



News Release

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Uninsured and Medicaid patients with head and neck cancer more likely to present with advanced tumors, experience cancer specific mortality

Nationwide study finds radiation therapy, surgery used less often for head and neck cancer patients with Medicaid or no health insurance

SCOTTSDALE, Ariz., February 18, 2016—Compared to patients with non-Medicaid insurance, uninsured patients and patients with Medicaid are more likely to present with advanced stages of head and neck cancer and have higher overall and cancer-specific mortality rates, according to research presented at the 2016 Multidisciplinary Head and Neck Cancer Symposium. The study of patients in a large, national cancer registry also found less use radiation therapy (RT) for uninsured and Medicaid patients and less use of cancer-related surgery for uninsured patients.

Drawing on the National Cancer Institute's Survival, Epidemiology and End Results (SEER) database, researchers examined clinical, demographic and socioeconomic variables in the records of all 53,848 patients diagnosed with primary squamous cell carcinoma of the oral cavity, pharynx or larynx between 2007 and 2012. Patients were divided into three cohorts based on health insurance

status: patients with non-Medicaid insurance (80.1 percent), patients with Medicaid (15 percent), and patients who were uninsured (4.9 percent).

Head and neck cancer patients with and without insurance differed significantly from each other in terms of disease stage at time of diagnosis, treatment practices and survival rates. Uninsured and Medicaid patients, compared to insured patients, were more likely to present with advanced disease, such as larger tumors or more extensive lymph node involvement, were less likely to receive RT, and had higher mortality rates following cancer.

Specifically, uninsured patients and Medicaid patients, compared to insured patients, were more likely to present with American Joint Committee on Cancer Stage III or IV disease (75.1 percent uninsured, 72.9 percent Medicaid, 60.1 percent insured; $p < .001$). These patients also were less likely to receive external beam RT (Odds Ratio (OR) for uninsured, 0.68; OR for Medicaid, 0.77; both $p < .05$), and uninsured patients were less likely to receive cancer directed surgery (OR, 0.86; $p < .05$).

Perhaps most alarmingly, rates of both overall mortality and cause-specific mortality were higher for uninsured and Medicaid patients, indicating that this subset of head and neck cancer patients is particularly vulnerable to cancer-related death. Odds ratios for uninsured and Medicaid patients, respectively, were 1.48 and 1.55 for overall mortality and 1.65 and 1.60 for cause-specific mortality, compared to those for patients with insurance.

“We were surprised by the similarity in outcomes among the uninsured patients and Medicaid patients,” said Thomas M. Churilla, MD, a resident physician in radiation oncology at the Fox Chase Cancer Center in Philadelphia and lead author on the study. “These findings suggest that other risk factors and barriers to care, in addition to health insurance coverage, are responsible for survival differences from head and neck cancers.”

Researchers used multiple logistic regression for analyses examining treatment directives to adjust for clinical and demographic covariates, including disease site, disease stage, age, race, location, education, income, use of RT (for the surgery analysis) and use of cancer directed surgery (for the RT analysis). Cancer-specific mortality analyses used the Kaplan-Meier method and adjusted for these covariates using Cox regression.

“Access to cancer care is a complex topic, and further study is necessary to determine what mix of patient, provider and disease-related factors are responsible for this disparity in mortality rates. Based on our study, expansions in Medicaid may not significantly affect outcomes for head and neck cancer patients unless we also explore and address these other underlying factors,” said Dr. Churilla.

The abstract, “The Impact of Health Insurance Status on the Presentation, Local Management, and Outcomes of Patients with Head and Neck Cancer in the United States,” 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. Churilla, 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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**2016 Multidisciplinary Head and Neck Cancer Symposium
News Briefing, Friday, February 19, 2016, 7:00 a.m., MT**

Scientific Session: Friday, February 19, 2016, 1:00 – 2:30 p.m., MT, Arizona Ballroom A-G, JW Marriott Camelback Resort and Spa

7 The Impact of Health Insurance Status on the Presentation, Local Management, and Outcomes of Patients with Head and Neck Cancer in the United States

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Purpose/Objective(s): We sought to evaluate the association between health insurance status and stage, treatment, and outcomes among patients with head and neck (H&N) cancer. We hypothesized that patients with Medicaid or lack of health insurance more frequently present with advanced disease, undergo less surgery or radiation, and have increased cancer specific mortality compared to patients with non-Medicaid insurance.

Materials/Methods: We queried the NCI Survival, Epidemiology and End Results database for primary squamous cell carcinoma of the oral cavity, pharynx, and larynx from 2007-2012. We characterized clinical and demographic variables according to insurance status (insured vs. Medicaid vs. uninsured). We tested for associations between patient insurance status and AJCC stage, receipt of cancer directed surgical procedure (\geq wide local excision), and receipt of external beam radiation therapy. We calculated odds ratios and computed Pearson's chi square test and used multiple logistic regression analysis to adjust for clinical and demographic covariates. We evaluated cancer specific mortality according to insurance status by the Kaplan-Meier method and adjusted for demographic and clinical using Cox Regression.

Results: A total of 53,848 patients were analyzed: 80.1% insured, 15.0% Medicaid, and 4.9% uninsured. AJCC Stage III or IV disease was more common among patients with Medicaid (72.9%) and uninsured (75.1%) compared to insured patients (60.1%), $p < 0.001$. After adjustment for site, stage, use of radiation, age, race, location, education, and income, uninsured patients were less likely to receive cancer directed surgery (OR [95% CI] = 0.86 [0.77-0.97]). Similarly, after adjustment for site, stage, cancer directed surgery, age, race, location, education and income, Medicaid and uninsured patients were less likely to receive external beam radiation therapy (OR [95% CI] = 0.77 [0.72-0.81] for Medicaid, and 0.68 [0.62-0.75] for uninsured). Patients with Medicaid or uninsured status had inferior outcomes after adjustment for surgery, radiation therapy, tumor, and demographic characteristics, as seen in the Table.

	Insured		Medicaid		Uninsured	
	HR	[95% CI]	HR	[95% CI]	HR	[95% CI]
Overall Mortality	1.00	--	1.55	1.49-1.62	1.48	1.38-1.58
Cause Specific Mortality	1.00	--	1.60	1.55-1.69	1.65	1.52-1.79

Table. Adjusted outcomes for H&N cancer patients according to health insurance status.

Conclusion: Patients with Medicaid or uninsured status frequently presented with advanced stage H&N cancer in the United States and were less likely to undergo cancer directed surgery or radiation therapy. Overall and cancer specific mortality were increased among Medicaid and uninsured patients after adjustment for clinical and treatment characteristics suggesting additional barriers to care or associated risk factors.

Author Disclosures: T.M. Churilla: None. B. Egleston: None. Y. Dong: None. M. Lango: None. T.J. Galloway: None.