

5-1-2018

Implications of hobnail features in anaplastic thyroid carcinoma and precursor lesions


Caroline Dunne, BA

Thomas Jefferson University, caroline.dunne@jefferson.edu

Stacey K. Mardekian, MD

Thomas Jefferson University, Stacey.Mardekian@jefferson.edu

Let us know how access to this document benefits you

Follow this and additional works at: <http://jdc.jefferson.edu/phsrs> Part of the [Medical Anatomy Commons](#), [Medical Cell Biology Commons](#), and the [Medical Pathology Commons](#)

Recommended Citation

Dunne, BA, Caroline and Mardekian, MD, Stacey K., "Implications of hobnail features in anaplastic thyroid carcinoma and precursor lesions" (2018). *Pathology Honors Program Student Research Symposium*. Poster 44.<http://jdc.jefferson.edu/phsrs/44>

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Pathology Honors Program Student Research Symposium by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.

Implications of hobnail features in anaplastic thyroid carcinoma and precursor lesions

Caroline Dunne, BA and Stacey Mardekian, MD

Department of Pathology, Anatomy & Cell Biology, Thomas Jefferson University Hospital

Anaplastic thyroid carcinoma (ATC) has the poorest prognosis of all thyroid cancers. Morphologically, it is characterized by pleomorphic undifferentiated cells. In some cases, a differentiated precursor lesion, either papillary thyroid carcinoma (PTC) or follicular thyroid carcinoma, can be identified adjacent to the anaplastic component. There are certain morphological variants of PTC that are known to be associated with more aggressive behavior, but a recently described, understudied variant is the hobnail variant. It is characterized histologically by micropapillary structures lined by cells with abundant eosinophilic cytoplasm and apically-placed bulging nuclei. The aim of this study was to evaluate the frequency of hobnail cells in ATC and associated precursor lesions. Microscopic slides from 21 cases of ATC diagnosed at Thomas Jefferson University Hospital between 2014 and 2017 were studied. 11 cases had an identifiable differentiated component, 8 of which were PTC. Hobnail cells were identified within the precursor PTC lesion in 5/8 of these cases. The high frequency of hobnail features in PTC precursor lesions associated with ATC suggests that hobnail features are an indicator of tumor aggressiveness. Further study is warranted to determine the prognostic value of hobnail cells in thyroid neoplasms.