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Position Statement on Human Papillomavirus (HPV) Vaccination for Prevention of HPV-Related Oropharyngeal Cancer

Presented by the Prevention & Early Detection Committee of the American Head and Neck Society

Over the past three decades, there has been a clear decrease in the prevalence of tobacco use in the United States and an associated decline in tobacco-related head and neck cancers[1]. The incidence of Human Papillomavirus (HPV)-related oropharyngeal squamous cell carcinoma (OPSCC), however, has been increasing at a dramatic rate, with HPV now being observed in over 70% of these tumors[2,3]. Recent data suggests that the incidence of HPV-related OPSCC in men exceeds the incidence HPV-related cervical cancer [4]. Despite these statistics, public awareness of HPV-related OPSCC remains low[5].

Since 2006, the Food and Drug Administration (FDA) has approved three commercially available vaccines aimed at preventing HPV infection, Gardisil-4 (Merck & Co.), Cervarix (GlaxoSmithKline), and recently, Gardisil-9 (Merck & Co.). Gardisil-4 is currently recommended by the Center for Disease Control (CDC) Advisory Committee on Immunization Practices (ACIP) for use in females between 9 to 26 years of age and males between 9 to 21 years of age, with the option to vaccinate up to age 26 for certain high-risk individuals [6].

These HPV vaccines have been shown to be safe, with no serious adverse events being reported in numerous large studies with over 10 years of follow-up [7 8 9 10 11]. Moreover, vaccine efficacy of over 93% was observed for preventing oral HPV infection when compared to control, suggesting the potential to prevent HPV-related OPSCC [12]. While these vaccines have clearly demonstrated their ability to prevent anogenital HPV infection and premalignant lesions, as well as genital warts, a trial proving prevention of HPV-related OPSCC or even a precursor lesion will be prohibitively difficult. This is primarily due to the inability to reliably screen for oropharyngeal premalignancy, the relative rarity of OPSCC, and the extended latent period between HPV infection and clinical cancer development.

Despite the safety of these vaccines and their potential benefit, uptake in the United States, especially in males, has been poor [13, 14,15], with lack of physician recommendation and low public awareness being primarily to blame. This is particularly relevant since males make up the majority of patients who develop HPV-related OPSCC [2,16]. Moreover, since prevention of OPSCC is not currently a FDA-approved indication for HPV vaccination, advertising this association is difficult.

It is clear that, without a definitive change to current HPV immunization

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practices, the HPV-related OPSCC epidemic will continue. Therefore, based on the observed link between HPV infection and the majority of OPSCC and the safety and efficacy shown of the currently available HPV vaccines in preventing HPV infection, The American Head and Neck Society strongly encourages HPV vaccination of both boys and girls for prevention of OPSCC and anogenital cancers. We hope that this endorsement will encourage more widespread implementation of these vaccines, especially in boys, and thus decrease the future burden of HPV infection and HPV-related OPSCC.

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