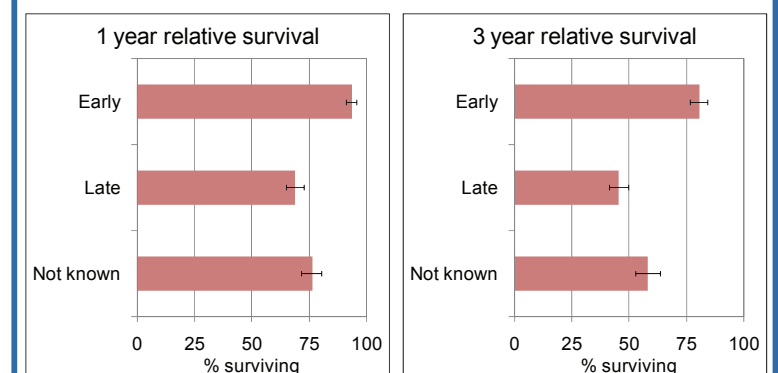
The survival rates for all age groups in the unmatched NCDR cohort are consistently lower than those in the DAHNO cohort, significantly lower for the 75 years and over age group.



Oral cavity

Survival rates by stage at diagnosis

Oral cavity cancers diagnosed at an early stage of disease have a significantly better survival than cancers diagnosed later, at both one year and three years after diagnosis.



Survival rates by age at diagnosis

Relative survival rates for oral cavity cancer decrease with increasing age for both cohorts. Both one year and three year survival rates, for patients aged 75 years and over, are significantly lower than the earlier age groups for both cohorts. The decrease in survival with increasing age is most noticeable for the unmatched NCDR cohort, where each consecutive older age group is significantly lower than the preceding younger age group.

For one year survival rates, the DAHNO cohort has consistently higher rates than the unmatched NCDR cohort, but these differences are not significant.

