

## **HPV-positive SCCOP patients' recurrence differs from HPV-negative patients**

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Patients with HPV-positive squamous cell carcinoma of the oropharynx (SCCOP) had a longer time to development of distant metastasis (DM) after initial treatment, and had more metastatic sites in more atypical locations compared to HPV-negative patients, according to research presented today at the 2014 Multidisciplinary Head and Neck Cancer Symposium.

Culled from records of an IRB-approved registry, the study reviewed 285 <u>patients</u> with stage III-IV SCCOP (originally thought to be a smoking-related head and <u>neck cancer</u>) treated with chemotherapy and radiation from 2002 to 2013. HPV status was determined by in situ hybridization for HPV DNA and/or by strong and diffuse (>75 percent) staining for p16 immunohistochemistry. There were 245 HPV-positive and 40 HPV-negative patients.

Twenty-seven HPV-positive and eight HPV-negative patients failed with DM and were the subjects for more detailed evaluation. Radiation therapy (RT) was either 3-D RT (HPV-positive = 15/27; HPV-negative = 4/8) or intensity modulated radiation therapy (IMRT) (HPV-positive = 12/27; HPV-negative = 4/8) with doses from 66-79 Gy. Patients received concurrent chemotherapy of cisplatin (HPV-positive = 9/27; HPV-negative = 2/8), cisplatin/5 fluorouracil (FU) (HPV-positive = 10/27; HPV-negative = 3/8) or cetuximab (HPV-positive = 8/27; HPV-negative = 2/8). One HPV-negative patient received cisplatin/paclitaxel chemotherapy. One patient in each group was treated with adjuvant chemoradiotherapy after initial resection. Student t-tests were used to



compare the difference between the means of the samples.

Both HPV-positive and HPV-negative patients were found to have similar rates of DM, however the mean time to develop DM was significantly longer for HPV-positive patients (HPV-positive = 21.6 months vs. HPV-negative = 7.0 months). The most common sites of metastasis for all patients were the lung (HPV-positive = 17/27 vs. HPVnegative = 5/8) and bone (HPV-positive = 12/27 vs. HPV-negative = 2/8). The average number of metastatic subsites was significantly higher for HPV-positive patients (HPV-positive = 2.0 vs. HPV-negative = 1.1, p = 0.026). Twenty-one of 27 HPV-positive patients had more than one metastatic deposit, and 12/27 had DM involving more than one organ system, compared to only 1/8 for HPV-negative patients. Metastases in less typical sites were more common in HPV-positive patients; sites included the liver (6), intra-abdominal lymph nodes (3), brain (2), pleura (2) and peritoneum (1). Locoregional failure (metastases in the original tumor region) was only seen in four of the 27 HPV-positive patients, compared to three of the eight HPV-negative patients.

"The late onset of DM in HPV-positive patients (almost two years) is unusual since the majority of aerodigestive tract malignancies tend to recur within 12-18 months of definitive treatment. The multiple and varied DM sites, which can present as distal localized pain, indicates that we may need to be more aggressive in working up suspicions for metastatic disease and that imaging such as PET/CT scans may be warranted even several years after treatment," said Samuel Trosman, MD, a resident in otolaryngology at the Cleveland Clinic. "We were able to learn significant characteristics of HPV-positive SCCOP that will help us provide more tailored care and surveillance strategies for these patients."

**More information:** The abstract, "Distant Metastatic Failure Patterns in Squamous Cell Cancer of the Oropharynx (SCCOP) Treated with



Chemoradiation: the Impact of Human Papillomavirus," will be presented in detail as a poster presentation at the 2014 Multidisciplinary Head and Neck Cancer Symposium.

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