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NCCN® Guidelines Panel: Head and Neck Cancers

On behalf of Foundation Medicine, I respectfully request the NCCN® Head and Neck Cancers Panel to review the enclosed data for inclusion of hybrid capture based NGS in the evaluation of patients with advanced head and neck cancers to inform the use of currently approved genomically matched therapies or counsel the patient on the option of an appropriately matched clinical trial.

The specific request is to incorporate hybrid capture based NGS testing into the workup of a patient with an advanced stage, occult or recurrent head and neck tumor (see Head and Neck Cancers Guideline v1.2106, pages ADV-1, ADV-3, OCC-1, and SALI-2).

Comprehensive genomic profiling is currently not an FDA-approved test.

The scientific understanding and clinical relevance of comprehensive genomic profiling (CGP) in cancer continues to evolve. Over the past year there have been several compelling publications demonstrating improved outcomes of advanced stage patients receiving genomically matched targeted therapy versus unmatched patients in various settings[1-4]. Patients with advanced and recurrent head and neck tumors historically have a poor prognosis, so the opportunity to treat their tumors based upon the underlying genomic drivers may offer benefit.

A publication by Chung, et al[5] reported the comprehensive genomic profiling findings from 252 patients with head and neck squamous cell carcinoma. The results found distinct genomic profiles between HPV-positive and HPV-negative tumors. The alterations provide the opportunity to identify patients most appropriate for clinical trials.

Additionally, another study published in 2016 by Wang, et al[6] described the genomic profiles of 149 patients with various salivary gland tumors including: salivary gland adenocarcinomas, not otherwise specified, salivary duct carcinomas, carcinoma ex pleomorphic adenoma, and salivary carcinoma, not otherwise specified. Clinically relevant genomic alterations were found in 78.5% of patient samples including alterations in the *PI3K/AKT/mTOR* pathway as well *ERBB2* alterations and interestingly, *RET* fusions. Follow-up on three patients (one with an *ERBB2* alteration and 2 patients with *RET* fustions) demonstrated response to trastuzumab and cabozantinib respectively.

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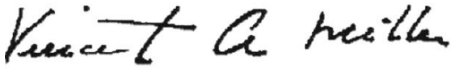
Thank you for the opportunity to submit this information to the Panel Committee Members. If you have any questions, please do not hesitate to contact Ingrid Marino at imarino@foundationmedicine.com.

Sincerely,



Vincent A. Miller, MD
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References

1. Schwaederle, et al. Association of Biomarker-Based Treatment Strategies with Response Rates and Progression-Free Survival in Refractory Malignant Neoplasms; A Meta-analysis. *JAMA Oncol*. Published Online June 6, 2016. doi:10.1001/jamaoncol.2016.2129.
2. Schwaederle, et al. Impact of Precision Medicine in Diverse Cancers: A Meta-Analysis of Phase II Clinical Trials. *J Clin Oncol* 2015; 33(32): 3817-3825.
3. Jardim, et al. Impact of a Biomarker-Based Strategy on Oncology Drug Development: A Meta-Analysis of Clinical Trials Leading to FDA Approval. *J Nat Cancer Inst* (2015) 107(11): djv253.
4. Wheler, J et al. Cancer therapy directed by comprehensive genomic profiling: a single center study. *Cancer Research* 2016 Published Online doi: 10.1158/0008-5472.CAN-15-3043.
5. Chung, CH et al. Genetic alterations in head and neck squamous cell carcinoma determined by cancer gene-targeted sequencing. *Annals of Oncology* 2015; Jun;26(6):1216-23.
6. Wang, K et al. Profiling of 149 salivary duct carcinomas, carcinoma ex pleomorphic adenomas, and adenocarcinomas, not otherwise specified reveals actionable genomic alterations. *Clin Can Res*. Published Online June 22, 2016. doi: 10.1158/1078-0432.CCR-15-2568.