

# 15<sup>th</sup> EUROPEAN PATHOLOGY CONGRESS &

## 14<sup>th</sup> International Conference on LEUKEMIA AND HEMATOLOGIC ONCOLOGY

June 20-21, 2018 | Paris, France

### GATA3 expression in primary cutaneous mucinous carcinoma

Akanksha Gupta<sup>1</sup>, Michael Murphy<sup>2</sup>, Richard Cartun<sup>1</sup> and Zende Elaba<sup>3</sup><sup>1</sup>Hartford Hospital, USA<sup>2</sup>University of Connecticut, USA<sup>3</sup>University of Massachusetts, USA

**Introduction:** Primary cutaneous mucinous carcinoma (PCMC) is a rare adnexal tumor of sweat gland origin with an indolent course. The primary challenge in diagnosis is distinguishing PCMC from metastatic mucinous breast carcinoma (MMBC)-an important distinction because of the poorer prognosis with metastatic disease, requiring aggressive management. GATA3 binding protein is a transcription factor known to be a sensitive marker for breast and urothelial carcinomas. Most primary and metastatic breast carcinomas express GATA3, making it useful in evaluating metastatic disease. GATA3 expression has also been demonstrated in various epithelial skin tumors but it has not been specifically studied in a cohort of PCMC.

**Case Series:** We evaluated the potential of GATA3 as a distinguishing marker between PCMC and MMBC by applying it in four consecutive cases of PCMC diagnosed at our institution. All patients were females, making mammary metastasis a relevant diagnostic consideration. All cases were CK7 (+)/CK20 (-), CDX2 (-) and expressed mammaglobin, ER and PR. Based on morphology and immunophenotype alone, the cases were practically indistinguishable from MMBC, except that they showed p63 (+) myoepithelial cells, suggestive of a primary cutaneous process. For each case, the diagnosis of PCMC was eventually made after possible extracutaneous primaries had been excluded by extensive systemic workup.

**Result:** All PCMC cases showed strong nuclear GATA3 expression.

**Conclusion:** GATA3 immunohistochemistry is not useful in contrasting PCMC from MMBC. In differentiating these histologic mimics, additional markers and thorough systemic workup are necessary to establish primary cutaneous derivation.

### Biography

Akanksha Gupta has completed her MBBS, and currently is a MD third year Pathology Resident at Hartford Hospital, CT, USA. She did a Pathology Residency in India and passed it with a Gold Medal and moved to US in 2013. While doing her second year Nephropathology fellowship in University of North Carolina at Chapel Hill, NC, USA, she has published five abstract/paper publications, 12 poster presentations, seven oral presentations and one online publication. She is very adept at oral presentations.

Akanksha.Gupta@hhchealth.org

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