



Potentially HPV-related head and neck cancers

NCIN Data Briefing

Introduction

HPV (human papilloma virus) infection is emerging as an important risk factor for some head and neck (H&N) squamous cell cancers (SCCs). The commonest head and neck sites associated with HPV infection are the tonsil, base of tongue, lingual tonsil and the lateral wall of the oropharynx. SCCs arising from other parts of the oral cavity and oropharynx and SCCs of the larynx are less likely to be associated with HPV infection and were used as “comparison SCCs” in this briefing.

Patients with potentially HPV-related SCCs often do not have the known risk factors, like smoking, alcohol consumption or tobacco chewing. Research in the USA has shown an association between the HPV related cancers and having a higher number of sexual partners and an increase in oral sexual behaviour.

The purpose of this briefing is to examine the rates of new (incident) cases of potentially HPV-related H&N SCCs and comparison H&N SCCs in England between 1990 and 2008.

Results

The number of potentially HPV-related H&N SCCs in England rose from 541 in 1990 to 1,498 in 2008. Over the same time period, the number of comparison H&N SCCs increased from 2,682 to 3,880.

Figure 1 Age-standardised incidence rates for England of potentially HPV-related SCCs (tonsil, base of tongue & lingual tonsil and other oropharynx) and comparison SCCs (larynx, oral tongue, other oral cavity) in (a) males and (b) females by year of diagnosis

(a) Male

(b) Female

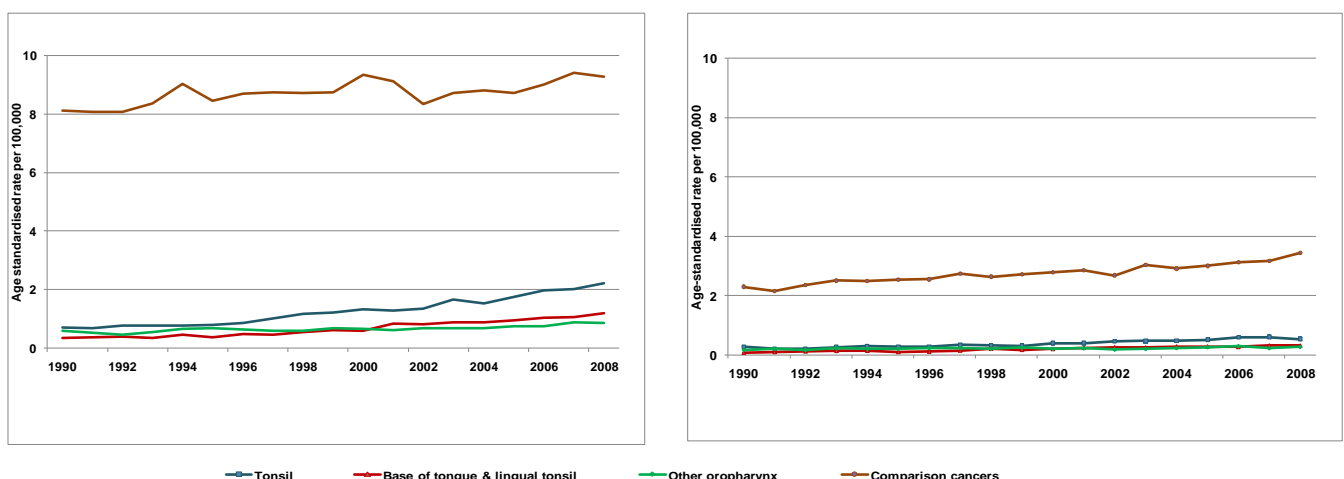


Figure 1 shows the age-standardised incidence rates for potentially HPV-related SCCs increased by 160% for males from 1990 to 2008 and by 110% for females. Although the trends were less marked, increases in comparison SCCs for males and females (of 14% and 50% respectively) were also observed. Overall, the incidence for both potentially HPV-related SCCs and comparison SCCs were two to four times higher in males than in females.

KEY MESSAGE:

The incidence of potentially HPV-related H&N SCCs increased between 1990 and 2008 - particularly in males.

Patients with potentially HPV-related SCCs are on average younger than those with other non-HPV-related H&N cancers.

The risk of developing a potentially HPV-related SCC is higher among people born after 1940 than those born in earlier decades.

Table 1 Average age at diagnosis for potentially HPV-related H&N SCCs and comparison H&N SCCs in England in 1990 and 2008

	Average age at diagnosis (95% confidence interval)			
	Males		Females	
	1990	2008	1990	2008
Potentially HPV-related SCCs	61.4 (60.3 - 62.6)	59.6 (59.0 - 60.2)	65.0 (63.1-66.9)	61.7 (60.4 - 63.0)
Comparison SCCs	64.6 (64.1 - 65.1)	64.6 (64.2 - 65.1)	68.5 (67.6-69.4)	67.1 (66.3 - 67.9)

Table 1 shows the average age at diagnosis for potentially HPV-related SCCs decreased between 1990 and 2008, whilst the average age at diagnosis for comparison SCCs remained stable.

Figure 2 Incidence rates for England of (a) potentially HPV-related and (b) comparison H&N SCCs by birth cohorts

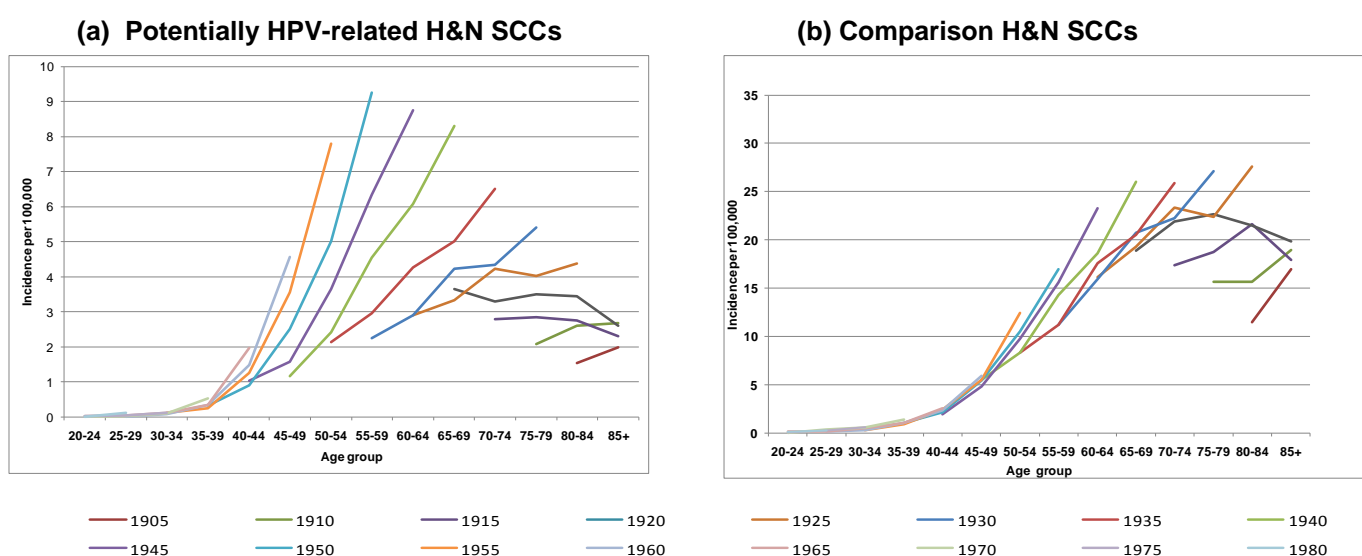


Figure 2 shows a greater increase in age specific incidence rates of potentially HPV-related SCCs and comparison SCCs for more recent birth cohorts (people born after 1940). There is an approximate 50% increase in incidence between 5-year birth cohorts for HPV-related SCCs versus a 20% increase for comparison cancers.

Conclusion

The incidence of potentially HPV-related H&N SCCs has been rising over the last two decades, particularly in males. These cancers are being diagnosed at an earlier age and the risk is higher in patients born after 1940 compared to those born in earlier decades.

FIND OUT MORE:

The [Oxford Cancer Intelligence Unit](#) is the lead cancer registry for head and neck cancers.

Other useful resources within the NCIN partnership:

[Cancer Research UK CancerStats](#) – Key facts and detailed statistics for health professionals

The NCIN is a UK-wide initiative, working closely with cancer services in England, Scotland, Wales and Northern Ireland, and the National Cancer Research Institute (NCRI), to drive improvements in standards of cancer care and clinical outcomes by improving and using the information it collects for analysis, publication and research. In England, the NCIN is part of the National Cancer Programme.