Most recurrences of HPV-positive oropharyngeal cancer can be found through imaging and physical exams within six months after treatment

SCOTTSDALE, Ariz., February 18, 2016—For patients treated with definitive radiation therapy (RT) for oropharyngeal cancer caused by human papillomavirus (HPV), the majority of recurrences can be detected by post-treatment imaging at three months and physical exams during the six months following treatment, according to research presented at the 2016 Multidisciplinary Head and Neck Cancer Symposium.

The number of oropharyngeal squamous cell carcinoma (OPSCC) cases associated with HPV has climbed “dramatically” in the past several decades, according to the American Cancer Society, and survival rates following definitive RT have risen, as well. As the number of oropharyngeal cancer patients and survivors grows, so does the need to determine general time to recurrence and the most effective modes of recurrence detection, to guide standards for optimal follow-up care by oncology teams.

To examine patterns in recurrence detection, researchers in this IRB-approved study examined all 246 cases of HPV- or p16-positive non-metastatic OPSCC treated with definitive RT at a single,
large-volume cancer center between 2006 and 2014. Most patients received RT and a concurrent systemic therapy (n = 209, 84.6 percent); fewer patients received definitive RT alone (n = 38, 15.4 percent).

For follow-up care, patients received a PET/CT scan three months after completing treatment, as well as physical exams every three months in the first year following treatment, every four months in the second year and every six months in years three through five. Median follow-up care length for all patients was 36 months. Patient outcomes, including recurrence and survival rates, were calculated using the Kaplan-Meier method from the end of RT.

Most recurrences were detected either by persistent disease appearing on three-month post-treatment imaging or by patients presenting with symptoms at follow-up exams. All six local failures were detected by direct visualization or flexible laryngoscopy in physical exams. Eight of the nine regional recurrences (89 percent), 12 of the 13 locoregional failures (92 percent), and 15 of the 21 distant recurrences (71 percent) were found due to symptoms or a PET/CT scan three months following treatment.

Findings also indicated that some disease characteristics increase the likelihood of recurrence. Both regional and distant failure were more common among patients who presented with five or more nodes or who had level four lymph nodes (p < 0.05). Risk of developing distant metastases also was greater in patients with a lymph node larger than six centimeters or with bilateral lymphadenopathy (p < 0.05).

“For most patients with HPV-associated oropharynx cancer, after a negative three-month PET scan, physical exams with history and direct visualization are sufficient to find recurrences,” said Jessica M. Frakes, MD, an assistant member of the department of radiation oncology at the H. Lee Moffitt Cancer Center in Tampa and lead author on the study. “Minimizing the number of unnecessary tests may alleviate the financial and emotional burden on these patients, including overall health care costs, time spent away from work and family, and the anxiety of waiting for scan results.”
In addition to examining patterns of recurrence and detection, this study lends support to the effectiveness of specialist teams in treating HPV-positive OPSCC with definitive RT. Within three years, local control was achieved in 97.8 percent of all patients in the study; regional control in 95.3 percent; locoregional control in 94 percent; and freedom from distant metastases in 91.4 percent. The three-year overall survival rate was 91 percent. Nine percent of patients experienced severe late toxicities, including 19 grade three toxicities and two grade four toxicities with resolution in the majority (76 percent, 16 of 21 toxicities) at the time of last follow up. Sixty-four percent of toxicities and/or recurrences occurred within the first six months following treatment; only four events occurred more than two years following treatment.

“We were pleasantly surprised by the high cure rates and the low permanent side effect rates for these patients,” said Dr. Frakes. “These findings demonstrate that individuals with HPV-associated oropharyngeal cancer who are treated with definitive RT and cared for by multidisciplinary specialists have excellent outcomes.”

The abstract, “Detection of Recurrence in HPV Associated Oropharynx Squamous Cell Carcinoma,” will be presented in detail during a scientific session on Friday, February 19, 2016 at 1:00 p.m. Mountain time at the 2016 Multidisciplinary Head and Neck Cancer Symposium in Scottsdale, Arizona. To speak with Dr. Frakes, contact the ASTRO media relations team at 480-905-7935 (February 18-19 only), 703-286-1600 or press@astro.org.

The 2016 Multidisciplinary Head and Neck Cancer Symposium is sponsored by the American Society for Radiation Oncology (ASTRO), the American Society of Clinical Oncology (ASCO) and the American Head & Neck Society (AHNS). The two-and-a-half day meeting includes interactive educational sessions focused on topics such as novel multidisciplinary therapies, directed therapy, treatment guidelines, prevention, surveillance and supportive care, as well as 13 oral abstract presentations of the current science of relevance to the head and neck cancer community. A total of 262 abstracts will be presented, including 249 posters. Keynote speakers include Tanguy Seiwert, MD, of the University of Chicago, to present “Immunotherapy for Head and Neck Cancer;” Robert I. Haddad, MD, of Brigham and Women’s Hospital, to present “Personalized Treatment for Head and
Neck Cancer -- The Time is Now;” Quynh-Thu Le, MD, FASTRO, of the Stanford School of Medicine, to present “Precision Therapy in Head and Neck Cancer -- From Technology to Biomarker-based Risk Stratification;” and Neil Hayes, MD, MPH, of the UNC School of Medicine, to present “Genome Atlas and Sequencing Data: How We Use This Going Forward.”

ABOUT ASTRO
ASTRO is the premier radiation oncology society in the world, with more than 10,000 members who are physicians, nurses, biologists, physicists, radiation therapists, dosimetrists and other health care professionals who specialize in treating patients with radiation therapies. As the leading organization in radiation oncology, the Society is dedicated to improving patient care through professional education and training, support for clinical practice and health policy standards, advancement of science and research, and advocacy. ASTRO publishes three medical journals, International Journal of Radiation Oncology • Biology • Physics (www.redjournal.org), Practical Radiation Oncology (www.practicalradonc.org) and Advances in Radiation Oncology (www.advancesradonc.org); developed and maintains an extensive patient website, RT Answers (http://www.rtanswers.org); and created the Radiation Oncology Institute (www.roinstitute.org), a nonprofit foundation to support research and education efforts around the world that enhance and confirm the critical role of radiation therapy in improving cancer treatment. To learn more about ASTRO, visit www.astro.org.

ABOUT ASCO
Founded in 1964, the American Society of Clinical Oncology (ASCO) is the world’s leading professional organization representing physicians who care for people with cancer. With nearly 40,000 members, ASCO is committed to improving cancer care through scientific meetings, educational programs and peer-reviewed journals. ASCO is supported by its affiliate organization, the Conquer Cancer Foundation, which funds ground-breaking research and programs that make a tangible difference in the lives of people with cancer. For ASCO information and resources, visit www.asco.org. Patient-oriented cancer information is available at www.cancer.net.

ABOUT AHNS
The American Head & Neck Society (AHNS) is the single largest organization in North America for the advancement of research and education in head and neck oncology. The mission of the American Head and Neck Society is: to promote and advance the knowledge of prevention, diagnosis, treatment, and rehabilitation of neoplasms and other diseases of the head and neck; to promote and advance research in diseases of the head and neck, and; to promote and advance the highest professional and ethical standards. For more information, visit www.ahns.info.

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Detection of Recurrence in HPV Associated Oropharynx Squamous Cell Carcinoma

J. M. Frakes, A. O. Naghavi, T. Strom, A. R. Giuliano, L. B. Harrison, A. Trotti, and J. J. Caudell; H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL

Purpose/Objective(s): Human papilloma virus (HPV) associated squamous cell carcinomas of the oropharynx are on the rise with a much higher likelihood of cure. We reviewed our institutional experience to determine time to recurrence as well as mode of detection of recurrence to further help guide optimal follow up.

Materials/Methods: After IRB approval, an institutional database for patients with HPV or p16 positive non-metastatic oropharyngeal cancers treated with definitive radiotherapy (RT) between 2006-2014 was queried, and 246 cases were identified. Charts were reviewed and patient, tumor and treatment factors as well as mode of detection of recurrence were abstracted. Patients either received definitive RT alone (n=38, 15.4%) or concurrent systemic therapy and RT (n=209, 84.6%). Outcomes, including local control (LC), regional control (RC), locoregional control (LRC), freedom from distant metastases (FFDM), and overall survival (OS), were calculated according to Kaplan-Meier method from the end of RT. Patients received a 3 month post treatment PET/CT and were seen every 3 months in the first year, every 4 months in Year 2, and every 6 months in Years 3-5.

Results: Median follow-up of all patients was 36 months. LC was achieved in 239 of 245 patients, with a 3 year LC rate of 97.8%. Of the 6 local failures, all were detected by direct visualization (n=2) or flexible laryngoscopy (n=4). Three year RC was 95.3%, where patients with ≥5 nodes or level 4 lymph nodes present were more likely to suffer regional failure (p<0.05). Of the 9 regional recurrences 89% (n=8) were found by symptoms or 3 month post treatment PET/CT. Three year LRC was 94%. Of the 13 patients that suffered a locoregional failure 92% (n=12) presented with either symptoms or persistent disease on 3 month post treatment PET/CT. Three year FFDM rate of 91.4%, with increased risk of metastases occurring in patients with a lymph node greater than 6 cm, bilateral lymphadenopathy, 5 or more nodes, or if a lymph node was present in level 4 (p<0.05). Of the 21 patients who suffered distant recurrence, 71% (n=15) were found due to symptoms or 3 month post treatment imaging. Three year OS was 91% for all patients. Late grade ≥3 toxicity occurred in 21 patients (9%); with 19 being grade 3 toxicities and 2 grade 4 toxicities. The majority of toxicity and/or failure occurred within the first 6 months (64%) with only 4 events beyond 2 years.

Conclusion: HPV associated oropharyngeal cancer treated with definitive RT have excellent outcomes. Of the few patients that suffer a local failure, all were identified with physical exam. Symptoms and/or 3 month post treatment PET/CT identified 92% of locoregional failures and 71% of distant failures. Given these findings, if post treatment of PET/CT is negative no further imaging is warranted. Follow up should include history and physical exam with direct visualization.